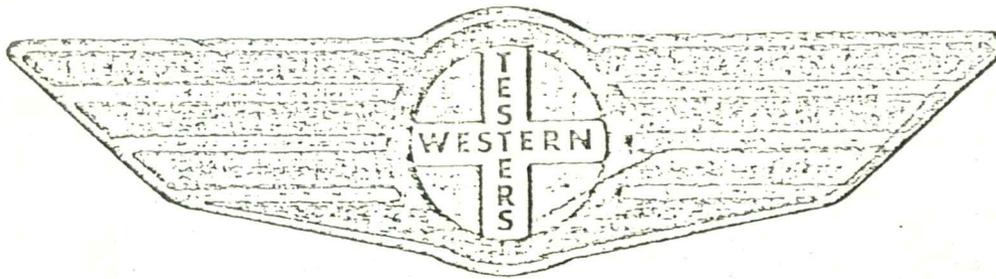


FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company RANGE OIL CO. INC. Lease and Well No. 10 HALE Sec. 22 Twp. 34S Rge. 3E Test No. 1 Date 12/1/57

WESTERN TESTING COMPANY INC.  
SUBSURFACE PRESSURE SURVEY

DATE: 12/7/84 TICKET #8020  
CUSTOMER: RANGE OIL COMPANY INC. LEASE: HALE  
WELL: #10 TEST: 1 GEOLOGIST: LAUER  
ELEVATION (KB): 1080 FORMATION: LAYTON  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

INTERVAL TEST FROM: 2558 FT TO: 2568 FT TOTAL DEPTH: 2568 FT  
DEPTH OF SELECTIVE ZONE: FT  
PACKER DEPTH: 2553 FT SIZE: 6 3/4 IN PACKER DEPTH: 2558 FT SIZE: 6 3/4 IN  
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE  
MUD TYPE: CHEM VISCOSITY: 40  
WEIGHT: 9.4 WATER LOSS (CC): 14.8  
CHLORIDES (P.P.M.): 2000  
JARS - MAKE: SERIAL NUMBER:  
DID WELL FLOW? REVERSED OUT?  
DRILL COLLAR LENGTH: 117 FT I.D.: 2.25 IN  
WEIGHT PIPE LENGTH: FT I.D.: IN  
DRILL PIPE LENGTH: 2361 FT I.D.: 3.8 IN  
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN  
ANCHOR LENGTH: 10 FT SIZE: 5 1/2 O.D. IN  
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN  
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

