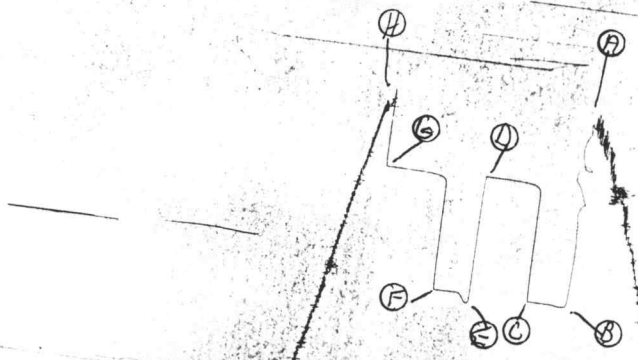


AT 14517

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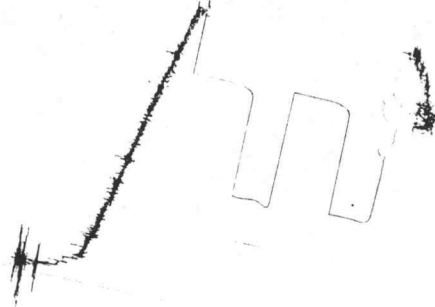
05741
10270



HT 4517

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OST# 1
13268



13268

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-29-88 TICKET : 14517
CUSTOMER : HUTCHINSON OIL COMPANY LEASE : KRANKENBERG
WELL : #3-19 TEST: 1 GEOLOGIST : J BURK
ELEVATION : 1870 GL FORMATION : LANSING
SECTION : 19 TOWNSHIP : 22S
RANGE : 12W COUNTY : STAFFORD STATE : KANSAS
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3372 TO : 3418 TOTAL DEPTH : 3418
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3367 SIZE : 6.63
PACKER DEPTH : 3372 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 RIG 2
MUD TYPE : CHEMICAL VISCOSITY : 40
WEIGHT : 8.9 WATER LOSS (CC) : 11.2
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 120 FT I.D. inch : 2.20
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3232 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 46 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-STRONG BLWO-GAS TO SURFACE IN 45 SECONDS
BLOW COMMENT #2 : SEE ATTACHED FLOW CHART.
BLOW COMMENT #3 : FINAL FLOW-GAS TO SURFACE.
BLOW COMMENT #4 :

RECOVERED : 65 FT OF: HEAVY OIL & GAS CUT MUD
 12% GAS-20% OIL-68% MUD
 RECOVERED : 120 FT OF: HEAVY OIL & GAS CUT MUD
 17% GAS-25% OIL-58% MUD

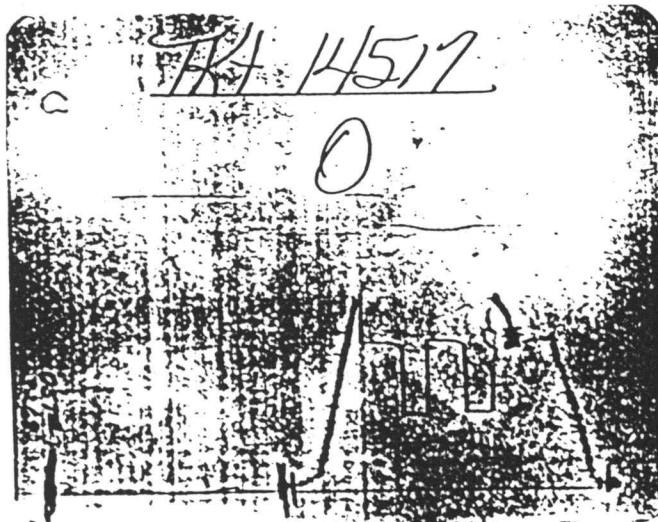
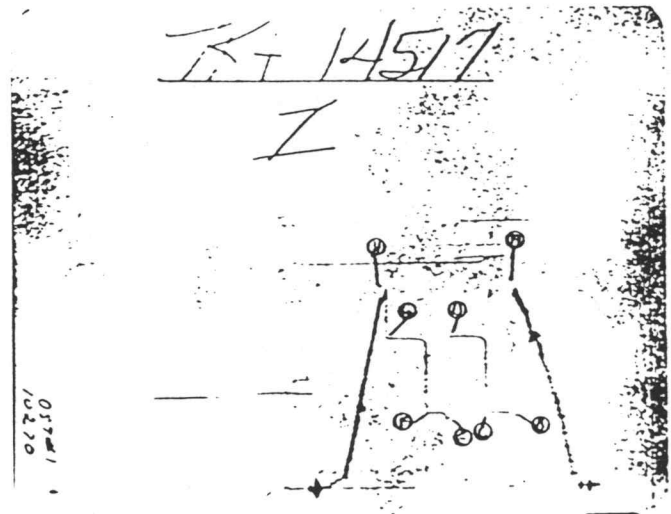
Total Barrels Fluid = 1.48
 Total Fluid Prod Rate = 38.64 BFPD
 Indicated Oil Rate = 8.98 BOPD
 Indicated Wtr Rate = 2.36 BWPD
 Corrected Oil Rate = 5.68 BOPD
 Corrected Wtr Rate = 1.49 BWPD

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 6:40 AM
 WELL TEMPERATURE : 105
 INITIAL HYDROSTATIC PRESSURE
 INITIAL FLOW PERIOD MIN: 30
 INITIAL CLOSED IN PERIOD MIN: 42
 FINAL FLOW PERIOD MIN: 25
 FINAL CLOSED IN PERIOD MIN: 48
 FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM : 9:10 AM

(A) 1609
 (B) 616 PSI TO (C) : 623
 (D) 1265
 (E) 576 PSI TO (F) : 626
 (G) 1253
 (H) 1605



GAS FLOW REPORT

| | |
|--|---------------------|
| Date : 7-29-88 | Ticket # : 14517 |
| Customer : HUTCHINSON OIL COMPANY | Lease : KRANKENBERG |
| Well : #3-19 Test : 1 | Geologist : J BURK |
| Elevation (KB) : 1870 Formation : LANSING | |
| Section : 19 Township : 22S | |
| Range : 12W County : STAFFORD | State : KANSAS |
| Gauge SN # : 10270 Range : 4150 | Clock : 12 |

| | | | | |
|---------------------|-------------|----------------|-------------------|------------------|
| TIME GAUGE (MIN) | TESTER TYPE | ORFICE SIZE | PRESSURE (PSI) | FLOW DESCRIPTION |
|---------------------|-------------|----------------|-------------------|------------------|

PRE FLOW
=====

| | | | | |
|----|-------|--------|----|--------------|
| 5 | MERLA | 1 1/2" | 25 | 2258000 CFPD |
| 10 | | | 37 | 2976000 CFPD |
| 15 | | | 37 | 2976000 CFPD |
| 20 | | | 37 | 2976000 CFPD |
| 25 | | | 37 | 2976000 CFPD |
| 30 | | | 37 | 2976000 CFPD |

SECOND FLOW
=====

| | | | | |
|----|-------|--------|----|--------------|
| 10 | MERLA | 1 1/2" | 37 | 2976000 CFPD |
| 15 | | | 37 | 2976000 CFPD |
| 20 | | | 37 | 2976000 CFPD |
| 25 | | | 37 | 2976000 CFPD |
| 30 | | | 37 | 2976000 CFPD |

Gas Bottle SN # : 24 GB
 Date Bottle Filled : 7-29-88
 Date to be Invoiced :

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : HUTCHINSON OIL COMPANY
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #3-19
DATE : 7-29-88
GAUGE NO : 10270

OPERATIONAL COMMENTS

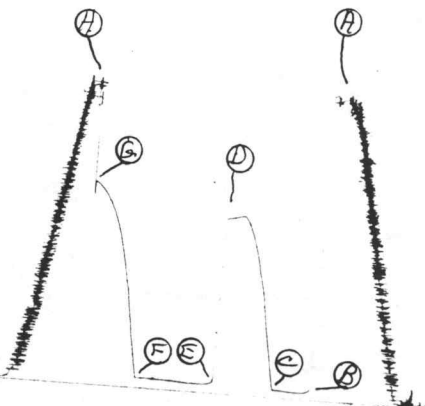
COMPANY : HUTCHINSON OIL COMPANY
 WELL : #3-19
 GAUGE # : 10270
 DATE : 29/ 7/88

