WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Bowers Drilling Company Lease & Well No. Durell #1

Elevation 1759 DerrickFloor Formation Douglas Ticket Number 6454

Date May 9,1965 Sec. 21 Twp. 31 Range 11 County Barber State Kansas

Test Approved by Robert McCann Western Representative Guy M. Knipe

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Formation Test No. 1 O.K. x Misrun Interval Tested From 3780' to 3793' Total Depth 3793'

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

Packer Depth 3777 Ft. Size 6 3/4 Packer Depth 3780 Ft. Size 6 3/4

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

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 13 Ft. Size 5½ OD

RECORDERS Depth 3782 Ft. Clock No. 5665 Depth 3785 Ft. Clock No. 100

Top Make Kuster Cap. 4200 No. 1558 Inside Outside Bottom Make Western Cap. 4000 No. 59 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 8:27 P M

Tool Open I.F.P. From 8:30P M to 8:33P M Hr. 3 Min. From (B) 624 P.S.I. To (C) 924 P.S.I.

Tool Closed I.C.I.P. From 8:33P M. to 9:03P M. Hr. 30 Min. (D) 1267 P.S.I.

Tool Open F.F.P. From 9:03P M. to 9:43P M. Hr. 40 Min. From (E) 972 P.S.I. To (F) 1085 P.S.I.

Tool Closed F.C.I.P. From 9:43P M. to 10:13P M. Hr. 30 Min. (G) 1259 P.S.I.

Initial Hydrostatic Pressure (A) 2050 P.S.I. Final Hydrostatic Pressure (H) 2048 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/4 In.	50 lb.	17 M.	6,160,000 M.C.F.
		55 lb.	27 M.	6,640,000 MCF
		55 lb.	37 M.	6,640,000 M.C.F.

BLOW Immediate strong blow gas to surface in one minute. Bottom Choke Size 3/4 In.

Did Well Flow x Yes No Recovery Total Ft. 5' of distillate

Mud

Reversed Out Yes x No Mud Type starch Viscosity 42 Weight 9.8 Maximum Temp. 110 °F

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

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

Length Drill Pipe 3619 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 140 ft.

I. D. Drill Collars 2¼ in. Length D.S.T. Tool 34 ft.

Remarks

WESTERN TESTERS

P. O. Box 793
GREAT BEND, KANSAS

Company Bowers Drilling Company Lease & Well No. #1 Durell

Test No. 1 Interval Tested From 3780' To 3793'

Time	Max Press. P.S.I.	Description of Flow
9:10 7 min.	40 lb.	5,210,000
9:20 -17 min.	50 lb.	6,160,000
9:30 -27 min.	55 lb.	6,640,000
9:40 -37 min.	55 lb.	6,640,000

Size Choke Surface 3/4 In. Bottom In. 3/4

Remarks Gas to ~~surface~~ surface in one minute.

WHELAN PRINTERS, GREAT BEND, KS.

WESTERN TESTING CO., INC.
Pressure Data

Date May 9, 1965 Test Ticket No. 6454

Recorder No. 1558 Capacity 4200 Location 3782 Ft.

Clock No. 5665 Elevation 1759 Derrick Floor Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2050 P.S.I.	Opened Tool	8:27 P M	
B First Initial Flow Pressure	624 P.S.I.	First Flow Pressure	3 Mins.	3 Mins.
C First Final Flow Pressure	924 P.S.I.	Initial Closed-in Pressure	30 Mins.	29 Mins.
D Initial Closed-in Pressure	1267 P.S.I.	Second Flow Pressure	40 Mins.	35 Mins.
E Second Initial Flow Pressure	972 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	1085 P.S.I.			
G Final Closed-in Pressure	1259 P.S.I.			
H Final Hydrostatic Mud	2044 P.S.I.			

