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

Company Abercrombie Drilling Co. Lease & Well No. Schippers A#1

Elevation 2681 Kelly Bushings Formation Kansas City Effective Pay --- Ft. Ticket No. 10348

Date 11-14-67 Sec. 22 Twp. 10s Range 28w County Sheridan State Kansas

Test Approved by Jack Wharton Western Representative W. M. Nething

Formation Test No. 1 O.K. X Misrun Interval Tested From 3811' to 3832' Total Depth 3832'

Size Main Hole 6 3/4 Rat Hole Conv. X B.T. Damaged Yes X No Conv. B.T. X Damaged Yes X No

Packer Depth 3811 Ft. Size 5 1/2 Packer Depth 3806 Ft. Size 5 1/2

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

Packer Depth Ft. Size

Tool Size 4½" OD Tool Jt. Size 4"FH & 3½"IF Anchor Length 21 Ft. Size 4½" OD

RECORDERS Depth 3825 Ft. Clock No. 9103 Depth 3828 Ft. Clock No. 4964

Top Make Kuster Cap. 4150 No. 2604 Inside =Outside= Bottom Make Kuster Cap. 4250 No. 1051 =Inside= Outside

Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 2:50 P. M

Tool Open I.F.P. From 2:53 M. to 3:03 P. M. Hr. 10 Min. From (B) 14 P.S.I. To (C) 14 P.S.I.

Tool Closed I.C.I.P. From 3:03 M. to 3:33 P M. Hr. 30 Min. (D) 41 P.S.I.

Tool Open F.F.P. From 3:33 M. to 4:33 P M. Hr. 60 Min. From (E) 21 P.S.I. To (F) 14 P.S.I.

Tool Closed F.C.I.P. From 4:33 M. to 5:03 P M. Hr. 30 Min. (G) 25 P.S.I.

Initial Hydrostatic Pressure (A) 2087 P.S.I. Final Hydrostatic Pressure (H) 2071 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/4 In.		M.	
			M.	
			M.	

BLOW Few bubbles, flushed tool. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. Five feet mud.

Reversed Out Yes X No Mud Type chemical Viscosity 42 Weight 10.3 Water Loss 13.6 cc. Maximum Temp. 116 °F

EXTRA EQUIPMENT: Dual Packers dual Safety Joint Jars: Size Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe 2520 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1271 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 25 ft.

I. D. Drill Collars 2.25 in. Length D.S.T. Tool 41 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 11-14-67 Test Ticket No. 10348

Recorder No. 1051 Capacity 4250 Location 3825 Ft.

Clock No. 4964 Elevation 2681 Kelly Bushings Well Temperature 116 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2087 P.S.I.	Opened Tool	2:50 P. M	
B First Initial Flow Pressure	14 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	14 P.S.I.	Initial Closed-in Pressure	30 Mins.	29 Mins.
D Initial Closed-in Pressure	41 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	21 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	14 P.S.I.			
G Final Closed-in Pressure	25 P.S.I.			
H Final Hydrostatic Mud	2071 P.S.I.			

