

Twenty Halliburton S-3 centralizers were used. These were placed as follows:

- A. 10' above shoe.
- B. Around collars of joints nos. 2, 4, 6, 8, 10, 12, 14, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56 and 60.

Thread lock was applied to the threads in differential fill shoe, shoe joint, differential fill collar and first joint above the collar.

Casing was cemented as follows:

- 1. Mixed and pumped 500 gal. mud flush.
- 2. Pumped 10 bbls. fresh water.
- 3. Mixed and pumped 900 sx. Class H cement with 3/4 of 1% CFR-2 and 5# KCL per sack (mixed 15.6#/gal., yield 1.18 ft.³/sx).
- 4. Dropped top rubber plug.
- 5. Washed pump and lines.
- 6. Displaced cement with 183 bbls. 3% KCL water.
- 7. Plug down @ 10:15 p.m. 10-30-75; pressure increased from 1500 to 2400 psig when plug landed.
- 8. Bled pressure; float held (full returns throughout cementing operations).

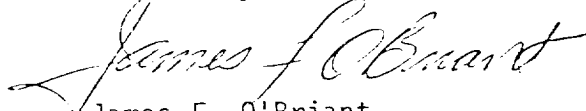
A temperature survey was taken; top of cement was indicated to be 9805' from surface. Wire line measurements indicate a plug back depth of 11,890' KB.

The hole was circulated for three hours with the rig pump. Pump pressure started at 450 psig and ended at 400 psig. Full returns were noted throughout the circulating time. No gas flares were noted.

The casing string weighed 143,000# according to the indicator. No weight was set on bottom; plug back depth is 12,280' KB.

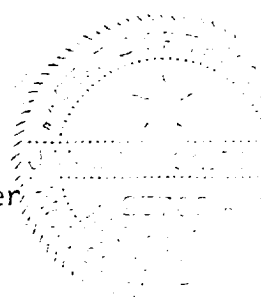
The slips were set, pack-offs, and well head set. The rig was released @ 11:00 a.m. 10-31-75.

Yours very truly,



James F. O'Briant

Registered Professional Engineer



JFO:css

Attachment:

Original field casing tally