WESTERN TESTERS

P. O. BOX 793 PHONE 793-7903
GREAT BEND, KANSAS

WESTERN TESTING CO., INC.
FORMATION TESTING
TICKET 21588

Formation ____ Elevation ____ Eff. Pay ____ Ft.

District G.B. Date 5-15-76 Customer Order No. ____

COMPANY NAME GRAVES ~~DRLG. CO. INC~~ Drilling Co, Inc.

ADDRESS 910 UNION CENTER WICHITA, KS 67202

LEASE AND WELL NO. WHELAN #1 COUNTY BARBER STATE KS Sec. 29 Twp. 31S Rge. 11W

Mail Inv. To SAME AS ABOVE No. Copies Requested Reg
Co. Name Address

Mail Charts To " " " No. Copies Requested Reg
Address

Formation Test No. 1 O.K. X Misrun — Interval Tested From 3504' to 3562' Total Depth 3562'

Size Main Hole 7⅞ Rat Hole — Conv. — B.T. X Damaged — Yes X No Conv. — B.T. X Damaged — Yes X No

Top Packer Depth 3499 Ft. Size 6 3/4 Bottom Packer Depth 3504 Ft. Size 6 3/4

Straddle — Conv. — B.T. — Damaged — Yes — No Packer Depth — Ft. Size —

Tool Size 5½ OD Tool Joint Size 4½FH Anchor Length 58 Ft. Size 27/8FH 1 JOINT PIPE Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3521 Ft. Clock No. 6897 Depth 3524 Ft. Clock No. 10168

Top Make KUSTER Cap. 4250 No. 1051 Inside ~~Outside~~ Bottom Make Kuster Cap. 4000 No. 3659 ~~Inside~~ Outside

Below Straddle: Depth — Rec. No. — Clock No. — Inside Outside Depth — Ft. Rec. No. — Clock No. — Inside Outside

Time Set Packer 10:37 P M

Tool Open I.F.P. From	10:40P M. to	10:55P M.	— Hr.	15 Min. From (B)	53 52 P.S.I. To (C)	53 54	P.S.I.
Tool Closed I.C.I.P. From	10:55P M. to	11:40P M.	— Hr.	45 Min. (D)	322 332		P.S.I.
Tool Open F.F.P. From	11:40P M. to	12:40A M.	1 Hr.	— Min. From (E)	64 61 P.S.I. To (F)	64 64	P.S.I.
Tool Closed F.C.I.P. From	12:40A M. to	1:25A M.	— Hr.	45 Min. (G)	301 310		P.S.I.
Initial Hydrostatic Pressure (A)	1867 1867 P.S.I.	Final Hydrostatic Pressure (H)	1856 1849 P.S.I.	Maximum Temp.	110		

INFORMATION

BLOW STRONG THROUGHOUT ~~fair~~ Both opening

Did Well Flow — Yes X No Recovery Total Ft. 60' ~~Mud~~ drilling mud

Reversed Out — Yes X No Mud Type GEL Viscosity 34 Weight 9.5 Water Loss 6.4 cc. Chlorides 81,000 PPM

EXTRA EQUIPMENT: Type Circ. Sub. PIN Safety Joint — Jars: Size — In. Make — Ser. No. —

Dual Packers? Yes Did Packers Hold? Yes Did Tool Plug? NO Where? —

DRILLING CONTRACTOR GRAVES ~~Drlg Co~~ Inc Length Drill Pipe 3364 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½ XH In.

Length Weight Pipe — ft. I.D. Weight Pipe — In. Tool Joint Size — In. Length Drill Collars 120 ft. I.D. Drill Collars 2 ¼ In.

Tool Joint Size 4½ H 90 In. Length D.S.T. Tool 78 ft.
4"H.90

Remarks

INVOICE SECTION

Open Hole Test	$ 355.00
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Misrun —	$
Evaluation	$
Packer	$
Circ. Sub.	$
	$
Total	$ 355.00

COMPANY TERMS

Western Testing Co., Inc., shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 10% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Disc. $71.10

Test Approved By Clyde R. Kuhn Western Representative Norman D. Hobbs
Signature of Customer or his Authorized Representative Clyde R. Kuhn
Operator's Time Mark Van Hrs.

