CONFIDENTIAL

ORIGINAL

KCC

JUN 13

CONFIDENTIAL

ANADARKO PETROLEUM CORPORATION

LEASE : REAL ESTATE

WELL NO.: A-4

TEST NO.: 1

RELEASED

JUL 15 1996

FROM CONFIDENTIAL

TICKET NO. 70673300
30-MAR-95
LIBERAL

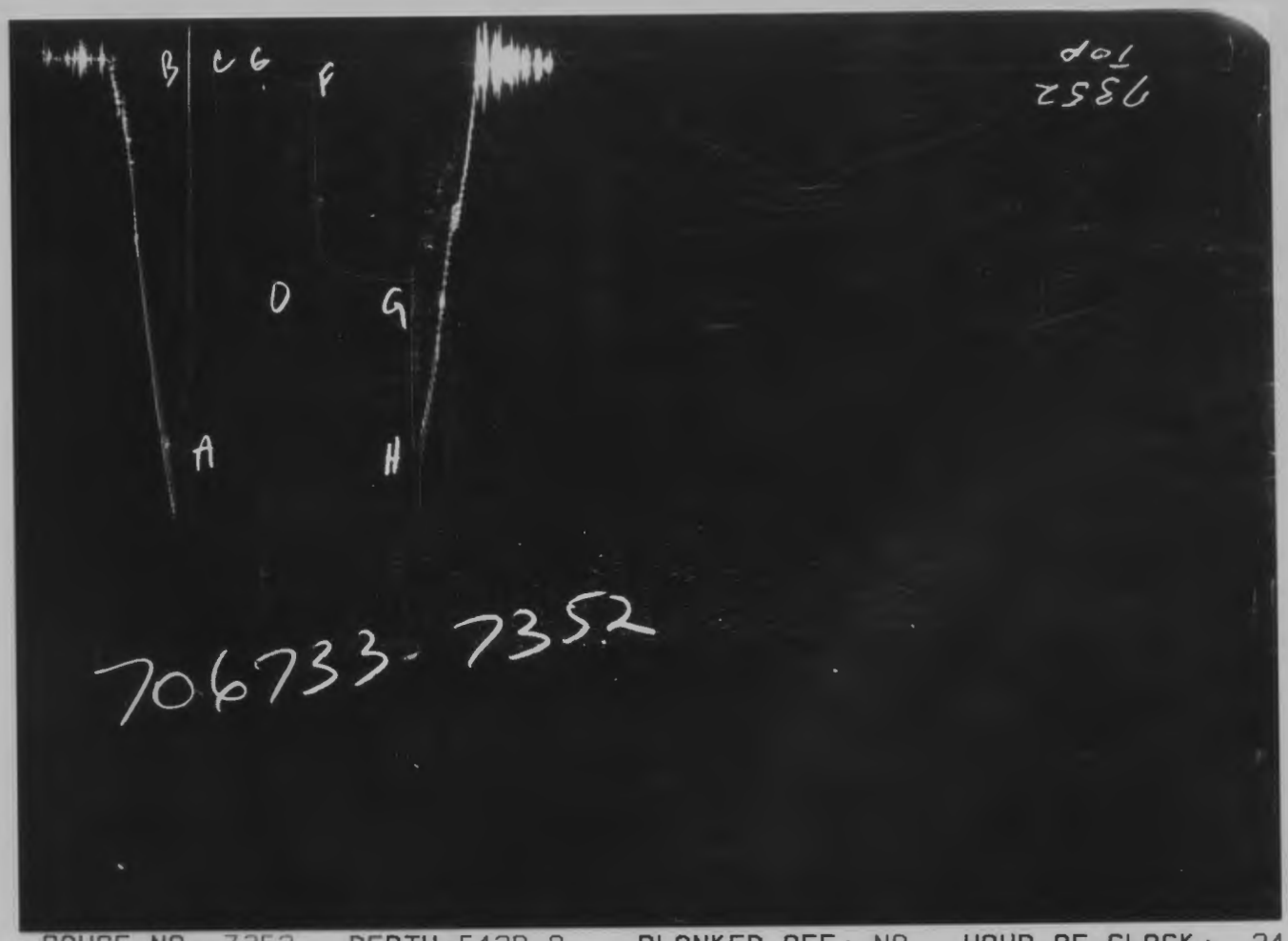
KCC

JUL 26 1996

REAL ESTATE	A-4	1	5450.5 - 5539.0	ANADARKO PETROLEUM CORPORATION	
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG.	16 - 30 S - 35 W	FIELD AREA	HICK	COUNTY	GRANT
				STATE	KANSAS

