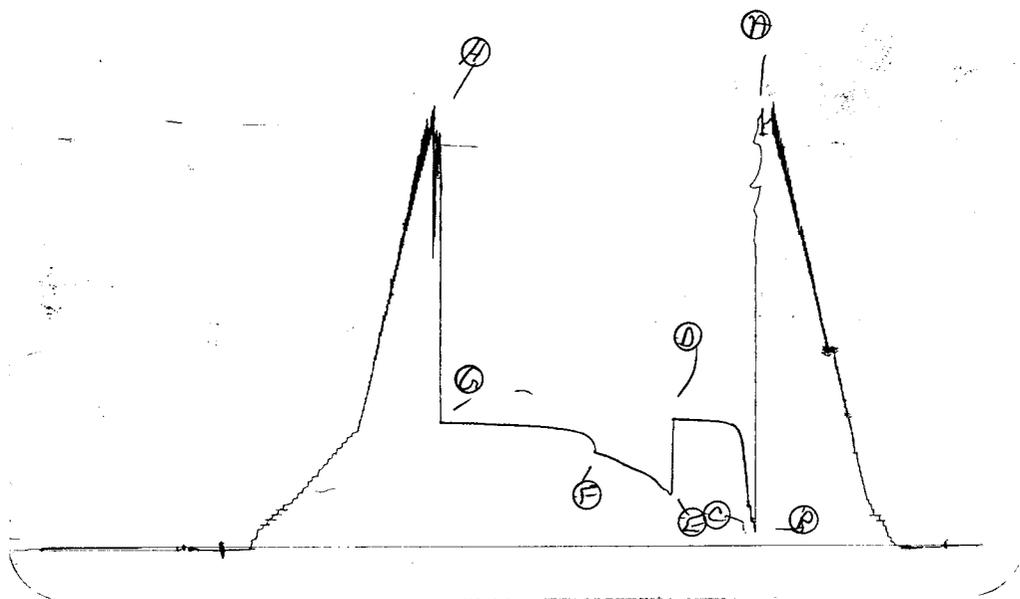


KT 18986

43849 DST1

1

6



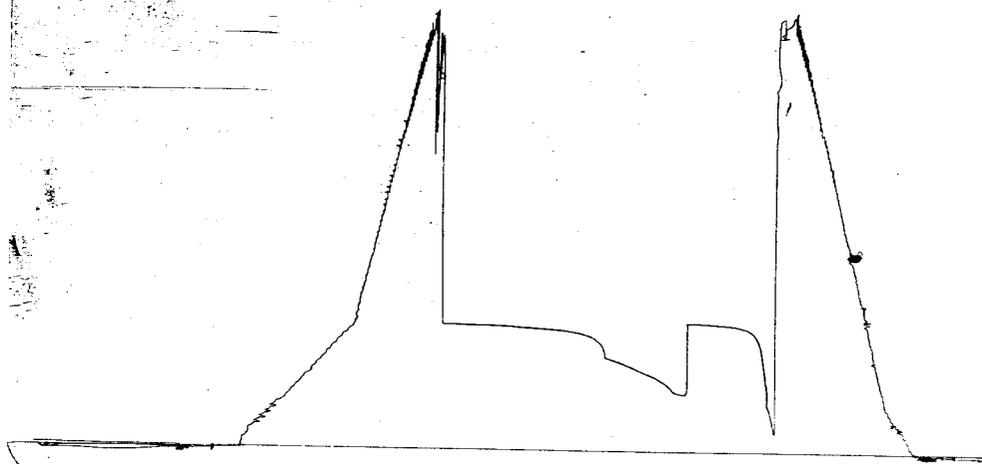
Inside Recorder

KT 18986

2604 DST1

0

6



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 3-22-93	TICKET : 18986
CUSTOMER : NORTH AMERICAN RESOURCES	LEASE : KESTER
WELL : #18-1 TEST: 1	GEOLOGIST: W. HANSEN
ELEVATION: 3058 K.B.	FORMATION: MORROW SAND
SECTION : 18	TOWNSHIP : 21S
RANGE : 34W COUNTY: FINNEY	STATE : KS
GAUGE SN#: 3849 RANGE : 4200	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4762.00 ft	TO: 4837.00 ft	TVD: 4837.0 ft
DEPTH OF SELECTIVE ZONE:	TEST TYPE: OIL	
DEPTH OF RECORDERS: 4769.0 ft	4772.0 ft	
TEMPERATURE: 114.0		
DRILL COLLAR LENGTH: 469.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4261.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 32.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 75.0 ft	ANCHOR SIZE:	6.000 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5 XH
PACKER DEPTH: 4757.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4762.0 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. : MURFIN #20	VISCOSITY : 53.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 9.500 cc
WEIGHT : 9.300 ppg	
CHLORIDES : 6000 ppm	SERIAL NUMBER: 408
JARS-MAKE : WTC	REVERSED OUT?: NO
DID WELL FLOW?: NO	

