WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe D#1

Elevation 2059 DerrickFloor Formation Topeka Ticket Number 8354

Date Sept.6,1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Gerrell Veatch

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Formation Test No. 1 O.K. X Misrun ____ Interval Tested From 3104' to 3137' Total Depth 3137'

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 3100 Ft. Size 6 3/4 Packer Depth 3104 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 33 Ft. Size 5½ OD

RECORDERS Depth 3107 Ft. Clock No. 6875 Depth 3110 Ft. Clock No. 154

Top Make Kuster Cap. 4300 No. 1566 Inside Outside Bottom Make Western Cap. 4000 No. 25 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 9:14 A M

Tool Open I.F.P. From 9:16A M to 9:22A M Hr. 6 Min. From (B) 36 P.S.I. To (C) 36 P.S.I.

Tool Closed I.C.I.P. From 9:22A M. to 9:52 M. Hr. 30 Min. (D) 1083 P.S.I.

Tool Open F.F.P. From 9:52A M. to 10:52 M. 1 Hr. ____ Min. From (E) 51 P.S.I. To (F) 110 P.S.I.

Tool Closed F.C.I.P. From 10:52 M. to 11:22 M. Hr. 30 Min. (G) 1010 P.S.I.

Initial Hydrostatic Pressure (A) 1709 P.S.I. Final Hydrostatic Pressure (H) 1696 P.S.I.

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

BLOW Weak, increasing to good in thrity minutes. Good throughout remainder Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes X No Recovery Total Ft. 60' oil cut mud; 120ft very slightly oil cut water

Mud

Reversed Out ____ Yes X No Mud Type gel. Viscosity 42 Weight 10.1 Maximum Temp. 101 °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 2030 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ____ ft.

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

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date September 6, 1965 — Test Ticket No. 8354

Recorder No. 1566 — Capacity 4300 — Location 3107 Ft.

Clock No. 6875 — Elevation 2059 Derrick Floor — Well Temperature 101 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1709 P.S.I.	Opened Tool	9:14 A M	
B First Initial Flow Pressure	36 P.S.I.	First Flow Pressure	6 Mins.	6 Mins.
C First Final Flow Pressure	36 P.S.I.	Initial Closed-in Pressure	30 Mins.	29 Mins.
D Initial Closed-in Pressure	1083 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E Second Initial Flow Pressure	51 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F Second Final Flow Pressure	110 P.S.I.			
G Final Closed-in Pressure	1010 P.S.I.			
H Final Hydrostatic Mud	1696 P.S.I.			

PRESSURE BREAKDOWN

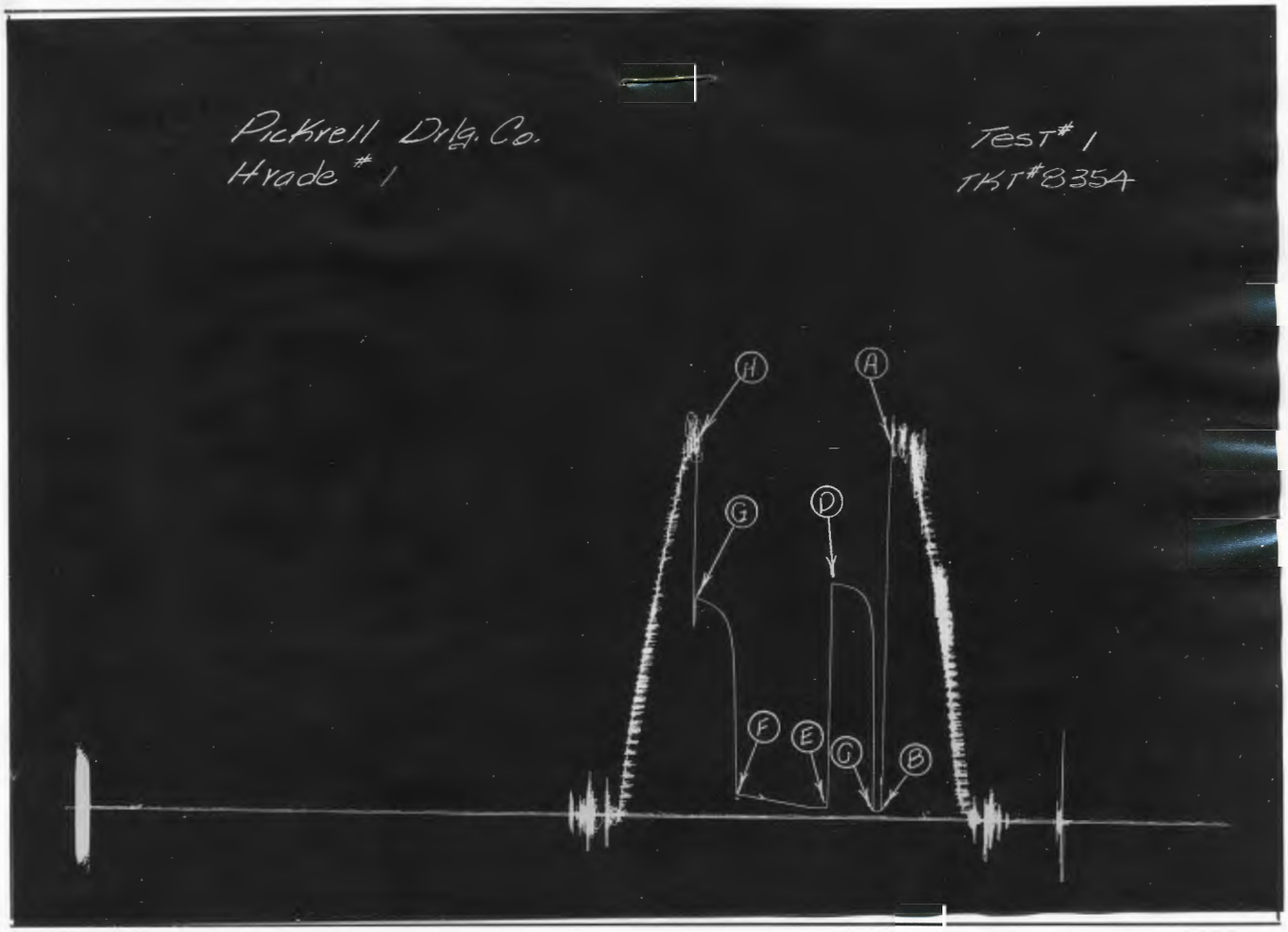
First Flow Press. Breakdown: 1 Inc. of 5 mins. and a final inc. of 1 Min.

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: 9 Inc. of 3 mins. and a final inc. of 0 Min.

