WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Massier A-1

Elevation 2228 Kelly Bushing Formation Cherokee Effective Pay Ft. Ticket No. 12377

Date 5-15-69 Sec. 14 Twp. 14 Range 22w County Trego State Kansas

Test Approved by Jack K. Wharton Western Representative Gerrell Veatch

Formation Test No. 1 O.K. x Misrun Interval Tested From 4116' to 4123' Total Depth 4243'

Size Main Hole 7 7/8 Rat Hole Conv. B.T x Damaged Yes x No Conv. x B.T. Damaged Yes x No

Top Packer Depth 4110 Ft. Size 6 3/4 Packer Depth 4116 Ft. Size 6 3/4

Straddle x Yes No x Conv. x B.T. Damaged Yes No

Packer Depth 4123 Ft. Size 6 3/4

Tool Size 5½"OD Tool Jt. Size 4½" FH 3½"IF Anchor Length 7 Ft. Size 5½"OD

RECORDERS Depth 4106 Ft. Clock No. 9726 Depth 4120 Ft. Clock No. 5665

AP Top Make Kuster Cap. 4200 No. 3354 Inside ~~Outside~~ Bottom Make Kuster Cap. 3200 No. 1051 ~~Inside~~ Outside

Below Straddle: Depth 4133 Clock No. 106 Inside Outside Depth 4139 Ft. Clock No. 153 Inside Outside

Top Make WTC Cap. 4000 No. 26 ~~Inside~~ Outside Bottom Make WTC Cap. 4000 No. 57 ~~Inside~~ Outside

Time Set Packer 4:12A M

Tool Open I.F.P. From 4:15 M. to 4:20A M. Hr. 5 Min. From (B) 44 P.S.I. To (C) 44 P.S.I.

Tool Closed I.C.I.P. From 4:20 M. to 4:50A M. Hr. 30 Min. (D) 1248 P.S.I.

Tool Open F.F.P. From 4:50 M. to 5:50A M. Hr. 60 Min. From (E) 390 P.S.I. To (F) 1063 P.S.I.

Tool Closed F.C.I.P. From 5:50 M. to 6:20A M. Hr. 30 Min. (G) 1214 P.S.I.

Initial Hydrostatic Pressure (A) 2117 P.S.I. Final Hydrostatic Pressure (H) 2106 P.S.I.

SURFACE INFORMATION	Size Choke 3/8 In.	Max. Press. P.S.I.	Time	Description of Flow
			M.	
			M.	
			M.	

BLOW Strong Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 2460'total--300 feet gassy slight muddy oil 87% oil--870 feet muddy oil 60-75 % oil-- 690 feet oil cut water 60-85 % water--600 feet clear water

Reversed Out Yes x No Mud Type starch Viscosity 69 Weight 9 Water Loss 6 cc. Maximum Temp. 112 °F

Type Circ. Sub plug Did Tool Plug? no Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers "3" Safety Joint no Did Packer Hold? yes Where?

Length Drill Pipe 3063 ft. I.D. Drill Pipe 2.8 in. Length Weight Pipe 1025 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 39 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 5-15-69 Test Ticket No. 12377

Recorder No. 3354 Capacity 4200 Location 4106 Ft.

Clock No. 9726 Elevation 2228 Kelly Bushing Well Temperature 112 °F

Point		Pressure			Time Given		Time Computed	
A	Initial Hydrostatic Mud	2117	P.S.I.	Open Tool	4:12A	M		
B	First Initial Flow Pressure	44	P.S.I.	First Flow Pressure	5	Mins.	5	Mins.
C	First Final Flow Pressure	44	P.S.I.	Initial Closed-in Pressure	30	Mins.	30	Mins.
D	Initial Closed-in Pressure	1248	P.S.I.	Second Flow Pressure	60	Mins.	60	Mins.
E	Second Initial Flow Pressure	390	P.S.I.	Final Closed-in Pressure	30	Mins.	30	Mins.
F	Second Final Flow Pressure	1063	P.S.I.					
G	Final Closed-in Pressure	1214	P.S.I.					
H	Final Hydrostatic Mud	2106	P.S.I.					

