WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Bowers Drilling Company Lease & Well No. Boggs #C-1

Elevation 1513 Derrick Floor Formation- Viola Ticket Number 4232

Date April 4, 1965 Sec. 9 Twp. 33s Range 12w County ~~Barber~~ Barber State Kansas

Test Approved by Robert E. McCann Western Representative George Tew

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Formation Test No. 1 O.K. x Misrun ____ Interval Tested From 4669' to 4690' Total Depth 4690'

Size Main Hole 7 7/8 Rat Hole None Conv. ____ B.T. x Damaged ____ Yes ____ x No Conv. x B.T. ____ Damaged ____ Yes x No

Packer Depth 4669 Ft. Size 6 3/4 Packer Depth 4664 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 21 Ft. Size 5½ OD

RECORDERS Depth 4683 Ft Clock No. 6861 Depth 4686 Ft. Clock No. 105

Top Make Kuster Cap. 4200 No. 1559 Inside ~~Outside~~ Bottom Make Western Cap. 4000 No. 60 ~~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

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Time Set Packer 1:07 P M

Tool Open I.F.P. From 1:10P M to 1:15P M Hr. 5 Min. From (B) 50 P.S.I. To (C) 50 P.S.I.

Tool Closed I.C.I.P. From 1:15P M. to 1:45 M. Hr. 30 Min. (D) 84 P.S.I.

Tool Open F.F.P. From 1:45P M. to 2:45 M. 1 Hr. ____ Min. From (E) 56 P.S.I. To (F) 63 P.S.I.

Tool Closed F.C.I.P. From 2:45P M. to 3:15 M. Hr. 30 Min. (G) 122 P.S.I.

Inital Hydrostatic Pressure (A) 2591 P.S.I. Final Hydrostatic Pressure (H) 2563 P.S.I.

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Fair blow throughout test. Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes X ~~X~~ No Recovery Total Ft. 80' slightly gas cut mud

____ Mud

Reversed Out ____ Yes X No Mud Type starch Viscosity 48 Weight 10.1 Maximum Temp. 125 °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 4362 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe ____ ft. I.D. Weight Pipe ____ in. Length Drill Collars 287 ft.

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

Remarks

WHELAN PRINTERS

WESTERN TESTING CO., INC.
Pressure Data

Date April 4, 1965 — Test Ticket No. 4232

Recorder No. 1559 — Capacity 4200 — Location 4683 Ft.

Clock No. 6861 — Elevation 1513 Derrick Floor — Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2591 P.S.I.	Opened Tool	1:07P M	
B First Initial Flow Pressure	50 P.S.I.	First Flow Pressure	5 Mins.	5 Mins.
C First Final Flow Pressure	50 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	84 P.S.I.	Second Flow Pressure	60 Mins.	61 Mins.
E Second Initial Flow Pressure	56 P.S.I.	Final Closed-in Pressure	30 Mins.	32 Mins.
F Second Final Flow Pressure	63 P.S.I.			
G Final Closed-in Pressure	122 P.S.I.			
H Final Hydrostatic Mud	2563 P.S.I.			

