

Flow Time	1st Min. 5	2nd Min. 60	Date	6-11-62	Ticket Number	346554 S	
Closed in Press. Time	1st Min. 30	2nd Min. 30	Kind of Job	OPEN HOLE	Halliburton District	HAYS	
Pressure Readings	Field	Office Corrected	Tester	BERENS	Witness	MABRY	
Depth Top Gauge	3176 Ft.	no	Blanked Off	Drilling Contractor	PEEL BROTHERS, INC.	RIG # 1	
BT. P.R.D. No.	396	12	Hour Clock	Elevation		Top Packer	
Initial Hydro Mud Pressure		1685		Total Depth	3217'	Bottom Packer	3180'
Initial Closed in Pres.		1105		Interval Tested	3180-3217'	Formation Tested	Kansas city
Initial Flow Pres.		1 10		Casing or Hole Size	7 7/8"	Casing Perfs.	Top Bot.
Final Flow Pres.		1 16		Surface Choke	1/4"	Bottom Choke	5/8" I.D. - LENGTH
Final Closed in Pres.		1079		Size & Kind Drill Pipe	4 1/2" ACME	Drill Collars Above Tester	
Final Hydro Mud Pressure		1664		Mud Weight	9.9	Mud Viscosity	44
Depth Cen. Gauge	Ft.		Blanked Off	Temperature	99 °F Actual	Anchor Size & Length	ID 3.76" X 37 OD 5"
BT. P.R.D. No.			Hour Clock	Depths Mea. From	KB	Depth of Tester Valve	3171' Ft.
Initial Hydro Mud Pres.				Cushion	None	Depth Back Pres. Valve	3174' Ft.
Initial Closed in Pres.				Recovered	138	Feet of	Muddy gasy oil
Initial Flow Pres.		1		Recovered	62	Feet of	Gassy oil
Final Flow Pres.		1		Recovered	976	Feet of	Gas
Final Closed in Pres.		2		Recovered		Feet of	
Final Hydro Mud Pres.				Oil A.P.I. Gravity	39	Water Spec. Gravity	
Depth Bot. Gauge	3212 Ft.	yes	Blanked Off	Gas Gravity		Surface Pressure	psi
BT. P.R.D. No.	7463	12	Hour Clock	Tool Opened	9:35	Tool Closed	11:40
Initial Hydro Mud Pres.		1711		Remarks	Opened for 5 min. 1st flow. Closed		
Initial Closed in Pres.	1120	1122			for 30 min. initial closed in pressure.		
Initial Flow Pres.	45	1 33			Reopened with a strong blow, for 60 min.		
Final Flow Pres.	90	1 35			2nd flow. Closed for 30 min. final closed		
Final Closed in Pres.	1090	1096			in pressure.		
Final Hydro Mud Pres.		1688					

Legal Location Sec. - Twp. - Rng. 15-10-16

Lease Name U. SMITH

Well No. 1

Test No. 1

Field Area NATOMA

County ROOKS

Mes. From Tester Valve

State KANSAS

FORMATION TEST DATA
SPECIAL PRESSURE DATA

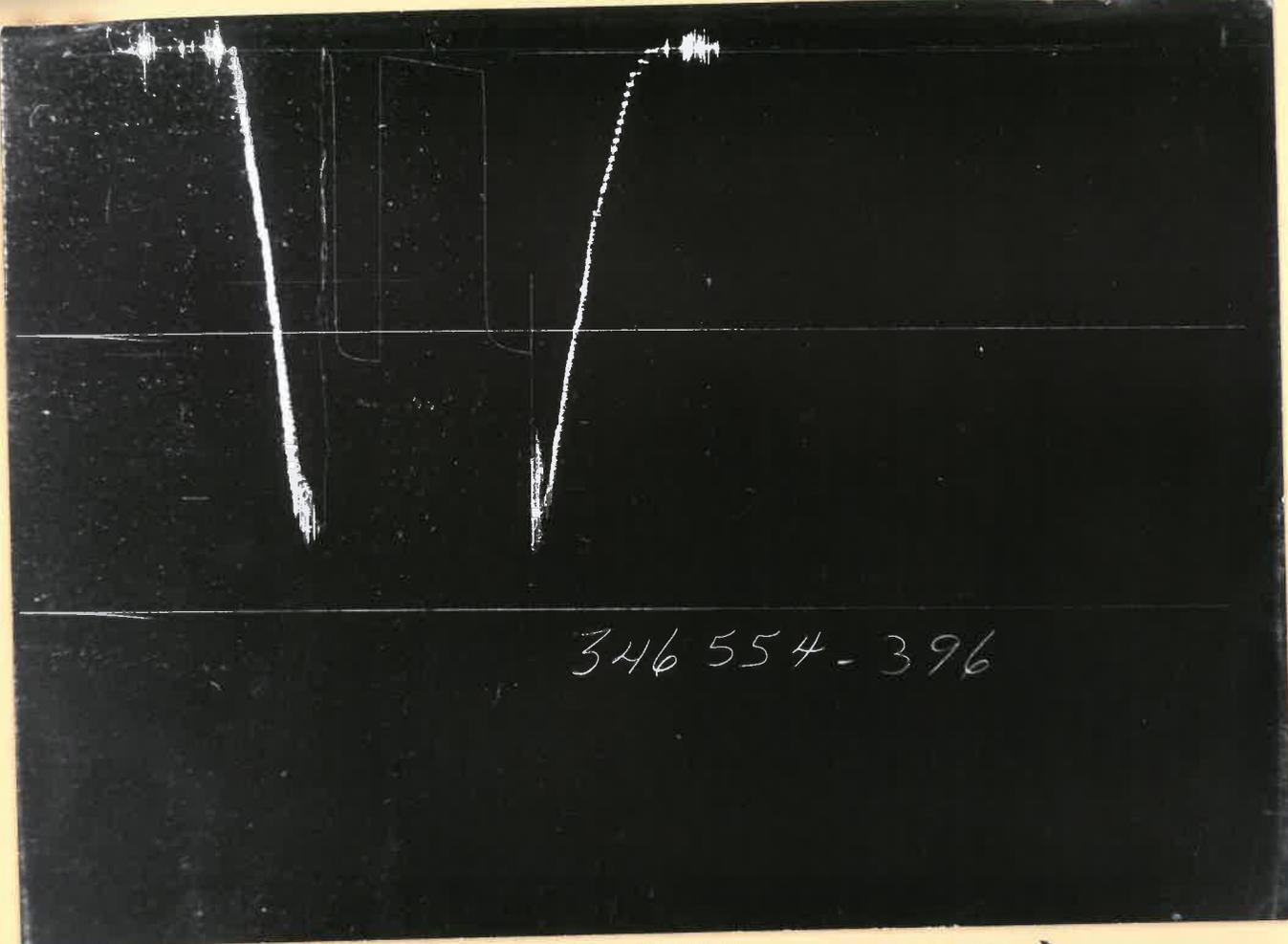
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Gauge No.		Depth		Clock		Ticket No.			
396		3176'		12 hour		346554			
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure		
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
P ₀	.000 10	.000		16	.000	26	.000		78
P ₁	.005 12	.0202		762*	.1052	35	.0195		994
P ₂	.010 13	.0404		1065	.2104	51	.0390		1031
P ₃	.015 14	.0606		1081	.3156	64	.0585		1046
P ₄	.020 15	.0808		1089	.4210	78	.0780		1055
P ₅	.025 16	.1010		1093			.0975		1062
P ₆		.1212		1097			.1170		1067
P ₇		.1414		1099			.1365		1070
P ₈		.1616		1101			.1560		1073
P ₉		.1818		1102			.1755		1076
P ₁₀		.2020		1105			.1950		1079