FIELD : KRANKENBERG
 JOB # : 14517
 DEPTH : 3418
 TEST :

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-----------------|--------------------|-------------------------|---------------|------------|-------------------|
| INITIAL FLOW | | | | | |
| 2 | 6:40: 0 | 0.000 | 616.000 | 105.00 | 0.000 |
| 3 | 6:44:59 | 0.083 | 616.000 | 105.00 | 0.000 |
| 4 | 6:50: 0 | 0.167 | 620.000 | 105.00 | 4.000 |
| 5 | 6:55: 0 | 0.250 | 623.000 | 105.00 | 3.000 |
| 6 | 6:59:59 | 0.333 | 623.000 | 105.00 | 0.000 |
| 7 | 7: 5: 0 | 0.417 | 623.000 | 105.00 | 0.000 |
| 8 | 7:10: 0 | 0.500 | 623.000 | 105.00 | 0.000 |
| INITIAL SHUT-IN | | | | | |
| 9 | 7:13: 0 | 0.550 | 1247.000 | 105.00 | 624.000 |
| 10 | 7:16: 0 | 0.600 | 1254.000 | 105.00 | 7.000 |
| 11 | 7:19: 0 | 0.650 | 1259.000 | 105.00 | 5.000 |
| 12 | 7:22: 0 | 0.700 | 1261.000 | 105.00 | 2.000 |
| 13 | 7:25: 0 | 0.750 | 1263.000 | 105.00 | 2.000 |
| 14 | 7:28: 0 | 0.800 | 1265.000 | 105.00 | 2.000 |
| 15 | 7:31: 0 | 0.850 | 1265.000 | 105.00 | 0.000 |
| 16 | 7:34: 0 | 0.900 | 1265.000 | 105.00 | 0.000 |
| 17 | 7:37: 0 | 0.950 | 1265.000 | 105.00 | 0.000 |
| 18 | 7:40: 0 | 1.000 | 1265.000 | 105.00 | 0.000 |
| 19 | 7:43: 0 | 1.050 | 1265.000 | 105.00 | 0.000 |
| 20 | 7:46: 0 | 1.100 | 1265.000 | 105.00 | 0.000 |
| 21 | 7:49: 0 | 1.150 | 1265.000 | 105.00 | 0.000 |
| 22 | 7:52: 0 | 1.200 | 1265.000 | 105.00 | 0.000 |
| FINAL FLOW | | | | | |
| 23 | 7:53: 0 | 1.217 | 576.000 | 105.00 | -689.000 |
| 24 | 7:56:59 | 1.283 | 599.000 | 105.00 | 23.000 |
| 25 | 8: 2: 0 | 1.367 | 624.000 | 105.00 | 25.000 |
| 26 | 8: 7: 0 | 1.450 | 626.000 | 105.00 | 2.000 |
| 27 | 8:11:59 | 1.533 | 626.000 | 105.00 | 0.000 |
| 28 | 8:17: 0 | 1.617 | 626.000 | 105.00 | 0.000 |
| FINAL SHUT-IN | | | | | |
| 29 | 8:20: 0 | 1.667 | 1227.000 | 105.00 | 601.000 |
| 30 | 8:23: 0 | 1.717 | 1240.000 | 105.00 | 13.000 |
| 31 | 8:26: 0 | 1.767 | 1245.000 | 105.00 | 5.000 |
| 32 | 8:29: 0 | 1.817 | 1247.000 | 105.00 | 2.000 |
| 33 | 8:32: 0 | 1.867 | 1248.000 | 105.00 | 1.000 |
| 34 | 8:35: 0 | 1.917 | 1249.000 | 105.00 | 1.000 |
| 35 | 8:38: 0 | 1.967 | 1250.000 | 105.00 | 1.000 |
| 36 | 8:41: 0 | 2.017 | 1251.000 | 105.00 | 1.000 |
| 37 | 8:44: 0 | 2.067 | 1252.000 | 105.00 | 1.000 |
| 38 | 8:47: 0 | 2.117 | 1252.000 | 105.00 | 0.000 |
| 39 | 8:50: 0 | 2.167 | 1253.000 | 105.00 | 1.000 |
| 40 | 8:53: 0 | 2.217 | 1253.000 | 105.00 | 0.000 |
| 41 | 8:56: 0 | 2.267 | 1253.000 | 105.00 | 0.000 |
| 42 | 8:59: 0 | 2.317 | 1253.000 | 105.00 | 0.000 |
| 43 | 9: 2: 0 | 2.367 | 1253.000 | 105.00 | 0.000 |
| 44 | 9: 5: 0 | 2.417 | 1253.000 | 105.00 | 0.000 |

KA 14518
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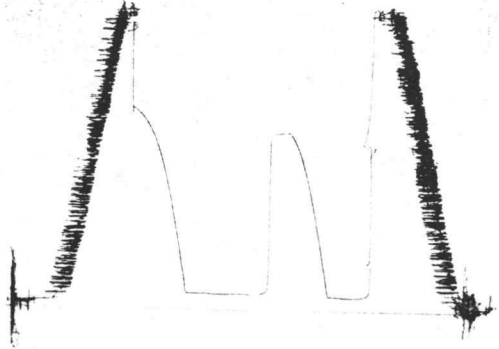
OST# 2
102120



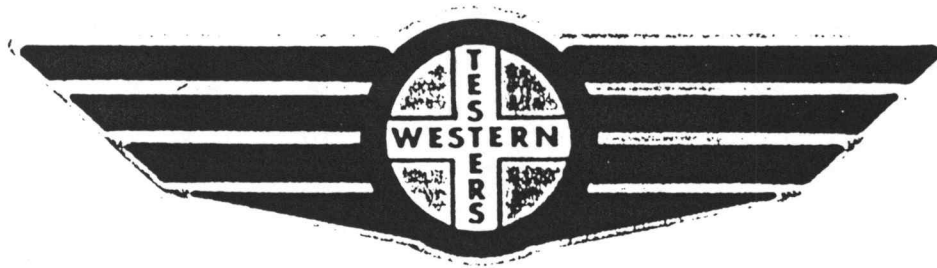
RF 14518

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OSTW
1/22/68



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-29-88 TICKET : 14518
CUSTOMER : HUTCHINSON OIL COMPANY LEASE : KRANKENBERG
WELL : #3-19 TEST: 2 GEOLOGIST : J BURK
ELEVATION : 1870 GL FORMATION : KANSAS CITY "G"
SECTION : 19 TOWNSHIP : 22S
RANGE : 12W COUNTY : STAFFORD STATE : KANSAS
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3413 TO : 3430 TOTAL DEPTH : 3430
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3408 SIZE : 6.63
PACKER DEPTH : 3413 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 RIG 2
MUD TYPE : CHEMICAL VISCOSITY : 37
WEIGHT : 9 WATER LOSS (CC) : 11.2
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3393 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 17 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW THROUGHOUT.
BLOW COMMENT #2 : FINAL FLOW-STRONG BLOW-GAS TO SURFACE IN 1 MINUTE-TOO
WEAK TO GAUGE.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 45 FT OF: MUDDY GASSY OIL
 48% OIL-20% GAS-10% WTR-22% MUD
 RECOVERED : 60 FT OF: MUDDY GASSY OIL
 44% OIL-40% GAS-13% WTR-3% MUD

