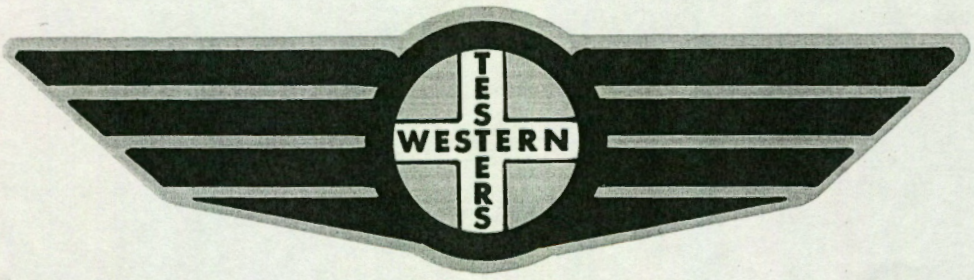
FORMATION TEST REPORT



HOME OFFICE: GREAT BEND, KANSAS

P. O. BOX 793 PHONE 793-7903

SEC. 18 TWP. 17S RGE. 24W TEST NO. 1 DATE 11-11-7

WESTERN TESTERS

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

mpany Walters Drilling Co. Lease & Well No. Humphery #1

vation 2433 Kelly Bushings Formation Mississippian Effective Pay Ft. Ticket No. 17208

e 11-11-72 Sec. 18 Twp. 17S Range 24W County Ness State Kansas

Approved by Peter J. Stubbs Western Representative James W. Holloway

mation Test No. 1 O.K. X Misrun Interval Tested From 4382' to 4390' Total Depth 4390'

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

Packer Depth 4377 Ft. Size 6 3/4" Packer Depth 4382 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

l Size 5 1/2" O.D. Tool Jt. Size 4 1/2" F.H. Anchor Length 8 Ft. Size 5 1/2" O.D.

CORDERS Depth 4374 Ft. Clock No. 9725 Depth 4384 Ft. Clock No. 6774

Top Make Kuster Cap 4150 No. 2607 Inside Outside Bottom Make Kuster Cap 4200 No. 1558 Inside Outside

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

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

e Set Packer 9:31 P.M.

Open I.F.P. From 9:34 M. to 9:49P.M. Hr. 15 Min. From (B) 8 P.S.I. To (C) 24 P.S.I.

Closed I.C.I.P. From 9:49 M. to 10:34P M. Hr. 45 Min. (D) 1295 P.S.I.

Open F.F.P. From 10:34 M. to 11:34P M. 1 Hr. Min. From (E) 50 P.S.I. To (F) 115 P.S.I.

Closed F.C.I.P. From 11:34 M. to 12:34A.M. 1 Hr. Min. (G) 1280 P.S.I.

l Hydrostatic Pressure (A) 2355 P.S.I. Final Hydrostatic Pressure (H) 2345 P.S.I.

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

ORMATION M.

M.

M.

W Fair increasing to strong Bottom Choke Size 3/4 In.

Well Flow Yes X No Recovery Total Ft. 180 feet gas in pipe 250 feet gassy oil 160 feet muddy oil

rsed Out Yes X No Mud Type Starch Viscosity 50 Weight 9.8 Water Loss 10.2 cc. Maximum Temp. 127 °F

Circ. Sub Plug Safety Joint No Jars: Size Make Ser. No.

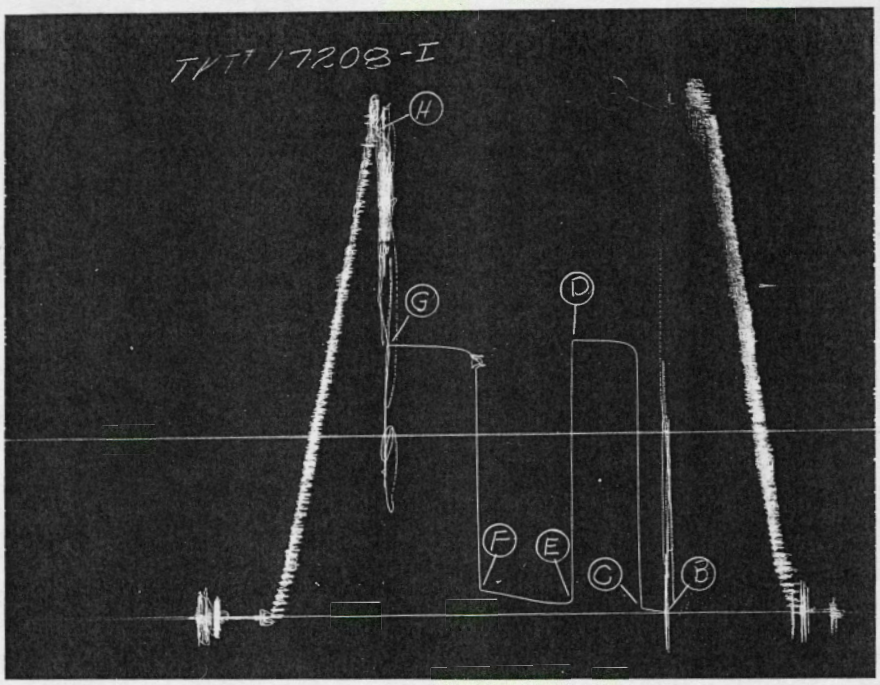
RA EQUIPMENT: Dual Packers Yes Did Packer Hold? Did Tool Plug? Where?

