

FLUID SAMPLE DATA			Date	6-15-77	Ticket Number	226317
Sampler Pressure _____ P.S.I.G. at Surface			Kind of Job	OPEN HOLE TEST	Halliburton District	PRATT
Recovery: Cu. Ft. Gas _____			Tester	G. GEORGE	Witness	
cc. Oil _____			Drilling Contractor	TH S GABBERT & JONES DRILLING COMPANY #9		
cc. Water _____			EQUIPMENT & HOLE DATA			
cc. Mud _____			Formation Tested	Kansas City		
Tot. Liquid cc. _____			Elevation	2094'	KB	Ft.
Gravity	_____ ° API @ _____ ° F.		Net Productive Interval	_____ Ft.		
Gas/Oil Ratio	_____ cu. ft./bbl.		All Depths Measured From	Kelly Bushing		
	RESISTIVITY	CHLORIDE CONTENT	Total Depth	4230' Ft.		
Recovery Water	_____ @ _____ ° F.	_____ ppm	Main Hole/Casing Size	7 7/8"		
Recovery Mud	_____ @ _____ ° F.	_____ ppm	Drill Collar Length	310'	I.D.	2.25"
Recovery Mud Filtrate	_____ @ _____ ° F.	_____ ppm	Drill Pipe Length	3819'	I.D.	3.826"
Mud Pit Sample	_____ @ _____ ° F.	_____ ppm	Packer Depth(s)	4154' - 4160' Ft.		
Mud Pit Sample Filtrate	_____ @ _____ ° F.	_____ ppm	Depth Tester Valve	4142' Ft.		
Mud Weight	9.7 vis	42 sec				

Cushion	TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Recovered	1345	Feet of	saltwater.	1"	.75"
Recovered		Feet of			
Recovered		Feet of			
Recovered		Feet of			
Recovered		Feet of			
Remarks	See Production Test Data Sheet . . .				

TEMPERATURE	Gauge No. 1831	Gauge No. 1830	Gauge No.	TIME		
	Depth: 4146 Ft.	Depth: 4226 Ft.	Depth: _____ Ft.			
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool A.M.		
Est. _____ ° F.	Blanked Off NO	Blanked Off YES	Blanked Off	Opened 0635 P.M.		
Actual 4224 125 ° F.	Pressures	Pressures	Pressures	Opened A.M.		
	Field	Office	Field	Bypass 0935 P.M.		
Initial Hydrostatic		2124	2150	2163	Reported	Computed
Flow Initial		20	19	72	Minutes	Minutes
Flow Final		260	314	298	30	30
Closed in		1423	1442	1458	30	30
Flow Initial		270	314	306		
Flow Final		615	647	649	90	90
Closed in		1391	1405	1425	30	30
Flow Initial						
Flow Final						
Closed in						
Final Hydrostatic		2137	2150	2174		

Legal Location
Sec. - Twp. - Rng. 4 - 27 - 16

Lease Name
BAKER

Well No. 2

Test No. 1

Tested Interval
4160' - 4230'

Field Area
Mea. From Tester Valve

County
KIOWA

State
KANSAS

Lease Owner/Company Name
J. MARK RICHARDSON

Gauge No. 1831		Depth 4146		Clock No. 14117		12 hour		Ticket No. 226317			
First Flow Period		First Closed In Pressure		Second Flow Period		Second Closed In Pressure		Third Flow Period		Third Closed In Pressure	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$
0	.0000	20	.0000	.0000	270	.0000	.0000	.0000	615		
1	.0340	104	.0136	.1008	340	.1008	.0132	.0132	1277		
2	.0680	143	.0272	.2017	406	.2017	.0264	.0264	1307		
3	.1020	175	.0408	.3025	465	.3025	.0396	.0396	1326		
4	.1360	204	.0544	.4033	519	.4033	.0528	.0528	1339		
5	.1700	233	.0680	.5042	568	.5042	.0660	.0660	1348		
6	.2040	260	.0816	.6050	615	.6050	.0792	.0792	1355		
7			.0952				.0924		1362		
8			.1088				.1056		1367		
9			.1224				.1188		1371		
10			.1360				.1320		1375		
11			.1496				.1452		1379		
12			.1632				.1584		1382		
13			.1768				.1716		1385		
14			.1904				.1848		1388		
15			.2040				.1980		1391		

