



P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N° 20995

Elevation 2714.66 Formation Chester (Miss) Eff. Pay _____ Ft.

District PRATT Date 11-2-94 Customer Order No. _____

COMPANY NAME Charter Production

ADDRESS 142 North Mosley Wichita, Kansas 67202

LEASE AND WELL NO. Whithead 1-14 COUNTY Meade STATE Kansas Sec. 14 Twp. 31S Rge. 29W

Mail Invoice To _____ Co. Name SAME Address _____ No. Copies Requested 19

Mail Charts To _____ Address _____ No. Copies Requested 19

Formation Test No. 1 Interval Tested From 5452 ft. to 5485 ft. Total Depth 5485 ft.

Packer Depth 5447 ft. Size 6 7/8 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 5452 ft. Size 6 7/8 in. Packer Depth 2 ft. Size 2 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 5477 ft. Recorder Number 1051 Cap. 4250

Bottom Recorder Depth (Outside) 5485 ft. Recorder Number 4832 Cap. 4200

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Alberquerque Rig 5 Drill Collar Length 359 I. D. 2 1/4 in.

Mud Type Chemo Viscosity 58 Weight Pipe Length 0 I. D. _____ in.

Weight 9.3 Water Loss 10.1 cc. Drill Pipe Length 5068 I. D. 3.8 in.

Chlorides 1800 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 OD in.

Jars: Make WTC Serial Number 411 Anchor Length 33 ft. Size 5 1/2 OD in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 1/2 in. Tool Joint Size 4 1/2 x 4 in.

Blow: Strong blow in 1 minute on initial flow

Strong blow gas to surface 2 minutes Sub flow check

Recovered _____ ft. of _____

Recovered 20 ft. of gas out mud 30% gas 70% mud

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: _____

Time On Location 9:10 A.M. Time Pick Up Tool 10:10 A.M. Time Off Location 7:15 A.M.

Time Set Packer(s) 12:05 P.M. Time Started Off Bottom 4:35 P.M. Maximum Temperature 129 °F

Initial Hydrostatic Pressure _____ (A) 2615 P.S.I.

Initial Flow Period _____ Minutes 30 (B) 53 P.S.I. to (C) 53 P.S.I.

Initial Closed In Period _____ Minutes 60 (D) 1845 P.S.I.

Final Flow Period _____ Minutes 60 (E) 53 P.S.I. to (F) 53 P.S.I.

Final Closed In Period _____ Minutes 120 (G) 1992 P.S.I.

Final Hydrostatic Pressure _____ (H) 2615 P.S.I.

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.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By _____
Signature of Customer or his authorized representative

Western Representative Rob Diet - Thank you

FIELD INVOICE

Open Hole Test	\$ _____
Misrun	\$ _____
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ _____
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage	\$ _____
Fluid Sampler	\$ _____
Extra Charts	\$ _____
Insurance	\$ _____
Telecopier	\$ _____
TOTAL	\$ _____



No. 1107

GAS FLOW REPORT

Date 11-2-94 Ticket 20995 Company Charter Production
 Well Name and No. Whitehead 1-14 Dst No. 1 Interval Tested 5452-5485
 County Meade State Kansas Sec. 14 Twp. 31S Rg. 29W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

SECOND FLOW

01	-	1/2 inch			Gas to surf
05	12 psi				68,800
10	5 psi				47,700
15	12 inches of water				21,700
20	8 inches				17,200
25	7 inches				16,700
30	7 "				16,700
35	7 "				
40	7 "				16,700
45	7 "				
50	7 "				16,700
55	7 "				
60	7 "				16,700

GAS BOTTLE

Serial No. _____ Date Bottle Filled 11-2-94 Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME

Authorized by

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. _____

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____ P.S.I.	Open Tool _____ M _____			
B First Initial Flow Pressure _____ P.S.I.	First Flow Pressure _____ Mins. _____ Mins.			
C First Final Flow Pressure _____ P.S.I.	Initial Closed-in Pressure _____ Mins. _____ Mins.			
D Initial Closed-in Pressure _____ P.S.I.	Second Flow Pressure _____ Mins. _____ Mins.			
E Second Initial Flow Pressure _____ P.S.I.	Final Closed-in Pressure _____ Mins. _____ Mins.			
F Second Final Flow Pressure _____ P.S.I.				
G Final Closed-in Pressure _____ P.S.I.				
H Final Hydrostatic Mud _____ P.S.I.				

