

Flow Time	1st 10	Mn.	2nd 120	Mn.	Date	5-30-64	Ticket Number	399287	Legal Location Sec. - Twp. - Rng. C 22 NW 31S NE 10W	Lease Name 1	Well No. 1	Field Area 1	Lease Owner/Company Name WILDCAT	County BARBER	State KANSAS	Owner's District KANSAS
Closed In Press. Time	1st 30	Mn.	2nd 30	Mn.	Kind of Job	OPEN HOLE	Halliburton District	PRATT								
Pressure Readings	Field		Office Corrected		Tester	BILL THOMPSON	Witness	GEO. WAITE								
Depth Top Gauge	4446	Ft.	no	Blanked Off	Drilling Contractor	SIERRA PETROLEUM COMPANY INCORPORATED										
BT. P.R.D. No.	534		12	Hour Clock	Elevation	1678' DF	Top Packer	4456'								
Initial Hydro Mud Pressure	2419		2429		Total Depth	4472'	Bottom Packer	4461'								
Initial Closed in Pres.	395		387		Interval Tested	4472-4461'	Formation Tested	Mississippi								
Initial Flow Pres.	29	1	21		Casing or Hole Size	7 7/8"	Casing Perfs.	Top								
Final Flow Pres.	59	2	29		Surface Choke	1"	Bottom Choke	3/4"								
Final Closed in Pres.	424		426		Size & Kind Drill Pipe	4 1/2" FH	Drill Collars Above Tester	I.D. - LENGTH								
Final Hydro Mud Pressure	2399		2415		Mud Weight	10.2	Mud Viscosity	44								
Depth Cen. Gauge		Ft.		Blanked Off	Temperature	113	*F Est. Anchor Size & Length	ID 3.37" OD 5" X 11'								
BT. P.R.D. No.				Hour Clock	Depths Mea. From	Kelly bushing	Depth of Tester Valve	4436 Ft.								
Initial Hydro Mud Pres.					TYPE AMOUNT		Depth Back Pres. Valve	Ft.								
Initial Closed in Pres.					Cushion		Ft.									
Initial Flow Pres.		1			Recovered	Feet of										
Final Flow Pres.		2			Recovered	90	Feet of	slight oil specked								
Final Closed in Pres.		1			Recovered		Feet of	watery mud								
Final Hydro Mud Pres.		2			Recovered		Feet of									
Depth Bot. Gauge	4468	Ft.	yes	Blanked Off	Oil A.P.I. Gravity		Water Spec. Gravity									
BT. P.R.D. No.	533		12	Hour Clock	Gas Gravity		Surface Pressure	psi								
Initial Hydro Mud Pres.	2441		2440		Tool Opened	A.M. P.M.	Tool Closed	A.M. P.M.								
Initial Closed in Pres.	401		403		Remarks On bottom 10:36. Open 10:38 with											
Initial Flow Pres.	48	1	46		a fair blow. Closed at 10:48 for 30 mins.											
Final Flow Pres.	76	2	46		Reopen tool at 11:18 with a fair blow											
Final Closed in Pres.	439		439		throughout test. Closed 1:18 for 30 mins.											
Final Hydro Mud Pres.	2431		2430		Off bottom 1:48.											
					No special reading adaptable.											

FORMATION TEST DATA

399287-534

↑  
PRESSURE  
↓

← TIME →

399287-533

Each horizontal line equal to 1000 p.s.i.

