

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

## DRILL-STEM TEST DATA

Well Name	<u>Haberman</u>	Test No.	<u>1</u>
Well Number	<u>3</u>	Zone Tested	<u>Arb</u>
Company	<u>J.A. Allison</u>	Date	<u>10-4-88</u>
Comp. Rep.	<u>O.R. Phelps</u>	Tester	<u>Don Fabricius</u>
Contractor	<u>Woodman-Iannitti Drilling Co.</u>	Ticket No.	<u>2654</u>
Location	<u>24-18-18</u>	Elevation	

Recorder No. <u>3088</u>	Clock Range <u>12</u>	Recorder No. <u>4377</u>	Clock Range <u>12</u>
Depth <u>3717</u>		Depth <u>3721</u>	
Initial Hydro Mud Press. <u>1935</u>		Initial Hydro Mud Press. <u>1924</u>	
Initial Shut-in Press. <u>1163</u>		Initial Shut-in Press. <u>1157</u>	
Initial Flow Press. <u>35-35</u>		Initial Flow Press. <u>35-35</u>	
Final Flow Press. <u>58-58</u>		Final Flow Press. <u>58-58</u>	
Final Shut-in Press. <u>1151</u>		Final Shut-in Press. <u>1146</u>	
Final Hydro Mud Press. <u>1935</u>		Final Hydro Mud Press. <u>1924</u>	
Temperature <u>112</u>		Tool Open Before I. S. I. <u>30</u>	Mins.
Mud Weight <u>9.5</u>	Viscosity <u>45</u>	Initial Shut-in <u>60</u>	Mins.
Fluid Loss <u>10</u>		Flow Period <u>30</u>	Mins.
Interval Tested <u>3698-3725</u>		Final Shut-in <u>60</u>	Mins.
Top Packer Depth <u>3693</u>		Surface Choke Size <u>1"</u>	
Bottom Packer Depth <u>3698</u>		Bottom Choke Size <u>3/4"</u>	
Total Depth <u>3725</u>		Main Hole Size <u>7 7/8</u>	
Drill Pipe Size <u>4 1/2 X H</u>	Wt. <u>16.60</u>	Rubber Size <u>6 3/4</u>	
Drill Collar I. D. _____	Ft. Run _____		
Recovery—Total Feet _____			
Recovered <u>60</u> Feet Of <u>muddy oil</u>			
Recovered _____ Feet Of _____			
Recovered _____ Feet Of _____			
Recovered _____ Feet Of _____			
Remarks			
<u>Weak blow thru-test</u>			

