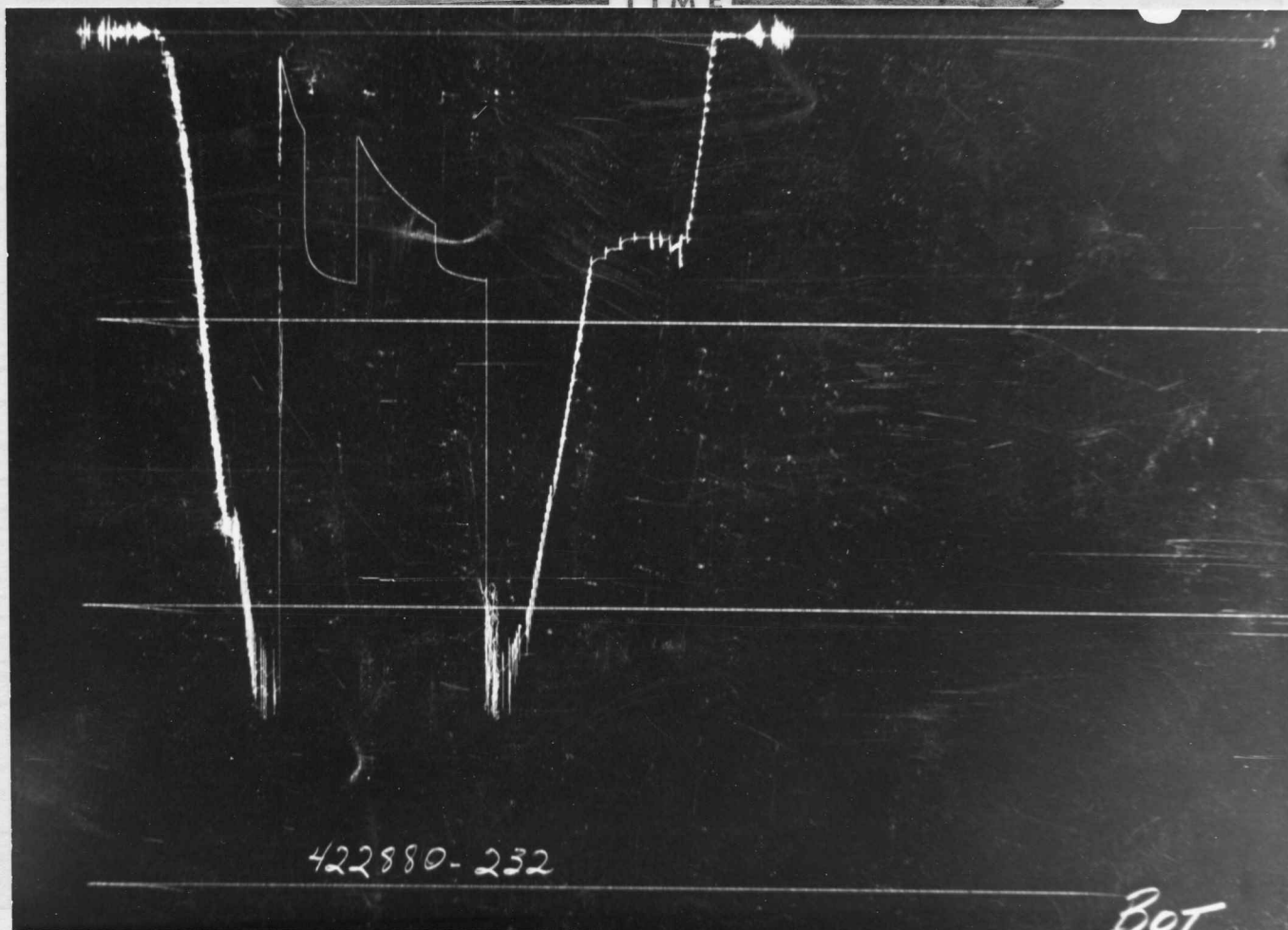