	First Flow Press.		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	36	0	36	0	51	0	110
P 2	5	36	3	843	5	51	3	655
P 3	6	36	6	982	10	51	6	851
P 4			9	1029	15	58	9	914
P 5			12	1049	20	64	12	956
P 6			15	1059	25	71	15	968
P 7			18	1068	30	79	18	982
P 8			21	1074	35	86	21	991
P 9			24	1079	40	92	24	1002
P10			27	1081	45	101	27	1010
P11			29	1083	50	105		
P12					55	110		
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1709	PSI
(B)	First Initial Flow Pressure	36	PSI
(C)	First Final Flow Pressure	36	PSI
(D)	Initial Closed-in Pressure	1083	PSI
(E)	Second Initial Flow Pressure	51	PSI
(F)	Second Final Flow Pressure	110	PSI
(G)	Final Closed-in Pressure	1010	PSI
(H)	Final Hydrostatic Mud	1696	PSI

WESTERN TEST

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe #1

Elevation 2059 Derrick Floor Formation Toronto-Lans. Ticket Number 8355

Date Sept.7,1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Gerrell Veatch

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Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 3166' to 3212' Total Depth 3212'

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 3162 Ft. Size 6 3/4 Packer Depth 3166 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 46 Ft. Size 5½ OD

RECORDERS Depth 3169 Ft. Clock No. 6875 Depth 3172 Ft. Clock No. 154

Top Make Kuster Cap. 4300 No. 1566 Inside ~~Outside~~ Bottom Make Western Cap. 4000 No. 25 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 3:09 A M

Tool Open I.F.P. From 3:11 M to 3:19 M Hr. 8 Min. From (B) 30 P.S.I. To (C) 30 P.S.I.

Tool Closed I.C.I.P. From 3:19A M. to 3:49A M. Hr. 30 Min. (D) 991 P.S.I.

Tool Open F.F.P. From 3:49A M. to 4:31A M. Hr. 40 Min. From (E) 34 P.S.I. To (F) 43 P.S.I.

Tool Closed F.C.I.P. From 4:31A M. to 5:01A M. Hr. 30 Min. (G) 510 P.S.I.

Initial Hydrostatic Pressure (A) 1726 P.S.I. Final Hydrostatic Pressure (H) 1709 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 eight minutes. Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes X No Recovery Total Ft. 10' mud with spots of oil

Mud

Reversed Out ____ Yes X No Mud Type gel. Viscosity 45 Weight 10.1 Maximum Temp. 102 °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 2092 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 66 ft.

Remarks Flushed tool.

WESTERN TESTING CO., INC.
Pressure Data

Date September 7, 1965 — Test Ticket No. 8355

Recorder No. 1566 — Capacity 4300 — Location 3169 Ft.

Clock No. 6875 — Elevation 2059 DerrickFloor — Well Temperature 102 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1726	P.S.I.	Opened Tool 3:09A M.	
B	First Initial Flow Pressure	30	P.S.I.	First Flow Pressure 8 Mins.	8 Mins.
C	First Final Flow Pressure	30	P.S.I.	Initial Closed-in Pressure 30 Mins.	27 Mins.
D	Initial Closed-in Pressure	991	P.S.I.	Second Flow Pressure 40 Mins.	40 Mins.
E	Second Initial Flow Pressure	34	P.S.I.	Final Closed-in Pressure 30 Mins.	27 Mins.
F	Second Final Flow Pressure	43	P.S.I.		
G	Final Closed-in Pressure	510	P.S.I.		
H	Final Hydrostatic Mud	1709	P.S.I.		

PRESSURE BREAKDOWN

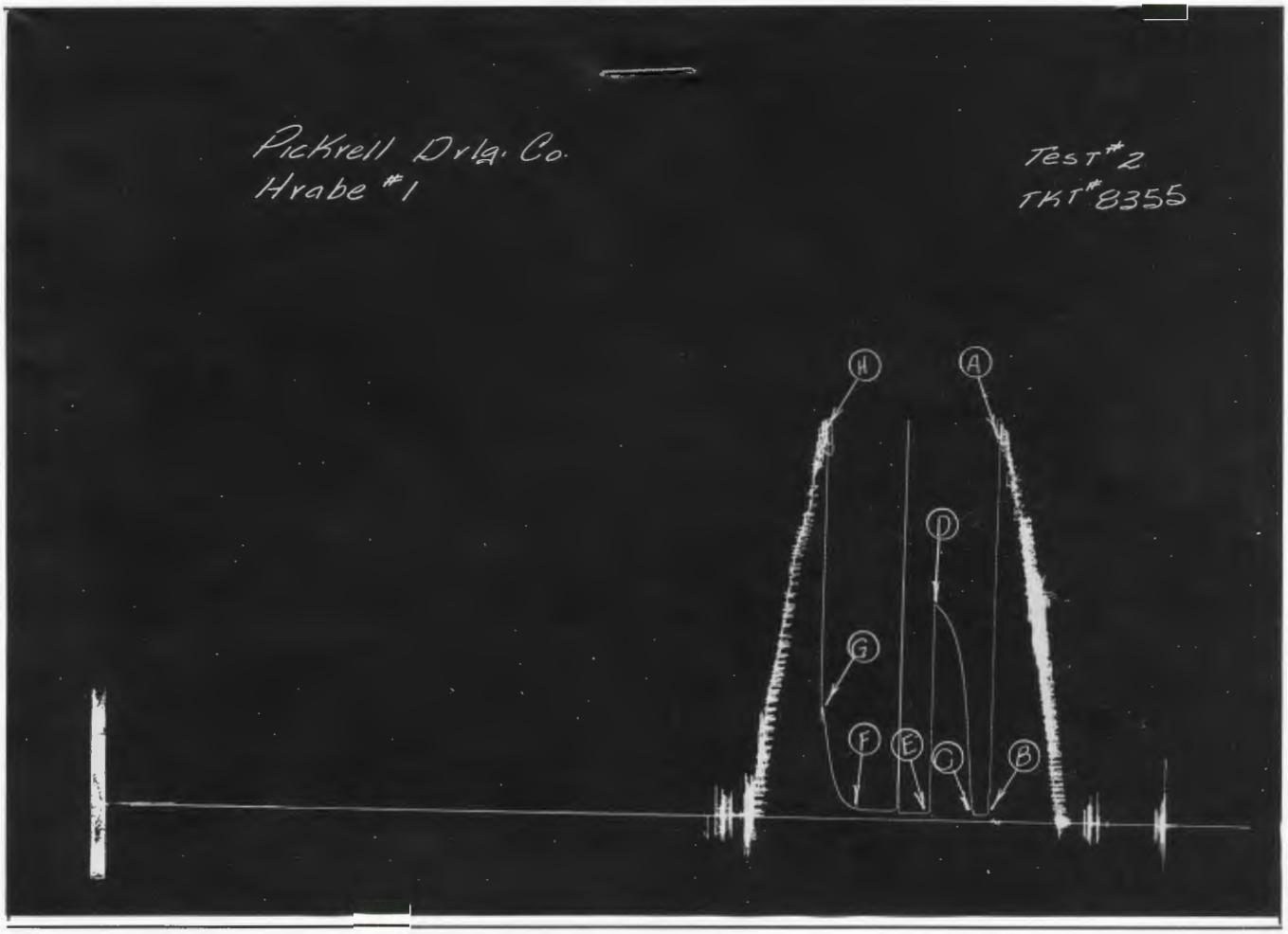
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 3 Min.

