WESTERN TESTERS

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

mpany Pickrell Drilling Company Lease & Well No. Hrabe #B-3

vation Est. 2040 Kelly Bushings Elevation Kansas City Effective Pay --------- Ft. Ticket No. 8666

te July 30, 1967 Sec. 3 Twp. 9s Range 17w County Rooks State Kansas

st Approved by Ralph W. Ruwwe Western Representative Kenneth Cheney

rmation Test No. 1 O.K. X Misrun Interval Tested From 3353' to 3388' Total Depth 3388'

e 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 3351 Ft. Size 6 3/4 Packer Depth 3353 Ft. Size 6 3/4

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

Packer Depth Ft. Size

ol Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 3 5 Ft. Size 5½ OD

CORDERS Depth 3 380 Ft. Clock No. 6860 Depth 3382 Ft. Clock No. 8378

Top Make Kuster Cap. 4150 No. 2608 Inside Outside Bottom Make Kuster Cap. 4150 No. 1558 Inside Outside

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

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

me Set Packer 9:09 A M

ol Open I.F.P. From 9:10 M. to 9:15 M. Hr. 5 Min. From (B) 43 P.S.I. To (C) 31 P.S.I.

ol Closed I.C.I.P. From 9:15 M. to 9:45 M. Hr. 30 Min. (D) 925 P.S.I.

ol Open F.F.P. From 9:45 M. to 11:45 M. 2 Hr. Min. From (E) 39 P.S.I. To (F) 54 P.S.I.

ol Closed F.C.I.P. From 11:45 M. to 12:45 M. 1 Hr. Min. (G) 811 P.S.I.

itial Hydrostatic Pressure (A) 1831 P.S.I. Final Hydrostatic Pressure (H) 1829 P.S.I.

RFACE Size Choke 3/8 Max. Press. P.S.I. Time Description of Flow

FORMATION M.

M.

M.

OW Weak throughout test. Bottom Choke Size 3/4 In.

d Well Flow Yes X No Recovery Total Ft. 100' gas in pipe; 80' oil cut mud (50% oil, 15% water, 35% mud)

versed Out Yes X No Mud Type starch Viscosity 41 Weight 10.1 Water Loss ---- cc. Maximum Temp. 97 °F

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

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

ngth Drill Pipe 2733 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 600 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

D. Drill Collars in. Length D.S.T. Tool 55 ft.

emarks

WESTERN TESTING CO., INC.

Pressure Data

Date July 30,1967 — Test Ticket No. 8666

Recorder No. 2608 — Capacity 4150 — Location 3380 Ft.

Clock No. 6860 — Elevation Estimated 2040 Kelly Bushings — Well Temperature 97 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1831	P.S.I.
B	First Initial Flow Pressure	43	P.S.I.
C	First Final Flow Pressure	31	P.S.I.
D	Initial Closed-in Pressure	925	P.S.I.
E	Second Initial Flow Pressure	39	P.S.I.
F	Second Final Flow Pressure	54	P.S.I.
G	Final Closed-in Pressure	811	P.S.I.
H	Final Hydrostatic Mud	1829	P.S.I.

	Time Given	Time Computed
Opened Tool	9:10 A M	
First Flow Pressure	5 Mins.	5 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	120 Mins.	117 Mins.
Final Closed-in Pressure	60 Mins.	60 Mins.

