ARROW TESTING COMPANY

15-051-20917 P. O. BOX 1051 GREAT BEND, KANSAS 67530 22-14s-19w

DRILL-STEM TEST DATA

Well Name	Kraus	Test No.	1
Well Number	1	Zone Tested	KC
Company	Pate-Dombaugh-Martin Exp.	Date	9-11-73
Comp. Rep.	Ray Dombaugh	Tester	Don Fabricius
Contractor	Dreiling Oil Co.	Ticket No.	744
Location	22-14-19	Elevation	2118KB

Recorder No.	3088	Recorder No.	207
Clock Range	12	Clock Range	8
Depth	3518	Depth	3522
Initial Hydro Mud Press.	1890	Initial Hydro Mud Press.	1930
Initial Shut-in Press.	1077	Initial Shut-in Press.	1044
Initial Flow Press.	70-117	Initial Flow Press.	80
Final Flow Press.	140-176	Final Flow Press.	180
Final Shut-in Press.	1054	Final Shut-in Press.	1030
Final Hydro Mud Press.	1890	Final Hydro Mud Press.	1930
Temperature	112	Tool Open Before I. S. I.	30 Mins.
Mud Weight	10	Viscosity 43	Initial Shut-in 30 Mins.
Fluid Loss	17	Flow Period	30 Mins.
Interval Tested	3470-3526	Final Shut-in	30 Mins.
Top Packer Depth	3465	Surface Choke Size	1"
Bottom Packer Depth	3470	Bottom Choke Size	3/4
Total Depth	3526	Main Hole Size	7 7/8
Drill Pipe Size	4½FH	Wt. 1660	Rubber Size 6 3/4
Drill Collar I. D.		Ft. Run	

Recovery—Total Feet 260

Recovered 140 Feet Of Slightly oil and gas cut mud

Recovered 60 Feet Of Slightly oil and gas cut watery mud

Recovered 60 Feet Of Muddy water

Recovered _____ Feet Of _____

Remarks

Strong blow thru test

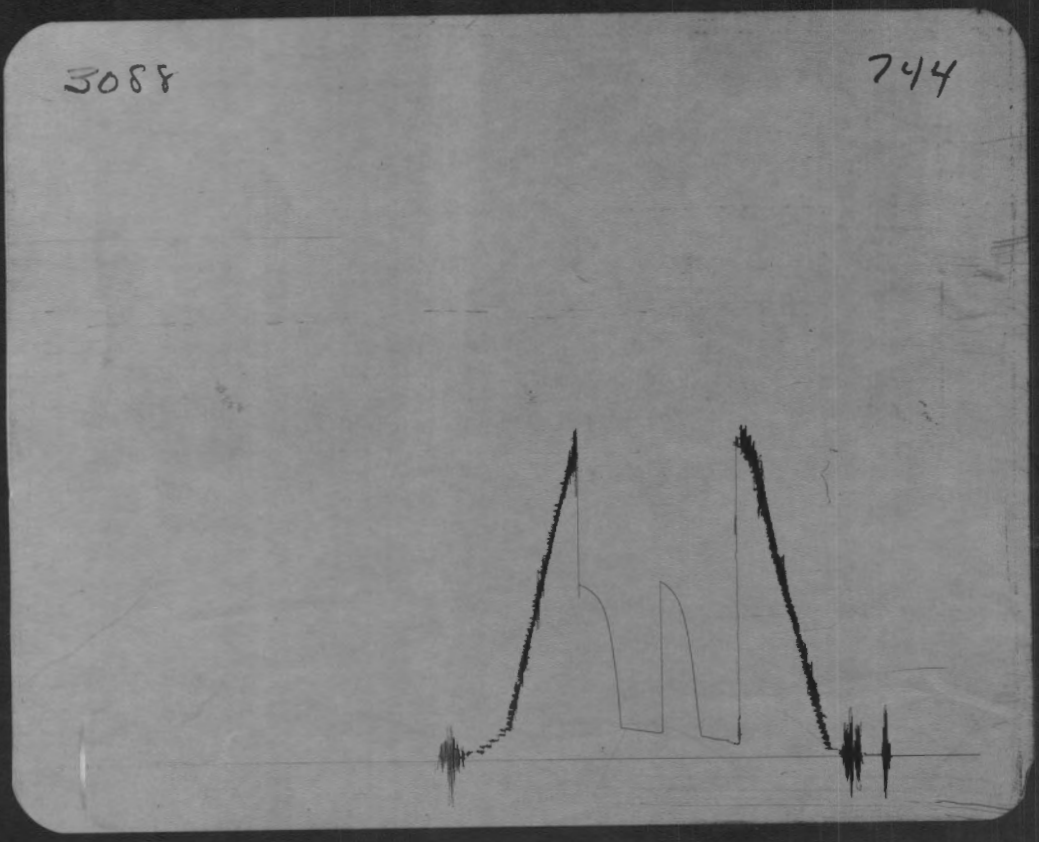
THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED. CONDITIONS: It is expressly understood and agreed that the above described work shall be done under the exclusive control, direction and supervision of the owner or contractor. As a part of the consideration for this agreement, it is expressly understood 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.