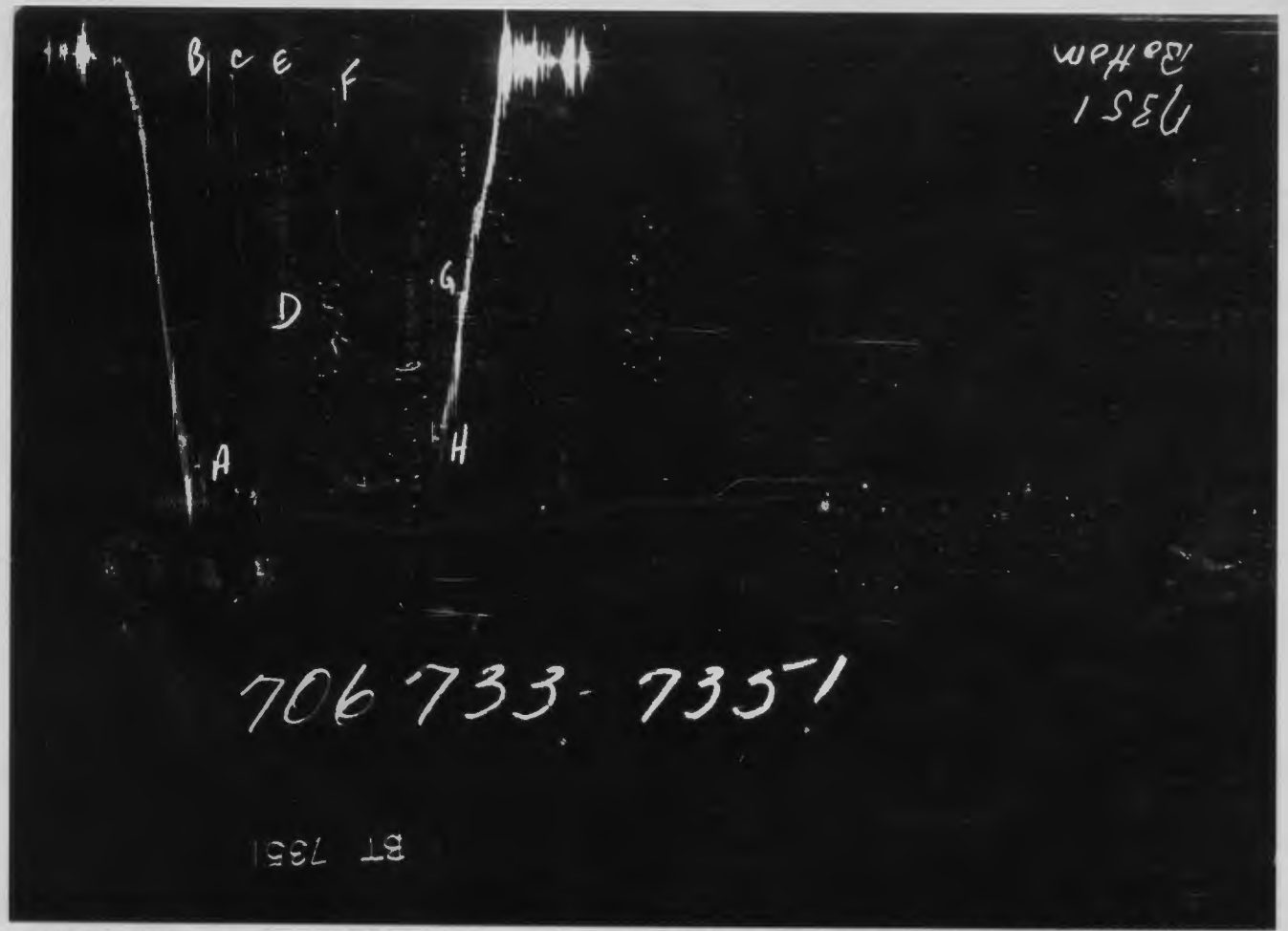
API#15-067-21340

DST REPORT PRODUCED BY HRS
A DIVISION OF HALLIBURTON COMPANY



GAUGE NO: 7352 DEPTH: 5429.9 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2510	2508.4			
B	INITIAL FIRST FLOW	31	16.9	30.0	28.7	F
C	FINAL FIRST FLOW	78	65.8			
C	INITIAL FIRST CLOSED-IN	78	65.8	60.0	60.5	C
D	FINAL FIRST CLOSED-IN	1369	1362.0			
E	INITIAL SECOND FLOW	31	77.5	60.0	61.0	F
F	FINAL SECOND FLOW	160	135.1			
F	INITIAL SECOND CLOSED-IN	160	135.1	120.0	119.8	C
G	FINAL SECOND CLOSED-IN	1360	1355.9			
H	FINAL HYDROSTATIC	2400	2412.8			



GAUGE NO: 7351 DEPTH: 5536.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2563	2566.5			
B	INITIAL FIRST FLOW	96	71.1	30.0	28.7	F
C	FINAL FIRST FLOW	112	112.9			
C	INITIAL FIRST CLOSED-IN	112	112.9	60.0	60.5	C
D	FINAL FIRST CLOSED-IN	1437	1415.3			
E	INITIAL SECOND FLOW	96	127.8	60.0	61.0	F
F	FINAL SECOND FLOW	192	189.3			
F	INITIAL SECOND CLOSED-IN	192	189.3	120.0	119.8	C
G	FINAL SECOND CLOSED-IN	1406	1409.8			
H	FINAL HYDROSTATIC	2466	2442.9			

EQUIPMENT & HOLE DATA

FORMATION TESTED: CHESTER
NET PAY (ft): 26.0
GROSS TESTED FOOTAGE: 88.5 PACKER TO T.D.
ALL DEPTHS MEASURED FROM: GROUND LEVEL
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2882.0 AT KELLY BUSHING
TOTAL DEPTH (ft): 5539.0
PACKER DEPTH(S) (ft): 5445, 5451
FINAL SURFACE CHOKE (in): 0.25000 B. HOSE
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal):
MUD VISCOSITY (sec): 50
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 120 @ 5534.0 ft