Gauge No. 1830		Depth 4226		Clock No. 2478		12 hour	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	72	.0000	.0000	306	.0000	649
1	.0333	153	.0136	.1008	377	.0133	1306
2	.0667	185	.0272	.2017	441	.0265	1342
3	.1000	226	.0408	.3025	502	.0398	1360
4	.1333	245	.0544	.4033	555	.0530	1373
5	.1667	272	.0680	.5042	603	.0663	1381
6	.2000	298	.0816	.6050	649	.0796	1389
7			.0952			.0928	1395
8			.1088			.1061	1401
9			.1224			.1193	1405
10			.1360			.1326	1410
11			.1496			.1459	1414
12			.1632			.1591	1416
13			.1768			.1724	1420
14			.1904			.1856	1423
15			.2040			.1990	1425
Reading Interval	5			15		2	Minutes

EQUIPMENT DATA

REMARKS:

9



	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	2"	1'	
Water Cushion Valve				
Drill Pipe	4.25"	3.826"	3819'	
Drill Collars	6"	2.25"	310'	
XXXXXX	6"	2"	1' CROSS OVER	
Dual CIP Valve	5"	.87"	6'	4137'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4142'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3"	4'	4146'
Hydraulic Jar	5"	1.50"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	6'	4154'
Distributor				
Packer Assembly	6.75"	1.53"	6'	4160'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor	5"	2.37"	8'	
CROSS OVER	6"	2"	1'	
Drill Collars	6"	2.25"	31'	
CROSS OVER	6"	2"	2'	
Flush Joint Anchor	5"	2.37"	20'	
HT - 500	5"	2"	2'	
Blanked-Off B.T. Running Case	5"	2.44"	4'	4226'
Total Depth				4230'