PRESSURE BREAKDOWN

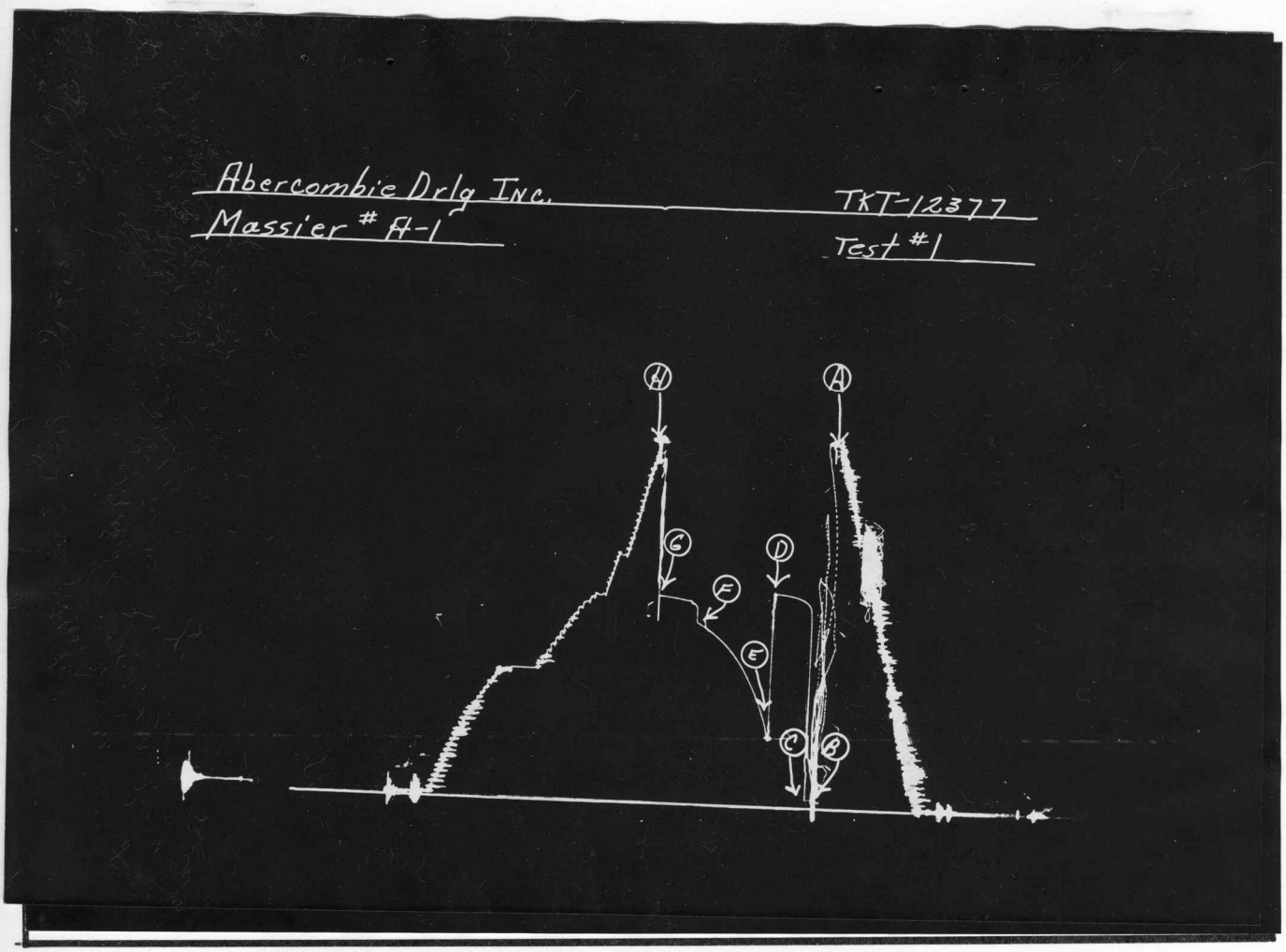
First Flow Pressure
Breakdown: 1 Inc. of 5 mins. and a final inc. of ____ Min.

