

L. RAY DUNWOODY  
INTERNORTH STATE NO. 1

INTERMEDIATE CASING AND CEMENTING RECORD

8 5/8" Casing detail - top to bottom:

|                                   |             |
|-----------------------------------|-------------|
| 50 jts., 24#/ft., K-55, ST&C csg. | 1548.40'    |
| Insert float                      | -----       |
| 2 jts., 24#/ft., K-55, ST&C csg.  | 57.05       |
| Weld on collar                    | <u>0.50</u> |
| Total string - 52 jts.            | 1605.95'    |
| Setting depth                     | 1600' G.L.  |

Centralizers run on first and third collars.

Casing was cemented by Halliburton as follows:

Pumped 100 barrels gelled water, 5 barrels fresh water spacer, 24 barrels flow check 21, 15 barrels fresh water, 200 sacks thickset with 10 pounds gilsonite per sack, 1/4 pound flocele per sack and 2%  $\text{CaCl}_2$ , 500 sacks Halliburton Light with 10 pounds gilsonite per sack, 1/4 pound flocele per sack, and 2%  $\text{CaCl}_2$  and 150 sacks Class "C" with 2%  $\text{CaCl}_2$ . Displaced plug with 101.5 barrels fresh water at 4:45 A.M., April 14, 1981. Cement did not circulate.

Ran temperature survey -- top of cement at 425'. Ran 1" tubing to 374'. Cemented through 1" with 175 sacks Class "C" with 4%  $\text{CaCl}_2$ . Waited on cement 2 hours. Ran 1" to 374'. Cemented with 100 sacks Class "C" with 4%  $\text{CaCl}_2$ . Waited on cement 3 hours. Ran 1" to 374'. Dumped 3 yards pea gravel down annulus and cemented with 100 sacks Class "C" with 4%  $\text{CaCl}_2$ . Waited on cement 2 hours. Ran 1" to 374'. Dumped 10 yards pea gravel down annulus and cemented with 100 sacks thickset with 4%  $\text{CaCl}_2$  and 200 sacks Class "C" with 4%  $\text{CaCl}_2$ . Waited on cement 5 hours. Ran 1" to 373'. Cemented down annulus with 8 yards ready mix. Cement to surface at 9:00 P.M., April 15, 1981.