DAY PHONE
GL 3-6201

NIGHT PHONE
GL 3-6222

P. O. BOX 827

GREAT BEND, KANSAS

EAGLE TESTERS

DRILL STEM TEST-RECOVERY REPORT

NO. 164

COMPANY Pan Western Petroleum Company

DATE Nov. 28, 1963 PLACE

WELL NO. 1 LEASE Woods COUNTY Kiowa

SEC. 24 TWP. 27 RNG. 18 DST. NO. 1 DEPTH OF WELL 4720'

PACKER SET 4696' PACKER SIZE 6 3/4x 2 7/8x 30" SIZE HOLE 4720'

ANCHOR LENGTH 24' ANCHOR SIZE 4½" DRILL PIPE SIZE 4½"

SIZE CHOKE 5/8" TOOL OPEN 11:48 p. M.

INITAL SHUT IN TIME 30 min. TOOL OPEN 2 hrs. FINAL SHUT IN TIME 45 min.

HYD. PRES. 2420# IBHP 1290# IFP 0 FFP 0 FBHP 1060#

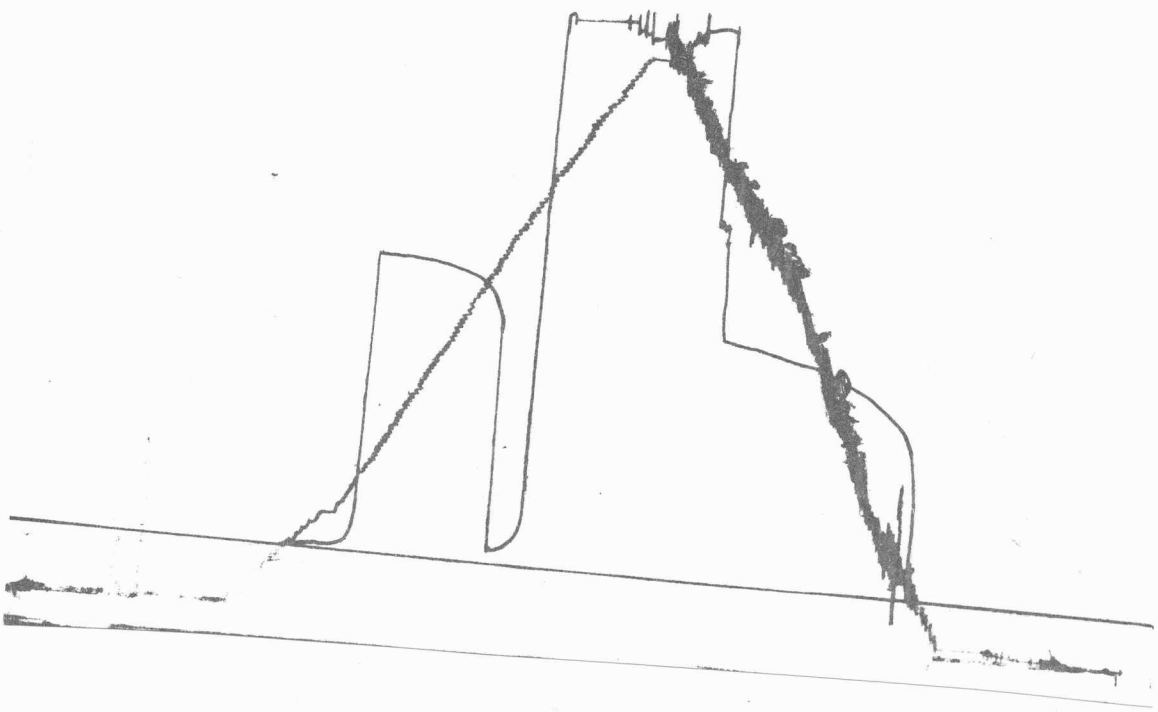
BLOW 11:30 p.m. 1,020,000 m.c.f., 12:05 a.m. 1,020,000 mcf 12:20 a.m. 887,000 mcf, 12:35 887,000 mcf, 12:50 517,000 mcf, Gas to surface in 4 minutes, 1:05 517,000, 1:20 517,000, 1:35 517,000, 1:44 434,000

RECOVERY

75' Rotary Mud

REMARKS

APPROVED BY Toby Elster TESTER Carl Skinner



DAY PHONE
GL 3-6201

NIGHT PHONE
GL 3-6222

P. O. BOX 827

GREAT BEND, KANSAS

EAGLE
TESTERS

DRILL STEM TEST-RECOVERY REPORT NO. 165

COMPANY Pan Western Petroleum Company

DATE Nov. 29, 1963 PLACE

WELL NO. 1 LEASE Woods COUNTY Kiowa

SEC. 24 TWP. 27 RNG 18 DST. NO. 2 DEPTH OF WELL 4760'

PACKER SET 4720' PACKER SIZE 6 3/4x 2 7/8x 30" SIZE HOLE 7 7/8"

ANCHOR LENGTH 40' ANCHOR SIZE 4½" DRILL PIPE SIZE 4½"

SIZE CHOKE 5/8" TOOL OPEN 7:25 M.

