



# **FORMATION TEST REPORT**

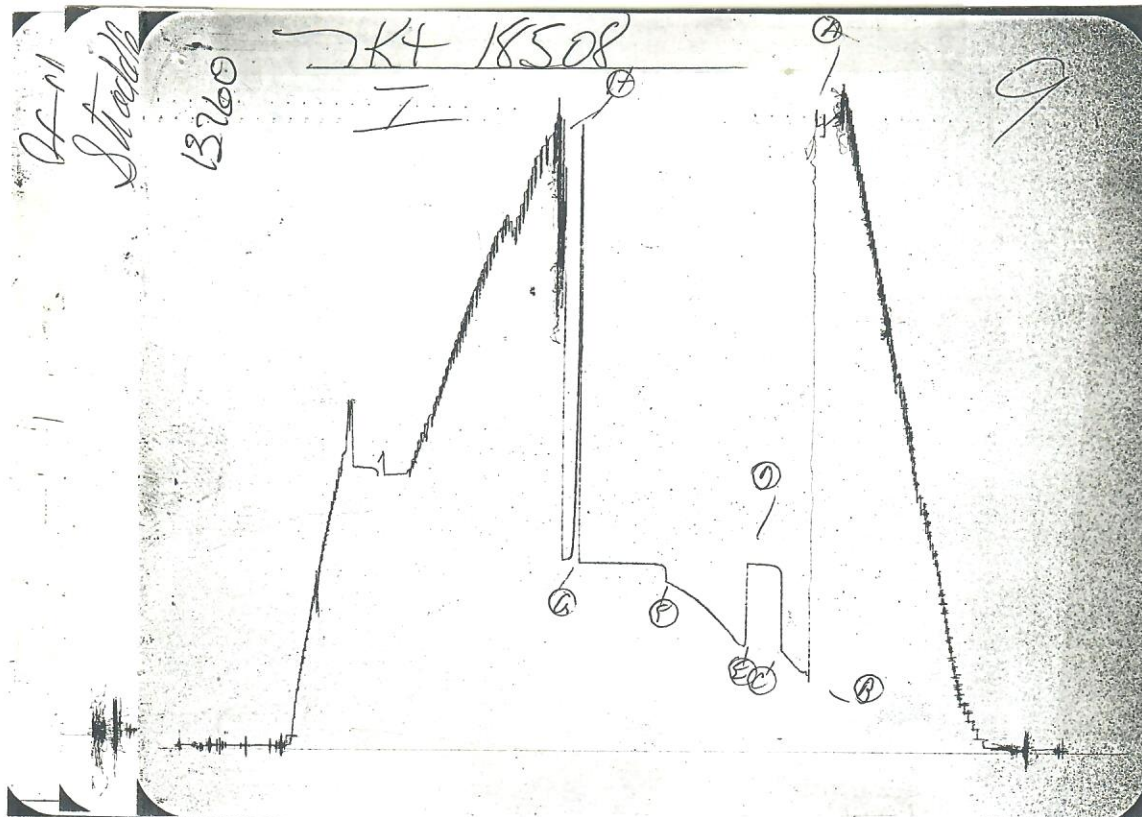


Home Office:

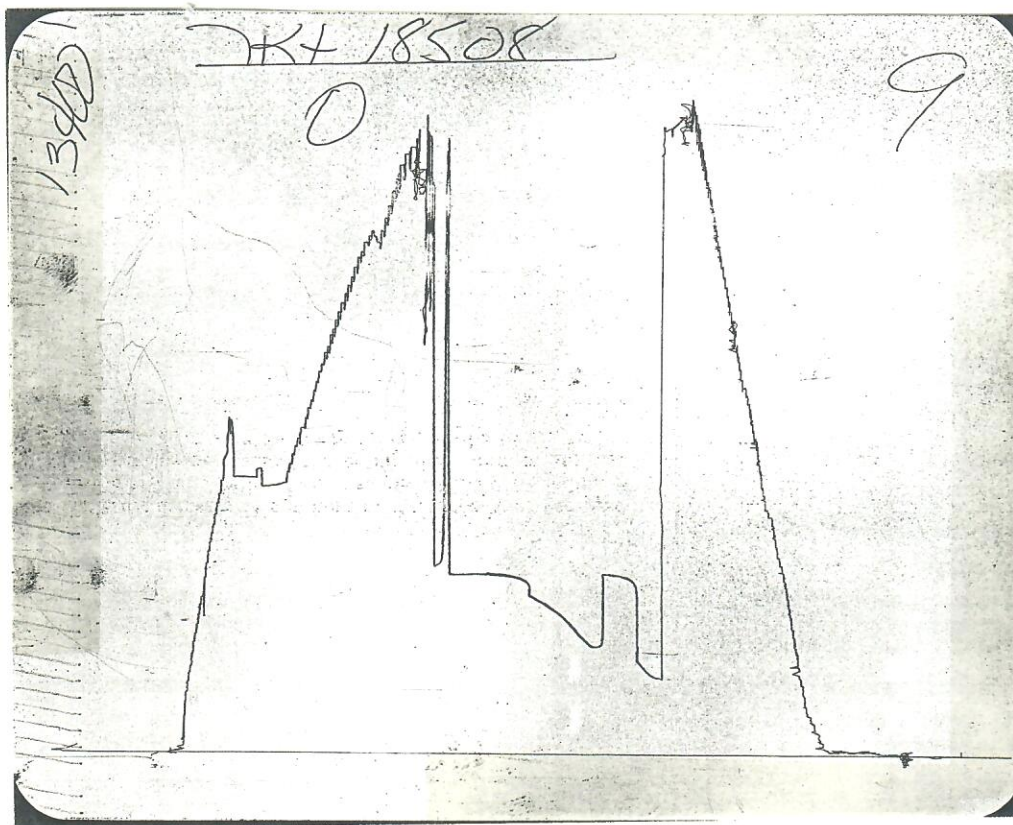
Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861



Inside Recorder

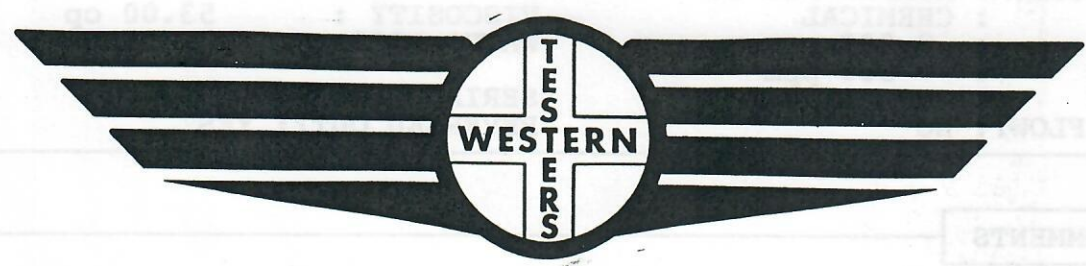


Outside Recorder

COMPANY UNION PACIFIC RESOURCES PLEASE & WELL NO. #4 CHRISTOPHER 43-1 SEC. 1 TWP. 12S RGE. 51W TEST NO. 1 DATE 7/31/93

# FORMATION TEST REPORT

RECEIVED  
AUG 09 1993  
COLO. OIL & GAS CONS. COMM.