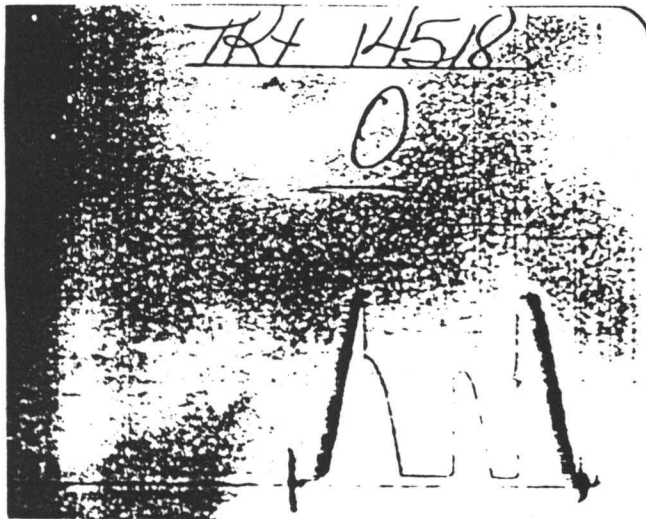
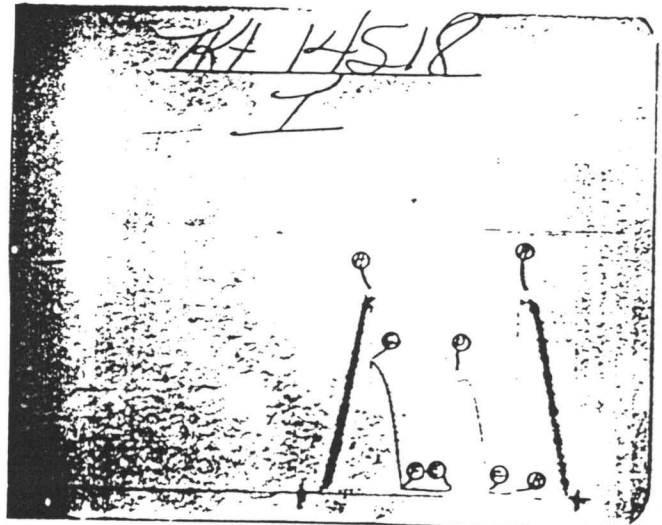
Total Barrels Fluid = 1.47
 Total Fluid Prod Rate = 23.56 BFPD
 Indicated Oil Rate = 10.77 BOPD
 Indicated Wtr Rate = 3.01 BWPD
 Corrected Oil Rate = 11.59 BOPD
 Corrected Wtr Rate = 3.23 BWPD

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 5:20 PM
 WELL TEMPERATURE : 108
 INITIAL HYDROSTATIC PRESSURE
 INITIAL FLOW PERIOD MIN: 30
 INITIAL CLOSED IN PERIOD MIN: 45
 FINAL FLOW PERIOD MIN: 60
 FINAL CLOSED IN PERIOD MIN: 39
 FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM : 8:20 PM

(A) 1636
 (B) 35 PSI TO (C) : 40
 (D) 960
 (E) 45 PSI TO (F) : 54
 (G) 1111
 (H) 1629



WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : HUTCHINSON OIL COMPANY
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #3-19
DATE : 7-29-88
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : HUTCHINSON OIL COMPANY
 WELL : #3-19
 GAUGE # : 10270
 DATE : 29/ 7/88

FIELD : KRANKENBERG
 JOB # : 14518
 DEPTH : 3430
 TEST :

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-----------------|--------------------|-------------------------|---------------|------------|-------------------|
| INITIAL FLOW | | | | | |
| 2 | 5:20: 0 | 0.000 | 35.000 | 108.00 | 0.000 |
| 3 | 5:24:59 | 0.083 | 35.000 | 108.00 | 0.000 |
| 4 | 5:30: 0 | 0.167 | 35.000 | 108.00 | 0.000 |
| 5 | 5:35: 0 | 0.250 | 35.000 | 108.00 | 0.000 |
| 6 | 5:39:59 | 0.333 | 35.000 | 108.00 | 1.000 |
| 7 | 5:45: 0 | 0.417 | 38.000 | 108.00 | 2.000 |
| 8 | 5:50: 0 | 0.500 | 40.000 | 108.00 | 2.000 |
| INITIAL SHUT-IN | | | | | |
| 9 | 5:53: 0 | 0.550 | 159.000 | 108.00 | 119.000 |
| 10 | 5:56: 0 | 0.600 | 273.000 | 108.00 | 114.000 |
| 11 | 5:59: 0 | 0.650 | 410.000 | 108.00 | 137.000 |
| 12 | 6: 2: 0 | 0.700 | 557.000 | 108.00 | 147.000 |
| 13 | 6: 5: 0 | 0.750 | 660.000 | 108.00 | 103.000 |
| 14 | 6: 8: 0 | 0.800 | 749.000 | 108.00 | 89.000 |
| 15 | 6:11: 0 | 0.850 | 832.000 | 108.00 | 83.000 |
| 16 | 6:14: 0 | 0.900 | 902.000 | 108.00 | 70.000 |
| 17 | 6:17: 0 | 0.950 | 970.000 | 108.00 | 68.000 |
| 18 | 6:20: 0 | 1.000 | 977.000 | 108.00 | 7.000 |
| 19 | 6:23: 0 | 1.050 | 976.000 | 108.00 | -1.000 |
| 20 | 6:26: 0 | 1.100 | 970.000 | 108.00 | -6.000 |
| 21 | 6:29: 0 | 1.150 | 965.000 | 108.00 | -5.000 |
| 22 | 6:32: 0 | 1.200 | 961.000 | 108.00 | -4.000 |
| 23 | 6:35: 0 | 1.250 | 960.000 | 108.00 | -1.000 |
| FINAL FLOW | | | | | |
| 24 | 6:36: 0 | 1.267 | 45.000 | 108.00 | -915.000 |
| 25 | 6:39:59 | 1.333 | 45.000 | 108.00 | 0.000 |
| 26 | 6:45: 0 | 1.417 | 45.000 | 108.00 | 0.000 |
| 27 | 6:50: 0 | 1.500 | 45.000 | 108.00 | 0.000 |
| 28 | 6:54:59 | 1.583 | 45.000 | 108.00 | 0.000 |
| 29 | 7: 0: 0 | 1.667 | 48.000 | 108.00 | 3.000 |
| 30 | 7: 5: 0 | 1.750 | 50.000 | 108.00 | 2.000 |
| 31 | 7: 9:59 | 1.833 | 52.000 | 108.00 | 2.000 |
| 32 | 7:15: 0 | 1.917 | 53.000 | 108.00 | 1.000 |
| 33 | 7:20: 0 | 2.000 | 54.000 | 108.00 | 1.000 |
| 34 | 7:24:59 | 2.083 | 54.000 | 108.00 | 0.000 |
| 35 | 7:30: 0 | 2.167 | 54.000 | 108.00 | 0.000 |
| 36 | 7:35: 0 | 2.250 | 54.000 | 108.00 | 0.000 |
| FINAL SHUT-IN | | | | | |
| 37 | 7:38: 0 | 2.300 | 190.000 | 108.00 | 136.000 |
| 38 | 7:41: 0 | 2.350 | 340.000 | 108.00 | 150.000 |
| 39 | 7:44: 0 | 2.400 | 495.000 | 108.00 | 155.000 |
| 40 | 7:47: 0 | 2.450 | 619.000 | 108.00 | 124.000 |
| 41 | 7:50: 0 | 2.500 | 733.000 | 108.00 | 114.000 |
| 42 | 7:53: 0 | 2.550 | 831.000 | 108.00 | 98.000 |
| 43 | 7:56: 0 | 2.600 | 902.000 | 108.00 | 71.000 |
| 44 | 7:59: 0 | 2.650 | 963.000 | 108.00 | 61.000 |
| 45 | 8: 2: 0 | 2.700 | 1010.000 | 108.00 | 47.000 |
| 46 | 8: 5: 0 | 2.750 | 1048.000 | 108.00 | 38.000 |
| 47 | 8: 8: 0 | 2.800 | 1076.000 | 108.00 | 28.000 |
| 48 | 8:11: 0 | 2.850 | 1095.000 | 108.00 | 19.000 |

COMPANY : HUTCHINSON OIL COMPANY
WELL : #3-19
GAUGE # : 10270
DATE : 29/ 7/88

FIELD : KRANKENBERG
JOB # : 14518
DEPTH : 3430
TEST :

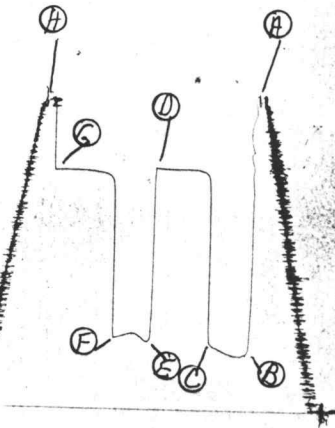
| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-------------|-----------------------|----------------------------|------------------|---------------|----------------------|
| 49 | 8:14: 0 | 2.900 | 1111.000 | 108.00 | 16.000 |

WESTERN TESTING CO. INC.

