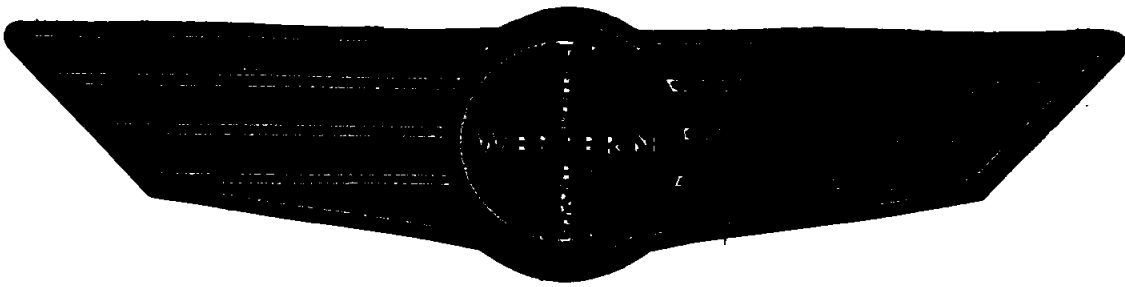


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 ARBUCKLE SEC. 30 TWP. 31S RGE. 9E TEST NO. 1 DATE 9/30/92

DST REPORT

GENERAL INFORMATION

DATE : 9/30/92
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : 1 TEST: 1
ELEVATION: 1088 KB
SECTION : 30
RANGE : 9E COUNTY: ELK
GAUGE SN#: 1051 RANGE : 4250
TICKET : 18845
LEASE : ARBUCKLE
GEOLOGIST: THOMAS BLAIR
FORMATION: LAYTON
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1419.00 ft TO: 1450.00 ft TVD: 1450.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 1441.0 ft 1444.0 ft
TEMPERATURE: 96.0
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 : 1039.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 31.0 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: 1414.0 ft SIZE: 6.630 in
PACKER DEPTH: 1419.0 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 DRILLING
MUD TYPE : CHEMICAL
WEIGHT : 9.400 ppg
CHLORIDES : 700 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 53.00 cp
WATER LOSS: 12.000 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW IN 4 MINUTES.
FINAL FLOW PERIOD STRONG BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
360.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 45000 P.P.M.
180.0	0.0	0.0	30.0	70.0	WATERY MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.6196	STB	AVERAGE WATER RATE:	68.7206	STB/D
WATER VOLUME:	3.6754	STB			
TOTAL FLUID :	4.2950	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 729.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	107.00	161.00
INITIAL SHUT-IN	30.00		409.00
FINAL FLOW	60.00	268.00	268.00
FINAL SHUT-IN	60.00		409.00

FINAL HYDROSTATIC PRESSURE: 697.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 716.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	111.00	166.00
INITIAL SHUT-IN	33.00		402.00
FINAL FLOW	60.00	269.00	280.00
FINAL SHUT-IN	63.00		403.00

FINAL HYDROSTATIC PRESSURE: 677.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 9/30/92	TICKET : 18845
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : ARBUCKLE
WELL : 1	TEST: 1
ELEVATION: 1088 KB	GEOLOGIST: THOMAS BLAIR
SECTION : 30	FORMATION: LAYTON
RANGE : 9E	COUNTY: ELK
GAUGE SN#: 1051	RANGE : 4250
	TOWNSHIP : 31S
	STATE : KS
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	111.00	111.00
5.00	111.00	0.00
10.00	113.00	2.00
15.00	122.00	9.00
20.00	135.00	13.00
25.00	155.00	20.00
30.00	166.00	11.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	278.00	278.00	0.00
6.00	314.00	36.00	0.00
9.00	343.00	29.00	0.00
12.00	359.00	16.00	0.00
15.00	373.00	14.00	0.00
18.00	383.00	10.00	0.00
21.00	387.00	4.00	0.00
24.00	392.00	5.00	0.00
27.00	397.00	5.00	0.00
30.00	399.00	2.00	0.00
33.00	402.00	3.00	0.00

FINAL FLOW

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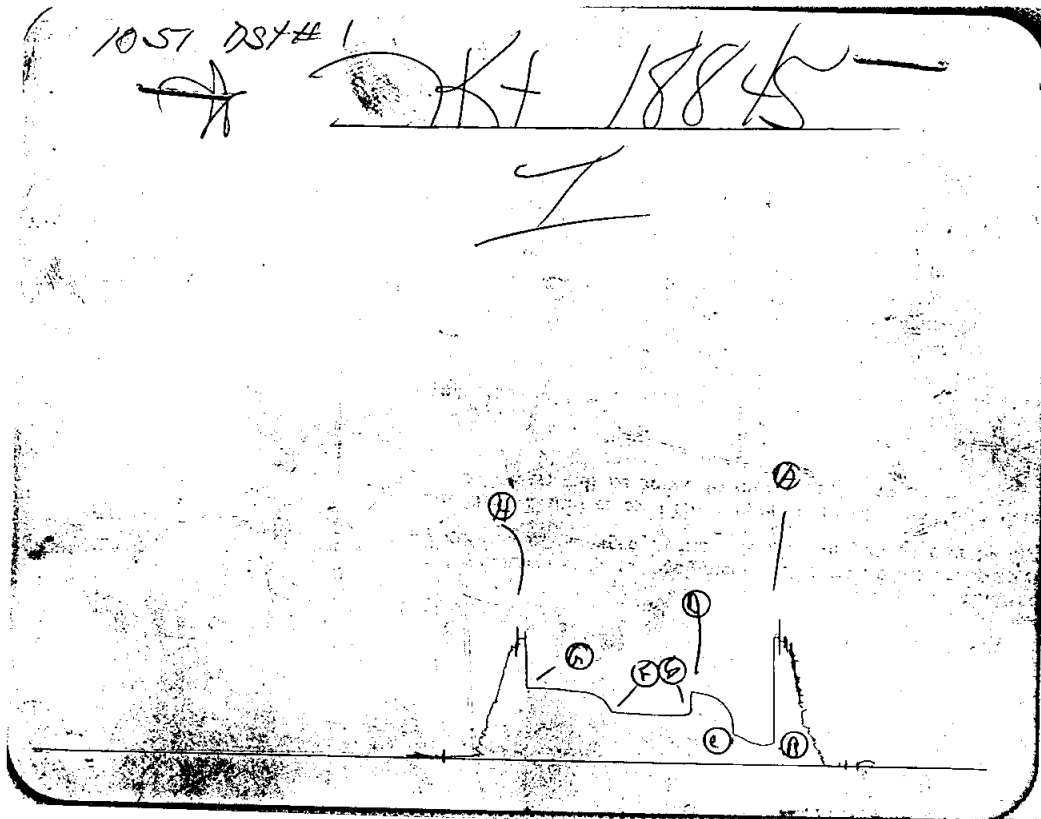
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

