WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #4

Elevation 2360 Derrick Floor Ticket Number 5441

Date Sept.5,1964 Sec. 13 Twp. 21s Range 24w County Hodgeman State Kansas

Test Approved by George E. Link Western Representative Jack Toelkes

Formation Test No. 1 O.K. x Misrun ____ Interval Tested From 4357' to 4393' Total Depth 4393'

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 4352 Ft. Size 6 3/4 Packer Depth 4357' Ft. Size 6 3/4

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

Packer Depth ____ Ft Size ____

Tool Size 5½ O. D. Tool Jt. Size 4½ F. H. Anchor Length 36' Ft. Size 5½ O. D.

RECORDERS Depth 4387' Ft Clock No. 6892 Depth 4390 Ft. Clock No. 142

Top Make Amerada Cap. 4382 No. 1567 Inside Outside Bottom Make Western Cap. 3000 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 11:32 A. M

Tool Open I.F.P. From 11:33 A M to 11:35 A M Hr. 2 Min. From (B) 28 P.S.I. To (C) 28 P.S.I.

Tool Closed I.C.I.P. From 11:35 A M. to 12:05 P M. Hr. 30 Min. (D) 66 P.S.I.

Tool Open F.F.P. From 12:05 P M. to 1:05 P M. 1 Hr. ____ Min. From (E) 41 P.S.I. To (F) 41 P.S.I.

Tool Closed F.C.I.P. From 1:05 P M. to 1:35 P M. Hr. 30 Min. (G) 41 P.S.I.

Inital Hydrostatic Pressure (A) 2414 P.S.I. Final Hydrostatic Pressure (H) 2396 P.S.I.

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Very weak 2 minutes Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes x No Recovery Total Ft. 6' mud with few spots oil

Reversed Out ____ Yes x No Mud Type starch Viscosity 49 Weight 10.2 Maximum Temp. 125 °F Mud

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 720 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D. S. T. Tool 54 ft.

Remarks

Flushed tool after 35 minutes. O. K.

WHELAN PRINTERS

WESTERN TESTING CO., INC.
Pressure Data

Date September 5, 1964 — Test Ticket No. 5441

Recorder No. 1567 — Capacity 4300 — Location 4387 Ft.

Clock No. 6892 — Elevation 2360 Derrick Floor — Well Temperature 125 °F

Point		Pressure		Time Given		Time Computed	
A	Initial Hydrostatic Mud	2414 P.S.I.	Opened Tool	11:32 A. M			
B	First Initial Flow Pressure	28 P.S.I.	First Flow Pressure	2	Mins.	2	Mins.
C	First Final Flow Pressure	28 P.S.I.	Initial Closed-in Pressure	30	Mins.	30	Mins.
D	Initial Closed-in Pressure	66 P.S.I.	Second Flow Pressure	60	Mins.	60	Mins.
E	Second Initial Flow Pressure	41 P.S.I.	Final Closed-in Pressure	30	Mins.	27	Mins.
F	Second Final Flow Pressure	41 P.S.I.					
G	Final Closed-in Pressure	41 P.S.I.					
H	Final Hydrostatic Mud	2396 P.S.I.					

