

O'BRIANT ENGINEERING COMPANY

316 BUILDING OF THE SOUTHWEST
MIDLAND, TEXAS 79701
915 - 683-3172

JAMES F. O'BRIANT
RESIDENCE 694-8907
MOBILE 683-4044

EUGENE V. PRINTZ
RESIDENCE 694-1791
MOBILE 337-5634

W. H. GILMORE, JR.
RESIDENCE 682-5578

PECK HARDEE, JR.
RESIDENCE 683-3101
MOBILE 683-4083

March 29, 1976

Harvey E. Yates Company, Inc.
Suite 1000
Security National Bank Building
Roswell, New Mexico 88201

In Re: Production Casing - 4-1/2"
Pennzoil Federal No. 1
Eddy County, New Mexico

Gentlemen:

Production casing was placed in your Pennzoil Federal No. 1 well
March 25, 1976. All casing shown below is 4-1/2" O.D., N-80, LT&C:

1 - Halliburton differential fill shoe	2.23'
1 - Jt. 13.50#/ft. sand blasted casing	28.50'
1 - Halliburton differential fill collar	1.65'
62 - Jts. 13.50#/ft. sand blasted casing	1,869.99'
278 - Jts. 11.60#/ft. mill coated casing	8,663.53'
47 - Jts. 13.50#/ft. mill coated casing	<u>1,479.10'</u>
Total pipe	12,045.00'
KB to CHF	<u>14.00'</u>
Casing set at	12,059.00' KB

Notes:

Top of differential fill collar at 12,027' KB.
Top of 13.50# casing (lower section) @ 10,156.63' KB.
Top of 11.60# casing (mill coat) @ 1493' KB.
Top of 13.50# casing from 1493' KB to surface.

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

- A. Loose on shoe joint.
- B. Around collars of joints nos. 2, 4, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 22, 25, 35, 46, 50, 54, and 63.

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