INITAL SHUT IN TIME 30 min. TOOL OPEN 2 hrs. FINAL SHUT IN TIME 45 min.

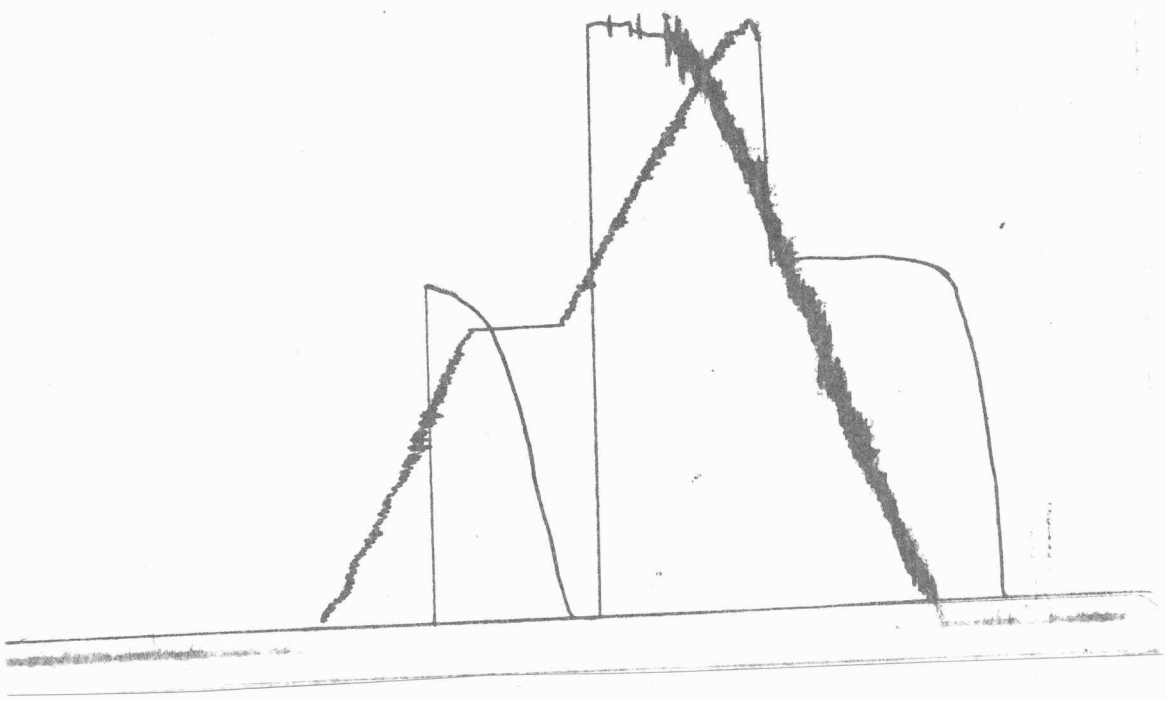
HYD. PRES. 2450# IBHP 1500# IFP 0 FFP 0 FBHP 1460#

BLOW Gas to surface in 13 min. too small to measure

RECOVERY 130' Watery Mud

REMARKS

APPROVED BY Toby Elster TESTER Carl Skinner



DAY PHONE
GL 3-6201

NIGHT PHONE
GL 3-6222

P. O. BOX 827

GREAT BEND, KANSAS

EAGLE TESTERS

DRILL STEM TEST-RECOVERY REPORT NO. 167

COMPANY Pan Western Petroleum Company

DATE Nov. 30, 1963 PLACE

WELL NO. 1 LEASE Woods COUNTY Kiowa

SEC. 24 TWP. 27 RNG. 18 DST. NO. 3-A DEPTH OF WELL 4820'

PACKER SET 4767' PACKER SIZE 6 3/4x 2 7/8x 30" SIZE HOLE 7 7/8"

ANCHOR LENGTH 53' ANCHOR SIZE 4½" DRILL PIPE SIZE 4½"

SIZE CHOKE 5/8" TOOL OPEN 10:30 P. M.

INITAL SHUT IN TIME 15 min. TOOL OPEN 1 hr. FINAL SHUT IN TIME 15 min.

