

SIDE TWO

Operator Name MOBIL OIL CORPORATION

Lease Name H. E. SHULER

Well # 2

Sec 16 Twp 31S Rge 35 XX East
XX West

County STEVENS

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken XX Yes No
 Samples Sent to Geological Survey XX Yes No
 Cores Taken Yes XX No

Formation Description
XX Log Sample

Name	Top	Bottom
CHASE	2565'	
WINFIELD	2662'	
COUNCIL GROVE	2886'	
ADMIRE	3148'	
WABAUNSEE	3296'	
SHAWNEE	3674'	
HEEBNER	4087'	
LANSING	4234'	
KANSAS CITY	4471'	
MARMATON	4902'	
CHEROKEE	5101'	
MORROW	5470'	
CHESTER	5774'	
STE. GENEVIEVE	6026'	
ST. LOUIS	6086'	

CASING RECORD

XX New Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (in. O.D.)	Weight Lbs/Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4"	8-5/8"	24#	1766'	CL C LITE	600 SX	65:35:6+6% GEL +3%CaCl ₂
					CL C	180 SX	+2% CaCl ₂
Production	7-7/8"	5-1/2"	14#	6250'	CL H	356 SX	50:50 POZ +2% GEL
					CL H	484 SX	50:50 POZ+2%GEL+2%CaCl ₂

PERFORATION RECORD

Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4 SPF	5966'-5994'	ACIDIZED W/2000 GAL 7.5% FE ACID	5966'-
		FRAC'D W/56,110 GALS GELLED DIESEL & 88M# 20/40 SD	5994'-DA

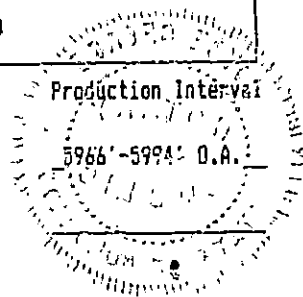
TUBING RECORD Size 2-7/8" Set At 5966' Packer At NONE Liner Run Yes XX No

Date of First Production 6-13-88 Producing Method Flowing XX Pumping Gas Lift Other (explain)

Estimated Production Per 24 Hours	Oil	Gas	Water	Gas-Oil Ratio	Gravity
	<u>49</u> Bbls	<u>30</u> MCF	<u>6</u> Bbls	<u>612</u> CFPB	

METHOD OF COMPLETION

Disposition of gas: Vented Open Hole XX Perforation
XX Sold Other (Specify)
 Used on Lease Dually Completed
 Conmingled



Mobil Oil Corporation

DENVER EAST DIVISION DRILL STEM TEST REPORT FORM

WELL NAME H.E. Sholey #2

Test Number #1
Formation Chester
Test Interval 5967-6004
Total Depth 6004
Test Company Johnson

Hole Size 7 7/8"
Conventional Inflatable Straddle
Top Pkr Set @ 5956 Btm Pkr Set @ 5967
Type of Cushion Fluid None
Amount of Cushion None

TEST DATA:

1. Tool open at 2100 hours. 5-12-88 Date.
2. Initial open period 15 mins.
3. Initial shut-in period 60 mins.
4. Final flow period 90 mins.
5. Final shut-in period 240 mins.
6. Description of blow on initial open period opened w/ 4" Blow, 5min - 6" Blow, 10min - 8 1/2", 15min 12"
7. Description of blow during test opened w/ strong blow, kept increasing to bottom bucket, by 3 to 4 PSI
8. G.T.S. None mins.; O.T.S. None mins.; Bottom hole choke size 1 3/16
Surface choke size 1/4"
9. Flow Rate: Gas NA C.F.P.D. Oil NA B.P.H. G.O.R. NA
10. Gravity of Gas NA Gravity of Oil NA
11. Total fluid recovery 180' Gas cut mud-oil, Good show of oil in bottom of N.C.S. + Sample Chamber
12. Resistivity of ^{mud} .7 at 58° Chlorides of ^{mud} 1000 at 58° P.P.M.
13. Depth of top press bomb 5992 Bottom bomb 5998

PRESSURE DATA:

Top Bomb:

I.H.P. 2939 PSI
I.F.P. 35 lbs to 35 lbs.
I.S.I.P. 1651 PSI
F.F.P. 48 PSI to 98 PSI
F.S.I.P. 1790 PSI
F.H.P. 2851 PSI
Temp. 143
Was S.I.P. building? Yes

Bottom Bomb:

I.H.P. 2955 PSI
I.F.P. 28 PSI to 28 PSI
I.S.I.P. 1649 PSI
F.F.P. 53 PSI to 91 PSI
F.S.I.P. 1776 PSI
F.H.P. 2853 PSI
Temp. 143

SAMPLE CHAMBER DATA:

1. Gas 1.2 C.F.
2. Oil 1800 oil + mud C.C.
3. H₂O None C.C.
4. Mud — C.C.
5. Sample Chamber Pressure 1100 psi

REMARKS:

Good test, Johnson did real Good Job on testing

RECEIVED
STATE CORPORATION COMMISSION
STATE OF KANSAS

AUG 15 1988

CONSERVATION DIVISION
Wichita, Kansas

REPORT NO.
107161

PAGE NO. 1

TEST DATE:
12-MAY-88

STARTM

A Schlumberger Transient Analysis Report Based On Model VerifiedTM Interpretation Of A Schlumberger Drillstem Test

Schlumberger

RECEIVED
STATE CORPORATION COMMISSION
STATE CORPORATION

Company: MOBIL OIL CORP.

Well: H. E. SHULER AUG 15 1988

TEST IDENTIFICATION

Test Type MFE OH DST
Test No. 1
Formation CHESTER
Test Interval (ft) ... 5967 - 6004
Reference Depth KELLY BUSHING

WELL LOCATION

Field CONSERVATION DIVISION
Wichita Kansas
County STEVENS
State KANSAS
Sec/Twn/Rng S16T31SR35W
Elevation (ft) 3022

HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 6004 / 6004
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 28
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type LSND
Mud Weight (lb/gal) 9.0+
Mud Resistivity (ohm.m) ..
Filtrate Resistiv.(ohm.m).
Filtrate Chlorides (ppm) . 1000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 2837
Gas Cushion Type NONE
Surface Pressure (psi) ... --
Liquid Cushion Type NONE
Cushion Length (ft) --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 5121 / 3.83
Collar Length ft/I.D.(in). 810 / 2.25
Packer Depths (ft) 5967
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type 5998 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
0.88 BBLS.	MUD & OIL	ASSUMED 35 API OIL
REPORTED:		
90 FT.	DRLG. MUD	.7 @ 58 DEG. F.
		1000 PPM CL.
90 FT.	GC OIL&MUD.	.7 @ 58 DEG. F.

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.16 SCF	GAS	CORRECTED TO PWF
1.2 SCF	GAS	MEASURED @ SC PRES
1800 CC	OIL & MUD	.7 @ 58 DEG. F.
		1000 PPM CL.
Press. 1100	GOR: 14	GLR: 14

VALIDATION RESULTS

Model of Behavior HOMOGENEOUS
Fluid Type Used OIL
Reservoir Pressure (psi) : 1841
Transmissivity (md.ft/cp) 8.601
Permeability (md) 0.964
Skin Factor/Damage Ratio . 5.021
Storativity Ratio
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft). 25
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ... ASSUMED 35
Basic Solids (%) 0
Gas Gravity 0.650
Water Cut (%) 0
Viscosity (cp) 3.137
Tot. Compress. (1/psi) ... 8.545E-6
Porosity (%) 10 - 12 (11)
Reservoir Temperature (F). 143
Form.Vol.Factor (bbl/STB). 1.023