**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.

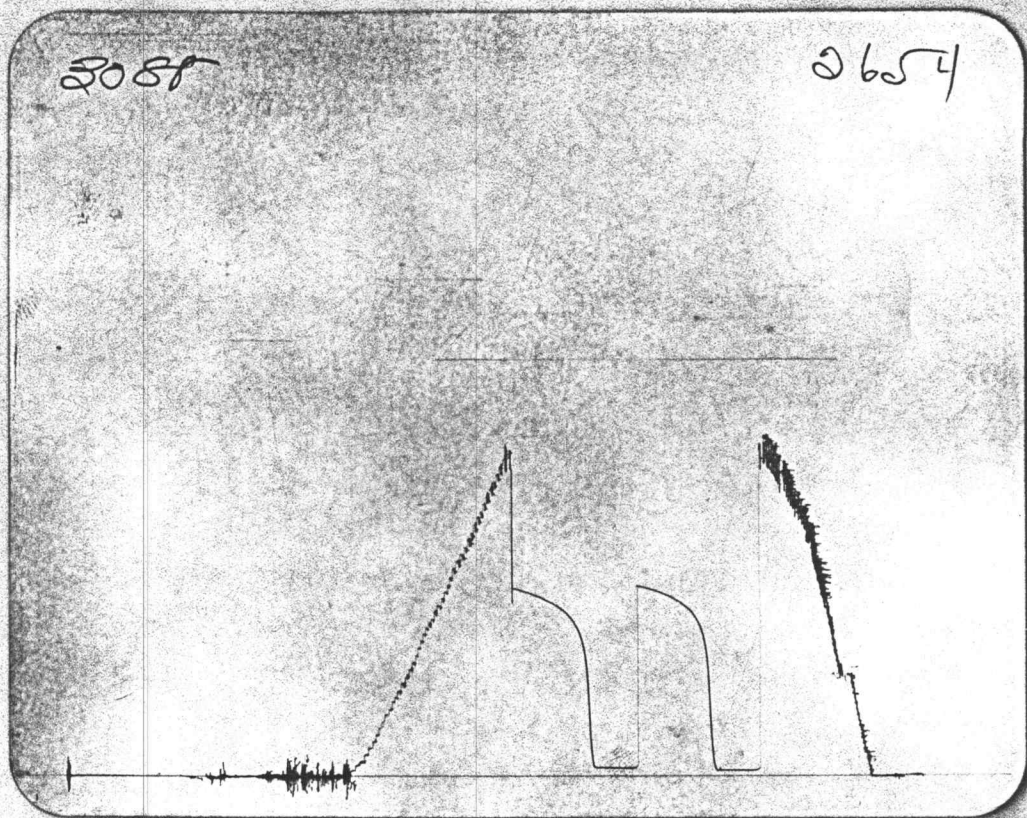
It is expressly understood and agreed that Arrow Testing Company, shall not be bound by any agreement, not herein contained, and no agent or representative connected with or employed by Arrow Testing Company has authority to alter or extend the terms of this agreement. I have read and understand the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

