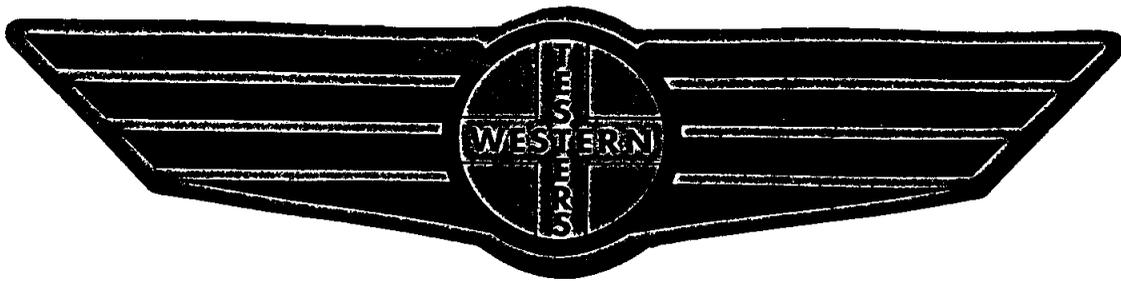


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 3-26-92
CUSTOMER : RANGE OIL COMPANY INC.
WELL : #1 TEST: 1
ELEVATION: 1005.0 KB
SECTION : 10
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 17775
LEASE : RUSSELL B
GEOLOGIST: TOM BLAIR
FORMATION: MISSISSIPPI
TOWNSHIP : 30S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1965.00 ft TO: 1980.00 ft TVD: 1980.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 1974.0 ft 1977.0 ft
TEMPERATURE: 99.0
DRILL COLLAR LENGTH: 360.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1585.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 15.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 1960.0 ft SIZE: 6.630 in
PACKER DEPTH: 1965.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : GLAVES #1
MUD TYPE : CHEMICAL VISCOSITY : 43.00 cp
WEIGHT : 9.500 ppg WATER LOSS: 12.000 cc
CHLORIDES : 1400 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

WEAK BLOW THROUGHOUT TEST - 3 INCH INTO BUCKET ON
INITIAL FLOW PERIOD - 5 INCH INTO BUCKET ON FINAL
FLOW PERIOD.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

RECOVERED 100 FT. OF GAS ABOVE FLUID.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
50.0	25.0	10.0	0.0	65.0	OIL GASSY CUT MUD
0.0	30.0	40.0	0.0	30.0	IN TOOL
0.0	0.0	0.0	0.0	0.0	GRAVITY OF OIL 35 AT 60
0.0	0.0	0.0	0.0	0.0	DEGREES

RATE INFORMATION

OIL VOLUME:	0.0615 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	0.1381 SCF	AVERAGE OIL RATE:	3.5406 STB/D
MUD VOLUME:	0.1598 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.2213 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 970.00

Description	t1	t End	p1	p End
INITIAL FLOW	5.00	30.00	40.00	50.00
INITIAL SHUT-IN	3.00	30.00	50.00	180.00
FINAL FLOW	5.00	60.00	50.00	65.00
FINAL SHUT-IN	3.00	60.00	65.00	210.00

FINAL HYDROSTATIC PRESSURE: 960.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1018.00

Description	t1	t End	p1	p End
INITIAL FLOW	5.00	30.00	45.00	46.00
INITIAL SHUT-IN	3.00	33.00	46.00	126.00
FINAL FLOW	5.00	60.00	50.00	52.00
FINAL SHUT-IN	3.00	63.00	52.00	199.00

FINAL HYDROSTATIC PRESSURE: 1004.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 3-26-92	TICKET : 17775
CUSTOMER : RANGE OIL COMPANY INC.	LEASE : RUSSELL B
WELL : #1 TEST: 1	GEOLOGIST: TOM BLAIR
ELEVATION: 1005.0 KB	FORMATION: MISSISSIPPI
SECTION : 10	TOWNSHIP : 30S
RANGE : 10E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	45.00	45.00
5.00	45.00	0.00
10.00	45.00	0.00
15.00	45.00	0.00
20.00	45.00	0.00
25.00	46.00	1.00
30.00	46.00	0.00