PRESSURE BREAKDOWN

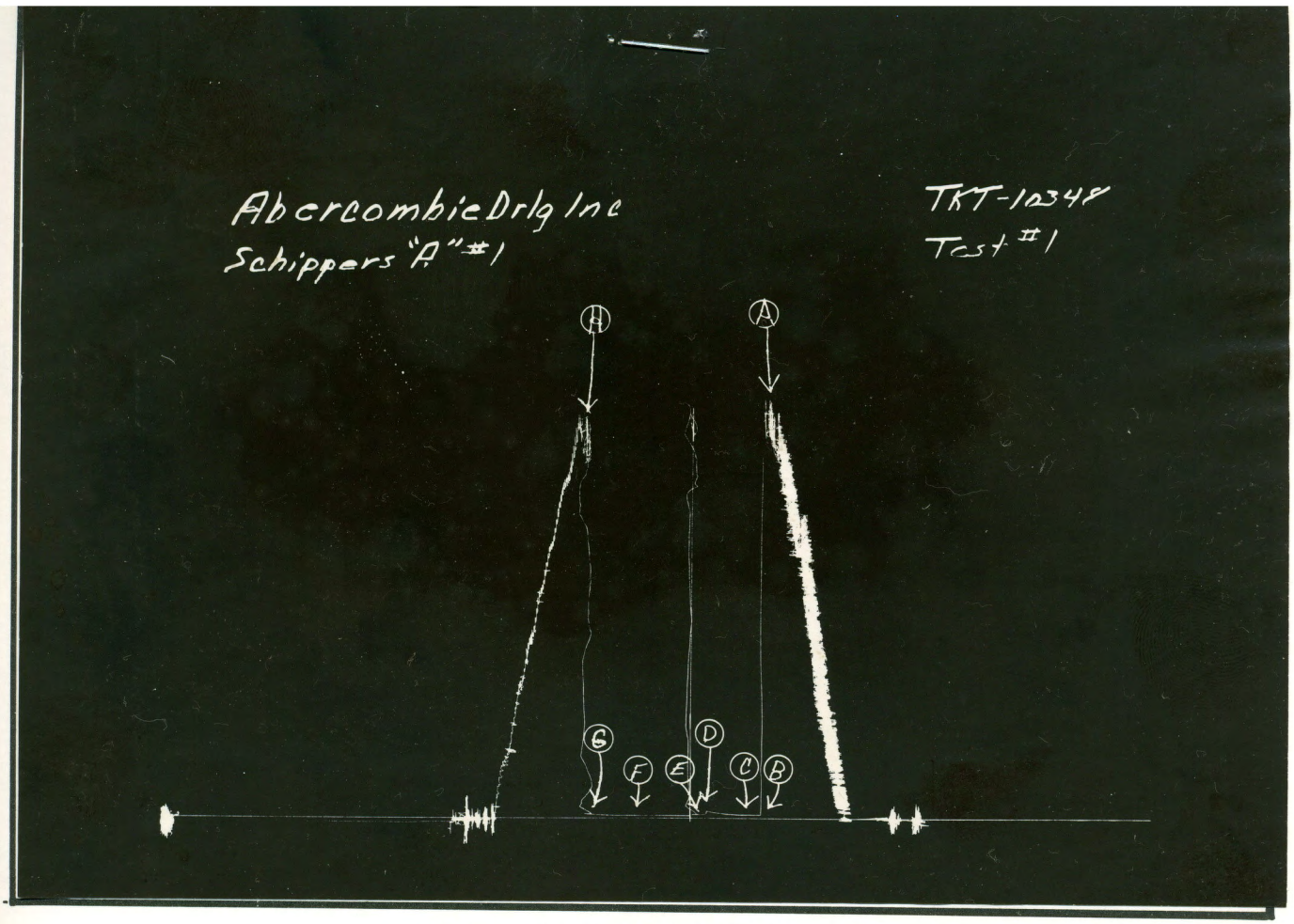
First Flow Press. Breakdown: 2 Inc. of 5 mins. and a final inc. of -- Min.

Initial Shut-In Breakdown: 9 Inc. of 3 mins. and a final inc. of 2 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 Press. Point Mins.	First Flow Press. 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	14	0	14	0	21	0	14
P 2	5	14	3	15	5	21	3	14
P 3	10	14	6	17	10	21	6	14
P 4			9	19	15	14	9	16
P 5			12	23	20	14	12	18
P 6			15	25	25	14	15	23
P 7			18	28	30	14	18	23
P 8			21	31	35	14	21	24
P 9			24	35	40	14	24	25
P10			27	39	45	14	27	25
P11			29	41	50	14	30	25
P12					55	14		
P13					60	14		
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	2094	2087	PSI
(B)	First Initial Flow Pressure	11	14	PSI
(C)	First Final Flow Pressure	11	14	PSI
(D)	Initial Closed-in Pressure	32	41	PSI
(E)	Second Initial Flow Pressure	11	21	PSI
(F)	Second Final Flow Pressure	11	14	PSI
(G)	Final Closed-in Pressure	21	25	PSI
(H)	Final Hydrostatic Mud	2074	2071	PSI

COMPANY Abercrombie Drlg. Inc. LEASE AND WELL NO. Schippers # A#1 SEC. 22 TWP. 10s RGE. 28w TEST NO. 1 DATE 11-14-6

