



Testing Services



Schlumberger In-House DST Interpretation Prepared For

COBRA OIL & GAS CORPORATION

WELL: State 30 #1
FIELD: Wildcat
COUNTY: Lea, New Mexico
TEST NUMBER: ONE
TEST DATE: 10-Mar-98 to 13-Mar-98

FORMATION: Morrow Sand
TEST TYPE: Slickline Build Up
TEST INTERVAL: 14,788 - 14,795 (Perfs)
SWS S.O. NUMBER: 1189161
REPORT PREPARED BY: HARVIN L. BROUGHTON

SUMMARY OF RESULTS

K = 0.0224 md
SKIN = -0.84
RADIUS OF INV = 119 ft
Pi = 9151 psia
THICKNESS (h) = 10 ft
RESERVOIR Homogeneous
BOUNDARY Infinite
WELL Storage & Skin

BHT = 210 degf
INITIAL HYDROSTATIC N/A
IFP (15 min) N/A
ISI (45min) N/A
FFP (120 min) N/A
FSI (240 min) N/A
FINAL HYDROSTATIC N/A
CUSHION NONE

SAMPLE CHAMBER, PRESSURE = GOR = GLR =

VOLUME	FLUID TYPE	PROPERTIES
cu ft	GAS	
cc	OIL	API@60degf
cc		ppm
		ppm

PIPE RECOVERY

VOLUME	FLUID TYPE	PROPERTIES
ft		API@60degf
ft		ppm
ft		ppm

COMMENTS: The Build Up data from the Morrow interval perforations from 14,788 - 14,795 best fit the model of a well in reservoir with very low permeability and no Skin at the time and conditions of the test. The simulation match is excellent and the extrapolated Pi is very near the RFT pressure reading in this zone.

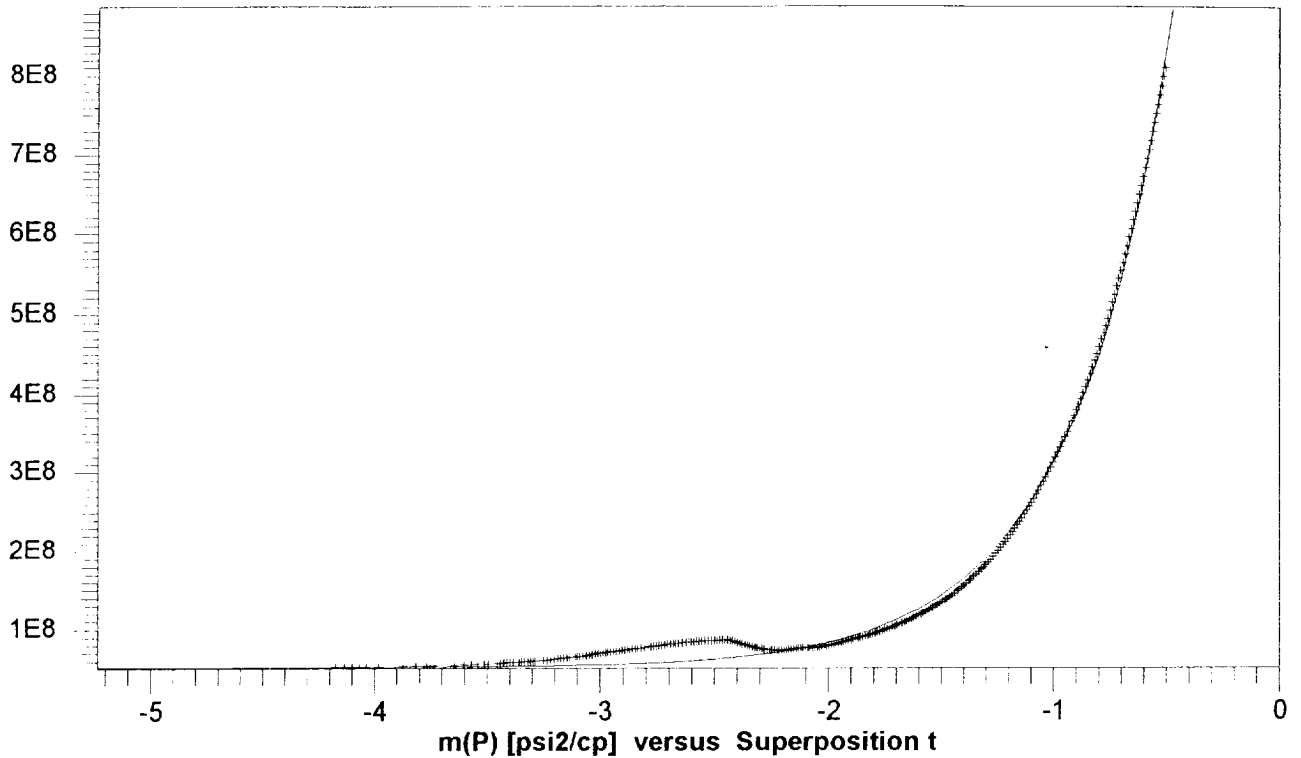
3/23/98

- SAPHIR -		Main Results		1STA30BU
Company	Cobra Oil & Gas	Formation interval		
Field	Wildcat	Perforated interval	14,788 - 14,795	
Well	State 30 #1	SWS S.O. Number	1189161	
Test	Build Up #1	SWS Location	Hobbs, NM	
Date	10-Mar-98 to 13-Mar-	Tester	S. Pitt	
Gauge	WTQR-1751			
Depth	14,756			

TEST TYPE	Standard	FLUID TYPE	Gas
Porosity Phi (%)	10	Gas Gravity	0.7
Well Radius rw	0.3281 ft	Pseudo-Critical P	663.336 psia
Pay Zone h	10 ft	Pseudo-Critical T	377.59 °R
		Reservoir T	210 °F
		Reservoir P	9151 psia
		Properties	@ Reservoir T&P
		Total Compr. ct	2.58631E-5 psi-1
		Viscosity	0.0346949 cp