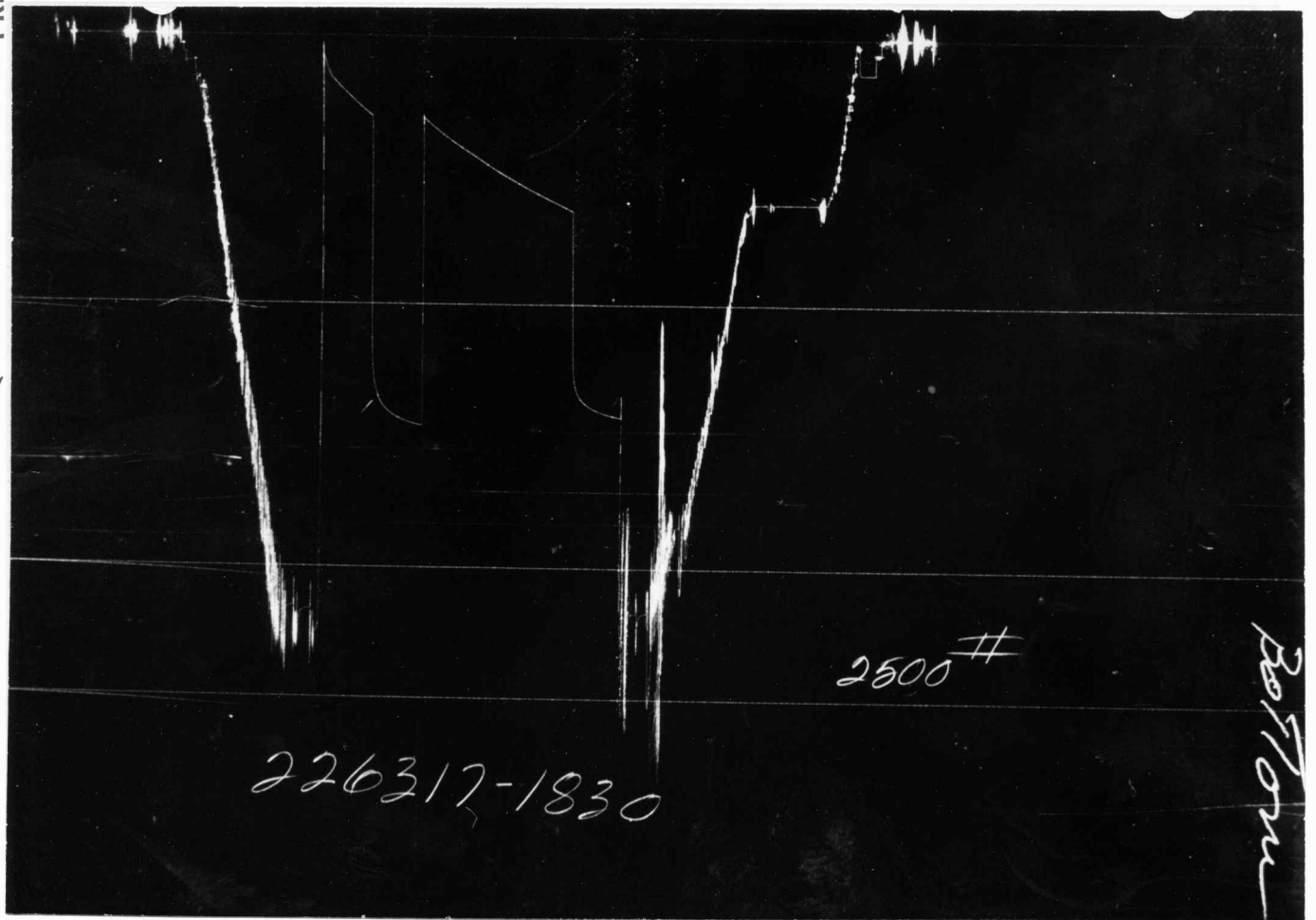