Home Office: Wichita, Kansas 67201  
P.O. Box 1599 Phone 1 - 800-688- 7021



## DST REPORT

### GENERAL INFORMATION

DATE	: 7/31/93	TICKET	: 18508
CUSTOMER	: UNION PACIFIC RESOURCES	LEASE	: CHRISTOPHER 43-1
WELL	: #4	TEST: 1	GEOLOGIST: MARTIN
ELEVATION	: 5042 GR	FORMATION	: MORROW
SECTION	: 10	TOWNSHIP	: 12S
RANGE	: 51W	STATE	: CO
GAUGE SN#	: 13760	CLOCK	: 12
COUNTY	: CHEYENNE		
RANGE	: 3950		

### WELL INFORMATION

PERFORATION INTERVAL FROM:	6570.00 ft	TO:	6595.00 ft	TVD:	6723.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	6583.0 ft		6586.0 ft		
TEMPERATURE:	168.0				
DRILL COLLAR LENGTH:	455.0 ft	I.D.:	2.200 in		
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH :	6083.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH :	32.0 ft	TOOL SIZE :	5.500 in		
ANCHOR LENGTH :	25.0 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:	6565.0 ft	SIZE:	6.750 in		
PACKER DEPTH:	6570.0 ft	SIZE:	6.750 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		

### MUD INFORMATION

DRILLING CON. :	MURFIN RIG 14	VISCOSITY :	53.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.600 cc
WEIGHT :	9.000 ppg		
CHLORIDES :	300 ppm	SERIAL NUMBER:	415
JARS-MAKE :	WTC	REVERSED OUT?:	YES
DID WELL FLOW?:	NO		

### COMMENTS

#### Comment

INITIAL FLOW PERIOD OPENED WITH GOOD BLOW - BOTTOM OF BUCKET IN 1 MINUTE. FINAL FLOW PERIOD OPENED WITH GOOD BLOW - BOTTOM OF BUCKET IN 1 MINUTE.

# DST REPORT (CONTINUED)

## COMMENTS (CONTINUED)

### Comment

GAS TO SURFACE IN 5 MINUTES. SEE GAS SHEET  
ATTACHED.  
AFE #15279

## FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
1900.0	100.0	0.0	0.0	0.0	OIL 34 GRAVITY @ 60 DEG.
4695.0	0.0	100.0	0.0	0.0	GAS

## RATE INFORMATION

OIL VOLUME: 26.6501 STB  
GAS VOLUME: 345.9450 SCF  
MUD VOLUME: 0.0000 STB  
WATER VOLUME: 0.0000 STB  
TOTAL FLUID : 26.6501 STB

TOTAL FLOW TIME: 80.0000 min.  
AVERAGE OIL RATE: 479.7013 STB/D  
AVERAGE WATER RATE: 0.0000 STB/D

## FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 3202.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	361.00	517.00
INITIAL SHUT-IN	30.00		945.00
FINAL FLOW	60.00	536.00	848.00
FINAL SHUT-IN	60.00		945.00

FINAL HYDROSTATIC PRESSURE: 3112.00



# DST REPORT (CONTINUED)

## OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 3242.00

Description	Duration	p1	p End
INITIAL FLOW	20.00	351.00	511.00
INITIAL SHUT-IN	30.00		951.00
FINAL FLOW	60.00	531.00	856.00
FINAL SHUT-IN	60.00		951.00

FINAL HYDROSTATIC PRESSURE: 3201.00

## RATE INFORMATION

TOTAL FLUID : 26.6501 STB	WATER VOLUME: 0.0000 STB	NUD VOLUME: 0.0000 STB	GAS VOLUME: 26.6501 STB
AVERAGE FLUID RATE: 479.7013 STB/D	AVERAGE WATER RATE: 0.0000 STB/D		
TOTAL FLOW TIME: 80.0000 MIN			

## FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 3202.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	361.00	517.00
INITIAL SHUT-IN	30.00		945.00
FINAL FLOW	60.00	536.00	848.00
FINAL SHUT-IN	60.00		945.00

FINAL HYDROSTATIC PRESSURE: 3112.00

# GAS FLOW REPORT

## GENERAL INFORMATION

DATE : 7/31/93	TICKET : 18508
CUSTOMER : UNION PACIFIC RESOURCES	LEASE : CHRISTOPHER 43-1
WELL : #4	TEST: 1
ELEVATION: 5042 GR	GEOLOGIST: MARTIN
SECTION : 10	FORMATION: MORROW
RANGE : 51W	TOWNSHIP : 12S
COUNTY: CHEYENNE	STATE : CO
GAUGE SN#: 13760	RANGE : 3950
	CLOCK : 12

## PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
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## SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.250	20" WATER	7510 SCF/D
15 MIN	MERLA	0.250	22" WATER	7880 SCF/D
20 MIN	MERLA	0.250	30" WATER	9200 SCF/D
25 MIN	MERLA	0.250	27" WATER	8700 SCF/D
30 MIN	MERLA	0.250	37" WATER	10300 SCF/D
35 MIN	MERLA	0.250	32" WATER	9500 SCF/D
40 MIN	MERLA	0.250	33" WATER	9600 SCF/D
45 MIN	MERLA	0.250	37" WATER	10300 SCF/D
50 MIN	MERLA	0.250	42" WATER	10900 SCF/D
55 MIN	MERLA	0.250	42" WATER	10900 SCF/D
60 MIN	MERLA	0.250	37" WATER	10300 SCF/D

# PRESSURE TRANSIENT REPORT

## GENERAL INFORMATION

DATE : 7/31/93	TICKET : 18508
CUSTOMER : UNION PACIFIC RESOURCES	LEASE : CHRISTOPHER 43-1
WELL : #4	TEST: 1
ELEVATION: 5042 GR	GEOLOGIST: MARTIN
SECTION : 10	FORMATION: MORROW
RANGE : 51W	TOWNSHIP : 12S
COUNTY: CHEYENNE	STATE : CO
Gauge SN#: 13760	RANGE : 3950
	CLOCK : 12

## INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	351.00	351.00
5.00	404.00	53.00
10.00	433.00	29.00
15.00	472.00	39.00
20.00	511.00	39.00

## INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	933.00	933.00	0.00
6.00	942.00	9.00	0.00
9.00	944.00	2.00	0.00
12.00	945.00	1.00	0.00
15.00	946.00	1.00	0.00
18.00	947.00	1.00	0.00
21.00	948.00	1.00	0.00
24.00	949.00	1.00	0.00
27.00	950.00	1.00	0.00
30.00	951.00	1.00	0.00

## FINAL FLOW

Time (min)	Pressure	Delta P
0.00	531.00	531.00
5.00	544.00	13.00
10.00	585.00	41.00



# PRESSURE TRANSIENT REPORT (CONTINUED)

## FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
15.00	624.00	39.00
20.00	661.00	37.00
25.00	696.00	35.00
30.00	723.00	27.00
35.00	756.00	33.00
40.00	784.00	28.00
45.00	805.00	21.00
50.00	824.00	19.00
55.00	842.00	18.00
60.00	856.00	14.00

## FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	939.00	939.00	0.00
6.00	945.00	6.00	0.00
9.00	945.00	0.00	0.00
12.00	946.00	1.00	0.00
15.00	946.00	0.00	0.00
18.00	946.00	0.00	0.00
21.00	947.00	1.00	0.00
24.00	947.00	0.00	0.00
27.00	947.00	0.00	0.00
30.00	948.00	1.00	0.00
33.00	948.00	0.00	0.00
36.00	948.00	0.00	0.00
39.00	949.00	1.00	0.00
42.00	949.00	0.00	0.00
45.00	950.00	1.00	0.00
48.00	950.00	0.00	0.00
51.00	950.00	0.00	0.00
54.00	951.00	1.00	0.00
57.00	951.00	0.00	0.00
60.00	951.00	0.00	0.00

# FLUID SAMPLE REPORT

## GENERAL INFORMATION

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CUSTOMER : UNION PACIFIC RESOURCES	LEASE : CHRISTOPHER 43-1
WELL : #4	TEST: 1
ELEVATION: 5042 GR	GEOLOGIST: MARTIN
SECTION : 10	FORMATION: MORROW
RANGE : 51W	TOWNSHIP : 12S
COUNTY: CHEYENNE	STATE : CO
Gauge SN#: 13760	RANGE : 3950
	CLOCK : 12