# NOMENCLATURE

<b>b</b>	= Approximate Radius of Investigation .....	Feet
<b>b<sub>1</sub></b>	= Approximate Radius of Investigation (Net Pay Zone h <sub>1</sub> ) .....	Feet
<b>D.R.</b>	= Damage Ratio .....	—
<b>EI</b>	= Elevation .....	Feet
<b>GD</b>	= B.T. Gauge Depth (From Surface Reference) .....	Feet
<b>h</b>	= Interval Tested .....	Feet
<b>h<sub>1</sub></b>	= Net Pay Thickness .....	Feet
<b>K</b>	= Permeability .....	md
<b>K<sub>1</sub></b>	= Permeability (From Net Pay Zone h <sub>1</sub> ) .....	md
<b>m</b>	= Slope Extrapolated Pressure Plot (Psi <sup>2</sup> /cycle Gas) .....	psi/cycle
<b>OF<sub>1</sub></b>	= Maximum Indicated Flow Rate .....	MCF/D
<b>OF<sub>2</sub></b>	= Minimum Indicated Flow Rate .....	MCF/D
<b>OF<sub>3</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Max. ....	MCF/D
<b>OF<sub>4</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Min. ....	MCF/D
<b>P<sub>e</sub></b>	= Extrapolated Static Pressure .....	Psig.
<b>P<sub>f</sub></b>	= Final Flow Pressure .....	Psig.
<b>P<sub>wt</sub></b>	= Potentiometric Surface (Fresh Water * ) .....	Feet
<b>Q</b>	= Average Adjusted Production Rate During Test .....	bbbls/day
<b>Q<sub>1</sub></b>	= Theoretical Production w/Damage Removed .....	bbbls/day
<b>Q<sub>g</sub></b>	= Measured Gas Production Rate .....	MCF/D
<b>R</b>	= Corrected Recovery .....	bbbls
<b>r<sub>w</sub></b>	= Radius of Well Bore .....	Feet
<b>t</b>	= Flow Time .....	Minutes
<b>t<sub>o</sub></b>	= Total Flow Time .....	Minutes
<b>T</b>	= Temperature Rankine .....	°R
<b>Z</b>	= Compressibility Factor .....	—
<b>μ</b>	= Viscosity Gas or Liquid .....	CP
<b>Log</b>	= Common Log	

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

Flow Time	1st 10 Min.	2nd 120 Min.	Date	5-30-64	Ticket Number	399288
Closed in Press. Time	1st 30 Min.	2nd 30 Min.	Kind of Job	Open Hole	Halliburton District	Pratt
Pressure Readings	Field	Office Corrected	Tester	Bill Thompson	Witness	Geo. Waite
Depth Top Gauge	4457 Ft.	no Blanked Off	Drilling Contractor	Sierra Petroleum Company Inc.		
BT. P.R.D. No.	534	12 Hour Clock	Elevation	1678' DF	Top Packer	4467'
Initial Hydro Mud Pressure	2429	2439	Total Depth	4492'	Bottom Packer	4472'
Initial Closed in Pres.	896	886	Interval Tested	4492-4472'	Formation Tested	Mississippi
Initial Flow Pres.	58	1 29 2 52	Casing or Hole Size	7 7/8"	Casing Perfs.	Top Bot.
Final Flow Pres.	106	1 35 2 95	Surface Choke	1"	Bottom Choke	3/4"
Final Closed in Pres.	578	570	Size & Kind Drill Pipe	4 1/2" FH	Drill Collars Above Tester	I.D. - LENGTH -
Final Hydro Mud Pressure	2408	2433	Mud Weight	10.2	Mud Viscosity	44
Depth Cen. Gauge		Blanked Off	Temperature	114	*F Est. Anchor Size ID & Length	3.33" X 20' *F Actual OD
BT. P.R.D. No.		Hour Clock	Depths Mea. From	-	Depth of Tester Valve	4447 Ft.
Initial Hydro Mud Pres.			TYPE AMOUNT		Depth Back Pres. Valve	Ft.
Initial Closed in Pres.			Cushion			
Initial Flow Pres.		1	Recovered	100	Feet of very slightly oil specked mud	
Final Flow Pres.		2	Recovered		Feet of	
Initial Flow Pres.		1	Recovered	60	Feet of water	
Final Flow Pres.		2	Recovered		Feet of	
Final Closed in Pres.			Oil A.P.I. Gravity		Water Spec. Gravity	
Final Hydro Mud Pres.			Gas Gravity		Surface Pressure	psi
Depth Bot. Gauge	4488 Ft.	yes Blanked Off	Tool Opened		A.M. Tool Closed	A.M. P.M.
BT. P.R.D. No.	533	12 Hour Clock	Remarks	On bottom 2:09 pm. Open 2:11 with a		
Initial Hydro Mud Pres.	2412	2450		fair blow. Closed 2:21 for 30 minutes.		
Initial Closed in Pres.	912	903		Reopen tool at 2:51 with a fair blow.		
Initial Flow Pres.	57	1 44 2 67		Closed tool for 30 minutes.		
Final Flow Pres.	114	1 52 2 109		No special reading adaptable.		
Final Closed in Pres.	591	588				
Final Hydro Mud Pres.	2392	2444				