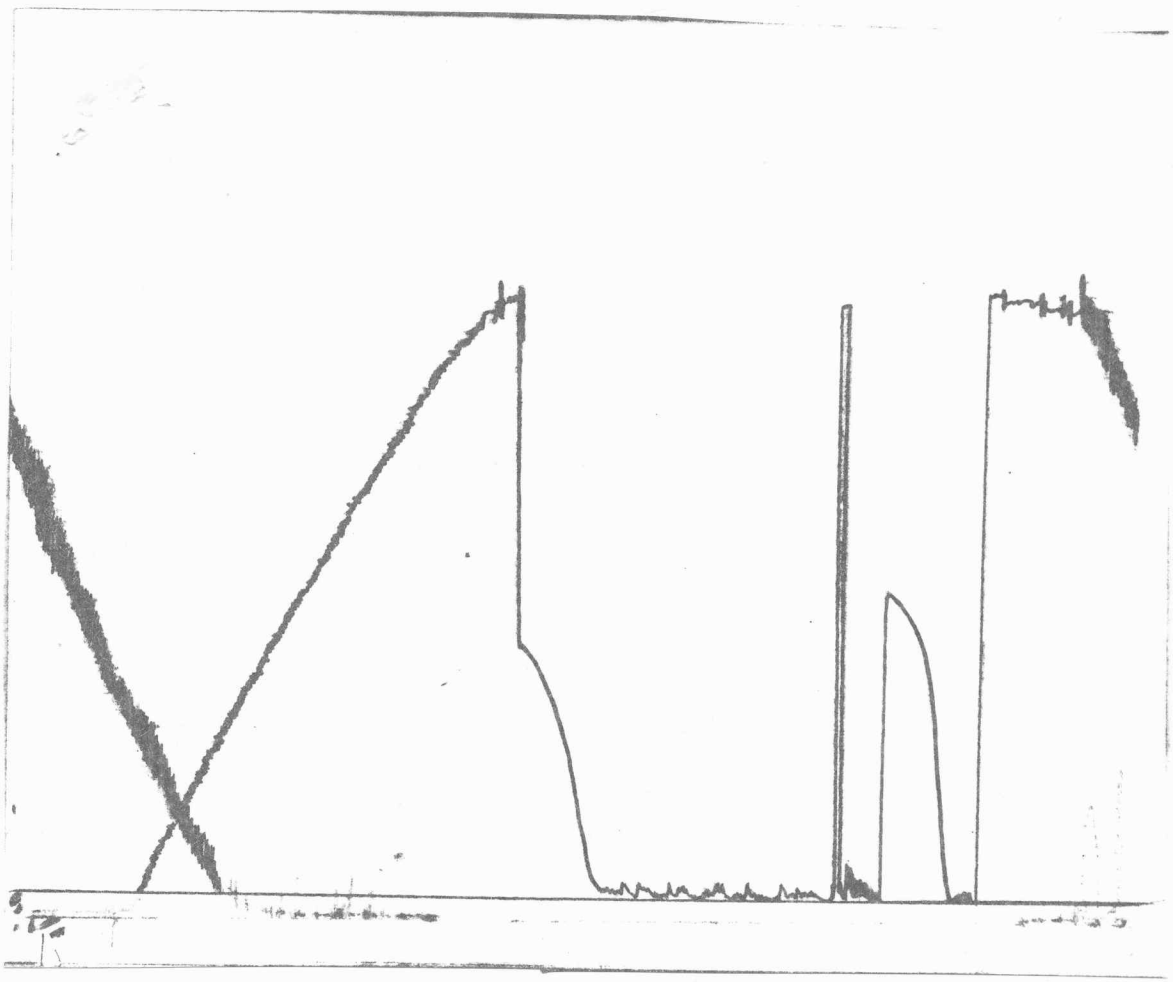
HYD. PRES. 2690# IBHP 1360# IFP 0 FFP 0 FBHP 1120#

BLOW Weak 3 min. blow then died. By pass tool 8 min. blow intermittent for remainder of test.

RECOVERY 60' Slightly watery Mud

REMARKS

APPROVED BY Toby Elster TESTER Carl Skinner



DAY PHONE
GL 3-6201

NIGHT PHONE
GL 3-6222

P. O. BOX 827

GREAT BEND, KANSAS

EAGLE
TESTERS

DRILL STEM TEST-RECOVERY REPORT NO. 166

COMPANY Pan Western Petroleum Company

DATE Nov. 30, 1963 PLACE

WELL NO. 1 LEASE Woods COUNTY Kiowa

SEC. 24 TWP. 27 RNG 18 DST. NO. 3 DEPTH OF WELL 4820'

PACKER SET 4767' PACKER SIZE 6 3/4x 2 7/8x 30" SIZE HOLE 7 7/8"

ANCHOR LENGTH 53' ANCHOR SIZE 4½" DRILL PIPE SIZE 4½"

SIZE CHOKE 5/8" TOOL OPEN 2:15 M.

INITAL SHUT IN TIME 30 min. TOOL OPEN 2 hrs. FINAL SHUT IN TIME 45 min.