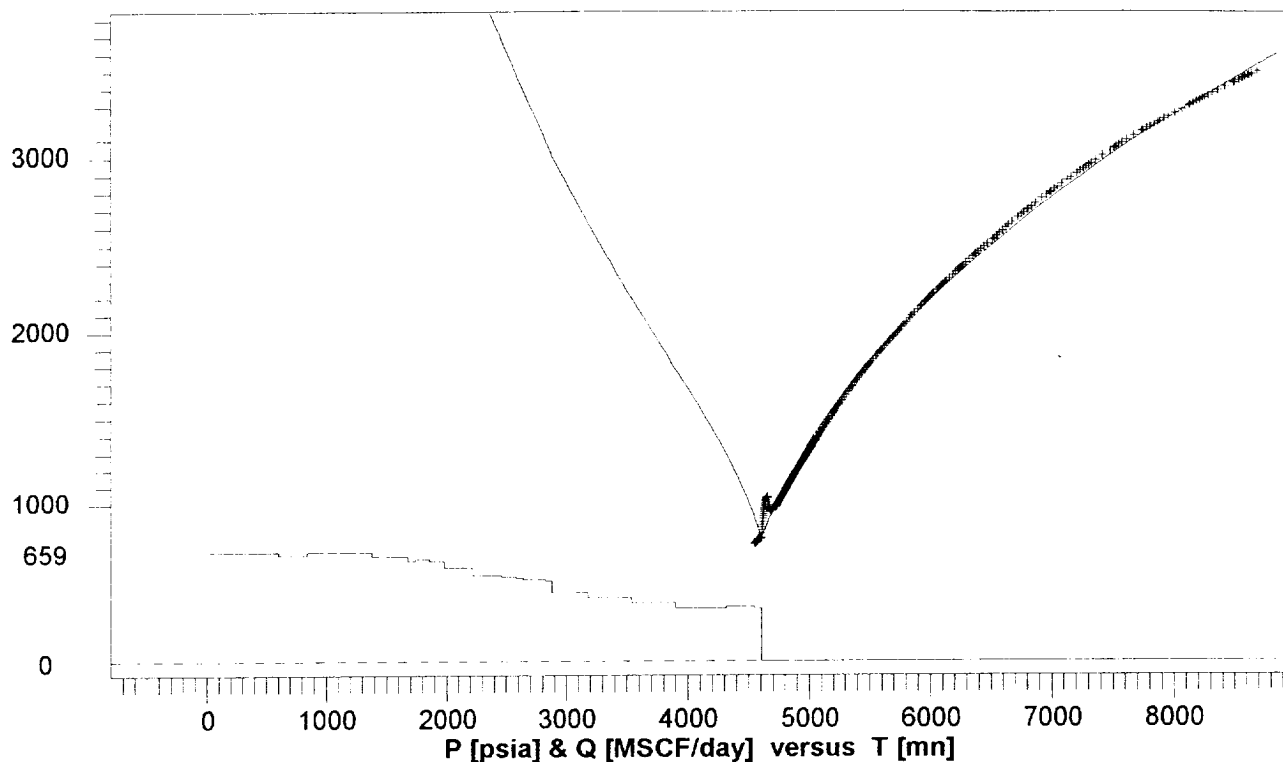
Flow Period #	21	RESERVOIR	Homogeneous
Rate	0 MSCF/day	BOUNDARY	Infinite
Rate Change	312 MSCF/day	WELL	Storage & Skin
P at dt=0	790.62 psia	Storage C	0.0838 STB/psi
Pi	9151.55 psia	Skin factor	-0.84
Time Match	0.000379 (mn)-1	kh	0.22 md.ft
Pressure Match	7.53E-10 (psi2/cp)-1	k	0.0224 md
		Mobility k/mu	0.65

- SAPHIR -		Semi-Log		1STA30BU	
Company	Cobra Oil & Gas	Test	Build Up #1		
Field	Wildcat	Date	10-Mar-98 to 13-Mar-		
Well	State 30 #1	Gauge	WTQR-1751		



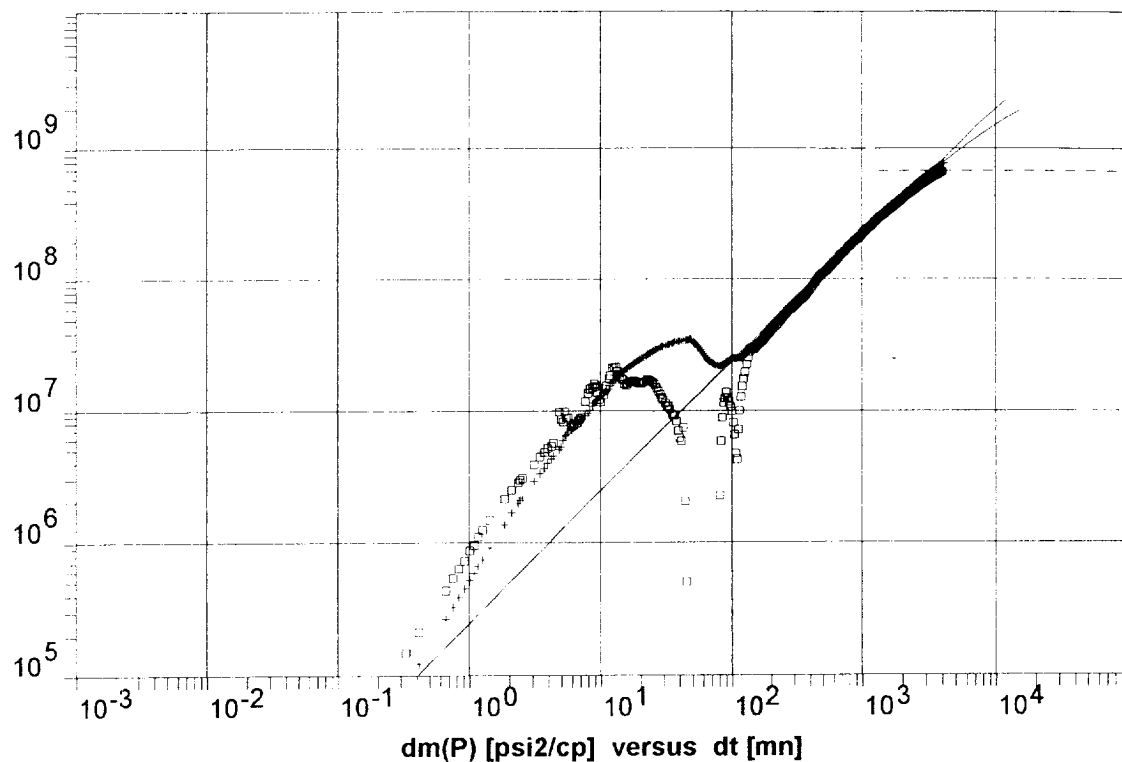
Flow Period #	21	RESERVOIR	Homogeneous
Rate	0 MSCF/day	BOUNDARY	Infinite
Rate Change	312 MSCF/day	WELL	Storage & Skin
P at dt=0	790.62 psia	Storage C	0.0838 STB/psi
Pi	9151.55 psia	Skin factor	-0.84
Time Match	0.000379 (mn)-1	kh	0.22 md.ft
Pressure Match	7.53E-10 (psi ² /cp)-1	k	0.0224 md
		Mobility k/ μ	0.65