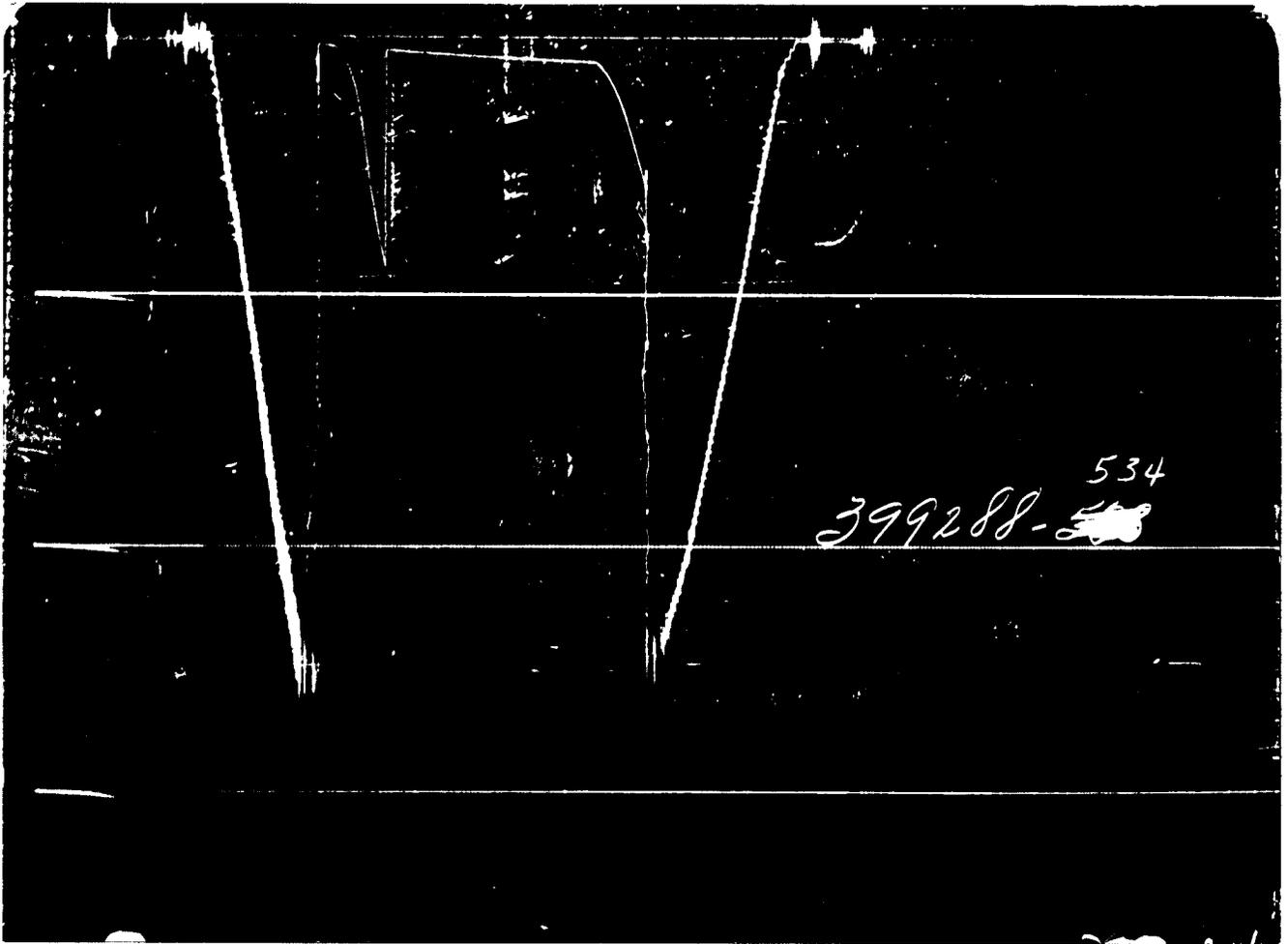
Legal Location Sec. - Twp. - Rng. C 22 NW 31S NE 10N  
 Lease Name  
 Well No. 1  
 Test No. 2  
 Field Area  
 County BARBER  
 State KANSAS  
 Lease Owner/Company Name SOLAR OIL COMPANY  
 Owner's District KANSAS