WESTERN TESTING CO., INC.
Pressure Data

te 5-15-76 Test Ticket No. 21588

order No. 1051 Capacity 4250 Location 3521 Ft.

ck No. 6897 Elevation — Well Temperature 110 °F

int	Pressure		Time Given	Time Computed
Initial Hydrostatic Mud	1867 P.S.I.	Open Tool	10:37P M	
First Initial Flow Pressure	52 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
First Final Flow Pressure	54 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
Initial Closed-in Pressure	332 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
Second Initial Flow Pressure	61 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
Second Final Flow Pressure	64 P.S.I.			
Final Closed-in Pressure	310 P.S.I.			
Final Hydrostatic Mud	1849 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: ____ Inc.
of 5 mins. and a
final inc. of 0 Min.

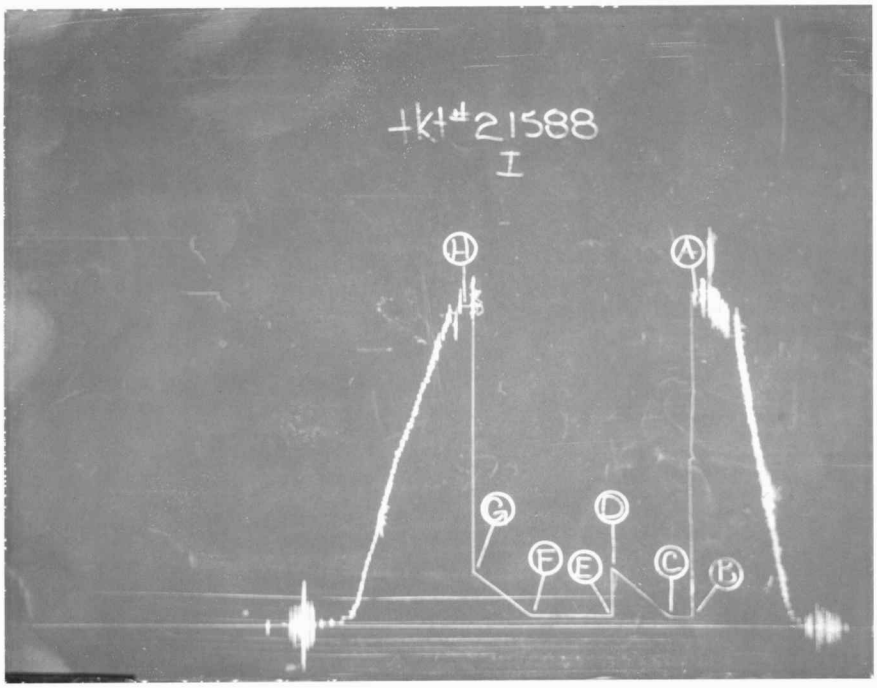
Initial Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

oint ins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
1 0	52	0	54	0	61	0	64
2 5	52	3	67	5	61	3	75
3 10	52	6	81	10	61	6	90
4 15	54	9	100	15	61	9	110
5 20		12	119	20	61	12	129
6 25		15	142	25	61	15	144
7 30		18	159	30	62	18	163
8 35		21	178	35	62	21	179
9 40		24	197	40	62	24	198
10 45		27	217	45	62	27	214
11 50		30	237	50	62	30	229
12 55		33	258	55	63	33	244
13 60		36	275	60	64	36	261
14		39	293	65		39	280
15		42	312	70		42	295
16		45	332	75		45	310
17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

WTC - 4


Tkt# 21588
I
H
A
G
D
F
E
C
B

WESTERN TESTERS INC.

P. O. Box 1599
Wichita, Kansas 67201

Company Graves Drilling Co., Inc. Lease & Well No. Whedan #1

Elevation - Formation - Effective Pay - Ft. Ticket No. 21588

Date 5-15-76 Sec. 29 Twp. 31S Range 11W County Barber State Kansas

Test Approved by Clyde R. Kuhn Western Representative Norman D. Hickel

Formation Test No. 1 O.K. X Misrun - Interval Tested From 3504' to 3562' Total Depth 3562'

Size Main Hole 77/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. - B.T. X Damaged - Yes X No

Top Packer Depth 3499 Ft. Size 6 3/4 Bottom Packer Depth 3504 Ft. Size 6 3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½ OD Tool Joint Size 4½ FH Anchor Length 58 Ft. Size 27' FH 1jointpipe XH Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3521 Ft. Clock No. 6897 Depth 3524 Ft. Clock No. 10168

Top Make Kuster Cap. 4250 No. 1051 ~~Outside~~ Inside Bottom Make Kuster Cap. 4000 No. 3659 ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 10:37 P M

Tool Open I.F.P. From 10:40 P M. to 10:55P M. - Hr. 15 Min. From (B) 52 P.S.I. To (C) 54 P.S.I.

