

ARROW TESTING COMPANY
P. O. BOX 1051 GREAT BEND, KANSAS 67530

DRILL-STEM TEST DATA

Well Name	Berry-Froelich	Test No.	1
Well Number	2	Zone Tested	Ft. Scott
Company	Pate-Dombaugh Pet.	Date	11-26-89
Comp. Rep.	R. Dombaugh	Tester	Don Fabricius
Contractor	Mallard Drlg.	Ticket No.	2776
Location	36-16-25	Elevation	

Recorder No. <u>3088</u>	Clock Range <u>12</u>	Recorder No. <u>4377</u>	Clock Range <u>12</u>
Depth <u>4372</u>		Depth <u>4376</u>	
Initial Hydro Mud Press. <u>2220</u>		Initial Hydro Mud Press. <u>2231</u>	
Initial Shut-in Press. <u>896</u>		Initial Shut-in Press. <u>915</u>	
Initial Flow Press. <u>23-35</u>		Initial Flow Press. <u>46-46</u>	
Final Flow Press. <u>35-47</u>		Final Flow Press. <u>58-58</u>	
Final Shut-in Press. <u>1174</u>		Final Shut-in Press. <u>1169</u>	
Final Hydro Mud Press. <u>2220</u>		Final Hydro Mud Press. <u>2231</u>	
Temperature _____		Tool Open Before I. S. I. <u>30</u>	Mins.
Mud Weight <u>9.3</u>	Viscosity <u>43</u>	Initial Shut-in <u>45</u>	Mins.
Fluid Loss <u>11</u>		Flow Period <u>60</u>	Mins.
Interval Tested <u>4335-80</u>		Final Shut-in <u>60</u>	Mins.
Top Packer Depth <u>4330</u>		Surface Choke Size <u>1"</u>	
Bottom Packer Depth <u>4335</u>		Bottom Choke Size <u>3/4"</u>	
Total Depth <u>4380</u>		Main Hole Size <u>7 7/8</u>	
Drill Pipe Size <u>4 1/2</u> X H	Wt. <u>16.60</u>	Rubber Size <u>6 3/4</u>	
Drill Collar I. D. <u>2 1/4</u>	Ft. Run <u>330</u>		

Recovery—Total Feet _____

Recovered 240 Feet Of Gas in pipe

Recovered 30 Feet Of Very slightly oil cut mud

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Remarks

Very weak blow on initial flow

Weak building to fair blow on final flow

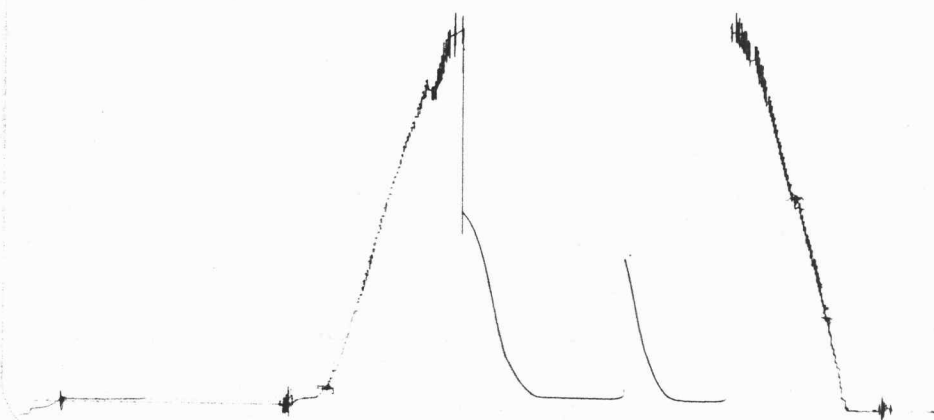
THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED. CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood and agreed that Arrow Testing Company shall not be responsible for damages or losses of any kind whatsoever occasioned by or incident to the use of the above described Tools, whether run or operated by customer, or by anyone employed directly or indirectly by Arrow Testing Company, nor whether resulting from the acts or omissions of Arrow Testing Company, or any of its agents, servants or employees in any way connected with or related to the use of such Tools.