Initial Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of ____ Min.

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of ____ Min.

Final Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of ____ Min.

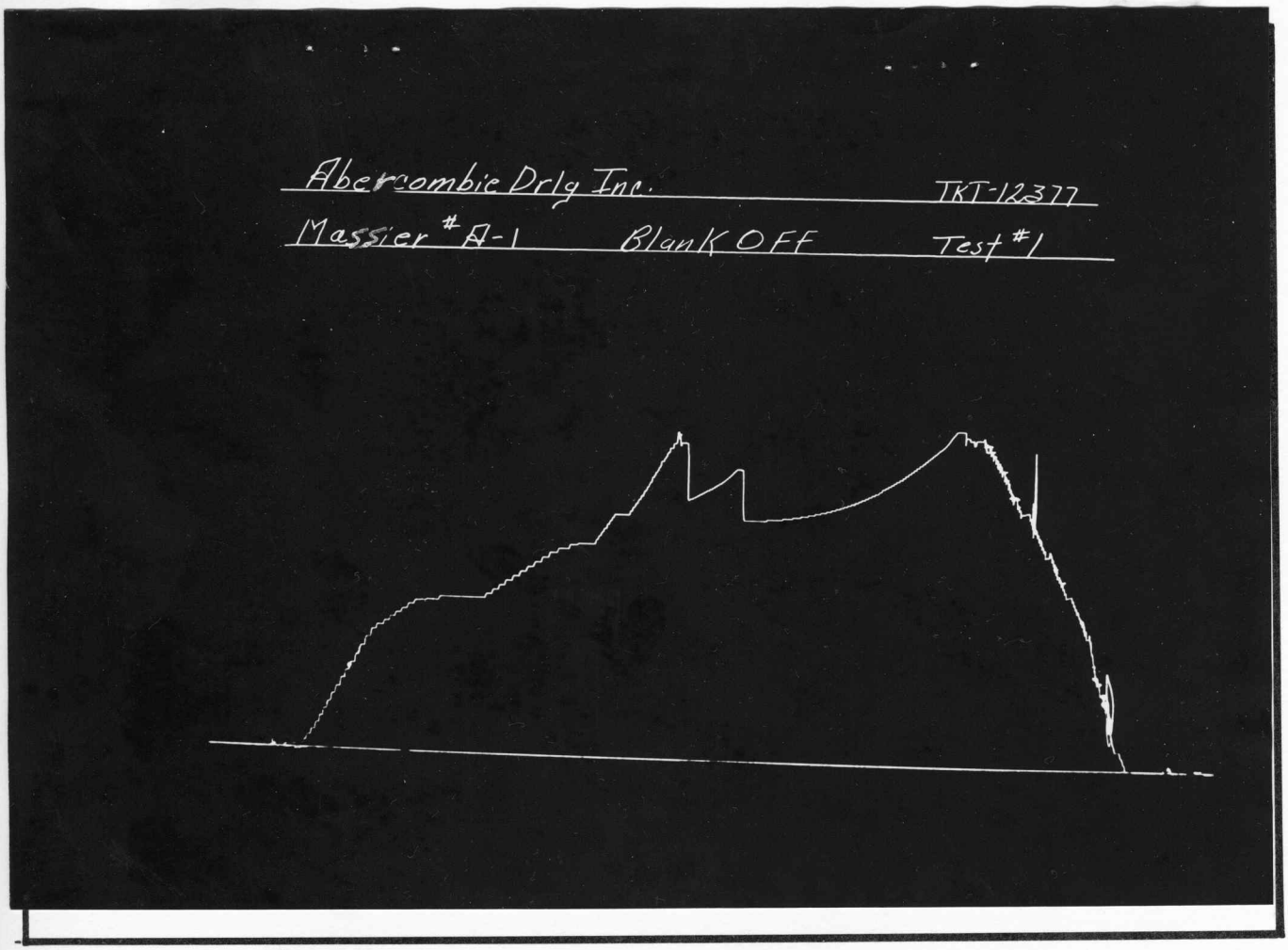
Point	First Flow Pressure Mins.	First Flow Pressure Press.	Initial Shut-In Point Minutes	Initial Shut-In Press.	Second Flow Pressure Point Minutes	Second Flow Pressure Press.	Final Shut-In Point Minutes	Final Shut-In Press.
P 1	0	44	0	44	0	390	0	1063
P 2	5	44	3	1170	5	502	3	1173
P 3			6	1208	10	628	6	1189
P 4			9	1219	15	700	9	1192
P 5			12	1227	20	763	12	1196
P 6			15	1234	25	833	15	1200
P 7			18	1237	30	883	18	1203
P 8			21	1240	35	928	21	1206
P 9			24	1244	40	964	24	1209
P10			27	1246	45	995	27	1212
P11			30	1248	50	1025	30	1214
P12					55	1048		
P13					60	1063		
P14								
P15								
P16								
P17								
P18								
P19								
P20								