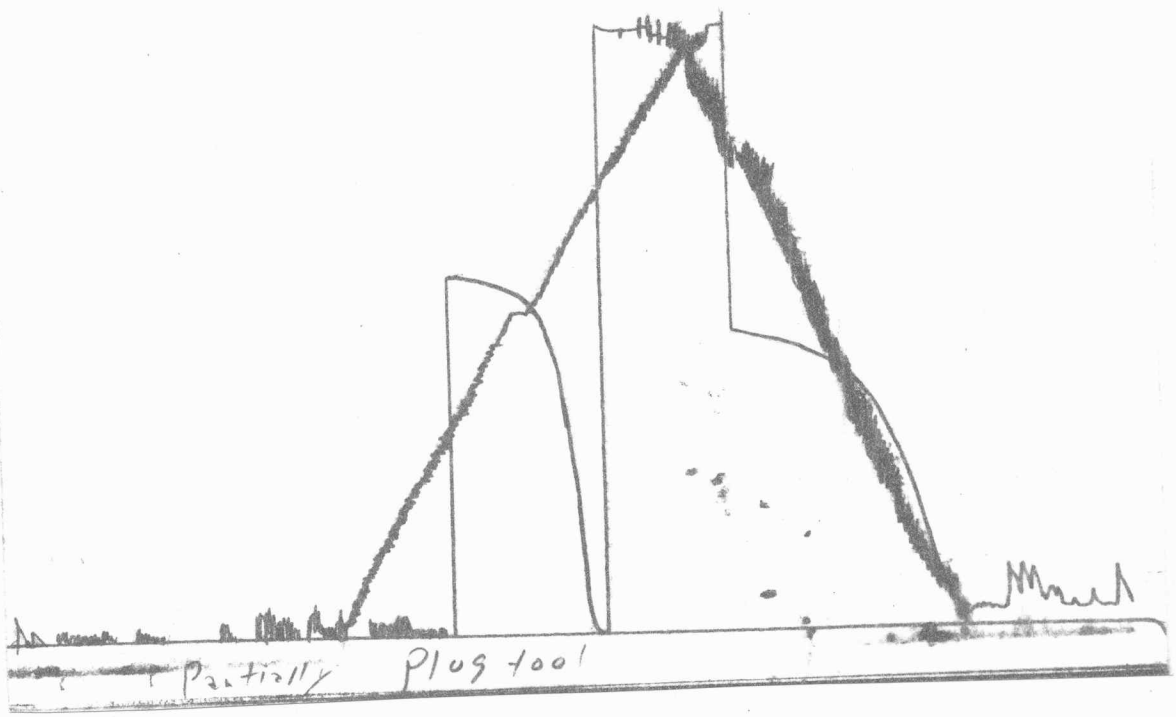
HYD. PRES. 2660# IBHP 1580# IFP 0 FFP 0 FBHP 1320#

BLOW Weak 6 min. blow intermittent for 40 min.

RECOVERY 90' Mud

REMARKS Tool Plugged

APPROVED BY TESTER Carl Skinner


Partially Plug tool

A WORLD OF EXPERIENCE

JOHNSTON TESTERS

SURFACE INFORMATION

Well Flowed	Amount
GAS	

Reversed Out	Amount
NO	

Recovered	Amount
VERY GAS CUT MUD	420'
GAS CUT WATERY MUD	30'
TOTAL RECOVERED IN BBLS.	6.39

Maximum Surface Pressure –

Description (Rate of Flow)	Time	Pressure (P.S.I.G.) INCHES OF MERCURY	Surface Choke
Opened Tool (12-4-63)	2110		1"
CLOSED FOR INITIAL SHUT-IN	2115	–	–
RE-OPENED TOOL	2200	–	–
GAS TO SURFACE	2204	–	–
GAS 560MCF/DAY	2205	1.2"	2"
GAS 606MCF/DAY	2210	1.4"	"
GAS 627MCF/DAY	2215	1.5"	"
GAS 627MCF/DAY	2220	1.5"	"
GAS 627MCF/DAY	2225	1.5"	"
GAS 627MCF/DAY	2235	1.5"	"
GAS 627MCF/DAY	2245	1.5"	"
GAS 627MCF/DAY	2315	1.5"	"
GAS 606MCF/DAY	2330	1.4"	"
GAS 560MCF/DAY (12-5-63)	0015	1.2"	"
GAS 560MCF/DAY	0030	1.2"	"
GAS 560MCF/DAY	0100	1.2"	"
CLOSED FOR FINAL SHUT-IN	0100	1.2"	"

Remarks: EQUALIZED MUD 0145
PULLED PACKER LOOSE 0148
OCT TYPE PI 1/4" INSERT CHOKE.
BOTTOM SAMPLE: CHLORIDE CONTENT-100,000PPM
PIT MUD SAMPLE: CHLORIDE CONTENT-60,000PPM

TOOL, HOLE & MUD DATA

Type Test SELECTIVE ZONE STRADDLE
Formation Tested MISS.
Elevation 2153 Ft.
All Depths Measured From DERRICK FLOOR

TOOL SEQUENCE

Tool	Size/Type	Depth/Length/ I.D.
DRILL PIPE	4½" FH	4483' 3.8"
CIRCULATING SUB	4½" FH	
DRILL PIPE	4½" FH	180' 3.8"
CROSS-OVER SUB	4½" R	
4-STAGE SHUT-IN	3½" FH	
HYDRAULIC TOOL	3½" FH	
JARS	3½" HS-1	
CROSS-OVER SUB	4½"	
CONV. PACKER	6 5/8"	4691'
RECORDER CARRIER	4 7/8"T	6'
PERF. ANCHOR	3½" FH	17'
RECORDER CARRIER	4 7/8"L	4'
BLANK OFF SUB	4 7/8"FH	1'
RECORDER CARRIER	4 7/8"L	6'
BOB-TAIL PACKER	6 5/8"	4727'
SELECTIVE ZONE		
ANCHORING DEVICE	7 7/8"	4733'

Total Depth 5136 Ft.
Main Hole Size 7 7/8" Rat Hole Size –
Casing Size – Liner Size –
Bottom Choke Size 3/4" Mud Type STARCH
Mud Wt. 10.3 Mud Viscosity 40
Water Loss 12 C.C.