It is expressly understood and agreed that Arrow Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Arrow Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the terms of this agreement and represent that I am authorized to sign the same as agent of customer.

By _____
Owner, Operator or his Agent

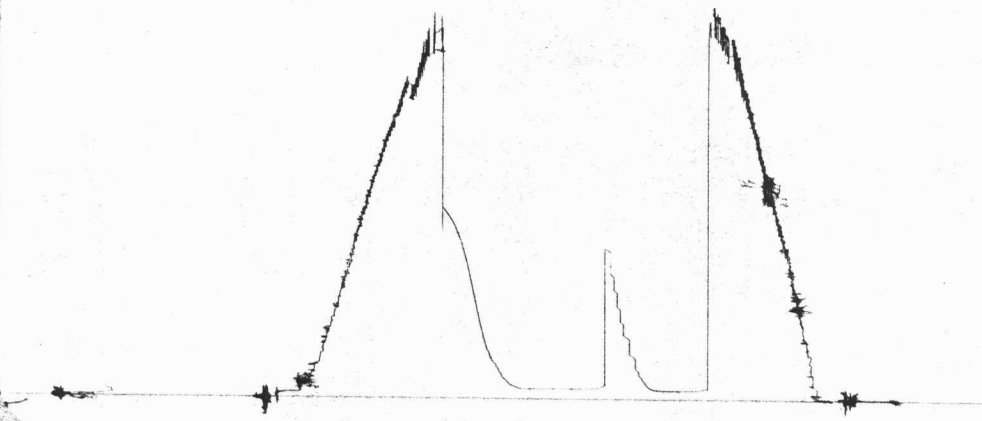
3088

2716



4377

2776



ARROW TESTING COMPANY
P. O. BOX 1051 GREAT BEND, KANSAS 67530

DRILL-STEM TEST DATA

Well Name	Berry-Froelich	Test No.	2
Well Number	2	Zone Tested	Mississippi
Company	Pate-Dombaugh Pet.	Date	11-27-89
Comp. Rep.	R. Dombaugh	Tester	Don Fabricius
Contractor	Mallard Drlg.	Ticket No.	2777
Location	36-16-25	Elevation	

Recorder No. <u>3088</u>	Clock Range <u>12</u>	Recorder No. <u>4377</u>	Clock Range <u>12</u>
Depth <u>4457</u>		Depth <u>4461</u>	
Initial Hydro Mud Press. <u>2299</u>		Initial Hydro Mud Press. <u>2299</u>	
Initial Shut-in Press. <u>1232</u>		Initial Shut-in Press. <u>1237</u>	
Initial Flow Press. <u>47-47</u>		Initial Flow Press. <u>58-58</u>	
Final Flow Press. <u>58-58</u>		Final Flow Press. <u>70-70</u>	
Final Shut-in Press. <u>1163</u>		Final Shut-in Press. <u>1169</u>	
Final Hydro Mud Press. <u>2299</u>		Final Hydro Mud Press. <u>2299</u>	
Temperature _____		Tool Open Before I. S. I. <u>30</u>	Mins.
Mud Weight <u>9.4</u>	Viscosity <u>44</u>	Initial Shut-in <u>45</u>	Mins.
Fluid Loss <u>8.4</u>		Flow Period <u>30</u>	Mins.
Interval Tested <u>4418-65</u>		Final Shut-in <u>45</u>	Mins.
Top Packer Depth <u>4413</u>		Surface Choke Size <u>1"</u>	
Bottom Packer Depth <u>4418</u>		Bottom Choke Size <u>3/4"</u>	
Total Depth <u>4465</u>		Main Hole Size <u>7 7/8</u>	
Drill Pipe Size <u>4 1/2</u> X H	Wt. <u>16.60</u>	Rubber Size <u>6 3/4</u>	
Drill Collar I. D. <u>2 1/4</u>	Ft. Run <u>330</u>		
Recovery—Total Feet _____			
Recovered <u>5</u>	Feet Of <u>free oil</u>		
Recovered <u>65</u>	Feet Of <u>very slightly oil cut mud</u>		
Recovered _____	Feet Of _____		
Recovered _____	Feet Of _____		
Remarks <u>Very weak blow thru test</u>			

