

Humble Oil & Refining Company, Box 2347, Hobbs, N M  
New Mexico State M, Well #2, Arrowhead Pool

Workover Started 4-21-61 - Completed 5-25-61.

Pull rods Attempted to squeeze OH from 3617-3720 w/100 sx cmt, leak developed in cellar. Reverse out cmt. Found PHD 3692. Found leak below csg head. Set retrievable bridge plug at 90'. Attempted string shot at 25' down, csg parted, pulled 453.46' of 5½" csg. Found hole bridged at 433', cleaned out to top of csg and inside csg to 3658' TD. Set Sweet Hookwall Packer at 460' in 5½" csg. Run 5½" csg over tubing and screwed into fish and pulled csg off at 440'. Pulled 5½" csg and packer. Ran 5½" csg w/Baash Ross casing bowl w/20,000# tension. Ran full bore packer to 2485'. Tested below csg w/1500# held OK. Tested on top of packer and hole started circulating at 1300#. Tested every 20 jts and had circulation until packer was set at 430'. Pulled packer and patched hole in 9-5/8" csg 8' below ground level. Ran Cement Bond Log to 2394'. Set Baker Model N2-2B Cast Iron Drillable bridge plug at 3514'. Perforated 5½" csg at 2389' with 4 shots. Baker Model B Mechanical Magnesium cement retainer set at 2355'. Pumped 275 bbls water into formation. Cmt w/250 sx Incor w/8% gel. No fillup - temp survey. Perf 5½" csg w/4 shots at 2352'. Cmt retainer set at 2334', pumped 25 bbls water into formation. Cmt w/300 sx Incor 8% gel. Pumped 25 bbls water into formation. Cmt w/300 sx Incor 8% gel. Pumped 45 bbls water into formation. Cmt w/300 sx Incor 8% gel. Pumped 20 bbls water into formation. Cmt w/300 sx Incor 8% gel cmt. Pumped 5 bbls water into formation. Cmt w/100 sx Incor 8% gel, 25# Gilsonite and 1/4# floreal per sx. Cmt outside 5½" csg 1943' - temp survey. Perf 5½" csg at 1938' w/4 shots. Set Baker Drillable Cmt Retainer at 1910'. Pumped 100 bbls fresh water into formation, failed to get circ. Cmt w/100 sx Incor 8% gel and 1/4# floreal per sk. WOC. Cmt perf w/100 sx Incor 8% gel, 25# Gilsonite and 1/4# floreal per sx. WOC. Temp Survey - top of cmt 1952'. Perf 5½" csg at 1897' w/4 shots. Set cmt retainer at 1873'. Cmt w/100 sx Incor 8% gel, 25# Gilsonite and 1/4# floreal per sx. WOC 5 hrs. Cmt w/100 sx Incor 8% gel, 35# Gilsonite and 1/4# floreal per sx. Ran temp survey - top of cmt 1800'. Perf 5½" csg at 1795'. Set Retrievable Bridge Plug at 1771'. Cmt w/100 sx Incor 8% gel cmt, 35# Gilsonite and 1/4# floreal per sx. Ran temp survey - top of cmt 1660'. Perf 5½" csg at 1665', set retainer at 1631'. Cmt w/100 sx Incor 8% gel plus 35# Gilsonite and 1/4# floreal per sx. WOC. Temp Survey - top of cmt 1560'. Perf 5½" csg at 1555' w/4 shots. Retainer set at 1531'. Cmt w/200 sx Incor 8% gel, cmt w/35# Gilsonite and 1/4# floreal per sx. WOC 6 hrs. Cmt w/200 sx Incor 8% gel, 35# Gilsonite and 1/4# floreal per sx. Temp Survey - top of cmt 465'. Perf 5½" csg at 464' w/4 shots. Cmt w/150 sx 8% gel. Cmt circ. Top of cmt at 421'. Drilled cmt & retainer to 453'. Washed to 475'. Hit obstruction at 453'. Ran Impression Block. Milled damaged csg at 453'. Cmt perf at 464' w/200 sx Incor 8% gel, 35# Gilsonite and 1/4# floreal per sx. WOC. Drill cmt from 420' - 475' w/obstruction at 453'. Washed to 506'. Collar Log indicated present hole outside of 5½" csg and 3' below csg bowl. Squeeze cmt 5½" csg. from surface w/200 sx Incor 8% gel, 35# Gilsonite and 1/4# floreal per sx. Install dry hole marker as required by NMOCC. Well plugged and abandoned.

Procedure for patching csg N.M. State M-2 approved per telephone conversation between Mr. Engbrecht and Mr. Perry 5-3-61.

Procedure for plugging and abandon N.M. State M-2 approved per telephone conversation between Mr. Ramey and Mr. Carpenter 5-25-61.

C-103 will be submitted when location is cleaned and leveled.