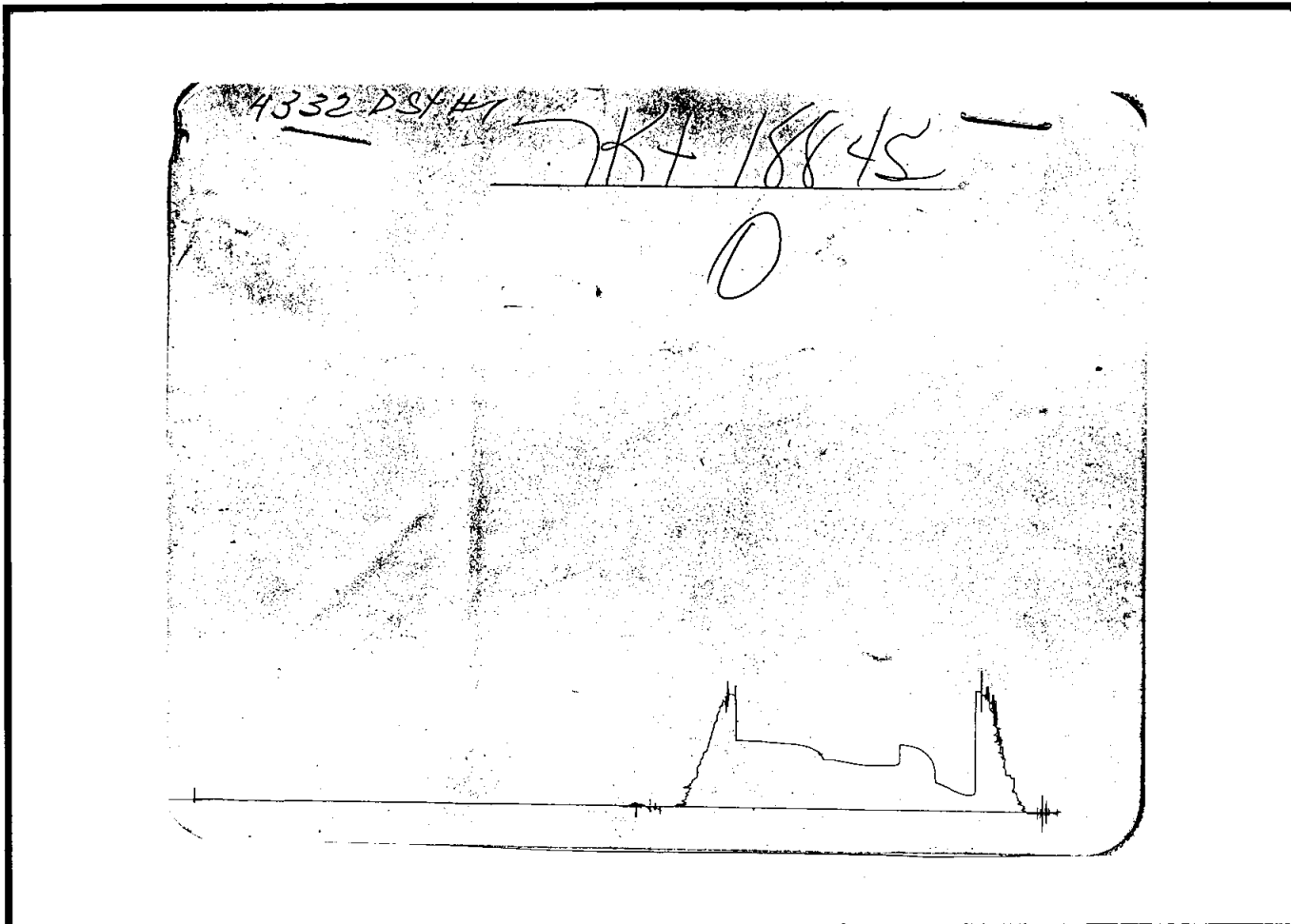
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	269.00	269.00
5.00	269.00	0.00
10.00	269.00	0.00
15.00	269.00	0.00
20.00	269.00	0.00
25.00	269.00	0.00
30.00	269.00	0.00
35.00	270.00	1.00
40.00	272.00	2.00
45.00	274.00	2.00
50.00	276.00	2.00
55.00	278.00	2.00
60.00	280.00	2.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	309.00	309.00	0.00
6.00	340.00	31.00	0.00
9.00	355.00	15.00	0.00
12.00	368.00	13.00	0.00
15.00	378.00	10.00	0.00
18.00	383.00	5.00	0.00
21.00	388.00	5.00	0.00
24.00	390.00	2.00	0.00
27.00	391.00	1.00	0.00
30.00	392.00	1.00	0.00
33.00	394.00	2.00	0.00
36.00	396.00	2.00	0.00
39.00	398.00	2.00	0.00
42.00	400.00	2.00	0.00
45.00	402.00	2.00	0.00
48.00	402.00	0.00	0.00
51.00	403.00	1.00	0.00
54.00	403.00	0.00	0.00
57.00	403.00	0.00	0.00
60.00	403.00	0.00	0.00
63.00	403.00	0.00	0.00

