Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Graves Drilling Company Lease & Well No. Peterson #1

Elevation 1521 Derrick Floor Formation Mississippi Ticket Number 6379

Date Dec. 7, 1966 Sec. 5 Twp. 21s Range 5W County McPherson State Kansas

Test Approved by R. G. Miller Western Representative W. M. Nething

Formation Test No. 1 O.K. X Misrun Interval Tested From 3310' to 3338' Total Depth 3338'

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 3310 Ft. Size 6 3/4 Packer Depth 3305 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 28 Ft. Size 5½ OD

RECORDERS Depth 3325 Ft. Clock No. 6800 Depth 3328 Ft. Clock No. 4964

Top Make Amerada Cap. 4150 No. 2604 Inside ~~Outside~~ Bottom Make Amerada Cap. 4250 No. 1051 ~~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 6:21 P M

Tool Open I.F.P. From 6:24 P M to 6:34 M Hr. 10 Min. From (B) 12 P.S.I. To (C) 12 P.S.I.

Tool Closed I.C.I.P. From 6:34 M. to 7:04 M. Hr. 30 Min. (D) 649 P.S.I.

Tool Open F.F.P. From 7:04 P M. to 7:39 P M. Hr. 35 Min. From (E) 21 P.S.I. To (F) 26 P.S.I.

Tool Closed F.C.I.P. From 7:39 P M to 8:09 P M. Hr. 30 Min. (G) 198 P.S.I.

Initial Hydrostatic Pressure (A) 1790 P.S.I. Final Hydrostatic Pressure (H) 1768 P.S.I.

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

BLOW Weak blow 10 minutes. Flushed tool. Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 10' mud with few specks oil Mud

Reversed Out Yes X No Mud Type starch Viscosity 44 Weight 10. Maximum Temp. 104 °F

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

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

Length Drill Pipe 2509 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 681 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 48 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date December 7, 1966 — Test Ticket No. 6379

Recorder No. 2604 — Capacity 4150 — Location 3325 Ft.

Clock No. 6800 — Elevation 1521 Derrick Floor — Well Temperature 104 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1790	P.S.I.	Opened Tool 6:21 PM	
B	First Initial Flow Pressure	12	P.S.I.	First Flow Pressure 10 Mins.	10 Mins.
C	First Final Flow Pressure	12	P.S.I.	Initial Closed-in Pressure 30 Mins.	30 Mins.
D	Initial Closed-in Pressure	649	P.S.I.	Second Flow Pressure 35 Mins.	35 Mins.
E	Second Initial Flow Pressure	21	P.S.I.	Final Closed-in Pressure 30 Mins.	30 Mins.
F	Second Final Flow Pressure	26	P.S.I.		
G	Final Closed-in Pressure	198	P.S.I.		
H	Final Hydrostatic Mud	1768	P.S.I.		

PRESSURE BREAKDOWN

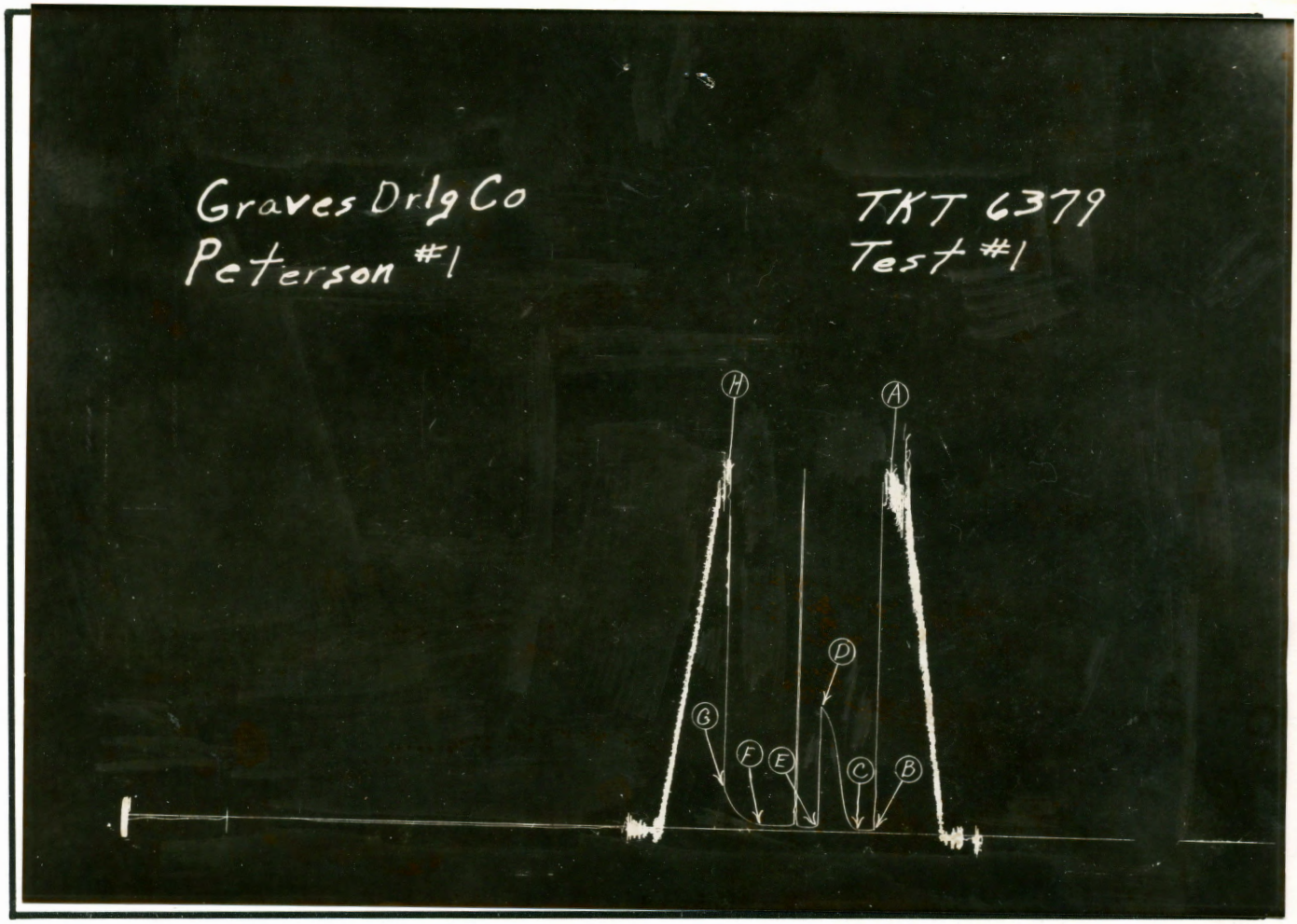
First Flow Press. Breakdown: 2 Inc. of 5 mins. and a final inc. of = Min.