PRESSURE BREAKDOWN

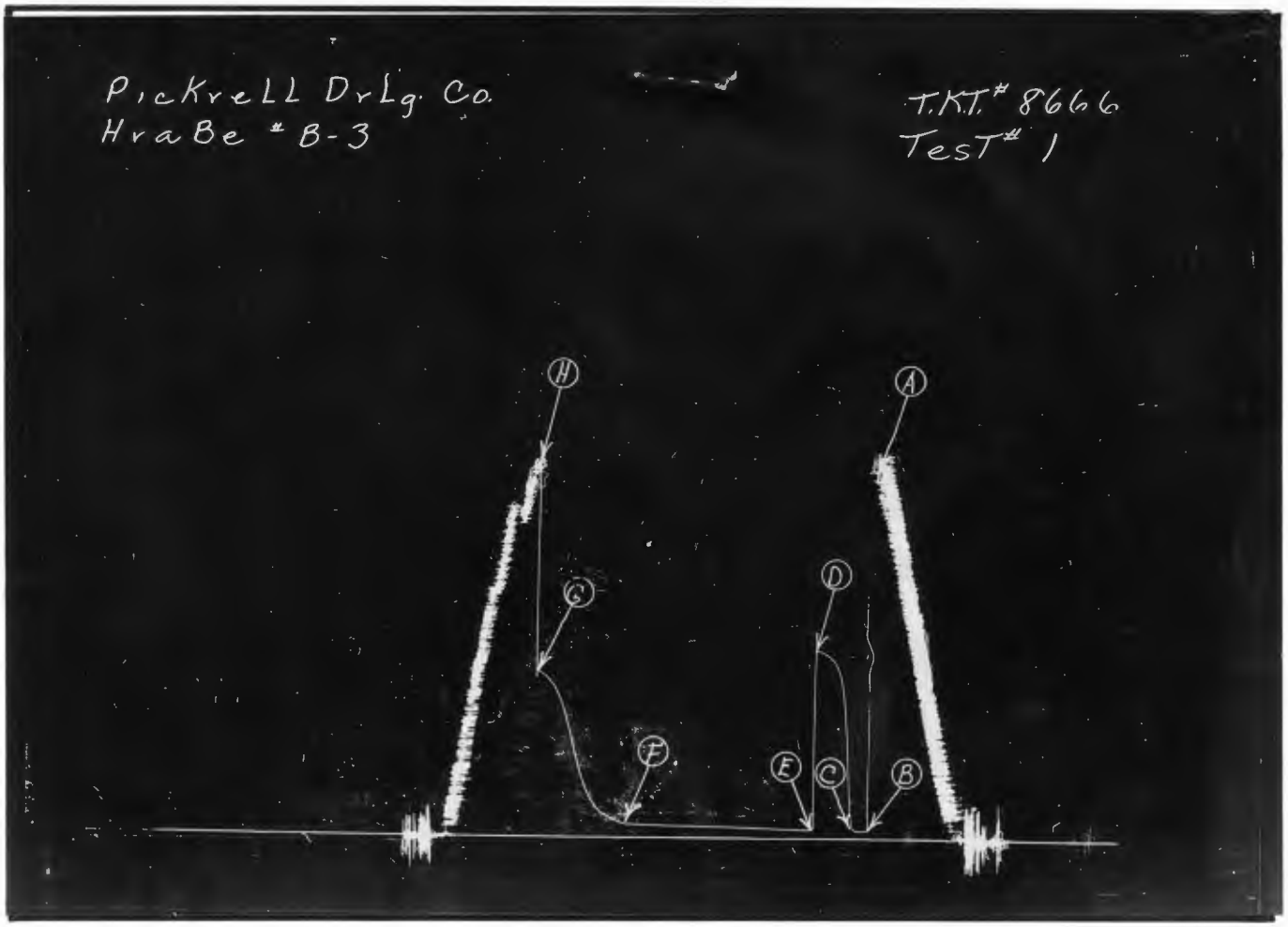
First Flow Press. Breakdown: 1 Inc. of 5 mins. and a final inc. of 0 Min.

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

Second Flow Pressure Breakdown: 23 Inc. of 5 mins. and a final inc. of 2 Min.

Final Shut-In Breakdown: 20 Inc. of 3 mins. and a final inc. of 0 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	43	0	31	0	39	0	54
P 2	5	31	3	58	5	33	3	60
P 3			6	241	10	33	6	68
P 4			9	639	15	35	9	79
P 5			12	797	20	37	12	87
P 6			15	848	25	38	15	104
P 7			~~18~~	~~882~~	~~30~~	~~39~~	~~18~~	~~123~~
P 8			21	893	35	39	21	141
P 9			24	909	40	40	24	173
P10			~~27~~	~~919~~	~~45~~	~~41~~	~~27~~	~~220~~
P11			30	925	50	42	30	303
P12					55	42	33	376
P13					~~60~~	~~44~~	~~36~~	~~473~~
P14					65	44	39	559
P15					70	46	42	651
P16					~~75~~	~~46~~	~~45~~	~~705~~
P17					80	48	48	746
P18					85	48	51	768
P19					~~90~~	~~50~~	~~54~~	~~788~~
P20					95	50	57	803
					100	52	60	811
					~~105~~	~~52~~		
					110	52		
					115	54		
					~~117~~	~~54~~		