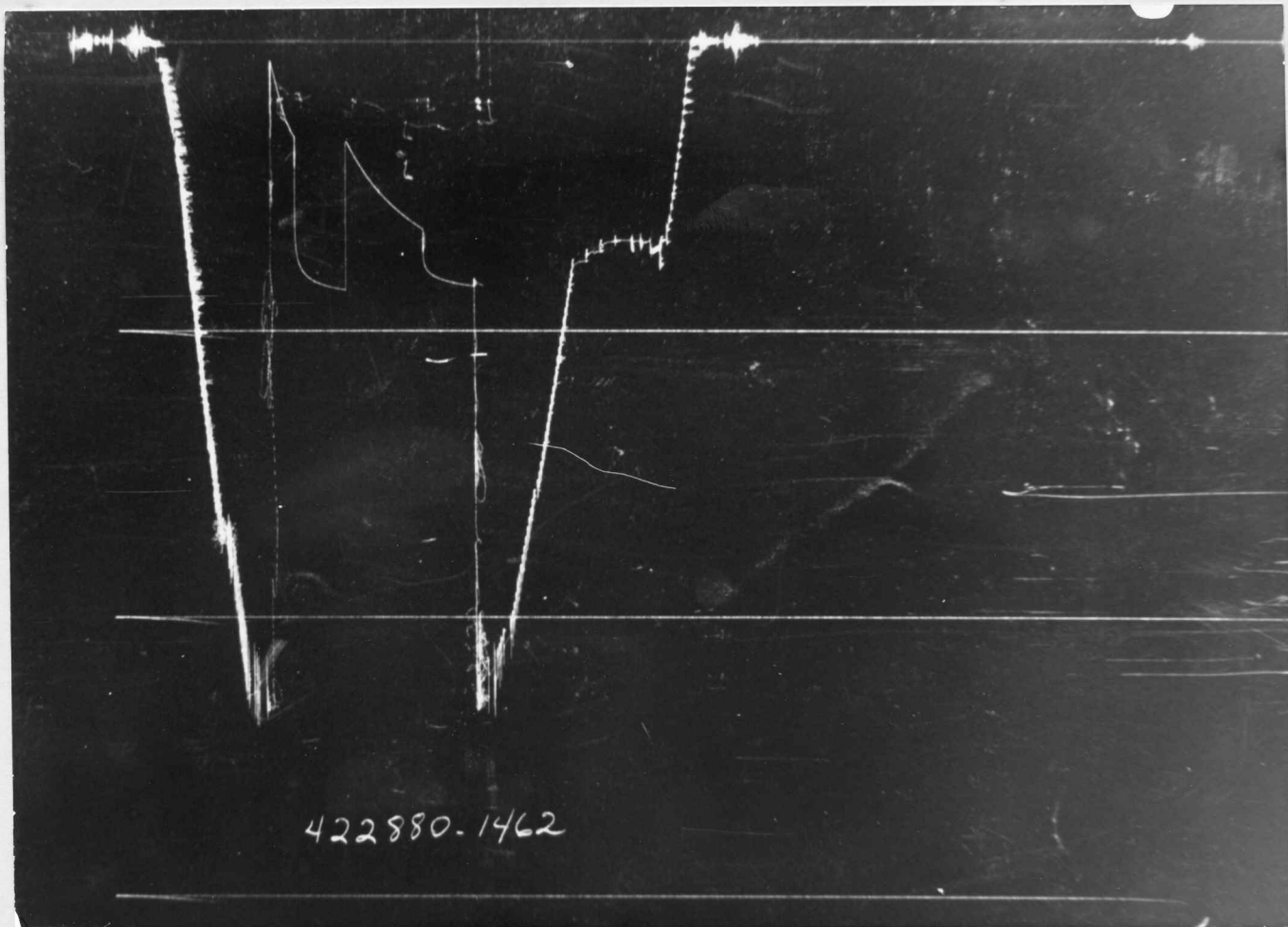