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

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

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

Point Mins.	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	12	0	12	0	21	0	26
P 2 5	12	3	18	5	21	3	26
P 3 10	12	6	23	10	21	6	29
P 4		9	53	15	21	9	38
P 5		12	117	20	26	12	46
P 6		15	260	25	26	15	60
P 7		18	397	30	26	18	77
P 8		21	506	35	26	21	100
P 9		24	571			24	132
P10		27	612			27	173
P11		30	649			30	198
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	1790 PSI
(B)	First Initial Flow Pressure	12 PSI
(C)	First Final Flow Pressure	12 PSI
(D)	Initial Closed-in Pressure	649 PSI
(E)	Second Initial Flow Pressure	21 PSI
(F)	Second Final Flow Pressure	26 PSI
(G)	Final Closed-in Pressure	198 PSI
(H)	Final Hydrostatic Mud	1768 PSI

WESTERN

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Graves Drilling Company Lease & Well No. Peterson #1

Elevation 1521 Derrick Floor Formation Mississippi Ticket Number 6380

Date Dec.8,1966 Sec. 5 Twp. 21s Range 5w County McPherson State Kansas

Test Approved by Edgar E. Smith Western Representative W. M. Nething

Formation Test No. 2 O.K. X Misrun Interval Tested From 3311' to 3344' Total Depth 3344'

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

Packer Depth 3311 Ft. Size 6 3/4 Packer Depth 3306 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 3326 Ft. Clock No. 6800 Depth 3329 Ft. Clock No. 4964

Top Make Amerada Cap. 4150 No. 2604 Inside ~~Outside~~ Bottom Make Amerada Cap. 4250 No. 1051 ~~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 4:32 A M

Tool Open I.F.P. From 4:35 M to 4:40 M Hr. 5 Min. From (B) 38 P.S.I. To (C) 78 P.S.I.

Tool Closed I.C.I.P. From 4:40A M. to 5:10 M. Hr. 30 Min. (D) 791 P.S.I.

Tool Open F.F.P. From 5:10A M. to 6:10 M. Hr. 60 Min. From (E) 106 P.S.I. To (F) 382 P.S.I.

Tool Closed F.C.I.P. From 6:10A M. to 6:40 M. Hr. 30 Min. (G) 755 P.S.I.

Initial Hydrostatic Pressure (A) 1797 P.S.I. Final Hydrostatic Pressure (H) 1758 P.S.I.

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

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

Did Well Flow Yes X No Recovery Total Ft. 270' oil cut mud; 630' muddy oil

Mud

Reversed Out Yes No Mud Type starch Viscosity 44 Weight 10 Maximum Temp. 112 °F

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

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

Length Drill Pipe 2510 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 681 ft. I.D. Weight Pipe 2.7 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 December 8, 1966 — Test Ticket No. 6380

Recorder No. 2 604 — Capacity 4150 — Location 3326 Ft.

Clock No. 6800 — Elevation 1521 Derrick Floor — Well Temperature 112 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1797	P.S.I.	Opened Tool	4:32 AM	
B	First Initial Flow Pressure	38	P.S.I.	First Flow Pressure	5 Mins.	5 Mins.
C	First Final Flow Pressure	78	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	791	P.S.I.	Second Flow Pressure	60 Mins.	59 Mins.
E	Second Initial Flow Pressure	106	P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	382	P.S.I.			
G	Final Closed-in Pressure	755	P.S.I.			
H	Final Hydrostatic Mud	1758	P.S.I.			