Initial Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 8 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	30		0	30		0	34		0	43
P 2	5	30		3	183		5	34		3	47
P 3	8	30		6	454		10	34		6	53
P 4				9	641		15	34		9	66
P 5				12	761		20	34		12	82
P 6				15	849		25	43		15	120
P 7				18	901		30	43		18	174
P 8				21	941		35	43		21	272
P 9				24	965		40	43		24	389
P10				27	991					27	510
P11											
P12											
P13											
P14											
P15											
P16											
P17											
P18											
P19											
P20											



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1726	PSI
(B)	First Initial Flow Pressure	30	PSI
(C)	First Final Flow Pressure	30	PSI
(D)	Initial Closed-in Pressure	991	PSI
(E)	Second Initial Flow Pressure	34	PSI
(F)	Second Final Flow Pressure	43	PSI
(G)	Final Closed-in Pressure	510	PSI
(H)	Final Hydrostatic Mud	1709	PSI

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe #1

Elevation 2059 DerrickFloor Formation K. C. Ticket Number 8356

Date Sept.9,1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Gerrell Veatch

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Formation Test No. 3 O.K. x Misrun ____ Interval Tested From 3244' to 3277' Total Depth 3277'

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 3240 Ft. Size 6 3/4 Packer Depth 3244 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 33 Ft. Size 5½ OD

RECORDERS Depth 3247 Ft. Clock No. 6875 Depth 3250 Ft. Clock No. 120

Top Make Kuster Cap. 4300 No. 1566 Inside Outside Bottom Make Western Cap. 4000 No. 25 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 9:27 P M

Tool Open I.F.P. From 9:29 M to 9:37 M Hr. 8 Min. From (B) 71 P.S.I. To (C) 92 P.S.I.

Tool Closed I.C.I.P. From 9:37 M. to 10:07 M. Hr. 30 Min. (D) 1023 P.S.I.

Tool Open F.F.P. From 10:07 M. to 11:07 M. 1 Hr. Min. From (E) 131 P.S.I. To (F) 302 P.S.I.

Tool Closed F.C.I.P. From 11:07 M. to 11:37 M. Hr. 30 Min. (G) 862 P.S.I.

Initial Hydrostatic Pressure (A) 1650 P.S.I. Final Hydrostatic Pressure (H) 1629 P.S.I.

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

____ | ____ | ____ M. | ____

____ | ____ | ____ M. | ____

____ | ____ | ____ M. | ____

BLOW Good blow throughout test. Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes x No Recovery Total Ft. 655' 15% water

120' gas in pipe;535' very heavy oil cut mud; 35% oil; 120' very heavy oil cut mud with water/d

Reversed Out ____ Yes x No Mud Type gel. Viscosity 43 Weight 9.3 Maximum Temp. 104 °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 2170 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ____ ft.

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

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date September 9, 1965 — Test Ticket No. 8356

Recorder No. 1566 — Capacity 4300 — Location 3247 Ft.

Clock No. 6875 — Elevation 2059 Derrick Floor — Well Temperature 104 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1650	P.S.I.	Opened Tool	9:27 P M	
B	First Initial Flow Pressure	71	P.S.I.	First Flow Pressure	8 Mins.	8 Mins.
C	First Final Flow Pressure	92	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1023	P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E	Second Initial Flow Pressure	131	P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	302	P.S.I.			
G	Final Closed-in Pressure	862	P.S.I.			
H	Final Hydrostatic Mud	1629	P.S.I.			

PRESSURE BREAKDOWN

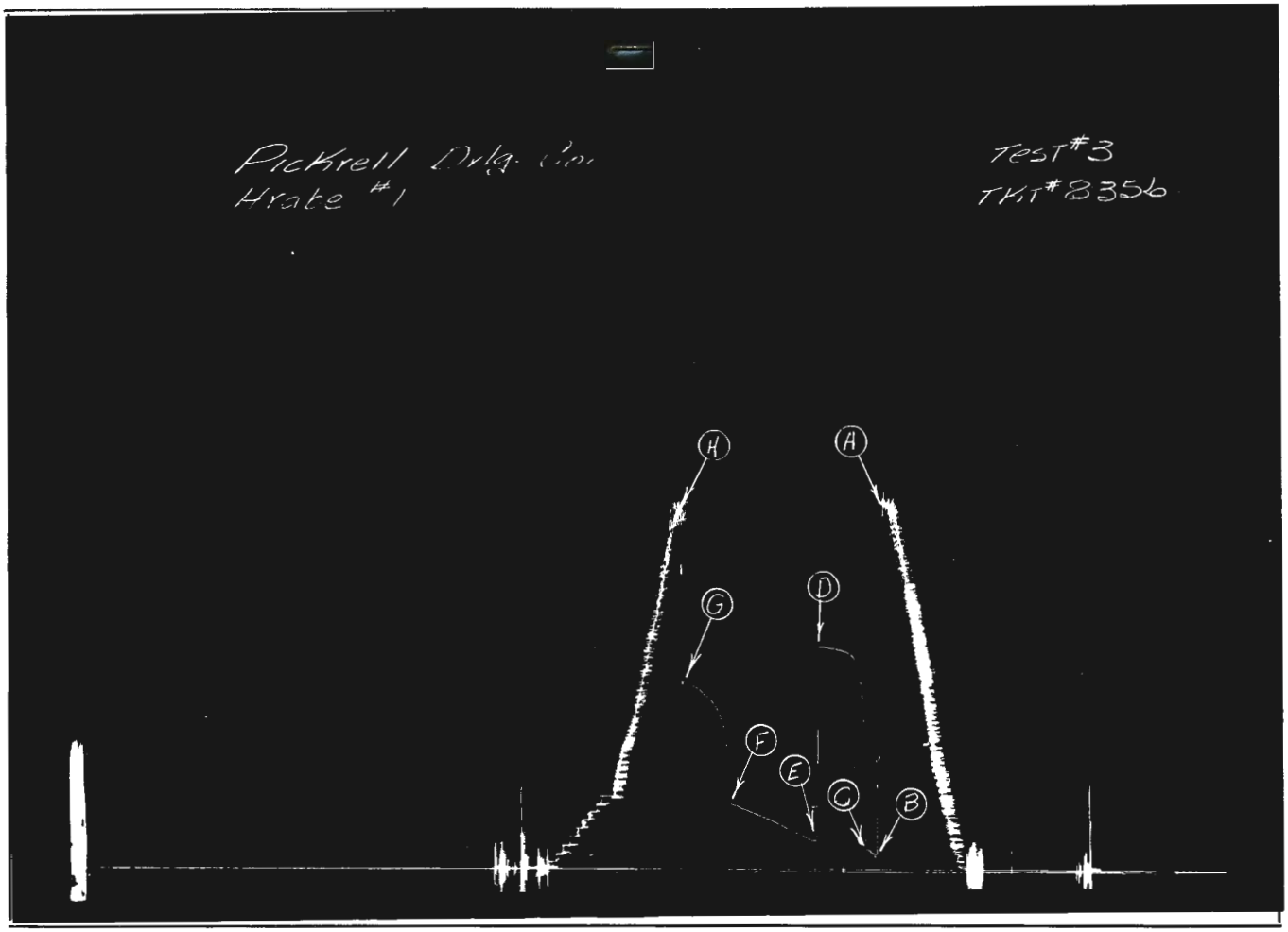
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 3 0 Min.