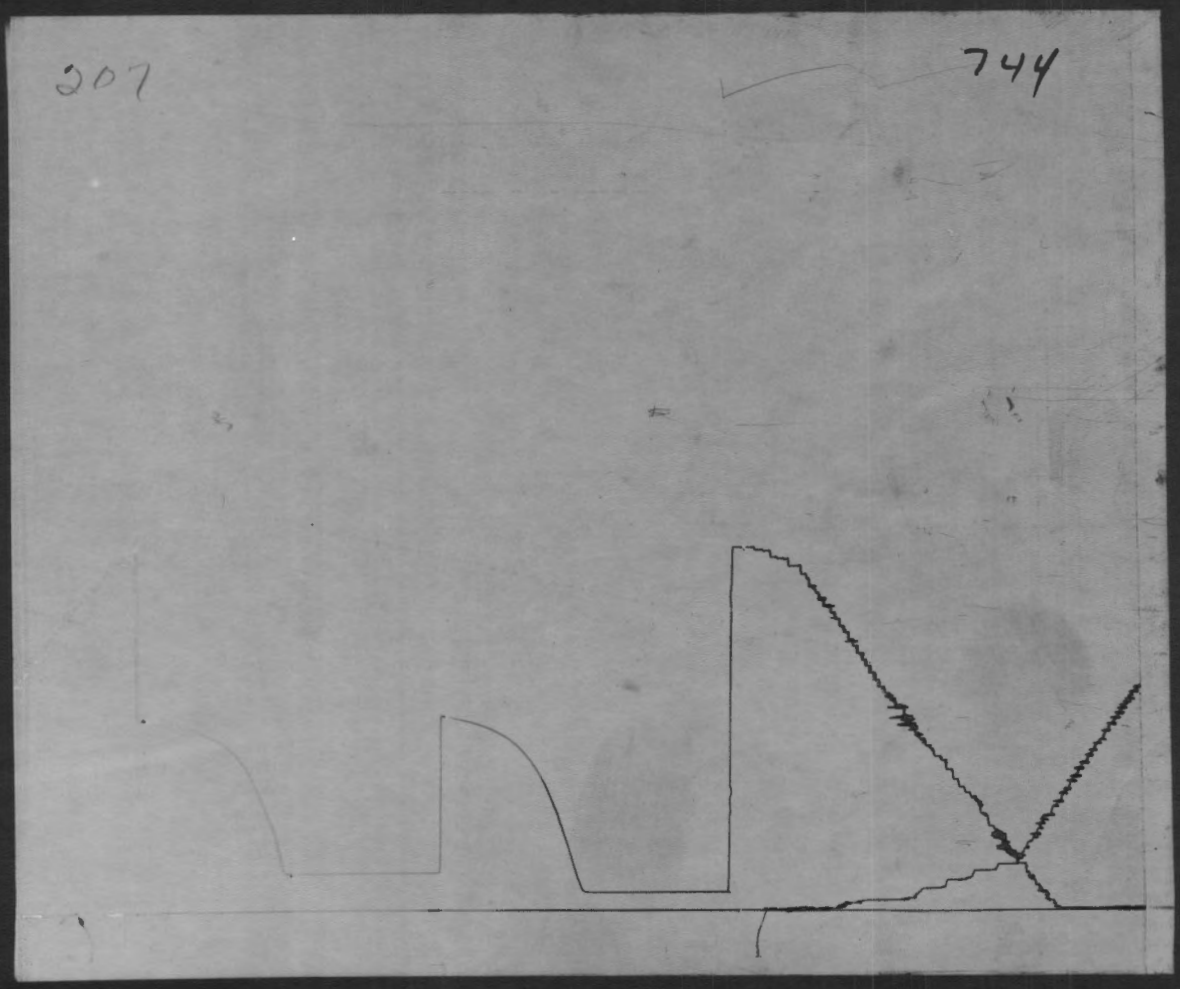
By _____

Owner, Operator or his Agent

3088 744



207 744



ARROW TESTING COMPANY

P. O. BOX 1051 GREAT BEND, KANSAS 67530

DRILL-STEM TEST DATA

Well Name	Kraus	Test No.	2
Well Number	1	Zone Tested	Arb
Company	Pate-Dombaugh-Martin Exp.	Date	9-13-73
Comp. Rep.	Ray Dombaugh	Tester	Don Fabricius
Contractor	Dreiling Oil	Ticket No.	745
Location	22-14-19	Elevation	2118KB

Recorder No.	3088	Recorder No.	207
Clock Range	12	Clock Range	8
Depth	3740	Depth	3758
Initial Hydro Mud Press.	2027	Initial Hydro Mud Press.	2060
Initial Shut-in Press.	1123	Initial Shut-in Press.	1090
Initial Flow Press.	46-58	Initial Flow Press.	40
Final Flow Press.	70-105	Final Flow Press.	90
Final Shut-in Press.	1123	Final Shut-in Press.	1090