th Drill Pipe 3413 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 945 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

Drill Collars in. Length D.S.T. Tool 32 ft.

arks

WTC 3



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2449	2355	PSI
(B)	First Initial Flow Pressure	21	8	PSI
(C)	First Final Flow Pressure	32	24	PSI
(D)	Initial Closed-in Pressure	1278	1295	PSI
(E)	Second Initial Flow Pressure	42	50	PSI
(F)	Second Final Flow Pressure	116	115	PSI
(G)	Final Closed-in Pressure	1272	1280	PSI
(H)	Final Hydrostatic Mud	2439	2345	PSI

COMPANY Walters Drilling Co. LEASE AND WELL NO. Humphery #1 SEC. 18 TWP. 17S RGE. 24W TEST NO. 1 DATE 11-11-72

Test Ticket No. 17208

e 11-11-72 Capacity 4150 Location 4374 Ft.

order No. 2607 Elevation 2433 Kelly Bushings Well Temperature 127 °F

ck No. 9725

nt	Pressure			Time Given	Time Computed
Initial Hydrostatic Mud	2355	P.S.I.	Open Tool	9:31 P.M	
First Initial Flow Pressure	8	P.S.I.	First Flow Pressure	15 Mins.	19 Mins.
First Final Flow Pressure	24	P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
Initial Closed-in Pressure	1295	P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
econd Initial Flow Pressure	50	P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
econd Final Flow Pressure	115	P.S.I.			
inal Closed-in Pressure	1280	P.S.I.			
inal Hydrostatic Mud	2345	P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc.
of 5 mins. and a
final inc. of 4 Min.

Point	Press.
0	8
5	10
10	14
15	21
19	24

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

Point Minutes	Press.
0	24
3	908
6	1252
9	1270
12	1280
15	1285
18	1288
21	1290
24	1291
27	1292
30	1293
33	1293
36	1294
39	1294
42	1295
45	1295

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

Point Minutes	Press.
0	50
5	51
10	52
15	53
20	58
25	64
30	71
35	80
40	88
45	95
50	103
55	108
60	115

Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	115
3	914
6	1224
9	1246
12	1255
15	1261
18	1265
21	1268
24	1270
27	1272
30	1273
33	1274
36	1274
39	1275
42	1276
45	1277
48	1278
51	1278
54	1279
57	1279
60	1280

WESTERN SERVICES

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

Company Walters Drilling Co. Lease & Well No. Humphery #1

Elevation 2433 Kelly Bushings Formation Mississippian Effective Pay Ft. Ticket No. 17208

Date 11-11-72 Sec. 18 Twp. 17S Range 24W County Ness State Kansas

Test Approved by Peter J. Stubbs Western Representative James W. Holloway

Formation Test No. 1 O.K. X Misrun Interval Tested From 4382' to 4390' Total Depth 4390'

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

Packer Depth 4377 Ft. Size 6 3/4" Packer Depth 4382 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5 1/2" O.D. Tool Jt. Size 4 1/2" F.H. Anchor Length 8 Ft. Size 5 1/2" O.D.

RECORDERS Depth 4374 Ft. Clock No. 9725 Depth 4384 Ft. Clock No. 6774

Top Make Kuster Cap 4150 No. 2607 Inside ~~Outside~~ Bottom Make Kuster Cap 4200 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 9:31 P.M.

Tool Open I.F.P. From 9:34 M. to 9:49P. M. Hr. 15 Min. From (B) 8 P.S.I. To (C) 24 P.S.I.