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

Second Flow Pressure
Breakdown: 11 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	71	0	92	0	131	0	320 302
P 2 5	82	3	669	5	138	3	617
P 3 8	92	6	862	10	157	6	696
P 4		9	959	15	177	9	744
P 5		12	991	20	194	12	772
P 6		15	1002	25	213	15	797
P 7		18	1006	30	231	18	817
P 8		21	1010	35	246	21	832
P 9		24	1014	40	263	24	845
P10		27	1019	45	276	27	858
P11		30	1023	50	291	30	862
P12				55	302		
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1650	PSI
(B)	First Initial Flow Pressure	71	PSI
(C)	First Final Flow Pressure	92	PSI
(D)	Initial Closed-in Pressure	1023	PSI
(E)	Second Initial Flow Pressure	131	PSI
(F)	Second Final Flow Pressure	302	PSI
(G)	Final Closed-in Pressure	862	PSI
(H)	Final Hydrostatic Mud	1629	PSI

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe #1

Elevation 2[illegible] DerrickFloor Formation K. C. Ticket Number 8357

Date Sept. 30, 1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Puswe Western Representative Gerrell Veatch

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Formation Test No. 4 O.K. X Misrun Interval Tested From 3271' to 3298' Total Depth 3[illegible]'

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 3267 Ft. Size 6 3/4 Packer Depth 3271 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 27 Ft. Size 5½

RECORDERS Depth 3274 Ft. Clock No. 6875 Depth 3277 Ft. Clock No. 104

Top Make Kus[illegible] Cap. 4[illegible] No. 15[illegible] Inside ~~Outside~~ Bottom Make Western Cap. 4000 No. 25 ~~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 10:53 M

Tool Open I.F.P. From 10:55 M to 11:00 M Hr. 5 Min. From (B) 101 P.S.I. To (C) 168 P.S.I.

Tool Closed I.C.I.P. From 11:00 M. to 11:30 M. Hr. 30 Min. (D) 937 P.S.I.

Tool Open F.F.P. From 11:30 M. to 12:[illegible] M. 1 Hr. Min. From (E) 21[illegible] P.S.I. To (F) 547 P.S.I.

Tool Closed F.C.I.P. From 12:30 M. to 1:[illegible] M. Hr. 30 Min. (G) 800 P.S.I.

Initial Hydrostatic Pressure (A) 1629 P.S.I. Final Hydrostatic Pressure (H) 1612 P.S.I.

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

BLOW Good blow throughout test. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 1260' (240' very heavy oil cut mud;360' clean gassy oil; 460' muddy froggy oil; 200' water) Mud

Reversed Out Yes X No Mud Type gel Viscosity 44 Weight 9.3 Maximum Temp. Broke °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 2197 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 47 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date September 10, 1965 Test Ticket No. 8357

Recorder No. 1566 Capacity 4300 Location 3274 Ft.

Clock No. 6875 Elevation 2059 DerrickFloor Well Temperature Broke! °F

Point		Pressure		Time Given		Time Computed	
A	Initial Hydrostatic Mud	1620	P.S.I.	Opened Tool	10:53 A M		
B	First Initial Flow Pressure	101	P.S.I.	First Flow Pressure	5 Mins.	5	Mins.
C	First Final Flow Pressure	168	P.S.I.	Initial Closed-in Pressure	30 Mins.	30	Mins.
D	Initial Closed-in Pressure	937	P.S.I.	Second Flow Pressure	60 Mins.	55	Mins.
E	Second Initial Flow Pressure	218	P.S.I.	Final Closed-in Pressure	30 Mins.	29	Mins.
F	Second Final Flow Pressure	547	P.S.I.				
G	Final Closed-in Pressure	800	P.S.I.				
H	Final Hydrostatic Mud	1612	P.S.I.				