PRESSURE BREAKDOWN

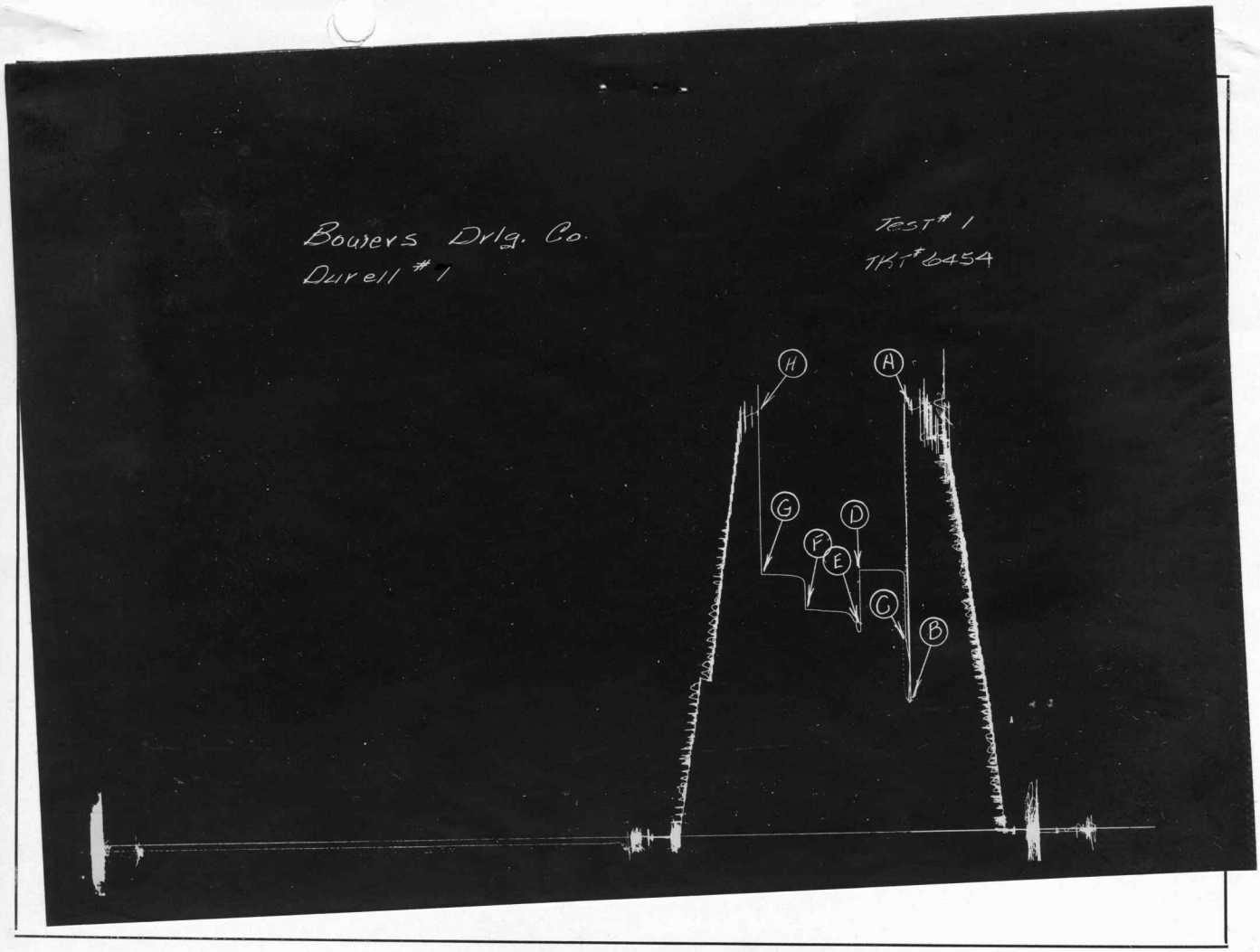
First Flow Press.
Breakdown: 1 Inc.
of 3 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 2 Min.