PRESSURE



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

BOT

Flow Time	1st 15	Min.	2nd 45	Min.	Date	10-4-65	Ticket Number	422880 - S
Closed In Press. Time	1st 30	Min.	2nd 30	Min.	Kind of Job	OPEN HOLE	Halliburton District	GREAT BEND
Pressure Readings	Field		Office Corrected		Tester	MR. MOORE	Witness	MR. MC CULLOM
Depth Top Gauge	4196	Ft.	NO	Blanked Off	Drilling Contractor	PEEL BROTHERS INCORPORATED	IC	
BT. P.R.D. No.	1462		12	Hour Clock	Elevation	2201' D.F.	Top Packer	-
Initial Hydro Mud Pressure	2281		2224		Total Depth	4223'	Bottom Packer	4203'
Initial Closed in Pres.	875		865		Interval Tested	4203'-4223'	Formation Tested	CHEROKEE
Initial Flow Pres.	64	1	67		Casing or Hole Size	7 7/8"	Casing Perfs. { Top Bot.	-
Final Flow Pres.	330	2	352		Surface Choke	1"	Bottom Choke	3/4"
Final Closed in Pres.	339	1	334		Size & Kind Drill Pipe	FLEX WEIGHT 2.476" x 510' 4 1/2" ACME	Drill Collars Above Tester	I.D. - LENGTH 2 1/4" x 88'
Final Hydro Mud Pressure	660	2	655		Mud Weight	10	Mud Viscosity	53
Depth Cen. Gauge		Ft.		Blanked Off	Temperature	108	Anchor Size & Length	ID OD 4 1/2" x 20'
BT. P.R.D. No.				Hour Clock	Depths Mea. From	KELLY BUSHINGS	Depth of Tester Valve	4187' Ft.
Initial Hydro Mud Pres.					TYPE	AMOUNT	Depth Back Pres. Valve	- Ft.
Initial Closed in Pres.					Cushion	-		- Ft.
Initial Flow Pres.		1			Recovered	201	Feet of	Slightly oily mud
Final Flow Pres.		2			Recovered	1294	Feet of	Slightly oily saltwater
Final Closed in Pres.		1			Recovered		Feet of	
Final Hydro Mud Pres.		2			Recovered		Feet of	
Depth Bot. Gauge	4219	Ft.	YES	Blanked Off	Oil A.P.I. Gravity	-	Water Spec. Gravity	-
BT. P.R.D. No.	232		12	Hour Clock	Gas Gravity	-	Surface Pressure	- psi
Initial Hydro Mud Pres.	2293		2240		Tool Opened	2:10 PM	A.M. P.M. Tool Closed	4:10 PM A.M. P.M.
Initial Closed in Pres.	882		879		Remarks	Opened tool for 15 minute 1st flow with a strong blow. Closed tool for 30 minute initial		
Initial Flow Pres.	90	1	87			closed in pressure. Reopened tool for 45 minute		
Final Flow Pres.	351	2	368			2nd flow with a strong blow. Closed tool for		
Final Closed in Pres.	360	1	348			30 minute final closed in pressure.		
Final Hydro Mud Pres.	666	2	668					
Final Closed in Pres.	864		865					
Final Hydro Mud Pres.	2257		2226					

FORMATION TEST DATA

HAGERMAN
Legal Location
Sec. 13 - 20S - 20W
B-1
Well No.
1
Test No.
CITIES SERVICE OIL COMPANY
Lease Owner/Company Name
PAWNEE
County
State
KANSAS
Owner's District

Gauge No. 1462		Depth 4196'		Clock 12 hour		Ticket No. 422880				
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure			
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\phi}{\phi}$	PSIG Temp. Corr.
P ₀	.000	67	.000		334	.000	352	.000		655
P ₁	.0192	135	.020		780	.0602	440	.0198		803
P ₂	.0384	201	.040		811	.1204	514	.0396		817
P ₃	.0576	261	.060		827	.1806	571	.0594		825
P ₄	.0768	303	.080		838	.2408	618	.0792		831
P ₅	.0960	334	.100		845	.3010	655	.0990		837
P ₆			.120		851			.1188		841
P ₇			.140		855			.1386		845
P ₈			.160		859			.1584		847
P ₉			.180		863			.1782		850
P ₁₀			.200		865			.1980		852

Gauge No. 232			Depth 4219'			Clock 12		hour	
P ₀	.000	87	.000		348	.000	368	.000	668
P ₁	.0196	148	.0205		793	.0612	456	.0197	815
P ₂	.0392	216	.0410		823	.1224	531	.0394	830
P ₃	.0588	277	.0615		840	.1836	586	.0591	838
P ₄	.0784	317	.0820		851	.2448	633	.0788	845
P ₅	.0980	348	.1025		858	.3060	668	.0985	850
P ₆			.1230		865			.1182	854
P ₇			.1435		869			.1379	857
P ₈			.1640		873			.1576	860
P ₉			.1845		875			.1773	863
P ₁₀			.2050		879			.1970	865
Reading Interval 3			3			9		3 Minutes	