PRESSURE BREAKDOWN

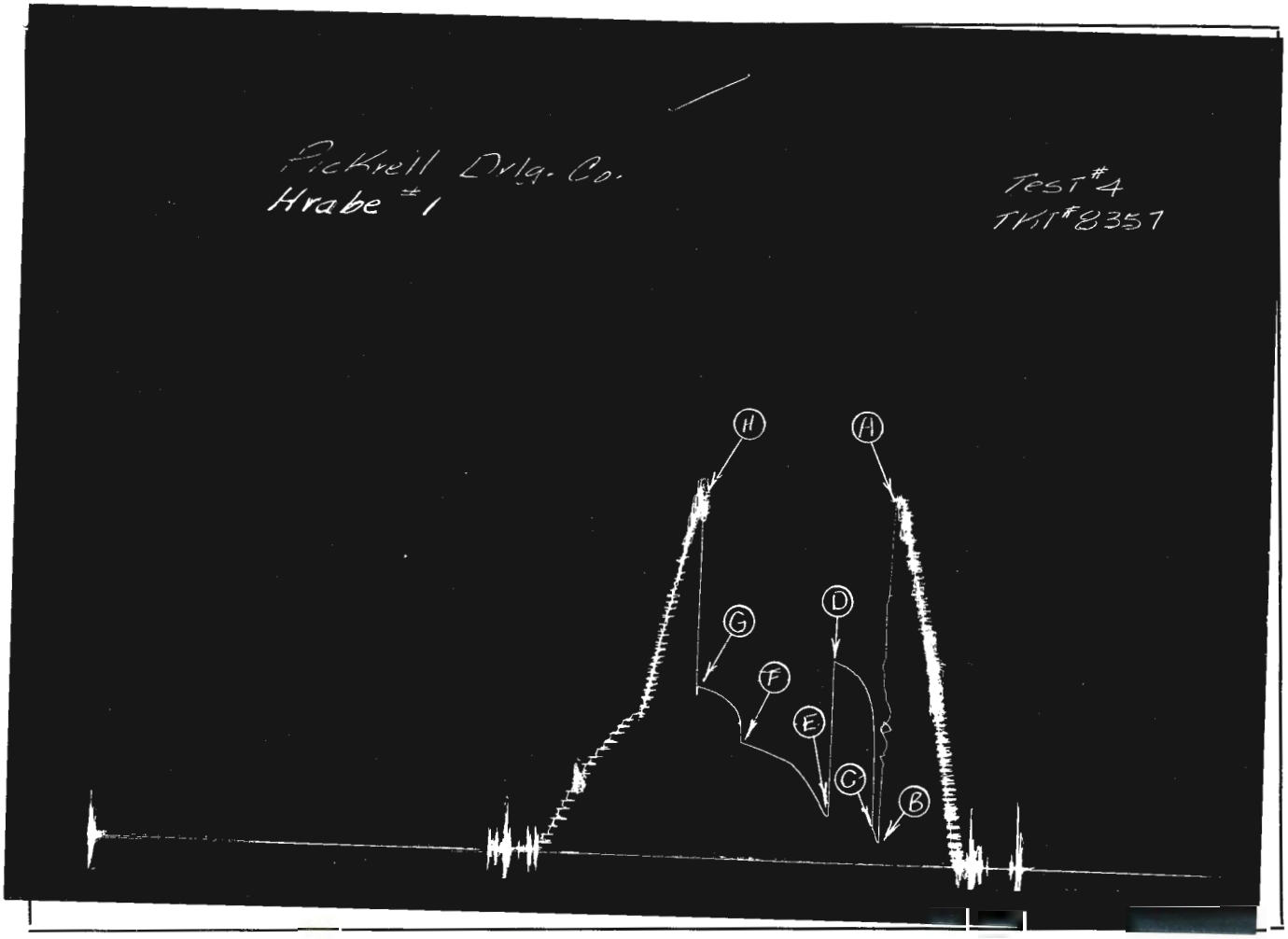
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 0 Mn.

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

Second Flow Pressure
Breakdown: 11 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 2 Min.

Point	Mins.	Press.	Point	Minutes	Press.	Point	Minutes	Press.	Point	Minutes	Press.
P 1	0	101		0	168		0	218		0	547
P 2	5	168		3	619		5	270		3	690
P 3				6	754		10	328		6	718
P 4				9	817		15	382		9	737
P 5				12	849		20	428		12	757
P 6				15	875		25	460		15	767
P 7				18	892		30	478		18	778
P 8				21	909		35	491		21	785
P 9				24	922		40	506		24	791
P10				27	929		45	521		27	795
P11				30	937		50	534		29	800
P12							55	547			
P13											
P14											
P15											
P16											
P17											
P18											
P19											
P20											



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	1620 PSI
(B)	First Initial Flow Pressure	101 PSI
(C)	First Final Flow Pressure	168 PSI
(D)	Initial Closed-in Pressure	937 PSI
(E)	Second Initial Flow Pressure	218 PSI
(F)	Second Final Flow Pressure	547 PSI
(G)	Final Closed-in Pressure	800 PSI
(H)	Final Hydrostatic Mud	1612 PSI

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe #1

Elevation 2059 DerrickFloor Formation === Ticket Number 8358

Date Sept.11,1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Puwwe Western Representative Gerrell Veatch

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Formation Test No. 5 O.K. X Misrun Interval Tested From 3385' to 3425' Total Depth 3425'

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 3381' Ft. Size 6 3/4 Packer Depth 3385' 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 40 Ft. Size 5½ OD

RECORDERS Depth 3389 Ft. Clock No. 6875 Depth 3391 Ft. Clock No. 104

Top Make Kuster Cap. 4300 No. 1966 Inside ~~Outside~~ Bottom Make Western Cap 4000 No. 25 ~~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 7:30 P M

Tool Open I.F.P. From 7:38 P M to 7:48 M Hr. 8 Min. From (B) 25 P.S.I. To (C) 47 P.S.I.

Tool Closed I.C.I.P. From 7:48 P M. to 8:16 M. Hr. 30 Min. (D) 1057 P.S.I.

Tool Open F.F.P. From 8:16 M. to 9:16 M. 1 Hr. Min. From (E) 69 P.S.I. To (F) 131 P.S.I.

Tool Closed F.C.I.P. From 9:16 M. to 9:46 M. Hr. 30 Min. (G) 922 P.S.I.

Initial Hydrostatic Pressure (A) 1761 P.S.I. Final Hydrostatic Pressure (H) 1752 P.S.I.

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

BLOW weak to good Bottom Choke Size 3/4

Did Well Flow Yes X No Recovery Total Ft. 15ft clean oil; 240' muddy oil

Mud

Reversed Out Yes X No Mud Type gel. Viscosity 43 Weight 9.5 Maximum Temp. 106 °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 2311 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 60 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date September 11, 1965 Test Ticket No. 8358

Recorder No. 1566 Capacity 4300 Location 3388 Ft.

Clock No. [illegible] Elevation 2059 Derrick Floor Well Temperature 106 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1761	P.S.I.
B	First Initial Flow Pressure	25	P.S.I.
C	First Final Flow Pressure	47	P.S.I.
D	Initial Closed-in Pressure	1057	P.S.I.
E	Second Initial Flow Pressure	69	P.S.I.
F	Second Final Flow Pressure	131	P.S.I.
G	Final Closed-in Pressure	922	P.S.I.
H	Final Hydrostatic Mud	1752	P.S.I.

	Time Given	Time Computed
Opened Tool	7:36 P M	
First Flow Pressure	8 Mins.	8 Mins.
Initial Closed-in Pressure	30 Mins.	27 Mins.
Second Flow Pressure	60 Mins.	57 Mins.
Final Closed-in Pressure	30 Mins.	32 Mins.