STONE  
 1  
 2  
 SOLAR OIL COMPANY  
 KANSAS

FORMATION TEST DATA

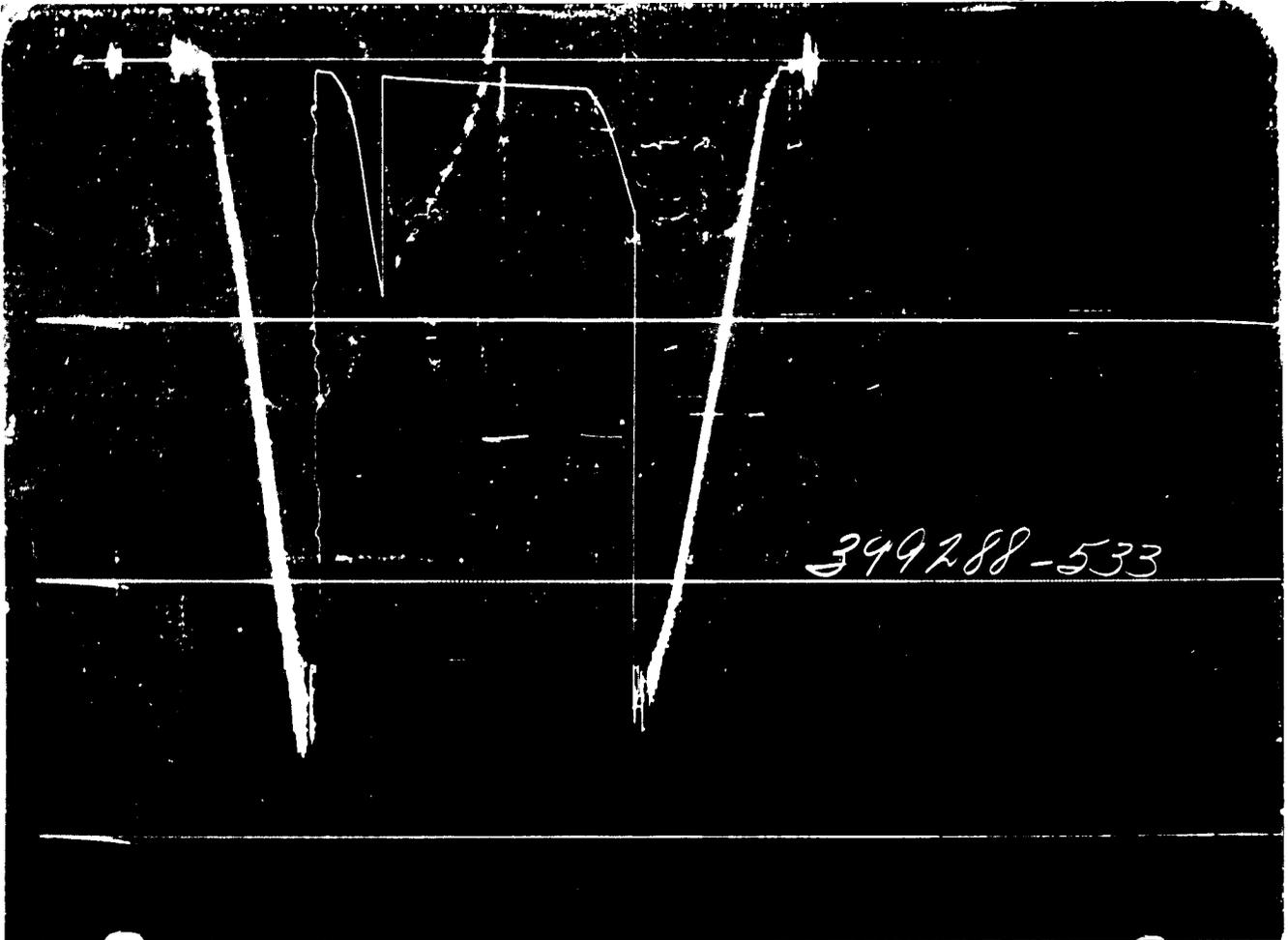
5

↑  
PRESSURE  
↓



← TIME →

↑  
PRESSURE  
↓



Each horizontal line equal to 1000 p.s.i.