REMARKS:

SPECIAL PRESSURE DATA

Flow Time	1st 30	Min.	2nd 60	Min.	Date	10-5-65	Ticket Number	422881 - S
Closed In Press. Time	1st 30	Min.	2nd 30	Min.	Kind of Job	OPEN HOLE	Halliburton District	GREAT BEND
Pressure Readings	Field		Office Corrected		Tester	MR. MOORE	Witness	MR. MC CULLOM
Depth Top Gauge	4227	Ft.	NO	Blanked Off	Drilling Contractor	PEEL BROTHERS INCORPORATED	IC	
BT. P.R.D. No.	1462		12	Hour Clock	Elevation	2201' D.F.	Top Packer	-
Initial Hydro Mud Pressure	2190		2199		Total Depth	4248'	Bottom Packer	4234'
Initial Closed in Pres.	1125		1120		Interval Tested	4234' - 4248'	Formation Tested	CONGLOMERATE
Initial Flow Pres.	18	1	18		Casing or Hole Size	7 7/8"	Casing Perfs. { Top Bot.	-
Final Flow Pres.	187	2	194		Surface Choke	1"	Bottom Choke	3/4"
Final Closed in Pres.	1116		1115		Size & Kind Drill Pipe	FLEX WEIGHT 2.476" x 510' 4 1/2" ACME	Drill Collars Above Tester	I.D. - LENGTH 2 1/4" x 88'
Final Hydro Mud Pressure	2154		2183		Mud Weight	10	Mud Viscosity	50
Depth Cen. Gauge		Ft.		Blanked Off	Temperature	109	Anchor Size & Length	ID 4 1/2" X 14'
BT. P.R.D. No.				Hour Clock	Depths Mea. From	KELLY BUSHINGS	Depth of Tester Valve	4217' Ft.
Initial Hydro Mud Pres.					TYPE	AMOUNT	Depth Back Pres. Valve	Ft.
Initial Closed in Pres.					Cushion			
Initial Flow Pres.		1			Recovered	874	Feet of Muddy saltwater	
Final Flow Pres.		2			Recovered		Feet of	
Final Closed in Pres.		1			Recovered		Feet of	
Final Hydro Mud Pres.		2			Recovered		Feet of	
Depth Bot. Gauge	4244	Ft.	YES	Blanked Off	Oil A.P.I. Gravity	-	Water Spec. Gravity	-
BT. P.R.D. No.	232		12	Hour Clock	Gas Gravity	-	Surface Pressure	psi
Initial Hydro Mud Pres.	2257		2211		Tool Opened	6:10	A.M. Tool Closed	8:40 A.M.
Initial Closed in Pres.	1134		1129		Remarks	Opened tool for 30 minute 1st flow with a		
Initial Flow Pres.	27	1	29			weak steady blow. Closed tool for 30 minute		
Final Flow Pres.	198	2	205			initial closed in pressure. Reopened tool for		
Final Closed in Pres.	1134		1123			60 minute 2nd flow with weak blow throughout		
Final Hydro Mud Pres.	2230		2195			test. Closed tool for 30 minute final closed		
						in pressure.		