COMMENTS

Comment

FAIR TO A STRONG BLOW OFF BOTTOM OF BUCKET IN 4 MINUTES ON INITIAL AND FINAL FLOW PERIODS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	940' GAS ABOVE FLUID.
850.0	100.0	0.0	0.0	0.0	CLEAN GASSY OIL
0.0	0.0	0.0	0.0	0.0	30 DEGREES GRAVITY AT
0.0	0.0	0.0	0.0	0.0	60 DEGREES F.
240.0	48.0	14.0	0.0	38.0	GASSY MUD CUT OIL
140.0	55.0	5.0	0.0	40.0	MUD CUT OIL & EMULSION
0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	12.0569	STB	TOTAL FLOW TIME:	65.0000	min.
GAS VOLUME:	1.1210	SCF	AVERAGE OIL RATE:	283.1418	STB/D
MUD VOLUME:	0.7239	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	12.7807	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2307.00

Description	Duration	p1	p End
INITIAL FLOW	5.00	68.00	227.00
INITIAL SHUT-IN	60.00		688.00
FINAL FLOW	60.00	280.00	514.00
FINAL SHUT-IN	120.00		688.00

FINAL HYDROSTATIC PRESSURE: 2264.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2300.00

Description	Duration	p1	p End
INITIAL FLOW	5.00	68.00	221.00
INITIAL SHUT-IN	60.00		684.00
FINAL FLOW	60.00	278.00	518.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION (CONTINUED)

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
FINAL SHUT-IN	120.00		682.00
FINAL HYDROSTATIC PRESSURE:	2266.00		

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 3-22-93	TICKET	: 18986
CUSTOMER	: NORTH AMERICAN RESOURCES	LEASE	: KESTER
WELL	: #18-1	TEST:	1
ELEVATION:	3058 K.B.	GEOLOGIST:	W. HANSEN
SECTION	: 18	FORMATION:	MORROW SAND
RANGE	: 34W	TOWNSHIP	: 21S
GAUGE SN#:	3849	STATE	: KS
		CLOCK	: 12
		COUNTY:	FINNEY
		RANGE	: 4200

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	68.00	68.00
5.00	221.00	153.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	404.00	404.00	0.00
6.00	480.00	76.00	0.00
9.00	608.00	128.00	0.00
12.00	642.00	34.00	0.00
15.00	654.00	12.00	0.00
18.00	665.00	11.00	0.00
21.00	671.00	6.00	0.00
24.00	675.00	4.00	0.00
27.00	677.00	2.00	0.00
30.00	679.00	2.00	0.00
33.00	680.00	1.00	0.00
36.00	681.00	1.00	0.00
39.00	682.00	1.00	0.00
42.00	683.00	1.00	0.00
45.00	683.00	0.00	0.00
48.00	683.00	0.00	0.00
51.00	684.00	1.00	0.00
54.00	684.00	0.00	0.00
57.00	684.00	0.00	0.00
60.00	684.00	0.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	278.00	278.00
5.00	304.00	26.00
10.00	329.00	25.00
15.00	363.00	34.00
20.00	389.00	26.00
25.00	408.00	19.00
30.00	421.00	13.00
35.00	438.00	17.00
40.00	455.00	17.00
45.00	476.00	21.00
50.00	493.00	17.00
55.00	506.00	13.00
60.00	518.00	12.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	518.00	518.00	0.00
6.00	581.00	63.00	0.00
9.00	604.00	23.00	0.00
12.00	617.00	13.00	0.00
15.00	625.00	8.00	0.00
18.00	631.00	6.00	0.00
21.00	638.00	7.00	0.00
24.00	640.00	2.00	0.00
27.00	642.00	2.00	0.00
30.00	646.00	4.00	0.00
33.00	648.00	2.00	0.00
36.00	650.00	2.00	0.00
39.00	654.00	4.00	0.00
42.00	656.00	2.00	0.00
45.00	659.00	3.00	0.00
48.00	661.00	2.00	0.00
51.00	662.00	1.00	0.00
54.00	663.00	1.00	0.00
57.00	664.00	1.00	0.00
60.00	665.00	1.00	0.00
63.00	666.00	1.00	0.00
66.00	667.00	1.00	0.00
69.00	668.00	1.00	0.00
72.00	669.00	1.00	0.00
75.00	671.00	2.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
78.00	672.00	1.00	0.00
81.00	673.00	1.00	0.00
84.00	674.00	1.00	0.00
87.00	675.00	1.00	0.00
90.00	675.00	0.00	0.00
93.00	676.00	1.00	0.00
96.00	677.00	1.00	0.00
99.00	677.00	0.00	0.00
102.00	677.00	0.00	0.00
105.00	678.00	1.00	0.00
108.00	679.00	1.00	0.00
111.00	680.00	1.00	0.00
114.00	681.00	1.00	0.00
117.00	682.00	1.00	0.00
120.00	682.00	0.00	0.00