TK 14519

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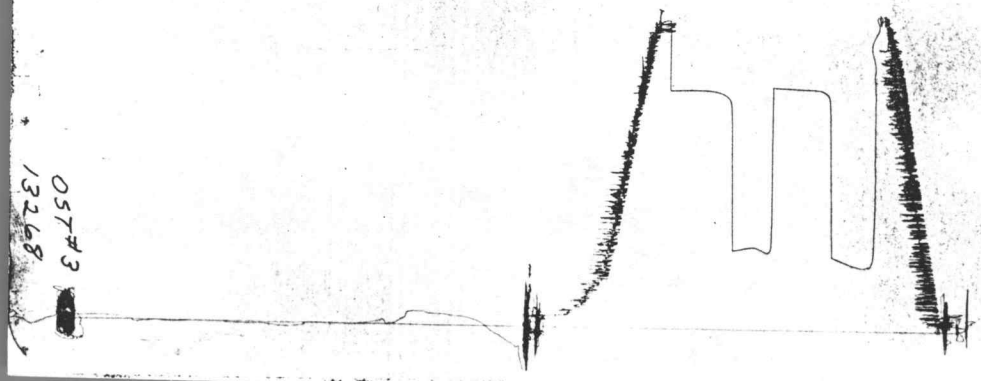
05743
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RT 14519

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OST#3
13268



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-30-88
CUSTOMER : HUTCHINSON OIL COMPANY
WELL : #3-19 TEST: 3
ELEVATION : 1870 GL
SECTION : 19
RANGE : 12W COUNTY : STAFFORD
GAUGE SN# : 10270 RANGE : 4150
TICKET : 14519
LEASE : KRANKENBERG
GEOLOGIST : STEVE ??
FORMATION : KANSAS CITY
TOWNSHIP : 22S
STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3463 TO : 3500 TOTAL DEPTH : 3500
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3458 SIZE : 6.63
PACKER DEPTH : 2463 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 RIG 2
MUD TYPE : CHEMICAL VISCOSITY : 41
WEIGHT : 9 WATER LOSS (CC) : 12
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER :
DID WELL FLOW ? : GAS & OIL REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3443 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 37 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

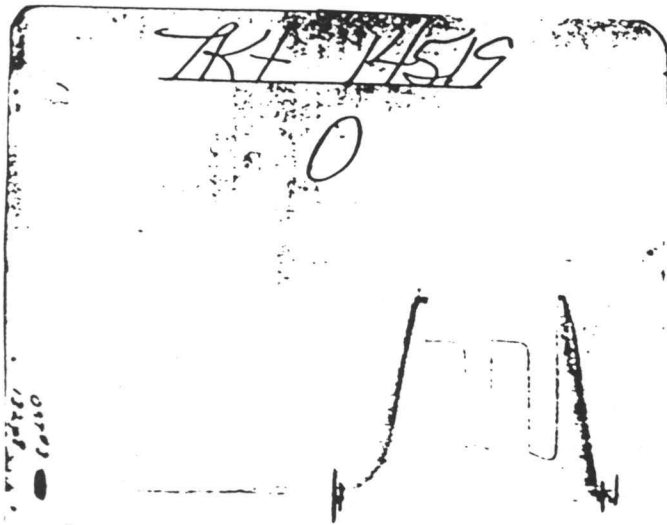
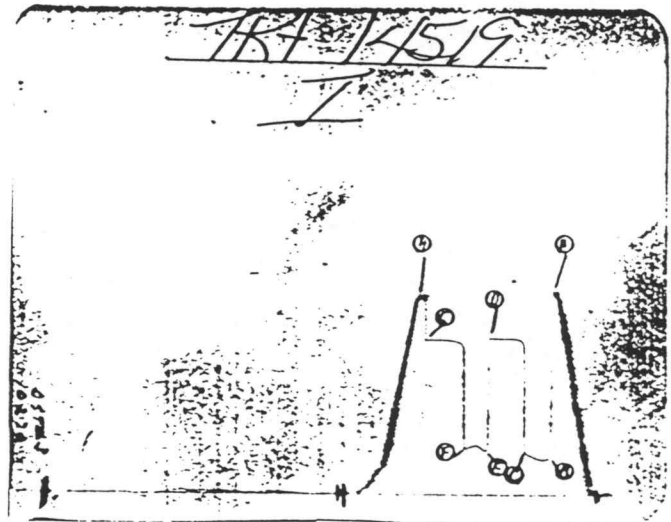
BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW-GAS TO SURFACE IN 2 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-GAS TO SURFACE.
BLOW COMMENT #3 : SEE ATTACHED FLOW CHART.
BLOW COMMENT #4 :

RECOVERED : 420 FT OF: CLEAN GASSY OIL GRAVITY 35

Total Barrels Fluid = 5.89
Total Fluid Prod Rate = 141.39 BFPD
Indicated Oil Rate = 141.39 BOPD
Corrected Oil Rate = 84.16 BOPD

REMARK 1 :
REMARK 2 : HAD OIL TO SURFACE 10 MINUTES INTO FINAL FLOW.
REMARK 3 :
REMARK 4 :

| | |
|----------------------------------|------------------------------------|
| SET PACKER(S) : 9:05 AM | TIME STARTED OFF BOTTOM : 11:35 AM |
| WELL TEMPERATURE : 107 | |
| INITIAL HYDROSTATIC PRESSURE | (A) 1699 |
| INITIAL FLOW PERIOD MIN: 30 | (B) 300 PSI TO (C) : 364 |
| INITIAL CLOSED IN PERIOD MIN: 45 | (D) 1316 |
| FINAL FLOW PERIOD MIN: 30 | (E) 373 PSI TO (F) : 392 |
| FINAL CLOSED IN PERIOD MIN: 45 | (G) 1300 |
| FINAL HYDROSTATIC PRESSURE | (H) 1673 |



GAS FLOW REPORT

Date : 7-30-88 Ticket # : 14519
 Customer : HUTCHINSON OIL COMPANY Lease : KRANKENBERG
 Well : #3-19 Test : 3 Geologist : STEVE ?
 Elevation (KB) : 1875 Formation : KANSAS CITY
 Section : 19 Township : 11S
 Range : 12W County : STAFFORD State : KANSAS
 Gauge SN # : 10270 Range : 4150 Clock : 12

| | | | | |
|---------------------|-------------|----------------|-------------------|------------------|
| TIME GAUGE (MIN) | TESTER TYPE | ORFICE SIZE | PRESSURE (PSI) | FLOW DESCRIPTION |
|---------------------|-------------|----------------|-------------------|------------------|

PRE FLOW
=====

| | | | | |
|----|-------|--------|----|-------------|
| 5 | MERLA | 1 1/4" | 7 | 653000 CFPD |
| 15 | | | 10 | 802000 CFPD |
| 25 | | | 12 | 893000 CFPD |
| 30 | | | 14 | 980000 CFPD |

SECOND FLOW
=====

| | | | | |
|----|-------|--------|----|--------------|
| 10 | MERLA | 1 1/4" | 15 | 1023000 CFPD |
| 20 | | | 25 | 1421000 CFPD |
| 30 | | | 27 | 1506000 CFPD |

Gas Bottle SN # : 26 GB
 Date Bottle Filled : 7-30-88
 Date to be Invoiced :

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : HUTCHINSON OIL COMPANY
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #3-19
DATE : 7-30-88
GAUGE NO : 10270

OPERATIONAL COMMENTS

HAD OIL TO SURFACE 10 MINUTES INTO FINAL FLOW.