Second Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	624	0	924	0	972	0	1085
P 2 3	924	3	1265	5	1033	3	1242
P 3		6	1267	10	1068	6	1248
P 4		9	1267	15	1073	9	1252
P 5		12	1267	20	1075	12	1254
P 6		15	1267	25	1079	15	1255
P 7		18	1267	30	1083	18	1256
P 8		21	1267	35	1085	21	1558
P 9		24	1267			24	1259
P10		27	1267			27	1259
P11		29	1267			30	1259
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2050	PSI
(B)	First Initial Flow Pressure	624	PSI
(C)	First Final Flow Pressure	924	PSI
(D)	Initial Closed-in Pressure	1267	PSI
(E)	Second Initial Flow Pressure	972	PSI
(F)	Second Final Flow Pressure	1085	PSI
(G)	Final Closed-in Pressure	1259	PSI
(H)	Final Hydrostatic Mud	2044	PSI

COMPANY BOWERS DRILLING COMPANY LEASE AND WELL NO. DURELL #1 SEC. 21 TWP. 31 RGE. 11 TEST NO. 1 DATE 5-9-65

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Bowers Drilling Company, Inc. Lease & Well No. Durrell #1

Elevation 1759 Derrick Floor Formation Miss. Ticket Number 5595

Date May 14,1965 Sec. 21 Twp. 31s Range 11w County Barber State Kansas

Test Approved by Robert E. McCann Western Representative Jack Toelkes

Formation Test No. 2 O.K. x Misrun Interval Tested From 4495' to 4517' Total Depth 4517'

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

Packer Depth 4490 Ft. Size 6 3/4 Packer Depth 4495 Ft. Size 6 3/4

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

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 22 Ft. Size 5½ OD

RECORDERS Depth 4510 Ft. Clock No. 6774 Depth 4513 Ft. Clock No. 151

Top Make Amerada Cap. 4382 No. 1567 Inside Outside Bottom Make Western Cap. 3600 No. 30 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 6:27A M

Tool Open I.F.P. From 6:29A M to 6:39A M Hr. 10 Min. From (B) 47 P.S.I. To (C) 47 P.S.I.

Tool Closed I.C.I.P. From 6:39A M. to 7:09A M. Hr. 30 Min. (D) 751 P.S.I.

Tool Open F.F.P. From 7:09A M. to 8:39A M. 1 Hr. 30 Min. From (E) 47 P.S.I. To (F) 62 P.S.I.

Tool Closed F.C.I.P. From 8:39A M. to 9:09A M. Hr. 30 Min. (G) 684 P.S.I.

Initial Hydrostatic Pressure (A) 2449 P.S.I. Final Hydrostatic Pressure (H) 2440 P.S.I.

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

BLOW Strong Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 90' slightly gas cut mud; 1000'gas in pipe

Mud

Reversed Out Yes x No Mud Type starch Viscosity 43 Weight 10.2 Maximum Temp. 123 °F

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

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

Length Drill Pipe 4177 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 300 ft.

I. D. Drill Collars 2.25 in. Length D.S.T. Tool 40 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date May 14,1965 Test Ticket No. 5595

Recorder No. 1567 Capacity 4300 Location 4510 Ft.

Clock No. 6774 Elevation 1759 Derrick Floor Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2449 P.S.I.	Opened Tool	6:27 A M	
B First Initial Flow Pressure	47 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	47 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	751 P.S.I.	Second Flow Pressure	90 Mins.	89 Mins.
E Second Initial Flow Pressure	47 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	62 P.S.I.			
G Final Closed-in Pressure	684 P.S.I.			
H Final Hydrostatic Mud	2440 P.S.I.			

