

Attachment - C-103

Gulf Oil Corporation - Graham State "C" No. 7-G, 25-19S-36E

Repaired 5-1/2" casing leak as follows:

1. Pulled tubing and packer.
2. Ran 5-1/2" Baker Model H wire line bridge plug set at 3795'. Dumped 2 sacks cement on top of plug.
3. Ran HRC tool. Found leak in 5-1/2" casing between 55' and 87'.
4. Perforated 5-1/2" casing at 1265' with 2, 1/2" Jet Holes. Pressured 5-1/2" casing with 800#. Could not break circulation. Pressured 7-5/8" casing to 300#. Pressure dropped 100# in 50 seconds.
5. Reran HRC tool set at 1220'. Pressured 5-1/2" casing below HRC tool with 950#. Broke circulation on 7-5/8" bradenhead.
6. Ran 5-1/2" Howco DM cement retainer set at 1214'. Pumped 150 sacks 4% Gal cement below retainer. Circulated estimated 25 sacks cement out 7-5/8" bradenhead.
7. Pressured 10-3/4" bradenhead with 200# for 30 minutes. No drop in pressure.
8. Waited on cement.
9. Pressured 5-1/2" casing with 500# for 30 minutes. No drop in pressure.
10. Pressured 7-5/8" casing with 300# for 30 minutes. No drop in pressure.
10. Drilled cement from 48' to 188'. Pressured 5-1/2" casing with 500# for 30 minutes. No drop in pressure. Drilled cement and retainer from 1208' to 1280'. Pressured 5-1/2" casing with 500#. Pressure dropped 200# in 5 seconds.
11. Ran 5-1/2" Howco DM cement retainer set at 1204'. Pumped 250 sacks regular cement below retainer. Squeezed 197 sacks regular cement in 6 stages with 800#. Reversed out approximately 21 sacks cement.
12. Waited on cement.
13. Pressured 5-1/2" casing with 500# for 30 minutes. No drop in pressure. Pressured 7-5/8" casing with 300# for 30 minutes. No drop in pressure.
14. Drilled cement and retainer from 1198' to 1370'. Pressured 5-1/2" casing with 500# for 30 minutes. No drop in pressure. Drilled out cement and bridge plug and cleaned out to 3975' TD.
15. Reran tubing and packer. Returned well to production.