TICKET NUMBER: 70673300

DATE: 3-25-95 TEST NO: 1

TYPE DST: OPEN HOLE

FIELD CAMP: LIBERAL

TESTER: RICHARD TAYLOR
JEFF CLARK

WITNESS: JOHN SHILLINGS

DRILLING CONTRACTOR: GABBERT & JONES RIG #12

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	0.750 @ 78 °F	4700 ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 190.0
cu.ft. OF GAS: 0.173
cc OF OIL: 1750.0
cc OF WATER:
cc OF MUD: 150.0
TOTAL LIQUID cc: 1900.0

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 41.0 @ 60 °F
GAS/OIL RATIO (cu.ft. per bbl): 15.7
GAS GRAVITY: 0.600 EST.

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

60 FT. OF GAS CUT OIL
282 FT. OF GAS CUT OIL & MUD

MEASURED FROM TESTER VALVE

REMARKS:

----------TIGHT HOLE INFORMATION----------

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 70673300
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
03-25-95					
0030					CALLED OUT
0330					ON LOCATION
0356					STARTED CLOCKS
0410					PICKED UP TOOLS
0510					STARTED IN THE HOLE
0644					SET 40000 LBS. ON TOOLS
0645	B.H.				HYDROSPRING OPENED WITH WEAK BLOW
					AT TOP OF BUBBLE BUCKET THRU HOSE
0650	B.H.				BLOW 3" IN BUCKET THRU 1/4" HOSE
0653	B.H.				BLOW 6" IN BUCKET
0655	B.H.				BLOW 12" IN BUCKET
0715	B.H.	12 OZ.			CLOSED TOOL; NO GAS
0815	B.H.				OPENED TOOL WITH BLOW TO BOTTOM OF
					BUBBLE BUCKET
0915	B.H.	38 OZ.			CLOSED TOOL WITH BLOW TO BOTTOM OF
					BUBBLE BUCKET; 38 OUNCES MAX.; NO
					GAS AT SURFACE
1115					OPENED BYPASS
1117					UNSEATED PACKERS AND STARTED OUT
					OF THE HOLE WITH TEST STRING
1330					HIT FLUID (342 FT. TOTAL)
1400					OUT OF HOLE
1430					LAID DOWN TOOLS
1500					JOB COMPLETED

TICKET NO: 70673300	GAUGE NO: 7352
CLOCK NO: 17532 HOUR: 24	DEPTH: 5429.9

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	16.9			
	2	5.0	32.5	15.6		
	3	9.9	39.7	7.1		
	4	15.0	45.8	6.2		
	5	20.0	52.6	6.8		
	6	25.0	59.7	7.1		
C	7	28.7	65.8	6.0		
			FIRST CLOSED-IN			
C	1	0.0	65.8			
	2	1.0	125.3	59.5	0.9	1.492
	3	2.0	207.3	141.5	1.9	1.186
	4	3.0	314.8	249.0	2.8	1.018
	5	4.0	445.1	379.3	3.5	0.913
	6	5.0	689.6	623.9	4.3	0.830
	7	6.0	884.2	818.5	4.9	0.764
	8	7.0	1035.6	969.9	5.6	0.707
	9	8.0	1119.9	1054.1	6.3	0.662
	10	9.0	1171.2	1105.4	6.9	0.622
	11	10.0	1204.7	1138.9	7.4	0.587
	12	12.0	1239.4	1173.6	8.5	0.531
	13	14.0	1262.0	1196.3	9.4	0.484
	14	16.0	1277.3	1211.5	10.3	0.446
	15	18.0	1288.1	1222.3	11.1	0.415
	16	20.0	1297.4	1231.7	11.8	0.387
	17	22.0	1304.5	1238.7	12.5	0.363
	18	24.0	1310.7	1244.9	13.1	0.342
	19	26.0	1316.9	1251.2	13.7	0.323
	20	28.0	1321.8	1256.0	14.2	0.307
	21	30.0	1326.1	1260.4	14.7	0.292
	22	35.0	1335.7	1269.9	15.8	0.260
	23	40.0	1342.2	1276.4	16.7	0.235
	24	45.0	1348.9	1283.1	17.5	0.215
	25	50.0	1353.6	1287.8	18.2	0.197
	26	55.0	1357.8	1292.0	18.9	0.183
D	27	60.5	1362.0	1296.2	19.5	0.169
			SECOND FLOW			
E	1	0.0	77.5			
	2	5.1	74.1	-3.4		
	3	10.0	84.4	10.2		
	4	15.0	95.3	11.0		
	5	20.0	102.1	6.8		
	6	25.0	108.9	6.8		
	7	30.0	116.8	7.9		
	8	35.0	123.8	7.0		
	9	40.0	130.0	6.2		
	10	45.0	135.5	5.6		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	11	50.0	143.3	7.7		
	12	55.0	147.8	4.5		
F	13	61.0	135.1	-12.7		
			SECOND CLOSED-IN			
F	1	0.0	135.1			
	2	1.0	233.4	98.3	1.0	1.942
	3	2.0	345.6	210.6	2.0	1.658
	4	3.0	528.0	392.9	2.9	1.486
	5	4.0	766.5	631.4	3.9	1.366
	6	5.0	923.5	788.5	4.7	1.279
	7	6.0	1026.0	890.9	5.6	1.203
	8	7.0	1088.4	953.3	6.5	1.142
	9	8.0	1126.7	991.6	7.3	1.089
	10	9.0	1148.5	1013.5	8.1	1.042
	11	10.0	1166.8	1031.7	9.0	1.000
	12	12.0	1192.2	1057.1	10.6	0.929
	13	14.0	1210.9	1075.8	12.1	0.870
	14	16.0	1224.1	1089.1	13.6	0.820
	15	18.0	1236.3	1101.2	15.0	0.777
	16	20.0	1246.0	1110.9	16.4	0.739
	17	22.0	1254.5	1119.5	17.7	0.706
	18	24.0	1262.0	1126.9	18.9	0.676
	19	26.0	1268.6	1133.5	20.2	0.648
	20	28.0	1274.8	1139.7	21.4	0.623
	21	30.0	1280.4	1145.3	22.5	0.601
	22	35.0	1291.3	1156.3	25.2	0.552
	23	40.0	1300.7	1165.6	27.7	0.511
	24	45.1	1309.0	1173.9	30.0	0.476
	25	50.0	1315.7	1180.6	32.1	0.446
	26	55.0	1321.0	1185.9	34.1	0.420
	27	60.0	1327.1	1192.0	36.0	0.397
	28	70.0	1334.7	1199.6	39.3	0.359
	29	80.0	1341.1	1206.0	42.3	0.327
	30	90.0	1346.6	1211.5	44.9	0.301
	31	100.0	1350.5	1215.4	47.3	0.278
	32	110.0	1353.8	1218.7	49.4	0.259
G	33	119.8	1355.9	1220.9	51.3	0.243