Final Hydro Mud Press.	2027	Final Hydro Mud Press.	2060
Temperature	118	Tool Open Before I. S. I.	30 Mins.
Mud Weight	10	Viscosity 41	Initial Shut-in 30 Mins.
Fluid Loss	15	Flow Period	45 Mins.
Interval Tested	3754-62	Final Shut-in	45 Mins.
Top Packer Depth	3745	Surface Choke Size	1"
Bottom Packer Depth	3754	Bottom Choke Size	3/4"
Total Depth	3762	Main Hole Size	7 7/8
Drill Pipe Size	4½FH	Wt. 1660	Rubber Size 6 3/4
Drill Collar I. D.		Ft. Run	

Recovery—Total Feet 220

Recovered _____ Feet Of _____

Recovered 160 Feet Of Gassy oil 25° Gravity

Recovered 60 Feet Of Muddy oil

Recovered _____ Feet Of _____

Remarks

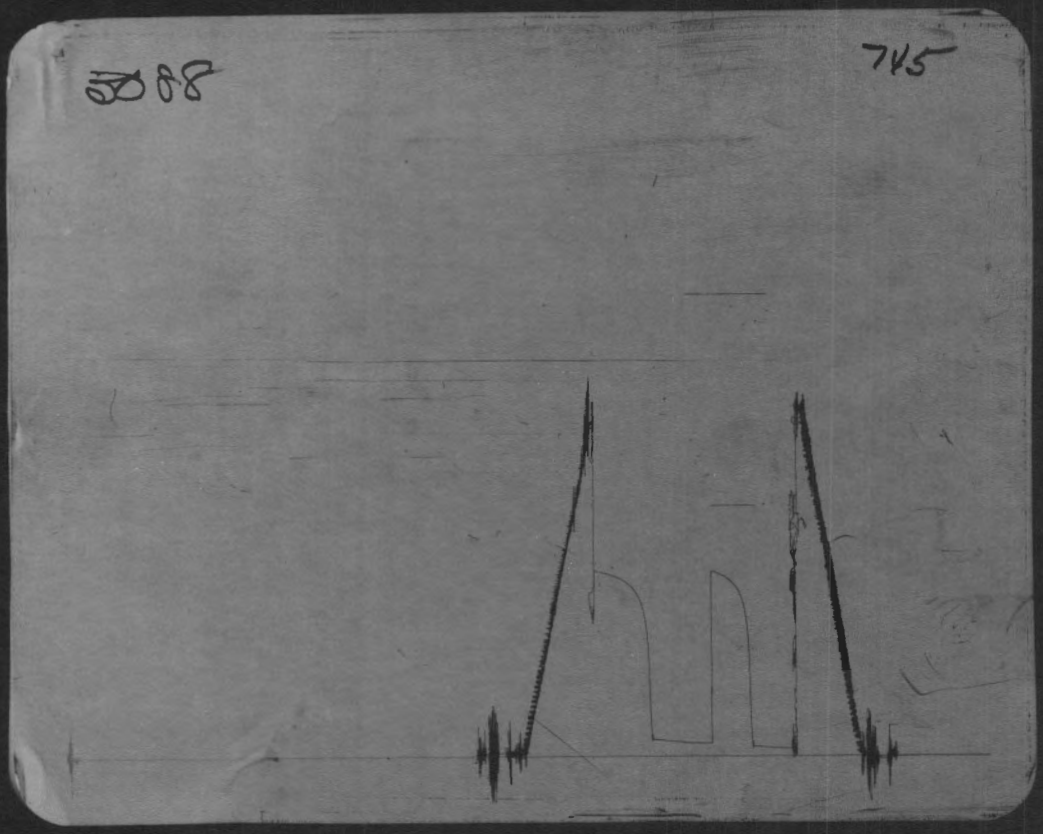
Strong blow on initial opening - fair blow on second opening