Tool Closed I.C.I.P. From 10:55P M. to 11:40P M. - Hr. 45 Min (D) 332 P.S.I.

Tool Open F.F.P. From 11:40 P M. to 12:40A M. 1 Hr. - Min. From (E) 61 P.S.I. To (F) 64 P.S.I.

Tool Closed F.C.I.P. From 12:40A M. to 1:25 A M. - Hr. 45 Min. (G) 310 P.S.I.

Initial Hydrostatic Pressure (A) 1867 P.S.I. Final Hydrostatic Pressure (H) 1849 P.S.I. Maximum Temp. 110

INFORMATION

BLOW Strong throughout test.

Did Well Flow - Yes X No Recovery Total Ft. 60' drilling mud.

Reversed Out - Yes X No Mud Type gel Viscosity 34 Weight 9.5 Water Loss 6.4 cc. Chlorides 81,000 P.P.M.

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? - - -

DRILLING CONTRACTOR Graves Drlg. Co., Inc. Length Drill Pipe? 3364 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½XH In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 120 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size 4"H90 In. Length D.S.T. Tool 78 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 5-15-76 Test Ticket No. 21588

Recorder No. 1051 Capacity 4250 Location 3521 Ft.

Clock No. 6897 Elevation - - Well Temperature 110 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1867 P.S.I.	Open Tool	10:37 P M	
B	First Initial Flow Pressure	52 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C	First Final Flow Pressure	54 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	332 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	61 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	64 P.S.I.			
G	Final Closed-in Pressure	310 P.S.I.			
H	Final Hydrostatic Mud	1849 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	52
P 2 5	52
P 3 10	52
P 4 15	54
P 5 20	
P 6 25	
P 7 30	
P 8 35	
P 9 40	
P10 45	
P11 50	
P12 55	
P13 60	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	54
3	67
6	81
9	100
12	119
15	142
18	159
21	178
24	197
27	217
30	237
33	258
36	275
39	293
42	312
45	332
48	
51	
54	
57	
60	

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	61
5	61
10	61
15	61
20	61
25	61
30	62
35	62
40	62
45	62
50	62
55	63
60	64
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	64
3	75
6	90
9	110
12	129
15	144
18	163
21	179
24	198
27	214
30	229
33	244
36	261
39	280
42	295
45	310
48	
51	
54	
57	
60	

WESTERN TESTERS

P. O. BOX 793 PHONE 793-7903

GREAT BEND, KANSAS

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET 21590

Formation Mississippi Elevation — Eff. Pay — Ft.

District Great Bend Date 5-18-76 Customer Order No. —

COMPANY NAME Graves Oil Co. Inc. Drilling Co, Inc. (Whelan)

ADDRESS 910 Union Center Wichita, KS.

LEASE AND WELL NO. WHELAN #1 COUNTY Barber STATE KS Sec. 29 Twp. 31S Rge. 14W

Mail Inv. To SAME as above No. Copies Requested Reg

Co. Name Address

Mail Charts To " " " No. Copies Requested Reg

Address

Formation Test No. 2 O.K. X Misrun — Interval Tested From 4288' to 4345' Total Depth 4345'

Size Main Hole 7⅞ Rat Hole — Conv. — B.T. X Damaged — Yes — No Conv. — B.T. X Damaged — Yes X No

Top Packer Depth 4283 Ft. Size 6¾ Bottom Packer Depth 4288 Ft. Size 6¾

Straddle — Conv. — B.T. — Damaged — Yes — No Packer Depth — Ft. Size —

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 57' Ft. Size 4½FH Surface Choke Size ¾ In. Bottom Choke Size ¾ In.

RECORDERS Depth 4308 Ft. Clock No. 6897 Depth 4311 Ft. Clock No. 10168

Top Make Kuster Cap. 4250 No. 1051 Inside Outside Bottom Make Kuster Cap. 4000 No. 3659 ~~Inside~~ Outside

Below Straddle: Depth — Rec. No. — Clock No. — Inside Outside Depth — Ft. Rec. No. — Clock No. — Inside Outside

Time Set Packer 11:27 P M

Tool Open I.F.P. From 11:30P M. to 11:45P M. — Hr. 15 Min. From (B) 4330 P.S.I. To (C) 4325 P.S.I.