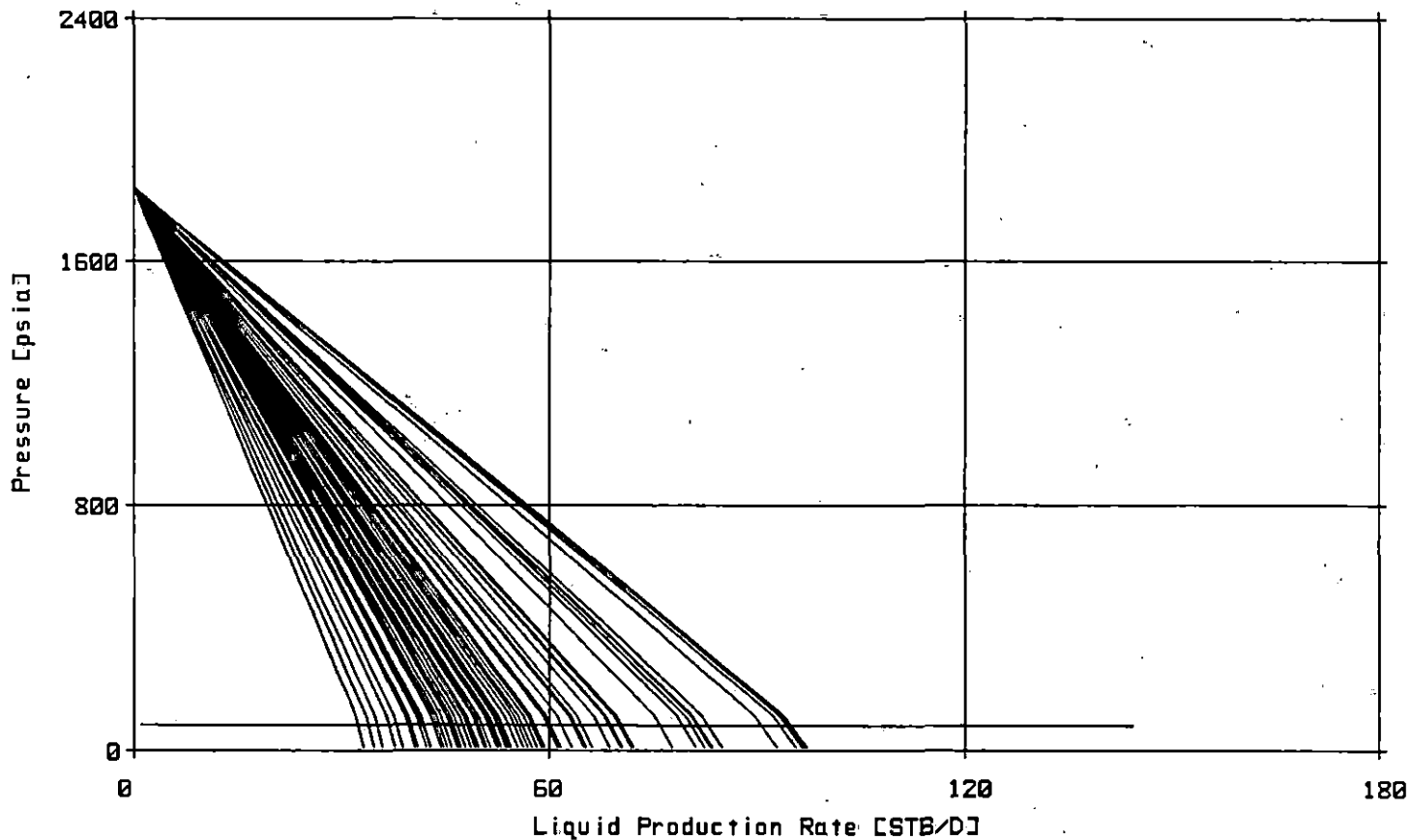
PRODUCTION RATE DURING TEST: 12 BOPD 0-AUG.

COMMENTS:

THE FINAL SHUT-IN PRESSURE BUILD-UP DATA WAS ANALYZED USING LOG-LOG ANALYSIS TECHNIQUES TO DETERMINE RESERVOIR PARAMETERS OF P*, Kh/u, AND SKIN. ANALYSIS OF THE SHUT-IN DATA INDICATES THE PRESENCE OF A HOMOGENEOUS SYSTEM WITH WELLBORE STORAGE AND SKIN AT EARLY TIME AND TRANSITIONAL DATA AT LATER TIME; INFINITE-ACTING RADIAL FLOW REGIME WAS NOT REACHED DURING THE SHUT-IN PERIOD. THE DATA WAS MODEL- VERIFIED(TM) TO CONFIRM THE ACCURACY OF THE RESERVOIR MODEL CHOSEN AND THE ANALYSIS RESULTS, WITH GOOD AGREEMENT BETWEEN THE THEORETICAL MODEL RESPONSE AND THE ACTUAL DATA, WITH THE EXCEPTION OF THE EARLY TIME DATA WHICH IS DOMINATED BY CHANGING WELLBORE STORAGE EFFECTS.

TRANSIENT IPR &
TUBING INTAKE

Schlumberger



DRAWDOWN T-C : FINITE CONDUCTIVITY VERTICAL FRACTURE
FCD=5.19E-01 ; CDF=0.00E+00

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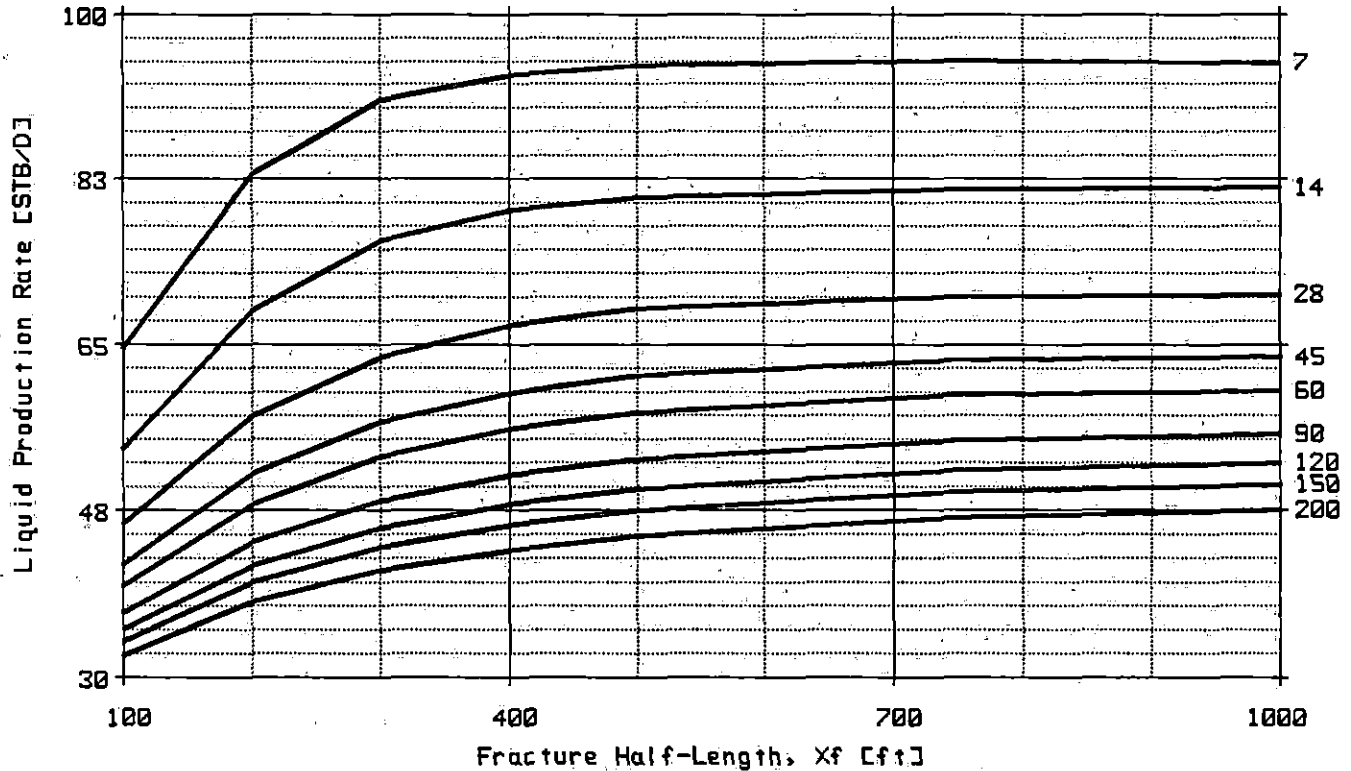
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SENSITIVITY ANALYSIS
Rate vs. Xf (vs. Time)
WELL ON PUMP @ 50 PSI FL.BHP

Schlumberger

Reservoir Pressure: 1841 psi Gas/Liquid Ratio: 14.0 SCF/STB
Permeability: 0.964 md Tubing Size: 2.441 in (id)
Net Thickness: 28.0 ft Flowing BH Pressure: 50.0 psi

Fracture Conductivity, kf/w : 500.0 md.ft



Production Rate vs. Frac. Half-Length, Transient Conditions
7 to 200 days : WELL ON PUMP @ 50 PSI FL.BHP