REMARKS:

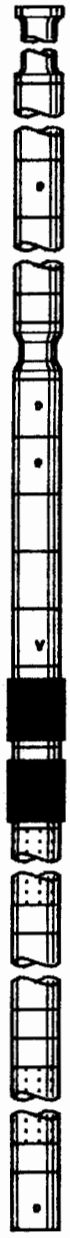
TICKET NO: 70673300	GAUGE NO: 7351
CLOCK NO: 13833 HOUR: 24	DEPTH: 5536.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	71.1			
	2	5.0	82.1	10.9		
	3	10.0	86.3	4.3		
	4	15.0	93.2	6.8		
	5	20.0	100.2	7.0		
	6	25.0	108.1	7.9		
C	7	28.7	112.9	4.8		
			FIRST CLOSED-IN			
C	1	0.0	112.9			
	2	1.0	172.7	59.9	0.9	1.495
	3	2.0	261.5	148.7	1.9	1.183
	4	3.0	363.3	250.4	2.7	1.025
	5	4.0	491.4	378.6	3.5	0.912
	6	5.0	589.6	476.7	4.3	0.828
	7	6.0	797.6	684.7	5.0	0.763
	8	7.0	958.9	846.1	5.6	0.709
	9	8.0	1102.7	989.9	6.2	0.664
	10	9.0	1182.9	1070.1	6.8	0.624
	11	10.0	1232.6	1119.7	7.4	0.589
	12	12.0	1278.5	1165.7	8.4	0.532
	13	14.0	1303.9	1191.0	9.4	0.484
	14	16.0	1318.4	1205.6	10.3	0.447
	15	18.0	1330.1	1217.3	11.1	0.415
	16	20.0	1339.1	1226.3	11.8	0.387
	17	22.0	1346.8	1234.0	12.5	0.363
	18	24.0	1354.4	1241.5	13.1	0.342
	19	26.0	1360.8	1247.9	13.6	0.324
	20	28.0	1366.4	1253.5	14.2	0.307
	21	30.0	1372.8	1259.9	14.7	0.291
	22	35.0	1384.0	1271.2	15.8	0.260
	23	40.0	1393.6	1280.8	16.7	0.235
	24	45.0	1401.0	1288.2	17.5	0.214
	25	50.0	1408.1	1295.2	18.2	0.197
	26	55.0	1411.9	1299.1	18.9	0.183
D	27	60.5	1415.3	1302.4	19.5	0.169
			SECOND FLOW			
E	1	0.0	127.8			
	2	5.0	120.4	-7.4		
	3	10.0	132.8	12.4		
	4	15.0	142.9	10.2		
	5	20.0	151.2	8.3		
	6	25.0	159.8	8.6		
	7	30.0	169.1	9.4		
	8	35.0	176.3	7.1		
	9	40.0	182.0	5.7		
	10	45.0	186.9	4.9		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	11	50.0	192.2	5.2		
	12	55.0	196.9	4.8		
F	13	61.0	189.3	-7.6		
			SECOND CLOSED-IN			
F	1	0.0	189.3			
	2	1.0	291.6	102.4	1.0	1.954
	3	2.0	422.1	232.8	2.0	1.658
	4	3.0	633.8	444.5	2.9	1.486
	5	4.0	864.0	674.7	3.9	1.366
	6	5.0	1008.5	819.2	4.8	1.276
	7	6.0	1088.1	898.8	5.6	1.205
	8	7.0	1149.0	959.7	6.5	1.142
	9	8.0	1181.1	991.8	7.4	1.086
	10	9.0	1203.6	1014.3	8.2	1.040
	11	10.0	1221.3	1032.0	9.0	0.999
	12	12.0	1242.5	1053.2	10.6	0.928
	13	14.0	1260.7	1071.4	12.1	0.869
	14	16.0	1274.4	1085.1	13.6	0.819
	15	18.0	1284.6	1095.3	15.0	0.778
	16	20.0	1294.9	1105.6	16.3	0.740
	17	22.0	1303.7	1114.4	17.7	0.705
	18	24.0	1310.9	1121.6	18.9	0.676
	19	26.0	1317.5	1128.2	20.2	0.648
	20	28.0	1323.2	1133.9	21.3	0.624
	21	30.0	1328.5	1139.2	22.5	0.601
	22	35.0	1340.9	1151.6	25.2	0.552
	23	40.0	1350.3	1161.0	27.7	0.511
	24	45.0	1357.6	1168.3	30.0	0.476
	25	50.0	1364.8	1175.5	32.1	0.447
	26	55.0	1370.7	1181.4	34.1	0.420
	27	60.0	1377.4	1188.1	36.0	0.397
	28	70.0	1387.2	1197.9	39.3	0.358
	29	80.0	1394.4	1205.1	42.3	0.327
	30	90.0	1400.1	1210.8	44.9	0.301
	31	100.0	1405.0	1215.7	47.3	0.278
	32	110.0	1408.2	1218.9	49.4	0.259
G	33	119.8	1409.8	1220.5	51.3	0.243