PRESSURE BREAKDOWN

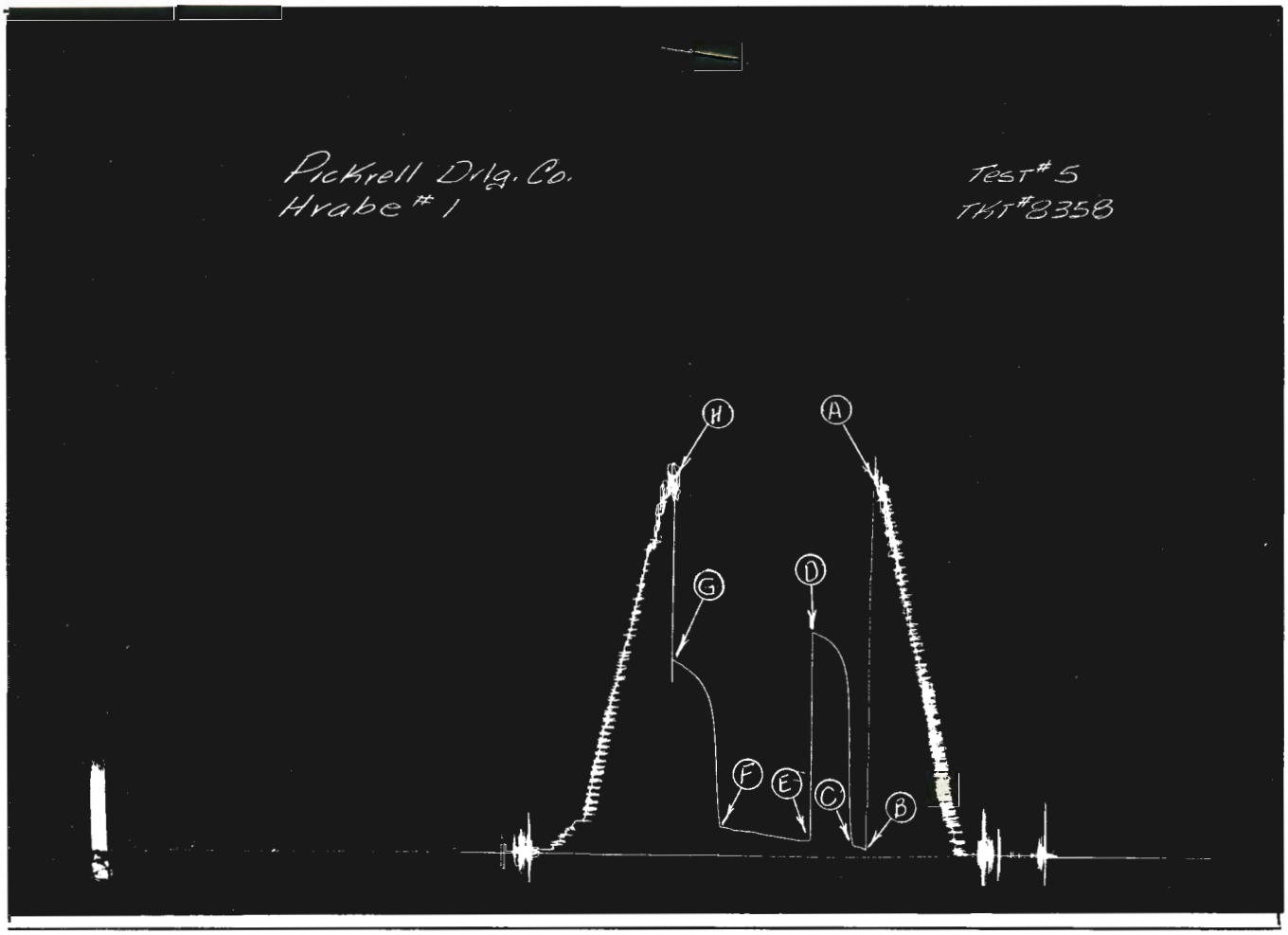
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 3 Min.

Initial Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 2 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	[illegible]	0	47	0	69	0	131
P 2 5	1	3	426	5	71	3	398
P 3 8	47	6	947	10	73	6	747
P 4		9	933	15	82	9	750
P 5		12	978	20	86	12	793
P 6		15	1004	25	92	15	828
P 7		18	1023	30	99	18	849
P 8		21	1038	35	108	21	871
P 9		24	1047	40	112	24	888
P10		27	1057	45	116	27	903
P11				50	123	30	916
P12				55	129	32	922
P13				57	131		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1761	PSI
(B)	First Initial Flow Pressure	25	PSI
(C)	First Final Flow Pressure	47	PSI
(D)	Initial Closed-in Pressure	1057	PSI
(E)	Second Initial Flow Pressure	69	PSI
(F)	Second Final Flow Pressure	131	PSI
(G)	Final Closed-in Pressure	922	PSI
(H)	Final Hydrostatic Mud	1752	PSI

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 GLadstone 3-7903

Company PICKRELL DRILLING COMPANY Lease & Well No. HRABE #1

Elevation 2059 DerrickFloor Formation ? Ticket Number 8359

Date September 12, 1965 Sec. 4 Twp. 9s Range 17w County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Gerrell Veatch

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Formation Test No. 6 O.K. x Misrun Interval Tested From 3426' to 3460' Total Depth 3460'

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

Packer Depth 3422 Ft. Size 6 3/4 Packer Depth 3426 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 34 Ft. Size 5½ OD

RECORDERS Depth 3429 Ft. Clock No. 6875 Depth 3432 Ft. Clock No. 104

Top Make Kuster Cap. 4300 No. 1566 Inside Outside Bottom Make Western Cap. 4000 No. 25 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 7:27 A M

Tool Open I.F.P. From 7:29A M to 7:38 M Hr. 9 Min. From (B) 30 P.S.I. To (C) 36 P.S.I.

Tool Closed I.C.I.P. From 7:38A M. to 8:08A M. Hr. 30 Min. (D) 1023 P.S.I.

Tool Open F.F.P. From 8:08A M. to 9:38A M. 1 Hr. 30 Min. From (E) 51 P.S.I. To (F) 116 P.S.I.

Tool Closed F.C.I.P. From 9:38A M. to 10:08A M. Hr. 30 Min. (G) 954 P.S.I.

Initial Hydrostatic Pressure (A) 1785 P.S.I. Final Hydrostatic Pressure (H) 1769 P.S.I.

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

____ ____ ____ M. ____

____ ____ ____ M. ____

____ ____ ____ M. ____

BLOW Weak to good throughout test. Bottom Choke Size 3/4 In.

Did Well Flow Yes x No Recovery Total Ft. 10' clean oil; 200' muddy oil

____ Mud

Reversed Out Yes x No Mud Type gel. Viscosity 43 Weight 9.5 Maximum Temp. 104 °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 2552 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 2.6 in. Length Drill Collars ft.

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

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date September 12, 1965 Test Ticket No. 8359

Recorder No. 1566 Capacity 4300 Location 3429 Ft.

Clock No. 6875 Elevation 2059 Derrick Floor Well Temperature 104 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1785	P.S.I.	Opened Tool	7:27 AM
B First Initial Flow Pressure	36	P.S.I.	First Flow Pressure	9:[illegible] Mins. 9 Mins.
C First Final Flow Pressure	36	P.S.I.	Initial Closed-in Pressure	30 Mins. 30 Mins.
D Initial Closed-in Pressure	1023	P.S.I.	Second Flow Pressure	90 Mins. 83 Mins.
E Second Initial Flow Pressure	51	P.S.I.	Final Closed-in Pressure	30 Mins. 27 Mins.
F Second Final Flow Pressure	116	P.S.I.		
G Final Closed-in Pressure	954	P.S.I.		
H Final Hydrostatic Mud	1769	P.S.I.		