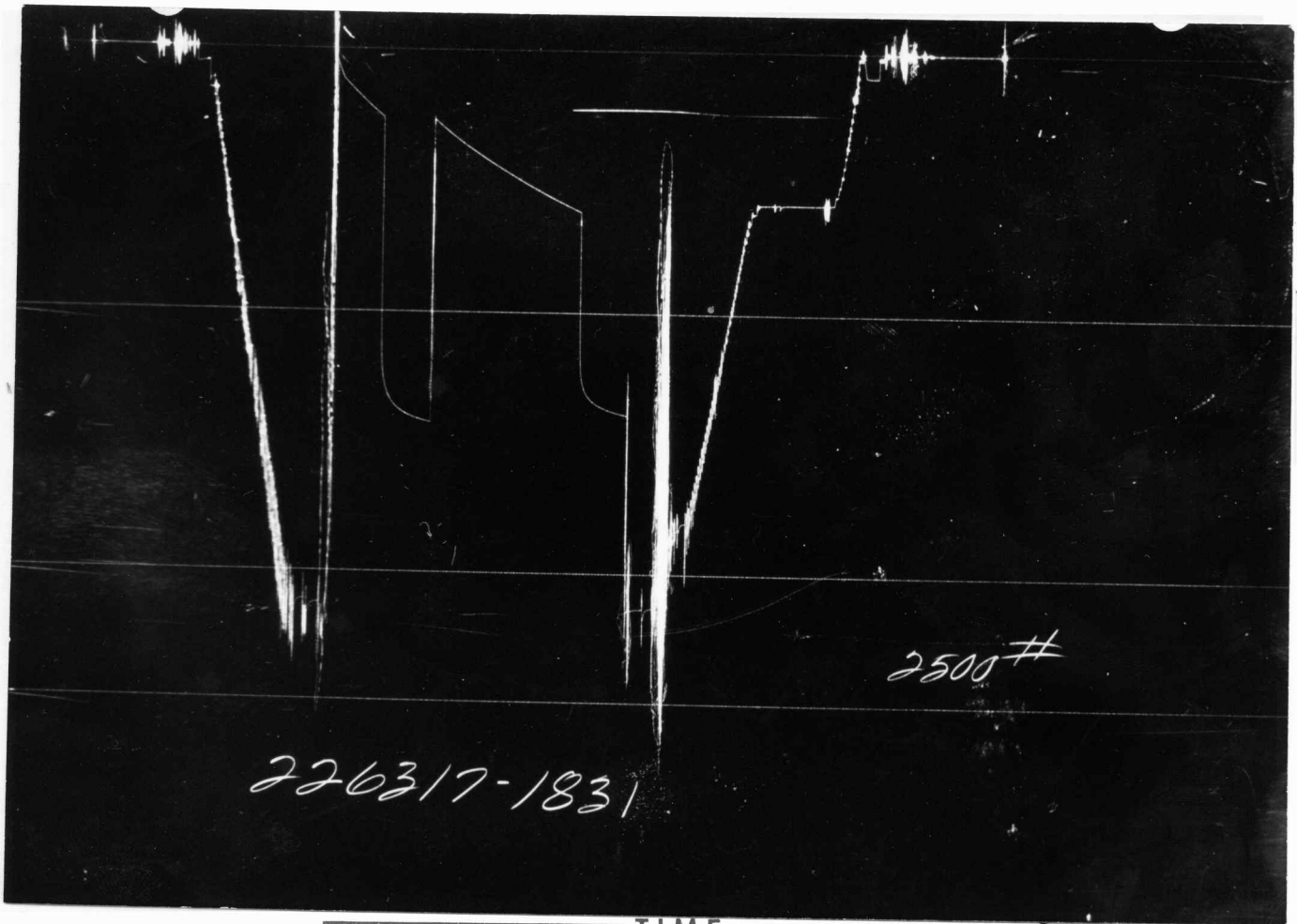
TEMPERATURE RECORDER CHART