PRESSURE BREAKDOWN

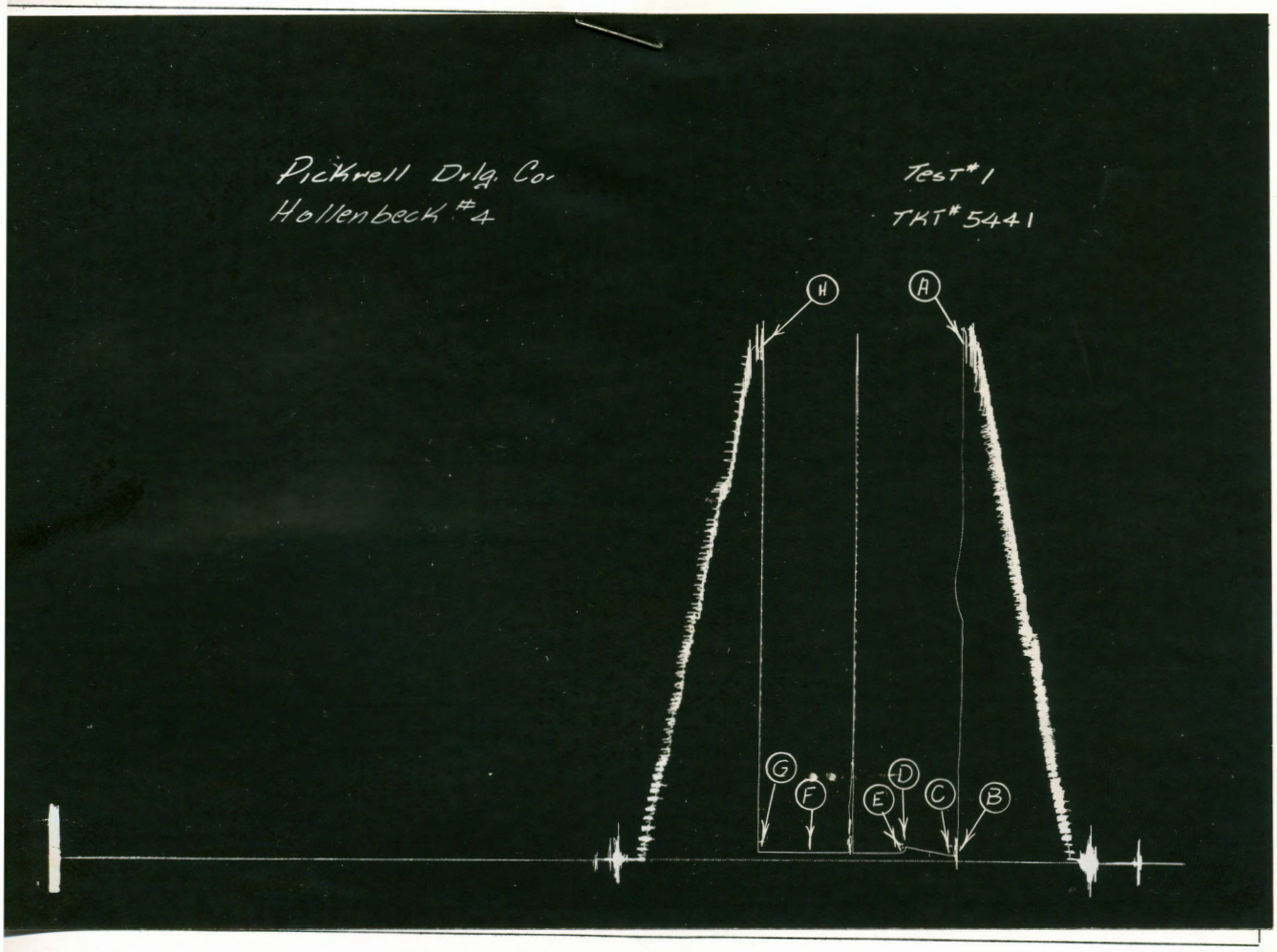
First Flow Press.
Breakdown: 1 Inc.
of 2 mins. and a
final inc. of 0 Min.

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 0 Min.

Final Shut-In
Breakdown: 9 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	28	0	28	0	41	0	41
P 2 2	28	3	31	5	41	3	41
P 3		6	36	10	41	6	41
P 4		9	43	15	41	9	41
P 5		12	47	20	41	12	41
P 6		15	51	25	41	15	41
P 7		18	54	30	41	18	41
P 8		21	58	35	41	21	41
P 9		24	62	40	41	24	41
P10		27	64	45	41	27	41
P11		30	66	50	41		
P12				55	41		
P13				60	41		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	2414 PSI
(B)	First Initial Flow Pressure	28 PSI
(C)	First Final Flow Pressure	28 PSI
(D)	Initial Closed-in Pressure	66 PSI
(E)	Second Initial Flow Pressure	41 PSI
(F)	Second Final Flow Pressure	41 PSI
(G)	Final Closed-in Pressure	41 PSI
(H)	Final Hydrostatic Mud	2396 PSI