REMARKS:

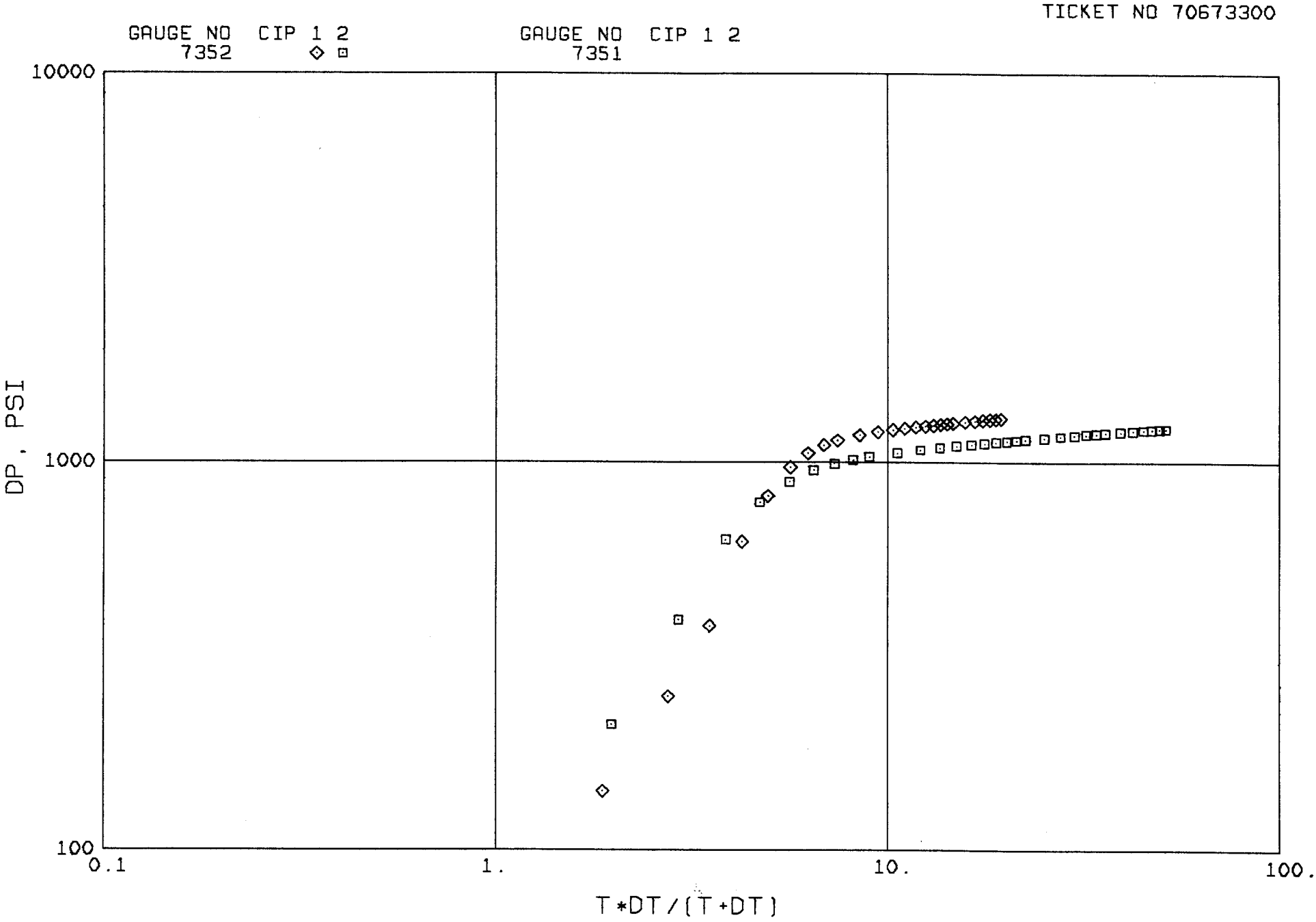
TICKET NO. 70673300



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE	4.500	3.826	4845.2	
3	DRILL COLLARS	6.000	2.500	534.4	
50	IMPACT REVERSING SUB	6.000	3.000	1.0	5380.1
3	DRILL COLLARS	6.000	2.500	30.4	
5	CROSSOVER	6.000	2.500	1.0	
11	HANDLING SUB & CHOKE ASSEMBLY	4.500	3.500	4.6	
13	DUAL CIP SAMPLER	5.000	0.750	6.9	
60	HYDROSPRING TESTER	5.000	0.750	5.3	5427.8
80	AP RUNNING CASE	5.000	2.250	4.1	5429.9
15	JAR	5.000	1.750	5.0	
16	VR SAFETY JOINT	5.000	1.000	2.8	