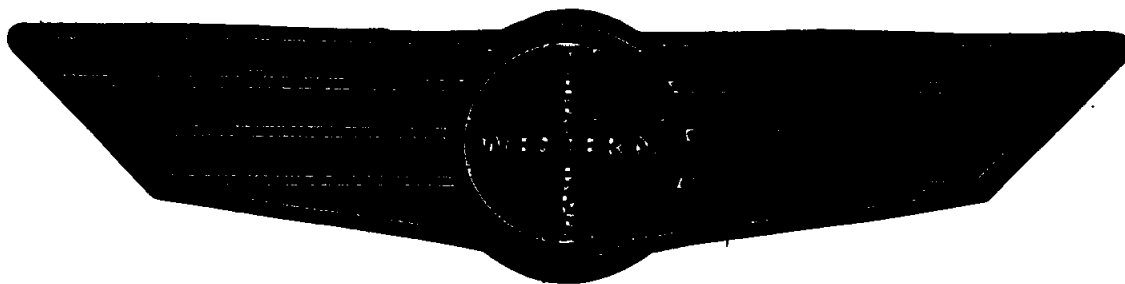


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 10/1/92
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : 1 TEST: 2
ELEVATION: 1088 KB
SECTION : 30
RANGE : 9E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 18611
LEASE : ARBUCKLE
GEOLOGIST: THOMAS BLAIR
FORMATION: FT. SCOTT
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1918.00 ft TO: 1950.00 ft TVD: 1950.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 1944.0 ft 1947.0 ft
TEMPERATURE: 97.0
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 : 1538.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 32.0 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: 1913.0 ft SIZE: 6.630 in
PACKER DEPTH: 1918.0 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 RIG 1
MUD TYPE : CHEMICAL
WEIGHT : 9.700 ppg
CHLORIDES : 1600 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 40.00 cp
WATER LOSS: 16.000 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW, DIED IN 28
MINUTES. FINAL FLOW PERIOD NO BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
5.0	0.0	0.0	0.0	100.0	DRILLING MUD

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	0.5901 STB/D
MUD VOLUME:	0.0246 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.0246 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 970.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	20.00	20.00
INITIAL SHUT-IN	30.00		85.00
FINAL FLOW	30.00	30.00	30.00
FINAL SHUT-IN	30.00		85.00

FINAL HYDROSTATIC PRESSURE: 960.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 989.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	39.00	40.00
INITIAL SHUT-IN	30.00		98.00
FINAL FLOW	30.00	48.00	48.00
FINAL SHUT-IN	30.00		79.00

FINAL HYDROSTATIC PRESSURE: 963.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/1/92	TICKET : 18611
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : ARBUCKLE
WELL : 1	GEOLOGIST: THOMAS BLAIR
ELEVATION: 1088 KB	FORMATION: FT. SCOTT
SECTION : 30	TOWNSHIP : 31S
RANGE : 9E	COUNTY: ELK
GAUGE SN#: 10979	RANGE : 4100
	STATE : KS
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	39.00	39.00
5.00	39.00	0.00
10.00	39.00	0.00
15.00	40.00	1.00
20.00	40.00	0.00
25.00	40.00	0.00
30.00	40.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	41.00	41.00	0.00
6.00	43.00	2.00	0.00
9.00	44.00	1.00	0.00
12.00	46.00	2.00	0.00
15.00	49.00	3.00	0.00
18.00	53.00	4.00	0.00
21.00	62.00	9.00	0.00
24.00	68.00	6.00	0.00
27.00	82.00	14.00	0.00
30.00	98.00	16.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	48.00	48.00