WESTERN TESTERS

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

Company ABERCROMBIE DRILLING INC. Lease & Well No. Schippers A#1

Elevation 2681 Kelly Bushings Formation Kansas City Effective Pay ---- Ft. Ticket No. 10349

Date 11-15-67 Sec. 22 Twp. 10s Range 28w County Sheridan State Kansas

Test Approved by Jack Wharton Western Representative W. M. Nething

Formation Test No. 2 O.K. X Misrun Interval Tested From 3832' to 3860' Total Depth 3860'

Size Main Hole 6 3/4 Rat Hole Conv. X B.T. Damaged Yes X No Conv. B.T. X Damaged Yes X No

Packer Depth 3832 Ft. Size 5 1/2 Packer Depth 3827 Ft. Size 6 1/8

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

Packer Depth Ft. Size

Tool Size 4½" OD Tool Jt. Size 4"FH & 3½"IF Anchor Length 28 Ft. Size 4½" OD

RECORDERS Depth 3853 Ft. Clock No. 9103 Depth 3856 Ft. Clock No. 4964

Top Make Kuster Cap. 4150 No. 2604 Inside Outside Bottom Make Kuster Cap. 4250 No. 1051 Inside Outside

Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 6:52 A. M

Tool Open I.F.P. From 6:54 M. to 7:04 A M. Hr. 10 Min. From (B) 29 P.S.I. To (C) 29 P.S.I.

Tool Closed I.C.I.P. From 7:04 M. to 7:34 A M. Hr. 30 Min. (D) 649 P.S.I.

Tool Open F.F.P. From 7:34 M. to 8:34 A M. Hr. 60 Min. From (E) 29 P.S.I. To (F) 36 P.S.I.

Tool Closed F.C.I.P. From 8:34 M. to 9:04 A M. Hr. 30 Min. (G) 112 P.S.I.

Initial Hydrostatic Pressure (A) 2096 P.S.I. Final Hydrostatic Pressure (H) 2070 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/4 In.		M.	
			M.	
			M.	

BLOW Weak blow 2 minutes, flushed tool Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 15 feet slightly oil cut mud.

Reversed Out Yes X No Mud Type Chemical Viscosity 44 Weight 10.3 Water Loss 13.6 cc. Maximum Temp. 117 °F

EXTRA EQUIPMENT: Dual Packers dual Safety Joint Jars: Size Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe 2541 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1271 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 25 ft.

I. D. Drill Collars 2.25 in. Length D.S.T. Tool 48 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 11-15-67 Test Ticket No. 10349

Recorder No. 2604 Capacity 4150 Location 3853 Ft.

Clock No. 9103 Elevation 2681 Kelly Bushings Well Temperature 117 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2096	P.S.I.	Opened Tool	6:52 A. M	
B	First Initial Flow Pressure	29	P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C	First Final Flow Pressure	29	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	649	P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	29	P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	36	P.S.I.			
G	Final Closed-in Pressure	112	P.S.I.			
H	Final Hydrostatic Mud	2070	P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc.
of 5 mins. and a
final inc. of -- Min.

Point	Mins.	Press.
P 1	0	29
P 2	5	29
P 3	10	29
P 4		
P 5		
P 6		
P 7		
P 8		
P 9		
P10		
P11		
P12		
P13		
P14		
P15		
P16		
P17		
P18		
P19		
P20		