70	OPEN HOLE PACKER	6.750	1.530	5.8	5444.7
70	OPEN HOLE PACKER	6.750	1.530	5.8	5450.5
20	FLUSH JOINT ANCHOR	5.000	2.370	13.0	
5	CROSSOVER	6.000	2.500	1.0	
3	DRILL COLLARS	6.000	2.500	57.7	
5	CROSSOVER	6.000	2.500	1.0	
5	CROSSOVER	6.000	2.500	1.0	
20	FLUSH JOINT ANCHOR	5.000	2.370	8.0	
83	HT-500 TEMPERATURE CASE	5.000		1.0	5534.0
81	BLANKED-OFF RUNNING CASE	5.000		4.0	5536.0
	TOTAL DEPTH				5539.0

EQUIPMENT DATA

TICKET NO 70673300



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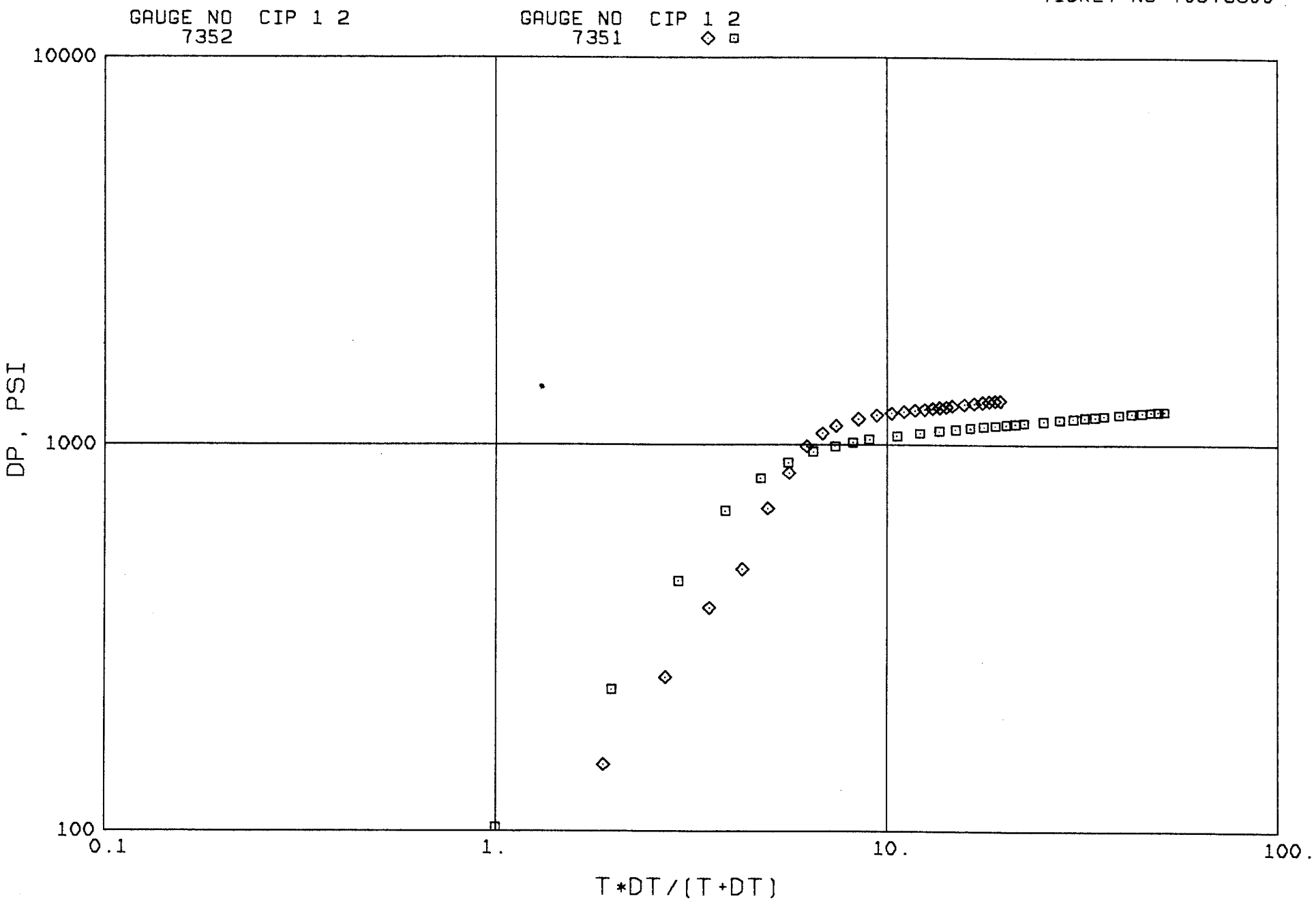