PRESSURE BREAKDOWN

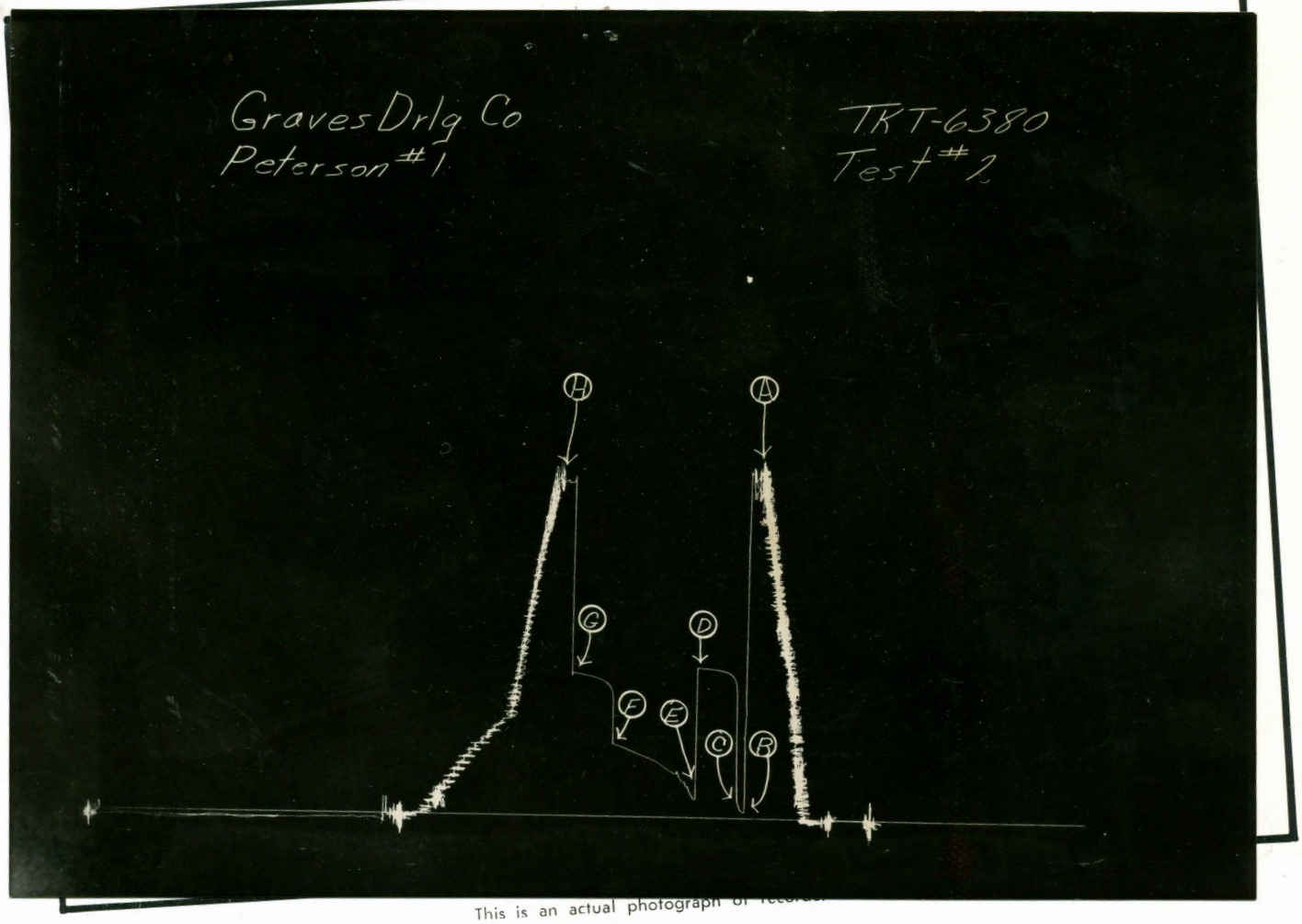
First Flow Press. Breakdown: 1 Inc. of 5 mins. and a final inc. of = Min.

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

Second Flow Pressure Breakdown: 11 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 = 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	38	0	78	0	106	0	382
P 2	5	78	3	600	5	159	3	686
P 3			6	746	10	191	6	707
P 4			9	763	15	234	9	721
P 5			12	773	20	249	12	730
P 6			15	777	25	277	15	738
P 7			18	782	30	298	18	744
P 8			21	784	35	314	21	748
P 9			24	786	40	330	24	750
P10			27	788	45	345	27	754
P11			30	791	50	363	30	755
P12					55	373		
P13					59	382		
P14								
P15								
P16								
P17								
P18								
P19								
P20								



This is an actual photograph of record.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	1797 PSI
(B)	First Initial Flow Pressure	38 PSI
(C)	First Final Flow Pressure	78 PSI
(D)	Initial Closed-in Pressure	791 PSI
(E)	Second Initial Flow Pressure	106 PSI
(F)	Second Final Flow Pressure	382 PSI
(G)	Final Closed-in Pressure	755 PSI
(H)	Final Hydrostatic Mud	1758 PSI