Tool Closed I.C.I.P. From 11:45P M. to 12:15A M. — Hr. 30 Min. (D) 4664 56 P.S.I.

Tool Open F.F.P. From 12:15A M. to 12:45A M. — Hr. 30 Min. From (E) 4334 P.S.I. To (F) 4347 P.S.I.

Tool Closed F.C.I.P. From 12:45A M. to 1:15A M. — Hr. 30 Min. (G) 5349 P.S.I.

Initial Hydrostatic Pressure (A) 2230 2237 P.S.I. Final Hydrostatic Pressure (H) 2219 2215 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Weak blow, Died in 12 minutes into ~~first~~ initial flow period. No Blow on final flow period. Open Flushed 15 min into ~~first~~ initial flow period. No Blow

Did Well Flow — Yes X No Recovery Total Ft. 5' ~~Mud~~ drilling mud

Reversed Out — Yes X No Mud Type Starch Viscosity 43 Weight 9 Water Loss — cc. Chlorides —

EXTRA EQUIPMENT: Type Circ. Sub. P/N Safety Joint — Jars: Size — In. Make — Ser. No. —

Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? No Where? —

DRILLING CONTRACTOR Graves Drlg Co Inc Length Drill Pipe — ft. I.D. Drill Pipe — In. Tool Joint Size — In.

Length Weight Pipe — ft. I.D. Weight Pipe — In. Tool Joint Size — In. Length Drill Collars 120 ft. I.D. Drill Collars 2¼ In.

Tool Joint Size 4½IF In. Length D.S.T. Tool 77 ft.

Remarks

INVOICE SECTION

Open Hole Test	$ 390.00
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Misrun	$
Evaluation	$
Packer	$
Circ. Sub.	$
	$
Total	$ 390.00

390 -80

COMPANY TERMS

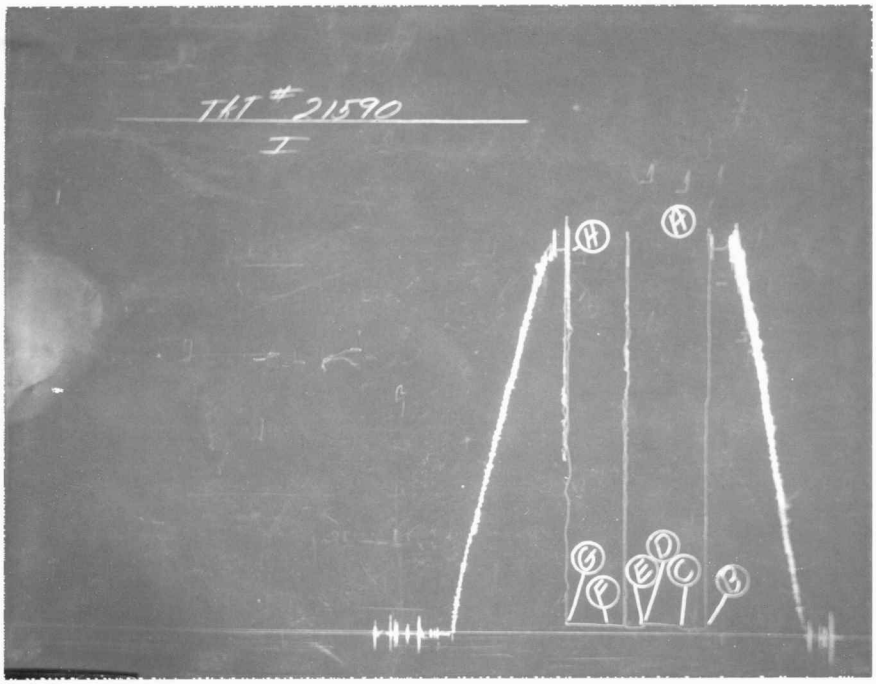
Western Testing Co., Inc., shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 10% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Discount #7.80

Test Approved By Harold Steinkamp Western Representative Norman D. Hicks

Signature of Customer or his Authorized Representative Harold Steinkamp Operator's Time Mark Yarn Hrs.