FORMATION TEST DATA

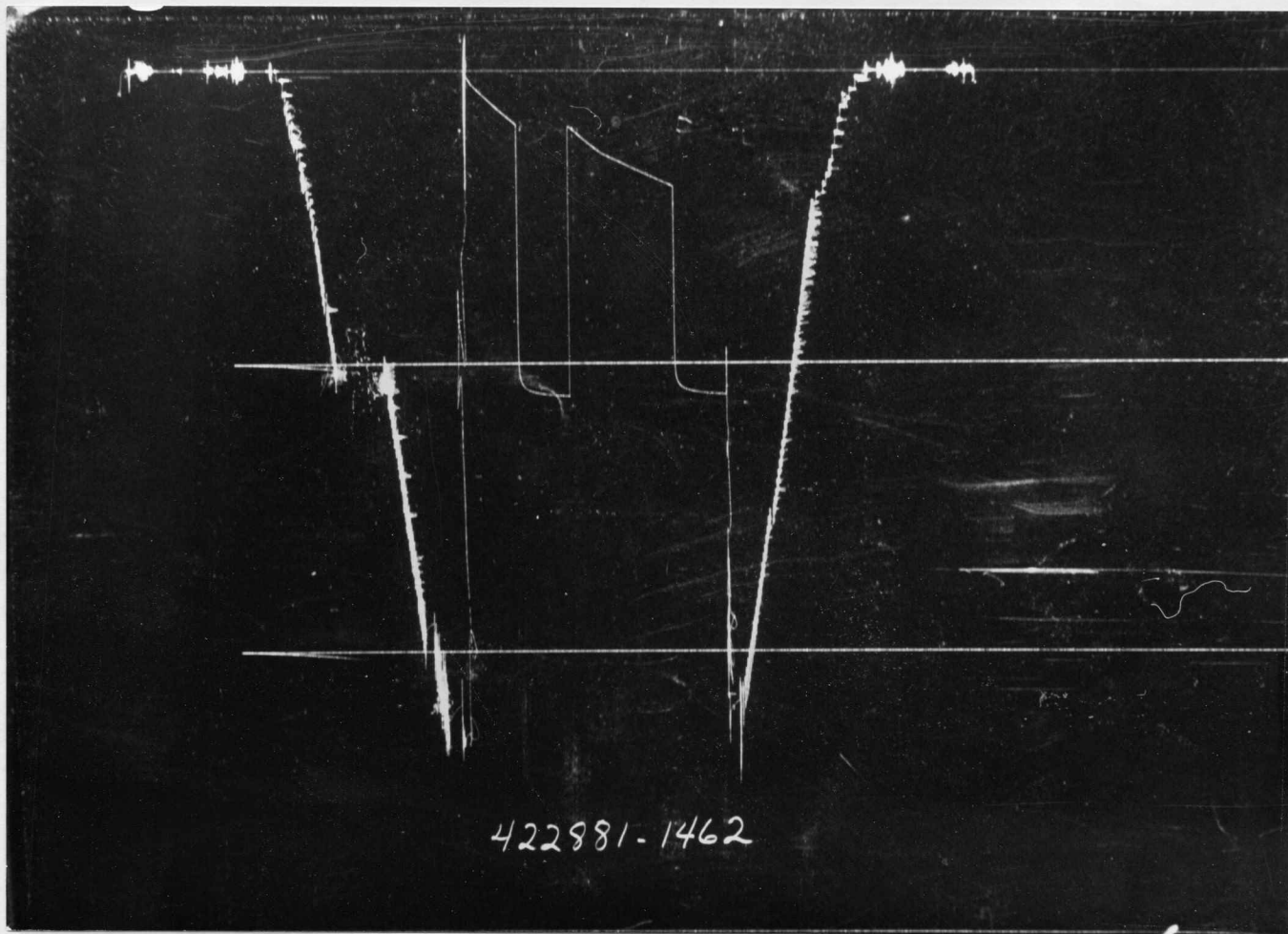
Gauge No. 1462			Depth 4227'			Clock 12 hour		Ticket No. 422881		
First Flow Period			Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
P ₀	.000	18	.000		187	.000	194	.000		398
P ₁	.0396	61	.020		1081	.081	251	.020		1081
P ₂	.0792	95	.040		1098	.162	300	.040		1094
P ₃	.1188	128	.060		1106	.243	333	.060		1101
P ₄	.1584	157	.080		1111	.324	366	.080		1104
P ₅	.1980	187	.100		1113	.405	398	.100		1107
P ₆			.120		1116			.120		1110
P ₇			.140		1117			.140		1112
P ₈			.160		1118			.160		1112
P ₉			.180		1119			.180		1114
P ₁₀			.200		1120			.200		1115

Gauge No. 232			Depth 4240'			Clock 12		hour		
P ₀	.000	29	.000		196	.000	205	.000		407
P ₁	.0408	70	.0202		1090	.0826	260	.0202		1090
P ₂	.0816	105	.0404		1107	.1652	308	.0404		1104
P ₃	.1224	135	.0606		1115	.2478	341	.0606		1110
P ₄	.1632	165	.0808		1119	.3304	375	.0808		1114
P ₅	.2040	196	.1010		1123	.4130	407	.1010		1116
P ₆			.1212		1125			.1212		1118
P ₇			.1414		1126			.1414		1120
P ₈			.1616		1127			.1616		1121
P ₉			.1818		1128			.1818		1122
P ₁₀			.2020		1129			.2020		1123
Reading Interval 6			3			12		3 Minutes		