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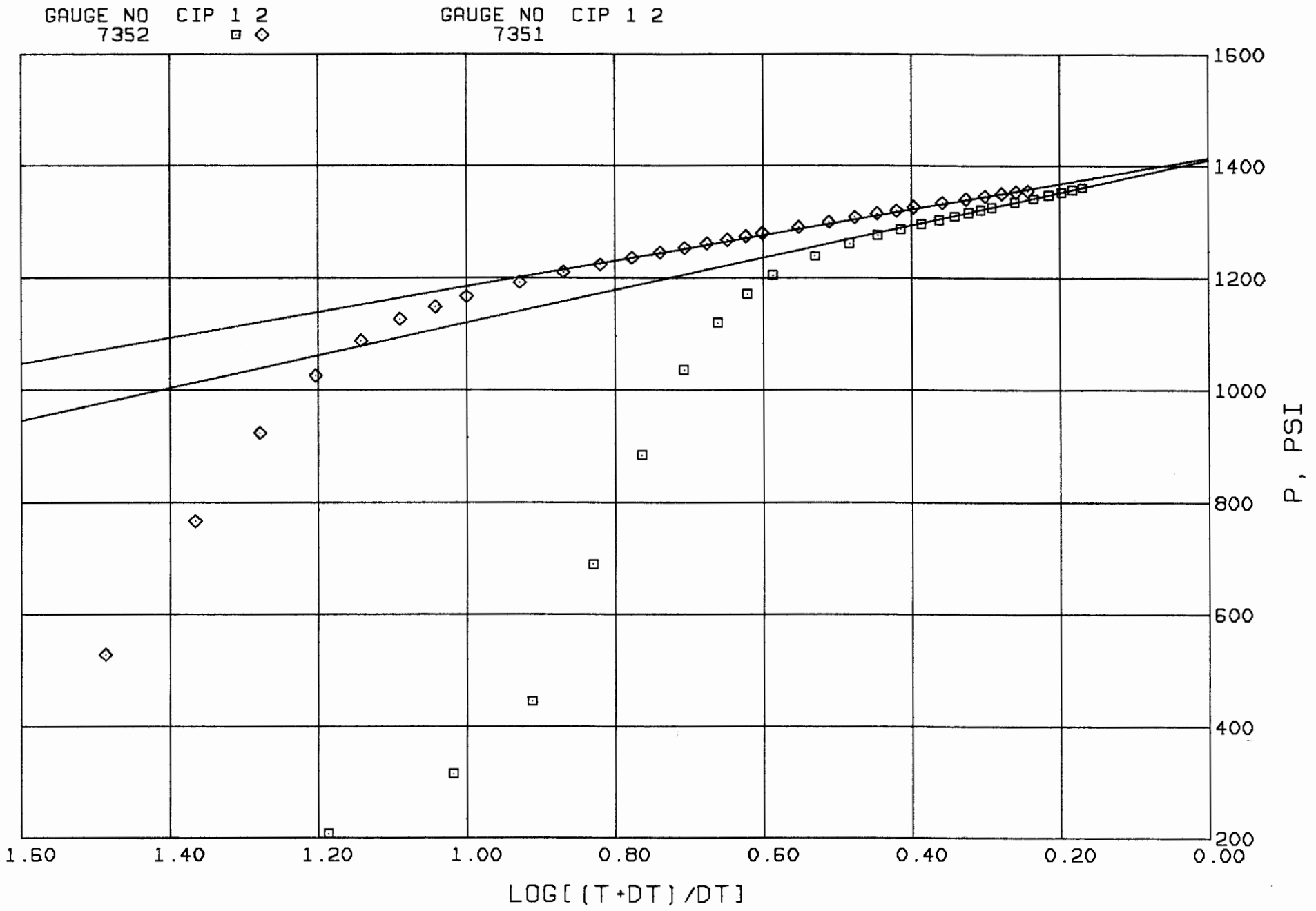