PRESSURE BREAKDOWN

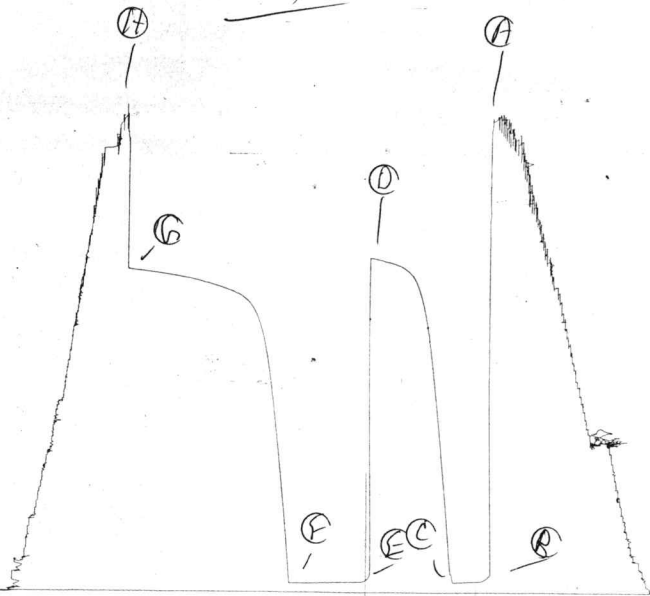
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105		63	1696
P 2 110		66		110		66	1702
P 3 115		69		115		69	1713
P 4 120		72		120		72	1717
P 5 125		75		125		75	1719
P 6 130		78		130		78	1728
P 7 135		81		135		81	1730
P 8 140		84		140		84	1732
P 9 145		87		145		87	1738
P10 150		90		150		90	1741
P11 155		93		155		93	1743
P12 160		96		160		96	1745
P13 165		99		165		99	1751
P14 170		102		170		102	1753
P15 175		105		175		105	1760
P16 180		108		180		108	1762
P17 185		111		185		111	1764
P18 190		114		190		114	1768
P19 195		117		195		117	1768
P20 200		120		200		120	1770