- SAPHIR -		Simulation		1STA30BU
Company	Cobra Oil & Gas	Test	Build Up #1	
Field	Wildcat	Date	10-Mar-98 to 13-Mar-	
Well	State 30 #1	Gauge	WTQR-1751	



Flow Period #	21	RESERVOIR	Homogeneous
Rate	0 MSCF/day	BOUNDARY	Infinite
Rate Change	312 MSCF/day	WELL	Storage & Skin
P at dt=0	790.62 psia	Storage C	0.0838 STB/psi
Pi	9151.55 psia	Skin factor	-0.84
Time Match	0.000379 (mn)-1	kh	0.22 md.ft
Pressure Match	7.53E-10 (psi2/cp)-1	k	0.0224 md
		Mobility k/mu	0.65

- SAPHIR -	Log-Log		1STA30BU
Company	Cobra Oil & Gas	Test	Build Up #1
Field	Wildcat	Date	10-Mar-98 to 13-Mar-
Well	State 30 #1	Gauge	WTQR-1751



Flow Period #	21	RESERVOIR	Homogeneous
Rate	0 MSCF/day	BOUNDARY	Infinite
Rate Change	312 MSCF/day	WELL	Storage & Skin
P at dt=0	790.62 psia	Storage C	0.0838 STB/psi
Smoothing	0.1	Skin factor	-0.84
Pi	9151.55 psia		
		kh	0.22 md.ft
Time Match	0.000379 (mn)-1	k	0.0224 md
Pressure Match	7.53E-10 (psi2/cp)-1	Mobility k/mu	0.65
		Investig. R	119 ft

- SAPHIR -	History Listings			1STA30BU
Company	Cobra Oil & Gas	Formation interval		
Field	Wildcat	Perforated interval	14,788 - 14,795	
Well	State 30 #1	SWS S.O. Number	1189161	
Test	Build Up #1	SWS Location	Hobbs, NM	
Date	10-Mar-98 to 13-Mar-	Tester	S. Pitt	
Gauge	WTQR-1751			
Depth	14,756			

Date	Time	FP #	Rate MSCF/day	Duration mn
07/03/98	06:46:00	1	659.000	600.000
	16:46:00	2	638.000	240.000
	20:46:00	3	659.000	540.000
08/03/98	05:46:00	4	630.000	300.000
	10:46:00	5	604.000	60.0000
	11:46:00	6	617.000	120.000
	13:46:00	7	604.000	120.000
	15:46:00	8	563.000	180.000
	18:46:00	9	559.000	60.0000
	19:46:00	10	514.000	240.000
	23:46:00	11	506.000	120.000
09/03/98	01:46:00	12	499.000	60.0000
	02:46:00	13	491.000	180.000
	05:46:00	14	483.000	60.0000
	06:46:00	15	408.000	300.000
	11:46:00	16	377.000	360.000
	17:46:00	17	346.000	360.000
	23:46:00	18	310.000	420.000
10/03/98	06:46:00	19	324.000	225.000
	10:31:00	20	312.000	60.5700
	11:31:34	21	0.00	4266.27

- SAPHIR -		History Listings		1STA30BU
Company	Cobra Oil & Gas	Formation interval		
Field	Wildcat	Perforated interval	14,788 - 14,795	
Well	State 30 #1	SWS S.O. Number	1189161	
Test	Build Up #1	SWS Location	Hobbs, NM	
Date	10-Mar-98 to 13-Mar-	Tester	S. Pitt	
Gauge	WTQR-1751			
Depth	14,756			

Date	Time	Pressure psia	Date	Time	Pressure psia	Date	Time	Pressure psia
10/03/98	10:31:53	756.120	10/03/98	12:10:04	1024.26	10/03/98	13:56:04	1007.79
	10:35:13	761.550		12:16:23	1029.75		13:59:34	1012.41
	10:38:04	762.400		12:19:34	1030.63		14:03:13	1017.17
	10:41:04	762.920		12:24:08	1013.62		14:05:43	1020.49
	10:43:38	764.020		12:28:34	995.660		14:09:28	1025.34
	10:45:53	765.020		12:33:53	973.220		14:12:58	1029.91
	10:48:49	766.720		12:36:38	963.850		14:16:28	1034.34
	10:51:08	766.960		12:41:23	956.660		14:19:43	1038.60
	10:54:43	769.110		12:47:04	949.490		14:22:43	1042.41
	10:57:04	772.740		12:50:58	948.810		14:26:08	1046.80
	10:59:13	775.360		12:53:43	950.050		14:29:38	1051.24
	11:01:49	779.440		12:57:04	953.220		14:33:28	1056.06
	11:03:49	786.100		13:02:08	959.480		14:36:49	1060.36
	11:06:43	787.090		13:05:13	963.430		14:39:43	1064.13
	11:10:53	786.010		13:08:23	968.330		14:42:53	1067.98
	11:14:58	784.930		13:12:04	968.990		14:47:04	1073.25
	11:17:38	787.680		13:14:28	969.500		14:49:28	1076.22
	11:21:23	786.600		13:16:49	969.850		14:52:28	1080.14
	11:25:13	789.330		13:19:19	970.350		14:54:53	1083.09
	11:28:23	791.240		13:21:43	970.690		14:58:38	1087.80
	11:31:49	791.040		13:24:49	970.860		15:01:38	1091.50
	11:35:28	821.030		13:27:23	970.990		15:05:43	1096.59
	11:37:53	848.040		13:30:34	971.290		15:08:34	1100.06
	11:40:23	876.790		13:33:23	974.880		15:11:28	1103.70
	11:43:13	901.950		13:35:49	979.430		15:14:43	1107.67
	11:45:08	926.510		13:38:19	983.710		15:17:38	1111.30
	11:47:13	941.950		13:40:53	987.760		15:20:58	1115.44
	11:50:08	961.290		13:43:38	991.650		15:24:08	1119.30
	11:54:08	982.160		13:46:58	995.990		15:26:28	1122.21
	11:58:19	1000.42		13:49:49	999.630		15:29:58	1126.56
	12:04:38	1015.92		13:53:28	1004.33		15:33:53	1131.21