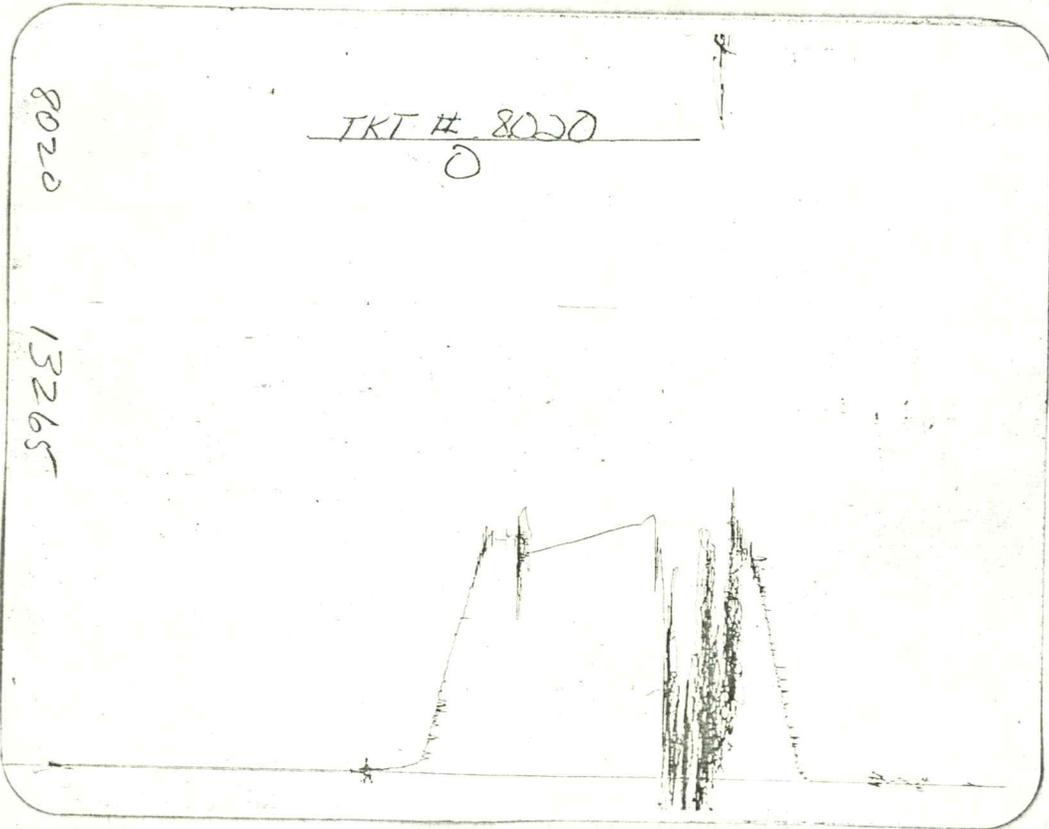
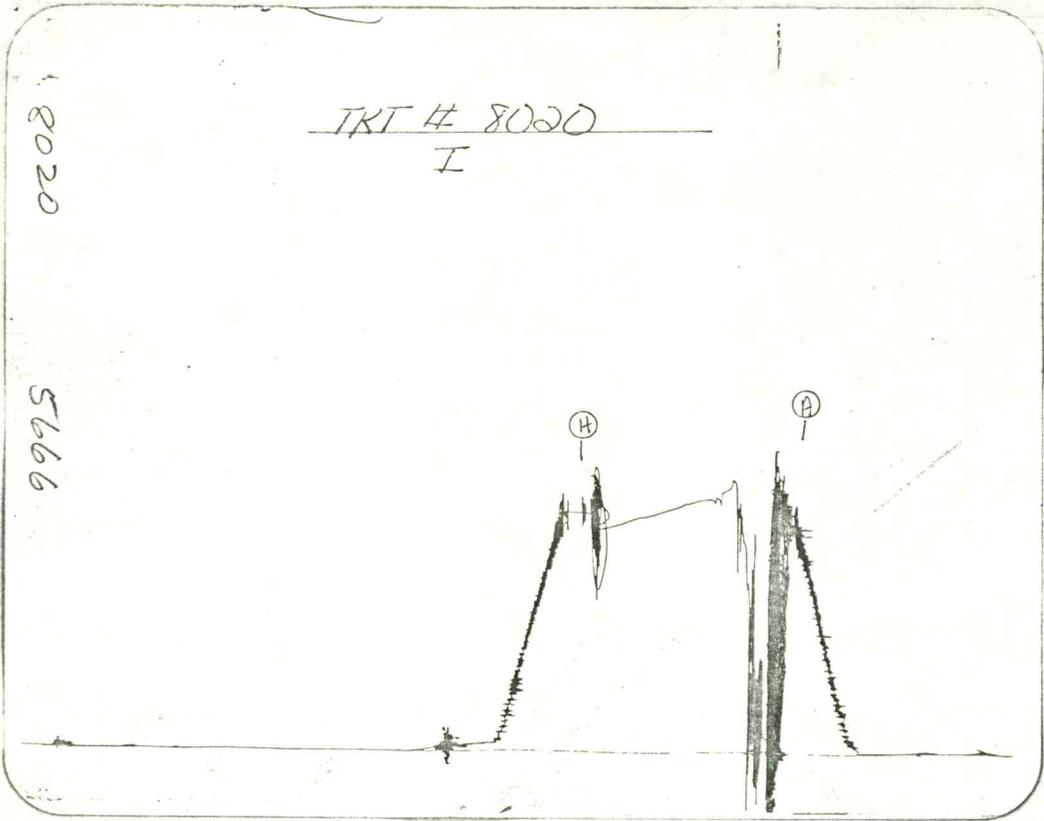
BLOW: VERY WEAK 27 MINUTE BLOW.