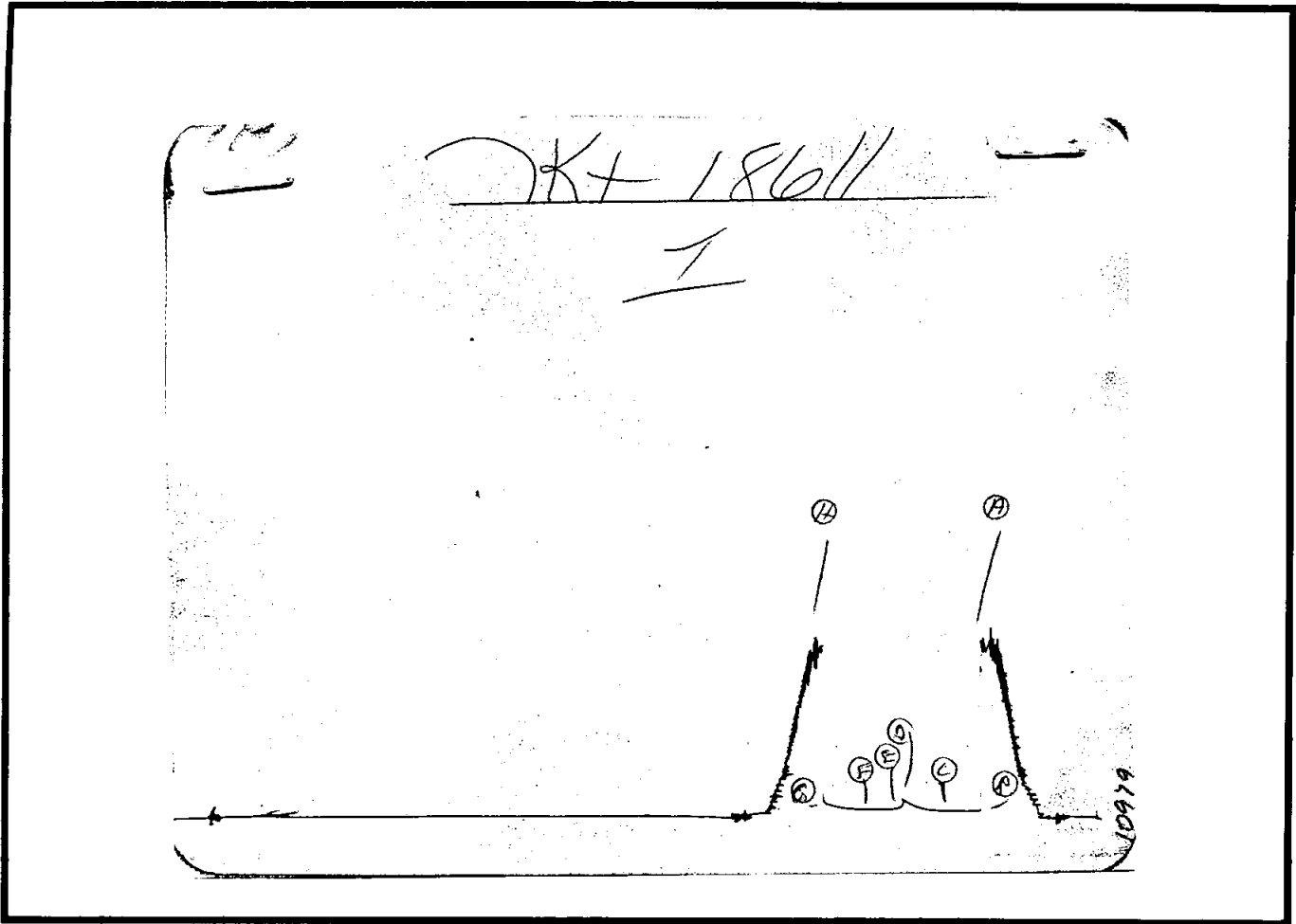
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

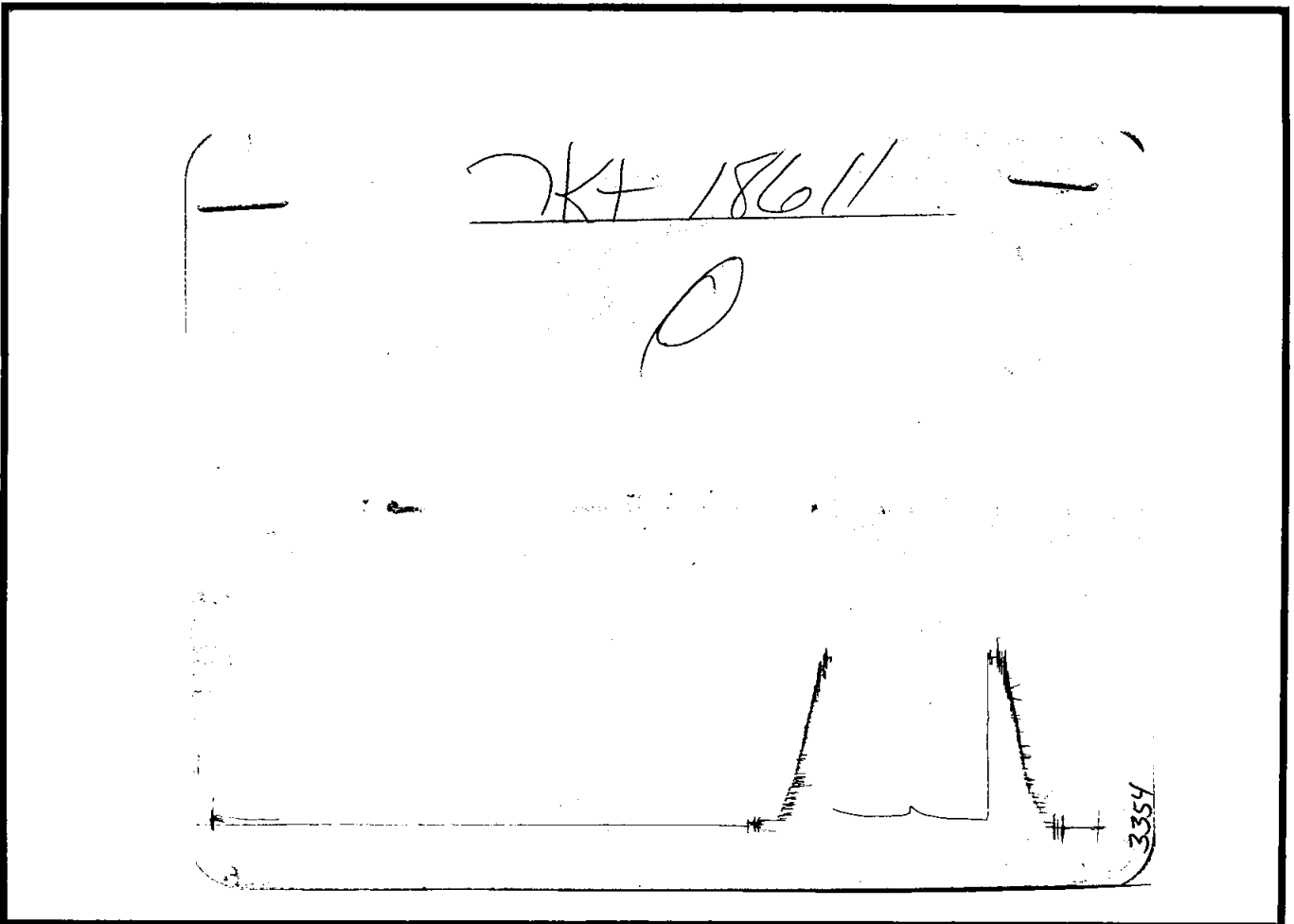
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	48.00	0.00
10.00	48.00	0.00
15.00	48.00	0.00
20.00	48.00	0.00
25.00	48.00	0.00
30.00	48.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	49.00	49.00	0.00
6.00	50.00	1.00	0.00
9.00	51.00	1.00	0.00
12.00	52.00	1.00	0.00
15.00	54.00	2.00	0.00
18.00	59.00	5.00	0.00
21.00	62.00	3.00	0.00
24.00	67.00	5.00	0.00
27.00	73.00	6.00	0.00
30.00	79.00	6.00	0.00