- SAPHIR -	History Listings		1STA30BU
Company	Cobra Oil & Gas	Formation interval	
Field	Wildcat	Perforated interval	14,788 - 14,795
Well	State 30 #1	SWS S.O. Number	1189161
Test	Build Up #1	SWS Location	Hobbs, NM
Date	10-Mar-98 to 13-Mar-	Tester	S. Pitt
Gauge	WTQR-1751		
Depth	14,756		

Date	Time	Pressure psia	Date	Time	Pressure psia	Date	Time	Pressure psia
10/03/98	15:37:08	1135.21	10/03/98	17:27:04	1262.70	10/03/98	22:39:08	1589.69
	15:40:08	1138.86		17:32:04	1268.24		22:58:53	1608.78
	15:43:38	1143.09		17:36:49	1273.49		23:26:38	1635.70
	15:46:38	1146.71		17:40:19	1277.15		23:52:08	1659.95
	15:50:28	1151.43		17:44:23	1281.59	11/03/98	00:10:28	1677.30
	15:53:08	1154.59		17:49:34	1287.15		00:32:58	1698.39
	15:55:38	1157.55		17:55:23	1293.34		01:00:23	1723.66
	15:59:43	1162.47		18:01:34	1299.63		01:20:53	1742.31
	16:02:58	1166.31		18:05:19	1303.43		01:37:04	1756.71
	16:07:23	1171.61		18:09:13	1307.49		02:00:08	1777.16
	16:10:34	1175.55		18:15:53	1314.34		02:22:19	1796.56
	16:13:34	1179.10		18:20:53	1319.56		02:36:08	1808.56
	16:16:34	1182.62		18:25:08	1323.97		03:04:49	1833.03
	16:19:49	1186.47		18:33:43	1333.12		03:37:04	1859.84
	16:23:28	1190.75		18:39:49	1339.81		03:59:58	1879.12
	16:26:28	1194.32		18:51:04	1352.56		04:20:13	1896.16
	16:30:13	1198.92		18:57:13	1359.70		04:51:38	1921.88
	16:33:43	1203.01		19:04:34	1368.07		05:16:13	1941.76
	16:36:58	1206.73		19:14:53	1379.78		05:37:58	1959.40
	16:40:23	1210.83		19:25:28	1391.60		06:06:13	1982.21
	16:42:49	1213.57		19:35:38	1402.74		06:30:49	2001.91
	16:46:08	1217.28		19:48:34	1416.70		06:57:19	2022.74
	16:50:19	1221.31		20:03:04	1432.17		07:27:58	2046.55
	16:54:38	1226.03		20:21:43	1451.67		08:12:04	2080.55
	16:58:13	1230.13		20:33:58	1464.19		08:49:58	2108.95
	17:01:28	1233.80		20:52:58	1483.56		09:29:43	2138.59
	17:05:49	1238.77		21:10:04	1500.88		09:54:04	2156.30
	17:10:38	1244.25		21:30:23	1521.26		10:20:53	2175.67
	17:14:23	1248.31		21:42:43	1533.64		10:49:04	2195.97
	17:17:53	1252.31		22:01:49	1552.82		11:05:53	2208.02
	17:22:34	1257.62		22:20:28	1571.30		11:49:23	2238.51

REPORT NO.
1189161

PAGE NO. 1

TEST DATE:
10-MAR-1998

STAR

Schlumberger Testing Data Report Pressure Data Report

Schlumberger

COMPANY: COBRA OIL & GAS COMPANY

WELL: STATE 30

TEST IDENTIFICATION

Test Type BHP
Test No. TWO
Formation
Test Interval (ft) 14788 to 14795

WELL LOCATION

Field WILDCAT
County LEA
State NEW MEXICO

COMPLETION CONFIGURATION

Total Depth (MD/TVD) (ft) 15273
Casing/Liner I.D. (in) 2.875
Hole Size (in) 6.50
Perforated Interval (ft) 14788 to 14795
Shot Density (shots/ft)
Perforation Diameter (in)
Net Pay (ft) 7

TEST STRING CONFIGURATION

Tubing Length (ft)/I.D. (in)..
Tubing Length (ft)/I.D. (in)..
Packer Depth (ft)
Gauge Depth (ft)/Type 14756/WTQR-1751
Downhole Valve (Y/N)/Type

TEST CONDITIONS

Tbg/Wellhead Pressure (psi) ..
Separator Pressure (psi)

INTERPRETATION RESULTS

Model of Behavior
Fluid Type Used for Analysis..
Reservoir Pressure (psi)
Transmissibility (md.ft/cp) ..
Effective Permeability (md) ..
Skin Factor
Storativity Ratio, Omega
Interporos.Flow Coef., Lambda..
Distance to an Anomaly (ft) ..
Radius of Investigation (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
Basic Solids (%)
Gas Gravity
GOR (scf/STB)
Water Cut (%)
Viscosity (cp)
Total Compressibility (1/psi)..
Porosity (%) 10
Reservoir Temperature (F) 210
Form.Vol.Factor (bbl/STB)

PRODUCTION RATE DURING TEST: Data Report

COMMENTS:

THIS BOTTOM HOLE PRESSURE SURVEY WAS MECHANICALLY SUCCESSFUL. ANY QUESTIONS PLEASE CALL THE HOBBS DISTRICT. THANK YOU FOR USING SCHLUMBERGER TESTING.