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2120	2117	PSI
(B)	First Initial Flow Pressure	31	44	PSI
(C)	First Final Flow Pressure	327	44	PSI
(D)	Initial Closed-in Pressure	1255	1248	PSI
(E)	Second Initial Flow Pressure	411	390	PSI
(F)	Second Final Flow Pressure	1065	1063	PSI
(G)	Final Closed-in Pressure	1213	1214	PSI
(H)	Final Hydrostatic Mud	2110	2106	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Massier A-# 1 SEC. 14 TWP. 14 RGE. 22W TEST NO. 1 DATE 5-15-69



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POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2120	2117	PSI
(B)	First Initial Flow Pressure	31	44	PSI
(C)	First Final Flow Pressure	327	44	PSI
(D)	Initial Closed-in Pressure	1255	1248	PSI
(E)	Second Initial Flow Pressure	411	390	PSI
(F)	Second Final Flow Pressure	1065	1063	PSI
(G)	Final Closed-in Pressure	1213	1214	PSI
(H)	Final Hydrostatic Mud	2110	2106	PSI

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WESTERN TESTERS

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Massier A-1

Elevation 2228 Kelly Bushing Formation Cherokee Effective Pay Ft. Ticket No. 12378

Date 5-15-69 Sec. 14 Twp. 14s Range 22w County Trego State Kansas

Test Approved by Jack K. Wharton Western Representative Gerrell Veatch

Formation Test No. 2 O.K. x Misrun Interval Tested From 4066' to 4103' Total Depth 4243'

Size Main Hole 7 7/8 Rat Hole Conv. B.T. x Damaged Yes x No Conv. x B.T. Damaged Yes x No

Top Packer Depth 4061 Ft. Size 6 3/4 Packer Depth 4066 Ft. Size 6 3/4

Straddle x Yes No Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½"OD Tool Jt. Size 3½"IF Anchor Length 37 Ft. Size 5½"OD

RECORDERS	Depth	Clock No.		Depth	Clock No.	
Top	4093 Ft.	9726		4095 Ft.	5665	
Top Make Kuster	Cap. 4150	No. 3354	Inside Outside	Bottom Make Kuster	Cap. 4150	No. 1051 Inside Outside
Below Straddle	4111	106	Inside Outside	4113 Ft.	153	Inside Outside
Top Make WTC	Cap. 4000	No. 26	Inside Outside	Bottom Make WT C	Cap. 4000	No. 57 Inside Outside

Time Set Packer 1:48P M

Tool Open I.F.P. From 1:50 M. to 2:00P M. Hr. 10 Min. From (B) 168 P.S.I. To (C) 185 P.S.I.