Tool Closed I.C.I.P. From 9:49 M. to 10:34P M. Hr. 45 Min. (D) 1295 P.S.I.

Tool Open F.F.P. From 10:34 M. to 11:34P M. 1 Hr. Min. From (E) 50 P.S.I. To (F) 115 P.S.I.

Tool Closed F.C.I.P. From 11:34 M. to 12:34A M. 1 Hr. Min. (G) 1280 P.S.I.

Initial Hydrostatic Pressure (A) 2355 P.S.I. Final Hydrostatic Pressure (H) 2345 P.S.I.

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

BLOW Fair increasing to strong Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 180 feet gas in pipe 250 feet gassy oil ~~160~~ feet muddy oil = 310' OIL PETE 60'

Reversed Out Yes X No Mud Type Starch Viscosity 50 Weight 9.8 Water Loss 10.2 cc. Maximum Temp. 127 °F

Type Circ. Sub. Plug Safety Joint No Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Did Tool Plug? Where?

Length Drill Pipe 3413 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 945 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I.D. Drill Collars in. Length D.S.T. Tool 32 ft.

Remarks

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date 11-11-72 Test Ticket No. 17208

Recorder No. 2607 Capacity 4150 Location 4374 Ft.

Clock No. 9725 Elevation 2433 Kelly Bushings Well Temperature 127 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2355 P.S.I.	Open Tool		9:31 P.M	
B	First Initial Flow Pressure	8 P.S.I.	First Flow Pressure		15 Mins.	19 Mins.
C	First Final Flow Pressure	24 P.S.I.	Initial Closed-in Pressure		45 Mins.	45 Mins.
D	Initial Closed-in Pressure	1295 P.S.I.	Second Flow Pressure		60 Mins.	60 Mins.
E	Second Initial Flow Pressure	50 P.S.I.	Final Closed-in Pressure		60 Mins.	60 Mins.
F	Second Final Flow Pressure	115 P.S.I.				
G	Final Closed-in Pressure	1280 P.S.I.				
H	Final Hydrostatic Mud	2345 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 4 Min.

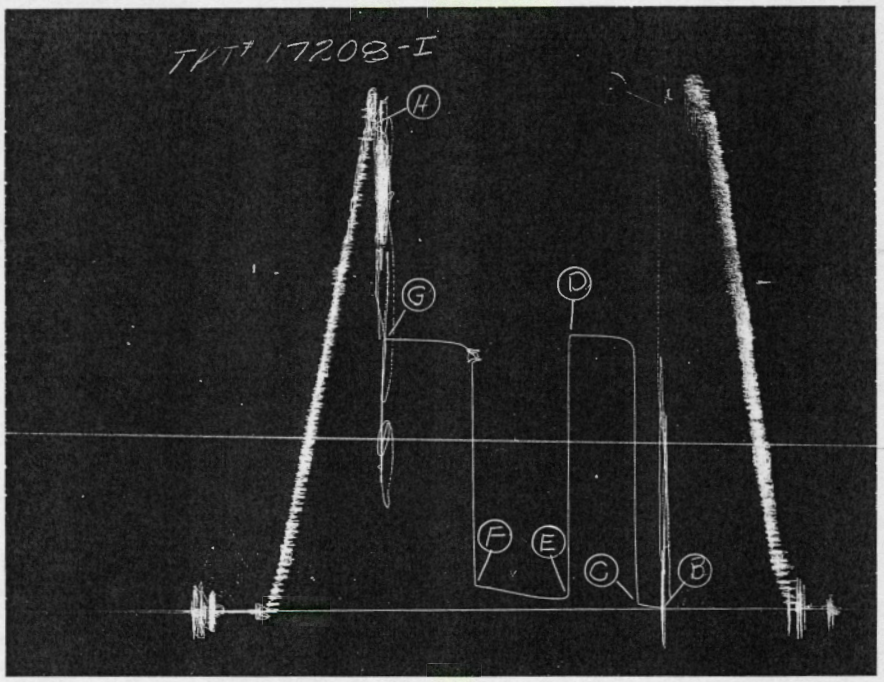
Initial Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

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

Final Shut-In
Breakdown: 20 Inc. of 3 mins. and a final inc. of 0 Min.

