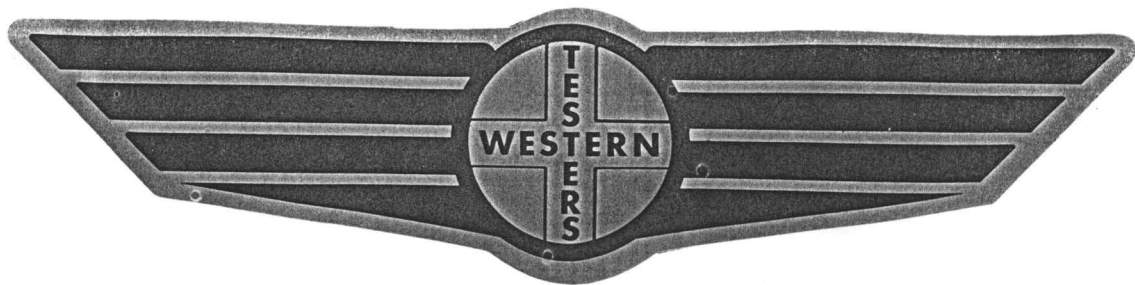


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE	: 10/26/94	TICKET	: 20651
CUSTOMER	: HELMERICH & PAYNE, INC.	LEASE	: CORNELSON
WELL	: #B-1	TEST: 1	GEOLOGIST: CHILDERS
ELEVATION	: 2970 GL	FORMATION	: MORROW
SECTION	: 36	TOWNSHIP	: 28S
RANGE	: 34W	COUNTY: HASKELL	STATE : KS
GAUGE SN#	: 10270	RANGE : 4150	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	5338.00 ft	TO:	5394.00 ft	TVD:	5394.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	5386.0 ft		5389.0 ft		
TEMPERATURE:	117.0				
DRILL COLLAR LENGTH:	640.0 ft	I.D.:		2.200 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4669.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	29.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	56.0 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:	5333.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	5338.0 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. :	CHEYENNE DRLG RIG 5	VISCOSITY :	50.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.800 cc
WEIGHT :	9.000 ppg	SERIAL NUMBER:	421
CHLORIDES :	800 ppm	REVERSED OUT?:	NO
JARS-MAKE :	WTC		
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIODS WEAK BUILDING TO A STRONG BLOW
IN 4 MINUTES. FINAL FLOW PERIOD WEAK BUILDING TO
A STRONG BLOW IN 50 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
105.0	0.0	5.0	0.0	95.0	GAS CUT MUD
180.0	16.0	12.0	0.0	72.0	OIL & GAS CUT MUD
420.0	45.0	13.0	12.0	40.0	MUDDY GASSY OIL
180.0	22.0	30.0	28.0	20.0	HVY OIL & GAS C/MUDDY WTR
0.0	0.0	0.0	0.0	0.0	CHLORIDES 28000 PPM
0.0	0.0	0.0	0.0	0.0	NOT ENOUGH FLUID TO RUN
0.0	0.0	0.0	0.0	0.0	NITRATES

RATE INFORMATION

OIL VOLUME:	1.4190 STB		
GAS VOLUME:	4.7302 SCF		
MUD VOLUME:	3.9075 STB		
WATER VOLUME:	0.4739 STB		
TOTAL FLUID :	5.8004 STB		
		TOTAL FLOW TIME:	90.0000 min.
		AVERAGE OIL RATE:	58.6605 STB/D
		AVERAGE WATER RATE:	11.7593 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2619.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	218.00	343.00
INITIAL SHUT-IN	60.00		1796.00
FINAL FLOW	60.00	385.00	395.00
FINAL SHUT-IN	120.00		1609.00

FINAL HYDROSTATIC PRESSURE: 2578.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2647.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	210.00	335.00
INITIAL SHUT-IN	60.00		1813.00
FINAL FLOW	60.00	399.00	402.00
FINAL SHUT-IN	120.00		1616.00