INITIAL SHUT IN

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	46.00	46.00	0.00
6.00	47.00	1.00	0.00
9.00	49.00	2.00	0.00
12.00	53.00	4.00	0.00
15.00	61.00	8.00	0.00
18.00	68.00	7.00	0.00
21.00	78.00	10.00	0.00
24.00	88.00	10.00	0.00
27.00	98.00	10.00	0.00
30.00	115.00	17.00	0.00
33.00	126.00	11.00	0.00

FINAL FLOW

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>
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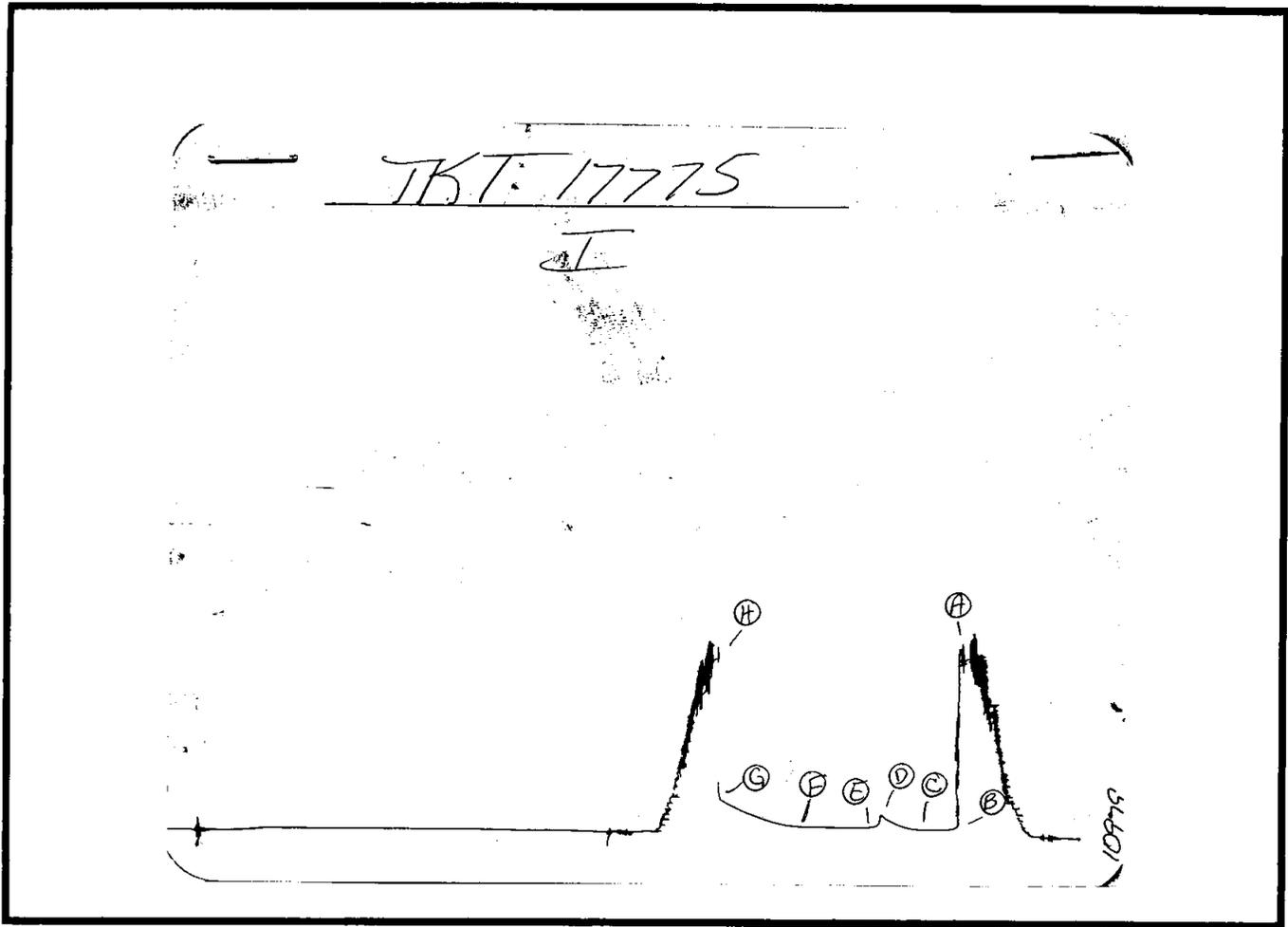
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