By \_\_\_\_\_

Owner, Operator or his Agent

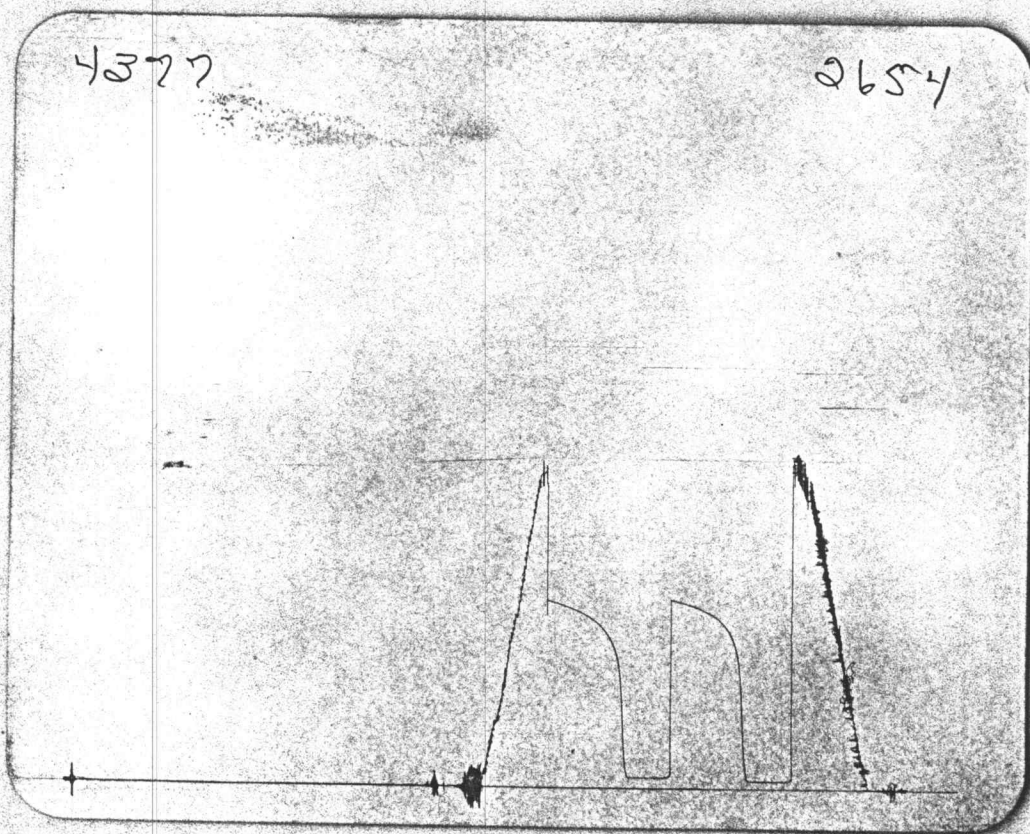
2088

2654



4377

2654



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

**DRILL-STEM TEST DATA**

Well Name	Haberman	Test No.	2
Well Number	3	Zone Tested	Arb
Company	J.A. Allison	Date	10-5-88
Comp. Rep.	O.R. Phelps	Tester	Don Fabricius
Contractor	Woodman Iannitti Drilling Co.	Ticket No.	2655
Location	24-18-18	Elevation	

Recorder No. <u>3088</u>	Clock Range <u>12</u>	Recorder No. <u>4377</u>	Clock Range <u>12</u>
Depth <u>3721</u>		Depth <u>3725</u>	
Initial Hydro Mud Press. <u>1923</u>		Initial Hydro Mud Press. <u>1924</u>	
Initial Shut-in Press. <u>1232</u>		Initial Shut-in Press. <u>1237</u>	
Initial Flow Press. <u>47-70</u>		Initial Flow Press. <u>70-70</u>	
Final Flow Press. <u>94-117</u>		Final Flow Press. <u>117-129</u>	
Final Shut-in Press. <u>1220</u>		Final Shut-in Press. <u>1215</u>	
Final Hydro Mud Press. <u>1923</u>		Final Hydro Mud Press. <u>1924</u>	
Temperature <u>112</u>		Tool Open Before I. S. I. <u>30</u>	Mins.
Mud Weight <u>9.5</u>	Viscosity <u>45</u>	Initial Shut-in <u>60</u>	Mins.
Fluid Loss <u>10.4</u>		Flow Period <u>30</u>	Mins.
Interval Tested <u>3697-3729</u>		Final Shut-in <u>60</u>	Mins.
Top Packer Depth <u>3692</u>		Surface Choke Size <u>1"</u>	
Bottom Packer Depth <u>3697</u>		Bottom Choke Size <u>3/4"</u>	
Total Depth <u>3729</u>		Main Hole Size <u>7 7/8</u>	
Drill Pipe Size <u>4 1/2 X H</u>	Wt. <u>16.60</u>	Rubber Size <u>6 3/4</u>	
Drill Collar I. D. _____	Ft. Run _____		
Recovery—Total Feet _____			
Recovered <u>120</u> Feet Of <u>gas in pipe</u>			
Recovered <u>208</u> Feet Of <u>oil</u>			
Recovered <u>32</u> Feet Of <u>mud</u>			
Recovered _____ Feet Of _____			

Remarks

Weak building to strong blow thru-test

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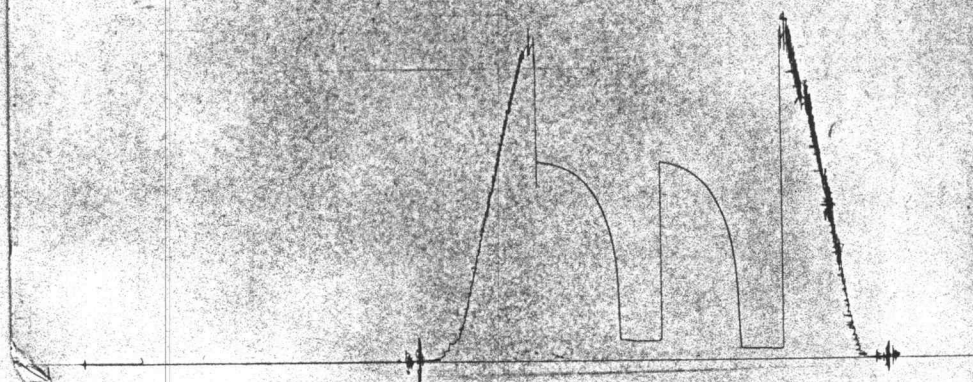
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By \_\_\_\_\_

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