Cushion Type	Amount	Pressure
–	–	–

TIME DATA

Initial Flow – Hrs. 5 Mins.
Initial Shut-in – Hrs. 45 Mins.
Final Flow 3 Hrs. – Mins.
Final Shut-in – Hrs. 45 Mins.

Customer WESTERN PETROLEUM CO., ETAL; 925 PATTON; GREAT BEND, KANSAS

Company PAN-WESTERN PETROLEUM INC., ETAL; 521 PET. BLDG.; WICHITA, KANSAS Date 12-4-63
Well WOODS #1 Field WILD CAT Location 24 27 18
Test Interval 4691' TO 4727' Formation Test # 4 Casing Test # –

County KIOWA State KANSAS Field Report No. 09772 A
Tester SALOGA (PRATT) Test Approved By MR. TOBY ELSTER No. DST Reports Requested 10

JOHNSTON TESTERS

Pressure Breakdown Data

Date 12-4-63 Field Report No. 09772 A

Recorder No. T-32 Capacity 3,000# Recorder Depth 4,692'

Recorder Run INSIDE Clock Travel 0.02029 inches per min. Well Temperature 117 °F.

Point	Pressure
A Initial Hydrostatic Mud	2566
B Initial Shut-in	1566
C Initial Flow	178
D Final Flow	180
E Final Shut-in	1461
F Final Hydrostatic Mud	2549

	Time Given	Time Computed
Opened Tool	2110	
Initial Flow	5 Mins.	7 Mins.
Initial Shut-in	45 Mins.	46 Mins.
Final Flow	180 Mins.	178 Mins.
Final Shut-in	45 Mins.	44 Mins.

c-1 180

c-2 174

Remarks:

PRESSURE INCREMENTS

Breakdown: ____ increments of ____ mins. and a final increment of ____ mins.

Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$

INITIAL SHUT-IN

Breakdown: 15 increments of 3 mins. and a final increment of 1 mins.

Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$
c-1 0	180	
3	988	
6	1429	
9	1511	
12	1532	
15	1544	
18	1550	
21	1554	
24	1556	
27	1558	
30	1560	
33	1561	
36	1563	
39	1564	
42	1565	
45	1566	
B 46	1566	

FINAL SHUT-IN

Breakdown: 14 increments of 3 mins. and a final increment of 2 mins.

Point Minutes	Pressure	$\frac{T + \Delta t}{\Delta t}$
D 0	180	
3	931	
6	1075	
9	1167	
12	1247	
15	1308	
18	1355	
21	1392	
24	1417	
27	1433	
30	1445	
33	1454	
36	1459	
39	1461	
42	1461	
E 44	1461	