COMPANY : HUTCHINSON OIL COMPANY
 WELL : #3-19
 GAUGE # : 10270
 DATE : 30/ 7/88

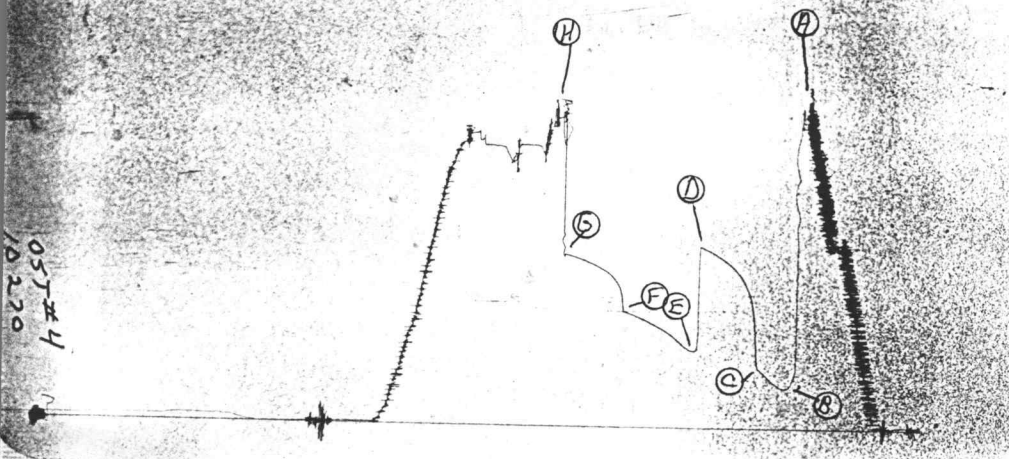
FIELD : KRANKENBERG
 JOB # : 14519
 DEPTH : 3500
 TEST :

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-----------------|--------------------|-------------------------|---------------|------------|-------------------|
| INITIAL FLOW | | | | | |
| 2 | 9: 5: 0 | 0.000 | 300.000 | 107.00 | 0.000 |
| 3 | 9: 9:59 | 0.083 | 300.000 | 107.00 | 0.000 |
| 4 | 9:15: 0 | 0.167 | 300.000 | 107.00 | 0.000 |
| 5 | 9:20: 0 | 0.250 | 308.000 | 107.00 | 8.000 |
| 6 | 9:24:59 | 0.333 | 325.000 | 107.00 | 17.000 |
| 7 | 9:30: 0 | 0.417 | 342.000 | 107.00 | 17.000 |
| 8 | 9:35: 0 | 0.500 | 364.000 | 107.00 | 22.000 |
| INITIAL SHUT-IN | | | | | |
| 9 | 9:38: 0 | 0.550 | 1250.000 | 107.00 | 886.000 |
| 10 | 9:41: 0 | 0.600 | 1297.000 | 107.00 | 47.000 |
| 11 | 9:44: 0 | 0.650 | 1304.000 | 107.00 | 7.000 |
| 12 | 9:47: 0 | 0.700 | 1309.000 | 107.00 | 5.000 |
| 13 | 9:50: 0 | 0.750 | 1311.000 | 107.00 | 2.000 |
| 14 | 9:53: 0 | 0.800 | 1311.000 | 107.00 | 0.000 |
| 15 | 9:56: 0 | 0.850 | 1311.000 | 107.00 | 0.000 |
| 16 | 9:59: 0 | 0.900 | 1311.000 | 107.00 | 0.000 |
| 17 | 10: 2: 0 | 0.950 | 1311.000 | 107.00 | 0.000 |
| 18 | 10: 5: 0 | 1.000 | 1311.000 | 107.00 | 0.000 |
| 19 | 10: 8: 0 | 1.050 | 1312.000 | 107.00 | 1.000 |
| 20 | 10:11: 0 | 1.100 | 1313.000 | 107.00 | 1.000 |
| 21 | 10:14: 0 | 1.150 | 1314.000 | 107.00 | 1.000 |
| 22 | 10:17: 0 | 1.200 | 1315.000 | 107.00 | 1.000 |
| 23 | 10:20: 0 | 1.250 | 1316.000 | 107.00 | 1.000 |
| FINAL FLOW | | | | | |
| 24 | 10:21: 0 | 1.267 | 373.000 | 107.00 | -943.000 |
| 25 | 10:24:59 | 1.333 | 378.000 | 107.00 | 5.000 |
| 26 | 10:30: 0 | 1.417 | 407.000 | 107.00 | 29.000 |
| 27 | 10:35: 0 | 1.500 | 414.000 | 107.00 | 7.000 |
| 28 | 10:39:59 | 1.583 | 404.000 | 107.00 | -10.000 |
| 29 | 10:45: 0 | 1.667 | 393.000 | 107.00 | -11.000 |
| 30 | 10:50: 0 | 1.750 | 392.000 | 107.00 | -1.000 |
| FINAL SHUT-IN | | | | | |
| 31 | 10:53: 0 | 1.800 | 1196.000 | 107.00 | 804.000 |
| 32 | 10:56: 0 | 1.850 | 1272.000 | 107.00 | 76.000 |
| 33 | 10:59: 0 | 1.900 | 1283.000 | 107.00 | 11.000 |
| 34 | 11: 2: 0 | 1.950 | 1288.000 | 107.00 | 5.000 |
| 35 | 11: 5: 0 | 2.000 | 1293.000 | 107.00 | 5.000 |
| 36 | 11: 8: 0 | 2.050 | 1296.000 | 107.00 | 3.000 |
| 37 | 11:11: 0 | 2.100 | 1298.000 | 107.00 | 2.000 |
| 38 | 11:14: 0 | 2.150 | 1299.000 | 107.00 | 1.000 |
| 39 | 11:17: 0 | 2.200 | 1300.000 | 107.00 | 1.000 |
| 40 | 11:20: 0 | 2.250 | 1300.000 | 107.00 | 0.000 |
| 41 | 11:23: 0 | 2.300 | 1300.000 | 107.00 | 0.000 |
| 42 | 11:26: 0 | 2.350 | 1300.000 | 107.00 | 0.000 |
| 43 | 11:29: 0 | 2.400 | 1300.000 | 107.00 | 0.000 |
| 44 | 11:32: 0 | 2.450 | 1300.000 | 107.00 | 0.000 |
| 45 | 11:35: 0 | 2.500 | 1300.000 | 107.00 | 0.000 |

TKF 14520

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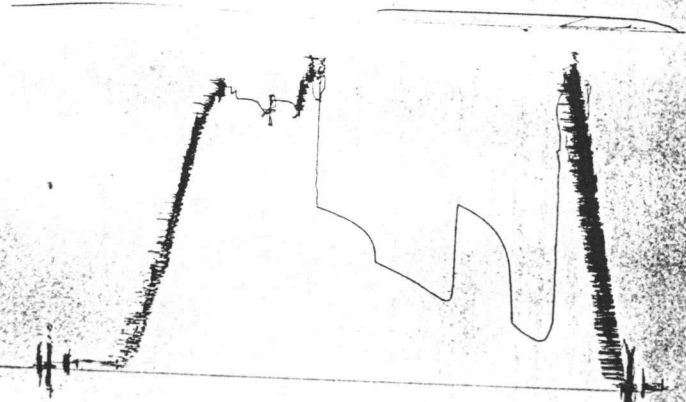
057-#4
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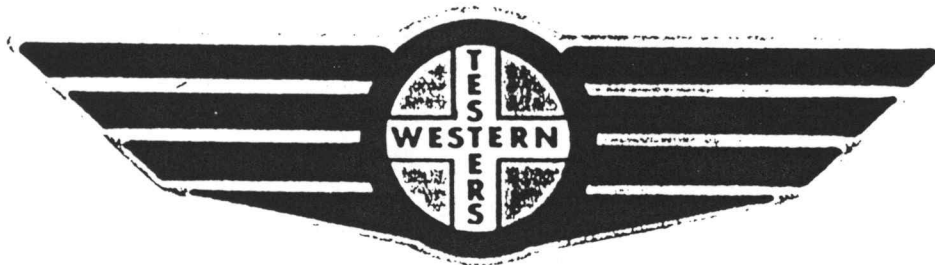
TKT 14500

0

DST #4
13968



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY HUTCHINSON OIL COMPANY LEASE & WELL NO. KRANKENBERG #3-19 SEC. 19 TWP. 22SRGE. 12WTEST NO. 4 DATE 7/30/88

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-30-88 TICKET : 14520
CUSTOMER : HUTCHINSON OIL COMPANY LEASE : KRANKENBERG
WELL : #3-19 TEST: 4 GEOLOGIST : J BURK
ELEVATION : 1870 GL FORMATION : KANSAS CITY/J&K
SECTION : 19 TOWNSHIP : 22S
RANGE : 12W COUNTY : STAFFORD STATE : KANSAS
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3498 TO : 3542 TOTAL DEPTH : 3542
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3493 SIZE : 6.63
PACKER DEPTH : 3498 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 RIG 2
MUD TYPE : CHEMICAL VISCOSITY : 43
WEIGHT : 9 WATER LOSS (CC) : 8
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER :
DID WELL FLOW ? : GAS REVERSED OUT ? : YES

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3478 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 44 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