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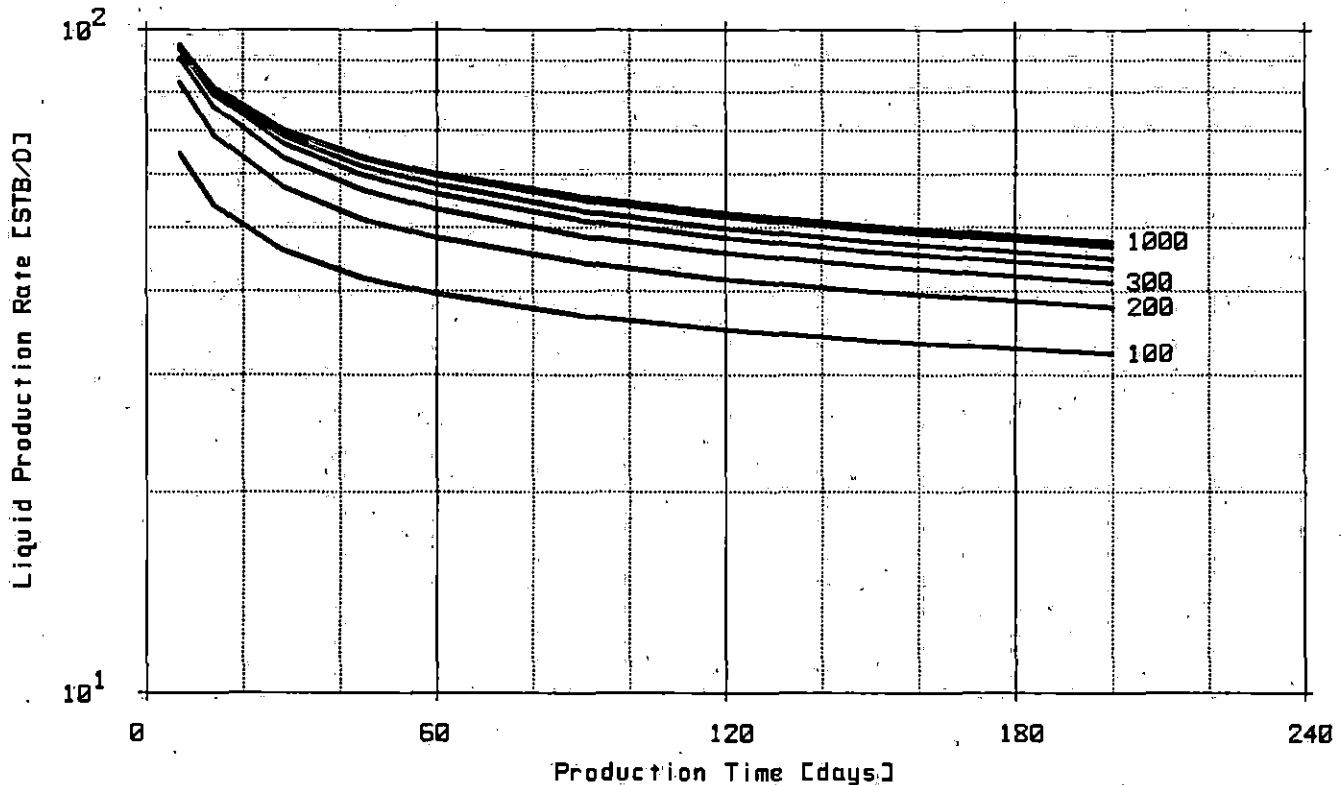
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SENSITIVITY ANALYSIS
Rate vs. Time (vs. Xf)
WELL ON PUMP @ 50 PSI FL.BHP

Schlumberger

Reservoir Pressure: 1841 psi Gas/Liquid Ratio: 14.0 SCF/STB
Permeability: 0.964 md Tubing Size: 2.441 in (id)
Net Thickness: 28.0 ft Flowing BH Pressure: 50.0 psi

Fracture Conductivity, kf/w : 500.0 md.ft



Effect of Time on Production Rate, for Fracture Half-Lengths
from 100 to 1000 ft : WELL ON PUMP @ 50 PSI FL.BHP

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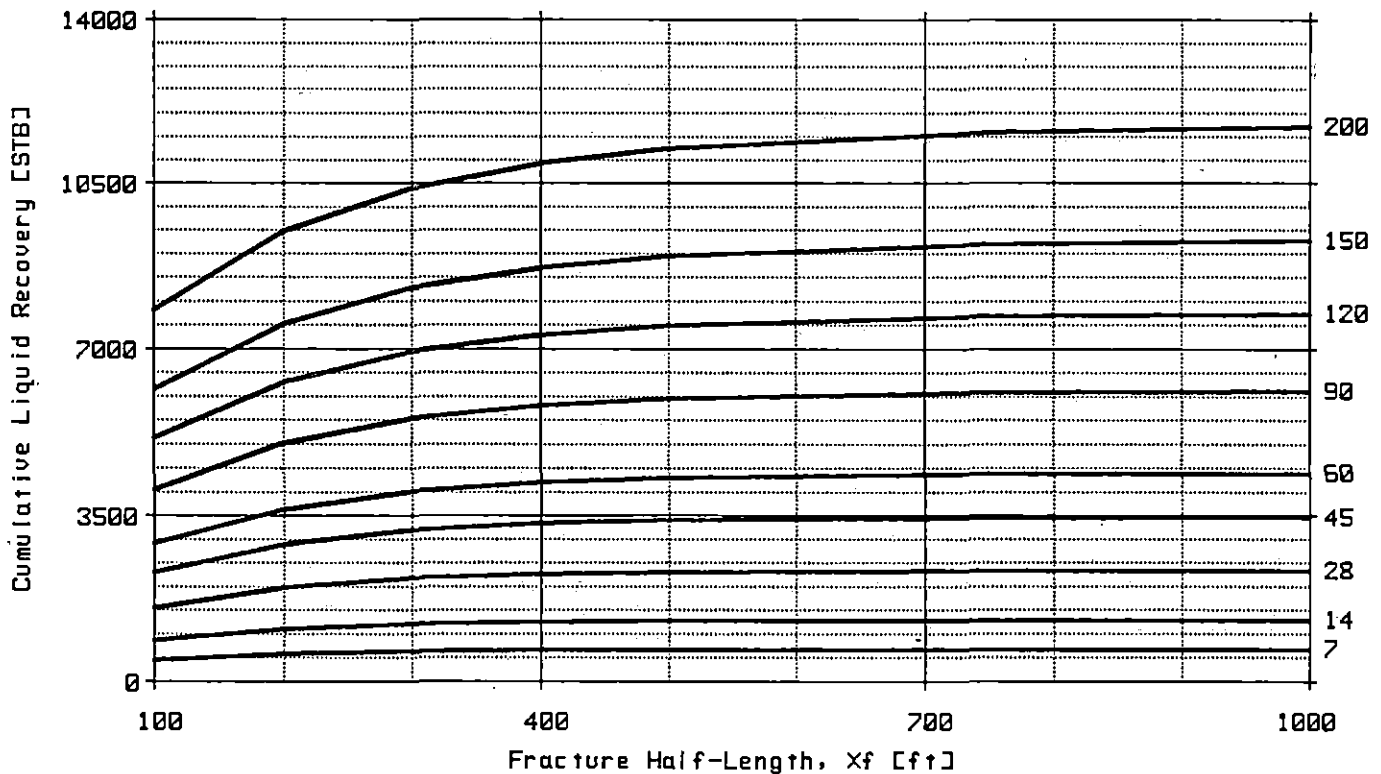
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SENSITIVITY ANALYSIS
Recovery vs. X_f (vs. Time)
WELL ON PUMP @ 50 PSI FL.BHP

Schlumberger

Reservoir Pressure: 1841 psi Gas/Liquid Ratio: 14.0 SCF/STB
Permeability: 0.964 md Tubing Size: 2.441 in (id)
Net Thickness: 28.0 ft Flowing BH Pressure: 50.0 psi

Fracture Conductivity, kf^*w : 500.0 md.ft



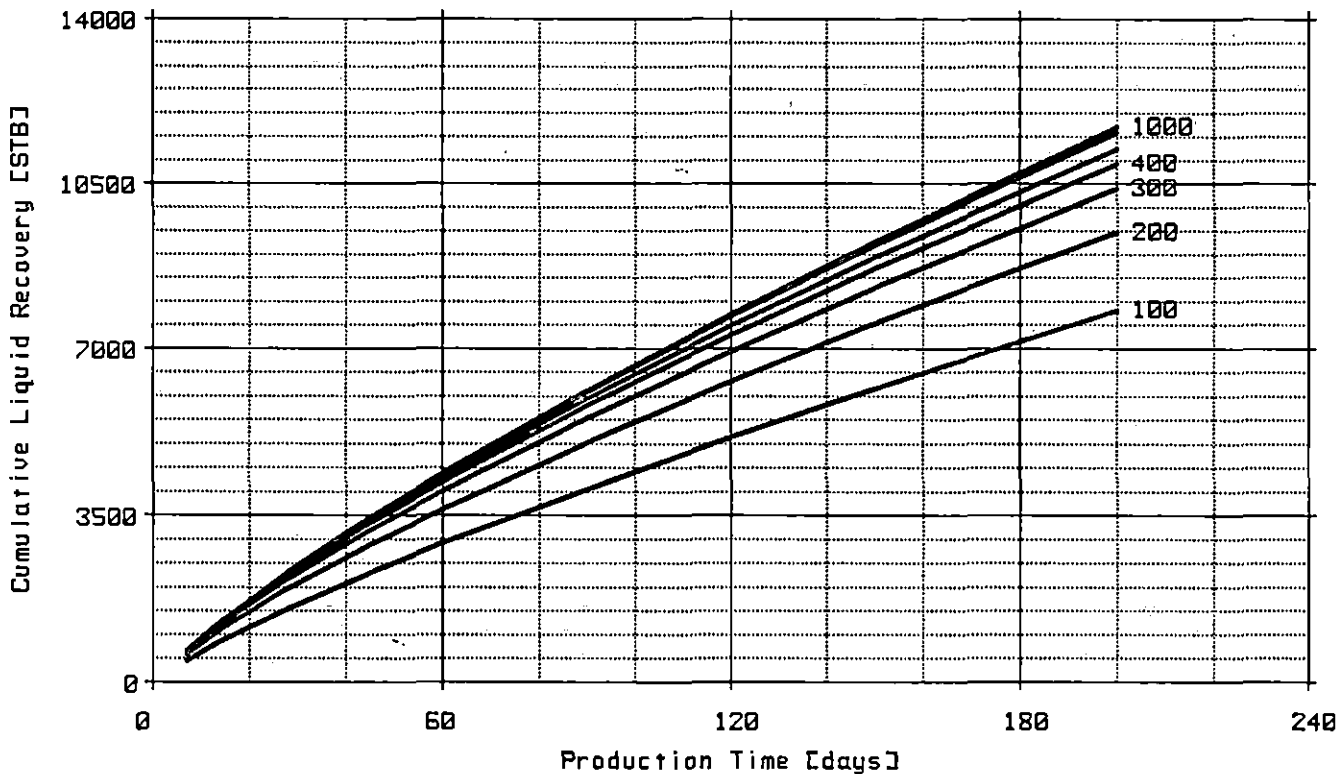
Cumulative Recovery vs. Frac. Half-Length, Transient Conditions
7 to 200 days : WELL ON PUMP @ 50 PSI FL.BHP