PRESSURE BREAKDOWN

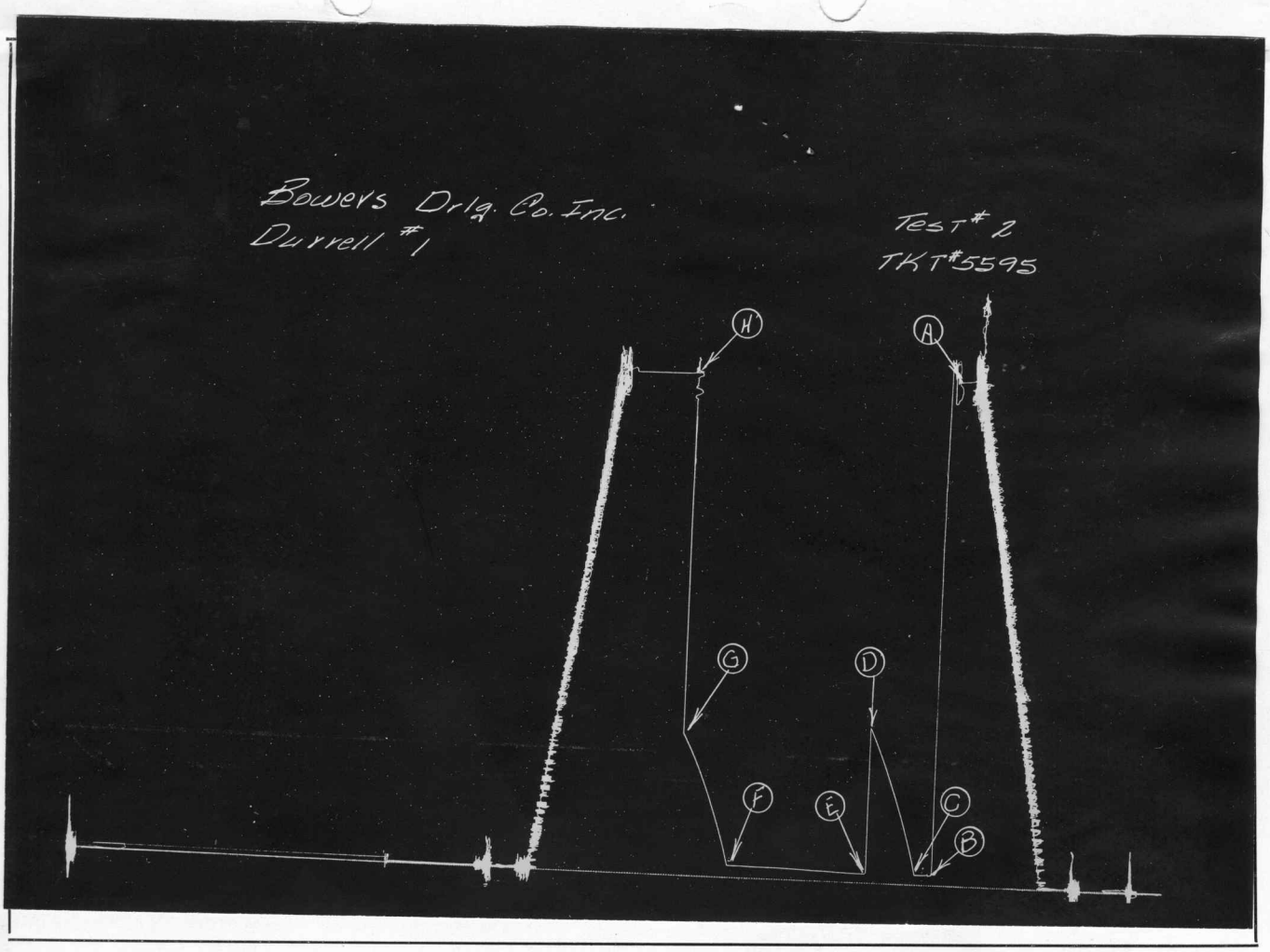
First Flow Press.
Breakdown: 2 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 17 Inc.
of 5 mins. and a
final inc. of 4 Min.

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.	Point	Minutes	Press.	Point	Minutes	Press.	Point	Minutes	Press.
P 1	0	47		0	47		0	47		0	62
P 2	5	47		3	151		5	47		3	162
P 3	10	47		6	228		10	47		6	228
P 4				9	306		15	48		9	306
P 5				12	387		20	48		12	378
P 6				15	450		25	49		15	437
P 7				18	510		30	49		18	497
P 8				21	566		35	51		21	545
P 9				24	629		40	53		24	598
P10				27	682		45	54		27	639
P11				30	751		50	55		30	684
P12							55	56			
P13							60	58			
P14							65	59			
P15							70	59			
P16							75	60			
P17							80	61			
P18							85	61			
P19							89	62			
P20											



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2449	PSI
(B)	First Initial Flow Pressure	47	PSI
(C)	First Final Flow Pressure	47	PSI
(D)	Initial Closed-in Pressure	751	PSI
(E)	Second Initial Flow Pressure	47	PSI
(F)	Second Final Flow Pressure	62	PSI
(G)	Final Closed-in Pressure	684	PSI
(H)	Final Hydrostatic Mud	2440	PSI