THT # 21590
I
A
A
G
F
E
D
C
B

Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company Graves Drilling Co., Inc. Lease & Well No. Whelan #1

Elevation - Formation Mississippi Effective Pay - Ft. Ticket No. 21590

Date 5-18-76 Sec. 29 Twp. 31S Range 14W County Barber State Kansas

Test Approved by Harold Steincamp Western Representative Norman D. Hickel

Formation Test No. 2 O.K. X Misrun - Interval Tested From 4288' to 4345' Total Depth 4345'

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

Top Packer Depth 4283 Ft. Size 6 3/4 Bottom Packer Depth 4288 Ft. Size 6 3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½ OD Tool Joint Size 4½ FH Anchor Length 57 Ft. Size 4½ FH Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4308 Ft. Clock No. 6897 Depth 4311 Ft. Clock No. 10168

Top Make Kuster Cap. 4250 No. 1051 Inside ~~Outside~~ Bottom Make Kuster Cap. 4000 No. 3659 ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 11:27 P M

Tool Open I.F.P. From 11:30 P M. to 11:45 P M. - Hr. 15 Min. From (B) 30 P.S.I. To (C) 25 P.S.I.

Tool Closed I.C.I.P. From 11:45 M. to 12:15 A M. - Hr. 30 Min (D) 56 P.S.I.

Tool Open F.F.P. From 12:15 A M. to 12:45 A M. - Hr. 30 Min. From (E) 34 P.S.I. To (F) 47 P.S.I.

Tool Closed F.C.I.P. From 12:45 M. to 1:15 A M. - Hr. 30 Min. (G) 49 P.S.I.

Initial Hydrostatic Pressure (A) 2237 P.S.I. Final Hydrostatic Pressure (H) 2215 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Weak blow, died in 12 minutes into initial flow period. No blow on final flow period. Flushed tool in 15 minutes into final flow period. No blow.

Did Well Flow - Yes X No Recovery Total Ft. 5' drilling mud.

Reversed Out - Yes X No Mud Type starch Viscosity 43 Weight 9.6 Water Loss - cc. Chlorides -

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? - - -

DRILLING CONTRACTOR Graves Drlg. Co., Inc. Length Drill Pipe? - Ft. I.D. Drill Pipe - In. Tool Joint Size - In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 120 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size 4½H90 In. Length D.S.T. Tool 77 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 5-18-76 Test Ticket No. 21590

Recorder No. 1051 Capacity 4250 Location 4308 Ft.

Clock No. 6897 Elevation - Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2237 P.S.I.	Open Tool	11:27 P M	
B First Initial Flow Pressure	30 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	25 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	56 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	34 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	47 P.S.I.			
G Final Closed-in Pressure	49 P.S.I.			
H Final Hydrostatic Mud	2215 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	30
P 2 5	27
P 3 10	25
P 4 15	25
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	25
3	37
6	45
9	47
12	49
15	49
18	53
21	54
24	54
27	55
30	56