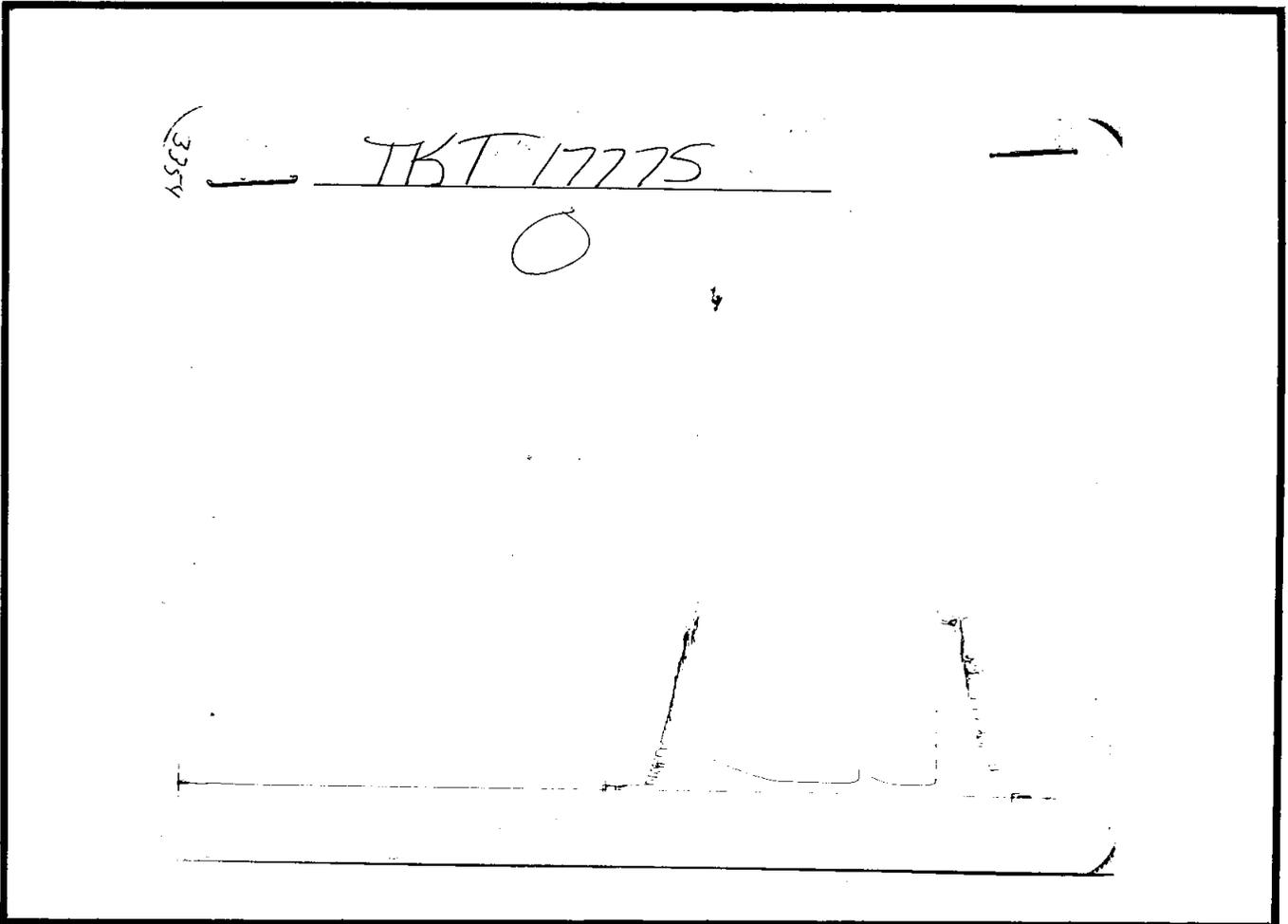
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	50.00	50.00
5.00	50.00	0.00
10.00	50.00	0.00
15.00	50.00	0.00
20.00	50.00	0.00
25.00	50.00	0.00
30.00	50.00	0.00
35.00	50.00	0.00
40.00	51.00	1.00
45.00	51.00	0.00
50.00	52.00	1.00
55.00	52.00	0.00
60.00	52.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	52.00	52.00	0.00
6.00	54.00	2.00	0.00
9.00	56.00	2.00	0.00
12.00	59.00	3.00	0.00
15.00	63.00	4.00	0.00
18.00	68.00	5.00	0.00
21.00	73.00	5.00	0.00
24.00	80.00	7.00	0.00
27.00	86.00	6.00	0.00
30.00	93.00	7.00	0.00
33.00	99.00	6.00	0.00
36.00	108.00	9.00	0.00
39.00	116.00	8.00	0.00
42.00	124.00	8.00	0.00
45.00	134.00	10.00	0.00
48.00	142.00	8.00	0.00
51.00	153.00	11.00	0.00
54.00	163.00	10.00	0.00
57.00	175.00	12.00	0.00
60.00	186.00	11.00	0.00
63.00	199.00	13.00	0.00