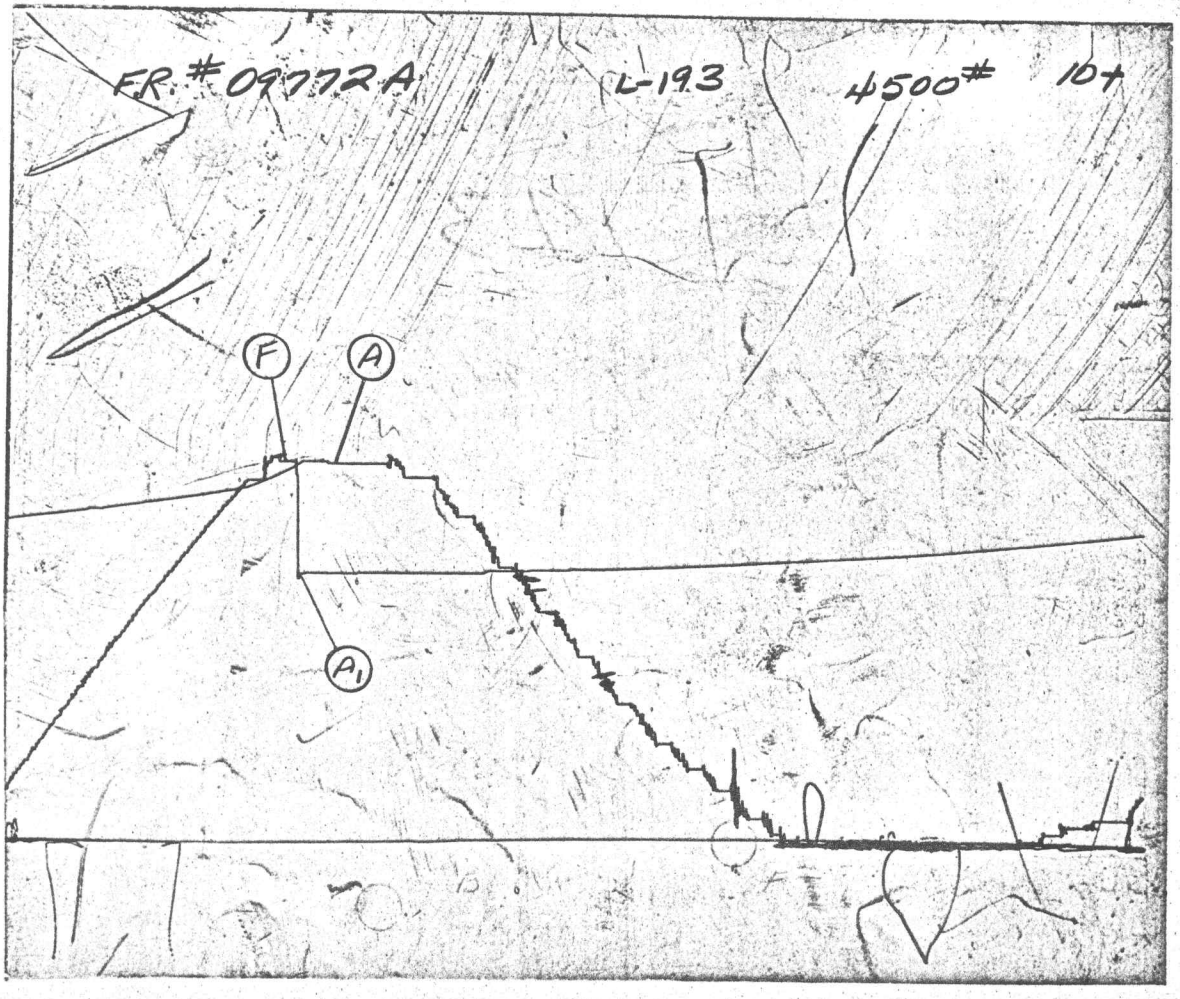
JOHNSTON TESTERS

Pressure Data

Field Report No. 09772 A

Recorder No.	L-193	OUTSIDE			
Capacity (P.S.I.G.)	4,500				
Recorder Depth	4,719'				
Pressure Gradient P.S.I./Ft.					
Well Temperature °F.	117				
A Initial Hydrostatic Mud	2593				
B Initial Shut-in	-				
C Initial Flow	-				
D Final Flow	-				
E Final Shut-in	-				
F Final Hydrostatic Mud	2603				
Remarks: A-1	1835	BELOW STRADDLE.			

*Shut in pressure did not reach static reservoir pressure.