10° each circle

- OF₃ = Theoretical Open Flow Potential with/Damage Removed Max. MCF/D
- OF₄ = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
- P_s = Extrapolated Static Pressure Psig.
- P_f = Final Flow Pressure Psig.
- P_o = Potentiometric Surface (Fresh Water *) Feet
- Q = Average Adjusted Production Rate During Test bbls/day
- Q₁ = Theoretical Production w/Damage Removed bbls/day
- Q_g = Measured Gas Production Rate MCF/D
- R = Corrected Recovery bbls
- r_w = Radius of Well Bore Feet
- t = Flow Time Minutes
- t_o = Total Flow Time Minutes
- T = Temperature Rankine °R
- Z = Compressibility Factor —
- μ = Viscosity Gas or Liquid CP
- Log = Common Log

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100° F.



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA				Date	6-17-77	Ticket Number	190670
Sampler Pressure _____ P.S.I.G. at Surface				Kind of Job	OPEN HOLE	Halliburton District	PRATT
Recovery: Cu. Ft. Gas _____				Tester	MR. SMYLIE	Witness	MR. RICHARDSON
cc. Oil _____				Drilling Contractor	GABBERT-JONES DRILLING COMPANY # 9 bjs		
cc. Water _____				EQUIPMENT & HOLE DATA			
cc. Mud _____				Formation Tested	Mississippian		
Tot. Liquid cc. _____				Elevation	2091' DF		Ft.
Gravity	_____ ° API @ _____ ° F.	RESISTIVITY		Net Productive Interval	10'		Ft.
Gas/Oil Ratio	_____ cu. ft./bbl.	CHLORIDE CONTENT		All Depths Measured From	Kelly Bushing		
Recovery Water	_____ @ _____ ° F. _____ ppm			Total Depth	4515'		Ft.
Recovery Mud	_____ @ _____ ° F. _____ ppm			Main Hole/Casing Size	7 7/8"		
Recovery Mud Filtrate	_____ @ _____ ° F. _____ ppm			Drill Collar Length	218'	I.D. 2.25"	
Mud Pit Sample	_____ @ _____ ° F. _____ ppm			Drill Pipe Length	4019'	I.D. 3.826"	
Mud Pit Sample Filtrate	_____ @ _____ ° F. _____ ppm			Packer Depth(s)	4464'		Ft.
Mud Weight	9.7 vis 52 sec			Depth Tester Valve	4447'		Ft.