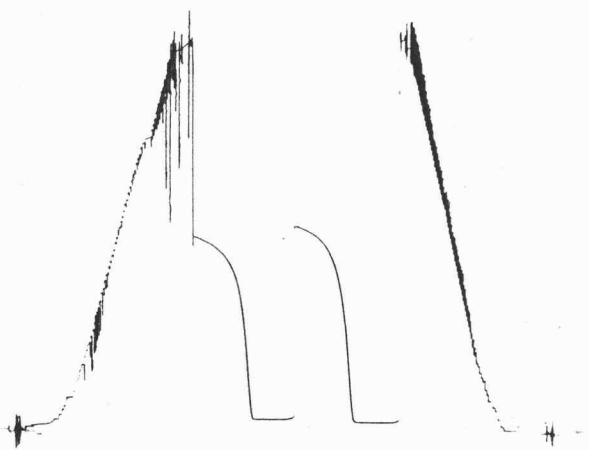
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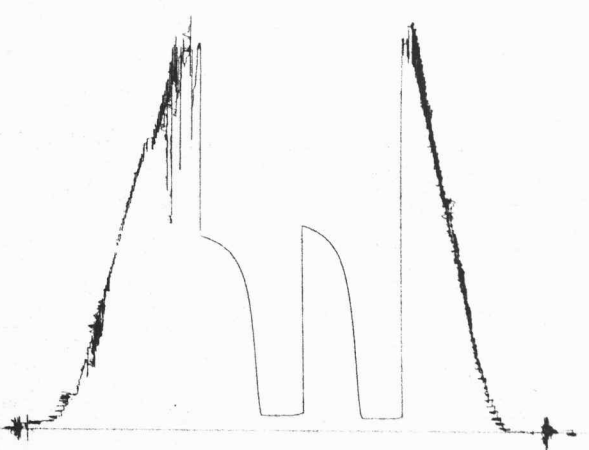
3088

2777



4377

2777



ARROW TESTING COMPANY

P. O. BOX 1051

GREAT BEND, KANSAS 67530

DRILL-STEM TEST DATA

Well Name	Berry-Froelich	Test No.	3
Well Number	2	Zone Tested	Mississippi
Company	Pate-Dombaugh Pet.	Date	11-28-89
Comp. Rep.	R. Dombaugh	Tester	Don Fabricius
Contractor	Mallard Drlg.	Ticket No.	2778
Location	36-16-25	Elevation	

Recorder No. 3088	Clock Range 12	Recorder No. 4377	Clock Range 12
Depth 4469		Depth 4473	
Initial Hydro Mud Press. 2301		Initial Hydro Mud Press. 2310	
Initial Shut-in Press. 1105		Initial Shut-in Press. 1100	
Initial Flow Press. 94-152		Initial Flow Press. 93-152	
Final Flow Press. 199-235		Final Flow Press. 199-234	
Final Shut-in Press. 1036		Final Shut-in Press. 1043	
Final Hydro Mud Press. 2301		Final Hydro Mud Press. 2310	
Temperature		Tool Open Before I. S. I. 30	Mins.
Mud Weight 9.4	Viscosity 44	Initial Shut-in 45	Mins.
Fluid Loss 8		Flow Period 60	Mins.
Interval Tested 4416-77		Final Shut-in 60	Mins.
Top Packer Depth 4411		Surface Choke Size 1"	
Bottom Packer Depth 4416		Bottom Choke Size 3/4"	
Total Depth 4477		Main Hole Size 7 7/8	
Drill Pipe Size 4 1/2 X H Wt. 16.60		Rubber Size 6 3/4	
Drill Collar I. D. 2 1/4 Ft. Run 330			
Recovery—Total Feet			
Recovered 180	Feet Of Slightly oil cut mud		
Recovered 255	Feet Of Oil cut mud		
Recovered	Feet Of		
Recovered	Feet Of		
Remarks	Weak building to strong blow thru test		