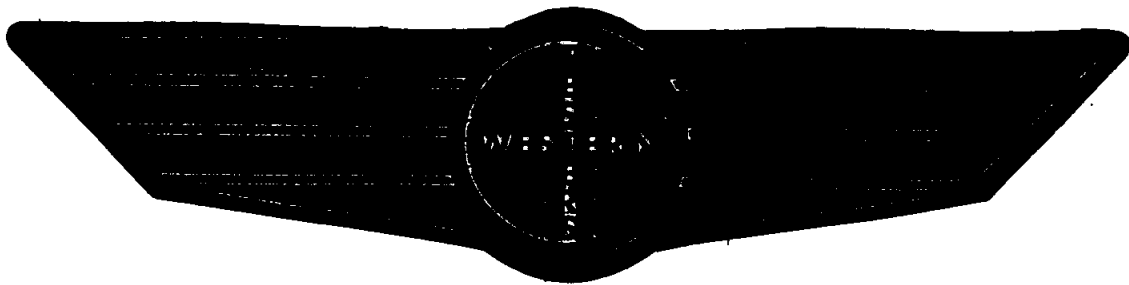


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY RANGE OIL COMPANY, INC LEASE & WELL NO. ARBUCKLE #1 SEC. 30 TWP. 31 SRGE. 9E TEST NO. 3 DATE 10/3/92

DST REPORT

GENERAL INFORMATION

DATE : 10/3/92
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : 1 TEST: 3
ELEVATION: 1088 KB
SECTION : 30
RANGE : 9E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 18612
LEASE : ARBUCKLE
GEOLOGIST: THOMAS BLAIR
FORMATION: MISSISSIPPI
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2231.00 ft TO: 2250.00 ft TVD: 2250.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2243.0 ft 2247.0 ft
TEMPERATURE: 104.0
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 : 1851.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 19.0 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: 2226.0 ft SIZE: 6.630 in
PACKER DEPTH: 2231.0 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 RIG 1
MUD TYPE : CHEMICAL VISCOSITY : 40.00 cp
WEIGHT : 9.400 ppg WATER LOSS: 12.000 cc
CHLORIDES : 900 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW, 1 INCH INTO
BUCKET. FINAL FLOW PERIOD STRONG BLOW, 6 INCH INTO
BUCKET.

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>
2.0	100.0	0.0	0.0	0.0	FREE OIL
0.0	0.0	0.0	0.0	0.0	40 GRAVITY AT 60 DEGREES
60.0	40.0	20.0	0.0	40.0	GASSY OIL CUT MUD
0.0	0.0	0.0	0.0	0.0	270' OF GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.1279 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	0.3313 SCF	AVERAGE OIL RATE:	3.9340 STB/D
MUD VOLUME:	0.1180 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.2459 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1060.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	30.00	30.00
INITIAL SHUT-IN	30.00		315.00
FINAL FLOW	60.00	30.00	40.00
FINAL SHUT-IN	60.00		595.00

FINAL HYDROSTATIC PRESSURE: 1050.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1090.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	33.00	38.00
INITIAL SHUT-IN	30.00		320.00
FINAL FLOW	60.00	47.00	51.00
FINAL SHUT-IN	63.00		620.00

FINAL HYDROSTATIC PRESSURE: 1084.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/3/92	TICKET : 18612
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : ARBUCKLE
WELL : 1	TEST: 3
ELEVATION: 1088 KB	GEOLOGIST: THOMAS BLAIR
SECTION : 30	FORMATION: MISSISSIPPI
RANGE : 9E	TOWNSHIP : 31S
COUNTY: ELK	STATE : KS
Gauge SN#: 10979	RANGE : 4100
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	33.00	33.00
5.00	33.00	0.00
10.00	33.00	0.00
15.00	35.00	2.00
20.00	36.00	1.00
25.00	37.00	1.00
30.00	38.00	1.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	46.00	46.00	0.00
6.00	53.00	7.00	0.00
9.00	63.00	10.00	0.00
12.00	79.00	16.00	0.00
15.00	95.00	16.00	0.00
18.00	121.00	26.00	0.00
21.00	158.00	37.00	0.00
24.00	200.00	42.00	0.00
27.00	246.00	46.00	0.00
30.00	320.00	74.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	47.00	47.00