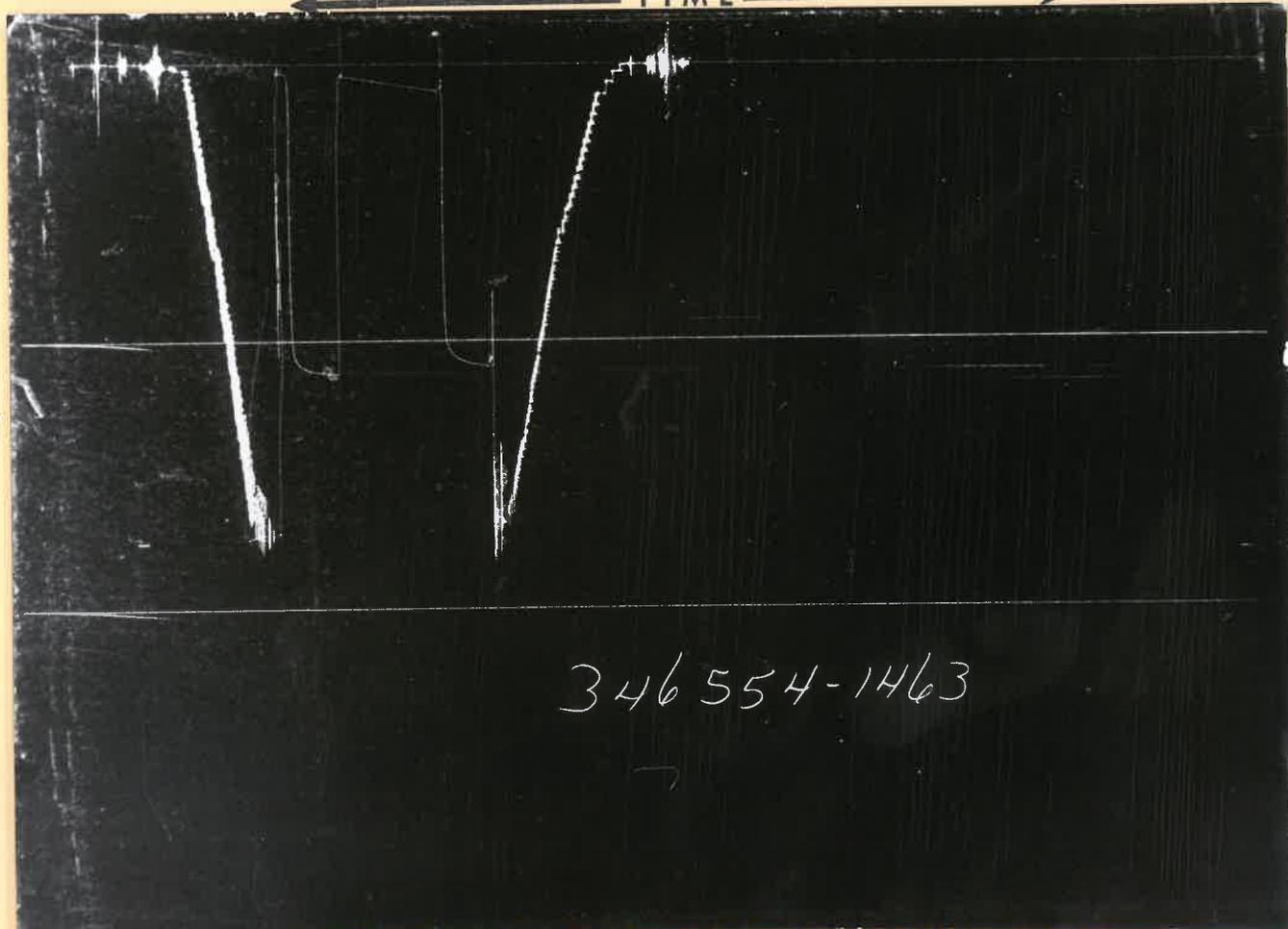
Gauge No.		Depth		Clock		Ticket No.		
1463		3212'		12 hour				
P ₀	.000 33	.000		35	.000	49	.000	100
P ₁	.031 35	.021		975	.104	57	.0205	1001
P ₂		.042		1078	.208	72	.0410	1047
P ₃		.063		1097	.312	85	.0615	1062
P ₄		.084		1106	.416	100	.0820	1072
P ₅		.105		1111			.1025	1080
P ₆		.126		1115			.1230	1084
P ₇		.147		1117			.1435	1088
P ₈		.168		1120			.1640	1091
P ₉		.189		1121			.1845	1094
P ₁₀		.210		1122			.2050	1096
Reading Interval		1	3		15		3	Minutes
REMARKS: *Questionable								

SPECIAL PRESSURE DATA

PRESSURE



346 554-396



346 554-1463

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

Flow Time	1st 5	Min.	2nd 60	Min.	Date	6-11-62	Ticket Number	346555	S
Closed In Press. Time	1st 30	Min.	2nd 30	Min.	Kind of Job	Open hole test	Halliburton District	Hays	
Pressure Readings	Field		Office Corrected		Tester	Berens	Witness	Mabry	
Depth Top Gauge	3229	Ft.	NO	Blanked Off	Drilling Contractor	Peel Brothers Incorporated	Top Packer	-	
BT. P.R.D. No.	396		12	Hour Clock	Elevation	2003'	Bottom Packer	3226'	
Initial Hydro Mud Pressure	-		1666		Total Depth	3272'	Formation Tested	Kansas City	
Initial Closed in Pres.	1135		1124		Interval Tested	3226' - 3272'	Casing or Hole Size	7 7/8"	
Initial Flow Pres.	60		1 21 2 66		Surface Choke	1/4"	Bottom Choke	5/8"	
Final Flow Pres.	270		1 51 2 278		Size & Kind Drill Pipe	4 1/2"	Drill Collars Above Tester	-	I.D. - LENGTH
Final Closed in Pres.	1090		1097		Mud Weight	9.9	Mud Viscosity	46	
Final Hydro Mud Pressure	-		1660		Temperature	99	Anchor Size & Length	ID 3.76" OD 5"	X 46'
Depth Cen. Gauge		Ft.		Blanked Off	Depths Mea. From	Kelly Bushings	Depth of Tester Valve	3220'	Ft.
BT. P.R.D. No.				Hour Clock	TYPE AMOUNT		Depth Back Pres. Valve	3217'	Ft.
Initial Hydro Mud Pres.					Cushion	-	Recovered	1426	Feet of Gas
Initial Closed in Pres.							Recovered	682	Feet of Slightly mud & gas out of
Initial Flow Pres.			1				Recovered	62	Feet of Muddy gassy oil
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	3267	Ft.	YES	Blanked Off	Tool Opened	6:10	A.M. Tool Closed	8:15	A.M. P.M.
BT. P.R.D. No.	1463		12	Hour Clock	Remarks	Opened tool for 5 minute 1st flow. Closed tool for 30 minute initial closed in pressure.			
Initial Hydro Mud Pres.	-		1695						
Initial Closed in Pres.	-		1145						
Initial Flow Pres.	-		1 48 2 92						
Final Flow Pres.	-		1 73 2 302						
Final Closed in Pres.	-		1115						
Final Hydro Mud Pres.	-		1687						

Legal Location
Sec. - Twp. - Rng.

SEC. 15 - 10 - 16

Field Area

NATOMA

County

ROOKS

State

KANSAS

U. SMITH
Lease Name

Well No.

Test No.