1051 D3+ #1

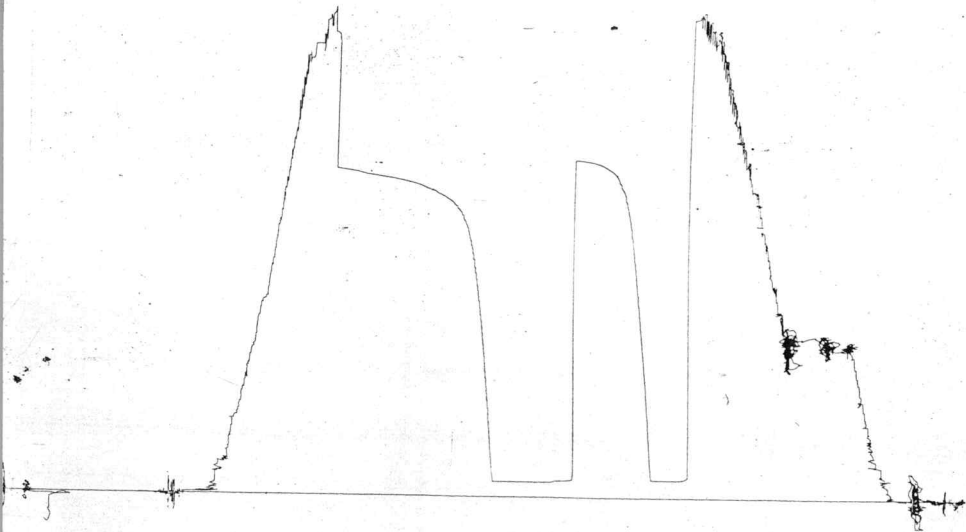


K+20995

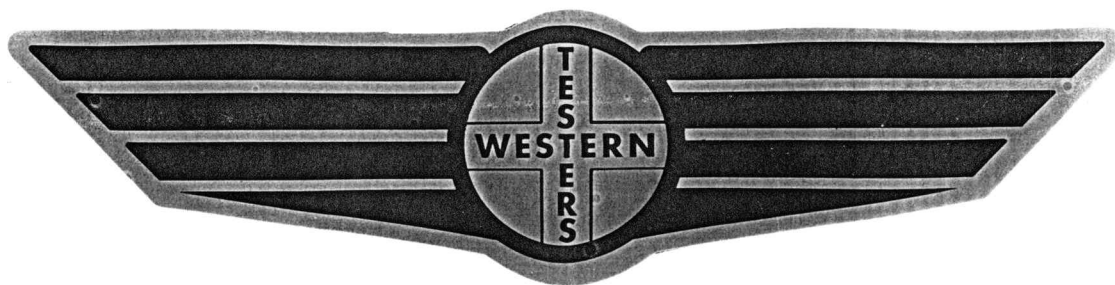
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4330 DST#17 KT 20995
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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 11/2/94
CUSTOMER : CHARTER PRODUCTION
WELL : #1-14 TEST: 1
ELEVATION: 2714GL
SECTION : 14
RANGE : 29W COUNTY: MEADE
GAUGE SN#: 1051 RANGE : 4250

TICKET : 20995
LEASE : WHITEHEAD
GEOLOGIST: SCHMALTZ
FORMATION: CHESTER MISSISSIPPI
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 5452.00 ft TO: 5485.00 ft TVD: 5485.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 5477.0 ft 5480.0 ft
TEMPERATURE: 129.0

DRILL COLLAR LENGTH:	359.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	5068.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	33.0 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:	5447.0 ft	SIZE:	6.625 in
PACKER DEPTH:	5452.0 ft	SIZE:	6.625 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : ABERCROMBIE RIG #5
MUD TYPE : CHEMICAL
WEIGHT : 9.300 ppg
CHLORIDES : 1800 ppm
JARS-MAKE : WTC
DID WELL FLOW?: NO

VISCOSITY : 58.00 cp
WATER LOSS: 10.100 cc

SERIAL NUMBER: 411
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW: STRONG BLOW IN 1 MINUTE.
FINAL FLOW: STRONG BLOW, GAS TO SURFACE IN 1
MINUTE. SEE ATTACHED SHEET FOR GAS MEASUREMENTS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
20.0	0.0	30.0	0.0	70.0	GAS CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.1657	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0688	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0688	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2615.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	53.00	53.00
INITIAL SHUT-IN	60.00		1845.00
FINAL FLOW	60.00	53.00	53.00
FINAL SHUT-IN	120.00		1772.00

FINAL HYDROSTATIC PRESSURE: 2615.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2618.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	64.00	58.00
INITIAL SHUT-IN	60.00		1835.00
FINAL FLOW	60.00	56.00	56.00
FINAL SHUT-IN	120.00		1770.00

FINAL HYDROSTATIC PRESSURE: 2613.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 11/2/94 CUSTOMER : CHARTER PRODUCTION WELL : #1-14 TEST: 1 ELEVATION: 2714GL SECTION : 14 RANGE : 29W COUNTY: MEADE GAUGE SN#: 1051 RANGE : 4250	TICKET : 20995 LEASE : WHITEHEAD GEOLOGIST: SCHMALTZ FORMATION: CHESTER MISSISSIPPI TOWNSHIP : 31S STATE : KS CLOCK : 12
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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.
5 MIN	MERLA	0.500	12 PSIG	129000 SCF/D
10 MIN	MERLA	0.500	5 PSIG	78100 SCF/D
15 MIN	MERLA	0.500	12" WATER	21900 SCF/D
20 MIN	MERLA	0.500	8" WATER	17200 SCF/D
25 MIN	MERLA	0.500	7" WATER	16700 SCF/D
30 MIN	MERLA	0.500	7" WATER	16700 SCF/D
35 MIN	MERLA	0.500	7" WATER	16700 SCF/D
40 MIN	MERLA	0.500	7" WATER	16700 SCF/D
45 MIN	MERLA	0.500	7" WATER	16700 SCF/D
50 MIN	MERLA	0.500	7" WATER	16700 SCF/D
55 MIN	MERLA	0.500	7" WATER	16700 SCF/D
60 MIN	MERLA	0.500	7" WATER	16700 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 11/2/94	TICKET	: 20995
CUSTOMER	: CHARTER PRODUCTION	LEASE	: WHITEHEAD
WELL	: #1-14	GEOLOGIST	: SCHMALTZ
ELEVATION	: 2714GL	FORMATION	: CHESTER MISSISSIPPI
SECTION	: 14	TOWNSHIP	: 31S
RANGE	: 29W	STATE	: KS
GAUGE SN#	: 1051	CLOCK	: 12
	COUNTY: MEADE		
	RANGE : 4250		