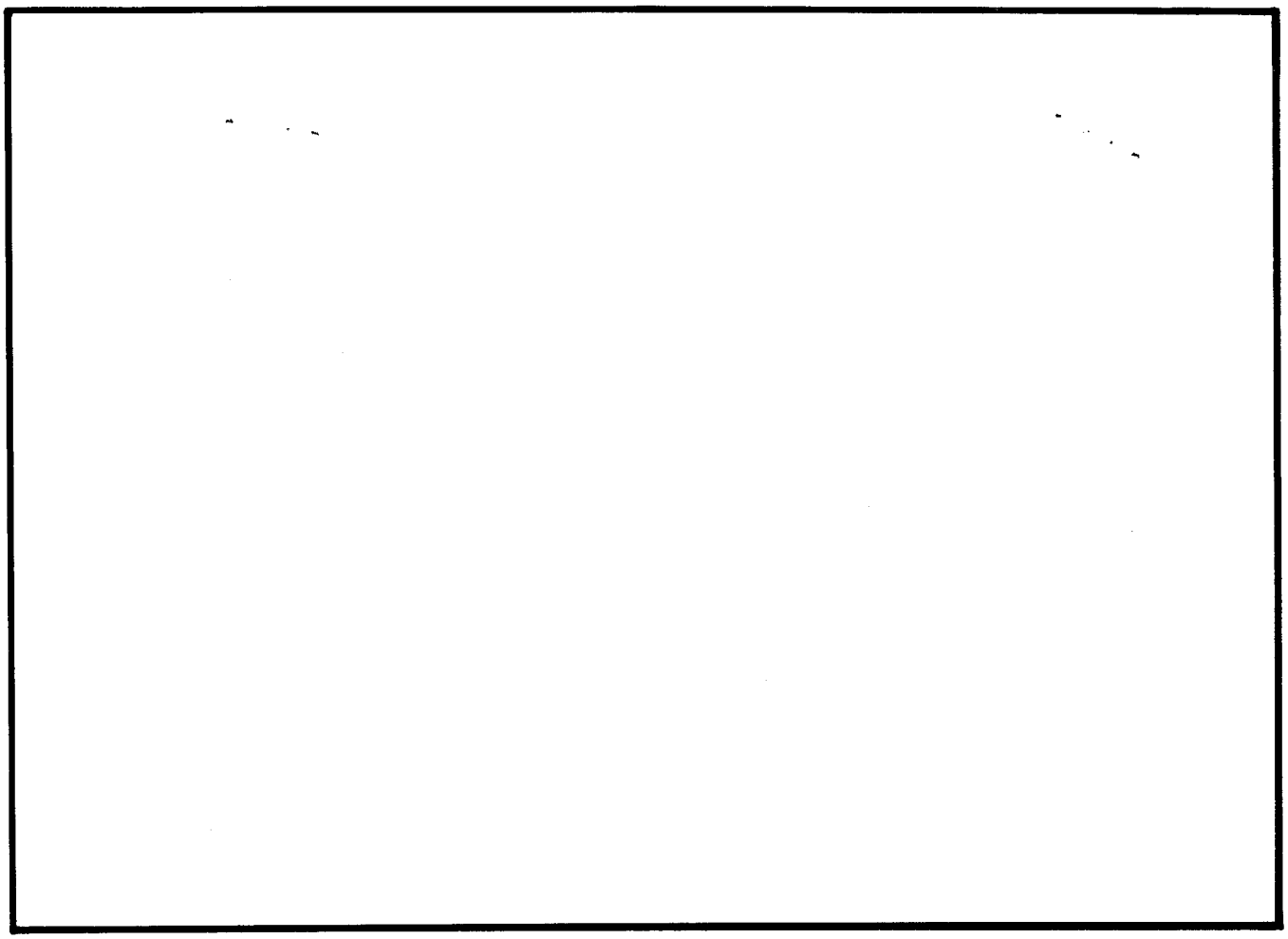
Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	34
5	32
10	32
15	43
20	45
25	47
30	