CITIES SERVICE PETROLEUM COMPANY
Lease Owner/Company Name

RUSSELL
Owner's District

15-105-16 W

FORMATION TEST DATA

SPECIAL PRESSURE DATA

Gauge No. 396 Depth 3229 Clock 12 hour Ticket No. 346555

	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	21	.000		51	.000	66	.000		278
P ₁	.006	30	.0205		981	.103	118	.0195		969
P ₂	.012	35	.0410		1054	.206	175	.0390		1018
P ₃	.018	40	.0615		1090	.309	227	.0585		1045
P ₄	.024	45	.0820		1105	.412	278	.0780		1061
P ₅	.030	51	.1025		1112			.0975		1071
P ₆			.1230		1116			.1170		1080
P ₇			.1435		1120			.1365		1085
P ₈			.1640		1121			.1560		1091
P ₉			.1845		1123			.1755		1094
P ₁₀			.2050		1124			.1950		1097

Gauge No. 1463 Depth 3267 Clock 12 hour

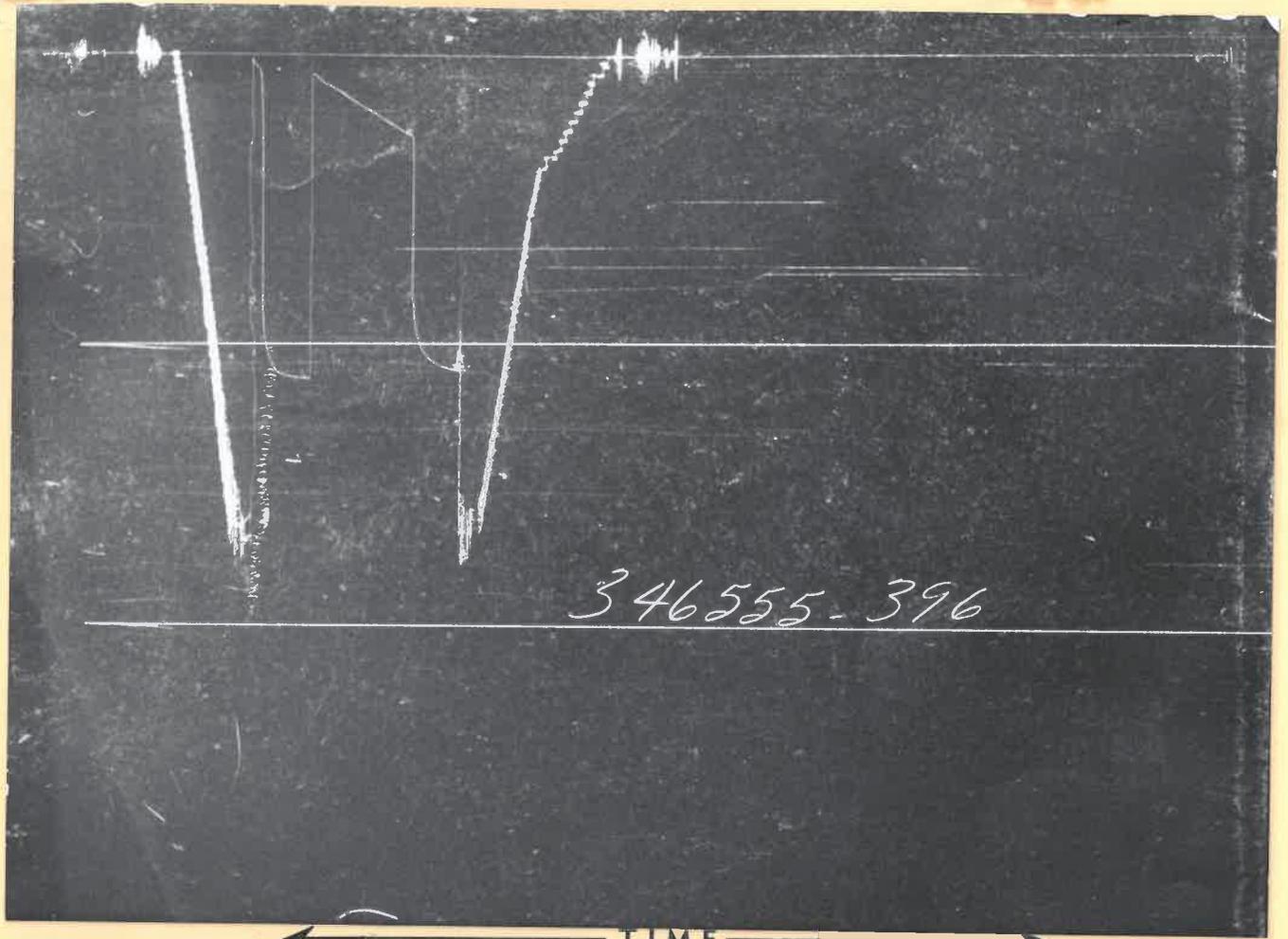
P ₀	.000	48	.000		73	.000	92	.000		302
P ₁	.006	53	.021		995	.102	145	.0212		956
P ₂	.012	57	.042		1067	.204	200	.0424		1019
P ₃	.018	63	.063		1107	.306	251	.0636		1053
P ₄	.024	67	.084		1125	.408	302	.0848		1073
P ₅	.030	73	.105		1131			.1060		1086
P ₆			.126		1138			.1272		1096
P ₇			.147		1140			.1484		1103
P ₈			.168		1142			.1696		1108
P ₉			.189		1144			.1908		1112
P ₁₀			.210		1145			.2120		1115

Reading Interval 1 3 15 3 Minutes

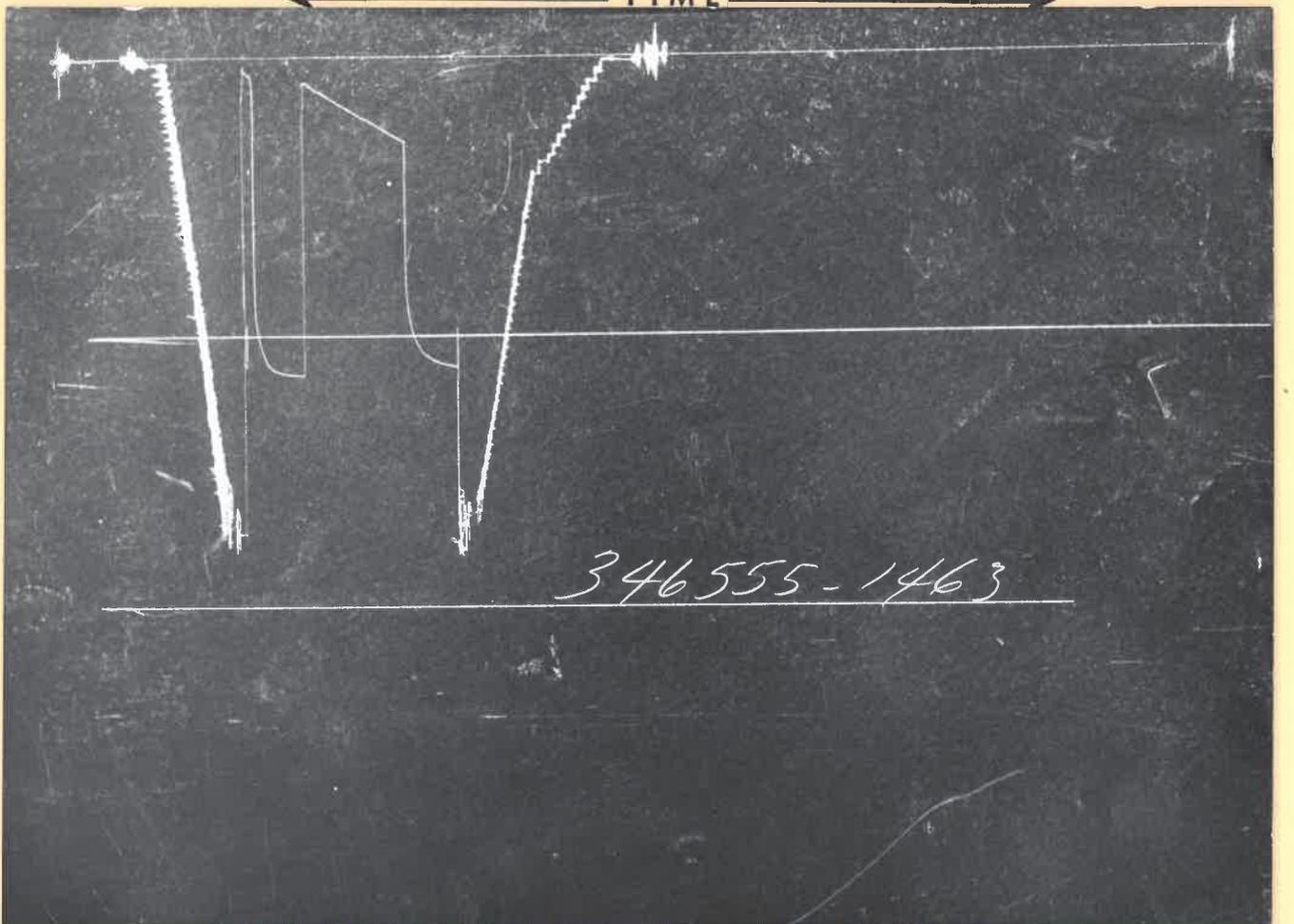
REMARKS:

SPECIAL PRESSURE DATA

PRESSURE



TIME



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

Flow Time	1st Min. 5	2nd Min. 60	Date	6-12-62	Ticket Number	346556 S
Closed In Press. Time	1st Min. 30	2nd Min. 30	Kind of Job	OPEN HOLE	Helliburton District	HAYS
Pressure Readings	Field	Office Corrected	Tester	A. A. BERENS	Witness	E. MABRY
Depth Top Gauge	3270 Ft.	Blanked Off No	Drilling Contractor	PEEL BROS. INC.		
BT. P.R.D. No.	396	Hour Clock 12	Elevation	2003' KB	Top Packer	
Initial Hydro Mud Pressure	-	1686	Total Depth	3313'	Bottom Packer	3274'
Initial Closed in Pres.	1150	1166	Interval Tested	3274-3313'	Formation Tested	Kansas City
Initial Flow Pres.	50	1 45 2 106	Casing or Hole Size	7 7/8"	Casing Perfs. } Top Bot.	
Final Flow Pres.	470	1 83* 2 496	Surface Choke	1/4"	Bottom Choke	5/8" I.D. - LENGTH
Final Closed in Pres.	1050	1060	Size & Kind Drill Pipe	4 1/2" ACME	Drill Collars Above Tester	
Final Hydro Mud Pressure	1720	1686	Mud Weight	9.9	Mud Viscosity	42
Depth Cen. Gauge	3308 Ft.	Blanked Off yes	Temperature	99	°F Est. Anchor Size & Length	ID OD X
BT. P.R.D. No.	1463	Hour Clock 12	Depths Mea. From	KB	Depth of Tester Valve	Ft.
Initial Hydro Mud Pres.		1705	Cushion	none	Depth Back Pres. Valve	Ft.
Initial Closed in Pres.		1179	Recovered	868	Feet of Gas	
Initial Flow Pres.		1 61 2 121	Recovered	62	Feet of Gassy oil, trace of mud	
Final Flow Pres.		1 127* 2 508	Recovered	1178	Feet of Muddy gassy oil	
Final Closed in Pres.		1071	Recovered		Feet of	
Final Hydro Mud Pres.		1702	Oil A.P.I. Gravity	28	Water Spec. Gravity	
Depth Bot. Gauge		Blanked Off	Gas Gravity		Surface Pressure	psi
BT. P.R.D. No.		Hour Clock	Tool Opened	1:15 PM	A.M. P.M. Tool Closed	3:20 PM A.M. P.M.
Initial Hydro Mud Pres.			Remarks	Tool opened with a strong blow for a 5 min.		
Initial Closed in Pres.				first flow. Rotated tool for a 30 minute initial		
Initial Flow Pres.		1 2		closed in pressure. Reopened tool with strong blow		
Final Flow Pres.		1 2		for a 60 minute final flow. Took a 30 minute final		
Final Closed in Pres.				closed in pressure. * Questionable		
Final Hydro Mud Pres.						

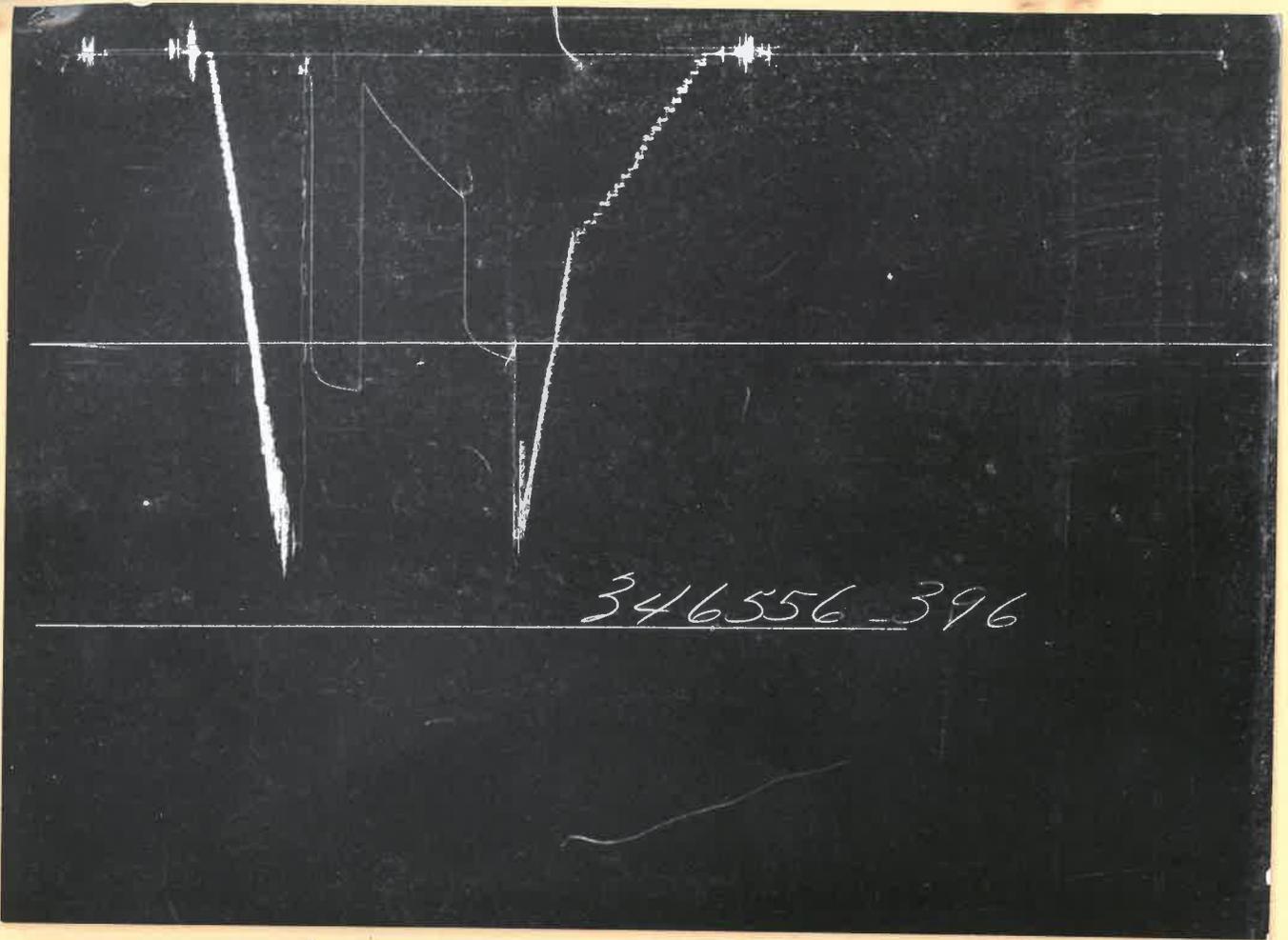
Legal Location Sec. - Twp. - Rng. 15 10 16
 Lease Name SMITH
 Well No. 4
 Test No. 3
 Field Area NATOMA
 County BOOKS
 State KANSAS
 Lease Owner/Company Name CITIES SERVICE PETROLEUM COMPANY
 Owner's District RUSSELL 15-105-16W