Point	First Flow Pressure Mins.	First Flow Pressure 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	8	0	24	0	50	0	115
P 2	5	10	3	908	5	51	3	914
P 3	10	14	6	1252	10	52	6	1224
P 4	15	21	9	1270	15	53	9	1246
P 5	19	24	12	1280	20	58	12	1255
P 6			15	1285	25	64	15	1261
P 7			18	1288	30	71	18	1265
P 8			21	1290	35	80	21	1268
P 9			24	1291	40	88	24	1270
P10			27	1292	45	95	27	1272
P11			30	1293	50	103	30	1273
P12			33	1293	55	108	33	1274
P13			36	1294	60	115	36	1274
P14			39	1294			39	1275
P15			42	1295			42	1276
P16			45	1295			45	1277
P17							48	1278
P18							51	1278
P19							54	1279
P20							57	~~1279~~
							60	1280

WTC - 4



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2449	2355	PSI
(B)	First Initial Flow Pressure	21	8	PSI
(C)	First Final Flow Pressure	32	24	PSI
(D)	Initial Closed-in Pressure	1278	1295	PSI
(E)	Second Initial Flow Pressure	42	50	PSI
(F)	Second Final Flow Pressure	116	115	PSI
(G)	Final Closed-in Pressure	1272	1280	PSI
(H)	Final Hydrostatic Mud	2439	2345	PSI

COMPANY LEASE AND WELL NO. SEC. TWP. RGE. TEST NO. DATE

WESTERN TESTERS

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

Company Walters Drilling Co. Lease & Well No. Humphery #1

Elevation 2433 Kelly Bushings Formation Mississippian Effective Pay Ft. Ticket No. 17208

Date 11-11-72 Sec. 18 Twp. 17S Range 24W County Ness State Kansas

Test Approved by Peter J. Stubbs Western Representative James W. Holloway

Formation Test No. 1 O.K. X Misrun Interval Tested From 4382' to 4390' Total Depth 4390'

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

Packer Depth 4377 Ft. Size 6 3/4" Packer Depth 4382 Ft. Size 6 3/4

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

Packer Depth Ft. Size

Tool Size 5 1/2" O.D. Tool Jt. Size 4 1/2" F.H. Anchor Length 8 Ft. Size 5 1/2" O.D.

RECORDERS Depth 4374 Ft. Clock No. 9725 Depth 4384 Ft. Clock No. 6774

Top Make Kuster Cap 4150 No. 2607 Inside Outside Bottom Make Kuster Cap 4200 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 9:31 P.M

Tool Open I.F.P. From 9:34 M. to 9:49P. M. Hr. 15 Min. From (B) 8 P.S.I. To (C) 24 P.S.

Tool Closed I.C.I.P. From 9:49 M. to 10:34P M. Hr. 45 Min. (D) 1295 P.S.

Tool Open F.F.P. From 10:34 M. to 11:34P M. 1 Hr. Min. From (E) 50 P.S.I. To (F) 115 P.S

Tool Closed F.C.I.P. From 11:34 M. to 12:34A M. 1 Hr. Min. (G) 1280 P.S

Initial Hydrostatic Pressure (A) 2355 P.S.I. Final Hydrostatic Pressure (H) 2345 P.S.

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

BLOW Fair increasing to strong Bottom Choke Size 3/4

Did Well Flow Yes X No Recovery Total Ft. 180 feet gas in pipe 250 feet gassy oil ~~160~~ 60' feet muddy oi

Reversed Out Yes X No Mud Type Starch Viscosity 50 Weight 9.8 Water Loss 10.2 cc. Maximum Temp. 127

Type Circ. Sub. Plug Safety Joint No Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Did Tool Plug? Where?

Length Drill Pipe 3413 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 945 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars

I.D. Drill Collars in. Length D.S.T. Tool 32 ft.

Remarks

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Test Ticket No. 17208

11-11-72

rder No. 2607 Capacity 4150 Location 4374 Ft.

k No. 9725 Elevation 2433 Kelly Bushings Well Temperature 127 °F

t	Pressure			Time Given	Time Computed
nitial Hydrostatic Mud	2355 P.S.I.	Open Tool		9:31 P.M	
irst Initial Flow Pressure	8 P.S.I.	First Flow Pressure		15 Mins.	19 Mins.
irst Final Flow Pressure	24 P.S.I.	Initial Closed-in Pressure		45 Mins.	45 Mins.
nitial Closed-in Pressure	1295 P.S.I.	Second Flow Pressure		60 Mins.	60 Mins.
econd Initial Flow Pressure	50 P.S.I.	Final Closed-in Pressure		60 Mins.	60 Mins.
econd Final Flow Pressure	115 P.S.I.				
inal Closed-in Pressure	1280 P.S.I.				
inal Hydrostatic Mud	2345 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc.
of 5 mins. and a
final inc. of 4 Min.