WELL TEST INTERFEROMETRY REPORT #1103101		PAGE: 2,
CLIENT : COBRA OIL & GAS COMPANY		16-MAR-98
REGION : CSD	SEQUENCE OF EVENTS	FIELD: WILDCAT
DISTRICT: HOBBS, NM		ZONE :
BASE : MIDLAND, TX		WELL : STATE 30
ENGINEER: SCOTT PITT		LOCATION:

DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	BHP (PSIA)	WHP (PSIG)
=====					
10-MAR	09:11	Gradient Stop 0 Ft.	-154	397	
10-MAR	09:34	Gradient Stop 5000 Ft.	-131	571	
10-MAR	09:59	Gradient Stop 10000 Ft.	-106	680	
10-MAR	10:15	Gradient Stop 12000 Ft.	-90	708	
10-MAR	10:29	Gradient Stop 13000 Ft.	-76	719	
10-MAR	10:43	Gradient Stop 14000 Ft.	-62	730	
10-MAR	10:47	Gradient Stop 14756 Ft.	-58	759	
10-MAR	10:47	START FLOW	-58	759	
10-MAR	11:45	END FLOW & START SHUT-IN	0	791	
13-MAR	07:52	END SHUT-IN	4087	3493	
13-MAR	07:52	Gradient Stop 14756 Ft.	4087	3493	
13-MAR	08:06	Gradient Stop 14000 Ft.	4101	3441	
13-MAR	08:20	Gradient Stop 13000 Ft.	4115	3384	
13-MAR	08:32	Gradient Stop 12000 Ft.	4127	3325	
13-MAR	08:48	Gradient Stop 10000 Ft.	4143	3201	
13-MAR	09:09	Gradient Stop 5000 Ft.	4164	2873	
13-MAR	09:33	Gradient Stop 0 Ft.	4188	2543	

GRADIENT PLOT

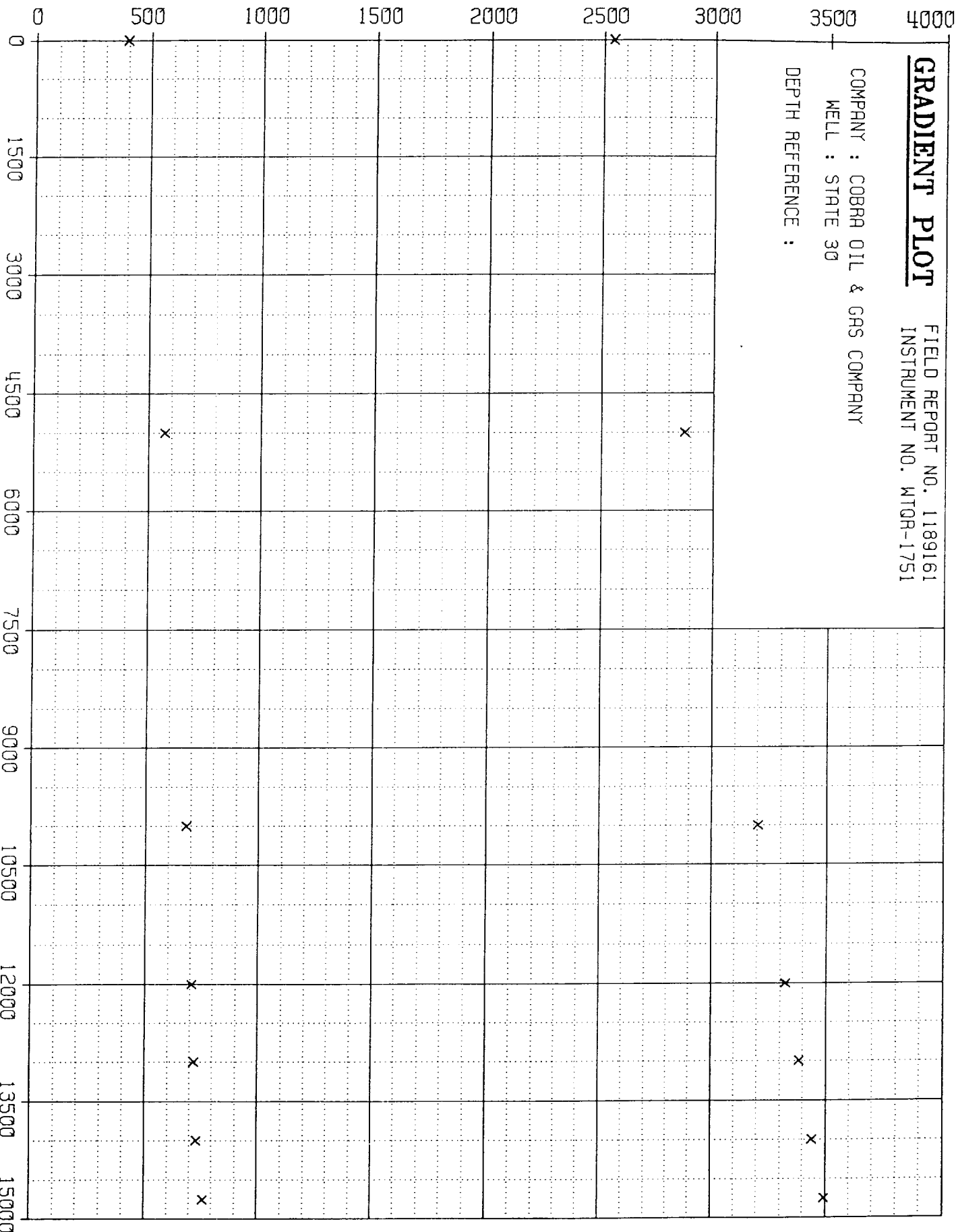
FIELD REPORT NO. 1189161
INSTRUMENT NO. WTGR-1751

COMPANY : COBRA OIL & GAS COMPANY

WELL : STATE 30

DEPTH REFERENCE :