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE	: 3-22-93	TICKET	: 18986
CUSTOMER	: NORTH AMERICAN RESOURCES	LEASE	: KESTER
WELL	: #18-1	TEST	: 1
ELEVATION	: 3058 K.B.	GEOLOGIST	: W. HANSEN
SECTION	: 18	FORMATION	: MORROW SAND
RANGE	: 34W	COUNTY	: FINNEY
GAUGE SN#	: 3849	STATE	: KS
		RANGE	: 4200
		CLOCK	: 12

SAMPLE INFORMATION

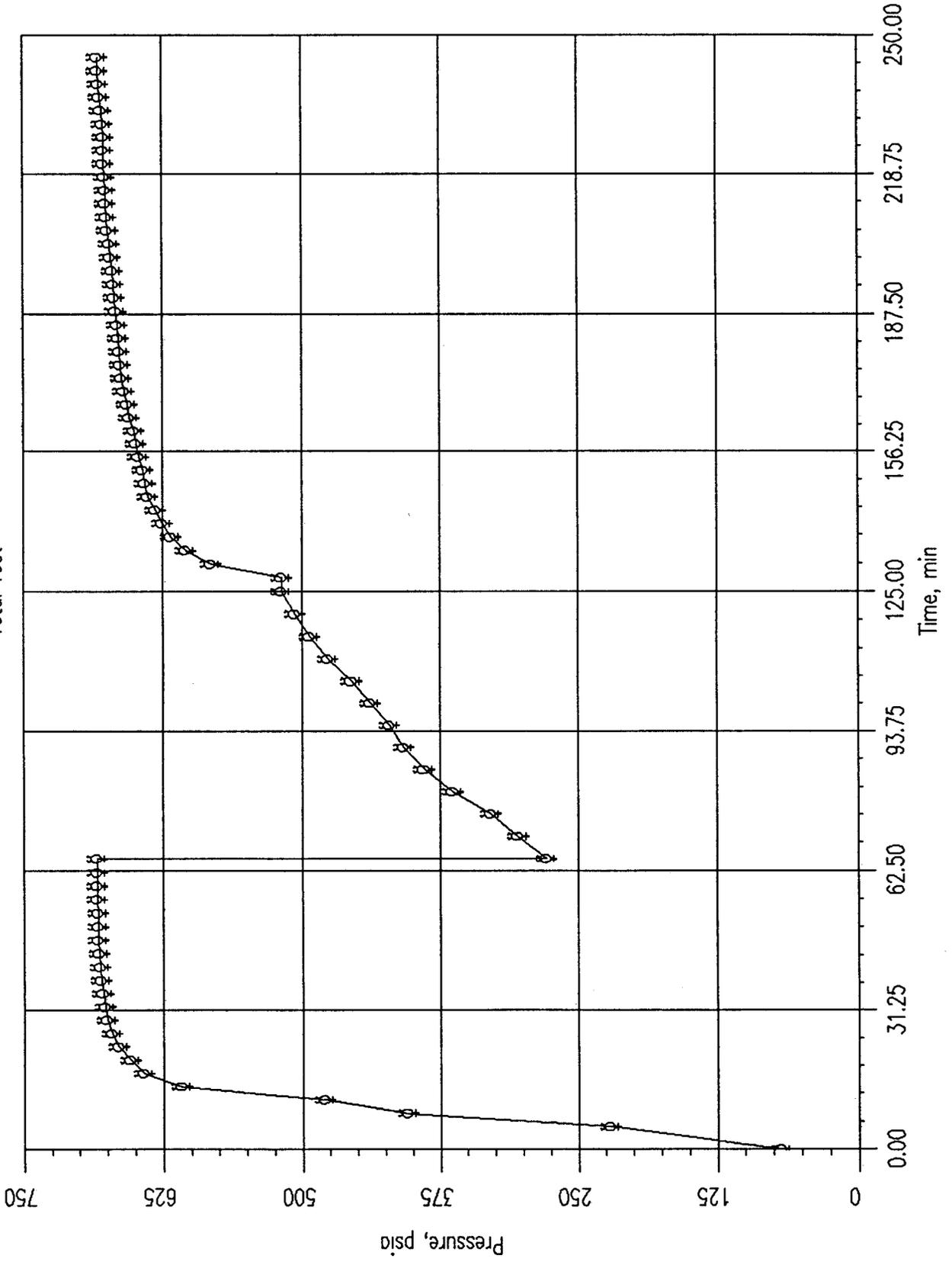
PRESSURE IN SAMPLER:	160.00 PSIG	BHT:	114.0 DEG F
TOTAL VOLUME OF SAMPLER:	3150.00 cc		
TOTAL VOLUME OF SAMPLE:	2700.00 cc		
OIL:	2700.00 cc		
WATER:	0.00 cc		
MUD:	0.00 cc		
GAS:	1.51 cc		
OTHER:	0.00 cc		