RECOVERED: 55 FT OF: DRLG MUD.  
RECOVERED: FT OF:  
RECOVERED: FT OF:

REMARKS: MISRUN PLUGGED TOOL.  
SLID TOOL 6' TO BOTTOM.

TIME SET PACKER(S): 8:00 A.M. TIME STARTED OFF BOTTOM: 10:00 A.M.  
WELL TEMPERATURE: 100 °F  
INITIAL HYDROSTATIC PRESSURE: (A) 1245 PSI  
INITIAL FLOW PERIOD MIN: 0 (B) 0 PSI TO (C) 0 PSI  
INITIAL CLOSED IN PERIOD MIN: 0 (D) 0 PSI  
FINAL FLOW PERIOD MIN: 0 (E) 0 PSI TO (F) 0 PSI  
FINAL CLOSED IN PERIOD MIN: 0 (G) 0 PSI  
FINAL HYDROSTATIC PRESSURE (H) 1245 PSI

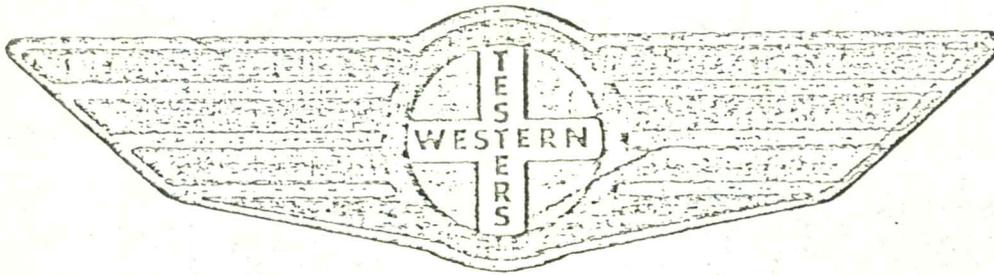




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REPORT



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Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company RANGE OIL INC. Lease and Well No. 10 HALE Sec. 22 TWP. 34S. R4E. 3E T2S. R10W. 2

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE: 12/8/84  
CUSTOMER: RANGE OIL COMPANY INC.  
WELL: 10 TEST: 2  
ELEVATION (KB): 1080 FORMATION: PAWNEE-FORT SCOTT  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

INTERVAL TEST FROM: 2996 FT TO: 3043 FT TOTAL DEPTH: 3043 FT  
DEPTH OF SELECTIVE ZONE: FT  
PACKER DEPTH: 2991 FT SIZE: 6 3/4 IN Packer DEPTH: 2996 FT SIZE: 6 3/4 IN  
PACKER DEPTH: FT SIZE: IN Packer DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG  
MUD TYPE: CHEMICAL VISCOSITY: 40  
WEIGHT: 9.7 WATER LOSS (CC): 11.0  
CHLORIDES (P.P.M.): 2200  
JARS - MAKE: SERIAL NUMBER:  
DID WELL FLOW? YES REVERSED OUT? NO  
DRILL COLLAR LENGTH: 117 FT I.D.: 2.25 IN  
WEIGHT PIPE LENGTH: FT I.D.: IN  
DRILL PIPE LENGTH: 2859 FT I.D.: 3.8 IN  
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN  
ANCHOR LENGTH: 47 FT SIZE: 5 1/2 OD IN  
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN  
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: STRONG BLOW THROUGHOUT TEST. GAS  
TO SURFACE IN 30 MINUTES. SEE  
ATTACHED SHEET FOR GAS MEASUREMENTS.

RECOVERED: 60 FT OF: DRILLING MUD.  
RECOVERED: FT OF:  
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 5:30 PM TIME STARTED OFF BOTTOM: 7:45 PM  
WELL TEMPERATURE: 107 °F  
INITIAL HYDROSTATIC PRESSURE: (A) 1535 PSI  
INITIAL FLOW PERIOD MIN: 30 (B) 63 PSI TO (C) 82 PSI  
INITIAL CLOSED IN PERIOD MIN: 30 (D) 1282 PSI  
FINAL FLOW PERIOD MIN: 30 (E) 61 PSI TO (F) 61 PSI  
FINAL CLOSED IN PERIOD MIN: 45 (G) 1281 PSI  
FINAL HYDROSTATIC PRESSURE (H) 1525 PSI