FINAL HYDROSTATIC PRESSURE: 2590.00

6

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 10/26/94	TICKET : 20651
CUSTOMER : HELMERICH & PAYNE, INC.	LEASE : CORNELSON
WELL : #B-1 TEST: 1	GEOLOGIST: CHILDERS
ELEVATION: 2970 GL	FORMATION: MORROW
SECTION : 36	TOWNSHIP : 28S
RANGE : 34W COUNTY: HASKELL	STATE : KS
GAUGE SN#: 10270 RANGE : 4150	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. _____
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PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 10/26/94	TICKET	: 20651
CUSTOMER	: HELMERICH & PAYNE, INC.	LEASE	: CORNELSON
WELL	: #B-1	TEST: 1	GEOLOGIST: CHILDERS
ELEVATION	: 2970 GL	FORMATION	: MORROW
SECTION	: 36	TOWNSHIP	: 28S
RANGE	: 34W	COUNTY: HASKELL	STATE : KS
GAUGE SN#	: 10270	RANGE : 4150	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	210.00	210.00
5.00	255.00	45.00
10.00	289.00	34.00
15.00	293.00	4.00
20.00	308.00	15.00
25.00	325.00	17.00
30.00	335.00	10.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	695.00	695.00	11.00
6.00	1101.00	406.00	6.00
9.00	1207.00	106.00	4.33
12.00	1331.00	124.00	3.50
15.00	1435.00	104.00	3.00
18.00	1495.00	60.00	2.67
21.00	1543.00	48.00	2.43
24.00	1585.00	42.00	2.25
27.00	1620.00	35.00	2.11
30.00	1655.00	35.00	2.00
33.00	1676.00	21.00	1.91
36.00	1701.00	25.00	1.83
39.00	1715.00	14.00	1.77
42.00	1734.00	19.00	1.71
45.00	1748.00	14.00	1.67
48.00	1761.00	13.00	1.63
51.00	1775.00	14.00	1.59
54.00	1786.00	11.00	1.56
57.00	1800.00	14.00	1.53

5

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	1813.00	13.00	1.50

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	399.00	399.00
5.00	399.00	0.00
10.00	399.00	0.00
15.00	399.00	0.00
20.00	400.00	1.00
25.00	400.00	0.00
30.00	401.00	1.00
35.00	401.00	0.00
40.00	402.00	1.00
45.00	402.00	0.00
50.00	402.00	0.00
55.00	402.00	0.00
60.00	402.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	645.00	645.00	21.00
6.00	802.00	157.00	11.00
9.00	923.00	121.00	7.67
12.00	1002.00	79.00	6.00
15.00	1080.00	78.00	5.00
18.00	1138.00	58.00	4.33
21.00	1184.00	46.00	3.86
24.00	1224.00	40.00	3.50
27.00	1261.00	37.00	3.22
30.00	1294.00	33.00	3.00
33.00	1327.00	33.00	2.82
36.00	1363.00	36.00	2.67
39.00	1394.00	31.00	2.54
42.00	1419.00	25.00	2.43
45.00	1435.00	16.00	2.33
48.00	1460.00	25.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
51.00	1477.00	17.00	2.18
54.00	1491.00	14.00	2.11
57.00	1504.00	13.00	2.05
60.00	1516.00	12.00	2.00
63.00	1527.00	11.00	1.95
66.00	1533.00	6.00	1.91
69.00	1539.00	6.00	1.87
72.00	1547.00	8.00	1.83
75.00	1553.00	6.00	1.80
78.00	1562.00	9.00	1.77
81.00	1568.00	6.00	1.74
84.00	1572.00	4.00	1.71
87.00	1578.00	6.00	1.69
90.00	1580.00	2.00	1.67
93.00	1583.00	3.00	1.65
96.00	1589.00	6.00	1.63
99.00	1593.00	4.00	1.61
102.00	1595.00	2.00	1.59
105.00	1599.00	4.00	1.57
108.00	1601.00	2.00	1.56
111.00	1607.00	6.00	1.54
114.00	1612.00	5.00	1.53
117.00	1614.00	2.00	1.51
120.00	1616.00	2.00	1.50

7

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE	: 10/26/94	TICKET	: 20651
CUSTOMER	: HELMERICH & PAYNE, INC.	LEASE	: CORNELSON
WELL	: #B-1	TEST: 1	GEOLOGIST: CHILDERS
ELEVATION	: 2970 GL	FORMATION	: MORROW
SECTION	: 36	TOWNSHIP	: 28S
RANGE	: 34W	COUNTY: HASKELL	STATE : KS
GAUGE SN#	: 10270	RANGE : 4150	CLOCK : 12