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	64.00	64.00
5.00	64.00	0.00
10.00	58.00	-6.00
15.00	58.00	0.00
20.00	58.00	0.00
25.00	58.00	0.00
30.00	58.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	279.00	279.00	11.00
6.00	430.00	151.00	6.00
9.00	744.00	314.00	4.33
12.00	978.00	234.00	3.50
15.00	1285.00	307.00	3.00
18.00	1394.00	109.00	2.67
21.00	1521.00	127.00	2.43
24.00	1621.00	100.00	2.25
27.00	1672.00	51.00	2.11
30.00	1728.00	56.00	2.00
33.00	1756.00	28.00	1.91
36.00	1773.00	17.00	1.83
39.00	1785.00	12.00	1.77
42.00	1798.00	13.00	1.71
45.00	1805.00	7.00	1.67
48.00	1811.00	6.00	1.63
51.00	1817.00	6.00	1.59
54.00	1823.00	6.00	1.56
57.00	1828.00	5.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	1835.00	7.00	1.50

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	56.00	56.00
5.00	56.00	0.00
10.00	56.00	0.00
15.00	56.00	0.00
20.00	56.00	0.00
25.00	56.00	0.00
30.00	56.00	0.00
35.00	56.00	0.00
40.00	56.00	0.00
45.00	56.00	0.00
50.00	56.00	0.00
55.00	56.00	0.00
60.00	56.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	215.00	215.00	21.00
6.00	559.00	344.00	11.00
9.00	739.00	180.00	7.67
12.00	921.00	182.00	6.00
15.00	1111.00	190.00	5.00
18.00	1245.00	134.00	4.33
21.00	1366.00	121.00	3.86
24.00	1457.00	91.00	3.50
27.00	1514.00	57.00	3.22
30.00	1553.00	39.00	3.00
33.00	1591.00	38.00	2.82
36.00	1600.00	9.00	2.67
39.00	1631.00	31.00	2.54
42.00	1642.00	11.00	2.43
45.00	1653.00	11.00	2.33
48.00	1659.00	6.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
51.00	1668.00	9.00	2.18
54.00	1676.00	8.00	2.11
57.00	1681.00	5.00	2.05
60.00	1687.00	6.00	2.00
63.00	1696.00	9.00	1.95
66.00	1702.00	6.00	1.91
69.00	1708.00	6.00	1.87
72.00	1714.00	6.00	1.83
75.00	1719.00	5.00	1.80
78.00	1724.00	5.00	1.77
81.00	1730.00	6.00	1.74
84.00	1734.00	4.00	1.71
87.00	1738.00	4.00	1.69
90.00	1741.00	3.00	1.67
93.00	1744.00	3.00	1.65
96.00	1747.00	3.00	1.63
99.00	1750.00	3.00	1.61
102.00	1753.00	3.00	1.59
105.00	1756.00	3.00	1.57
108.00	1759.00	3.00	1.56
111.00	1762.00	3.00	1.54
114.00	1766.00	4.00	1.53
117.00	1768.00	2.00	1.51
120.00	1770.00	2.00	1.50

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 11/2/94	TICKET : 20995
CUSTOMER : CHARTER PRODUCTION	LEASE : WHITEHEAD
WELL : #1-14 TEST: 1	GEOLOGIST: SCHMALTZ
ELEVATION: 2714GL	FORMATION: CHESTER MISSISSIPPI
SECTION : 14	TOWNSHIP : 31S
RANGE : 29W COUNTY: MEADE	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