WESTERN TESTING CO. INC.  
GAS FLOW REPORT

DATE: 12/8/84  
CUSTOMER: RANGE OIL COMPANY INC.  
WELL: 10 TEST: 2  
ELEVATION (KB): 1080 FORMATION: PAWNEE-FORT SCOTT  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

TICKET #8021  
LEASE: HALE  
GEOLOGIST: LAUER

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

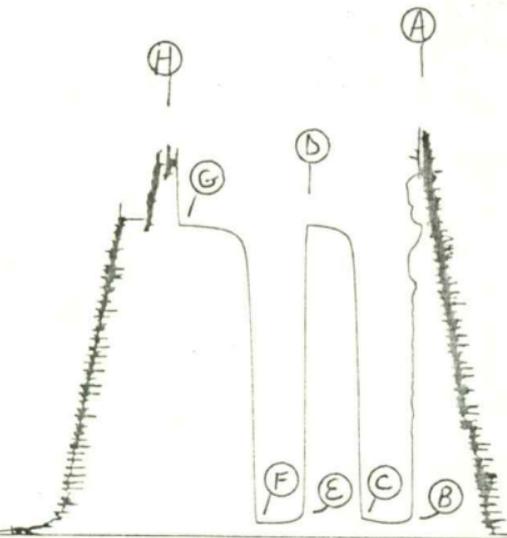
SECOND FLOW

5	MERLA	1/2	6.0 PSIG	86300 CFPD
10			5.0	78100
15			5.0	78100
20			5.0	78100
25			5.0	78100
30			5.0	78100

GAS BOTTLE SN #: 601  
DATE BOTTLE FILLED: 12/8/84  
DATE TO BE INVOICED:

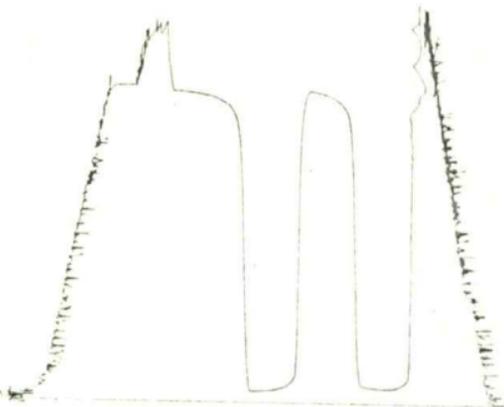
TKT # 8021

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TKT # 8021

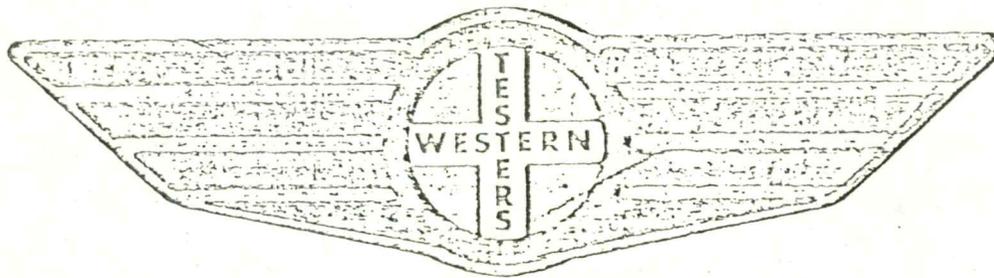
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FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company \_\_\_\_\_  
Lease and Well No. \_\_\_\_\_  
# TO \_\_\_\_\_  
SEC. \_\_\_\_\_  
77 W.P. \_\_\_\_\_  
JTS AKC \_\_\_\_\_  
JW \_\_\_\_\_  
\_\_\_\_\_

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE: 12/9/84 TICKET #8022  
CUSTOMER: RANGE OIL COMPANY INC. LEASE: HALE  
WELL: 10 TEST: 3 GEOLOGIST: LAUER  
ELEVATION (KB): 1080 FORMATION: BARTLESVILLE  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