PRESSURE (PSIA)



DEPTH (FT)

Schlumberger

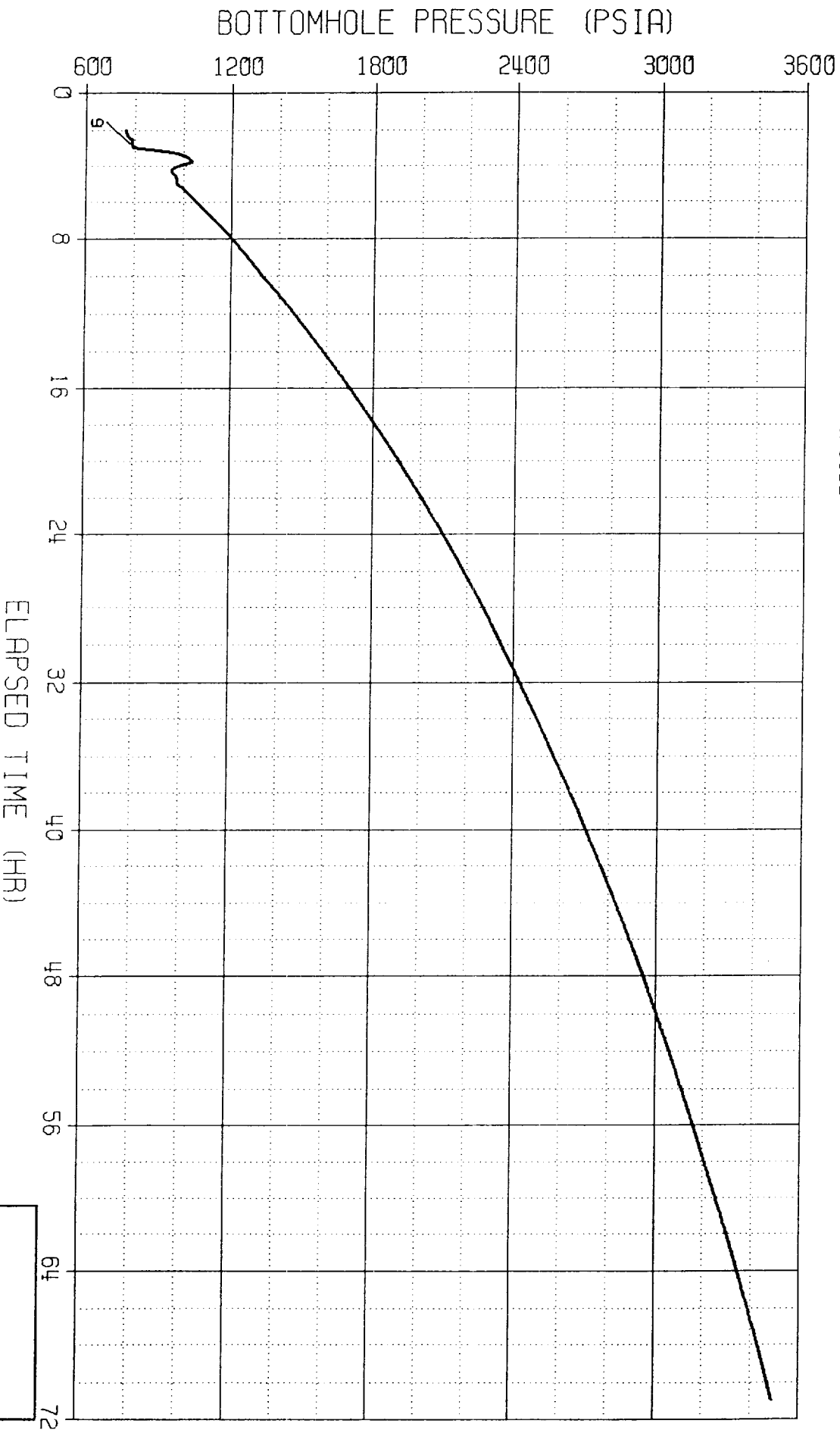
BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 1189161
INSTRUMENT NO. WTOR-1751