RESISTIVITY

DRILLING MUD:	CHLORIDE CONTENT:	0.00 ppm
MUD PIT SAMPLE: .66 AT 65 DEGREES F.	CHLORIDE CONTENT:	9900.00 ppm
GAS/OIL RATIO:	GRAVITY:	30
WHERE WAS SAMPLE DRAINED: ON LOCATION		
REMARKS:		

Profile Plot

Total Test

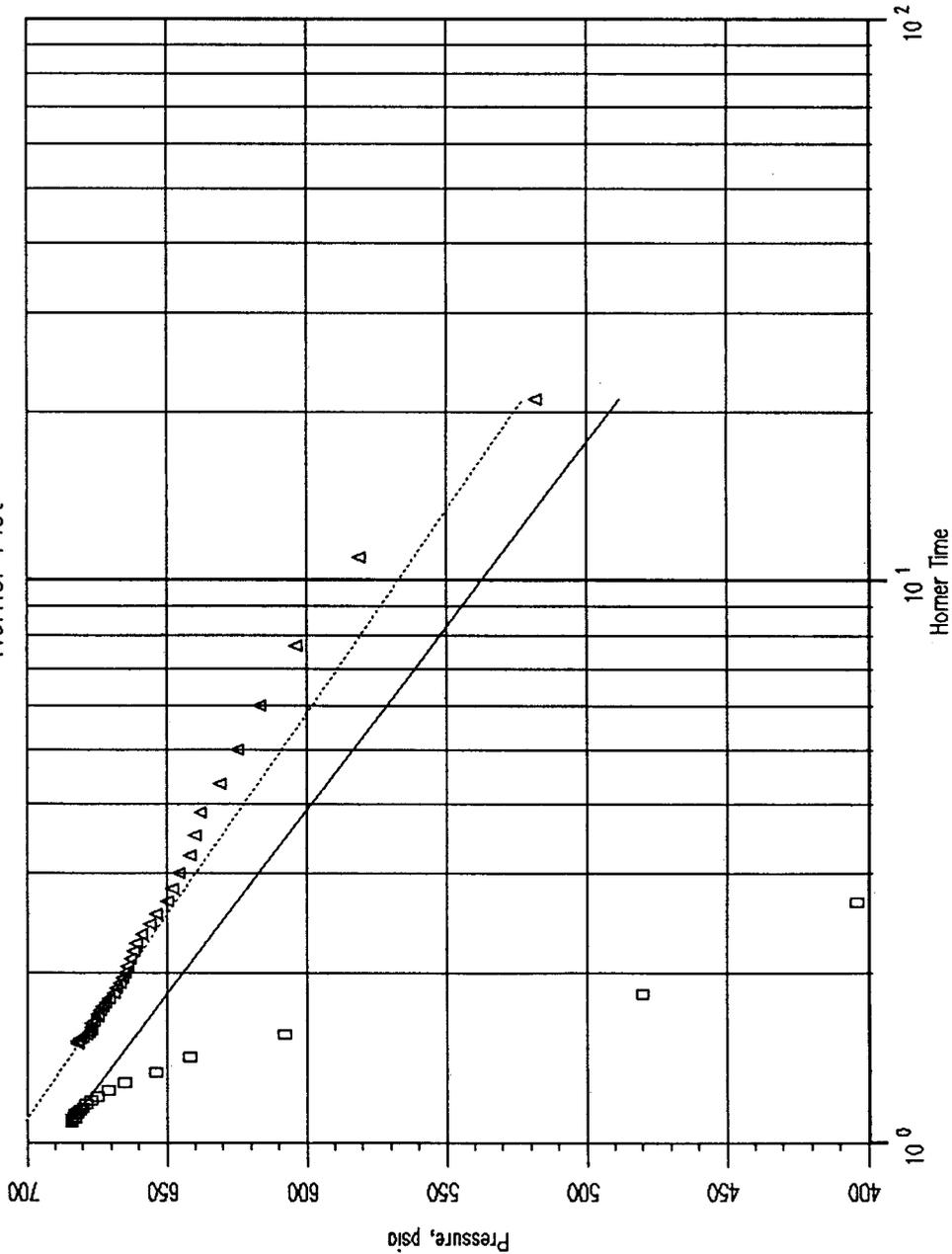


DATE 3-22-93
 CUSTOMER NORTH AMERICAN RESOURCES
 WELL #18-1
 ELEVATION 3058 K.B.
 SECTION 18
 RANGE 34W
 GAUGE SN# 3849

TEST 1
 COUNTY FINNEY
 RANGE 4200

TICKET 18986
 LEASE KESTER
 GEOLOGIST W. HANSEN
 FORMATION MORROW SAND
 TOWNSHIP 21S
 STATE KS
 CLOCK 12

Horner Plot



Result

	#1	#2
tp, hrs	0.08	1.00
Slope	-152.56	-138.61
Pstar, psig	689.79	706.02
P1hr, psig	684.49	664.29
Skin	1.17	-2.09
k, md	72.00	79.25
kh/u, md-ft/cp	320.15	352.37
ri, ft	4.66	16.95
DR, %	0.97	0.33
Drawdown Factor, %		0.292
Drawdown P*, %		-2.353

— BUILD 1
 BUILD 2

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 3-22-93	TICKET : 18986
CUSTOMER : NORTH AMERICAN RESOURCES	LEASE : KESTER
WELL : #18-1 TEST: 1	GEOLOGIST: W. HANSEN
ELEVATION: 3058 K.B.	FORMATION: MORROW SAND