INTERVAL TEST FROM: 3237 FT TO: 3257 FT TOTAL DEPTH: 3257 FT  
DEPTH OF SELECTIVE ZONE: FT  
PACKER DEPTH: 3232 FT SIZE: 6 3/4 IN PACKER DEPTH: 3237 FT SIZE: 6 3/4 IN  
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG  
MUD TYPE: CHEMICAL VISCOSITY: 46  
WEIGHT: 9.9 WATER LOSS (CC): 11.8  
CHLORIDES (P.P.M.): 2700  
JARS - MAKE: SERIAL NUMBER:  
DID WELL FLOW? NO REVERSED OUT? NO  
DRILL COLLAR LENGTH: 117 FT I.D.: 2.25 IN  
WEIGHT PIPE LENGTH: FT I.D.: IN  
DRILL PIPE LENGTH: 3100 FT I.D.: 3.8 IN  
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN  
ANCHOR LENGTH: 20 FT SIZE: 5 1/2 OD IN  
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN  
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: INITIAL FLOW PERIOD WEAK 2" BLOW.  
FINAL FLOW PERIOD FAIR 4" BLOW.

RECOVERED: 30 FT OF: DRILLING MUD.  
RECOVERED: FT OF:  
RECOVERED: FT OF:

REMARKS: SOUR ODOR IN PIPE.

TIME SET PACKER(S): 2:00 PM TIME STARTED OFF BOTTOM: 5:00 PM  
WELL TEMPERATURE: 114 °F  
INITIAL HYDROSTATIC PRESSURE: (A) 1705 PSI  
INITIAL FLOW PERIOD MIN: 30 (B) 44 PSI TO (C) 44 PSI  
INITIAL CLOSED IN PERIOD MIN: 33 (D) 100 PSI  
FINAL FLOW PERIOD MIN: 60 (E) 51 PSI TO (F) 51 PSI  
FINAL CLOSED IN PERIOD MIN: 69 (G) 151 PSI  
FINAL HYDROSTATIC PRESSURE (H) 1681 PSI

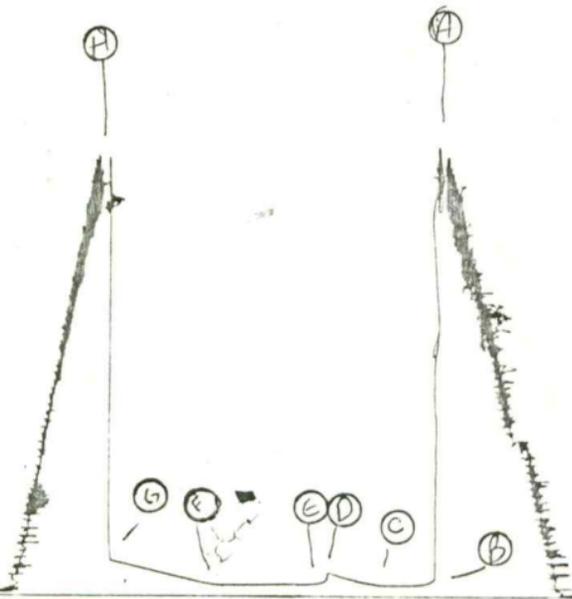


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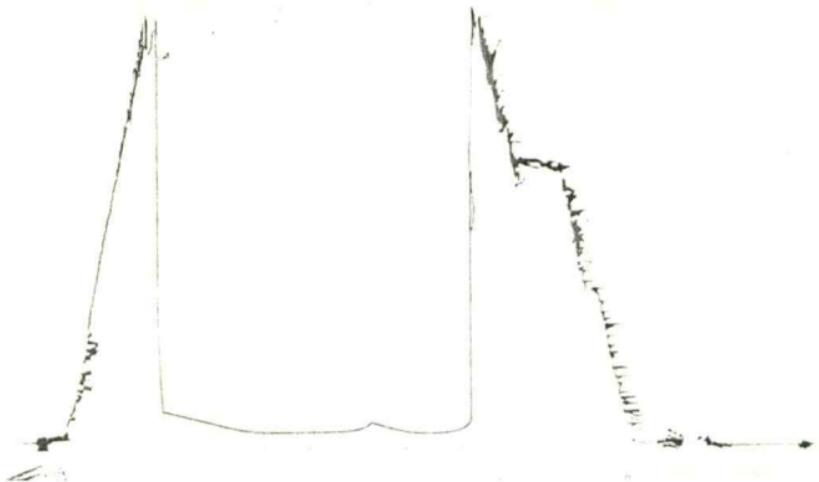