Tool Closed I.C.I.P. From 2:00 M. to 2:30P M. Hr. 30 Min. (D) 1149 P.S.I.

Tool Open F.F.P. From 2:30 M. to 3:30P M. Hr. 60 Min. From (E) 189 P.S.I. To (F) 343 P.S.I.

Tool Closed F.C.I.P. From 3:30P M. to 4:00P M. Hr. 30 Min. (G) 1050 P.S.I.

Initial Hydrostatic Pressure (A) 2063 P.S.I. Final Hydrostatic Pressure (H) 2059 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/8 In.		M.	
			M.	
			M.	

BLOW Strong first 10 minutes then fair to good on final flow Bottom Choke Size 3/4 In.

Did Well Flow Yes No Recovery Total Ft. 680 total fluid: 20 feet mud--120 feet slightly oil cut mud--180 feet very heavy oil cut mud-- 360 feet heavy mud andgas cut oil (8-10 % H20: 8% solids)

Reversed Out Yes x No Mud Type starch Viscosity 69 Weight 9.8 Water Loss 6 cc. Maximum Temp. 111 °F

Type Circ. Sub. plug Did Tool Plug? no Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where?

Length Drill Pipe 3009 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1025 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 69 ft.

Remarks Hook set at 4117

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date 5-15-69 Test Ticket No. 12378

Recorder No. 3354 Capacity 4150 Location 4093 Ft.

Clock No. 9726 Elevation 2228 Kelly Bushing Well Temperature 111 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2063 P.S.I.	Open Tool	1:48P M	
B First Initial Flow Pressure	168 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	~~1149~~ 185 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1149 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	189 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	343 P.S.I.			
G Final Closed-in Pressure	1050 P.S.I.			
H Final Hydrostatic Mud	2059 P.S.I.			