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

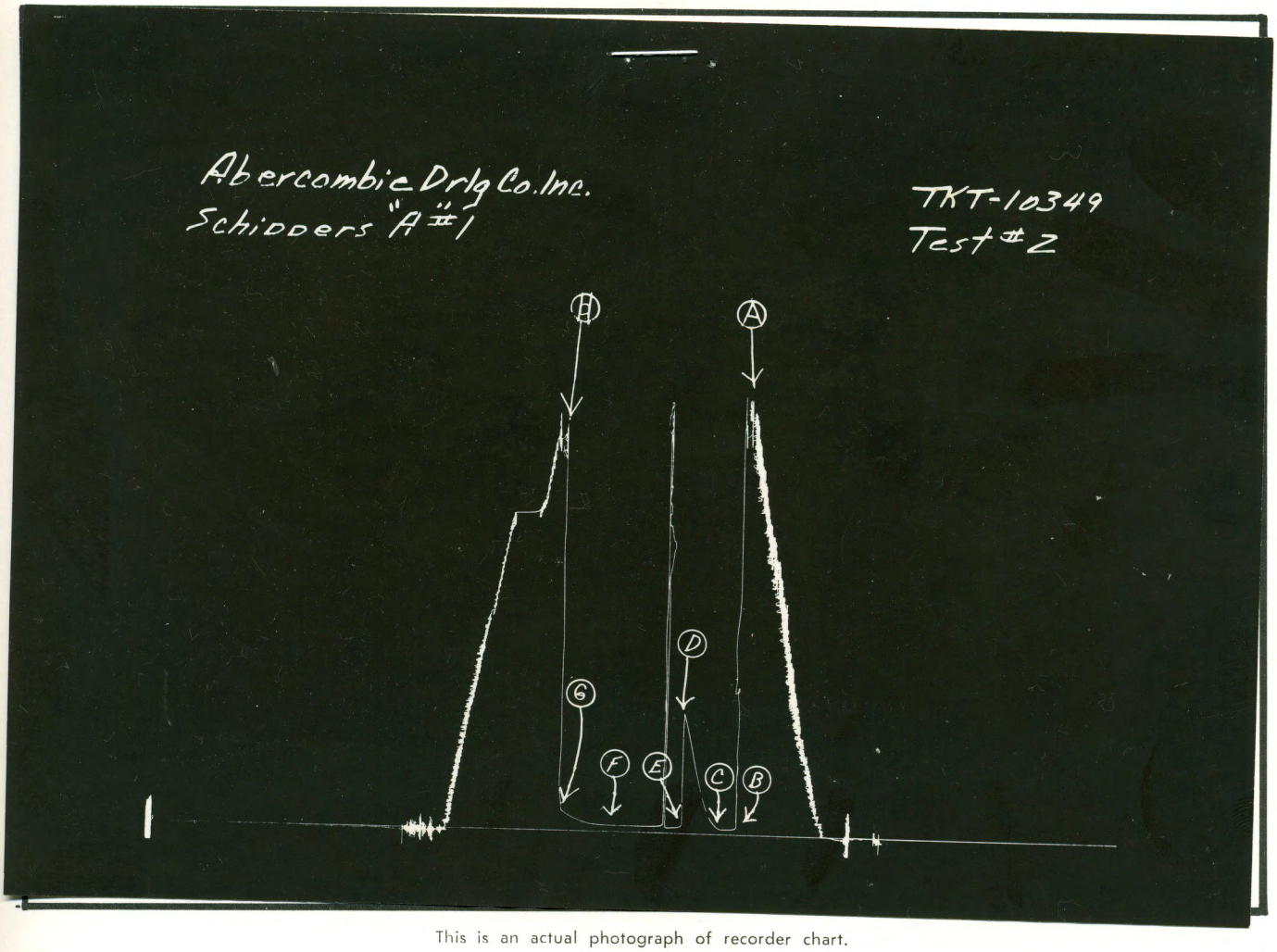
Point	Minutes	Press.
P 1	0	29
P 2	3	38
P 3	6	62
P 4	9	97
P 5	12	151
P 6	15	233
P 7	18	313
P 8	21	390
P 9	24	493
P10	27	579
P11	30	649
P12		
P13		
P14		
P15		
P16		
P17		
P18		
P19		
P20		

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

Point	Minutes	Press.
P 1	0	29
P 2	5	29
P 3	10	29
P 4	15	54
P 5	20	34
P 6	25	34
P 7	30	34
P 8	35	34
P 9	40	35
P10	45	36
P11	50	36
P12	55	36
P13	60	36
P14		
P15		
P16		
P17		
P18		
P19		
P20		

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

Point	Minutes	Press.
P 1	0	36
P 2	3	40
P 3	6	42
P 4	9	44
P 5	12	49
P 6	15	57
P 7	18	66
P 8	21	78
P 9	24	87
P10	27	102
P11	30	112
P12		
P13		
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	2105	2096	PSI
(B)	First Initial Flow Pressure	21	29	PSI
(C)	First Final Flow Pressure	21	29	PSI
(D)	Initial Closed-in Pressure	648	649	PSI
(E)	Second Initial Flow Pressure	21	29	PSI
(F)	Second Final Flow Pressure	32	36	PSI
(G)	Final Closed-in Pressure	117	112	PSI
(H)	Final Hydrostatic Mud	2074	2070	PSI