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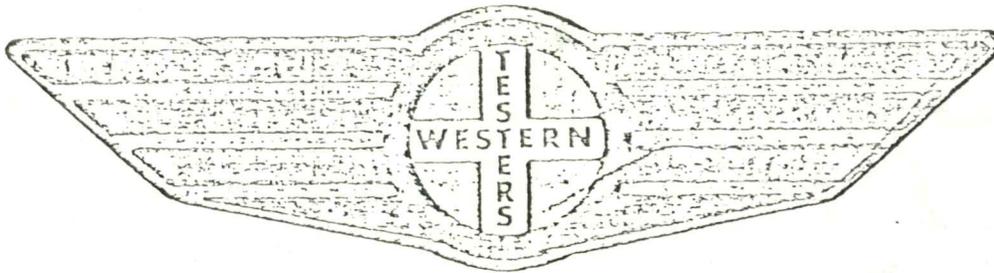
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TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company \_\_\_\_\_ RANGE OIL CO., INC. \_\_\_\_\_ Lease and Well No. \_\_\_\_\_ #10 HALF \_\_\_\_\_ Sec. 22 TWP. 34S RGE. 3E 1951 NO. 4 DATE 12/10/78

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE: 12/10/84 TICKET #8023  
CUSTOMER: RANGE OIL COMPANY INC. LEASE: HALE  
WELL: 10 TEST: 4 GEOLOGIST: LAUER  
ELEVATION (KB): 1080 FORMATION: MISSISSIPPI  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

INTERVAL TEST FROM: 3287 FT TO: 3307 FT TOTAL DEPTH: 3307 FT  
DEPTH OF SELECTIVE ZONE: FT  
PACKER DEPTH: 3282 FT SIZE: 6 3/4 IN PACKER DEPTH: 3287 FT SIZE: 6 3/4 IN  
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG  
MUD TYPE: CHEMICAL VISCOSITY: 46  
WEIGHT: 9.9 WATER LOSS (CC): 11.8  
CHLORIDES (P.P.M.): 2700  
JARS - MAKE: SERIAL NUMBER:  
DID WELL FLOW? YES REVERSED OUT? NO  
DRILL COLLAR LENGTH: 117 FT I.D.: 2.25 IN  
WEIGHT PIPE LENGTH: FT I.D.: IN  
DRILL PIPE LENGTH: 3150 FT I.D.: 3.8 IN  
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN  
ANCHOR LENGTH: 20 FT SIZE: 5 1/2 OD IN  
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN  
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: STRONG BLOW THROUGHOUT TEST. GAS  
TO SURFACE IN 27 MINUTES. SEE  
ATTACHED SHEET FOR GAS MEASUREMENTS.

RECOVERED: 75 FT OF: GAS CUT MUD WITH A TRACE OF OIL.  
RECOVERED: 60 FT OF: OIL & GAS CUT MUD (10% GAS; 15% OIL).  
RECOVERED: FT OF:  
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 2:20 AM TIME STARTED OFF BOTTOM: 5:20 AM  
WELL TEMPERATURE: 116 °F  
INITIAL HYDROSTATIC PRESSURE: (A) 1735 PSI  
INITIAL FLOW PERIOD MIN: 30 (B) 64 PSI TO (C) 83 PSI  
INITIAL CLOSED IN PERIOD MIN: 33 (D) 1093 PSI  
FINAL FLOW PERIOD MIN: 60 (E) 51 PSI TO (F) 61 PSI  
FINAL CLOSED IN PERIOD MIN: 63 (G) 1088 PSI  
FINAL HYDROSTATIC PRESSURE (H) 1675 PSI



WESTERN TESTING CO. INC.  
GAS FLOW REPORT

DATE: 12/10/84

CUSTOMER: RANGE OIL COMPANY INC.