PRESSURE BREAKDOWN

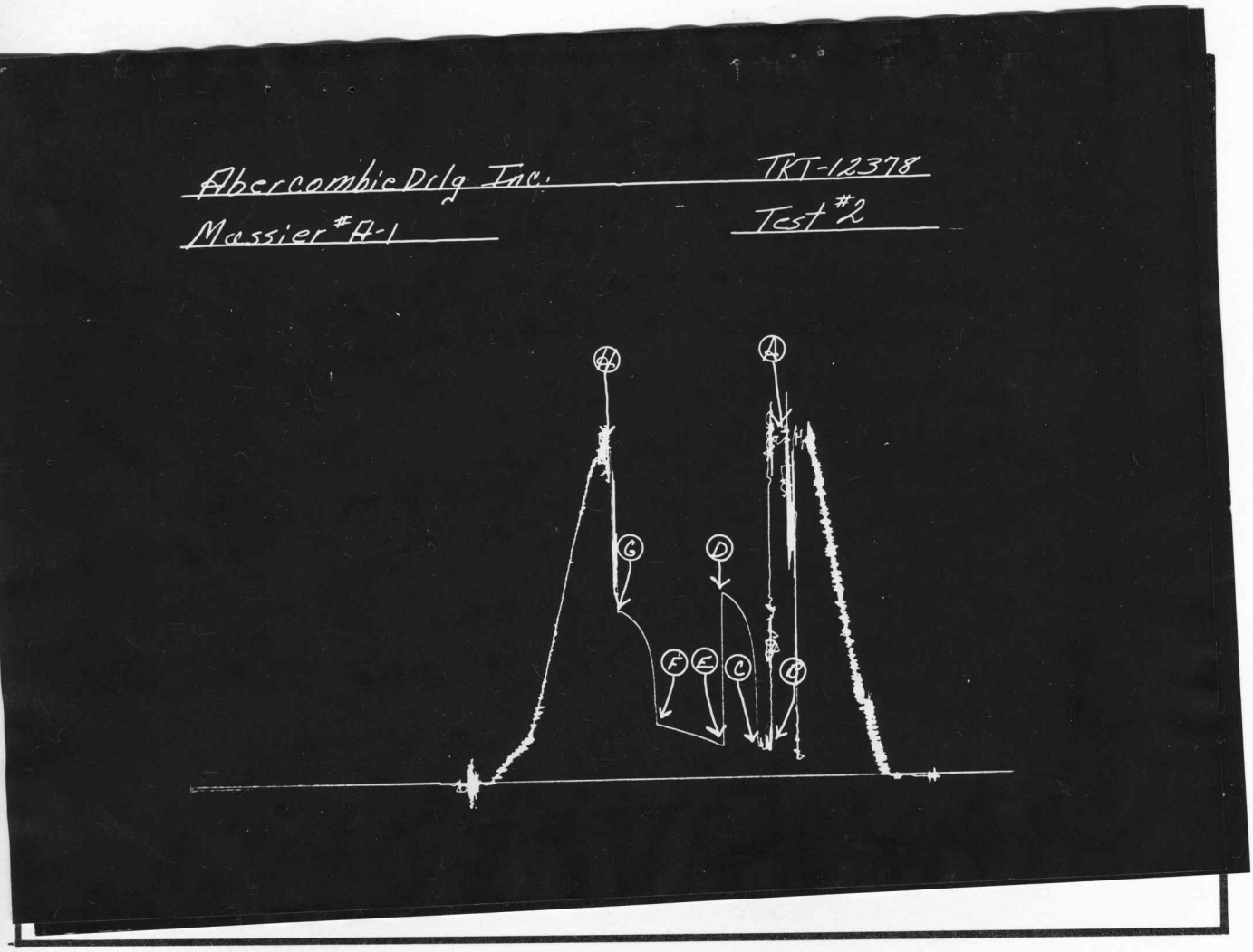
First Flow Pressure
Breakdown: 2 Inc. of 5 mins. and a final inc. of ____ Min.

Initial Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of ____ Min.

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of ____ Min.

Final Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of ____ Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	168	0	185	0	189	0	343
P 2 5	170	3	727	5	217	3	738
P 3 10	185	6	894	10	234	6	835
P 4		9	968	15	248	9	892
P 5		12	1018	20	262	12	934
P 6		15	1059	25	274	15	964
P 7		18	1086	30	286	18	987
P 8		21	1107	35	297	21	1008
P 9		24	1126	40	308	24	1027
P10		27	1139	45	318	27	1040
P11		30	1149	50	327	30	1050
P12				55	339		
P13				60	343		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



