

DRILLER'S LOG

HELMRICH & PAYNE, INC.  
 Pleasant Prairie Unit #77  
 C NW SE  
 Section 17 - 26s - 34w  
 Finney County, Kansas

Commenced: 12/18/81  
 Completed: 1/05/82

Surface casing: 793' of 8-5/8"  
 cmted w/350 sx 65-35 pozmix, 6%  
 gel, 3% cal, & 150 sx Class H,  
 3% cal, 1/4# floreal per sack.

FORMATIONDEPTH

|                    |                 |
|--------------------|-----------------|
| Surface Hole       | 0 - 805         |
| Clay, Sand         | 805 - 1350      |
| Gloretta           | 1350 - 1530     |
| Sand, Clay         | 1530 - 1820     |
| Clay               | 1820 - 1990     |
| Clay, Shale        | 1990 - 2280     |
| Shale              | 2280 - 2722     |
| Shale, Lime        | 2722 - 3158     |
| Shale              | 3158 - 3320     |
| Lime, Shale        | 3320 - 3525     |
| Shale, Lime        | 3525 - 3775     |
| Chalk, Shale, Lime | 3775 - 3985     |
| Shale, Lime        | 3985 - 4590     |
| Shale              | 4590 - 4695     |
| Lime, Shale        | 4695 - 4928     |
| Shale, Lime        | 4928 - 5020     |
| Shale, Chert       | 5020 - 5100     |
| Lime, Shale        | 5100 - 5200 RTD |

I do hereby certify that the foregoing statements are true and correct to the best of my knowledge and belief.

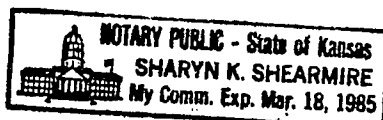
CHEYENNE DRILLING, INC.

*A. J. Jacques*

A. J. Jacques

STATE OF KANSAS: ss:

Subscribed and sworn to before me this 18th day of January, 1982.



*Sharyn K. Shearmire*

Sharyn K. Shearmire, Notary Public