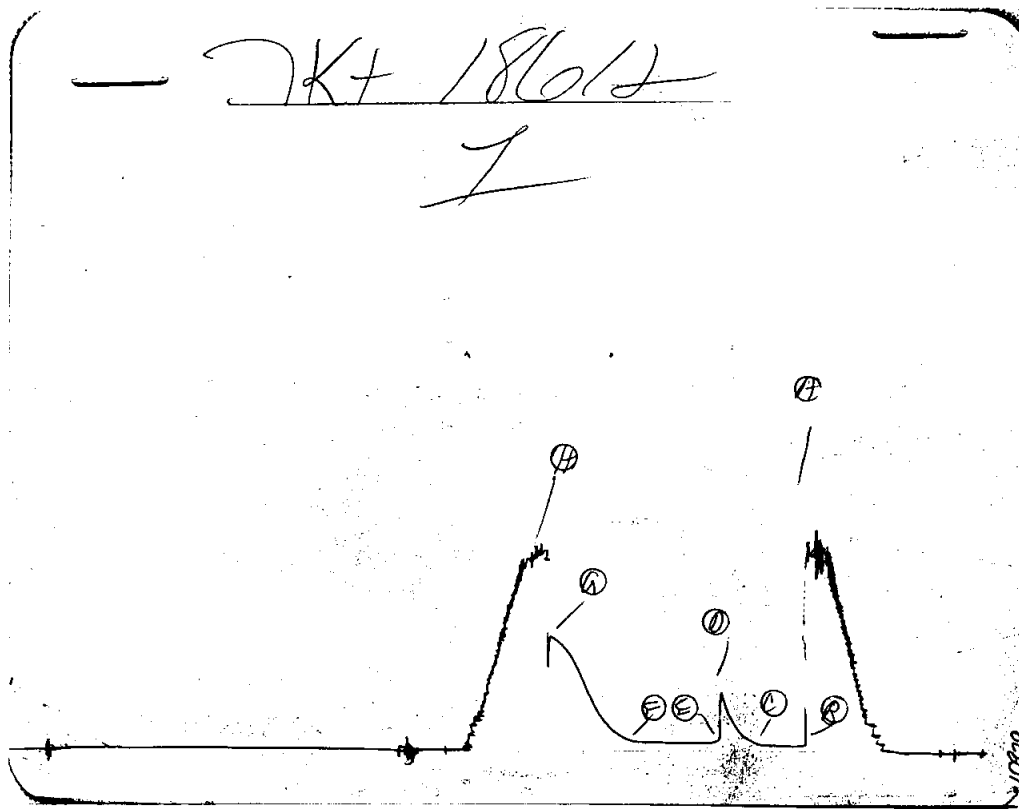
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

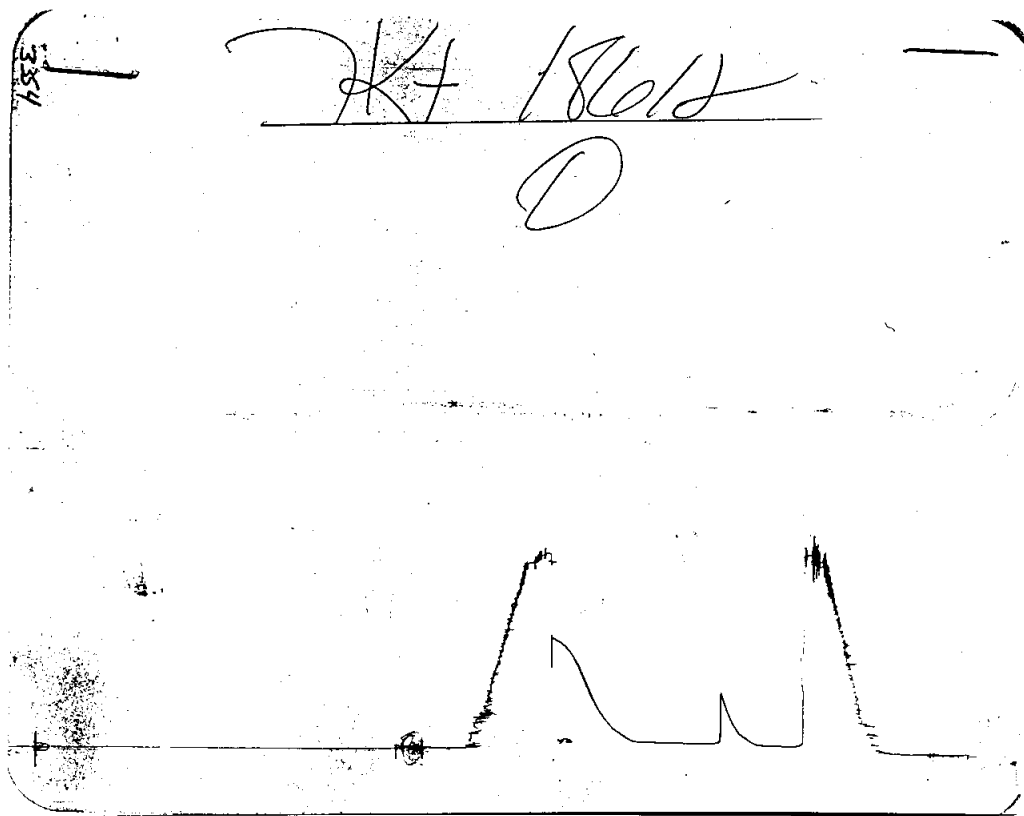
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	47.00	0.00
10.00	47.00	0.00
15.00	47.00	0.00
20.00	48.00	1.00
25.00	48.00	0.00
30.00	48.00	0.00
35.00	49.00	1.00
40.00	49.00	0.00
45.00	50.00	1.00
50.00	50.00	0.00
55.00	51.00	1.00
60.00	51.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	60.00	60.00	0.00
6.00	68.00	8.00	0.00
9.00	76.00	8.00	0.00
12.00	90.00	14.00	0.00
15.00	107.00	17.00	0.00
18.00	126.00	19.00	0.00
21.00	149.00	23.00	0.00
24.00	174.00	25.00	0.00
27.00	209.00	35.00	0.00
30.00	244.00	35.00	0.00
33.00	291.00	47.00	0.00
36.00	335.00	44.00	0.00
39.00	380.00	45.00	0.00
42.00	436.00	56.00	0.00
45.00	480.00	44.00	0.00
48.00	516.00	36.00	0.00
51.00	548.00	32.00	0.00
54.00	568.00	20.00	0.00
57.00	589.00	21.00	0.00
60.00	608.00	19.00	0.00
63.00	620.00	12.00	0.00