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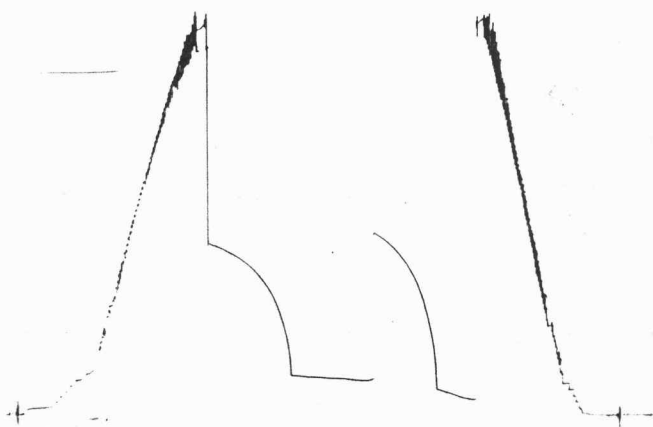
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Owner, Operator or his Agent

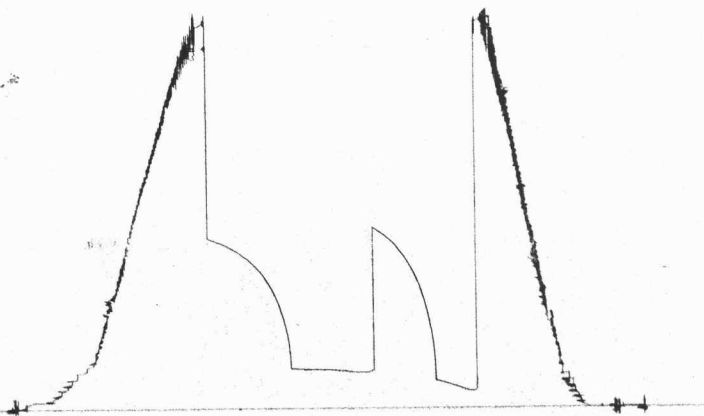
3088

2778



4377

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ARROW TESTING COMPANY
P. O. BOX 1051 GREAT BEND, KANSAS 67530

DRILL-STEM TEST DATA

Well Name	Berry-Frolich	Test No.	4
Well Number	2	Zone Tested	Mississippi
Company	Pate-Dombaugh Pet.	Date	11-28-89
Comp. Rep.	R. Dombaugh	Tester	Don Fabricius
Contractor	Mallard Drlg.	Ticket No.	2779
Location	36-16-25	Elevation	