Input Data

Porosity 0.800 Rw: 0.328 ft h: 13.000 ft

qg 16700.0 STB

Pvt Data

Evaluation Pressure : 1835.0
Evaluation Temperature: 129.0

Gas Grav 0.65 API
Bg 0.001 RBL/STB Vis 0.016 cp Ct 1.0988E+000 1/PSI

Horner Results

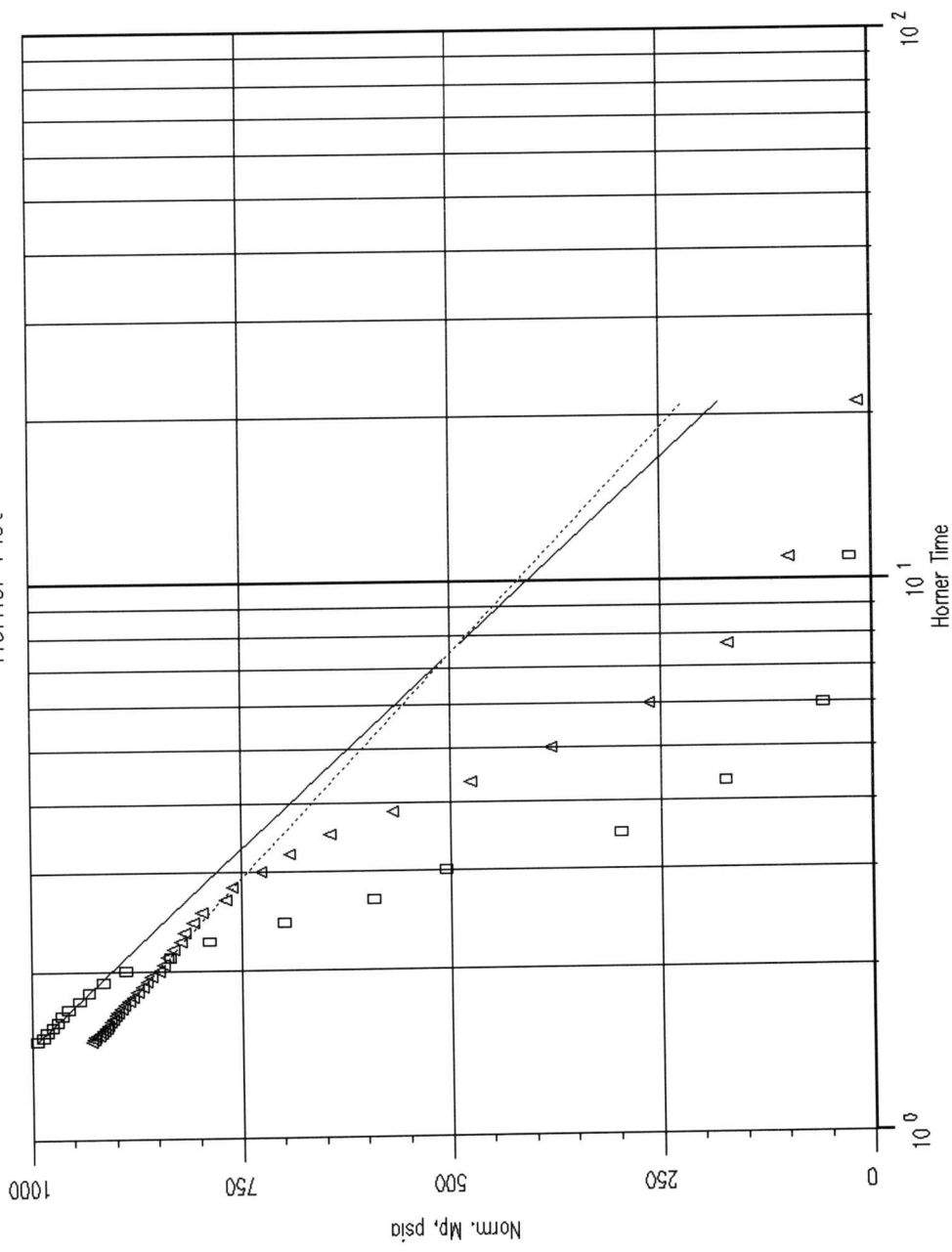
	Initial Shut-In	Final Shut-In
pseudo pressure time	0.50 hrs	1.00 hrs
slope	-710.52	-617.40
pstar	1957.85 psig	1878.90 psig
plhr	993.49 psig	851.49 psig
skin	5.16	4.86
permeability	0.01 md	0.01 md
transmissability	5.16 md-ft/cp	5.93 md-ft/cp
radius of investigation	0.02 ft	0.02 ft
Damage-Ratio	-0.54 percent	-0.54 percent
Drawdown Factor		0.035 percent
Drawdown P*		0.040 percent

