## Re aired 7" casing leak and ran 5-1/2" liner as follows:

1. Perforated 3-1/2" tubing at 4052' with 2, 1/2" jet holes. Pulled tubing and packer. Ran steel line measurement to 4169'. Ran Gamma Ray—"eutron and short arm caliper.

2. Ran 2-7/8" tubing and \$ joints (255') 5-2/2" OD 14# Hydril FJ casing liner set at 4169'. Cemented with 40 sacks cement. Pulled 2-7/8" tubing.

3. Ran 2-7/8" tubing and 6-1/4" bit to 4169'. Pressured 7" casing and 5-1/2" liner with 1000#, dropped to 700# in 4 minutes. Fulled tubing and bit.

4. Ran 2-7/8" tubing with HRC tool. Tested 7" casing from 1007-3900', OK. Pull tubing and HRC tool. Ran 2-7/8" tubing and 7" cement retainer at 3900'. rumped 44 sacks resent below retainer. Pulled tubing.

5. Perforated 7" casing at 2000' with 2, 1/2" deflective shots. Ran 2-7/8" tubing and cement retainer at 1985'. Pumped 325 sacks cement thru perforations at 2000'. Circulated cement to surface. Squeezed with 800#. Fulled tubing. Pumped 300 sacks cement down 13-3/8" - 9-5/8" annulus.

\*\*Aximum Pressure 150#. W.C.

6. Presoured 7" casing with 1000# for 30 minutes, OK. Han 2-7/8" tubing and 6-1/4" bit and drilled cement to 2010 and retainer to 1985'. Pressured 7" casing with 1000# for 30 minutes, OK. Drilled cement and retainer to 3914'. Fulled tubing and bit. Ran 2-7/8" tubing and 4-3/4" bit and drilled cement to 3916', washed to TD 4169'. Pressured 7" casing and 5-1/2" liner with 1000# for 30 minutes, OK. Pulled tubing and bit.

7. Perforated 5-1/2" casing from 4100-4108', 4123-4128", 4138-4146' and 4157-4163' with 4, 1/2" jet holes per foot. han 9 joints 2-7/8" tubing and 131 joints 3-1/2" tubing with 7" Sweet mookwall packer at 3869'. Swabbed and well kicked off.

5-29,56

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