COMPANY BOWERS DRILLING CO., INC. LEASE AND WELL NO. DURRELL #1 SEC. 21 TWP. 31s RGE. 11w TEST NO. 2 DATE 5-14-65

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Bowers Drilling Company, Inc. Lease & Well No. Durrell #1

Elevation 1759 DerrickFloor Formation Miss. Ticket Number 5596

Date May 15,1965 Sec. 21 Twp. 31s Range 11w County Barber State Kansas

Test Approved by Robert McCann Western Representative Jack Toelkes

Formation Test No. 3 O.K. x Misrun Interval Tested From 4517' to 4558' Total Depth 4558'

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

Packer Depth 4512 Ft. Size 6 3/4 Packer Depth 4517 Ft. Size 6 3/4

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

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 41 Ft. Size 5½ OD

RECORDERS Depth 4552 Ft. Clock No. 6774 Depth 4555 Ft. Clock No. 151

Top Make Amerada Cap. 4382 No. 1567 Inside Outside Bottom Make Western Cap. 3600 No. 30 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 4:28 A M

Tool Open I.F.P. From 4:30A M to 4:40 M Hr. 10 Min. From (B) 58 P.S.I. To (C) 58 P.S.I.

Tool Closed I.C.I.P. From 4:40 M. to 5:10A M. Hr. 30 Min. (D) 404 P.S.I.

Tool Open F.F.P. From 5:10A M. to 6:40A M. 1 Hr. 30 Min. From (E) 73 P.S.I. To (F) 86 P.S.I.

Tool Closed F.C.I.P. From 6:40A M. to 7:10A M. Hr. 30 Min. (G) 246 P.S.I.

Initial Hydrostatic Pressure (A) 2469 P.S.I. Final Hydrostatic Pressure (H) 2460 P.S.I.

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

BLOW Good decrease to weak. Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 200' gas in pipe; 100' oil and gas cut mud

Mud

Reversed Out x Yes No Mud Type starch Viscosity 42 Weight 9.6 Maximum Temp. 126 °F

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

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

Length Drill Pipe 4198 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe ft. I.D. Weight Pipe in. Length Drill Collars 300 ft.

I. D. Drill Collars 2.25 in. Length D.S.T. Tool 75 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date May 15, 1965 Test Ticket No. 5596

Recorder No. 1567 Capacity 4300 Location 4552 Ft.

Clock No. 6774 Elevation 1759 Derrick Floor Well Temperature 126 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2469 P.S.I.	Opened Tool	4:28 A M	
B First Initial Flow Pressure	58 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	58 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D Initial Closed-in Pressure	404 P.S.I.	Second Flow Pressure	90 Mins.	90 Mins.
E Second Initial Flow Pressure	73 P.S.I.	Final Closed-in Pressure	30 Mins.	29 Mins.
F Second Final Flow Pressure	86 P.S.I.			
G Final Closed-in Pressure	246 P.S.I.			
H Final Hydrostatic Mud	2460 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 2 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	58
P 2 5	58
P 3 10	58
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: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