Point	Press.
0	8
5	10
10	14
15	21
19	24

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

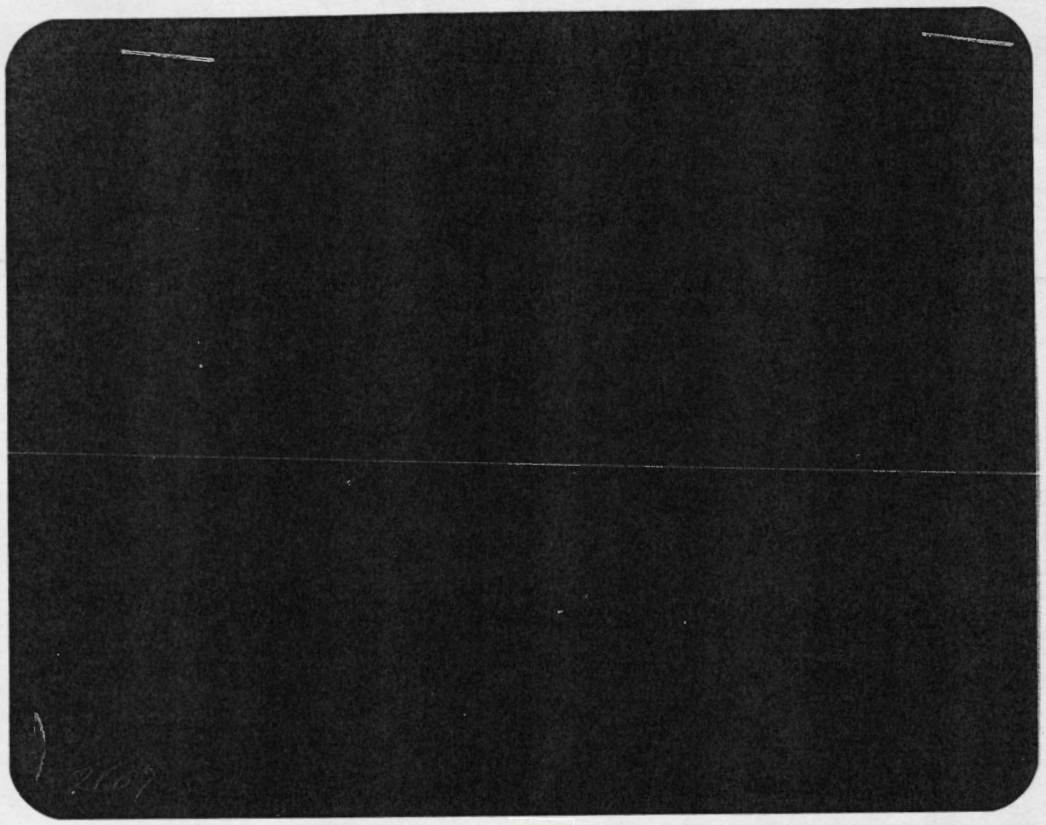
Point Minutes	Press.
0	24
3	908
6	1252
9	1270
12	1280
15	1285
18	1288
21	1290
24	1291
27	1292
30	1293
33	1293
36	1294
39	1294
42	1295
45	1295

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

Point Minutes	Press.
0	50
5	51
10	52
15	53
20	58
25	64
30	71
35	80
40	88
45	95
50	103
55	108
60	115

Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	115
3	914
6	1224
9	1246
12	1255
15	1261
18	1265
21	1268
24	1270
27	1272
30	1273
33	1274
36	1274
39	1275
42	1276
45	1277
48	1278
51	1278
54	1279
57	1279
60	1280



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2449	2355	PSI
(B)	First Initial Flow Pressure	21	8	PSI
(C)	First Final Flow Pressure	32	24	PSI
(D)	Initial Closed-in Pressure	1278	1295	PSI
(E)	Second Initial Flow Pressure	42	50	PSI
(F)	Second Final Flow Pressure	116	115	PSI
(G)	Final Closed-in Pressure	1272	1280	PSI
(H)	Final Hydrostatic Mud	2439	2345	PSI

55.00 PSI SLOPE

18.75 MILLIDARCY FEET ... 8' effective pay (ave perm 18.75 MD overall)

COMPANY Walters Drilling Co. LEASE AND WELL NO. [illegible] SEC. [illegible]