FORMATION TEST DATA
SPECIAL PRESSURE DATA

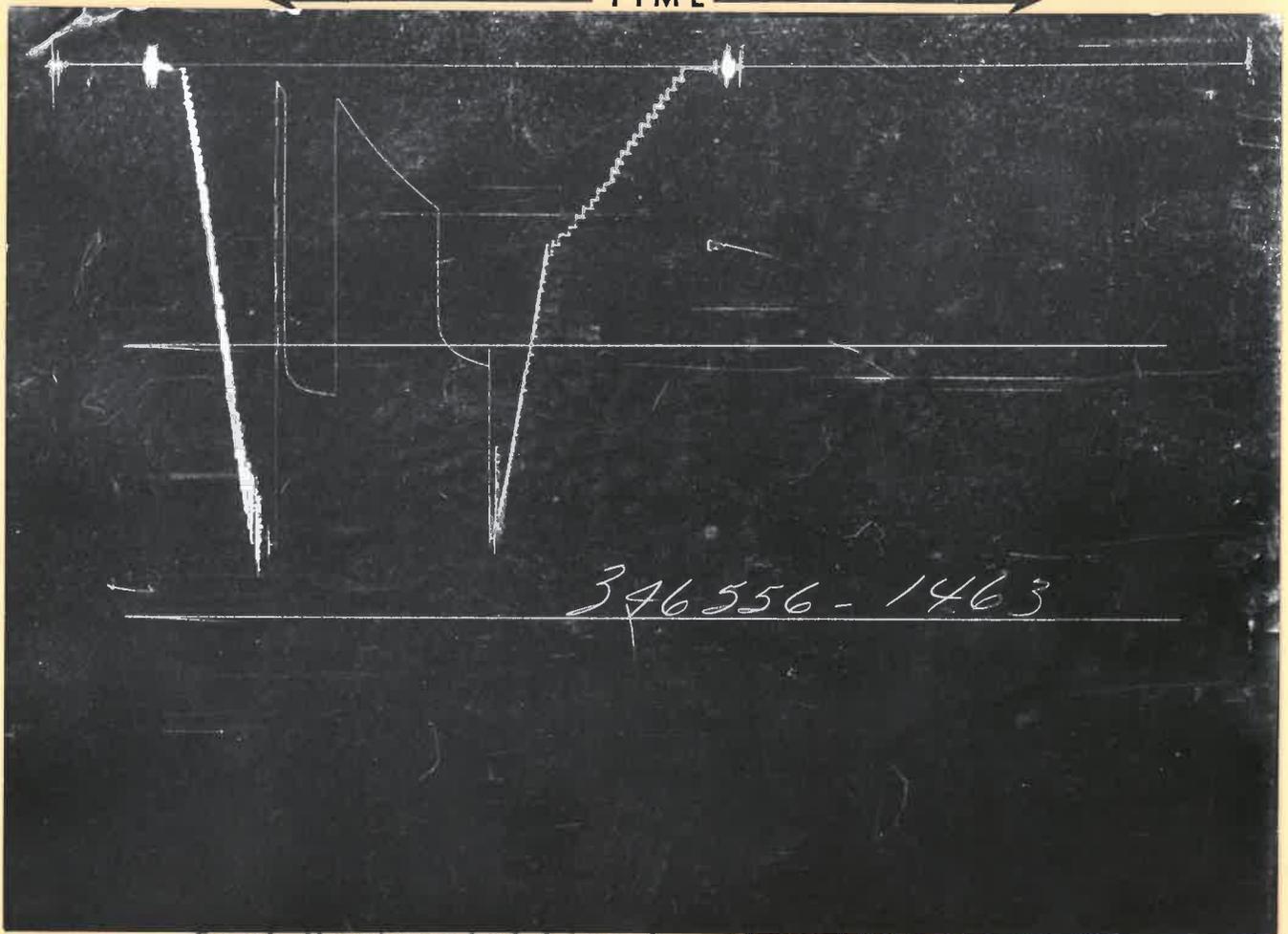
Gauge No. 396		Depth 3270		Clock 12 hour		Ticket No. 346556					
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure				
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{e}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{e}$	PSIG Temp. Corr.	
P ₀	.000	45	.000		83	.000	106	.000		496	
P ₁	.0044	55	.020		1106	.103	222	.0206		963	
P ₂	.0088	64	.040		1130	.206	321	.0412		990	
P ₃	.0132	71	.060		1141	.309	415	.0618		1005	
P ₄	.0176	76	.080		1149	.412	496	.0824		1018	
P ₅	.0220	83*	.100		1153			.1030		1027	
P ₆			.120		1157			.1236		1035	
P ₇			.140		1161			.1442		1043	
P ₈			.160		1163			.1648		1050	
P ₉			.180		1165			.1854		1055	
P ₁₀			.200		1166			.2060		1060	
Gauge No. 1463		Depth 3308		Clock 12 hour							
P ₀	.000	61	.000		127	.000	121	.000		508	
P ₁	.0064	66	.0205		1118	.1025	240	.021		971	
P ₂	.0128	77	.0410		1141	.2050	344	.042		996	
P ₃	.0192	87	.0615		1154	.3075	432	.063		1015	
P ₄	.0256	94	.0820		1161	.4100	508	.084		1028	
P ₅	.0320	127*	.1025		1166			.105		1039	
P ₆			.1230		1171			.126		1047	
P ₇			.1435		1173			.147		1054	
P ₈			.1640		1176			.168		1061	
P ₉			.1845		1178			.189		1067	
P ₁₀			.2050		1179			.210		1071	
Reading Interval		1	3			15		3	Minutes		
REMARKS:		* Questionable									