Flow Time	1st Min.	2nd Min.	Date	Ticket Number	Legal Location Sec. - Twp. - Rng.
15	75	5-2-64	399289 S	22	31
Closed In Press. Time	1st Min.	2nd Min.	Kind of Job	Halliburton District	Lease Name
30	30	OPEN HOLE	PRATT	22	31
Pressure Readings	Field	Office Corrected	Tester	Witness	Well No.
			BILL THOMPSON	GEO. WAITE	1
Depth Top Gauge	4793 Ft.	no Blanked Off	Drilling Contractor	SIERRA PETROLEUM COMPANY, INC.	Test No.
BT. P.R.D. No.	534	12 Hour Clock	Elevation	1678' DF	3
Initial Hydro Mud Pressure	2600	2602	Total Depth	4845'	County
Initial Closed in Pres.	1709	1694	Interval Tested	4803' - 4845'	BARBER
Initial Flow Pres.	1002	1 324 2 1036	Casing or Hole Size	7 7/8"	State
Final Flow Pres.	1630	1 1004 2 1637	Surface Choke	1"	KANSAS
Final Closed in Pres.	1680	1686	Size & Kind Drill Pipe	4 1/2" FH	
Final Hydro Mud Pressure	2580	2580	Mud Weight	10.1	
Depth Cen. Gauge			Temperature	117	
BT. P.R.D. No.			Anchor Size & Length	ID 3.37" X 42' OD 5"	
Initial Hydro Mud Pres.			Depths Mea. From	Kelly Bushing	
Initial Closed in Pres.			Cushion	none	
Initial Flow Pres.			Recovered	3465 Feet of salt water.	
Final Flow Pres.			Recovered	Feet of	
Final Closed in Pres.			Recovered	Feet of	
Final Hydro Mud Pres.			Oil A.P.I. Gravity	0	
Depth Bot. Gauge	4841 Ft.	yes Blanked Off	Gas Gravity	0	
BT. P.R.D. No.	533	12 Hour Clock	Tool Opened	10:11 A.M.	
Initial Hydro Mud Pres.	2616	2628	Tool Closed	12:11 A.M.	
Initial Closed in Pres.	1730	1723	Remarks	Opened tool with a good blow for 15 minute first flow. Closed tool for a 30 minute initial	
Initial Flow Pres.	1027	1 356 2 1071		closed in pressure. Reopened tool for a 75 minute	
Final Flow Pres.	1654	1 1033 2 1665		second flow. Closed tool for a 30 minute final	
Final Closed in Pres.	1711	1713		closed in pressure.	
Final Hydro Mud Pres.	2606	2607			