PRESSURE BREAKDOWN

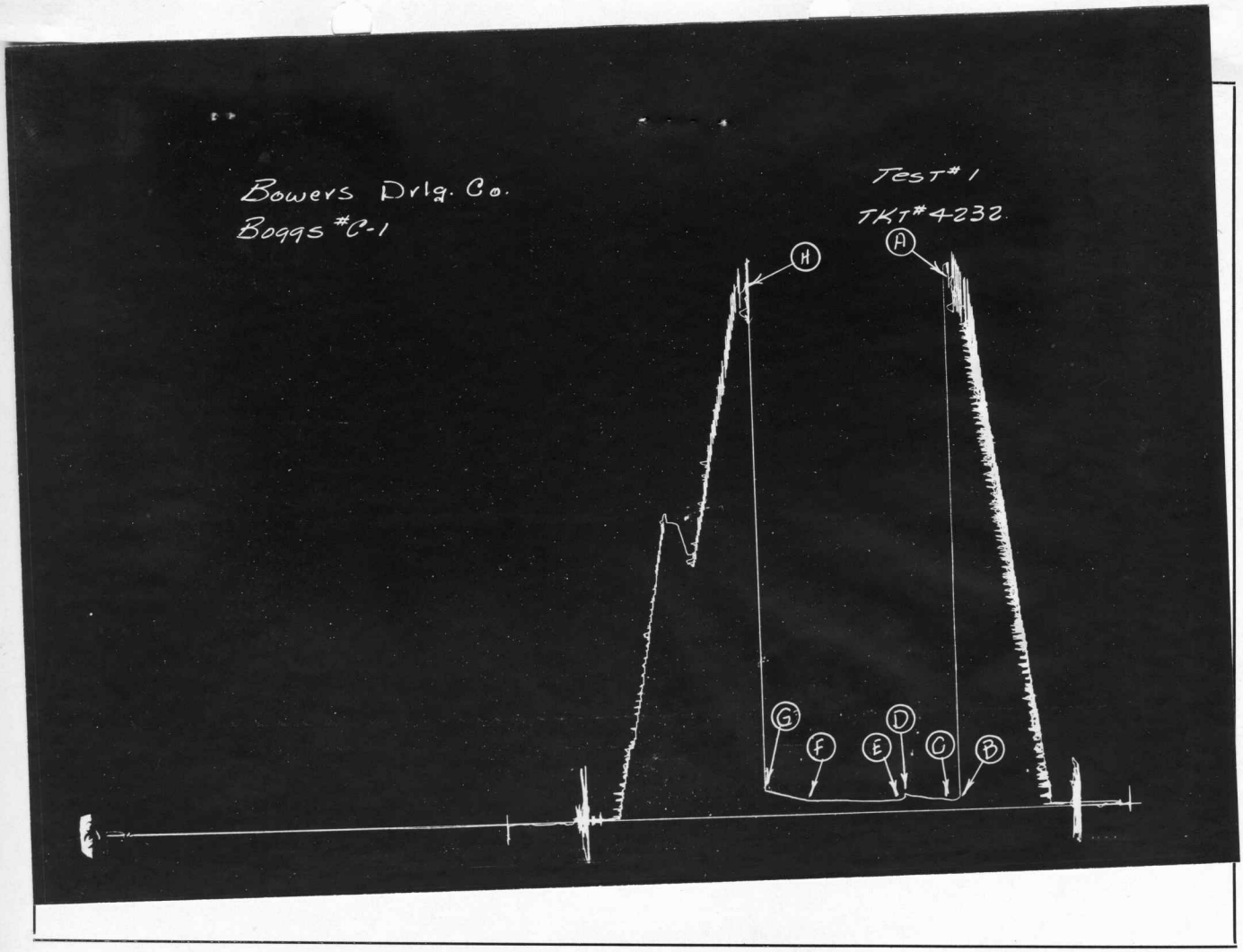
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 0 Min.

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

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 1 Min.

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 2 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	50	0	50	0	56	0	63
P 2 5	50	3	52	5	56	3	67
P 3		6	56	10	56	6	73
P 4		9	59	15	56	9	80
P 5		12	60	20	56	12	86
P 6		15	63	25	56	15	90
P 7		18	69	30	56	18	96
P 8		21	73	35	61	21	101
P 9		24	75	40	63	24	105
P10		27	78	45	63	27	111
P11		30	84	50	63	30	118
P12				55	63	32	122
P13				60	63		
P14				61	63		
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2591	PSI
(B)	First Initial Flow Pressure	50	PSI
(C)	First Final Flow Pressure	50	PSI
(D)	Initial Closed-in Pressure	84	PSI
(E)	Second Initial Flow Pressure	56	PSI
(F)	Second Final Flow Pressure	63	PSI
(G)	Final Closed-in Pressure	122	PSI
(H)	Final Hydrostatic Mud	2563	PSI

COMPANY BOWERS DRILLING COMPANY LEASE AND WELL NO. BOGGS #C-1 SEC. 9 TWP. 33S RGE. 12W TEST NO. 1 DATE 4-4-65

TIGHT HOLE

TIGHT HOLE

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Bowers Drilling Company Lease & Well No. Boggs #C-1

Elevation 1513 Derrick Floor; Formation- Simpson Ticket Number 4219

Date April 6, 1965 Sec. 9 Twp. 33s Range 12w County Barber State Kansas

Test Approved by Robert E. McCann Western Representative Guy M. Knipe

Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 4769' to 4792' Total Depth 4792'

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 4766 Ft. Size 6 3/4 Packer Depth 4769 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 23 Ft. Size 5½ OD

RECORDERS Depth 4784 Ft Clock No. 5665 Depth 4787 Ft. Clock No. 150

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 5:27 A M

Tool Open I.F.P. From 5:29A M to 5:35 M Hr. 6 Min. From (B) 132 P.S.I. To (C) 132 P.S.I.