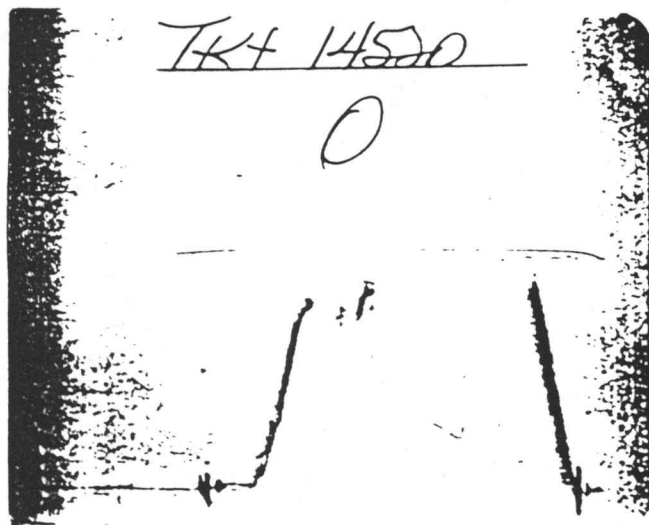
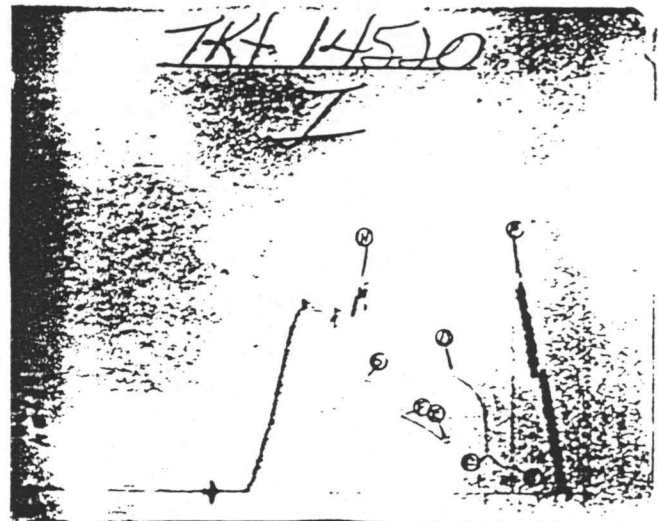
BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW-GAS TO SURFACE IN 2 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-GAS TO SURFACE-TOO WEAK TO GAUGE.
BLOW COMMENT #3 : SEE ATTACHED FLOW CHART.
BLOW COMMENT #4 :

RECOVERED : 3200 FT OF: CLEAN GASSY OIL GRAVITY 35

Total Barrels Fluid = 44.88
Total Fluid Prod Rate = 760.39 BFPD
Indicated Oil Rate = 760.39 BOPD
Corrected Oil Rate = 266.69 BOPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 9:35 PM TIME STARTED OFF BOTTOM : 12:35 AM
WELL TEMPERATURE : 108
INITIAL HYDROSTATIC PRESSURE (A) 1689
INITIAL FLOW PERIOD MIN: 30 (B) 225 PSI TO (C) : 329
INITIAL CLOSED IN PERIOD MIN: 45 (D) 995
FINAL FLOW PERIOD MIN: 55 (E) 427 PSI TO (F) : 638
FINAL CLOSED IN PERIOD MIN: 45 (G) 946
FINAL HYDROSTATIC PRESSURE (H) 1677



GAS FLOW REPORT

Date : 7-30-88 Ticket # : 14520
 Customer : HUTCHINSON OIL COMPANY Lease : KRANKENBERG
 Well : #3-19 Test : 4 Geologist : J BURK
 Elevation (KB) : 1875 Formation : KANSAS CITY/J&K
 Section : 19 Township : 22S
 Range : 12W County : STAFFORD State : KANSAS
 Gauge SN # : 10270 Range : 4150 Clock : 12

| TIME GAUGE (MIN) | TESTER TYPE | ORFICE SIZE | PRESSURE (PSI) | FLOW DESCRIPTION |
|---------------------|-------------|----------------|-------------------|-------------------|
| | | | PRE FLOW ===== | |
| 5 | MERLA | 1" | 12" of WTR | 89800 CFPD |
| 15 | | 1/4" | 5 | 3710 CFPD |
| 25 | | 1/4" | | TOO WEAK TO GAUGE |

SECOND FLOW
=====

Gas Bottle SN # : 28 GB
 Date Bottle Filled : 7-30-88
 Date to be Invoiced :

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : HUTCHINSON OIL COMPANY
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #3-19
DATE : 7-30-88
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : HUTCHINSON OIL COMPANY
 WELL : #3-19
 GAUGE # : 10270
 DATE : 30/ 7/88

FIELD : KRANKENBERG
 JOB # : 14520
 DEPTH : 3542
 TEST :

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-----------------|--------------------|-------------------------|---------------|------------|-------------------|
| INITIAL FLOW | | | | | |
| 2 | 9:35: 0 | 0.000 | 225.000 | 108.00 | 0.000 |
| 3 | 9:39:59 | 0.083 | 225.000 | 108.00 | 0.000 |
| 4 | 9:45: 0 | 0.167 | 225.000 | 108.00 | 0.000 |
| 5 | 9:50: 0 | 0.250 | 247.000 | 108.00 | 22.000 |
| 6 | 9:54:59 | 0.333 | 277.000 | 108.00 | 30.000 |
| 7 | 10: 0: 0 | 0.417 | 312.000 | 108.00 | 35.000 |
| 8 | 10: 5: 0 | 0.500 | 329.000 | 108.00 | 17.000 |
| INITIAL SHUT-IN | | | | | |
| 9 | 10: 8: 0 | 0.550 | 666.000 | 108.00 | 337.000 |
| 10 | 10:11: 0 | 0.600 | 746.000 | 108.00 | 80.000 |
| 11 | 10:14: 0 | 0.650 | 794.000 | 108.00 | 48.000 |
| 12 | 10:17: 0 | 0.700 | 826.000 | 108.00 | 32.000 |
| 13 | 10:20: 0 | 0.750 | 857.000 | 108.00 | 31.000 |
| 14 | 10:23: 0 | 0.800 | 880.000 | 108.00 | 23.000 |
| 15 | 10:26: 0 | 0.850 | 898.000 | 108.00 | 18.000 |
| 16 | 10:29: 0 | 0.900 | 917.000 | 108.00 | 19.000 |
| 17 | 10:32: 0 | 0.950 | 933.000 | 108.00 | 16.000 |
| 18 | 10:35: 0 | 1.000 | 946.000 | 108.00 | 13.000 |
| 19 | 10:38: 0 | 1.050 | 958.000 | 108.00 | 12.000 |
| 20 | 10:41: 0 | 1.100 | 970.000 | 108.00 | 12.000 |
| 21 | 10:44: 0 | 1.150 | 982.000 | 108.00 | 12.000 |
| 22 | 10:47: 0 | 1.200 | 991.000 | 108.00 | 9.000 |
| 23 | 10:50: 0 | 1.250 | 995.000 | 108.00 | 4.000 |
| FINAL FLOW | | | | | |
| 24 | 10:51: 0 | 1.267 | 427.000 | 108.00 | -568.000 |
| 25 | 10:54:59 | 1.333 | 427.000 | 108.00 | 0.000 |
| 26 | 11: 0: 0 | 1.417 | 446.000 | 108.00 | 19.000 |
| 27 | 11: 5: 0 | 1.500 | 479.000 | 108.00 | 33.000 |
| 28 | 11: 9:59 | 1.583 | 508.000 | 108.00 | 29.000 |
| 29 | 11:15: 0 | 1.667 | 533.000 | 108.00 | 25.000 |
| 30 | 11:20: 0 | 1.750 | 555.000 | 108.00 | 22.000 |
| 31 | 11:24:59 | 1.833 | 572.000 | 108.00 | 17.000 |
| 32 | 11:30: 0 | 1.917 | 593.000 | 108.00 | 21.000 |
| 33 | 11:35: 0 | 2.000 | 609.000 | 108.00 | 16.000 |
| 34 | 11:39:59 | 2.083 | 622.000 | 108.00 | 13.000 |
| 35 | 11:45: 0 | 2.167 | 638.000 | 108.00 | 16.000 |
| FINAL SHUT-IN | | | | | |
| 36 | 11:48: 0 | 2.217 | 756.000 | 108.00 | 118.000 |
| 37 | 11:51: 0 | 2.267 | 796.000 | 108.00 | 40.000 |
| 38 | 11:54: 0 | 2.317 | 824.000 | 108.00 | 28.000 |
| 39 | 11:57: 0 | 2.367 | 842.000 | 108.00 | 18.000 |
| 40 | 12: 0: 0 | 2.417 | 858.000 | 108.00 | 16.000 |
| 41 | 12: 3: 0 | 2.467 | 871.000 | 108.00 | 13.000 |
| 42 | 12: 6: 0 | 2.517 | 882.000 | 108.00 | 11.000 |
| 43 | 12: 9: 0 | 2.567 | 894.000 | 108.00 | 12.000 |
| 44 | 12:12: 0 | 2.617 | 902.000 | 108.00 | 8.000 |
| 45 | 12:15: 0 | 2.667 | 914.000 | 108.00 | 12.000 |
| 46 | 12:18: 0 | 2.717 | 921.000 | 108.00 | 7.000 |
| 47 | 12:21: 0 | 2.767 | 929.000 | 108.00 | 8.000 |
| 48 | 12:24: 0 | 2.817 | 934.000 | 108.00 | 5.000 |