COMPANY Pickrell Drilling Co. LEASE AND WELL NO. Hollenbeck #4 SEC. 13 TWP. 21s RGE. 24w TEST NO. 1 DATE 9-5-64

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hollenbeck #4

Elevation 2360 Derrick Floor Ticket Number 542

Date Sept. 6, 1964 Sec. 13 Twp. 21s Range 24w County Hodgeman State Kansas

Test Approved by George E. Link Western Representative Jack Toelkes

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Formation Test No. 2 O.K. x Misrun ____ Interval Tested From 4468' to 4474' Total Depth 4474'

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

Packer Depth 4463 Ft. Size 6 3/4 Packer Depth 4468 Ft. Size 6 3/4

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

Packer Depth ____ Ft Size ____

Tool Size 5½ O. D. Tool Jt. Size 4½ F. H. Anchor Length 16 Ft. Size 5½ O. D.

RECORDERS Depth 4468' Ft Clock No. 6892 Depth 4471 Ft. Clock No. 142

Top Make Amerada Cap. 4382 No. 1567 Inside Outside Bottom Make Western Cap. 3000 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

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Time Set Packer 7:15 P. M

Tool Open I.F.P. From 7:17 P M to 7:21 P M Hr. 4 Min. From (B) 34 P.S.I. To (C) 36 P.S.I.

Tool Closed I.C.I.P. From 7:21 P. M. to 7:51 P M. Hr. 30 Min. (D) 946 P.S.I.

Tool Open F.F.P. From 7:51 P. M. to 9:21 P M. 1 Hr. 30 Min. From (E) 71 P.S.I. To (F) 211 P.S.I.

Tool Closed F.C.I.P. From 9:21 P. M. to 9:51 P M. Hr. 30 Min. (G) 788 P.S.I.

Inital Hydrostatic Pressure (A) 2486 P.S.I. Final Hydrostatic Pressure (H) 2475 P.S.I.

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Good Bottom Choke Size 3/4 in.

Did Well Flow ____ Yes x No Recovery Total Ft. 155' gas in pipe, 30' clean oil, 497' muddy oil.

Mud

Reversed Out ____ Yes x No Mud Type starch Viscosity 45 Weight 10.1 Maximum Temp. 134 °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 3730 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 720 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

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

Remarks

WHELAN PRINTERS

WESTERN TESTING CO., INC.
Pressure Data

Date September 6, 1964 — Test Ticket No. 5442

Recorder No. 1567 — Capacity 4300 — Location 4468 Ft.

Clock No. 6892 — Elevation 2360 Derrick Floor — Well Temperature 134 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	2486 P.S.I.	Opened Tool	7:15 P. M.	
B	First Initial Flow Pressure	34 P.S.I.	First Flow Pressure	4 Mins.	5 Mins.
C	First Final Flow Pressure	36 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	946 P.S.I.	Second Flow Pressure	90 Mins.	90 Mins.
E	Second Initial Flow Pressure	71 P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F	Second Final Flow Pressure	211 P.S.I.			
G	Final Closed-in Pressure	788 P.S.I.			
H	Final Hydrostatic Mud	2475 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	34
P 2 5	36
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.