Tool Closed I.C.I.P. From 5:35A M. to 6:05A M. Hr. 30 Min. (D) 371 P.S.I.

Tool Open F.F.P. From 6:05A M. to 7:05A M. 1 Hr. Min. From (E) 143 P.S.I. To (F) 177 P.S.I.

Tool Closed F.C.I.P. From 7:05A M. to 7:45A M. Hr. 40 Min. (G) 364 P.S.I.

Inital Hydrostatic Pressure (A) 2582 P.S.I. Final Hydrostatic Pressure (H) 2572 P.S.I.

SURFACE INFORMATION	Size Choke 3/4 In.	Max. Press. P.S.I.	Time	Description of Flow
		21" water	5 min. M.	648,000 C. F.
		2 lb.	20 M.	1,020,000 M.C.F.
		2 lb.	60 M.	1,020,000 M.C.F.

BLOW Strong gas to surface in four minutes. Bottom Choke Size 3/4 in.

Did Well Flow X Yes ____ No Recovery Total Ft. No Fluid.

Mud

Reversed Out ____ Yes ____ No Mud Type starch Viscosity 47 Weight 10.2 Maximum Temp. 129 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint yes Jars: Size 4½ OD Make Bowen Ser. No. 2638

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

Length Drill Pipe 4627 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe ____ ft. I.D. Weight Pipe ____ in. Length Drill Collars 112 ft.

I. D. Drill Collars 2¼ in. Length D. S. T. Tool 53 ~~53~~ ft.

Remarks

TIGHT HOLE

WHELAN PRINTERS

WESTERN TESTERS
P. O. Box 793
GREAT BEND, KANSAS

Company Bowers Drilling Company Lease & Well No. Boggs #C-1

Test No. 2 Interval Tested From 4769' To 4792'

Time	Max Press. P.S.I.	Description of Flow
5 min. - 6:10	21" water	648,000
20 min.- 6:25	21b. "	1,020,000
30 min.- 6:35	"	1,020,000
40 min.- 6:45	"	1,020,000
50 min.- 6:55	"	1,020,000
60 min.- 7:05	"	1,020,000

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

Remarks Gas to surface in four minutes.

WHELAN PRINTERS, GREAT BEND, KS.

WESTERN TESTING CO., INC.
Pressure Data

Date April 6, 1965 — Test Ticket No. 4219

Recorder No. 1558 — Capacity 4200 — Location 4784 Ft.

Clock No. 5665 — Elevation 1513 Derrick Floor — Well Temperature 129 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2582 P.S.I.	Opened Tool	5:27 A M	
B First Initial Flow Pressure	132 P.S.I.	First Flow Pressure	6 Mins.	6 Mins.
C First Final Flow Pressure	132 P.S.I.	Initial Closed-in Pressure	30 Mins.	29 Mins.
D Initial Closed-in Pressure	371 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E Second Initial Flow Pressure	143 P.S.I.	Final Closed-in Pressure	40 Mins.	38 Mins.
F Second Final Flow Pressure	177 P.S.I.			
G Final Closed-in Pressure	364 P.S.I.			
H Final Hydrostatic Mud	2572 P.S.I.			