Cushion	TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Blow Hose	Bottom Choke
			Ft.		1/4"	3/4"

Recovered	165'	Feet of mud.	
Recovered		Feet of	
Recovered		Feet of	
Recovered		Feet of	
Recovered		Feet of	

Remarks SEE PRODUCTION TEST DATA SHEET....

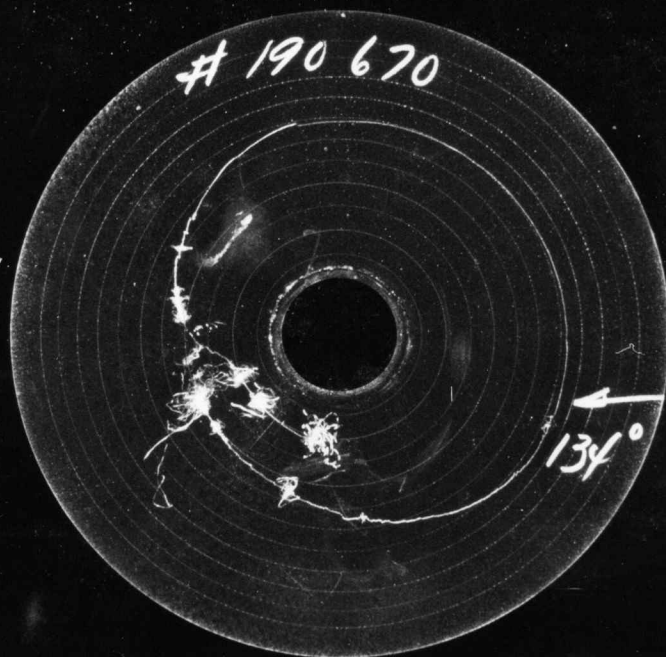
TEMPERATURE	Gauge No. 6763		Gauge No. 6762		Gauge No.		TIME	
	Depth:	4449' Ft.	Depth:	4511' Ft.	Depth:	Ft.		
Est. _____ ° F.	12 Hour Clock		12 Hour Clock		Hour Clock		Tool	A.M.
	Blanked Off NO		Blanked Off YES		Blanked Off		Opened	1105 P.M.
Actual 4510' 134 ° F.	Pressures		Pressures		Pressures		Opened	A.M.
	Field	Office	Field	Office	Field	Office	Bypass	1335 P.M.
Initial Hydrostatic		2353	2395	2389			Reported	Computed
First Period	Flow Initial	32	62	76			Minutes	Minutes
	Flow Final	96	246	248				
	Closed in	99	246	248			30	
Second Period	Flow Initial	97	246	241				
	Flow Final	97	246	246			60	
	Closed in	102	246	246			30	
Third Period	Flow Initial							
	Flow Final							
	Closed in							
Final Hydrostatic		2353	2374	2389				

Legal Location Sec. - Twp. - Rng. _____
 Lease Name BAKER
 Well No. 2
 Test No. 2
 Tested Interval 4447' to 4515'
 County KANSAS
 State KANSAS
 Lease Owner/Company Name J. MARK RICHARDSON



	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	5.75"	2.50"	1'	
Water Cushion Valve				
Drill Pipe	4.50"	3.826"	4019'	
Drill Collars	6"	2.25"	218'	
Handling Sub & Choke Assembly	5"	2.50"	5'	
Dual CIP Valve	5"	.87"	5'	4442'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4447'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	4449'
Hydraulic Jar	5"	1"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	6'	4464'
Distributor				
Packer Assembly				
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars	6"	2.25"	30'	
Flush Joint Anchor	5"	2.37"	10'	
Blanked-Off B.T. Running Case	5"	2.50"	4'	4511'
Total Depth				4515'