Recorder No. <u>3088</u>	Clock Range <u>12</u>	Recorder No. <u>4377</u>	Clock Range <u>12</u>
Depth <u>4478</u>		Depth <u>4482</u>	
Initial Hydro Mud Press. <u>2310</u>		Initial Hydro Mud Press. <u>2310</u>	
Initial Shut-in Press. <u>931</u>		Initial Shut-in Press. <u>938</u>	
Initial Flow Press. <u>47-117</u>		Initial Flow Press. <u>58-129</u>	
Final Flow Press. <u>188-211</u>		Final Flow Press. <u>211-234</u>	
Final Shut-in Press. <u>896</u>		Final Shut-in Press. <u>903</u>	
Final Hydro Mud Press. <u>2310</u>		Final Hydro Mud Press. <u>2310</u>	
Temperature <u>3</u>		Tool Open Before I. S. I. <u>30</u>	Mins.
Mud Weight <u>9.4</u>	Viscosity <u>45</u>	Initial Shut-in <u>45</u>	Mins.
Fluid Loss <u>8</u>		Flow Period <u>60</u>	Mins.
Interval Tested <u>4470-86</u>		Final Shut-in <u>60</u>	Mins.
Top Packer Depth <u>4465</u>		Surface Choke Size <u>1"</u>	
Bottom Packer Depth <u>4470</u>		Bottom Choke Size <u>3/4"</u>	
Total Depth <u>4486</u>		Main Hole Size <u>7 7/8</u>	
Drill Pipe Size <u>4 1/2</u> X H	Wt. <u>16.60</u>	Rubber Size <u>6 3/4</u>	
Drill Collar I. D. <u>2 1/4</u>	Ft. Run <u>330</u>		
Recovery—Total Feet <u> </u>			
Recovered <u>30</u>	Feet Of <u>oil</u>		
Recovered <u>445</u>	Feet Of <u>water</u>		
Recovered <u> </u>	Feet Of <u> </u>		
Recovered <u> </u>	Feet Of <u> </u>		

Remarks

Weak building to strong blow thru test

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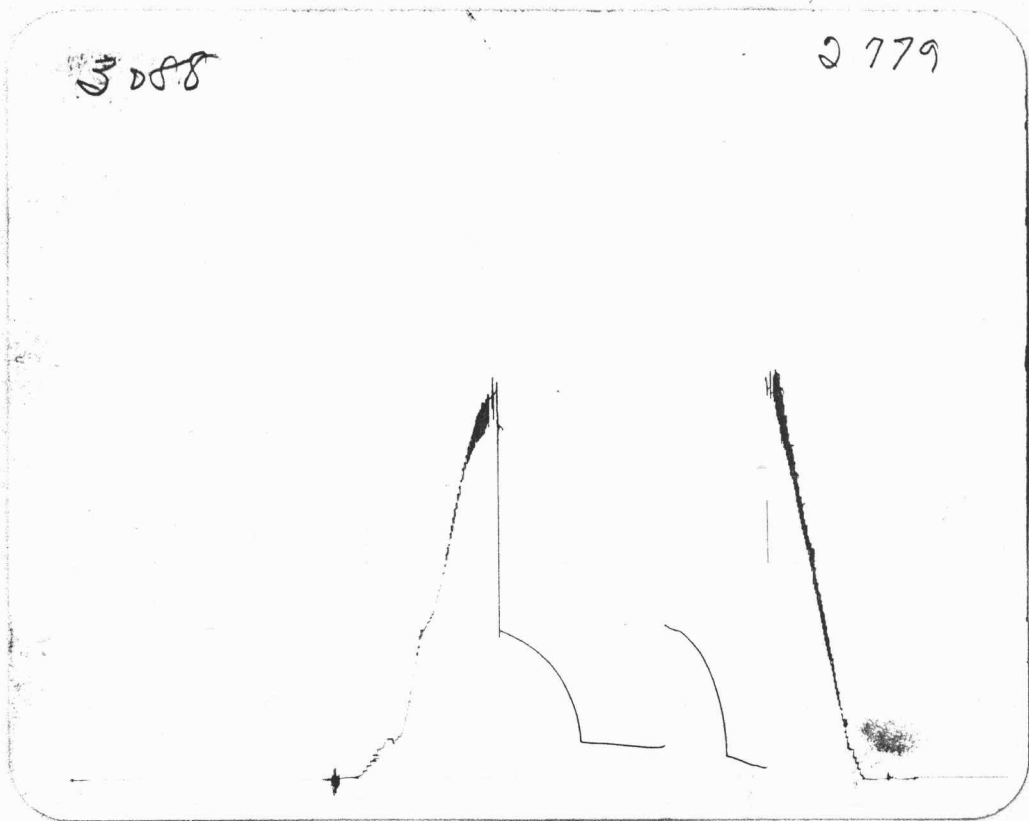
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By _____

Owner, Operator or his Agent

3088

2779



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2779