SENSITIVITY ANALYSIS
 Recovery vs. Time (vs. Xf)
 WELL ON PUMP @ 50 PSI FL.BHP



Reservoir Pressure: 1841 psi Gas/Liquid Ratio: 14.0 SCF/STB
 Permeability: 0.964 md Tubing Size: 2.441 in (id)
 Net Thickness: 28.0 ft Flowing BH Pressure: 50.0 psi

Fracture Conductivity, $kf*w$: 500.0 md.ft



Effect of Time on Cumulative Recovery, for Fracture Half-Lengths from 100 to 1000 ft : WELL ON PUMP @ 50 PSI FL.BHP

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SENSITIVITY ANALYSIS
Input Data Summary
WELL ON PUMP @ 50 PSI FL.BHP

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Production Time [days]

7.0	14.0	28.0	45.0	60.0
90.0	120.0	150.0	200.0	

Fracture Half-Length, Xf [ft]

100.0	200.0	300.0	400.0	500.0
750.0	1000.			

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SEQUENCE OF EVENTS

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EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN. -H2O)
1	12-MAY	2102	SET PACKERS	-8.15	2837	
2		2104	OPENED TOOL - BUBBLE HOSE	0.00	33	WEAK BLOW
3		2119	CLOSED FOR INITIAL SHUT-IN	14.11	55	BTM. BUCKT
4		2219	FINISHED SHUT-IN	77.06	1654	
5		2222	RE-OPENED TOOL	78.21	63	GOOD BLOW
		2223				BTM. BUCKT
			NO GAS TO SURFACE			
6		2357	CLOSED FOR FINAL SHUT-IN	169.60	109	BTM. BUCKT
7	13-MAY	0357	FINISHED SHUT-IN	412.99	1792	
8		0358	PULLED PACKERS LOOSE	424.36	2821	

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 107161

COMPANY : MOBIL OIL CORP.

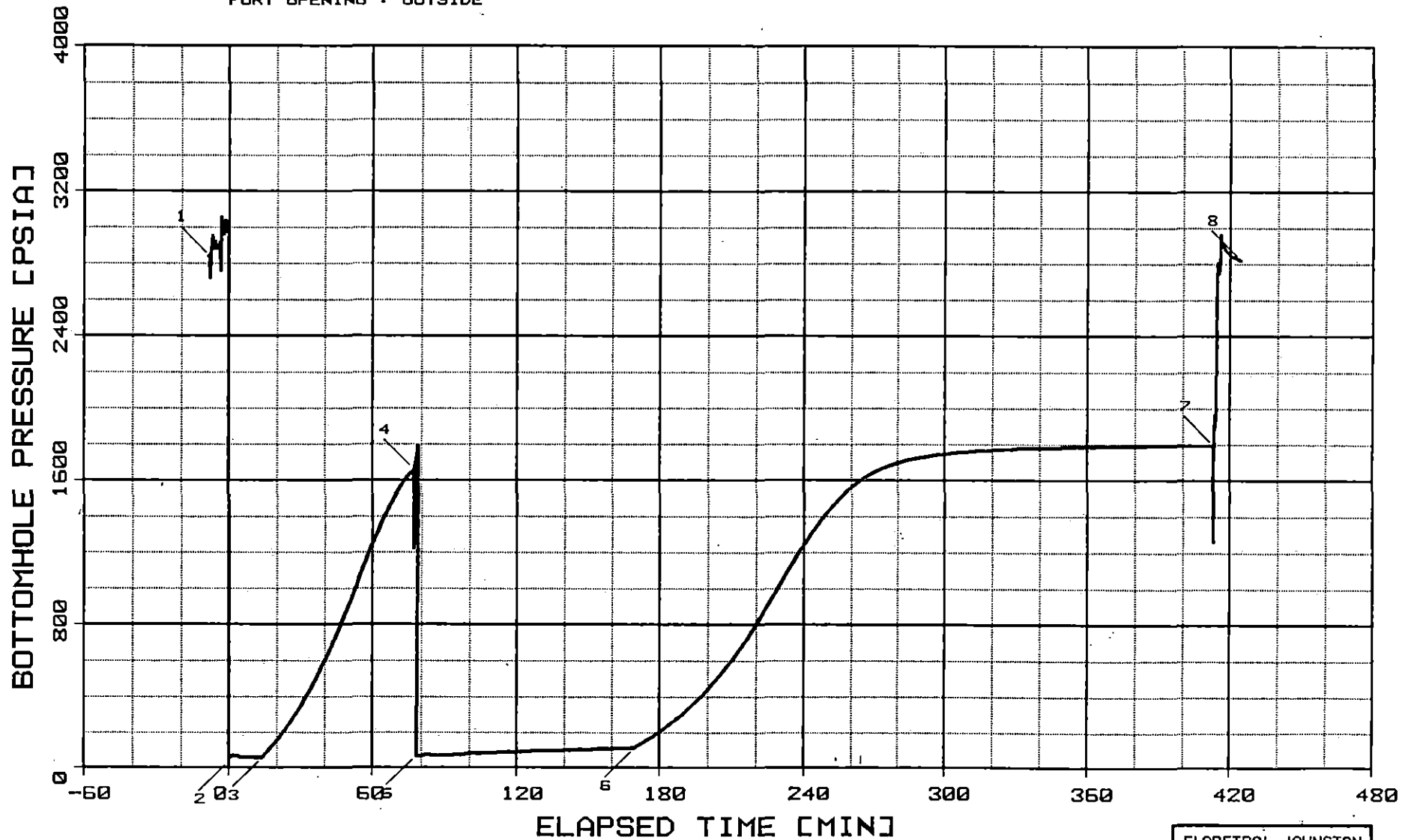
INSTRUMENT NO. J-1290

WELL : H.E. SHULER

DEPTH : 5998 FT

CAPACITY : 6400 PSI

PORT OPENING : OUTSIDE



FLOPETROL JOHNSTON

Schlumberger

 * WELL TEST DATA PRINTOUT *

FIELD REPORT # : 107161
 COMPANY : MOBIL OIL CORP.
 WELL : H.E. SHULER

INSTRUMENT # : J-1290
 CAPACITY [PSI] : 6400.
 DEPTH [FT] : 5998.0
 PORT OPENING : OUTSIDE
 TEMPERATURE [DEG F] : 143.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
1	20:55:51	12-MY	HYDROSTATIC MUD	-8.15	2837
2	21: 4: 0	12-MY	START FLOW	0.00	33
3	21:18: 7	12-MY	END FLOW & START SHUT-IN	14.11	55
4	22:21: 4	12-MY	END SHUT-IN	77.06	1654
5	22:22:13	12-MY	START FLOW	78.21	63
6	23:53:36	12-MY	END FLOW & START SHUT-IN	169.60	109
7	3:56:59	13-MY	END SHUT-IN	412.99	1792
8	4: 8:22	13-MY	HYDROSTATIC MUD	424.36	2821

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	14.11	14.11	33	55
2	78.21	169.60	91.39	63	109

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	14.11	77.06	62.95	55	1654	55	14.11
2	169.60	412.99	243.39	109	1792	109	105.50

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
21: 4: 0	12-MY	0.00	0.00	33
21: 9: 0	12-MY	5.00	5.00	53
21:14: 0	12-MY	10.00	10.00	54
21:18: 7	12-MY	14.11	14.11	55

TEST PHASE : SHUTIN PERIOD # 1
 FINAL FLOW PRESSURE [PSIA] = 55
 PRODUCING TIME [MIN] = 14.11

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
21:18: 7	12-MY	14.11	0.00	55	0	
21:19: 7	12-MY	15.11	1.00	72	17	1.179
21:20: 7	12-MY	16.11	2.00	88	33	0.906
21:21: 7	12-MY	17.11	3.00	104	49	0.756
21:22: 7	12-MY	18.11	4.00	120	65	0.656
21:23: 7	12-MY	19.11	5.00	136	81	0.582
21:24: 7	12-MY	20.11	6.00	152	97	0.525
21:25: 7	12-MY	21.11	7.00	168	113	0.479
21:26: 7	12-MY	22.11	8.00	185	130	0.441
21:27: 7	12-MY	23.11	9.00	203	147	0.410
21:28: 7	12-MY	24.11	10.00	221	165	0.382
21:30: 7	12-MY	26.11	12.00	260	205	0.338
21:32: 7	12-MY	28.11	14.00	301	246	0.303
21:34: 7	12-MY	30.11	16.00	344	289	0.275
21:36: 7	12-MY	32.11	18.00	391	336	0.251
21:38: 7	12-MY	34.11	20.00	439	384	0.232
21:40: 7	12-MY	36.11	22.00	491	436	0.215
21:42: 7	12-MY	38.11	24.00	544	488	0.201
21:44: 7	12-MY	40.11	26.00	597	542	0.188
21:46: 7	12-MY	42.11	28.00	654	599	0.177
21:48: 7	12-MY	44.11	30.00	712	657	0.167
21:53: 7	12-MY	49.11	35.00	871	815	0.147
21:58: 7	12-MY	54.11	40.00	1038	983	0.131
22: 3: 7	12-MY	59.11	45.00	1211	1156	0.118
22: 8: 7	12-MY	64.11	50.00	1372	1317	0.108
22:13: 7	12-MY	69.11	55.00	1507	1452	0.099
22:18: 7	12-MY	74.11	60.00	1610	1555	0.092
22:21: 4	12-MY	77.06	62.95	1654	1599	0.088