PRESSURE BREAKDOWN

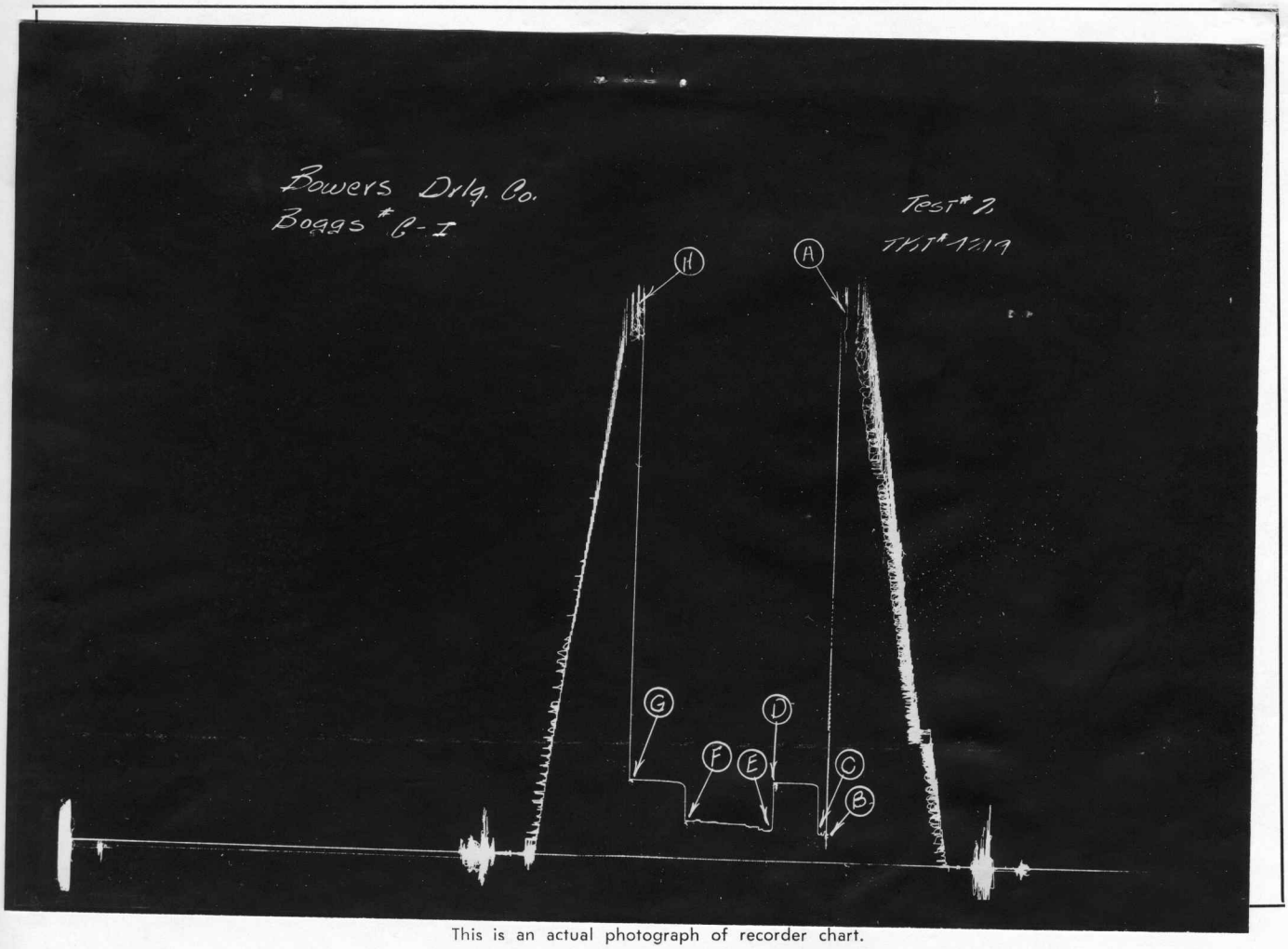
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 1 Min.

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

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 12 Inc.
of 3 mins. and a
final inc. of 2 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	132	0	132	0	143	0	177
P 2 5	132	3	369	5	149	3	358
P 3 6	132	6	371	10	160	6	360
P 4		9	371	15	166	9	362
P 5		12	371	20	168	12	364
P 6		15	371	25	168	15	364
P 7		18	371	30	172	18	364
P 8		21	371	35	177	21	364
P 9		24	371	40	179	24	364
P10		27	371	45	181	27	364
P11		29	371	50	179	30	364
P12				55	177	33	364
P13						36	364
P14						38	364
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2582	PSI
(B)	First Initial Flow Pressure	132	PSI
(C)	First Final Flow Pressure	132	PSI
(D)	Initial Closed-in Pressure	371	PSI
(E)	Second Initial Flow Pressure	143	PSI
(F)	Second Final Flow Pressure	177	PSI
(G)	Final Closed-in Pressure	364	PSI
(H)	Final Hydrostatic Mud	2572	PSI

COMPANY BOWERS DRILLING COMPANY LEASE AND WELL NO. BOGGS #C-1 SEC. 9 TWP. 33s RGE. 12w TEST NO. 2 DATE 4-6-65