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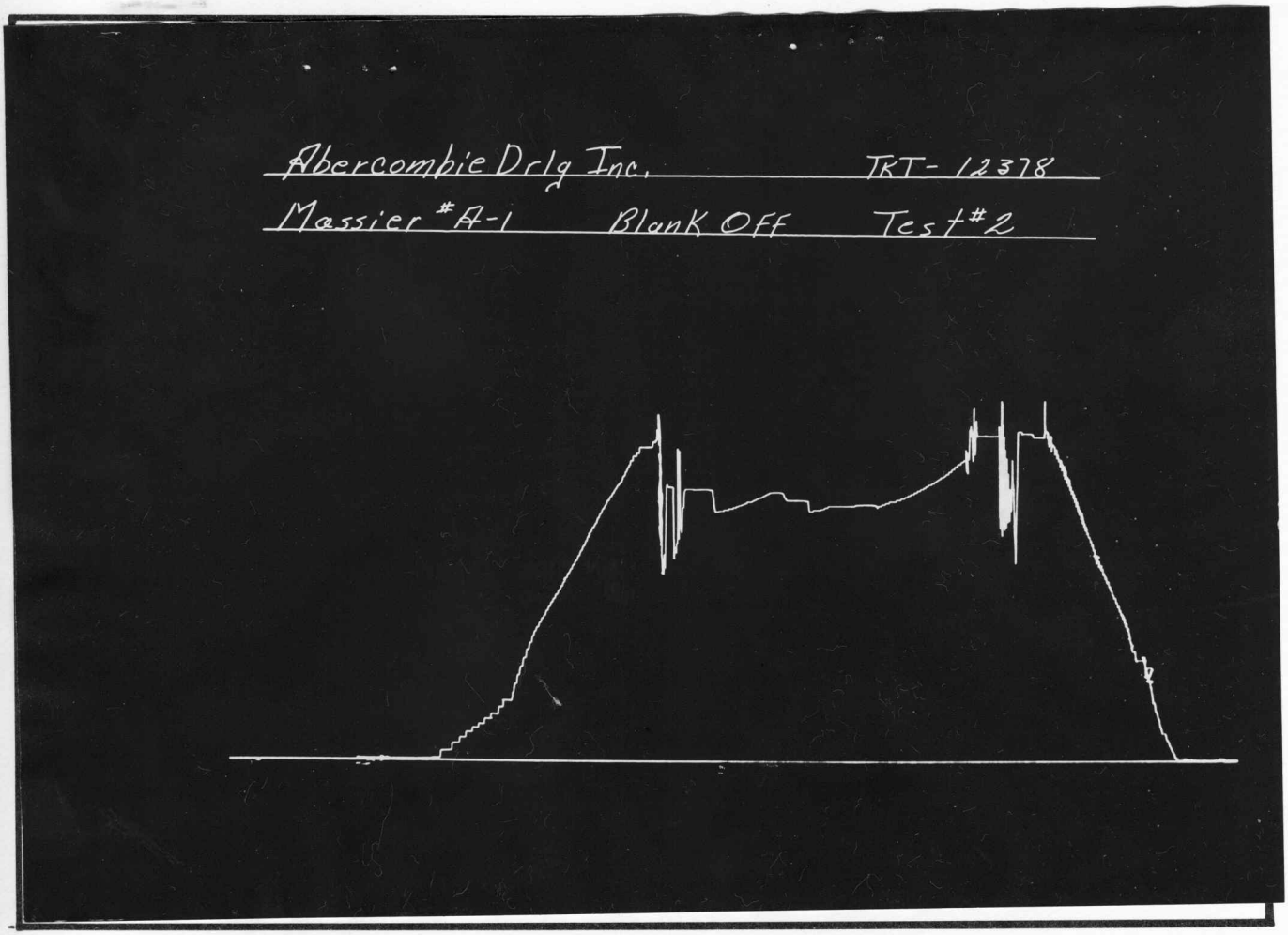
POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2090	2063	PSI
(B)	First Initial Flow Pressure	168	168	PSI
(C)	First Final Flow Pressure	200	185	PSI
(D)	Initial Closed-in Pressure	1145	1149	PSI
(E)	Second Initial Flow Pressure	200	189	PSI
(F)	Second Final Flow Pressure	348	343	PSI
(G)	Final Closed-in Pressure	1054	1050	PSI
(H)	Final Hydrostatic Mud	2080	2059	PSI

COMPANY Abercrombie Drilling Co. Inc. LEASE AND WELL NO. Massier A-1 SEC. 14 TWP. 14 RGE. 22W TEST NO. 2 DATE 5-15-69



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(F)	Second Final Flow Pressure	348	343	PSI
(G)	Final Closed-in Pressure	1054	1050	PSI
(H)	Final Hydrostatic Mud	2080	2059	PSI

COMPANY Abercrombie Drilling Co. Inc. LEASE AND WELL NO. Massier A-1 SEC. 14 TWP. 14 RGE. 22W TEST NO. 2 DATE 5-15-69