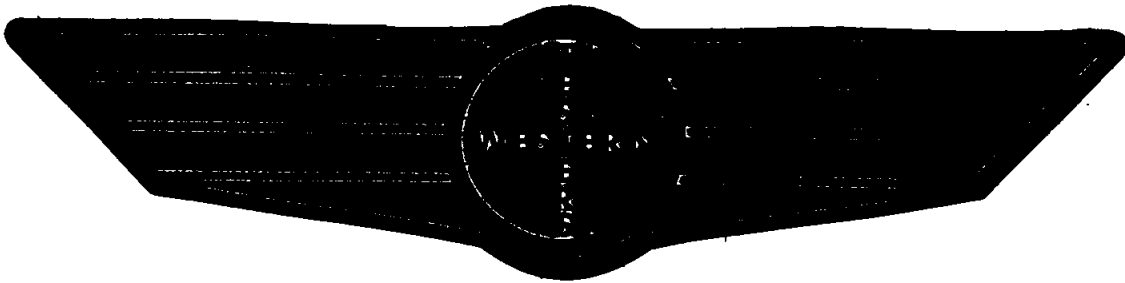


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY RANGE OIL COMPANY, INCLEASE & WELL NO. ARBUCKLE #1 SEC. 30TWP. 31SRGE. 9E TEST NO. 4 DATE 10/4/92

DST REPORT

GENERAL INFORMATION

DATE : 10/4/92
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : 1 TEST: 4
ELEVATION: 1088 KB
SECTION : 30
RANGE : 9E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 18613
LEASE : ARBUCKLE
GEOLOGIST: THOMAS BLAIR
FORMATION: ARBUCKLE
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2530.00 ft TO: 2550.00 ft TVD: 2550.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2543.0 ft 2547.0 ft
TEMPERATURE: 112.0
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 : 2150.0 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: 2525.0 ft SIZE: 6.630 in
PACKER DEPTH: 2530.0 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 RIG 1
MUD TYPE : CHEMICAL
WEIGHT : 9.600 ppg
CHLORIDES : 900 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 46.00 cp
WATER LOSS: 11.200 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW, 1/2 INCH INTO BUCKET.

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>
25.0	100.0	0.0	0.0	0.0	FREE OIL
0.0	0.0	0.0	0.0	0.0	36 GRAVITY AT 60 DEGREES
35.0	15.0	5.0	0.0	80.0	GASSY OIL CUT MUD
0.0	0.0	0.0	0.0	0.0	85' OF GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.1488	STB		
GAS VOLUME:	0.0483	SCF	TOTAL FLOW TIME:	90.0000 min.
MUD VOLUME:	0.1377	STB	AVERAGE OIL RATE:	4.5831 STB/D
WATER VOLUME:	0.0000	STB	AVERAGE WATER RATE:	0.0000 STB/D
TOTAL FLUID :	0.2864	STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1255.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	20.00	20.00
INITIAL SHUT-IN	30.00		895.00
FINAL FLOW	60.00	30.00	40.00
FINAL SHUT-IN	60.00		960.00

FINAL HYDROSTATIC PRESSURE: 1245.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1288.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	39.00	41.00
INITIAL SHUT-IN	30.00		909.00
FINAL FLOW	60.00	50.00	56.00
FINAL SHUT-IN	60.00		960.00

FINAL HYDROSTATIC PRESSURE: 1258.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/4/92	TICKET : 18613
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : ARBUCKLE
WELL : 1 TEST: 4	GEOLOGIST: THOMAS BLAIR
ELEVATION: 1088 KB	FORMATION: ARBUCKLE
SECTION : 30	TOWNSHIP : 31S
RANGE : 9E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	39.00	39.00
5.00	39.00	0.00
10.00	39.00	0.00
15.00	41.00	2.00
20.00	41.00	0.00
25.00	41.00	0.00
30.00	41.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	43.00	43.00	0.00
6.00	49.00	6.00	0.00
9.00	60.00	11.00	0.00
12.00	91.00	31.00	0.00
15.00	185.00	94.00	0.00
18.00	358.00	173.00	0.00
21.00	615.00	257.00	0.00
24.00	796.00	181.00	0.00
27.00	876.00	80.00	0.00
30.00	909.00	33.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	50.00	50.00