COMPANY : HUTCHINSON OIL COMPANY
WELL : #3-19
GAUGE # : 10270
DATE : 30/ 7/88

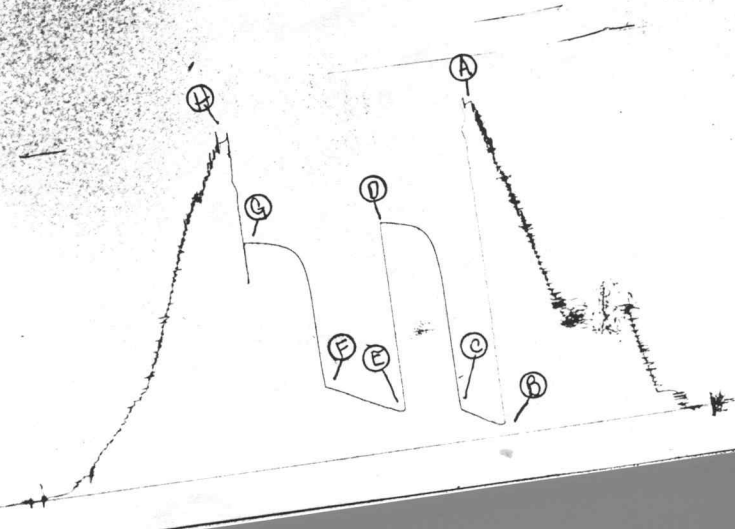
FIELD : KRANKENBERG
JOB # : 14520
DEPTH : 3542
TEST :

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-------------|-----------------------|----------------------------|------------------|---------------|----------------------|
| 49 | 12:27: 0 | 2.867 | 942.000 | 108.00 | 8.000 |
| 50 | 12:30: 0 | 2.917 | 946.000 | 108.00 | 4.000 |

WESTERN TESTING CO. INC.

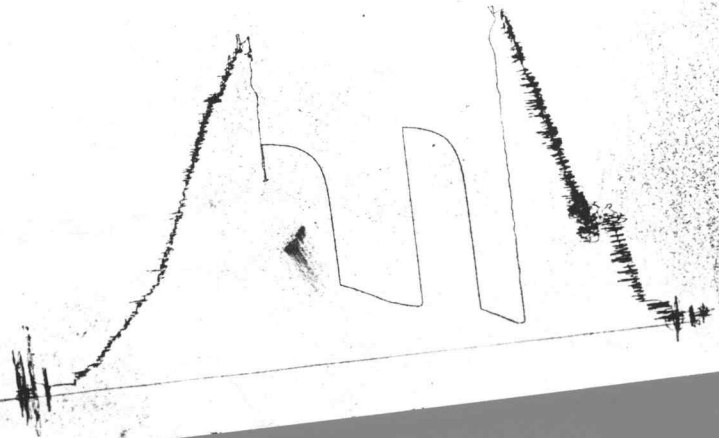
TK# 14521
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10270

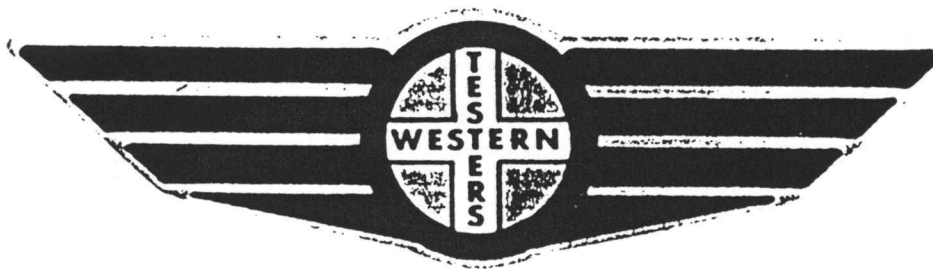


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13268



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY HUTCHINSON OIL COMPANY

LEASE & WELL NO.

KRANKENBERG #3-19

SEC. 19

TWP. 22S

RGE. 12W

TEST NO. 5

DATE

7/31/88

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7/31/88 TICKET : 14521
CUSTOMER : HUTCHINSON OIL COMPANY LEASE : KRANKENBERG
WELL : 3-19 TEST: 5 GEOLOGIST : HUTCHINSON
ELEVATION : 1870 GL FORMATION : ARBUCKLE
SECTION : 19 TOWNSHIP : 22S
RANGE : 12W COUNTY : STAFFORD STATE : KANSAS
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3680 TO : 3750 TOTAL DEPTH : 3750
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3675 SIZE : 6.63
PACKER DEPTH : 3680 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 RIG 2
MUD TYPE : CHEMICAL VISCOSITY : 44
WEIGHT : 9.1 WATER LOSS (CC) : 8.8
CHLORIDES (PPM) : 6000
JARS-MAKE : SERIAL NUMBER :
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3660 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 70 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD WEAK BLOW BUILDING TO A
BLOW COMMENT #2 : STRONG BLOW IN 5 MINUTES. GAS TO SURFACE IN 18
BLOW COMMENT #3 : MINUTES.
BLOW COMMENT #4 : FINAL FLOW PERIOD GAS TO SURFACE.

| | | | | | | |
|-----------|---|-----|----|-----|------------------------------------|------------|
| RECOVERED | : | 725 | FT | OF: | CLEAN OIL | GRAVITY 31 |
| RECOVERED | : | 120 | FT | OF: | OIL & GAS CUT MUD | |
| RECOVERED | : | 0 | FT | OF: | 15% OIL; 17% GAS; 6% WTR; 52% MUD | |
| RECOVERED | : | 60 | FT | OF: | OIL & GAS CUT MUD | |
| RECOVERED | : | 0 | FT | OF: | 10% OIL; 16% GAS; 12% WTR; 62% MUD | |
| RECOVERED | : | 60 | FT | OF: | SLIGHTLY OIL & GAS CUT MUDDY WATER | |
| RECOVERED | : | 0 | FT | OF: | 3% OIL; 5% GAS; 44% MUD; 48% WATER | |