DATE 11/2/94
 CUSTOMER CHARTER PRODUCTION
 WELL #1-14
 ELEVATION 2714GL
 SECTION 14
 RANGE 29W
 GAUGE SN# 1051

TEST 1
 COUNTY MEADE
 RANGE 4250

TICKET 20995
 LEASE WHITEHEAD
 GEOLOGIST SCHMALTZ
 FORMATION CHESTER MISSISSIPPI
 TOWNSHIP 31S
 STATE KS
 CLOCK 12

Horner Plot

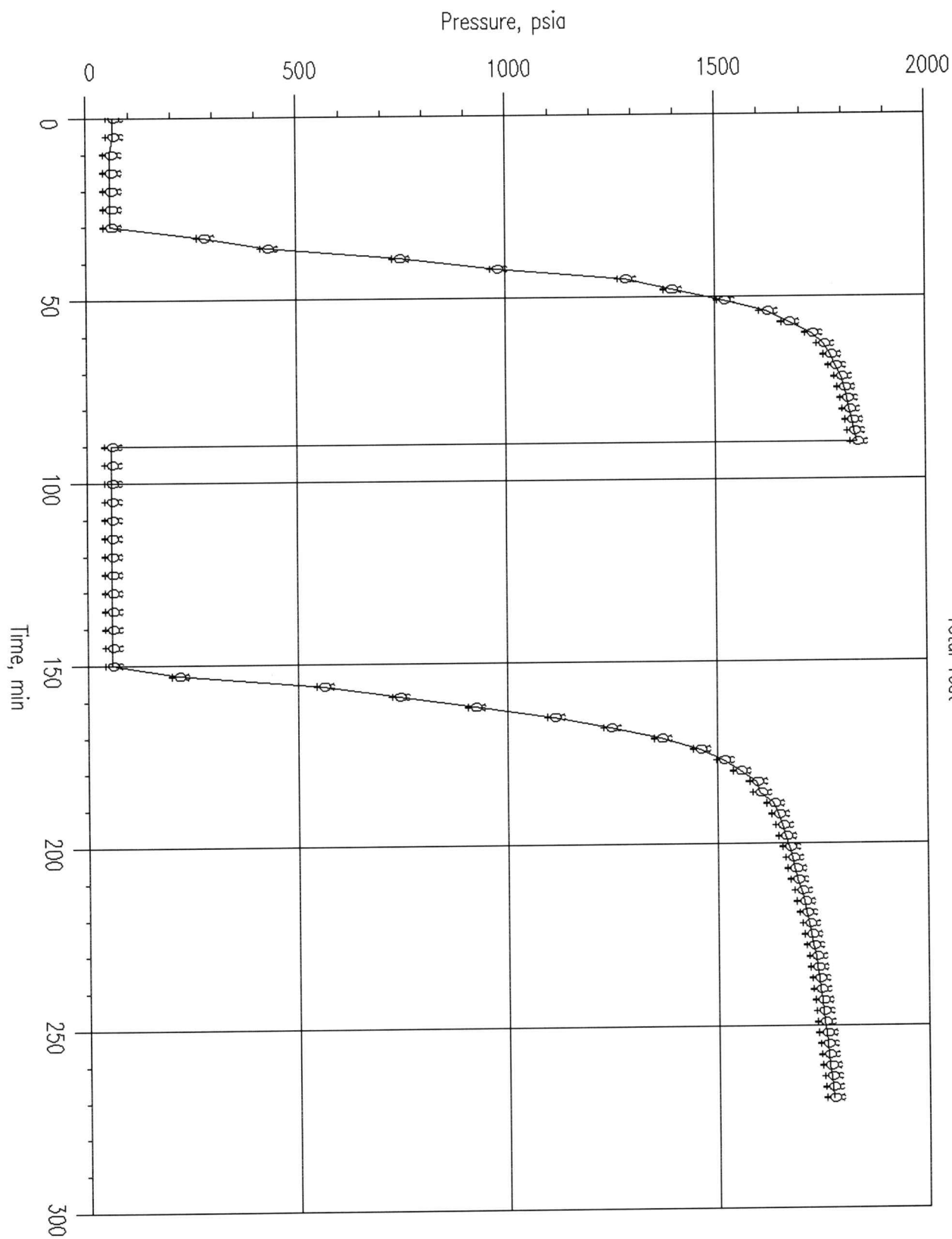


Result

	#1	#2
tp, hrs	0.50	1.00
Slope	-710.52	-617.40
Pstar, psig	1957.85	1878.90
P1hr, psig	993.49	851.49
Skin	5.16	4.86
k, md	0.01	0.01
kh/u, md-ft/cp	5.16	5.93
ri, ft	0.02	0.02
DR, %	-0.54	-0.54
Drawdown Factor, %	0.035	0.035
Drawdown P*	0.040	0.040