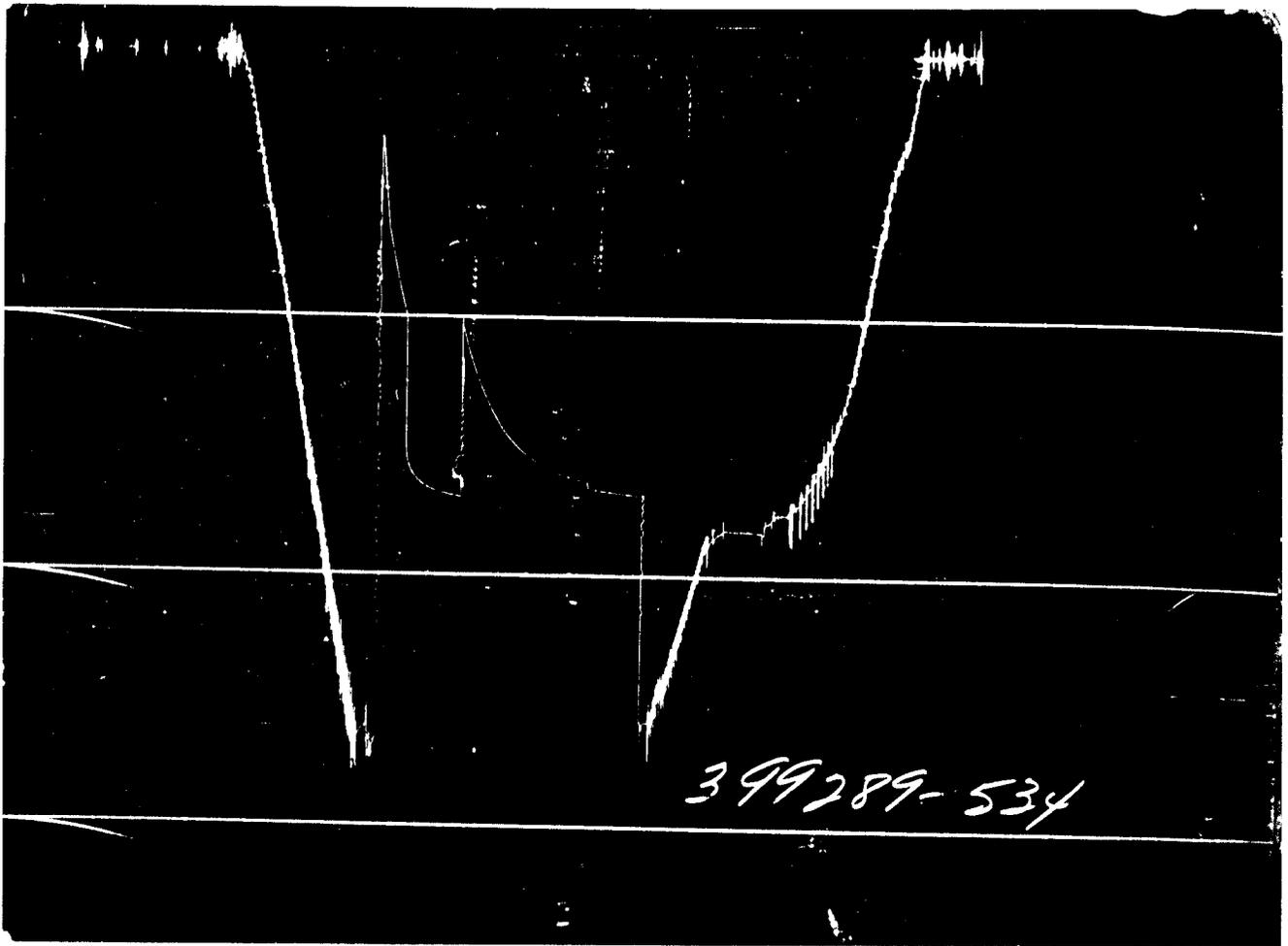
FORMATION TEST DATA

5

Gauge No.		534		Depth		4793'		Clock		12 hour		Ticket No.		399289	
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 <sub>0</sub>	.000	324		1004	.000	1036	.000		1637						
P <sub>1</sub>	.0224	549	.0227	1593	.1024	1320	.0226		1662						
P <sub>2</sub>	.0448	722	.0454	1624	.2048	1477	.0452		1666						
P <sub>3</sub>	.0672	829	.0681	1645	.3072	1559	.0687		1670						
P <sub>4</sub>	.0896	923	.0908	1658	.4096	1606	.0904		1673						
P <sub>5</sub>	.1120	1004	.1135	1668	.5120	1637	.1130		1676						
P <sub>6</sub>			.1362	1676			.1356		1678						
P <sub>7</sub>			.1589	1682			.1582		1680						
P <sub>8</sub>			.1816	1687			.1808		1684						
P <sub>9</sub>			.2043	1691			.2034		1684						
P <sub>10</sub>			.2270	1694			.2260		1686						
Gauge No.		533		Depth		4841'		Clock		12 hour					
P <sub>0</sub>	.000	356	.000	1033	.000	1071	.000		1665						
P <sub>1</sub>	.0208	567	.0216	1632	.097	1352	.0211		1690						
P <sub>2</sub>	.0416	735	.0432	1660	.194	1507	.0422		1694						
P <sub>3</sub>	.0624	843	.0648	1677	.291	1590	.0633		1698						
P <sub>4</sub>	.0832	944	.0864	1689	.388	1636	.0844		1700						
P <sub>5</sub>	.1040	1033	.1080	1698	.485	1665	.1055		1703						
P <sub>6</sub>			.1296	1705			.1266		1705						
P <sub>7</sub>			.1512	1712			.1477		1708						
P <sub>8</sub>			.1728	1715			.1688		1709						
P <sub>9</sub>			.1944	1720			.1899		1711						
P <sub>10</sub>			.2160	1723			.2110		1713						
Reading Interval		3		3		15		3		Minutes					
REMARKS:															