WELL: 10

ELEVATION (KB): 1080

SECTION: 22

RANGE: 3E

GAUGE SN #5666

TEST: 4

COUNTY: COWLEY

RANGE: 3950

TICKET #8023

LEASE: HALE

GEOLOGIST: LAUER

FORMATION: MISSISSIPPI

TOWNSHIP: 34S

STATE: KANSAS

CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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SECOND FLOW

5	MERLA	1/2	7.0 PSIG	94500 CFPD
10			4.0	68800
15			3.0	59200
20		1/4	6.0	22900
25			7.0	25000
30			9.0	29000
35			10	30800
40			11	32400
45			11	32400
50			11	32400

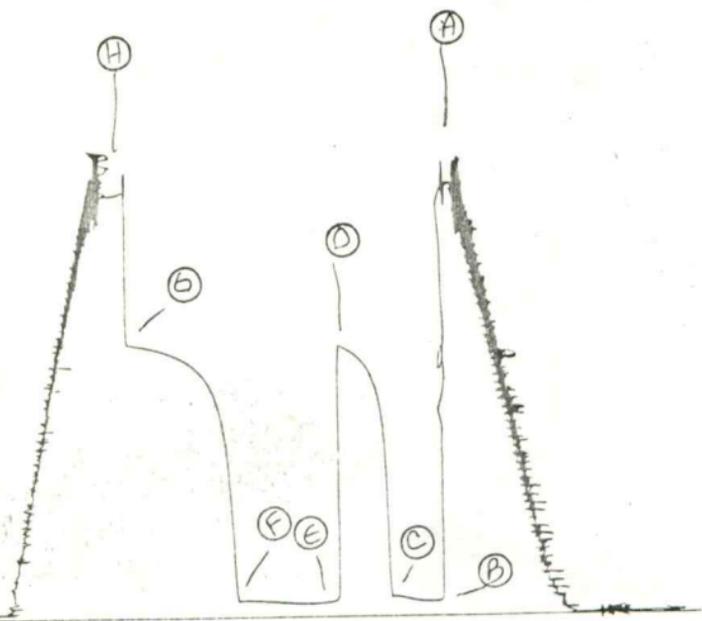
GAS BOTTLE SN #: 102  
DATE BOTTLE FILLED: 12/10/84  
DATE TO BE INVOICED:

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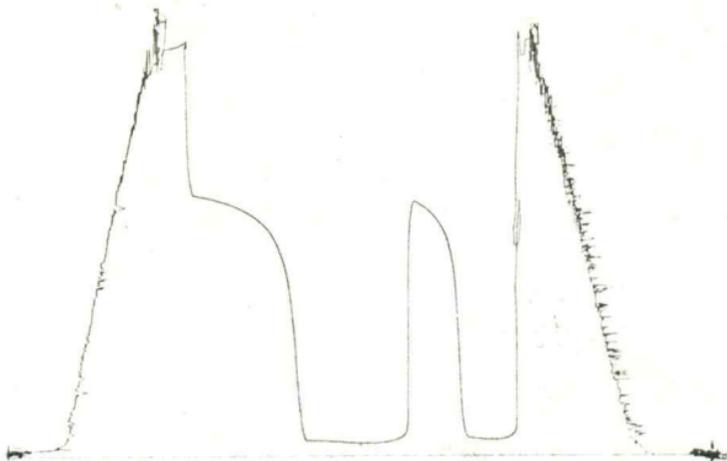


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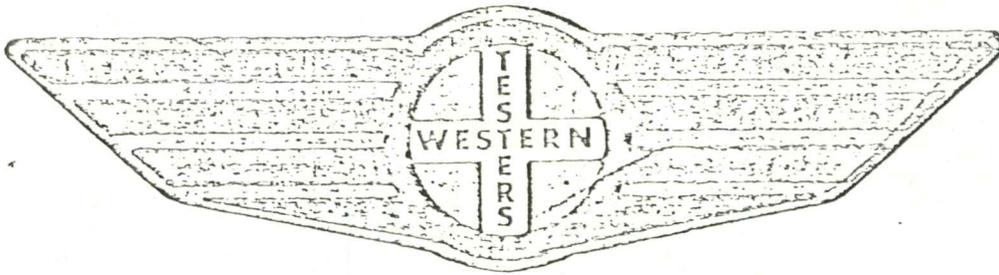
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FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company  
Lease and Well No.  
ITV  
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77  
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WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE: 12/10/84 TICKET #8024  
CUSTOMER: RANGE OIL COMPANY INC. LEASE: HALE  
WELL: 10 TEST: 5 GEOLOGIST: LAUER  
ELEVATION (KB): 1080 FORMATION: MISSISSIPPI  
SECTION: 22 TOWNSHIP: 34S  
RANGE: 3E COUNTY: COWLEY STATE: KANSAS  
GAUGE SN #5666 RANGE: 3950 CLOCK: 12