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
22:22:13	12-MY	78.21	0.00	63
22:27:13	12-MY	83.21	5.00	71
22:32:13	12-MY	88.21	10.00	66
22:37:13	12-MY	93.21	15.00	69
22:42:13	12-MY	98.21	20.00	74
22:47:13	12-MY	103.21	25.00	78
22:52:13	12-MY	108.21	30.00	80
22:57:13	12-MY	113.21	35.00	83
23: 2:13	12-MY	118.21	40.00	84
23: 7:13	12-MY	123.21	45.00	90
23:12:13	12-MY	128.21	50.00	91
23:17:13	12-MY	133.21	55.00	94
23:22:13	12-MY	138.21	60.00	96
23:27:13	12-MY	143.21	65.00	98
23:32:13	12-MY	148.21	70.00	100
23:37:13	12-MY	153.21	75.00	103
23:42:13	12-MY	158.21	80.00	104
23:47:13	12-MY	163.21	85.00	108
23:52:13	12-MY	168.21	90.00	109
23:53:36	12-MY	169.60	91.39	109

TEST PHASE : SHUTIN PERIOD # 2
 FINAL FLOW PRESSURE [PSIA] = 109
 PRODUCING TIME [MIN] = 105.50

TIME OF DAY	DATE	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
23:53:36	12-MY	169.60	0.00	109	0	
23:54:36	12-MY	170.60	1.00	121	12	2.027
23:55:36	12-MY	171.60	2.00	129	20	1.730
23:56:36	12-MY	172.60	3.00	137	28	1.558
23:57:36	12-MY	173.60	4.00	145	36	1.437
23:58:36	12-MY	174.60	5.00	153	44	1.344
23:59:36	12-MY	175.60	6.00	161	52	1.269
0: 0:36	13-MY	176.60	7.00	169	61	1.206
0: 1:36	13-MY	177.60	8.00	179	70	1.152
0: 2:36	13-MY	178.60	9.00	188	79	1.105
0: 3:36	13-MY	179.60	10.00	198	89	1.063
0: 5:36	13-MY	181.60	12.00	217	108	0.991
0: 7:36	13-MY	183.60	14.00	236	128	0.931
0: 9:36	13-MY	185.60	16.00	258	149	0.880
0:11:36	13-MY	187.60	18.00	279	170	0.836
0:13:36	13-MY	189.60	20.00	300	192	0.798
0:15:36	13-MY	191.60	22.00	327	218	0.763
0:17:36	13-MY	193.60	24.00	351	242	0.732

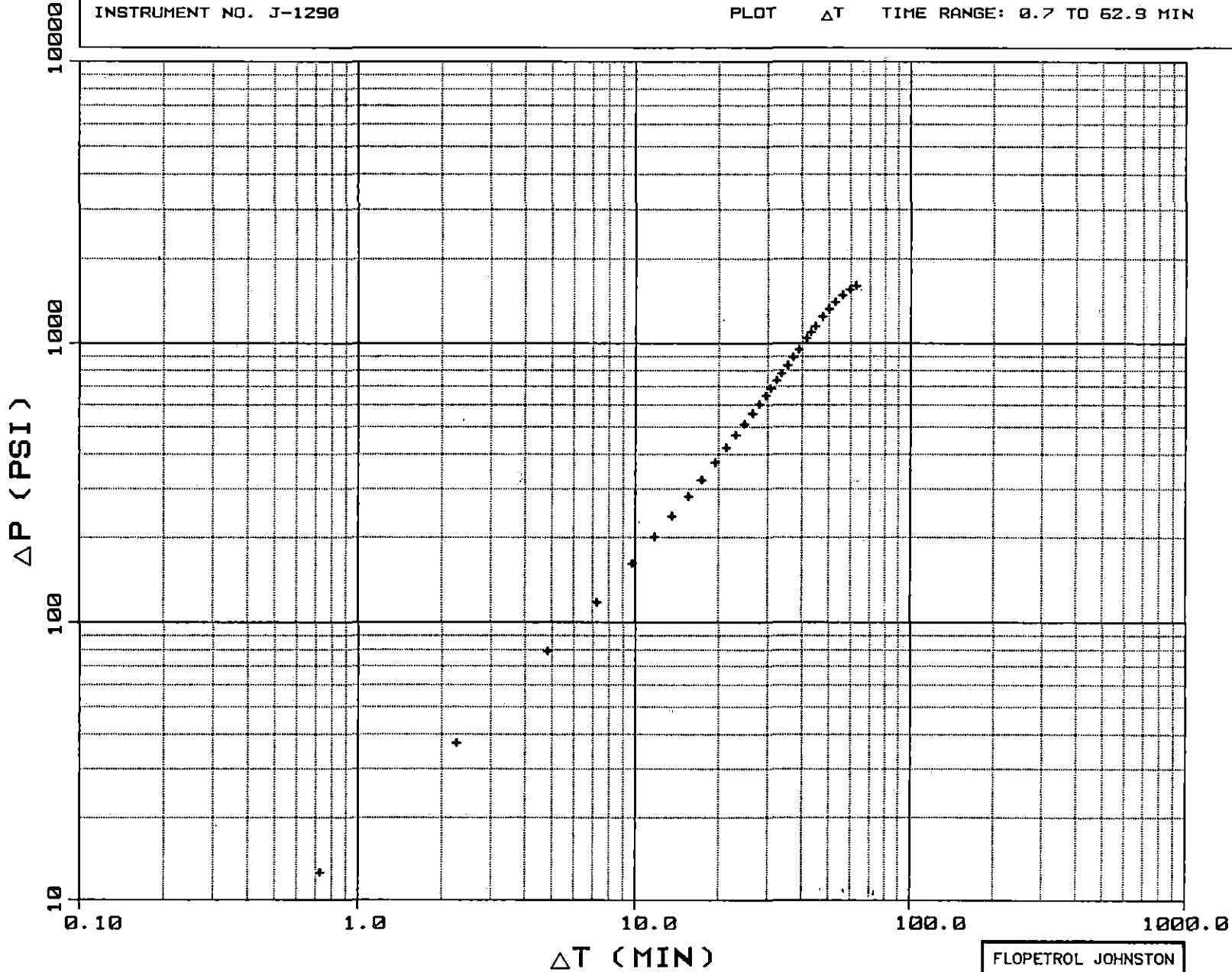
TEST PHASE : SHUTIN PERIOD # 2
 FINAL FLOW PRESSURE [PSIA] = 109
 PRODUCING TIME [MIN] = 105.50

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
*****	*****	*****	*****	*****	*****	*****
0:19:36	13-MY	195.60	26.00	377	268	0.704
0:21:36	13-MY	197.60	28.00	404	295	0.678
0:23:36	13-MY	199.60	30.00	432	323	0.655
0:28:36	13-MY	204.60	35.00	510	401	0.604
0:33:36	13-MY	209.60	40.00	594	485	0.561
0:38:36	13-MY	214.60	45.00	688	579	0.524
0:43:36	13-MY	219.60	50.00	788	679	0.493
0:48:36	13-MY	224.60	55.00	898	789	0.465
0:53:36	13-MY	229.60	60.00	1011	902	0.441
0:58:36	13-MY	234.60	65.00	1125	1016	0.419
1: 3:36	13-MY	239.60	70.00	1231	1122	0.399
1: 8:36	13-MY	244.60	75.00	1329	1220	0.381
1:13:36	13-MY	249.60	80.00	1417	1308	0.365
1:18:36	13-MY	254.60	85.00	1490	1381	0.350
1:23:36	13-MY	259.60	90.00	1552	1443	0.337
1:28:36	13-MY	264.60	95.00	1601	1492	0.324
1:33:36	13-MY	269.60	100.00	1640	1531	0.313
1:38:36	13-MY	274.60	105.00	1669	1560	0.302
1:43:36	13-MY	279.60	110.00	1692	1583	0.292
1:48:36	13-MY	284.60	115.00	1711	1602	0.283
1:53:36	13-MY	289.60	120.00	1724	1615	0.274
1:58:36	13-MY	294.60	125.00	1736	1627	0.266
2: 3:36	13-MY	299.60	130.00	1742	1633	0.258
2: 8:36	13-MY	304.60	135.00	1751	1642	0.251
2:13:36	13-MY	309.60	140.00	1755	1646	0.244
2:18:36	13-MY	314.60	145.00	1760	1651	0.237
2:23:36	13-MY	319.60	150.00	1764	1655	0.231
2:28:36	13-MY	324.60	155.00	1768	1659	0.225
2:33:36	13-MY	329.60	160.00	1771	1662	0.220
2:38:36	13-MY	334.60	165.00	1773	1664	0.215
2:43:36	13-MY	339.60	170.00	1776	1667	0.210
2:48:36	13-MY	344.60	175.00	1778	1669	0.205
2:53:36	13-MY	349.60	180.00	1779	1670	0.200
2:58:36	13-MY	354.60	185.00	1781	1672	0.196
3: 3:36	13-MY	359.60	190.00	1782	1673	0.192
3: 8:36	13-MY	364.60	195.00	1784	1675	0.188
3:13:36	13-MY	369.60	200.00	1785	1676	0.184
3:18:36	13-MY	374.60	205.00	1786	1677	0.180
3:23:36	13-MY	379.60	210.00	1787	1678	0.177
3:28:36	13-MY	384.60	215.00	1788	1679	0.173
3:33:36	13-MY	389.60	220.00	1789	1680	0.170
3:38:36	13-MY	394.60	225.00	1789	1680	0.167
3:43:36	13-MY	399.60	230.00	1790	1682	0.164
3:48:36	13-MY	404.60	235.00	1791	1682	0.161
3:53:36	13-MY	409.60	240.00	1791	1682	0.158
3:56:59	13-MY	412.99	243.39	1792	1683	0.156