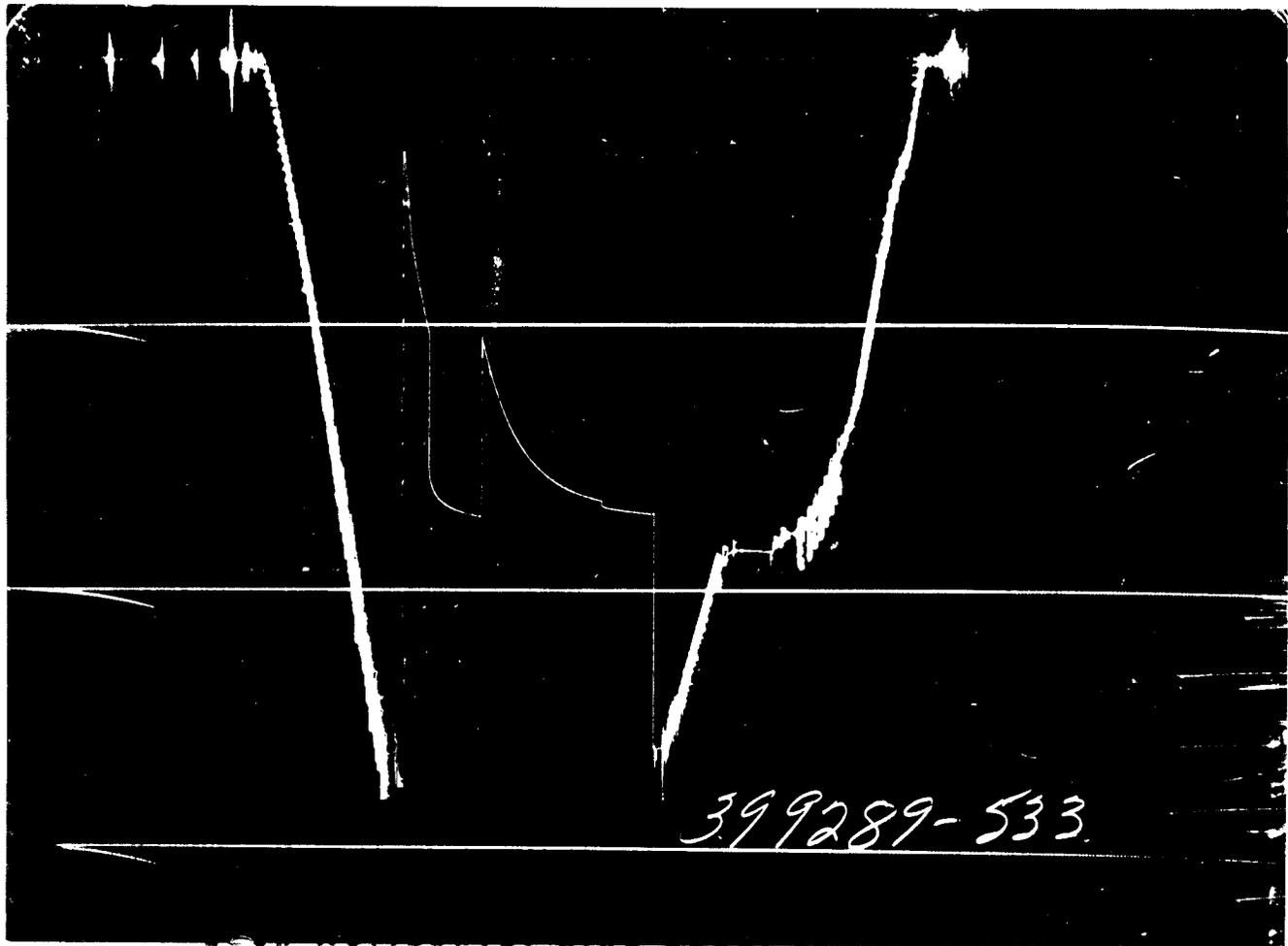
**SPECIAL PRESSURE DATA**

↑  
PRESSURE  
↓



← TIME →

↑  
PRESSURE  
↓



*399289-533*