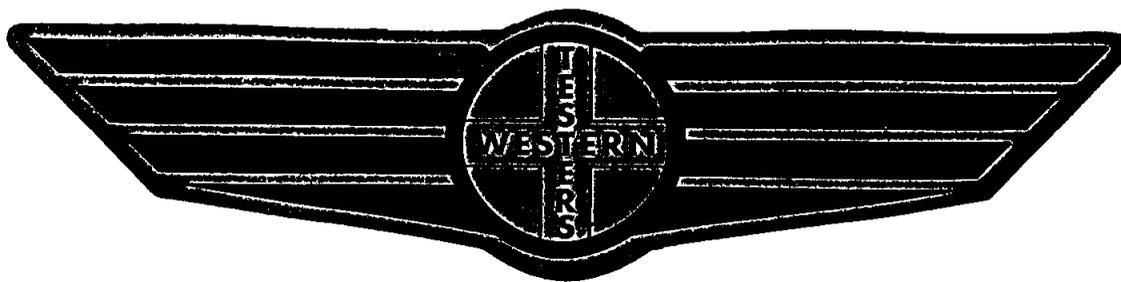


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800 - 688 - 7021

DST REPORT

GENERAL INFORMATION

DATE : 3-26-92
CUSTOMER : RANGE OIL COMPANY INC.
WELL : #1 TEST: 2
ELEVATION: 1005.0 KB
SECTION : 10
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 17776
LEASE : RUSSELL B
GEOLOGIST: TOM BLAIR
FORMATION: MISSISSIPPI
TOWNSHIP : 30S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1980.00 ft TO: 2000.00 ft TVD: 2000.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 1984.0 ft 1987.0 ft
TEMPERATURE: 100.0
DRILL COLLAR LENGTH: 360.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1600.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 20.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5FH
PACKER DEPTH: 1975.0 ft SIZE: 6.630 in
PACKER DEPTH: 1980.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : GLAVES #1
MUD TYPE : CHEMICAL
WEIGHT : 9.500 ppg
CHLORIDES : 1400 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 43.00 cp
WATER LOSS: 12.000 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

WEAK BLOW ON TOP OF BUCKET ON INITIAL FLOW PERIOD.
WEAK BLOW ON FINAL FLOW PERIOD ON TOP OF BUCKET
DIED IN 48 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

<u>Feet of Fluid</u>	<u>% Oil</u>	<u>% Gas</u>	<u>% Water</u>	<u>% Mud</u>	<u>Comments</u>
40.0	0.0	0.0	0.0	100.0	DRILLING MUD W/TRACE OF OIL ON TOP OF TOOL
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	3.1472	STB/D
MUD VOLUME:	0.1967	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.1967	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1015.00

<u>Description</u>	<u>t1</u>	<u>t End</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	5.00	30.00	30.00	30.00
INITIAL SHUT-IN	3.00	30.00	30.00	495.00
FINAL FLOW	5.00	60.00	50.00	50.00
FINAL SHUT-IN	3.00	60.00	50.00	495.00

FINAL HYDROSTATIC PRESSURE: 1005.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1034.00

<u>Description</u>	<u>t1</u>	<u>t End</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	2.00	30.00	41.00	41.00
INITIAL SHUT-IN	3.00	33.00	41.00	518.00
FINAL FLOW	5.00	60.00	47.00	47.00
FINAL SHUT-IN	3.00	63.00	47.00	513.00

FINAL HYDROSTATIC PRESSURE: 1021.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 3-26-92	TICKET	: 17776
CUSTOMER	: RANGE OIL COMPANY INC.	LEASE	: RUSSELL B
WELL	: #1	TEST: 2	
ELEVATION	: 1005.0 KB	GEOLOGIST	: TOM BLAIR
SECTION	: 10	FORMATION	: MISSISSIPPI
RANGE	: 10E	TOWNSHIP	: 30S
GAUGE SN#	: 10979	STATE	: KS
		CLOCK	: 12
		COUNTY	: ELK
		RANGE	: 4100

