### WELL LOG

**OPERATOR:** George P. Crawford  
**WELL NAME:** Cooper #1  
**LOCATION:** NE/4 SW/4 SW/4 8-35-17W  
**COUNTY:** Rooks  
**STATE:** Kansas  
**WELL COMMENCED:** June 4, 1980  
**WELL COMPLETED:** June 10, 1980  
**ELEVATION:** none  
**TOTAL DEPTH:** 1316'  
**PRODUCTION:** D & A  
**RIG NO.:** #1  
**CASING:** 8-5/8': none, lost circulation & never got it back  
5-1/2": none  

**ALL MEASUREMENTS TAKEN FROM THE TOP OF ROTARY BUSHING:**

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
<th>FORMATION</th>
<th>DEVIATION</th>
<th>VERTICAL</th>
<th>REMARKS</th>
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</thead>
<tbody>
<tr>
<td>0'</td>
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<td>sand</td>
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<tr>
<td>44'</td>
<td>44'</td>
<td>sands and shales</td>
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<tr>
<td>44'</td>
<td>550'</td>
<td>sands and shales</td>
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<tr>
<td>550'</td>
<td>692'</td>
<td>sand and shale</td>
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<tr>
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<td>692'</td>
<td>sand and clay</td>
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<td>sand and shale</td>
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<td>1316'</td>
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<td>1316'</td>
<td>RTD</td>
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</tbody>
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**STATE OF KANSAS**  
**COUNTY OF**

The undersigned hereby certifies that to the best of his knowledge and belief, the above facts are true and correct.

**PIONEER DRILLING CO., INC.**

By Roger L. Comer

SUBSCRIBED AND SWORN TO, BEFORE ME, this 19th day of June, 1980.

**CONNIE JO AUSTIN**

STATE NOTARY PUBLIC  
ROOKS COUNTY, KS.  
KANSAS  
MY NOT. EXPIRED 1-26-83