SAMPLE INFORMATION

PRESSURE IN SAMPLER:	320.00 PSIG	BHT:	117.0 DEG F
TOTAL VOLUME OF SAMPLER:	2500.00 cc		
TOTAL VOLUME OF SAMPLE:	1300.00 cc		
OIL:	767.00 cc		
WATER:	169.00 cc		
MUD:	195.00 cc		
GAS:	6.26 cc		
OTHER:	0.00 cc		

RESISTIVITY

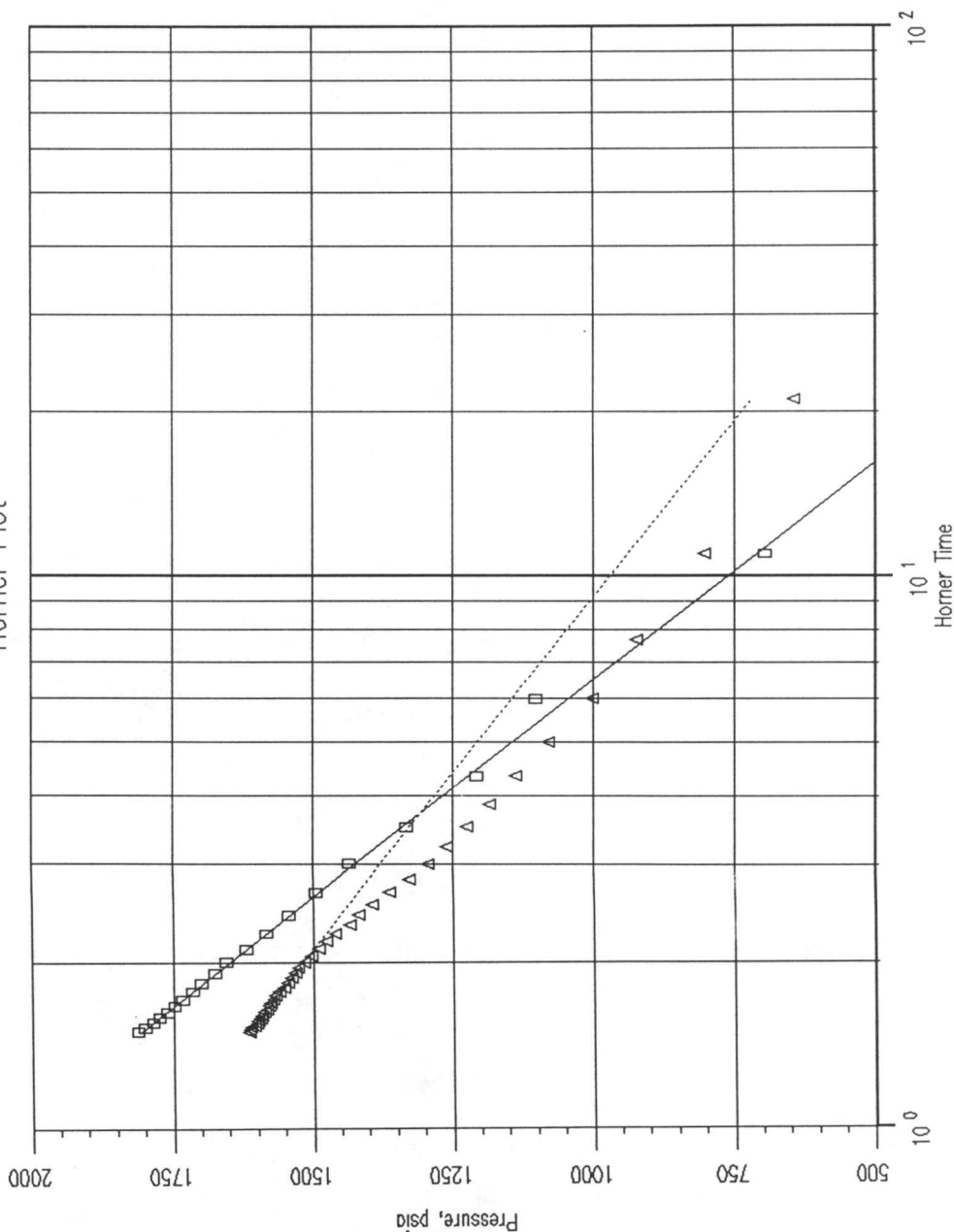
DRILLING MUD: .14 @ 75 DEGREES F	CHLORIDE CONTENT: 28000.00 ppm
MUD PIT SAMPLE: 5. @ 55 DEGREES F	CHLORIDE CONTENT: 800.00 ppm
GAS/OIL RATIO: 1500CF BBL	GRAVITY:
WHERE WAS SAMPLE DRAINED: AT RIG	
REMARKS:	