SECTION : 18	TOWNSHIP : 21S
RANGE : 34W COUNTY: FINNEY	STATE : KS
GAUGE SN#: 3849 RANGE : 4200	CLOCK : 12

Input Data

Porosity 0.180 Rw: 0.328 ft h: 15.000 ft

qo 283.1 STB GOR 110.0 SCF/STB

Pvt Data

Evaluation Pressure : 684.0

Evaluation Temperature: 114.0

Oil Grav	30.00 API	Gas Grav	0.65 API	Pb	684.00 PSIA
Bo	1.061 RBL/STB	Vis	1.000 cp	Ct	4.7929E-004 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
pseudo pressure time	0.08 hrs	1.00 hrs
slope	-152.56	-138.61
pstar	689.79 psig	706.02 psig
plhr	684.49 psig	664.29 psig
skin	1.17	-2.09
permeability	72.00 md	79.25 md
transmissability	320.15 md-ft/cp	352.37 md-ft/cp
radius of investigation	4.66 ft	16.95 ft
Damage-Ratio	0.97 percent	0.33 percent
Drawdown Factor		0.292 percent
Drawdown P*		-2.353 percent

18986
 KESTER
 W. HANSEN
 MORROW SAND
 21S
 KS
 12

TICKET
 LEASE
 GEOLOGIST
 FORMATION
 TOWNSHIP
 STATE
 CLOCK

TEST 1
 COUNTY FINNEY
 RANGE 4200

DATE 3-22-93
 CUSTOMER NORTH AMERICAN RESOURCES
 WELL #18-1
 ELEVATION 3058 K.B.
 SECTION 18
 RANGE 34W
 GAUGE SN# 3849

Log-Log Plot