JOHNSTON TESTERS

Pressure Data

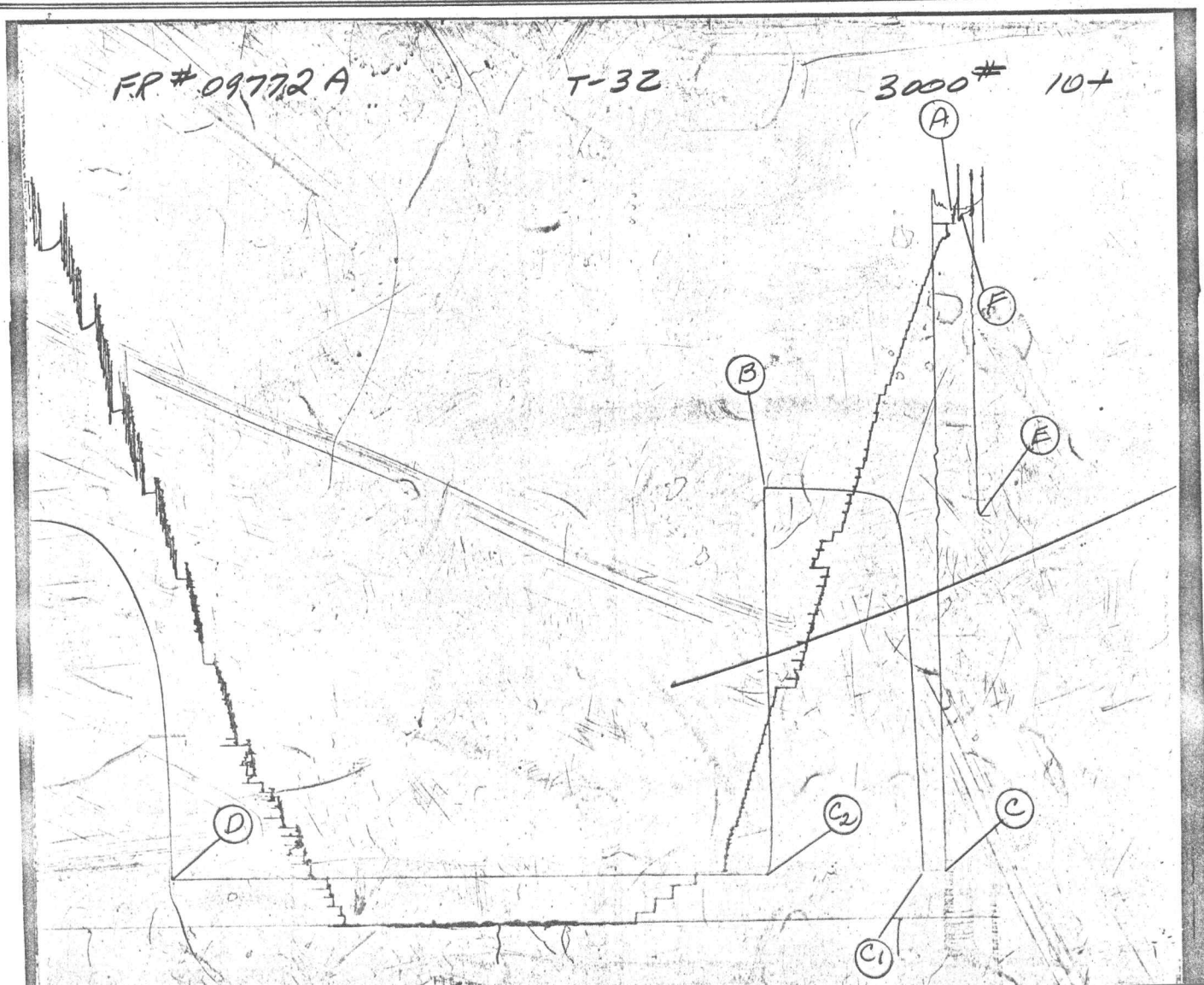
Field Report No. 09772 A

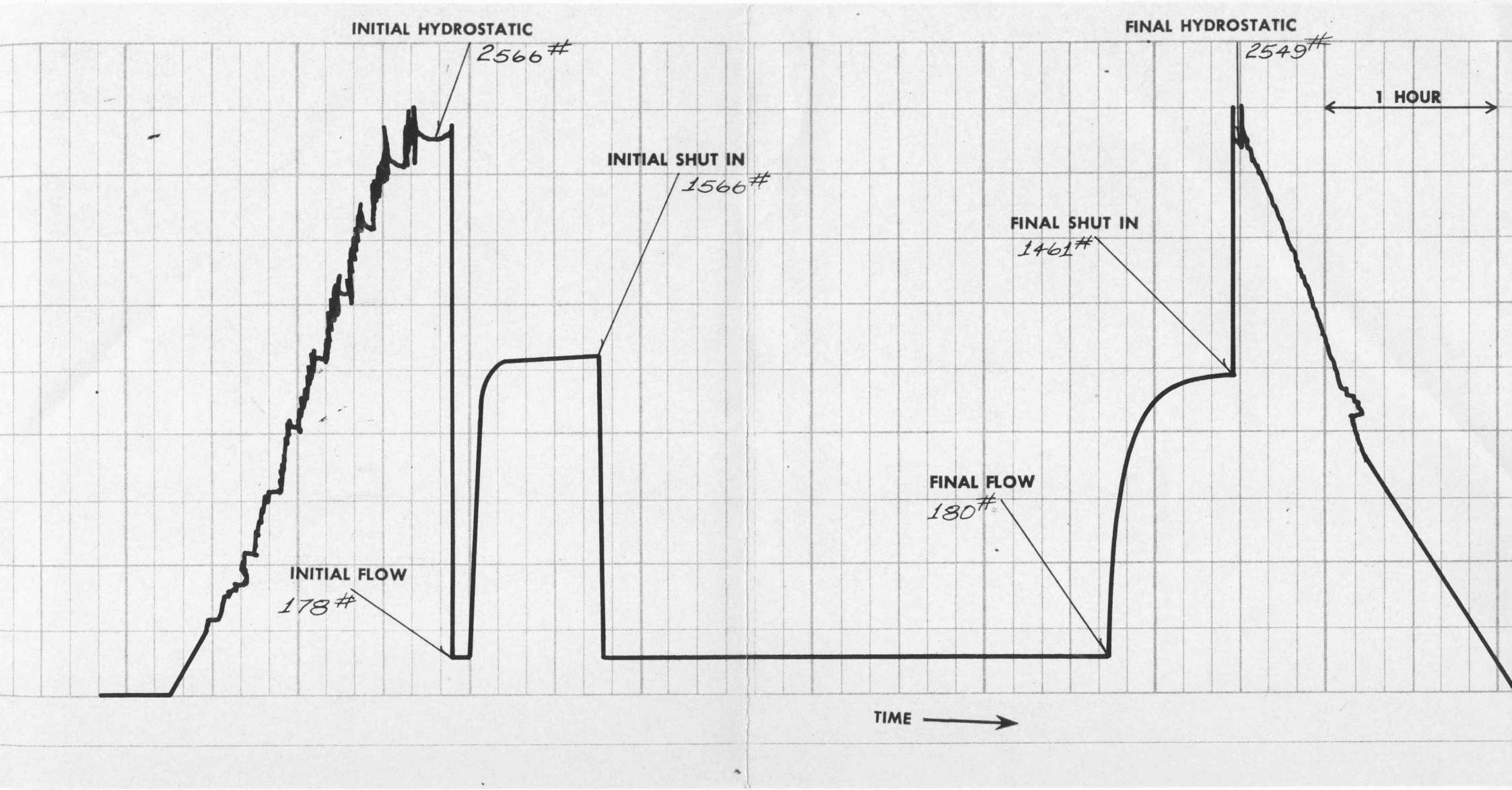
Recorder No.	T-32	INSIDE				
Capacity (P.S.I.G.)	3,000					
Recorder Depth	4,692'					
Pressure Gradient P.S.I./Ft.						
Well Temperature °F.	117					
A Initial Hydrostatic Mud	2566					
B Initial Shut-in	* 1566					
C Initial Flow	178					
D Final Flow	180					
E Final Shut-in	* 1461					
F Final Hydrostatic Mud	2549					