COMPANY Abercrombie Drlg. Inc. LEASE AND WELL NO. Schippers A#1 SEC. 22 TWP. 10s RGE. 28W TEST NO. 2 DATE 11

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

Company Abercrombie Drlg. Co. Lease & Well No. Schippers # 1

Elevation 2681 Kelly Bushings Formation Kansas City Effective Pay -- Ft. Ticket No. 10214

Date 11-16-67 Sec. 22 Twp. 10s Range 28w County Sheridan State Kansas

Test Approved by Jack Wharton Western Representative Kenneth Cheney

Formation Test No. 3 O.K. X Misrun Interval Tested From 3915' to 3995' Total Depth 3995'

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

Top Packer Depth 3911 Ft. Size 5 1/2 Packer Depth 3915 Ft. Size 5 1/2

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

Packer Depth Ft. Size

Tool Size 4½" OD Tool Jt. Size 3½" IF Anchor Length 80 Ft. Size 4½" OD

RECORDERS Depth 3988 Ft. Clock No. 8377 Depth 3990 Ft. Clock No. 6895

Top Make Kuster Cap. 4150 No. 2607 Inside ~~Outside~~ Bottom Make Kuster Cap. 4150 No. 969 ~~Inside~~ Outside

Below Straddle: Depth Clock No. Inside Outside Depth Ft. Clock No. Inside Outside

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 9:16 P. M

Tool Open I.F.P. From 9:18 M. to 9:28 P.M. Hr. 10 Min. From (B) 54 P.S.I. To (C) 54 P.S.I.

Tool Closed I.C.I.P. From 9:28 M. to 9:58 P.M. Hr. 30 Min. (D) 1004 P.S.I.

Tool Open F.F.P. From 9:58 M. to 10:58 P.M. 1 Hr. 00 Min. From (E) 59 P.S.I. To (F) 71 P.S.I.

Tool Closed F.C.I.P. From 10:58 M. to 11:28 P.M. Hr. 30 Min. (G) 866 P.S.I.

Initial Hydrostatic Pressure (A) 2247 P.S.I. Final Hydrostatic Pressure (H) 2242 P.S.I.

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

BLOW Weak for ten minutes. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. Forty feet thin mud.

Reversed Out Yes X No Mud Type Chem. Viscosity 40 Weight 10.5 Water Loss 11.6 cc. Maximum Temp. 124 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size Make Ser. No.

Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe 2607 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1258 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 2.7 ft.

I. D. Drill Collars 30 in. Length D.S.T. Tool 100 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 11-16-67 Test Ticket No. 10214

Recorder No. 2607 Capacity 4150 Location 3988 Ft.

Clock No. 8377 Elevation 2681 Kelly Bushings Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2247 P.S.I.	Opened Tool	9:16 P. M	
B First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	54 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1004 P.S.I.	Second Flow Pressure	60 Mins.	59 Mins.
E Second Initial Flow Pressure	59 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	71 P.S.I.			
G Final Closed-in Pressure	866 P.S.I.			
H Final Hydrostatic Mud	2242 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc.
of 5 mins. and a
final inc. of -- Min.

Point Mins.	Press.
P 1 0	54
P 2 5	54
P 3 10	54
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