LOG LOG PLOT

COMPANY : MOBIL OIL CORP.
WELL : H.E. SHULER
FIELD REPORT NO. 107161
INSTRUMENT NO. J-1290

SHUTIN #1 :
FINAL FLOW PRESSURE (PWF): 55.19 PSIA
PLOT ELAPSED TIME RANGE: 14.8 TO 77.1 MIN
PLOT ΔT TIME RANGE: 0.7 TO 62.9 MIN



FLOPETROL JOHNSTON
Schlumberger

ΔT (MIN)

0.46 0.66 0.95 1.4 2.0 3.1 4.7 7.8 14 34 60

HORNER PLOT

FIELD REPORT NO. 107161

INSTRUMENT NO. J-1290

COMPANY : MOBIL OIL CORP.

WELL : H.E. SHULER

SHUTIN #1 : FINAL FLOW PRESSURE: 55.19 PSIA

PLOT ELAPSED TIME RANGE: 14.8 TO 77.1 MIN

PLOT ΔT TIME RANGE: 0.7 TO 62.9 MIN

PRODUCING TIME (T_p): 14.1 MIN

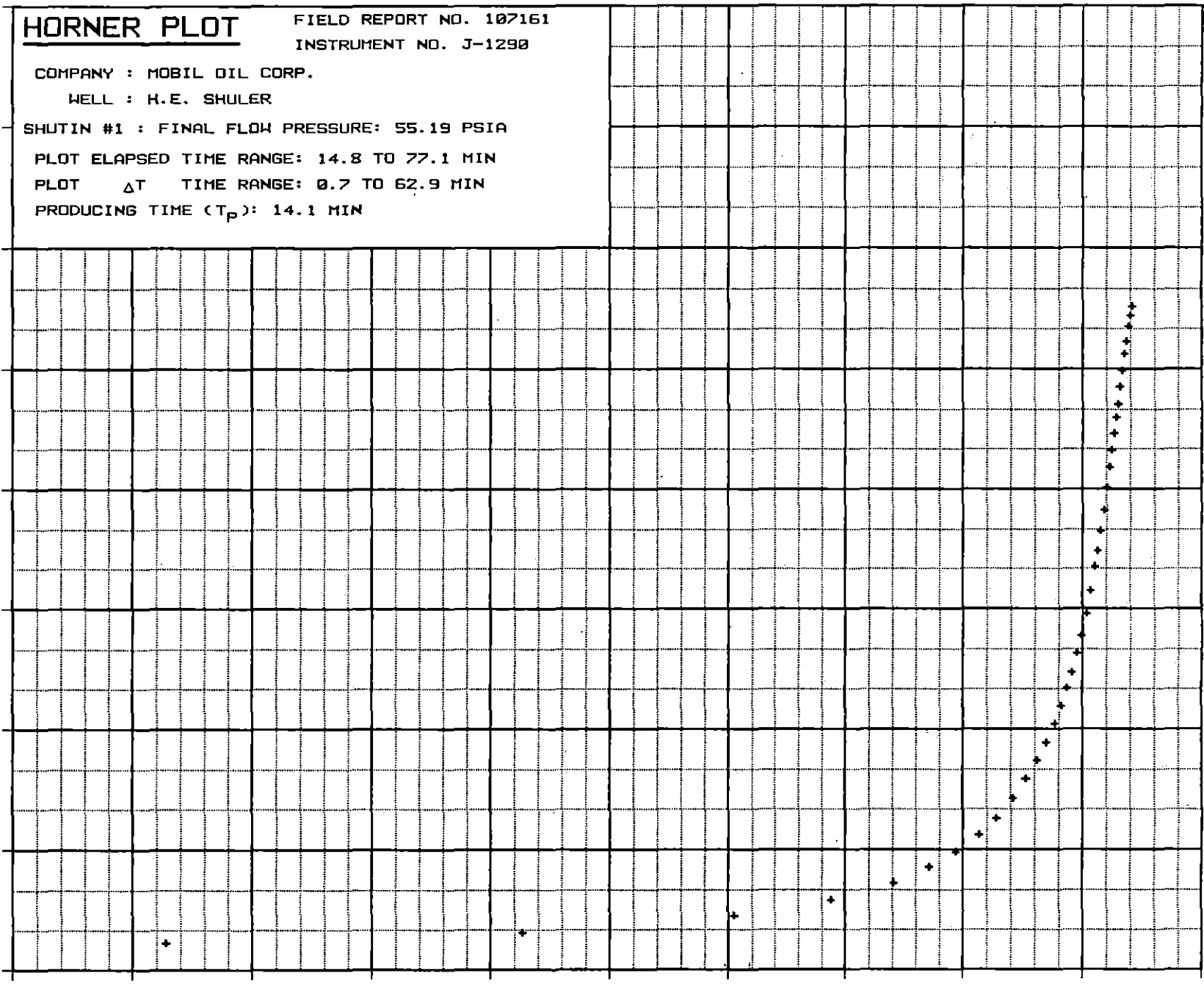
SHUTIN PRESSURE [PSIA]

2400
2100
1800
1500
1200
900
600
300
0

1.50 1.35 1.20 1.05 0.90 0.75 0.60 0.45 0.30 0.15 0.00

$$\text{LOG} \left[\frac{T_p + \Delta T}{\Delta T} \right]$$

FLOPETROL JOHNSTON
Schlumberger



LOG LOG PLOT

COMPANY : MOBIL OIL CORP.

WELL : H.E. SHULER

FIELD REPORT NO. 107161

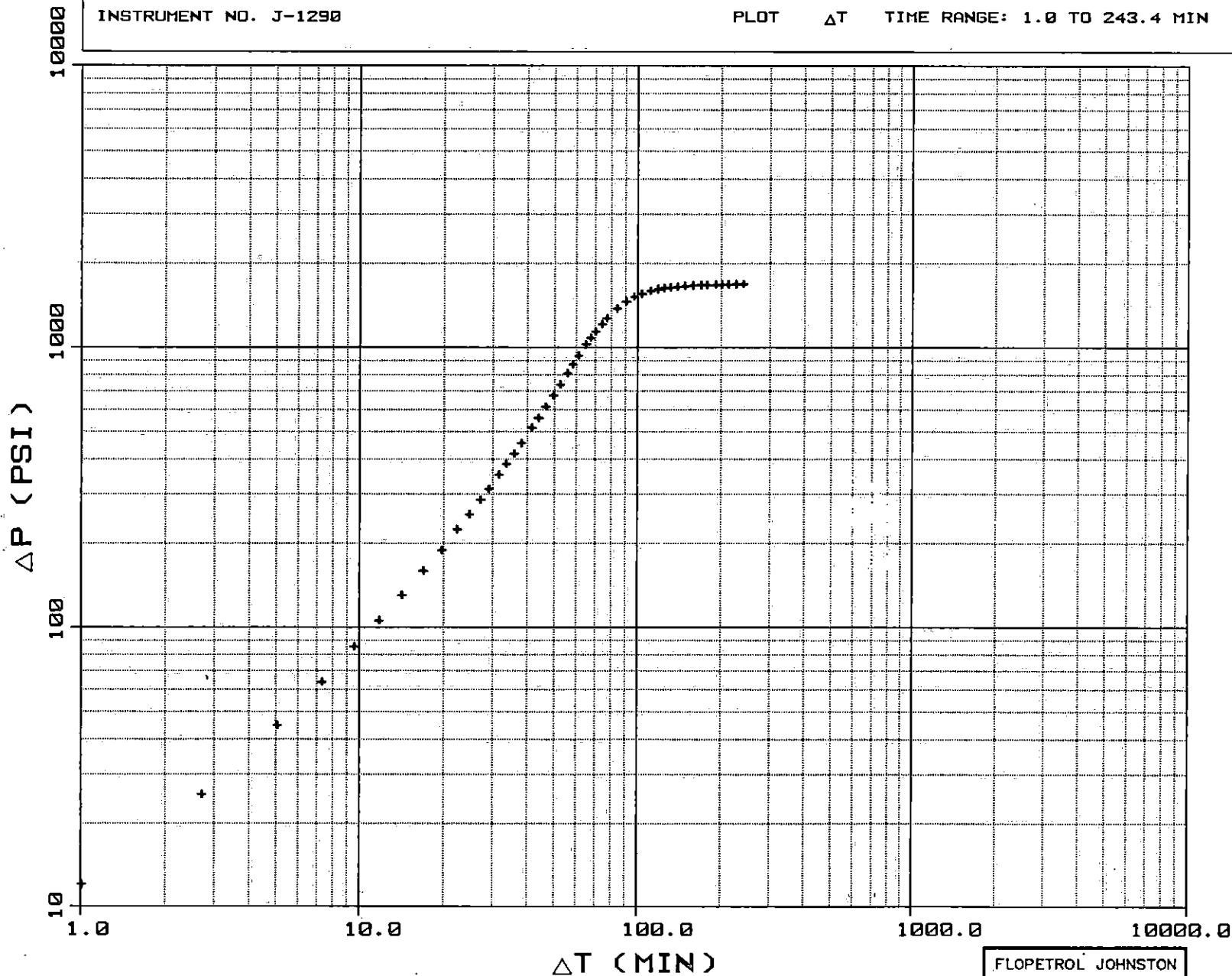
INSTRUMENT NO. J-1290

SHUTIN #2 :