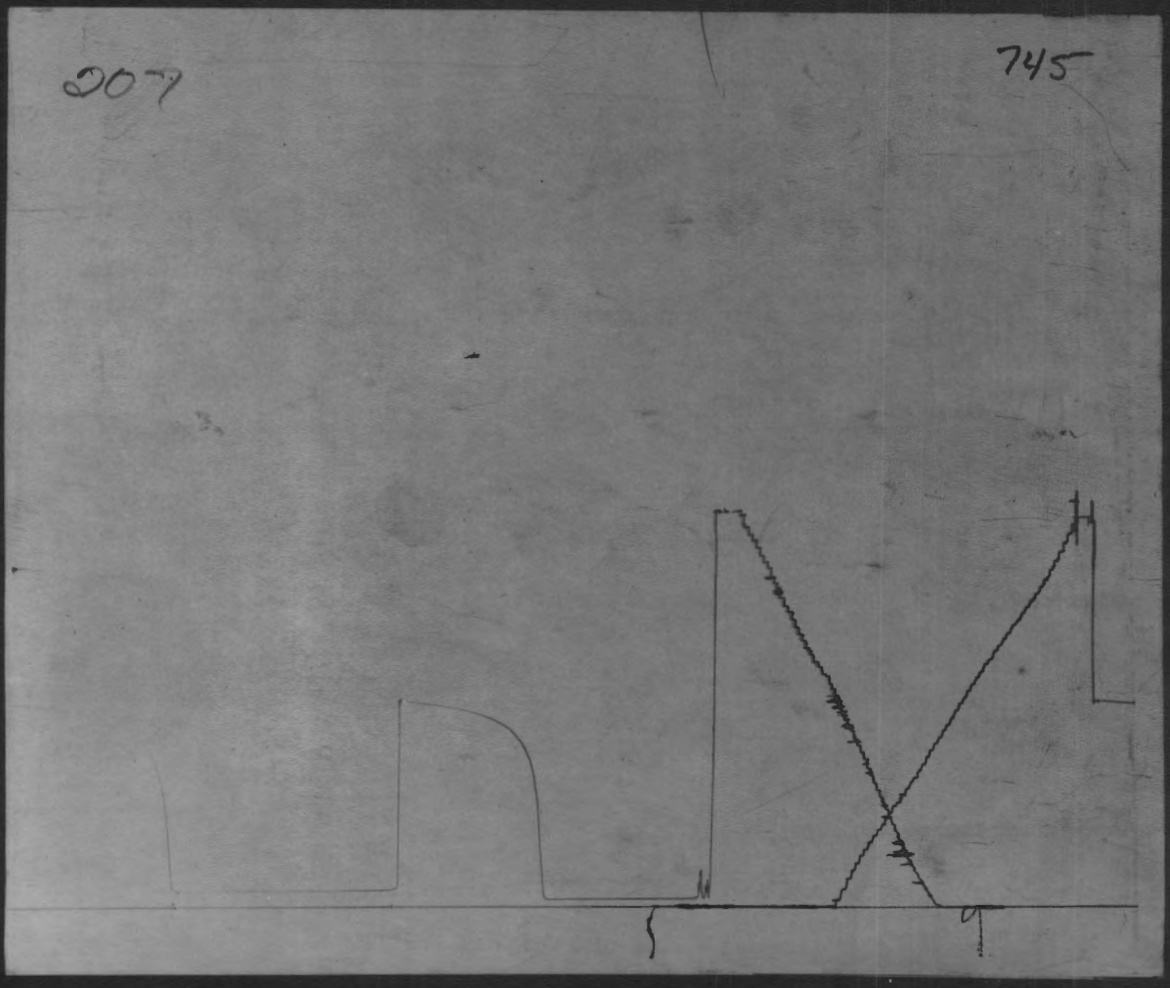
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By _____

Owner, Operator or his Agent


5088
745


2077
745