## SAMPLE INFORMATION

PRESSURE IN SAMPLER:	600.00 PSIG	BHT: 168.0 DEG F
TOTAL VOLUME OF SAMPLER:	3150.00 cc	
TOTAL VOLUME OF SAMPLE:	2700.00 cc	
OIL:	2700.00 cc	
WATER:	0.00 cc	
MUD:	0.00 cc	
GAS:	3.00 cc	
OTHER:	0.00 cc	

## RESISTIVITY

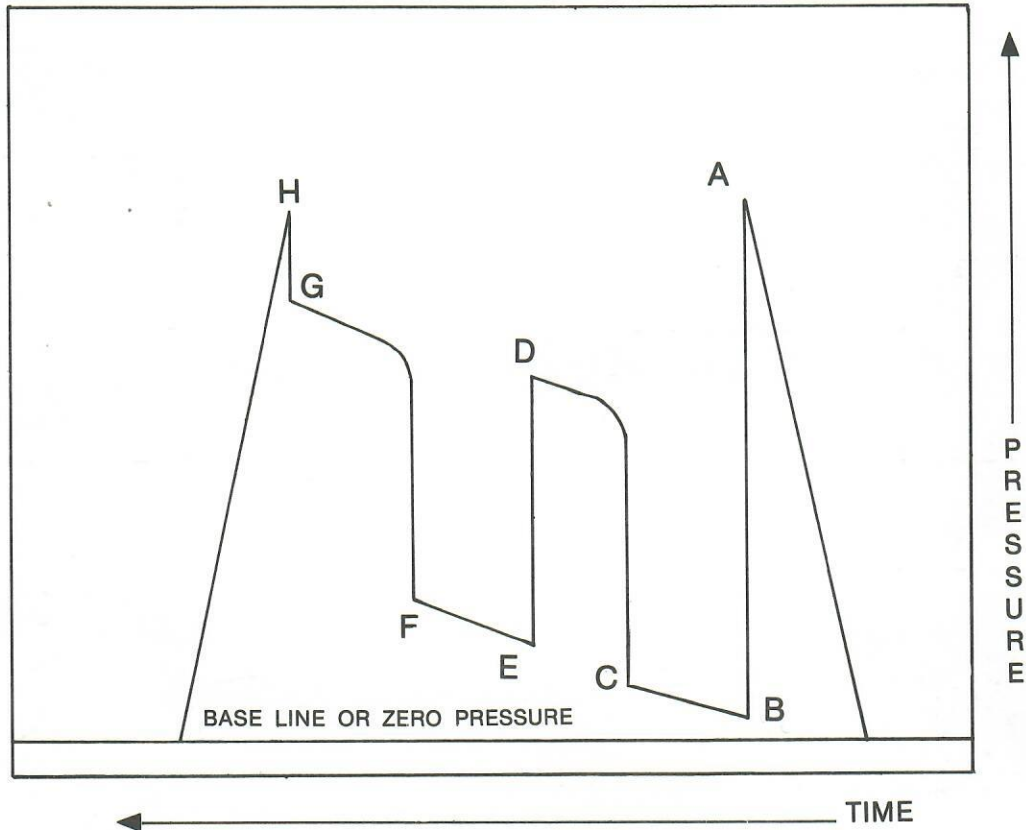
DRILLING MUD:	CHLORIDE CONTENT:	0.00 ppm
MUD PIT SAMPLE:	CHLORIDE CONTENT:	0.00 ppm
GAS/OIL RATIO:	GRAVITY:	
WHERE WAS SAMPLE DRAINED:		
REMARKS: AFE# 15279		



### COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

### AK-1 Recorders



A - Initial Hydrostatic

B - First Initial Flow

C - First Final Flow

D - Initial Shut-In

E - Second Initial Flow

F - Second Final Flow

G - Final Shut-In

H - Final Hydrostatic