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	1831 PSI
(B)	First Initial Flow Pressure	43 PSI
(C)	First Final Flow Pressure	31 PSI
(D)	Initial Closed-in Pressure	925 PSI
(E)	Second Initial Flow Pressure	39 PSI
(F)	Second Final Flow Pressure	54 PSI
(G)	Final Closed-in Pressure	811 PSI
(H)	Final Hydrostatic Mud	1829 PSI

WESTERN TEST SERVICE

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

Company Pickrell Drilling Company Lease & Well No. Hrabe #B-3

Elevation Est. 2040 Kelly Bushings Formation Sand Effective Pay -------- Ft. Ticket No. 8667

Date July 30,1967 Sec. 3 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Kenneth Cheney

Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 3396' to 3426' Total Depth 3426'

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 3392 Ft. Size 6 3/4 Packer Depth 3396 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 30 Ft. Size 5½ OD

RECORDERS Depth 3418 Ft. Clock No. 6860 Depth 3420 Ft. Clock No. 8376

Top Make Kuster Cap. 4150 No. 2608 Inside ~~Outside~~ Bottom Make Kuster Cap. 4150 No. 1558 ~~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 11:39 P M

Tool Open I.F.P. From 11:40 M. to 11:45 M. Hr. 5 Min. From (B) 43 P.S.I. To (C) 43 P.S.I.

Tool Closed I.C.I.P. From 11:45 M. to 12:15 M. Hr. 30 Min. (D) 1244 P.S.I.

Tool Open F.F.P. From 12:15 M. to 1:30 M. 1 Hr. 15 Min. From (E) 41 P.S.I. To (F) 48 P.S.I.

Tool Closed F.C.I.P. From 1:30 M. to 2:30 M. 1 Hr. ____ Min. (G) 855 P.S.I.

Initial Hydrostatic Pressure (A) 1855 P.S.I. Final Hydrostatic Pressure (H) 1821 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 10 minutes. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 20' mud

Reversed Out Yes X No Mud Type starch Viscosity 41 Weight 10.1 Water Loss ----- cc. Maximum Temp. 99 °F

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

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

Length Drill Pipe 2776 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 600 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 50 ft.

Remarks Flushed tool after 30 and 50 minutes.

WESTERN TESTING CO., INC.
Pressure Data

Date July 30, 1967 — Test Ticket No. 8667

Recorder No. 2608 — Capacity 4150 — Location 3418 Ft.

Clock No. 6860 — Elevation Est. 2040 Kelly Bushings — Well Temperature 99 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1355	P.S.I.
B	First Initial Flow Pressure	43	P.S.I.
C	First Final Flow Pressure	43	P.S.I.
D	Initial Closed-in Pressure	1244	P.S.I.
E	Second Initial Flow Pressure	41	P.S.I.
F	Second Final Flow Pressure	48	P.S.I.
G	Final Closed-in Pressure	855	P.S.I.
H	Final Hydrostatic Mud	1821	P.S.I.

	Time Given	Time Computed
Opened Tool	11:40 P M	
First Flow Pressure	5 Mins.	5 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	75 Mins.	75 Mins.
Final Closed-in Pressure	Mins.	Mins.

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	43
P 2 5	43
P 3	
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 0 Min.