SPECIAL PRESSURE DATA

PRESSURE



TIME



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

Flow Time	1st 5 Min.	2nd 60 Min.	Date	6-13-62	Ticket Number	346557 S
Closed In Press. Time	1st 30 Min.	2nd 30 Min.	Kind of Job	OPEN HOLE	Halliburton District	HAYS
Pressure Readings	Field	Office Corrected	Tester	A. A. BERENS	Witness	E. MABRY
Depth Top Gauge	3316 Ft.	Blanked Off No.	Drilling Contractor	PEEL BROS. INC.		
BT. P.R.D. No.	396	12 Hour Clock	Elevation	2003' KB	Top Packer	
Initial Hydro Mud Pressure	-	1716	Total Depth	3360'	Bottom Packer	3313'
Initial Closed in Pres.	1200	1209	Interval Tested	3313-3360'	Formation Tested	Kansas City
Initial Flow Pres.	25	1 17 2 32	Casing or Hole Size	7 7/8"	Casing Perfs. } Top Bot.	
Final Flow Pres.	80	1 21 2 83	Surface Choke	1/4"	Bottom Choke	5/8"
Final Closed in Pres.	1135	1163	Size & Kind Drill Pipe	4 1/2" ACME	Drill Collars Above Tester	I.D. - LENGTH
Final Hydro Mud Pressure	1735	1715	Mud Weight	9.8	Mud Viscosity	47
Depth Gen. Gauge	3355 Ft.	Blanked yes Off	Temperature	100 °F Est. °F Actual	Anchor Size ID & Length	OD X
BT. P.R.D. No.	1463	12 Hour Clock	Depths Mea. From	KB	Depth of Tester Valve	3310' Ft.
Initial Hydro Mud Pres.		1740	Cushion	TYPE none	Amount	Depth Back Pres. Valve 3307 Ft.
Initial Closed in Pres.		1228	Recovered	20	Feet of	Slightly oily mud
Initial Flow Pres.		1 41 2 58	Recovered	125	Feet of	Watery mud with show of oil
Final Flow Pres.		1 42 2 103	Recovered		Feet of	
Final Closed in Pres.		1179	Recovered		Feet of	
Final Hydro Mud Pres.		1734	Oil A.P.I. Gravity		Water Spec. Gravity	
Depth Bot. Gauge	Ft.	Blanked Off	Gas Gravity		Surface Pressure	psi
BT. P.R.D. No.		Hour Clock	Tool Opened	10:25 AM	A.M. P.M.	Tool Closed 12:30 PM A.M. P.M.
Initial Hydro Mud Pres.			Remarks	Tool opened with fair blow for a 5 minute		
Initial Closed in Pres.				first flow. Rotated tool for a 30 minute initial		
Initial Flow Pres.		1 2		closed in pressure. Reopened tool with fair blow		
Final Flow Pres.		1 2		for a 60 minute final flow. Took a 30 minute		
Final Closed in Pres.				final closed in pressure.		
Final Hydro Mud Pres.						

Legal Location Sec. - Twp. - Rng. 15 10 16

Lease Name SMITH U

Well No. 4

Test No. 1

Field Area NATOMA

County ROOKS

State KANSAS

Lease Owner/Company Name CITES SERVICE PETROLEUM CO.

Owner's District RUSSELL

15-105-16W

FORMATION TEST DATA

SPECIAL PRESSURE DATA

5

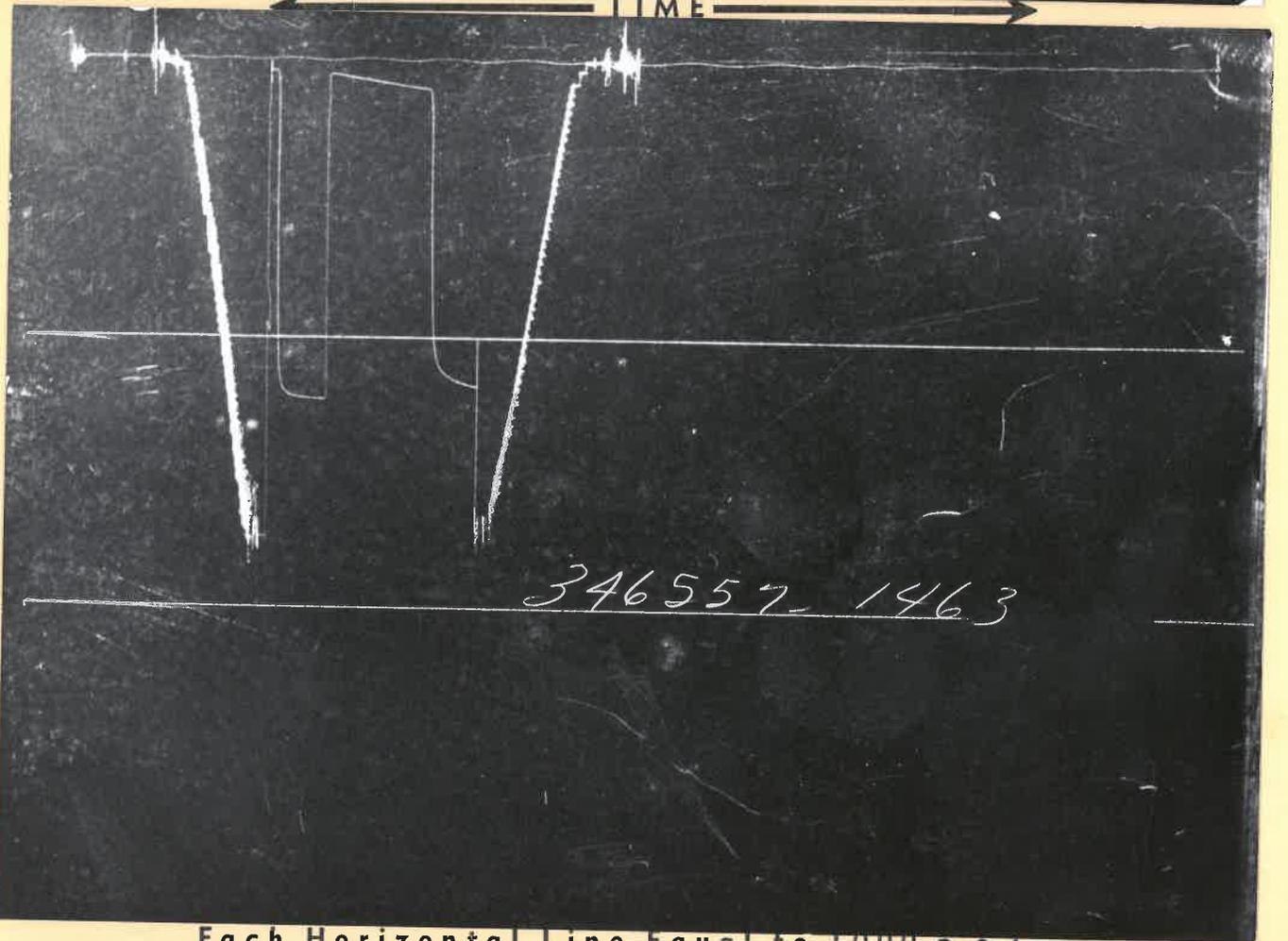
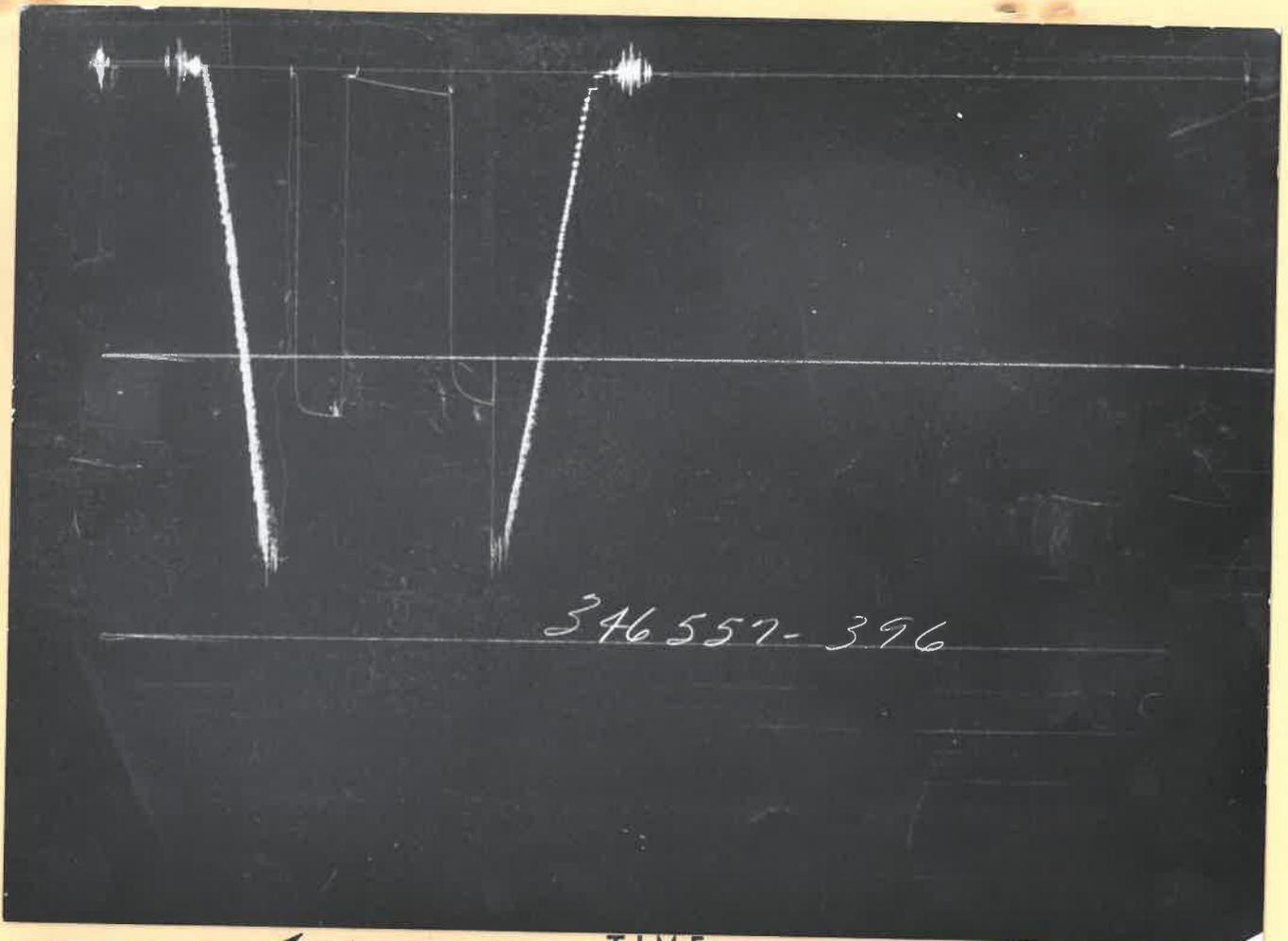
Gauge No. 396		Depth 3316			Clock 12 hour		Ticket No. 346557			
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	
P ₀	.000	17	.000		21	.000	32	.000		83
P ₁	.004	17	.0205		1147	.1045	43	.0197		842
P ₂	.008	18	.0410		1184	.2090	57	.0394		1081
P ₃	.012	19	.0615		1194	.3135	71	.0591		1111
P ₄	.016	20	.0820		1199	.4180	83	.0788		1125
P ₅	.020	21	.1025		1203			.0985		1135
P ₆			.1230		1205			.1182		1144
P ₇			.1435		1207			.1379		1150
P ₈			.1640		1208			.1576		1155
P ₉			.1845		1209			.1773		1159
P ₁₀			.2050		1209			.1970		1163