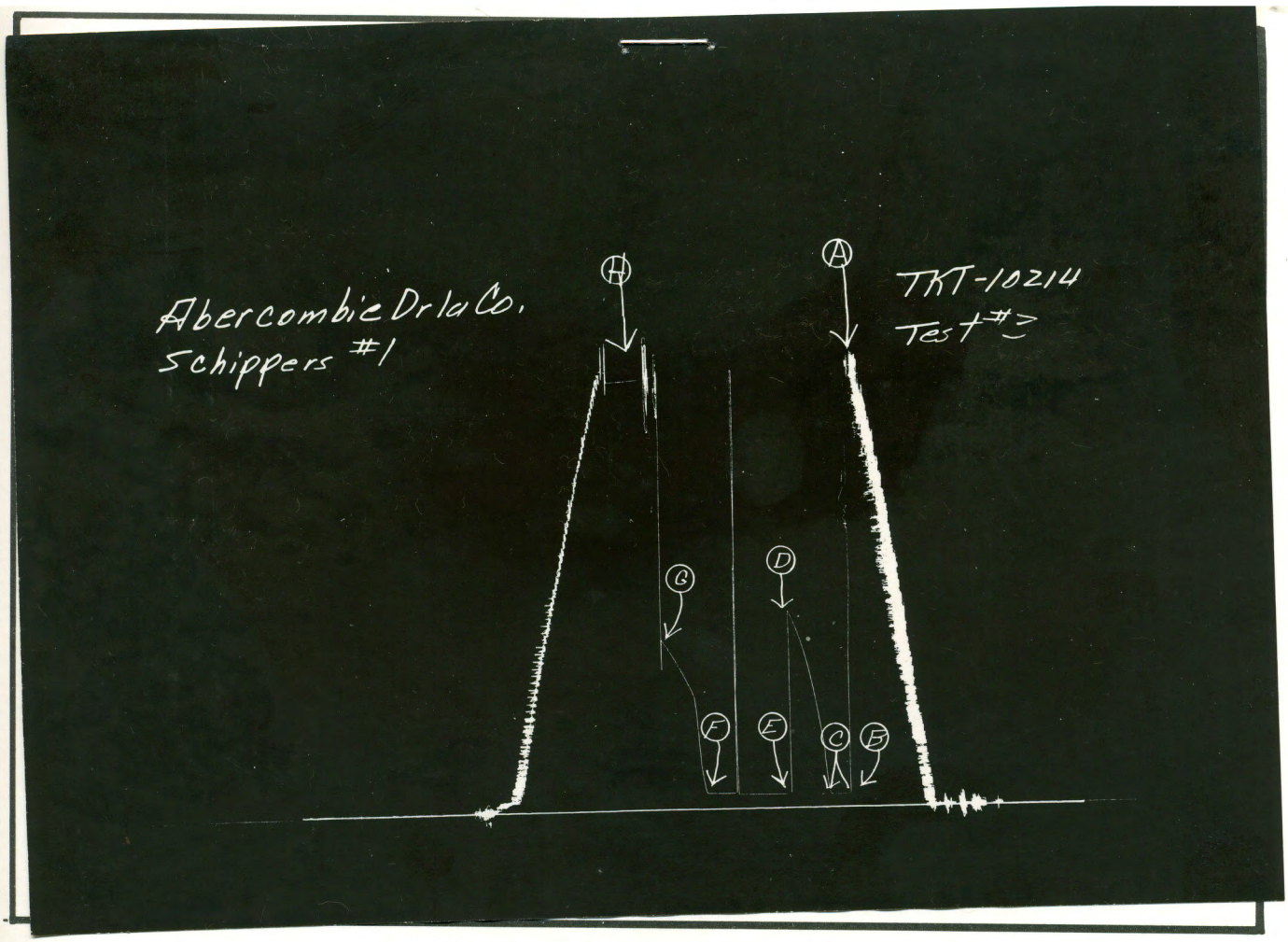
Point Minutes	Press.
0	54
3	165
6	389
9	516
12	622
15	720
18	801
21	875
24	933
27	979
30	1004

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 4 Min.

Point Minutes	Press.
0	59
5	59
10	60
15	60
20	60
25	61
30	61
35	69
40	69
45	69
50	70
55	71
59	71

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

Point Minutes	Press.
0	71
3	235
6	491
9	601
12	643
15	685
18	730
21	772
24	809
27	847
30	866



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2331	2247	PSI
(B)	First Initial Flow Pressure	52	54	PSI
(C)	First Final Flow Pressure	59	54	PSI
(D)	Initial Closed-in Pressure	997	1004	PSI
(E)	Second Initial Flow Pressure	65	59	PSI
(F)	Second Final Flow Pressure	73	71	PSI
(G)	Final Closed-in Pressure	857	866	PSI
(H)	Final Hydrostatic Mud	2316	2242	PSI

COMPANY Abercrombie Drlg. Co. LEASE AND WELL NO. Schippers # 1 SEC. 22 TWP. 10s RGE. 28w TEST NO. 3 DATE 11-16-