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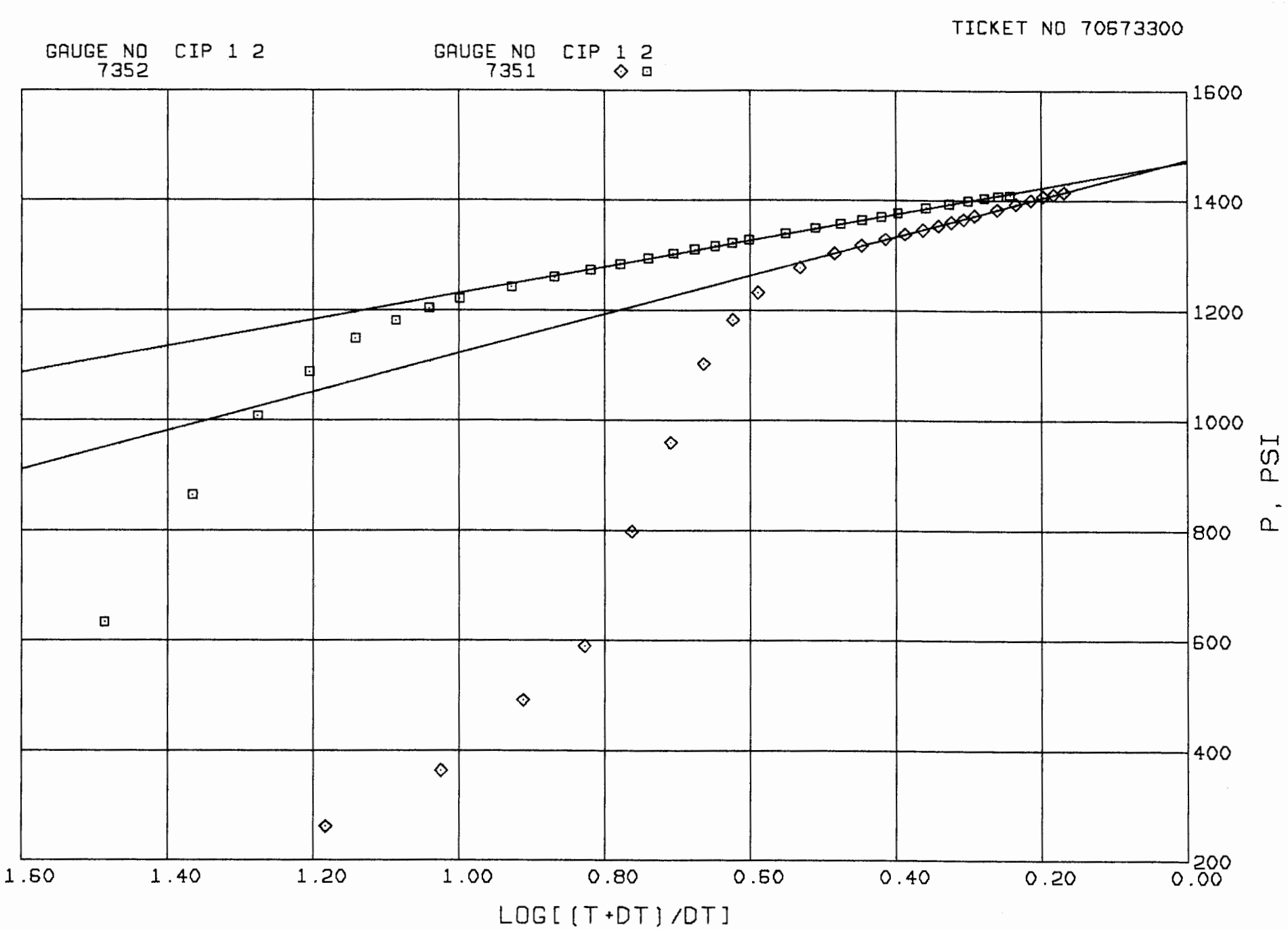

TICKET NUMBER 70673300

SUMMARY OF RESERVOIR PARAMETERS

USING HORNER METHOD FOR LIQUID WELLS

OIL GRAVITY 41.0 °API@60 °F
GAS GRAVITY 0.600
GAS/OIL RATIO 335.4 SCF/STB
TEMPERATURE 120.0 °F
NET PAY 26.0 ft
POROSITY 10.0 %
PIPE CAPACITY FACTORS 0.00607 0.01422 bbl/ft

WATER SALINITY 0.0 % SALT
FLUID GRADIENT 0.3554 psi/ft
FLUID PROPERTIES AT 1475.0 psig
VISCOSITY 0.996 cp
FMT VOL FACTOR 1.204 Rvol/Svol
SYSTEM COMPRESSIBILITY 16.21 x 10^{-6} vol/vol/psi

GAUGE NUMBER		7352	7352	7351	7351			
GAUGE DEPTH		5429.9	5429.9	5536.0	5536.0			
FLOW AND CIP PERIOD		1	2	1	2			UNITS
FINAL FLOW PRESSURE	P_f	65.8	135.1	112.9	189.3			psig
TOTAL FLOW TIME	t	28.7	89.8	28.7	89.8			min
EXTRAPOLATED PRESSURE	P*	1411.1	1414.8	1475.5	1472.0			psig
ONE CYCLE PRESSURE		1120.0	1185.1	1122.6	1231.4			psig
PRODUCTION RATE	Q		36.3		37.7			BPD
TRANSMISSIBILITY	kh/μ		30.9		30.7			$\frac{md-ft}{cp}$
FLOW CAPACITY	kh		30.8149		30.5620			md-ft
PERMEABILITY	k		1.18519		1.17546			md
SKIN FACTOR	S		2.1		1.8			
DAMAGE RATIO	DR		1.5		1.4			
POTENTIAL RATE	Q_1		53.6		53.3			BPD
RADIUS OF INVESTIGATION	r_i		33.5		33.4			ft

REMARKS: PARAMETERS SHOWN ABOVE ARE RELATIVE TO OIL PRODUCTION. THE RATE USED AS BASIS OF ANALYSIS WAS OBTAINED BY USING THE PRESSURE CHANGE METHOD FOR FLUID ENTRY INTO THE PIPE.