INTERVAL TEST FROM: 3307 FT TO: 3334 FT TOTAL DEPTH: 3334 FT  
DEPTH OF SELECTIVE ZONE: FT  
PACKER DEPTH: 3302 FT SIZE: 6 3/4 IN PACKER DEPTH: 3307 FT SIZE: 6 3/4 IN  
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG  
MUD TYPE: CHEMICAL VISCOSITY: 39  
WEIGHT: 9.8 WATER LOSS (CC): 11.2  
CHLORIDES (P.P.M.): 3600

JARS - MAKE: SERIAL NUMBER:  
DID WELL FLOW? NO REVERSED OUT? NO  
DRILL COLLAR LENGTH: 117 FT I.D.: 2.25 IN  
WEIGHT PIPE LENGTH: FT I.D.: IN  
DRILL PIPE LENGTH: 3170 FT I.D.: 3.8 IN  
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN  
ANCHOR LENGTH: 27 FT SIZE: 5 1/2 OD IN  
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN  
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: STRONG BLOW THROUGHOUT TEST.

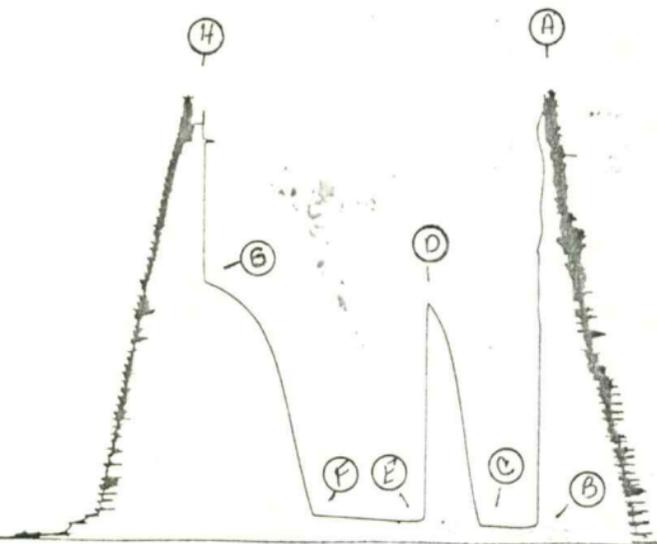
RECOVERED: 2080 FT OF: GAS ABOVE FLUID.  
RECOVERED: 75 FT OF: OIL & GAS CUT FROTHY MUD (30% GAS; 15% OIL).  
RECOVERED: 60 FT OF: SLIGHTLY OIL & GAS CUT MUD (15% GAS; 5% OIL).  
RECOVERED: FT OF:  
RECOVERED: FT OF:

REMARKS: STRANGE ODOR TO SURFACE IN 26 MINUTES  
THAT WOULD NOT BURN. GAUGED AT  
8.82 CFPD; PER GEOLOGISTS REQUEST.

TIME SET PACKER(S): 3:15 PM TIME STARTED OFF BOTTOM: 6:15 PM  
WELL TEMPERATURE: 119 °F  
INITIAL HYDROSTATIC PRESSURE: (A) 1740 PSI  
INITIAL FLOW PERIOD MIN: 30 (B) 67 PSI TO (C) 73 PSI  
INITIAL CLOSED IN PERIOD MIN: 33 (D) 974 PSI  
FINAL FLOW PERIOD MIN: 60 (E) 92 PSI TO (F) 112 PSI  
FINAL CLOSED IN PERIOD MIN: 63 (G) 1050 PSI  
FINAL HYDROSTATIC PRESSURE (H) 1682 PSI



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