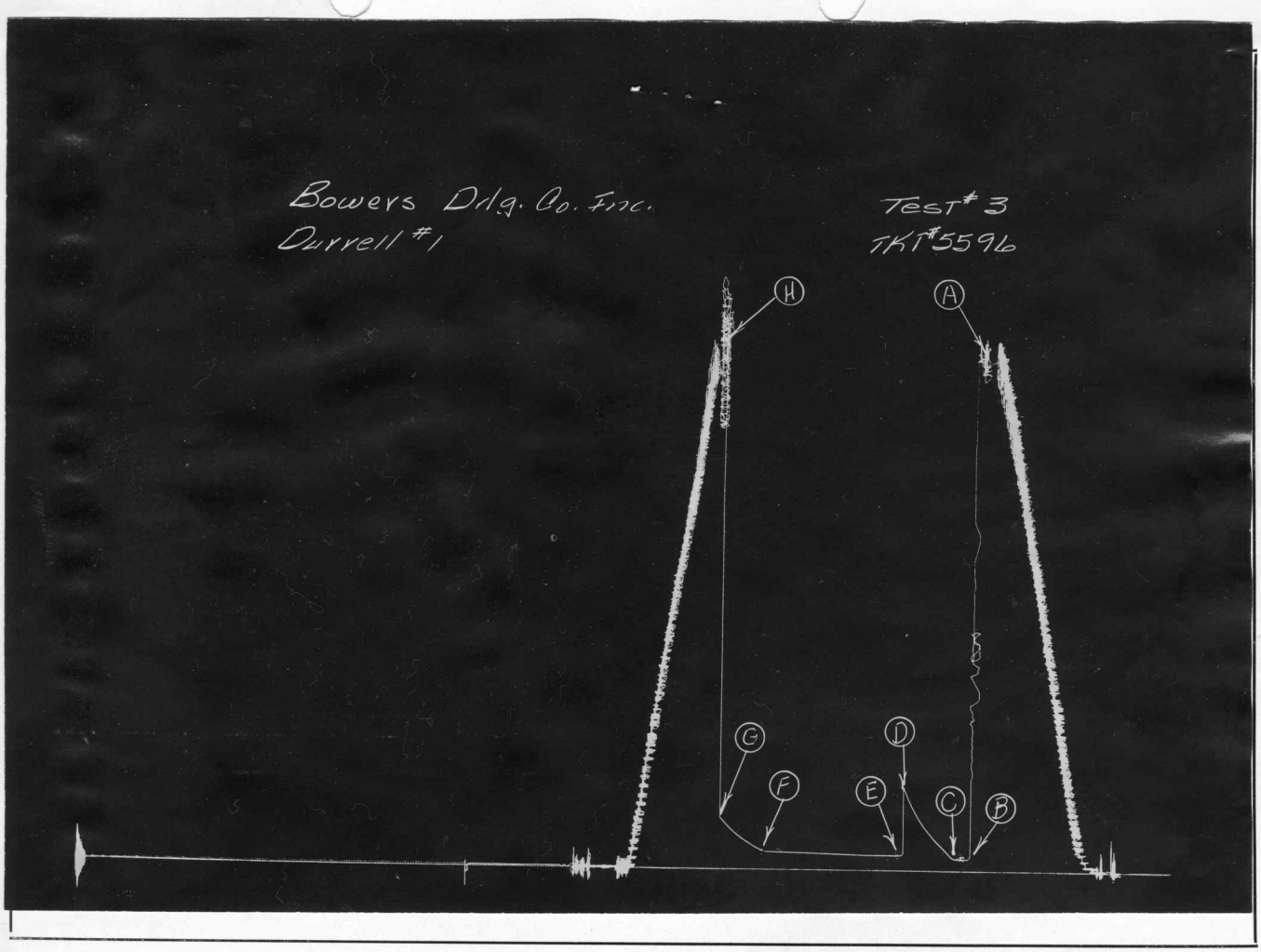
Point Minutes	Press.
0	58
3	71
6	99
9	120
12	140
15	166
18	194
21	222
24	263
27	302
30	348
33	404

Second Flow Pressure
Breakdown: 18 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	73
5	73
10	73
15	73
20	74
25	74
30	75
35	76
40	77
45	78
50	79
55	80
60	82
65	83
70	84
75	84
80	85
85	85
90	86

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 2 Min.

Point Minutes	Press.
0	86
3	99
6	110
9	123
12	136
15	151
18	168
21	185
24	209
27	233
29	246



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2469	PSI
(B)	First Initial Flow Pressure	58	PSI
(C)	First Final Flow Pressure	58	PSI
(D)	Initial Closed-in Pressure	404	PSI
(E)	Second Initial Flow Pressure	73	PSI
(F)	Second Final Flow Pressure	86	PSI
(G)	Final Closed-in Pressure	246	PSI
(H)	Final Hydrostatic Mud	2460	PSI

COMPANY BOWERS DRILLING COMPANY, INC. LEASE AND WELL NO. DURRELL #1 SEC. 21 TWP. 31S RGE. 11W TEST NO. 3 DATE 5-15-65