DATE 10/26/94
 CUSTOMER HELMERICH & PAYNE, INC.
 WELL #B-1
 ELEVATION 2970 GL
 SECTION 36
 RANGE 34W
 GAUGE SN# 10270

TEST 1
 COUNTY HASKELL
 RANGE 4150

TICKET 20651
 LEASE CORNELSON
 GEOLOGIST CHILDERS
 FORMATION MORROW
 TOWNSHIP 28S
 STATE KS
 CLOCK 12

Horner Plot



Result

	#1	#2
tp, hrs	0.50	1.00
Slope	-1271.03	-783.77
Pstar, psig	2031.95	1754.08
P1hr, psig	1808.13	1518.14
Skin	-0.77	-0.91
k, md	0.57	0.93
kh/u, md-ft/cp	8.93	14.49
ri, ft	4.42	7.96
DR, %	0.50	0.57
Drawdown Factor, %		10.866
Drawdown P*, %		13.675

— BUILD 1

..... BUILD 2

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 10/26/94	TICKET : 20651
CUSTOMER : HELMERICH & PAYNE, INC.	LEASE : CORNELSON
WELL : #B-1 TEST: 1	GEOLOGIST: CHILDERS
ELEVATION: 2970 GL	FORMATION: MORROW
SECTION : 36	TOWNSHIP : 28S
RANGE : 34W COUNTY: HASKELL	STATE : KS
GAUGE SN#: 10270 RANGE : 4150	CLOCK : 12

Input Data

Porosity 0.100 Rw: 0.328 ft h: 15.000 ft

qo 58.7 STB GOR 420.0 SCF/STB

Pvt Data

Evalutation Pressure : 1813.0

Evalutation Temperature: 117.0

Oil Grav 35.00 API	Gas Grav 0.65 API	Pb 1813.00 PSIA
Bo 1.191 RBL/STB	Vis 1.000 cp	Ct 1.6100E-004 1/PSI