FINAL FLOW PRESSURE (PWF): 108.93 PSIA

PLOT ELAPSED TIME RANGE: 170.6 TO 413.0 MIN

PLOT ΔT TIME RANGE: 1.0 TO 243.4 MIN



FLOPETROL JOHNSTON
Schlumberger

ΔT (MIN)

0.33 0.60 1.1 1.9 3.4 6.3 11 22 48 135 00

HORNER PLOT

FIELD REPORT NO. 107161

INSTRUMENT NO. J-1290

COMPANY : MOBIL OIL CORP.

WELL : H.E. SHULER

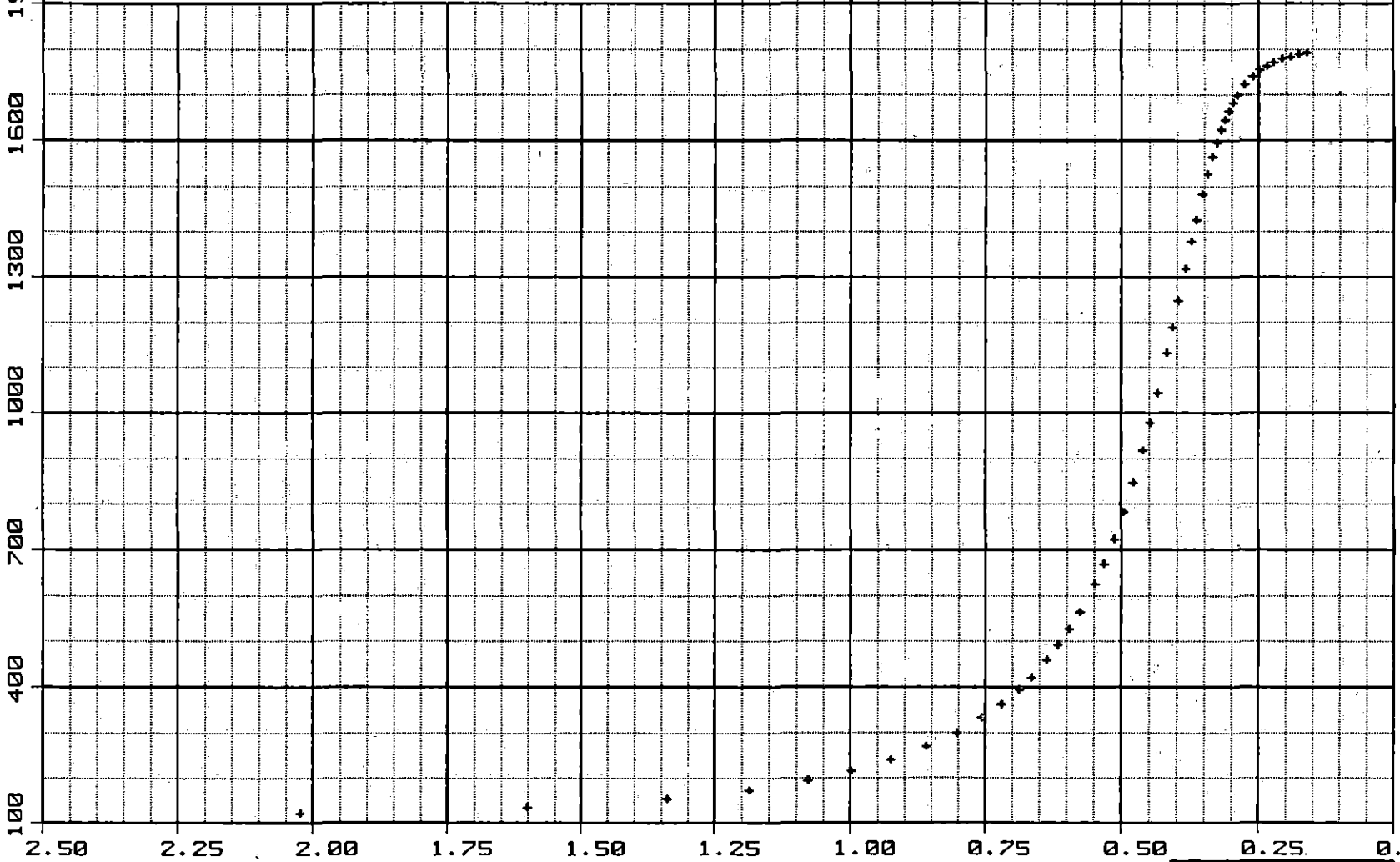
SHUTIN #2 : FINAL FLOW PRESSURE: 108.93 PSIA

PLOT ELAPSED TIME RANGE: 170.6 TO 413.0 MIN

PLOT ΔT TIME RANGE: 1.0 TO 243.4 MIN

PRODUCING TIME (T_p): 105.5 MIN

SHUTIN PRESSURE [PSIA]