— BUILD 1
 BUILD 2

Profile Plot Total Test

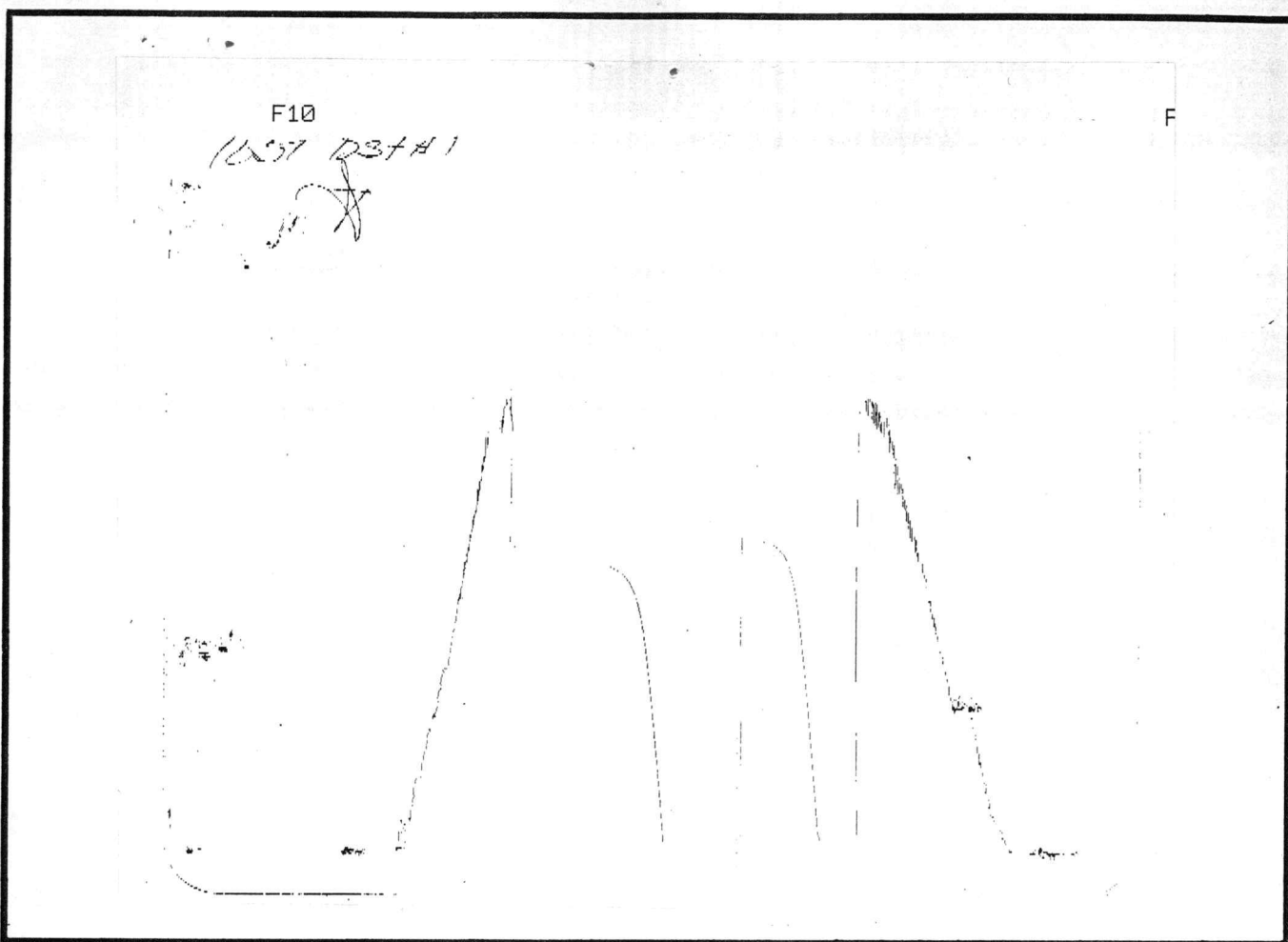


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(257 D3+1)