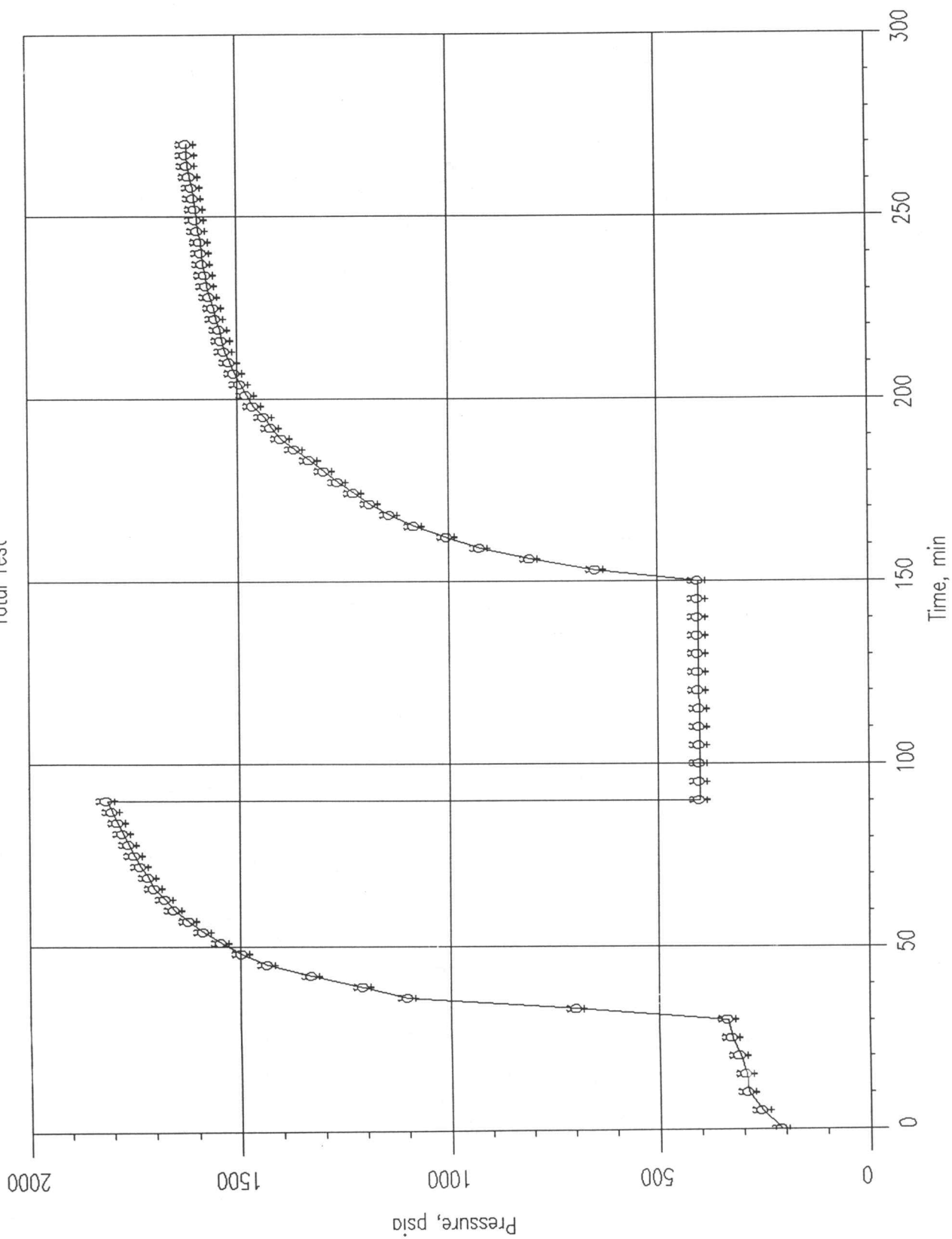
Horner Results

Inital Shut-In

Final Shut-In

pseudo pressure time	0.50 hrs	1.00 hrs
slope	-1271.03	-783.77
pstar	2031.95 psig	1754.08 psig
plhr	1808.13 psig	1518.14 psig
skin	-0.77	-0.91
permeability	0.57 md	0.93 md
transmisability	8.93 md-ft/cp	14.49 md-ft/cp
radius of investigation	4.42 ft	7.96 ft
Damage-Ratio	0.5 percent	0.57 percent
Drawdown Factor		10.866 percent
Drawdown P*		13.675 percent

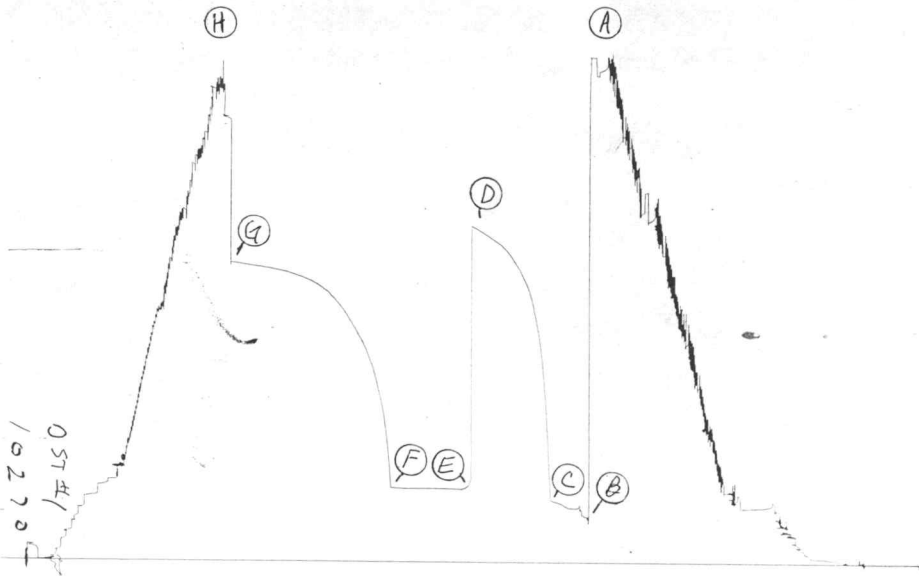
Profile Plot Total Test



TKT # 20651

⑤

I



TKT # 20651

①

OST #1

13550