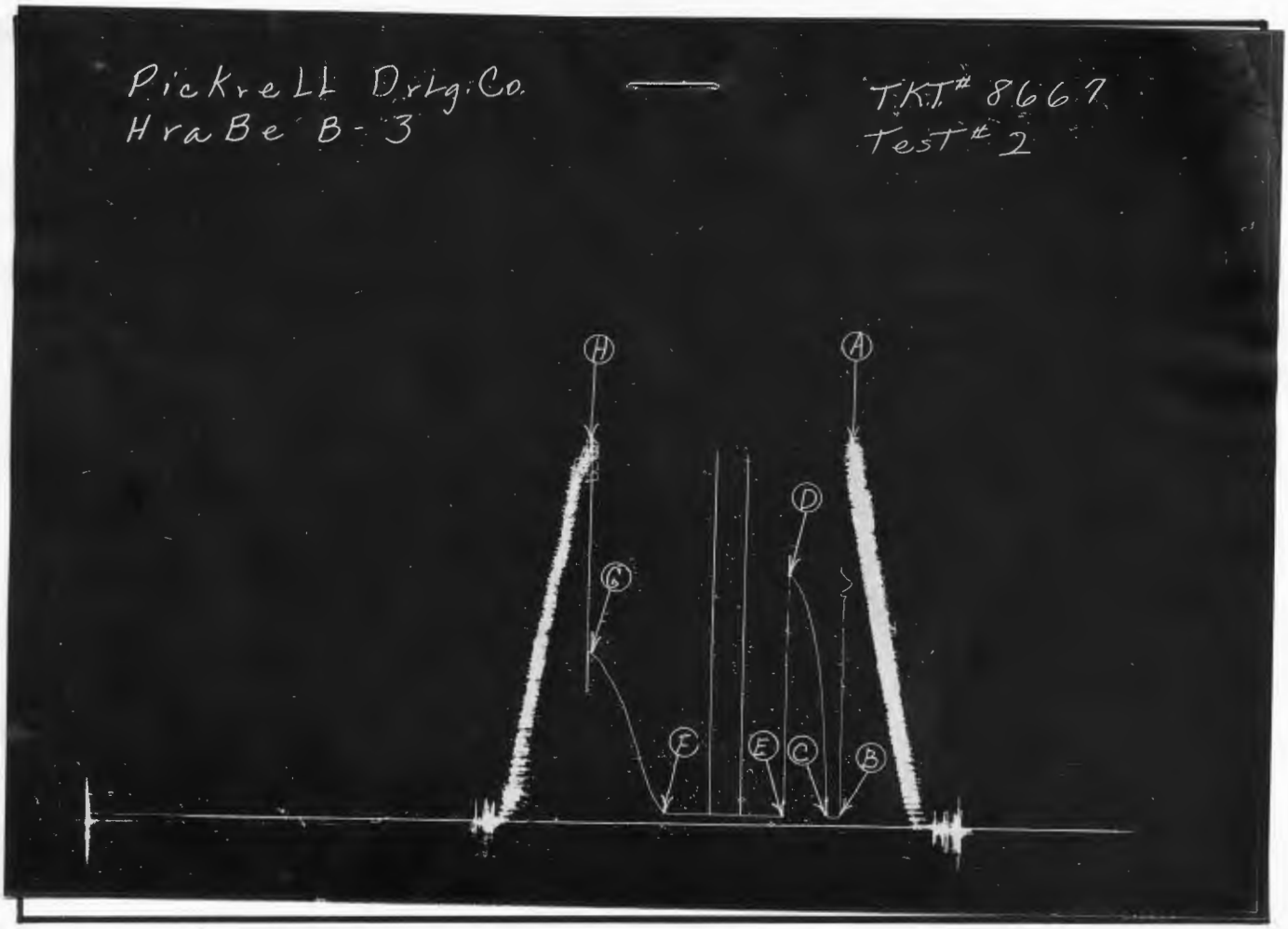
Point Minutes	Press.
0	43
3	228
6	638
9	818
12	948
15	1037
18	1084
21	1155
24	1196
27	1223
30	1244

Second Flow Pressure
Breakdown: 15 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	41
5	41
10	41
15	41
20	41
25	41
30	45
35	45
40	45
45	45
50	48
55	48
60	48
65	48
70	48
75	48

Final Shut-In
Breakdown: 19 Inc. of 3 mins. and a final inc. of 2 Min.

Point Minutes	Press.
0	48
3	58
6	70
9	94
12	131
15	187
18	243
21	312
24	381
27	446
30	514
33	578
36	624
39	673
42	708
45	741
48	778
51	872
54	836
57	848
59	855



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	1855 PSI
(B)	First Initial Flow Pressure	43 PSI
(C)	First Final Flow Pressure	43 PSI
(D)	Initial Closed-in Pressure	1244 PSI
(E)	Second Initial Flow Pressure	41 PSI
(F)	Second Final Flow Pressure	48 PSI
(G)	Final Closed-in Pressure	855 PSI
(H)	Final Hydrostatic Mud	1821 PSI

COMPANY Pickrell Drilling Co. LEASE AND WELL NO. Hrabe #B-3 SEC. 3 TWP. 9S RGE. 14W TEST NO. 2 DATE