Gauge No. 1463		Depth 3355			Clock 12 hour					
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	41	.000		42	.000	58	.000		103
P ₁	.028	42	.021		1158	.103	65	.0205		943
P ₂			.042		1201	.206	78	.0410		1094
P ₃			.063		1214	.309	92	.0615		1125
P ₄			.084		1219	.412	103	.0820		1140
P ₅			.105		1222			.1025		1151
P ₆			.126		1224			.1230		1160
P ₇			.147		1226			.1435		1166
P ₈			.168		1228			.1640		1172
P ₉			.189		1228			.1845		1176
P ₁₀			.210		1228			.2050		1179
Reading Interval		1	3		15		3	Minutes		

REMARKS:

SPECIAL PRESSURE DATA

PRESSURE



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

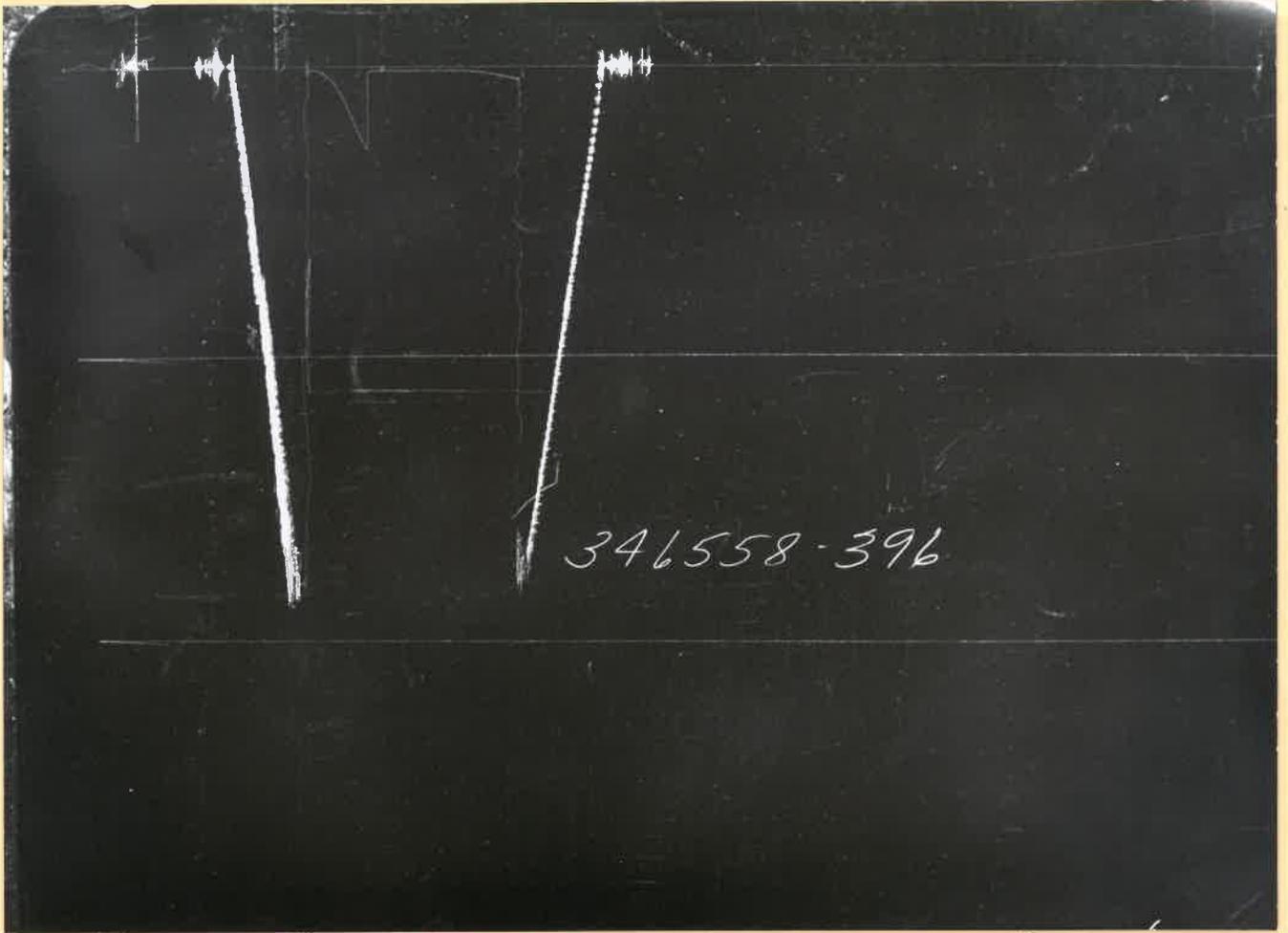
Flow Time	1st 5 Min.	2nd 60 Min.	Date	6-14-62	Ticket Number	346558
Closed In Press. Time	1st 30 Min.	2nd 30 Min.	Kind of Job	Open hole	Halliburton District	Hays
Pressure Readings	Field	Office Corrected	Tester	A A Berens	Witness	E. Mabry
Depth Top Gauge	3465 Ft.	no Blanked Off	Drilling Contractor	PEEL BROTHERS INC.		
BT. P.R.D. No.	396	12 Hour Clock	Elevation	2003' KB	Top Packer	-
Initial Hydro Mud Pressure	-	1770	Total Depth	3487'	Bottom Packer	3462'
Initial Closed in Pres.	280	287	Interval Tested	3462-3487'	Formation Tested	Cong.
Initial Flow Pres.	10	1 13 2 21	Casing or Hole Size	7 7/8"	Casing Perfs. } Top Bot.	
Final Flow Pres.	15	1 14 2 14	Surface Choke	1/4"	Bottom Choke	5/8"
Final Closed in Pres.	35	45	Size & Kind Drill Pipe	4 1/2" Acme	Drill Collars Above Tester	I.D. - LENGTH
Final Hydro Mud Pressure	-	1739	Mud Weight	9.8	Mud Viscosity	46
Depth Gen. Gauge	Ft.	Blanked Off	Temperature	A 101 °F Est. °F Actual	Anchor Size & Length	ID 3.76 OD 5 X 25
BT. P.R.D. No.		Hour Clock	Depths Mea. From	Kelly bushing	Depth of Tester Valve	3456 Ft.
Initial Hydro Mud Pres.			Cushion	-	Depth Back Pres. Valve	3453 Ft.
Initial Closed in Pres.			Recovered	10 Feet of	mud with specks of	
Initial Flow Pres.		1	Recovered	Feet of	oil	
Final Flow Pres.		1	Recovered	Feet of		
Final Closed in Pres.		2	Recovered	Feet of		
Final Hydro Mud Pres.			Oil A.P.I. Gravity		Water Spec. Gravity	
Depth Bot. Gauge	3482 Ft.	yes Blanked Off	Gas Gravity		Surface Pressure	psi
BT. P.R.D. No.	1463	12 Hour Clock	Tool Opened	5:15 PM A.M. P.M.	Tool Closed	7:20 PM A.M. P.M.
Initial Hydro Mud Pres.		1816	Remarks	Tool opened for a 5 minute first		
Initial Closed in Pres.		299		flow. Rotated for a 30 minute initial		
Initial Flow Pres.		1 28 2 36		closed in pressure. Tool re-opened with		
Final Flow Pres.		1 27 2 28		a weak blow for 3 minutes. Took a 30		
Final Closed in Pres.		58		minute final closed in pressure.		
Final Hydro Mud Pres.		1802		NO SPECIAL READING ADAPTABLE		