INITIAL FLOW

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	41.00	41.00
5.00	41.00	0.00
10.00	41.00	0.00
15.00	41.00	0.00
20.00	41.00	0.00
25.00	41.00	0.00
30.00	41.00	0.00

INITIAL SHUT IN

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	41.00	41.00	0.00
6.00	76.00	35.00	0.00
9.00	223.00	147.00	0.00
12.00	347.00	124.00	0.00
15.00	416.00	69.00	0.00
18.00	449.00	33.00	0.00
21.00	473.00	24.00	0.00
24.00	490.00	17.00	0.00
27.00	502.00	12.00	0.00
30.00	511.00	9.00	0.00
33.00	518.00	7.00	0.00

FINAL FLOW

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>
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PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

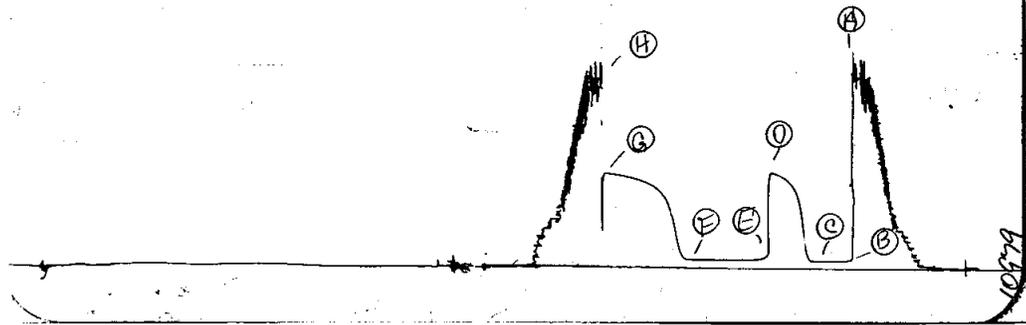
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	47.00	47.00
5.00	47.00	0.00
10.00	47.00	0.00
15.00	47.00	0.00
20.00	47.00	0.00
25.00	47.00	0.00
30.00	47.00	0.00
35.00	47.00	0.00
40.00	47.00	0.00
45.00	47.00	0.00
50.00	47.00	0.00
55.00	47.00	0.00
60.00	47.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	51.00	51.00	0.00
6.00	82.00	31.00	0.00
9.00	169.00	87.00	0.00
12.00	273.00	104.00	0.00
15.00	340.00	67.00	0.00
18.00	386.00	46.00	0.00
21.00	411.00	25.00	0.00
24.00	432.00	21.00	0.00
27.00	448.00	16.00	0.00
30.00	457.00	9.00	0.00
33.00	468.00	11.00	0.00
36.00	475.00	7.00	0.00
39.00	481.00	6.00	0.00
42.00	487.00	6.00	0.00
45.00	492.00	5.00	0.00
48.00	497.00	5.00	0.00
51.00	501.00	4.00	0.00
54.00	505.00	4.00	0.00
57.00	508.00	3.00	0.00
60.00	512.00	4.00	0.00
63.00	513.00	1.00	0.00

TKT 17776

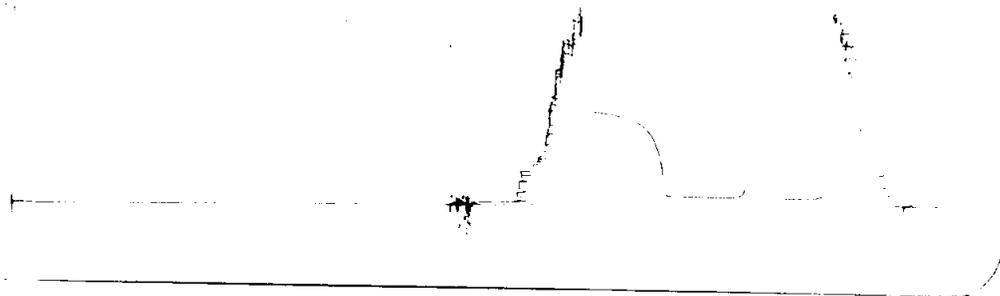
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Inside Recorder

3354 TKT 17776

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Outside Recorder