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 4 Min.

Point Mins.	Press.
P 1 0	36
P 2 5	36
P 3 9	36
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.

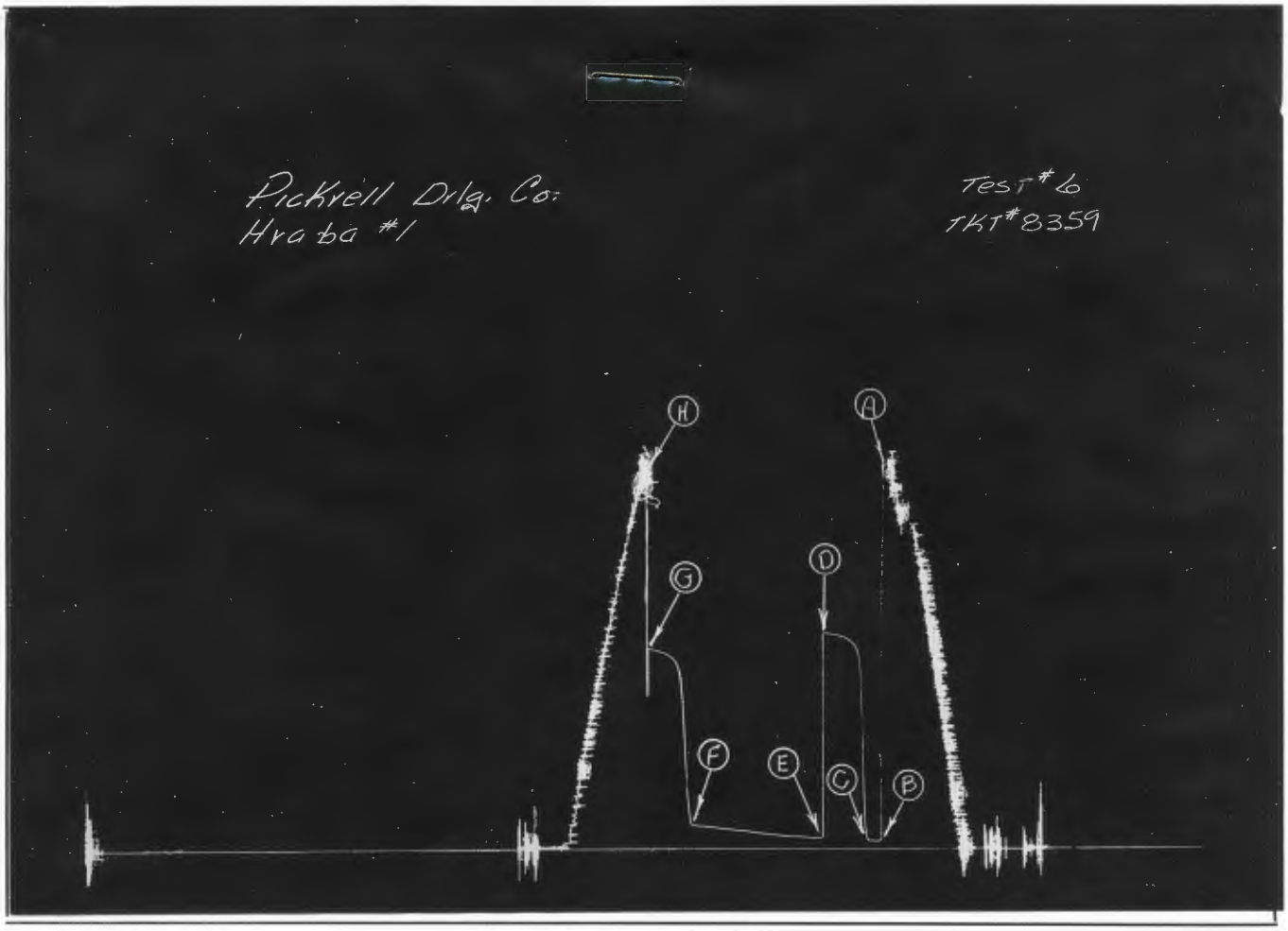
Point Minutes	Press.
0	36
3	421
6	860
9	957
12	980
15	997
18	1008
21	1014
24	1019
27	1021
30	1023

Second Flow Pressure
Breakdown: 16 Inc.
of 5 mins. and a
final inc. of 3 Min.

Point Minutes	Press.
0	51
5	53
10	56
15	58
20	61
25	65
30	69
35	73
40	79
45	84
50	90
55	92
60	95
65	101
70	105
75	110
80	114
83	116

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	116
3	378
6	645
9	751
12	805
15	822
18	933
21	941
24	948
27	954



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1785	PSI
(B)	First Initial Flow Pressure	36	PSI
(C)	First Final Flow Pressure	36	PSI
(D)	Initial Closed-in Pressure	1023	PSI
(E)	Second Initial Flow Pressure	51	PSI
(F)	Second Final Flow Pressure	116	PSI
(G)	Final Closed-in Pressure	954	PSI
(H)	Final Hydrostatic Mud	1769	PSI

Home Office: Great Bend, Kansas
P. O. Box 793 GLadstone 3-7903

Company Pickrell Drilling Company Lease & Well No. Hrabe #1

Elevation 2059 Derrick Floor Formation Arb. Ticket Number 8360

Date Sept.12,1960 Sec. 4 Twp. 9W Range 17W County Rooks State Kansas

Test Approved by Ralph W. Ruwwe Western Representative Gerrell Veatch

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Formation Test No. 7 O.K. X Misrun ____ Interval Tested From 3477' to 3481' Total Depth 3481'

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 3473 Ft. Size 6 3/4 Packer Depth 3477 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 4 Ft. Size 5½ OD

RECORDERS Depth 3470 Ft. Clock No. 6875 Depth 3479 Ft. Clock No. 104

AP. Top Make Kuster Cap. 4300 No. 1166 Inside Outside Bottom Make Western Cap. 4000 No. 25 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 9:28 P M

Tool Open I.F.P. From 9:30P M to 9:38 M Hr. 8 Min. From (B) 51 P.S.I. To (C) 51 P.S.I.

Tool Closed I.C.I.P. From 9:38 M. to 10:08 M. Hr. 30 Min. (D) 997 P.S.I.

Tool Open F.F.P. From 10:08P M. to 11:08P M. 1 Hr. ____ Min. From (E) 68 P.S.I. To (F) 20[illegible] P.S.I.

Tool Closed F.C.I.P. From 11:[illegible] M. to 11:[illegible] M. Hr. 30 Min. (G) [illegible] P.S.I.

