

HARRY LEONARD "E" #5

Displaced oil in 5½" casing and 2-3/8" tubing w/160 bbls water. Pulled 2-3/8" tubing, mixed 360 bbls 45 viscosity mud. Ran HOWCO 5½" DM cement retainer on tubing. Set retainer at 7700', mixed and pumped 250 sacks regular Neat Trinity cement thru tubing, pumped 10 bbls water ahead of cement. Formation broke down w/2800# pressure, back to 2200#. Squeezed 130 sacks below retainer w/3000# maximum pressure. Picked up tubing 2' above retainer and back washed 118 sacks cement. Mixed 800 bbls 12# 55 viscosity mud, tested perforation gun lubricator w/2000# pressure, OK. Perforated 5½" casing at 7400' w/6, 3/8" jet holes by Welox. Killed well w/770 bbls mud, pumped thru perforations at 7400' w/2 HOWCO pump trucks. Ran HOWCO 5½" DM squeeze cement retainer on tubing. Set retainer at 7350' and cemented thru tubing and perforations in 5½" casing at 7400' w/355 sacks Trinity Regular Neat cement. Maximum pressure 1100#. Drop bar and closed valve in retainer OK. Backed off and displaced 15' of cement on top retainer, reversed out 25 sacks cement, pulled tubing. Ran HOWCO temperature survey in 12 hours, top cement behind 5½" casing at 5392', WOC 36 hours. Perforated 5½" casing at 6200' w/4, 3/8" jet holes by Welox. Ran HOWCO 5½" DM cement retainer on tubing, set at 6150'. Broke formation down w/2200# pressure back to 1600#, pumped 20 bbls water into formation at 1 bbl per minute w/1600#. Mixed and pumped 300 sacks Regular Neat Longhorn cement, staged 279 sacks into formation thru perforations in 5½" casing at 6200'. Maximum pressure 3000#. Left 7 sacks in casing below retainer, 2 sacks on top retainer and reversed out 12 sacks. Ran HOWCO temperature survey in 6 hours, no cement show above 5392'. Cut 5½" casing at 5342' w/McCullough jet cutter, pulled 5½" casing, recovered 164 joints 5334'. Plug in hole. Heavy mud from 6135' to 5200', 31 sacks cement plug from 5200' to 5100'. Heavy mud from 5100' to 2850', 37 sacks cement plug from 2850' to 2750'. Heavy mud from 2750' to 2250', 18 sacks cement plug from 2250' to 2200'. Heavy mud from 2200' to 50', 18 sacks cement plug from 50' to surface. Installed 4" pipe marker extending 4' above surface.

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