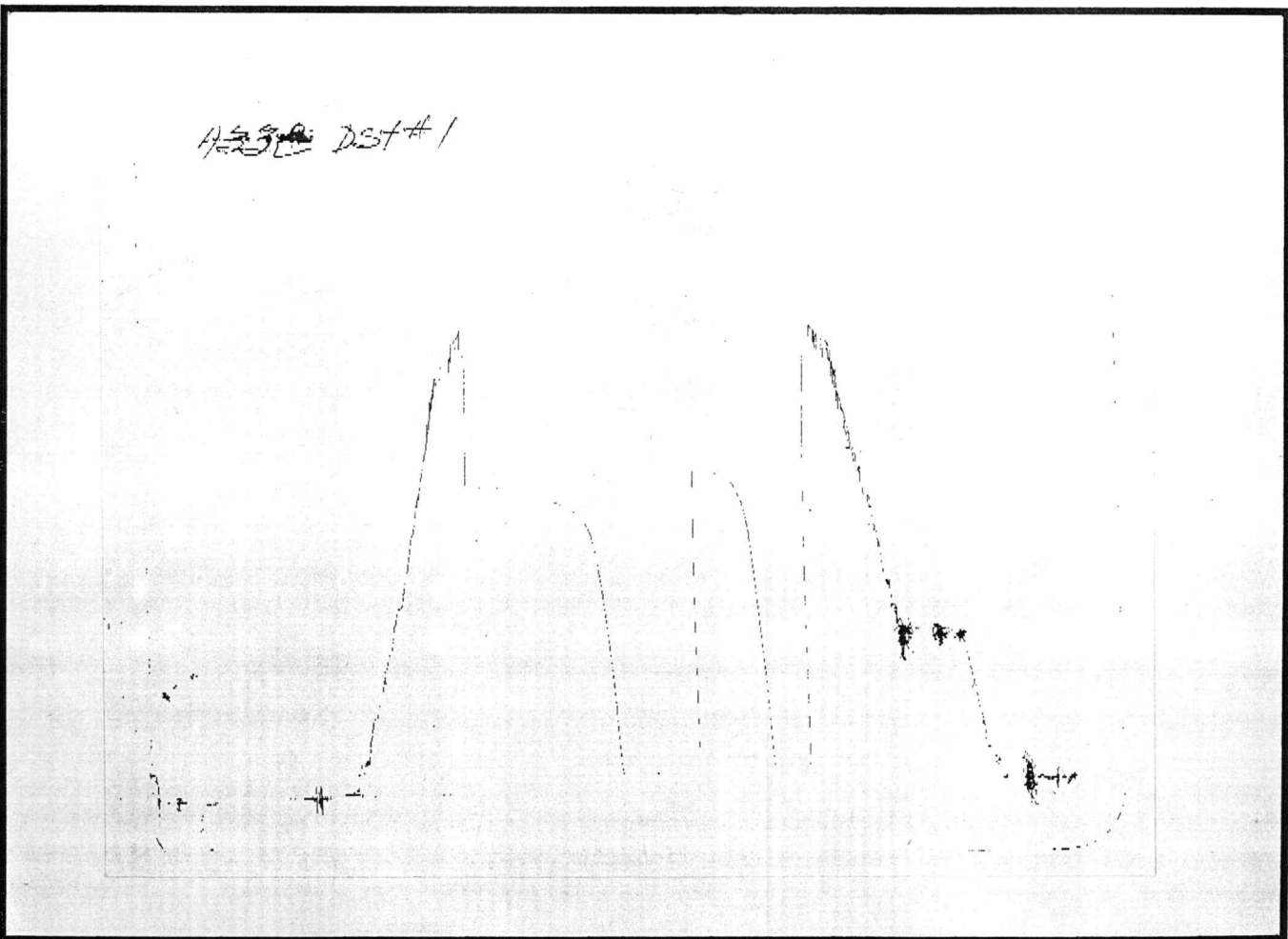
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Inside Recorder

~~4-23-68~~ DST #1



Outside Recorder