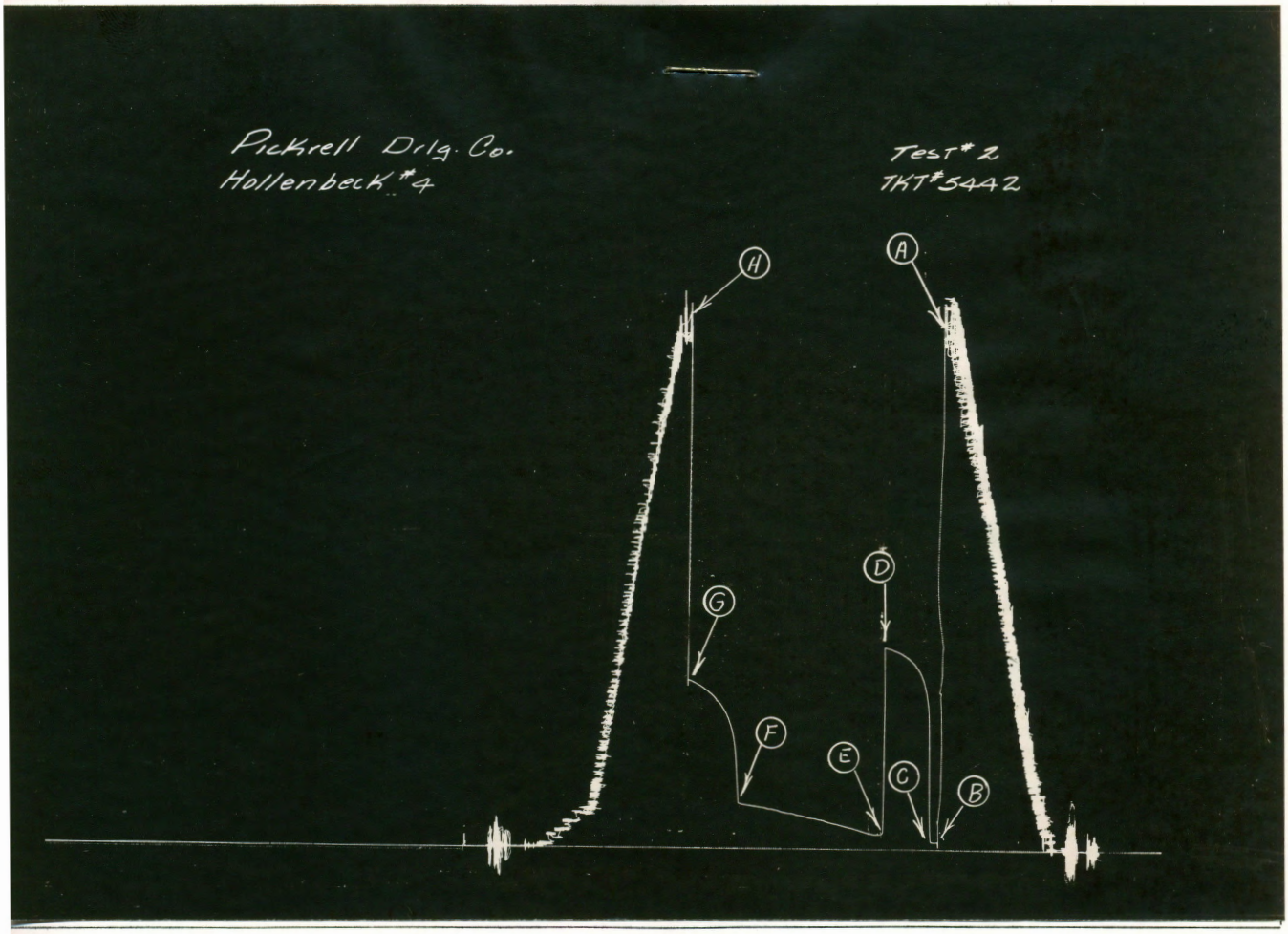
Point Minutes	Press.
0	36
3	506
6	780
9	842
12	874
15	898
18	911
21	924
24	933
27	941
30	946

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

Point Minutes	Press.
0	71
5	72
10	79
15	90
20	103
25	110
30	116
35	125
40	140
45	146
50	155
55	164
60	170
65	179
70	187
75	194
80	198
85	205
90	211

Final Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	211
3	495
6	590
9	633
12	667
15	702
18	725
21	742
24	758
27	771
30	781
33	788



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	2486	PSI
(B)	First Initial Flow Pressure	34	PSI
(C)	First Final Flow Pressure	36	PSI
(D)	Initial Closed-in Pressure	946	PSI
(E)	Second Initial Flow Pressure	71	PSI
(F)	Second Final Flow Pressure	211	PSI
(G)	Final Closed-in Pressure	788	PSI
(H)	Final Hydrostatic Mud	2475	PSI

COMPANY Pickrell Drilling Co. LEASE AND WELL NO. Hollenbeck #4 SEC. 13 TWP. 21s RGE. 24w TEST NO. 2 DATE 9-6-6