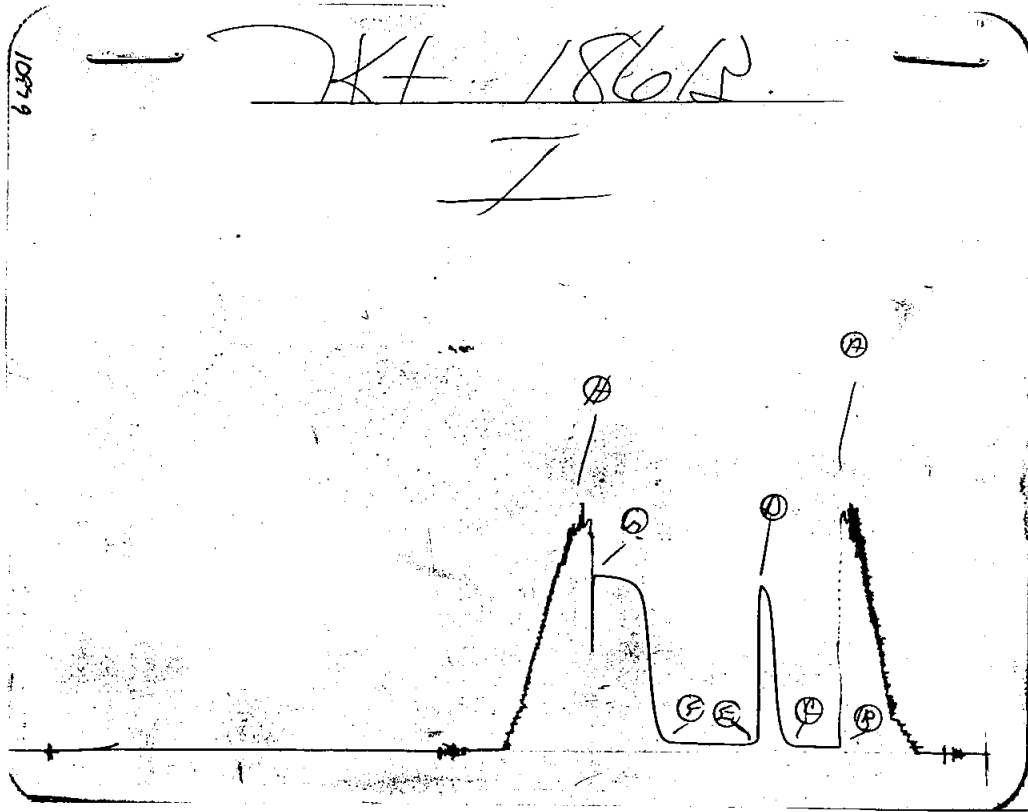
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

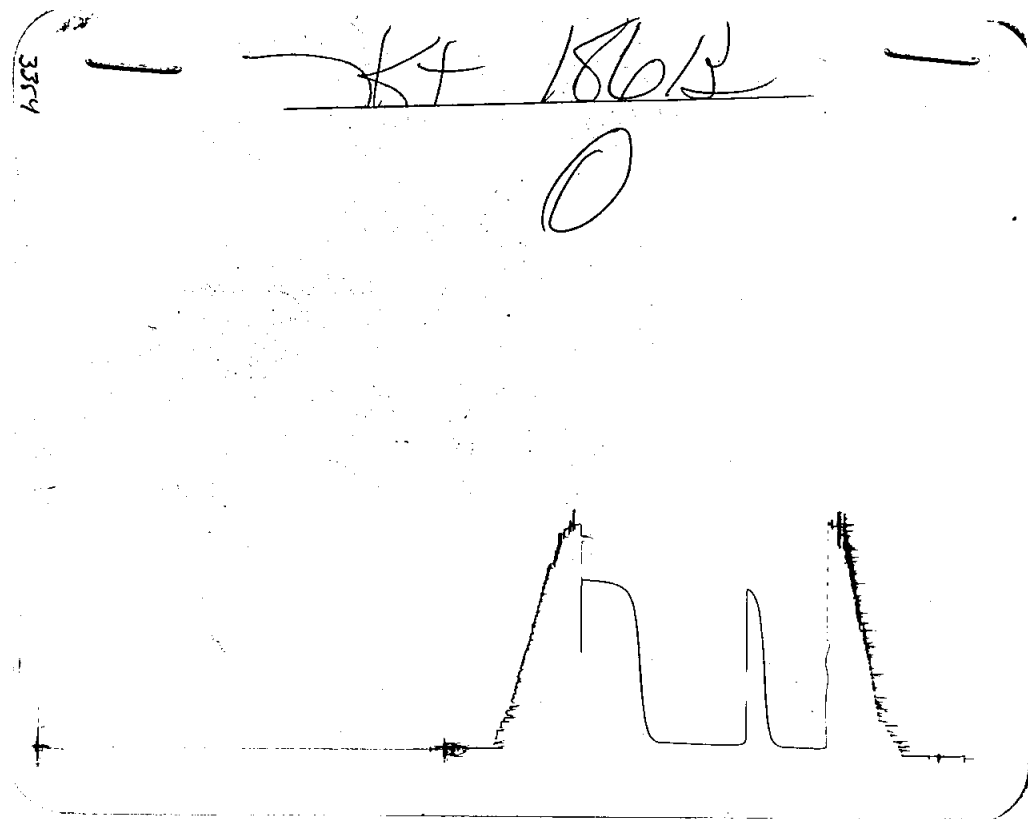
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	50.00	0.00
10.00	50.00	0.00
15.00	50.00	0.00
20.00	50.00	0.00
25.00	50.00	0.00
30.00	50.00	0.00
35.00	51.00	1.00
40.00	52.00	1.00
45.00	53.00	1.00
50.00	54.00	1.00
55.00	55.00	1.00
60.00	56.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	62.00	62.00	0.00
6.00	74.00	12.00	0.00
9.00	110.00	36.00	0.00
12.00	199.00	89.00	0.00
15.00	339.00	140.00	0.00
18.00	561.00	222.00	0.00
21.00	751.00	190.00	0.00
24.00	853.00	102.00	0.00
27.00	887.00	34.00	0.00
30.00	911.00	24.00	0.00
33.00	924.00	13.00	0.00
36.00	936.00	12.00	0.00
39.00	941.00	5.00	0.00
42.00	945.00	4.00	0.00
45.00	950.00	5.00	0.00
48.00	952.00	2.00	0.00
51.00	954.00	2.00	0.00
54.00	956.00	2.00	0.00
57.00	958.00	2.00	0.00
60.00	960.00	2.00	0.00



Inside Recorder



Outside Recorder