Legal Location Sec. - Twp. - Rng. SMITH
Lease Name NATOMA
Well No. 15 10 16
Field Area NATOMA
Country ROOKS
State KANSAS
Lease Owner/Company Name CITIES SERVICE PETROLEUM COMPANY
Owner's District BISSSETT
15-105-16 W

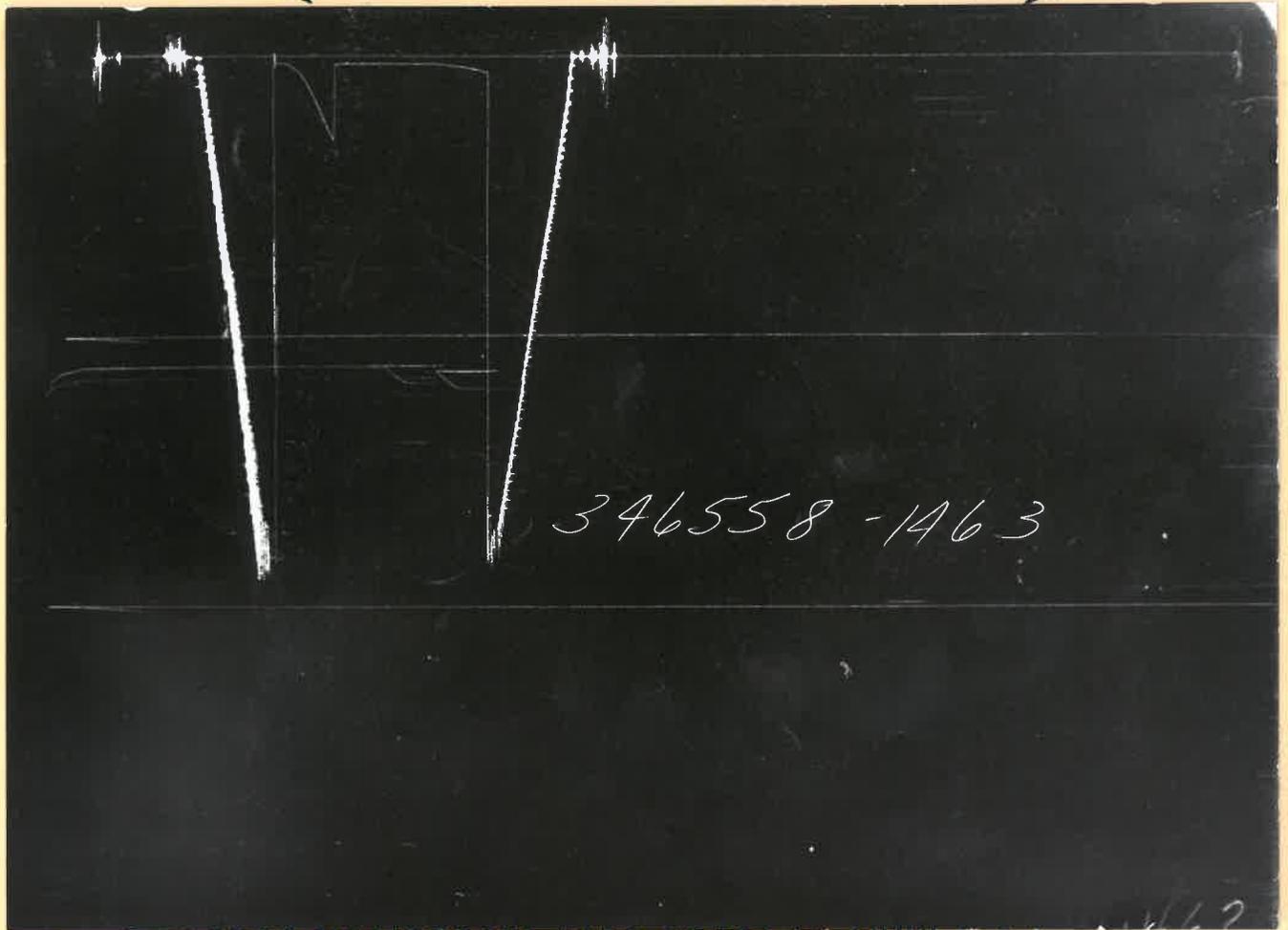
FORMATION TEST DATA

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

↑
PRESSURE
↓



← TIME →



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