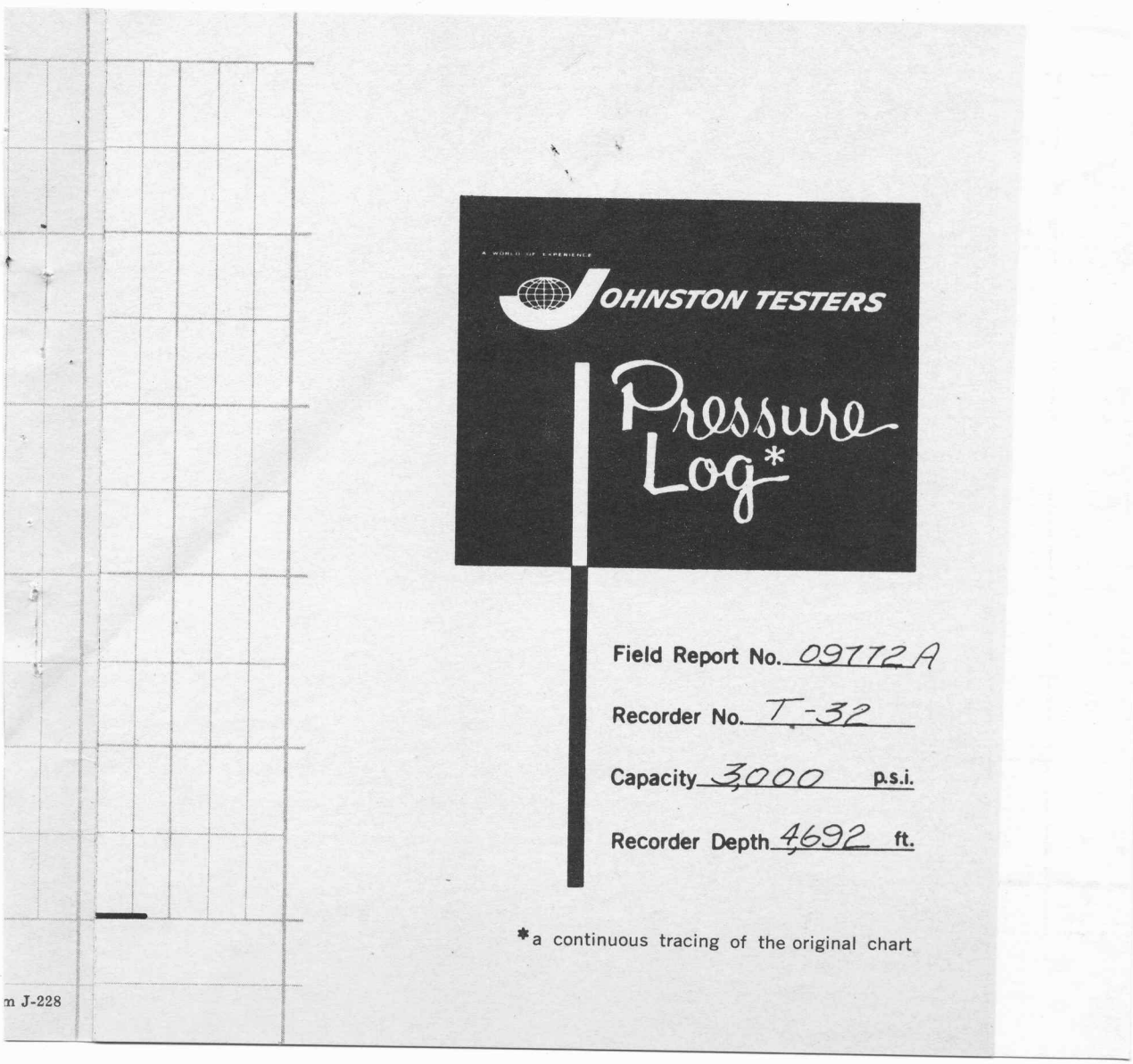
Remarks: c-1 180

c-2 174

*Shut in pressure did not reach static reservoir pressure.




INITIAL HYDROSTATIC
2566#
INITIAL SHUT IN
1566#
INITIAL FLOW
178#
FINAL HYDROSTATIC
2549#
1 HOUR
FINAL SHUT IN
1461#
FINAL FLOW
180#
TIME



A WORLD OF EXPERIENCE

JOHNSTON TESTERS

Pressure Log*

Field Report No. 09772A

Recorder No. T-32

Capacity 3,000 p.s.i.

Recorder Depth 4,692 ft.

*a continuous tracing of the original chart

m J-228