COMPANY : COBRA OIL & GAS COMPANY
WELL : STATE 30

DEPTH : 14756 FT
CAPACITY : 16000 PSI
PORT OPENING : INSIDE

Electronic Pressure Data



BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 1189161

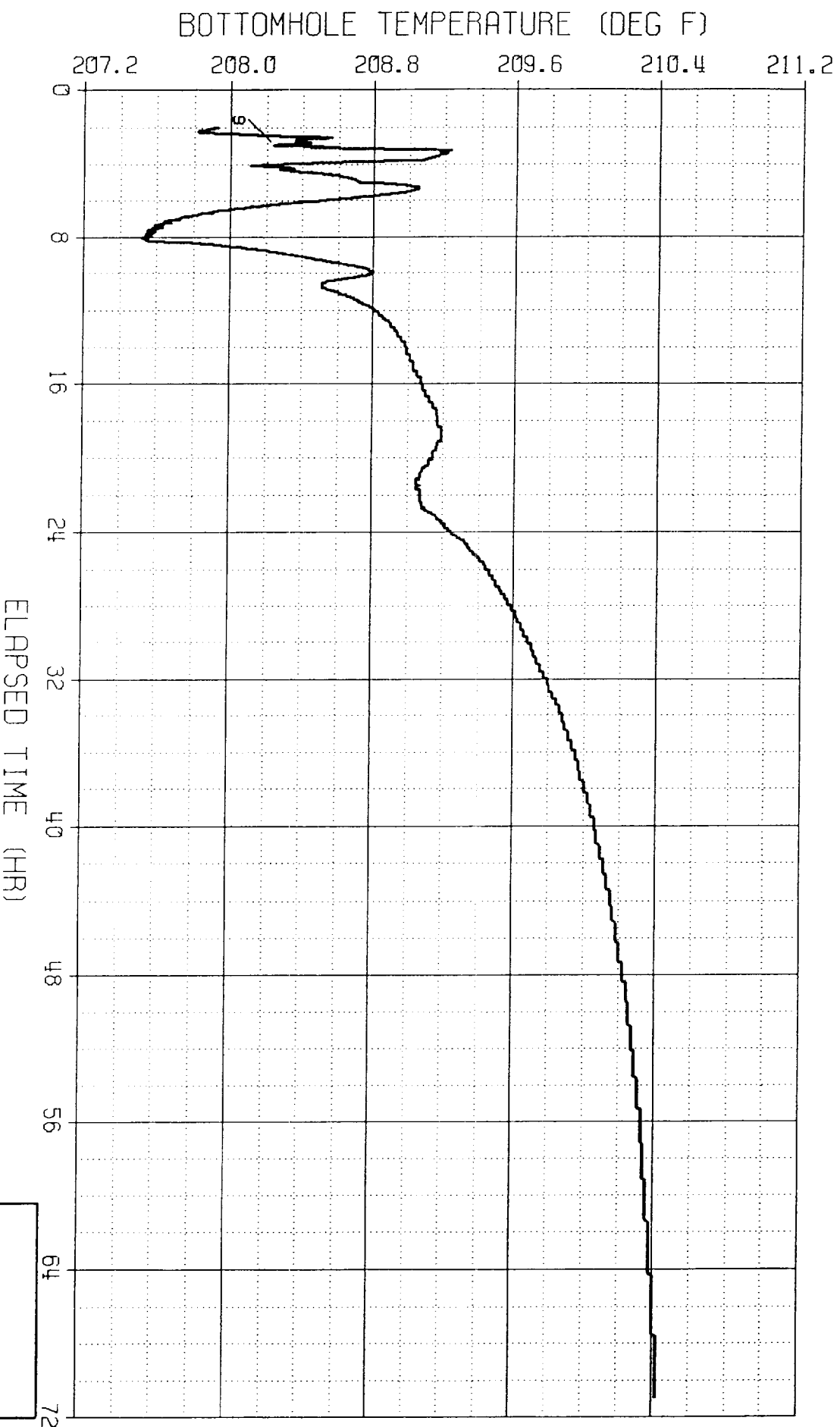
COMPANY : COBRA OIL & GAS COMPANY

INSTRUMENT NO. WTOR-1751

WELL : STATE 30

DEPTH : 14756 FT

Electronic Temperature Data

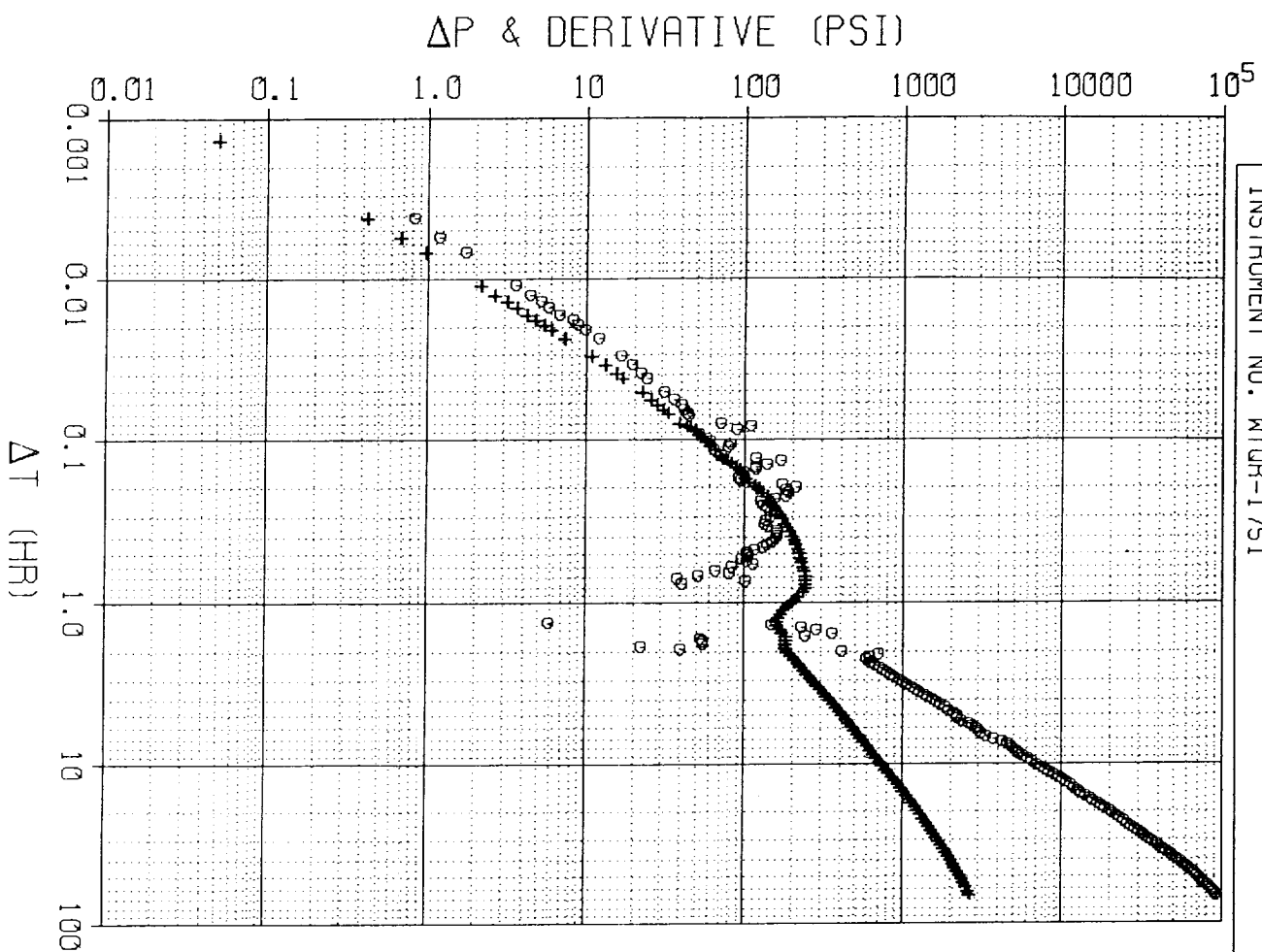


Schlumberger

LOG LOG PLOT

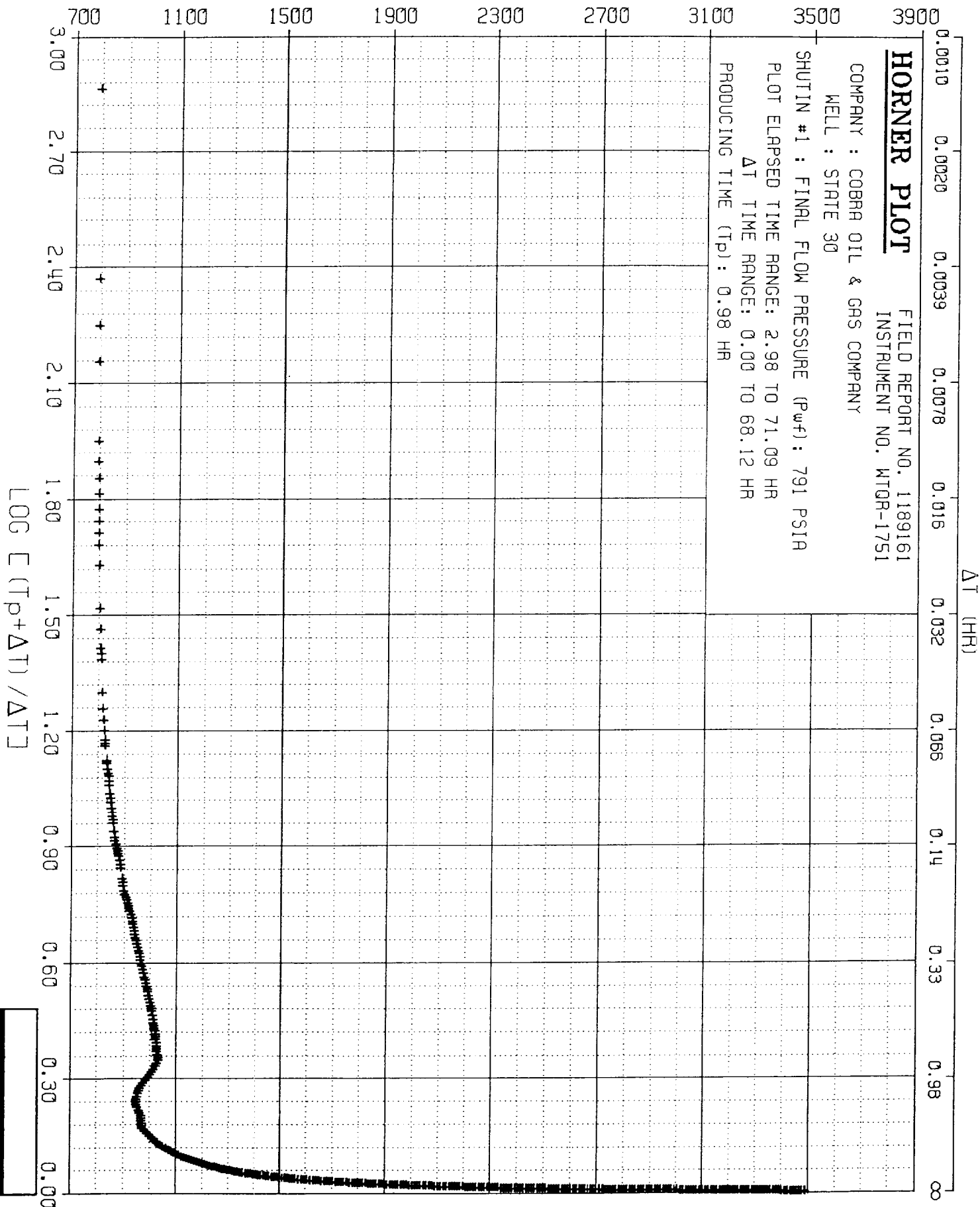
COMPANY : COBRA OIL & GAS COMPANY
WELL : STATE 30
FIELD REPORT NO. 1189161
INSTRUMENT NO. WTOR-1751

SHUTIN #1 : PRODUCING TIME (T_p) : 0.98 HR
FINAL FLOW PRESSURE (P_{wf}) : 791 PSIA
PLOT ELAPSED TIME RANGE: 2.98 TO 71.09 HR
ΔT TIME RANGE: 0.00 TO 68.12 HR



Schlumberger

PRESSURE (PSIA)



WELL TEST INTERPRETATION REPORT #1105101		DATE: 12, 16-MAR-98
CLIENT : COBRA OIL & GAS COMPANY		
REGION : CSD DISTRICT: HOBBS, NM BASE : MIDLAND, TX ENGINEER: SCOTT PITT	DISTRIBUTION OF REPORTS	
		FIELD: WILDCAT ZONE : WELL : STATE 30 LOCATION:

SCHLUMBERGER has sent copies of this report to the following:

=====

SCHOENBERGER EXPL. CO
BOX 2604
MIDLAND, TX 79702
Attn: WENDALL SCHOENBERGER
(2 copies)

MITCHELL ENERGY CORP.
BOX 4000
WOODLANDS, TX 77387
Attn: CHRIS STAMN
(3 copies)

CODY ENERGY INC
7555 E. HAMPDEN
SUITE 600
DENVER, CO 80231
Attn: BECKI DeCAMP
(2 copies)

PRUET OIL CO.
217 W. CAPITOL
SUITE 201
JACKSON, MS 39201
Attn: P.D. CATE
(1 copy)

COBRA OIL & GAS
P.O. BOX 8206
WICHITA FALLS, TX 76307
(3 copies)

Any interpretations or recommendations are opinions and necessarily based on inferences and empirical factors and assumptions, which are not infallible. Accordingly, Schlumberger (Flopetrol Johnston) cannot and does not warrant the accuracy or correctness of any interpretation or measurement. Under no circumstances should any interpretation or measurement be relied upon as the sole basis for any drilling, completion, well treatment or production decision or any procedure involving risk to the safety of any drilling venture, drilling rig or its crew or any other individual. The Customer has full responsibility for all drilling, completion, well treatment, and production procedure, and all other activities relating to the drilling or production operation.