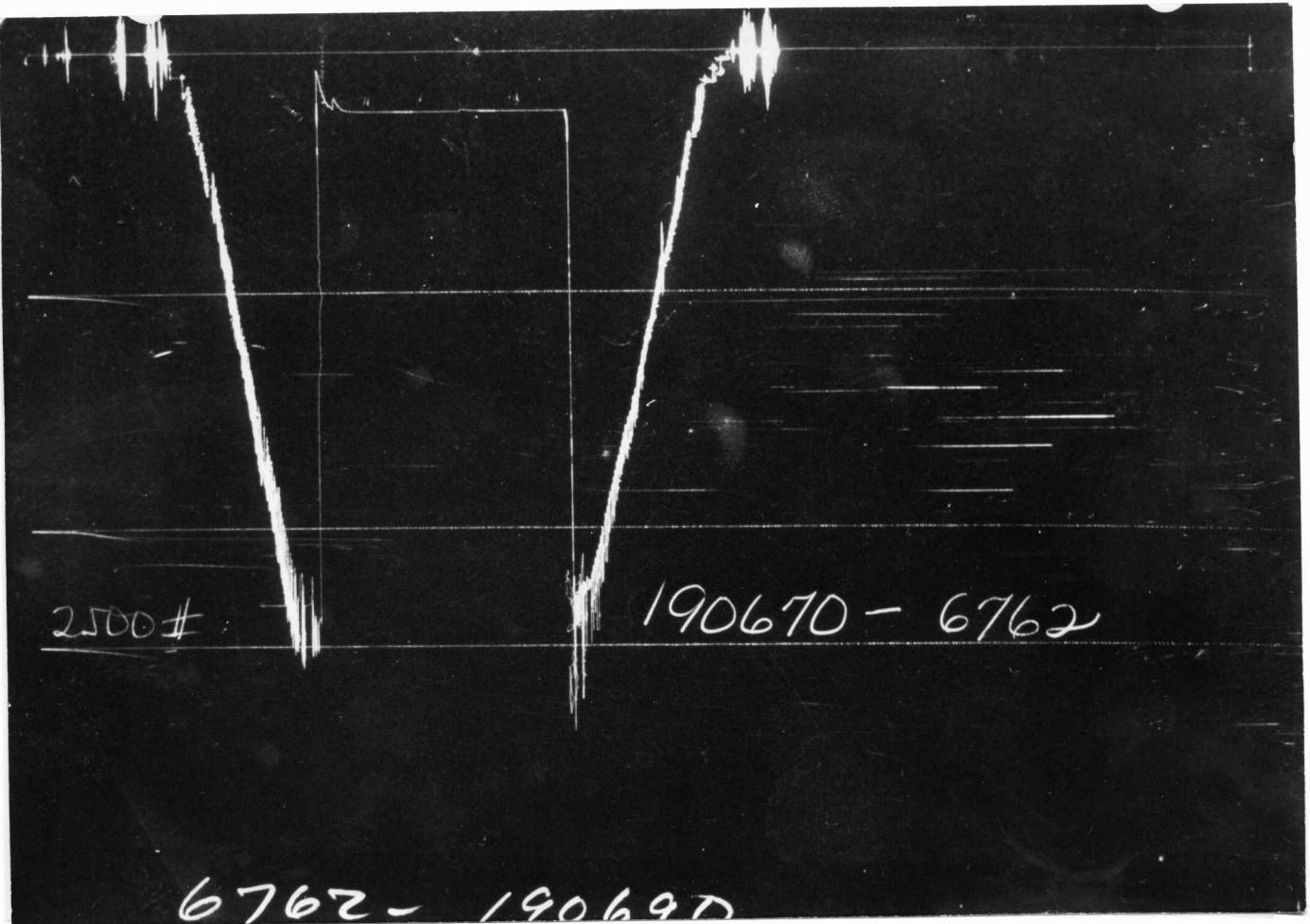
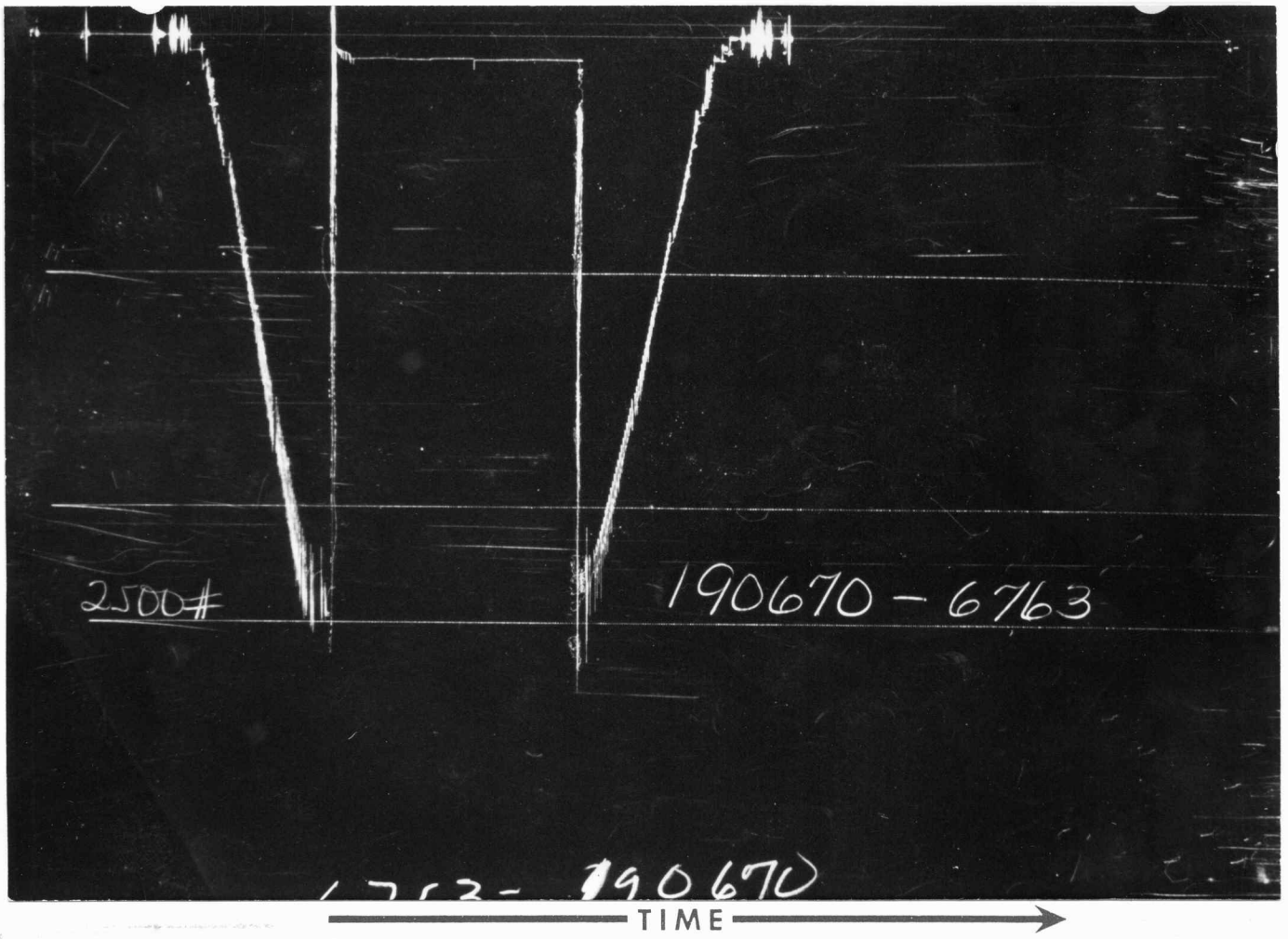
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