flushed tool

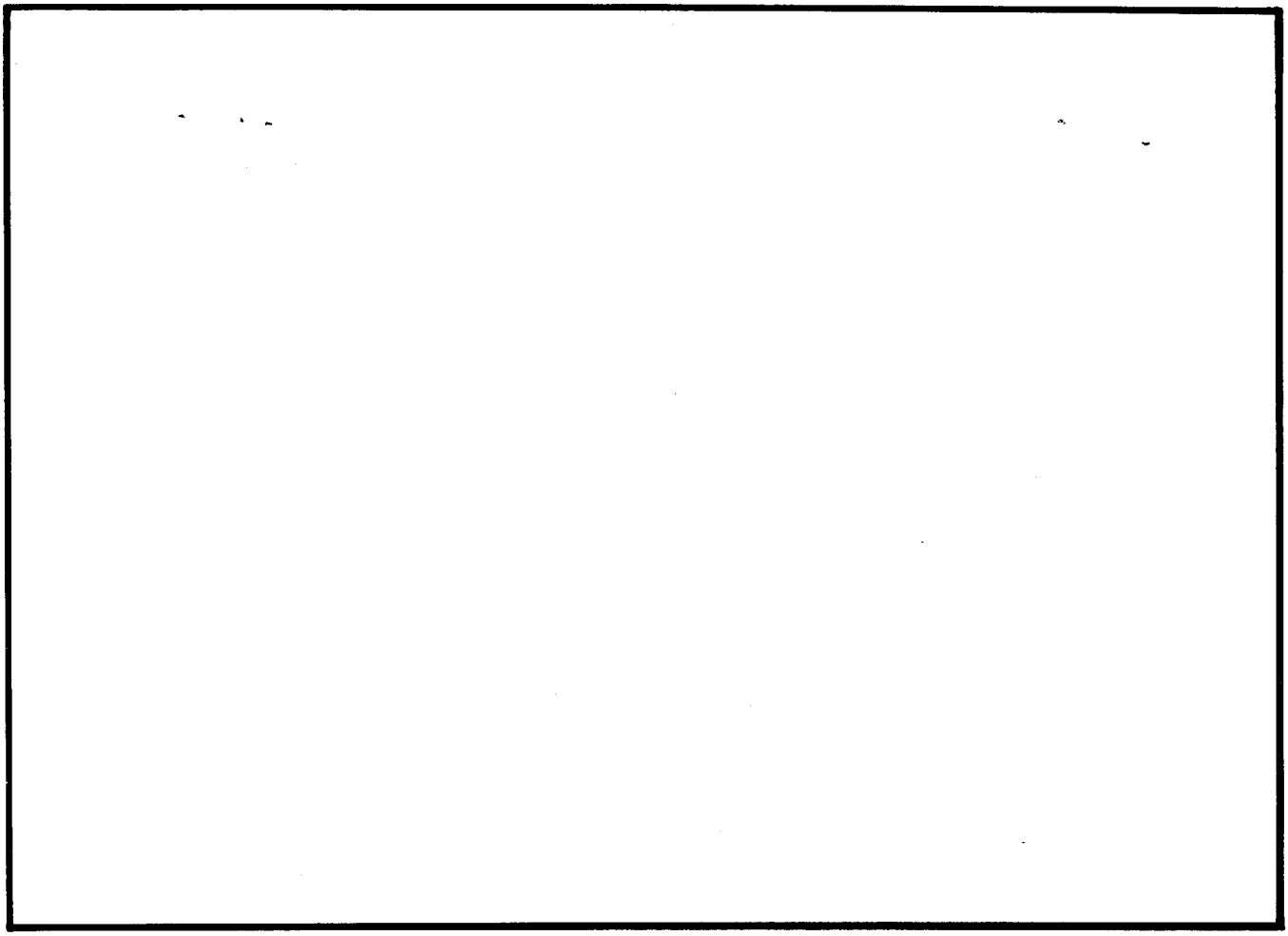
Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	47
3	44
6	46
9	47
12	48
15	49
18	49
21	49
24	49
27	49
30	49



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1867	1867	PSI
(B)	First Initial Flow Pressure	53	52	PSI
(C)	First Final Flow Pressure	53	54	PSI
(D)	Initial Closed-in Pressure	322	332	PSI
(E)	Second Initial Flow Pressure	64	61	PSI
(F)	Second Final Flow Pressure	64	64	PSI
(G)	Final Closed-in Pressure	301	310	PSI
(H)	Final Hydrostatic Mud	1856	1849	PSI



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2230	2237	PSI
(B)	First Initial Flow Pressure	43	30	PSI
(C)	First Final Flow Pressure	43	25	PSI
(D)	Initial Closed-in Pressure	64	56	PSI
(E)	Second Initial Flow Pressure	43	34	PSI
(F)	Second Final Flow Pressure	43	47	PSI
(G)	Final Closed-in Pressure	53	49	PSI
(H)	Final Hydrostatic Mud	2219	2215	PSI

NOMENCLATURE

b	=	Approximate Radius of Investigation	Feet
b^1	=	Approximate Radius of Investigation (Net Pay Zone h^1)	Feet
D.R.	=	Damage Ratio	——
El	=	Elevation	Feet
GD	=	B.T. Gauge Depth (From Surface Reference)	Feet
h	=	Interval Tested	Feet
h^1	=	Net Pay Thickness	Feet
K	=	Permeability	md
K^1	=	Permeability (From Net Pay Zone h^1)	md
m	=	Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF^1	=	Maximum Indicated Flow Rate	MCF/D
OF^2	=	Minimum Indicated Flow Rate	MCF/D
OF^3	=	Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF^4	=	Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	=	Extrapolated Static Pressure	Psig.
P^F	=	Final Flow Pressure	Psig.
$P^{\circ T}$	=	Potentiometric Surface (Fresh Water*)	Feet
Q	=	Average Adjusted Production Rate During Test	bbls/day
Q^1	=	Theoretical Production w/Damage Removed	bbls/day
Q^g	=	Measured Gas Production Rate	MCF/D
R	=	Corrected Recovery	bbls
r^w	=	Radius of Well Bore	Feet
t	=	Flow Time	Minutes
t°	=	Total Flow Time	Minutes
T	=	Temperature Rankine	°R
Z	=	Compressibility Factor	——
u	=	Viscosity Gas or Liquid	CP
Log	=	Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.