REMARKS:

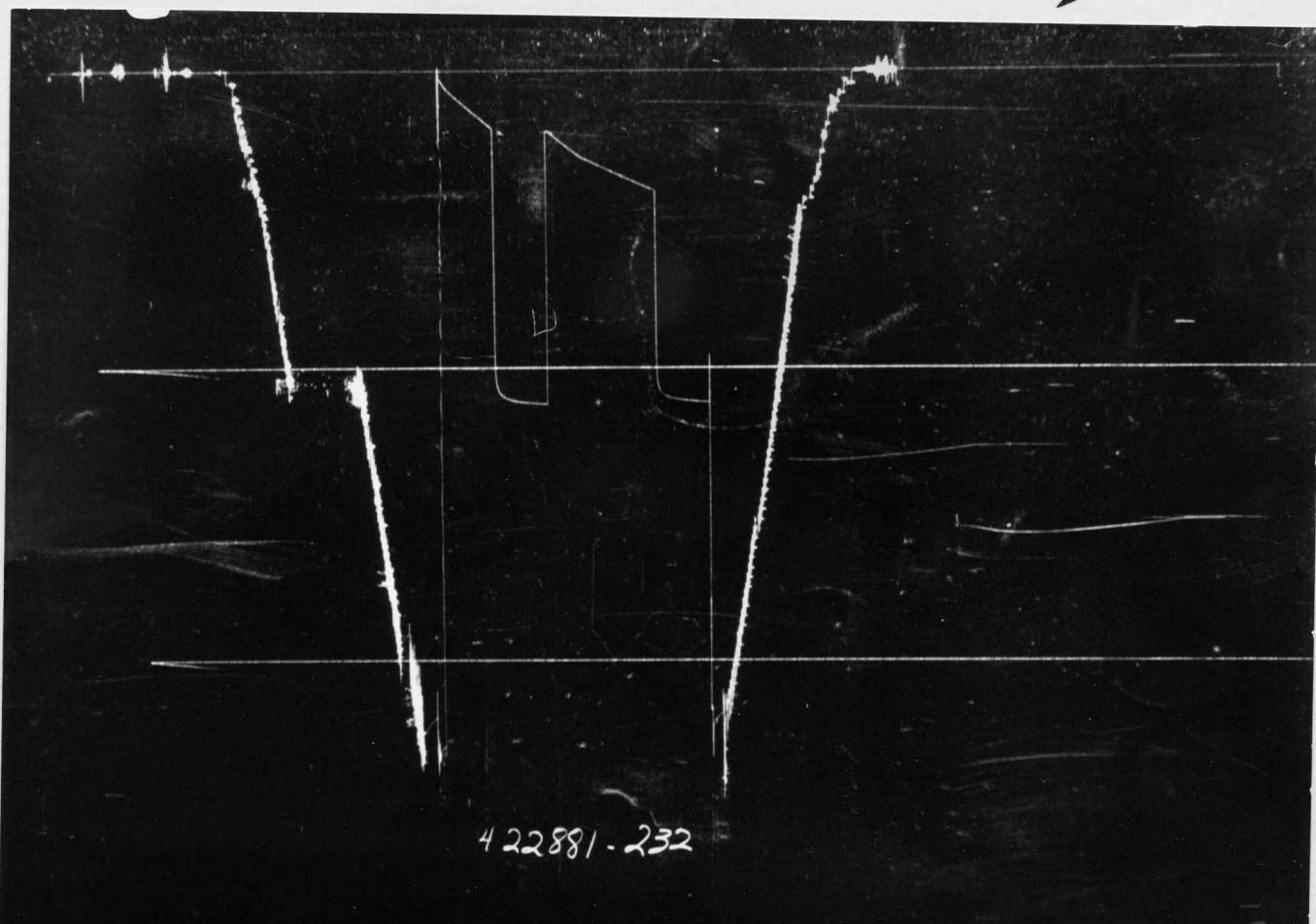
SPECIAL PRESSURE DATA

PRESSURE



422881-1462

TIME



422881-232