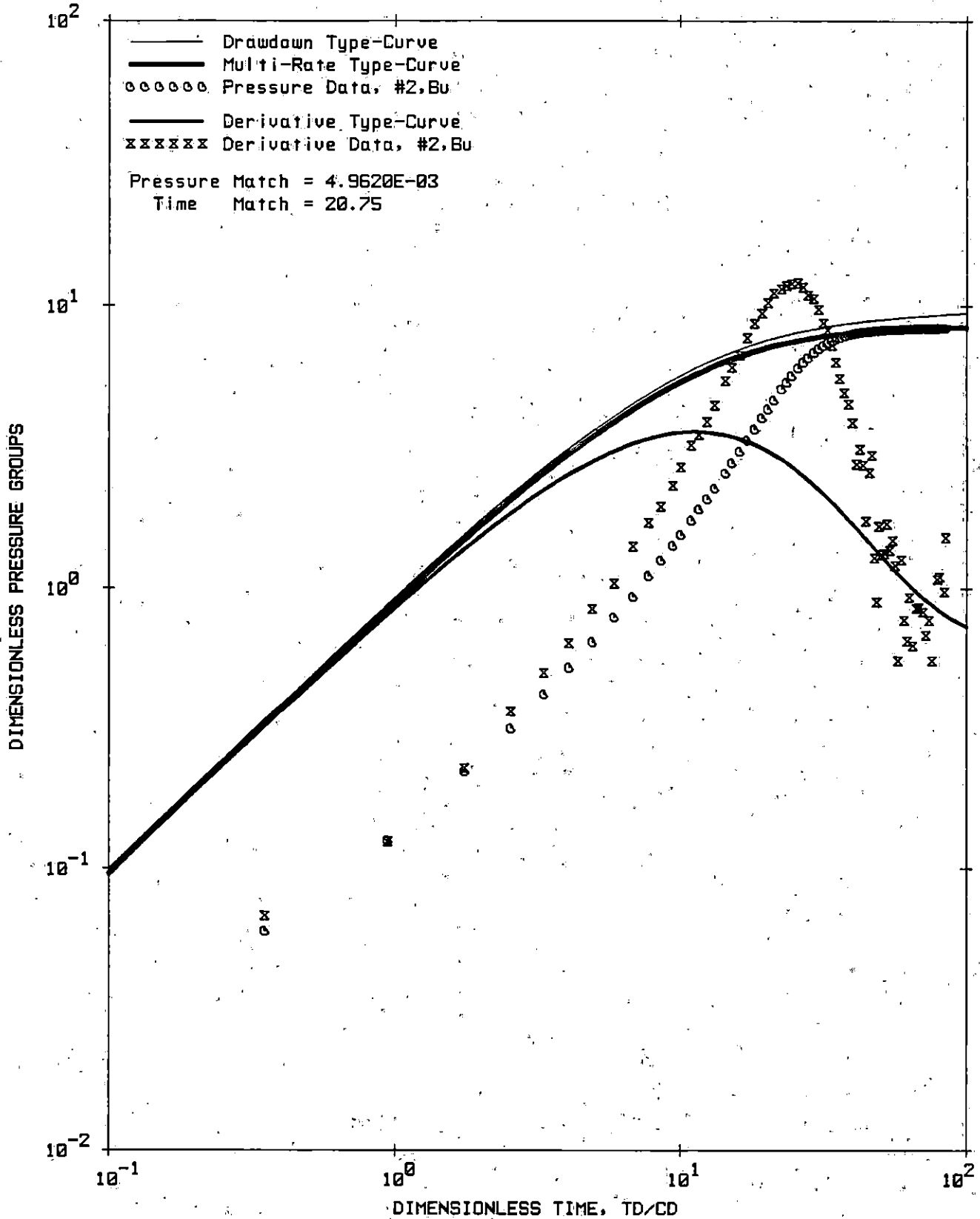


$$\text{LOG} \left[\frac{T_p + \Delta T}{\Delta T} \right]$$

FLOPETROL JOHNSTON
Schlumberger

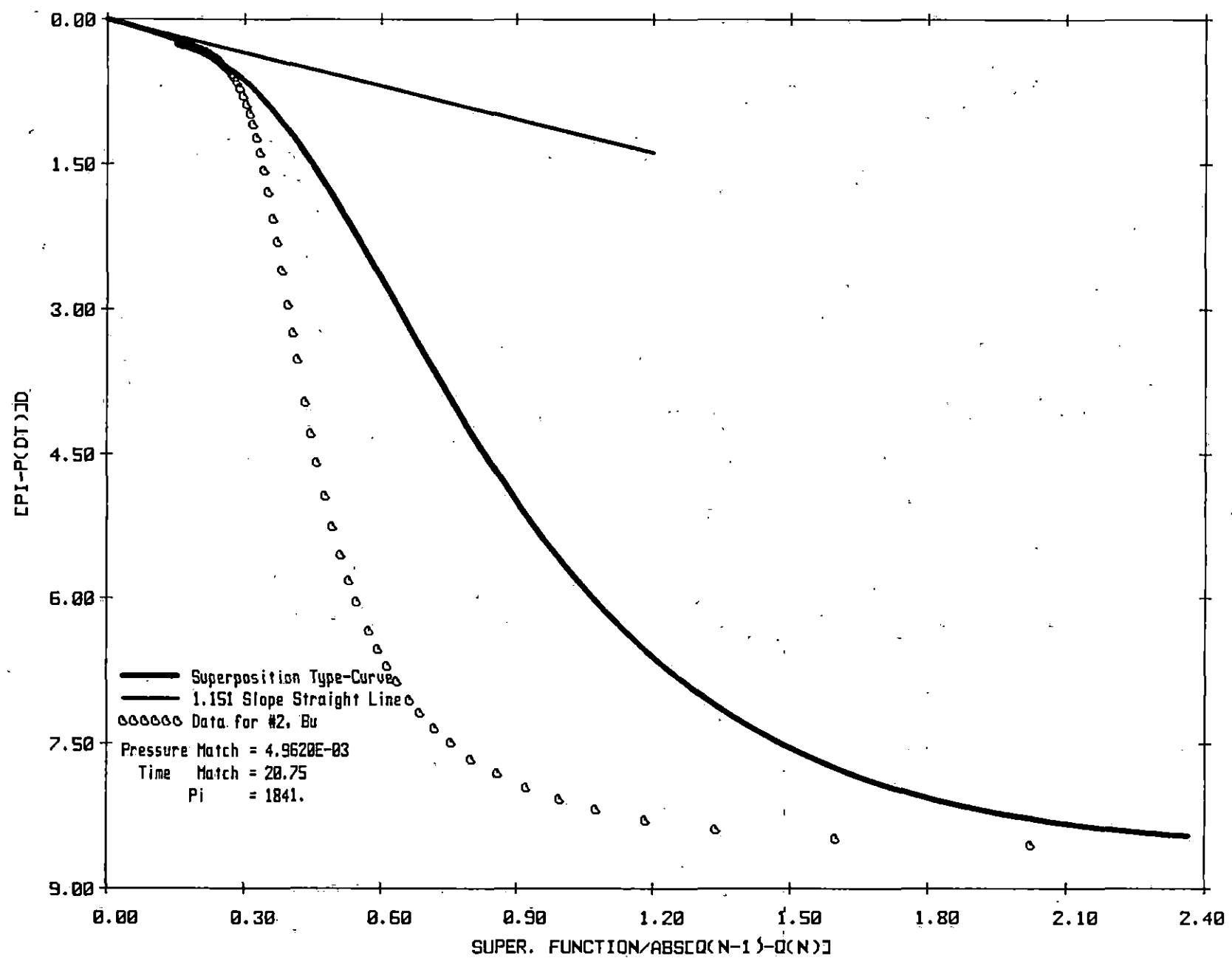
DIMENSIONLESS MULTI-RATE
PLOT : LOG-LOG MATCH FOR
#2, Bu

Schlumberger



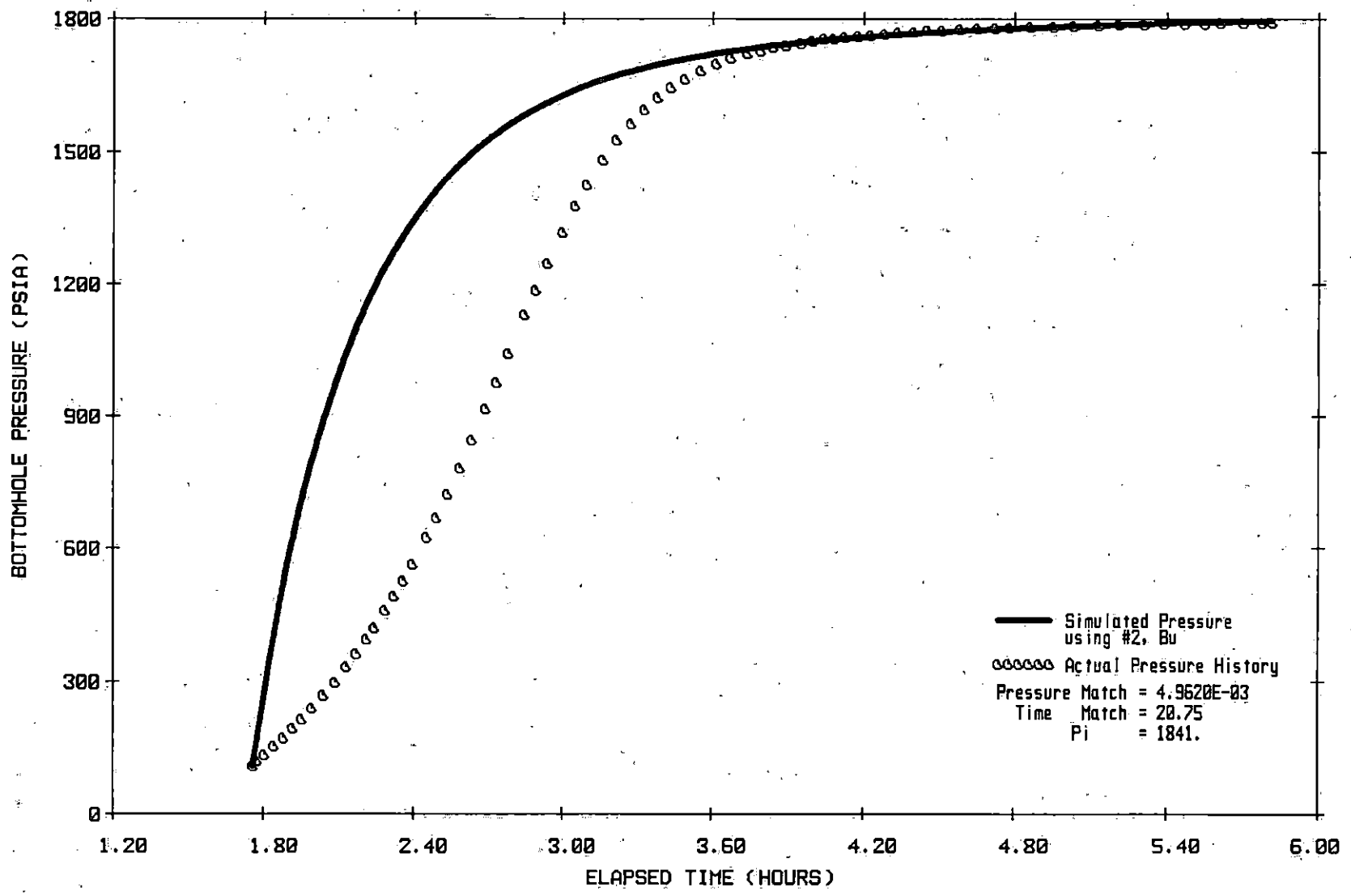
TYPE-CURVE : WELLBORE STORAGE & SKIN (HOMOGENEOUS)
CD*E(2S)=8.87E+05

DIMENSIONLESS SUPERPOSITION
PLOT FOR #2, Bu



TYPE-CURVE : WELLBORE STORAGE & SKIN (HOMOGENEOUS)
CD*(E(2S))=8.87E+05.

PRESSURE HISTORY MATCH
SIMULATION



TYPE-CURVE : WELLBORE STORAGE & SKIN (HOMOGENEOUS)
PRESSURE HISTORY MATCH (SIMULATION)