Initial Hydrostatic Pressure (A) 1798 P.S.I. Final Hydrostatic Pressure (H) 17[illegible] P.S.I.

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

BLOW Fair to good throughout test. Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes X No Recovery Total Ft. 480' ft. oil; 30' oil cut mud

Mud

Reversed Out ____ Yes ____ No Mud Type gel. Viscosity 42 Weight 9.3 Maximum Temp. 106 °F

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

Type Circ. Sub. plug Did Tool Plug? yes Where? anchor Did Packer Hold? yes

Length Drill Pipe 2399 ft. I.D. Drill Pipe 3.7 in Length Weight Pipe 1054 ft. I.D. Weight Pipe 26 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 28 ft.

Remarks Kuster above packer. Pluging on pre-flow.

WESTERN TESTING CO., INC.
Pressure Data

Date September 12, 1965 — Test Ticket No. 8360

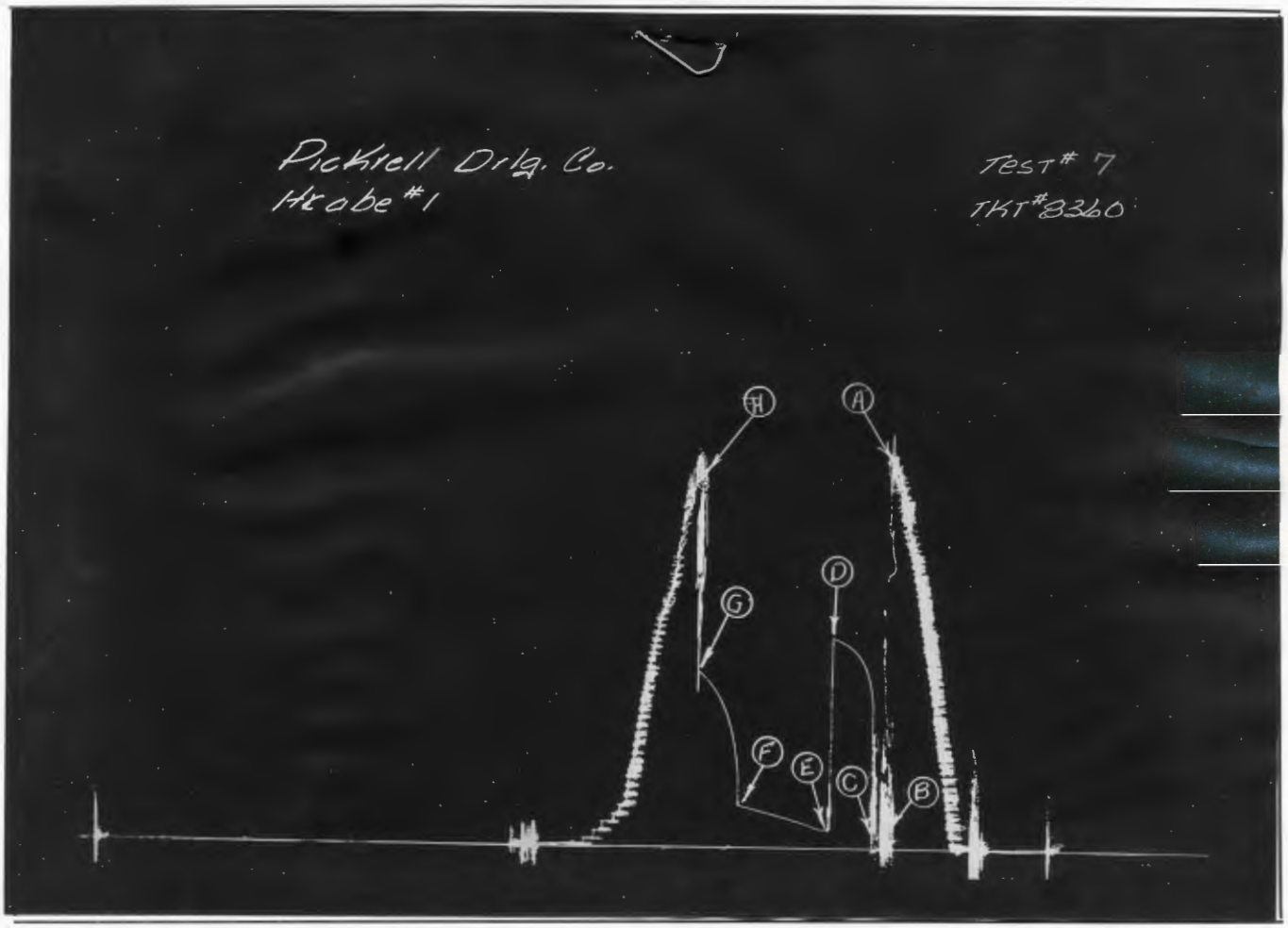
Recorder No. 1566 — Capacity 4300 — Location 3470 Ft.

Clock No. 6879 — Elevation 2059 Derrick Floor — Well Temperature 106 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1798 P.S.I.	Opened Tool	9:28 PM	
B First Initial Flow Pressure	51 P.S.I.	First Flow Pressure	3 Mins.	5 Mins.
C First Final Flow Pressure	51 P.S.I.	Initial Closed-in Pressure	30 Mins.	27 Mins.
D Initial Closed-in Pressure	997 P.S.I.	Second Flow Pressure	60 Mins.	58 Mins.
E Second Initial Flow Pressure	88 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F Second Final Flow Pressure	200 P.S.I.			
G Final Closed-in Pressure	836 P.S.I.			
H Final Hydrostatic Mud	1785 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 1 Inc.		Breakdown: 9 Inc.		Breakdown: 11 Inc.		Breakdown: 9 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 3 Min.		final inc. of 0 Min.	
Point Mins.	**Press.**	**Point Minutes**	**Press.**	**Point Minutes**	**Press.**	**Point Minutes**	**Press.**
P 1 0	51	0	51	0	88	0	200
P 2 5	51	3	782	5	90	3	436
P 3		6	847	10	97	6	589
P 4		9	896	15	112	9	647
P 5		12	929	20	125	12	689
P 6		15	948	25	138	15	735
P 7		18	967	30	146	18	772
P 8		21	978	35	157	21	800
P 9		24	991	40	168	24	821
P10		27	997	45	177	27	836
P11				50	187		
P12				55	196		
P13				58	200		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE	
(A)	Initial Hydrostatic Mud	1798	PSI
(B)	First Initial Flow Pressure	51	PSI
(C)	First Final Flow Pressure	51	PSI
(D)	Initial Closed-in Pressure	997	PSI
(E)	Second Initial Flow Pressure	88	PSI
(F)	Second Final Flow Pressure	200	PSI
(G)	Final Closed-in Pressure	836	PSI
(H)	Final Hydrostatic Mud	1785	PSI