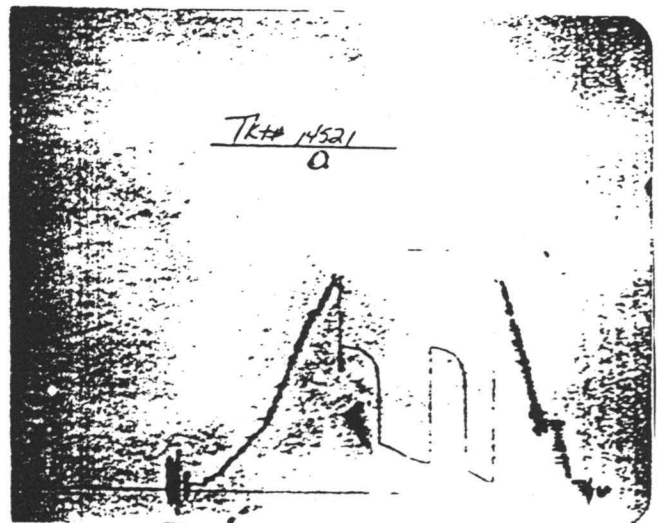
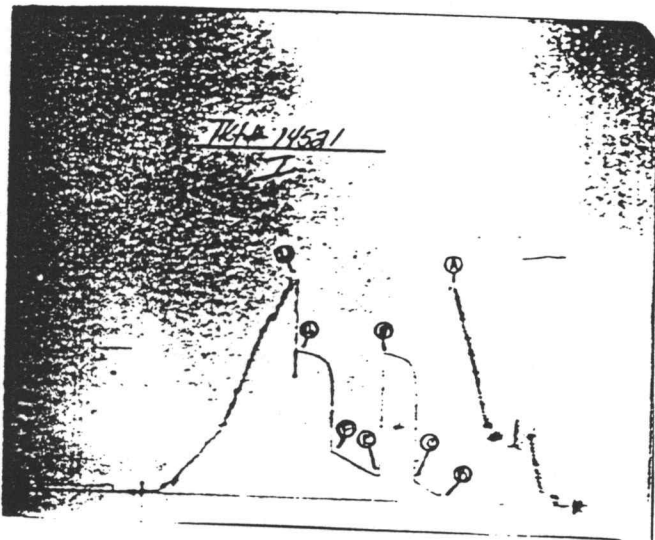
| | | |
|-----------------------|---|-------------|
| Total Barrels Fluid | = | 13.54 |
| Total Fluid Prod Rate | = | 229.31 BFPD |
| Indicated Oil Rate | = | 178.41 BOPD |
| Indicated Wtr Rate | = | 10.27 BWPD |
| Corrected Oil Rate | = | 210.50 BOPD |
| Corrected Wtr Rate | = | 12.11 BWPD |

REMARK 1 : CHLORIDES 14000 PPM
 REMARK 2 :
 REMARK 3 : GAS TOO WEAK TO GUAGE
 REMARK 4 :

SET PACKER(S) : 11:55 PM
 WELL TEMPERATURE : 113
 INITIAL HYDROSTATIC PRESSURE
 INITIAL FLOW PERIOD MIN: 30
 INITIAL CLOSED IN PERIOD MIN: 42
 FINAL FLOW PERIOD MIN: 55
 FINAL CLOSED IN PERIOD MIN: 45
 FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM : 2:55 AM

| | | |
|-----|------|------------------|
| (A) | 1817 | |
| (B) | 62 | PSI TO (C) : 172 |
| (D) | 1240 | |
| (E) | 214 | PSI TO (F) : 396 |
| (G) | 1236 | |
| (H) | 1792 | |



WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : HUTCHINSON OIL COMPANY
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : 3-19
DATE : 7/31/88
GAUGE NO : 10270

OPERATIONAL COMMENTS

CHLORIDES 14000 PPM

GAS TOO WEAK TO GAUGE

COMPANY : HUTCHINSON OIL COMPANY

WELL : 3-19

GAUGE # : 10270

DATE : 31/ 7/88

FIELD : KRANKENBERG

JOB # : 14521

DEPTH : 3750

TEST : CHLORIDES 14000 PPM

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|---------------------|--------------------|-------------------------|---------------|------------|-------------------|
| INITIAL FLOW PERIOD | | | | | |
| 2 | 11:55: 0 | 0.000 | 62.000 | 113.00 | 0.000 |
| 3 | 11:59:59 | 0.083 | 64.000 | 113.00 | 2.000 |
| 4 | 12: 5: 0 | 0.167 | 84.000 | 113.00 | 20.000 |
| 5 | 12:10: 0 | 0.250 | 103.000 | 113.00 | 19.000 |
| 6 | 12:14:59 | 0.333 | 128.000 | 113.00 | 25.000 |
| 7 | 12:20: 0 | 0.417 | 150.000 | 113.00 | 22.000 |
| 8 | 12:25: 0 | 0.500 | 172.000 | 113.00 | 22.000 |
| INITIAL SHUT-IN | | | | | |
| 9 | 12:28: 0 | 0.550 | 990.000 | 113.00 | 818.000 |
| 10 | 12:31: 0 | 0.600 | 1089.000 | 113.00 | 99.000 |
| 11 | 12:34: 0 | 0.650 | 1140.000 | 113.00 | 51.000 |
| 12 | 12:37: 0 | 0.700 | 1167.000 | 113.00 | 27.000 |
| 13 | 12:40: 0 | 0.750 | 1184.000 | 113.00 | 17.000 |
| 14 | 12:43: 0 | 0.800 | 1196.000 | 113.00 | 12.000 |
| 15 | 12:46: 0 | 0.850 | 1204.000 | 113.00 | 8.000 |
| 16 | 12:49: 0 | 0.900 | 1211.000 | 113.00 | 7.000 |
| 17 | 12:52: 0 | 0.950 | 1217.000 | 113.00 | 6.000 |
| 18 | 12:55: 0 | 1.000 | 1223.000 | 113.00 | 6.000 |
| 19 | 12:58: 0 | 1.050 | 1228.000 | 113.00 | 5.000 |
| 20 | 13: 1: 0 | 1.100 | 1233.000 | 113.00 | 5.000 |
| 21 | 13: 4: 0 | 1.150 | 1238.000 | 113.00 | 5.000 |
| 22 | 13: 7: 0 | 1.200 | 1240.000 | 113.00 | 2.000 |
| FINAL FLOW PERIOD | | | | | |
| 23 | 13: 8: 0 | 1.217 | 214.000 | 113.00 | -1026.000 |
| 24 | 13:11:59 | 1.283 | 214.000 | 113.00 | 0.000 |
| 25 | 13:17: 0 | 1.367 | 230.000 | 113.00 | 16.000 |
| 26 | 13:22: 0 | 1.450 | 246.000 | 113.00 | 16.000 |
| 27 | 13:26:59 | 1.533 | 266.000 | 113.00 | 20.000 |
| 28 | 13:32: 0 | 1.617 | 284.000 | 113.00 | 18.000 |
| 29 | 13:37: 0 | 1.700 | 300.000 | 113.00 | 16.000 |
| 30 | 13:41:59 | 1.783 | 322.000 | 113.00 | 22.000 |
| 31 | 13:47: 0 | 1.867 | 342.000 | 113.00 | 20.000 |
| 32 | 13:52: 0 | 1.950 | 362.000 | 113.00 | 20.000 |
| 33 | 13:56:59 | 2.033 | 380.000 | 113.00 | 18.000 |
| 34 | 14: 2: 0 | 2.117 | 396.000 | 113.00 | 16.000 |
| FINAL SHUT-IN | | | | | |
| 35 | 14: 5: 0 | 2.167 | 1050.000 | 113.00 | 654.000 |
| 36 | 14: 8: 0 | 2.217 | 1114.000 | 113.00 | 64.000 |
| 37 | 14:11: 0 | 2.267 | 1148.000 | 113.00 | 34.000 |
| 38 | 14:14: 0 | 2.317 | 1167.000 | 113.00 | 19.000 |
| 39 | 14:17: 0 | 2.367 | 1182.000 | 113.00 | 15.000 |
| 40 | 14:20: 0 | 2.417 | 1192.000 | 113.00 | 10.000 |
| 41 | 14:23: 0 | 2.467 | 1199.000 | 113.00 | 7.000 |
| 42 | 14:26: 0 | 2.517 | 1204.000 | 113.00 | 5.000 |
| 43 | 14:29: 0 | 2.567 | 1212.000 | 113.00 | 8.000 |
| 44 | 14:32: 0 | 2.617 | 1218.000 | 113.00 | 6.000 |
| 45 | 14:35: 0 | 2.667 | 1224.000 | 113.00 | 6.000 |
| 46 | 14:38: 0 | 2.717 | 1228.000 | 113.00 | 4.000 |
| 47 | 14:41: 0 | 2.767 | 1232.000 | 113.00 | 4.000 |
| 48 | 14:44: 0 | 2.817 | 1234.000 | 113.00 | 2.000 |

COMPANY : HUTCHINSON OIL COMPANY
WELL : 3-19
GAUGE # : 10270
DATE : 31/ 7/88

FIELD : KRANKENBERG
JOB # : 14521
DEPTH : 3750
TEST : CHLORIDES 14000 PPM

| DATA No. | REAL TIME HR:MN:SS | ELAPSE TIME DELTA HOURS | PRESSURE PSIG | TEMP DEG F | DELTA P Pi-P(i-1) |
|-------------|-----------------------|----------------------------|------------------|---------------|----------------------|
| 49 | 14:47: 0 | 2.867 | 1236.000 | 113.00 | 2.000 |

WESTERN TESTING CO. INC.