

Denne rapport
tilhører



L&U DOK.SENTER

L.NR. 128843/0103

KODE Well 31/3-2 nr. 15

Returneres etter bruk



BAKER PRODUCTION SERVICES NORWAY A/S

COMPANY NORSK HYDRO A/S

WELL NO. 31/3-2

FIELD TROLL

DATE April 6 - 24, 1984



BAKER

PRODUCTION SERVICES

COMPANY NORSK HYDRO A/S

WELL NO. 31/3-2

FIELD TROLL

DATE April 6 - 24, 1984

BAKER PRODUCTION SERVICES NORWAY A/S

4056 TANANGER, NORWAY

TELEX 40360 bps n

PHONE: 04696836/696790



BAKER PRODUCTION SERVICES NORWAY A.S.

Norsk Hydro A/S
Postboks 2594, Solli
Bygdøy Alle 2
Oslo 2

Attn: Nils Nilsen

Dear Sir,

Please find attached a copy of our test report from the drillstem test conducted on your well 31/3-2 which took place from April 6/84 through April 24/84.

The report is broken down into two sections; Pre Gravel Pack Test and Post Gravel Pack Test and is tabbed accordingly.

The gas flow rates were calculated in accordance with AGA Method number 3 using a pressure base of 14.73 psi and a temperature base of 60 degrees Fahrenheit.

If you should have any questions regarding this report please do not hesitate to contact this office.

Regards

A handwritten signature in cursive script, appearing to read "Bruce Mackenzie".

Bruce Mackenzie
Baker Production Services Norway A/S

REPLY TO:

4056 Tananger, Norway
Telephone: (04) 69 68 36 - 69 67 90
Warehouse: (04) 69 66 28
Telex: 40360 BPS N
May 29, 1984
BPS/110/84/BM



COMPANY Norsk Hydro A/S
WELL NAME 31/3-2
FIELD Troll TEST INTERVAL 1577-1567 m
COUNTRY Offshore Norway
BAKER TECHNICIAN N. Brown

*Report
Index*

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NOTE: THE SECTIONS APPEARING IN THIS REPORT
ARE INDICATED BY A CROSS

*Operations
Log*

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COMPANY NORSK HYDRO
WELL NAME 31/3-2
FIELD TROLL TEST INTERVAL _____
COUNTRY OFFSHORE NORWAY
BAKER TECHNICIAN N. Brown

*Operations
Log*

PAGE 1 OF 6

DATE
&
TIME

OPERATIONS LOG

06.04.84.

Technical Specialists N. Brown, D. Nessa, M. Singleton and Operator T. Seksa depart base for "TREASURE SEEKER" arrive rig. Discuss with Norsk Hydro rep positioning of equipment.

07.04.84.

Spot equipment on main deck. Pressure test choke manifold body to 5000 PSIG for 10 mins. Test OK. pressure test up against upstream and bypass valves on manifold to 3000 PSIG for 10 mins. Test OK. pressure test up against downstream and bypass valves on manifold to 3000 PSIG for 10 mins. Test OK. Pressure test from below downstream valves on manifold to 3000 PSIG for 10 mins. Test OK. commence hooking up fans and ignition system on burners. Commence checking out SSTT equipment.

08.04.84.

Make up control line block and slick line joint to SSTT function test SSTT and control line panel. Pressure test SSTT body to 5000 PSIG for 10 mins. Test OK. Pressure test against SSTT balls to 5000 PSIG for 10 mins test OK. Pressure test STT body to 5000 PSIG for 10 mins. Test OK. Pressure test up against STT master valve from below to 3000 PSIG for 10 mins. Test OK. Pressure test against STT kill valve to 3000 PSIG for 10 mins. Test OK. Pressure test against swab valve, fail safe valve and master valve on STT to 3000 PSIG for 10 mins Test OK. Continue hooking up fans and ignition systems on burners.

DATE & TIME	OPERATIONS LOG
08.04.84.	Technical Specialist G. Melling and P. Lundberg, Operators L. Johnson, G. Haarr and Assistant M. Talgø and E. Lura depart base for "TREASURE SEEKER". Arrive rig check out wireline equipment. Make up bowen x-over and B.O.P. to STT pressure test up against blind rams to 3000 PSIG. For 10 mins with 0.108" wire in position test OK. Check out wire in position test OK. Check out operation of BOP's.
09.04.84.	Hook up and test running of wireline unit and powerpack. Install x-over and stuffing box on BOP and pressure test to 3000 PSIG for 10 mins test OK. Function test all wireline tools pressure test all 2" chicksan swivels to 3000 PSIG for 10 mins. Test OK. Pressure test all 3" chicksan swivels to 3000 PSIG for 10 mins. Test OK. Pressure test CO-Flex hose to 3000 PSIG for 10 mins. Test OK. Make up swivel and X-over onto STT and pressure test up against STT master valve to 5000 PSIG for 10 mins. Test OK. Test run burner fans 3 hrs test burner ignition system. Flush lines on SSTT hose reel. Test out SSTT Glycol injection pump. Space out SSTT.
10.04.84.	Make dummy run with SSTT. Make up Glycol injection sub on to SSTT. Function test glycol injection sub. Function test SSTT Change out Pup joint on top of SSTT assembly. pressure test SSTT assembly to 5000 PSIG for 10 mins. Test OK. Pressure test against SSTT balls to 5000 PSIG for 10 mins. Test OK. Pressure test against heater inlet and bypass valves to 3000 PSIG for 10 mins. Test OK. Pressure test heater coils and against downstream valve to 1500 PSIG for 10 mins. Test OK.

DATE & TIME	OPERATIONS LOG
0.04.84.	Pressure test against separator inlet and bypass valves to 1500 PSIG. Test failed due to damage bypass valve. Change out damaged valve. Calibrate Barton Meter and Foxboro pressure recorder. Repair E.S.D. line. Continue maintenance of wireline tools. T. Seksa, M. Talgø depart rig for base.
1.04.84.	Pressure test against separator inlet and bypass valves to 1500 PSIG for 10 mins. Test OK. Pressure test separator to 1200 PSIG. Leaks on 3" and 8" Daniels boxes. Strip down and replace valve seats, valve strips and valve seat gaskets. Re. pressure test to 1200 PSIG. Test failed. Leak on 3" daniels box equalizing valve. Strip out and replace re-pressure test separator to 1200 PSIG. Test failed due to leak on downstream valve of gas meter runs. Strip out valve. Unable to repair. Awaiting new valve from town. Carry out general maintenance on SSTT and wireline equipment.
12.04.84,	A. Magnusson departs base for rig arrive rig. Replace valve on separator gas line. Re-pressure test separator to 1200 PSIG for 10 mins. Test OK. Inject grease into valves and work same. Continue maintenance of wireline tools and SSTT.
13.04.84.	Calibrate meters on separator. Ball meter not turning. Strip out and replace rotor. Make up single joint on STT and pressure test to 5000 PSIG for 10 mins against master valve. Test OK. Hook up degasser on heater steam lines. Clean burner heads.

DATE & TIME	OPERATIONS LOG
14.04.84.	Make up SSTT to test string and function test. RIH and pressure test body to 3000 PSIG for 10 mins. Test good. Rig up STT, CO flex hose, kill line; choke manifold and surface lines. P/T kill line up to STT kill valve to 5000 PSIG for 10 mins. Test OK. Pressure test STT body to 5000 PSIG for 10 mins. Test OK. Close master valve on STT for differential test of 500 PSIG above and 5000 PSIG below for 10 mins. Test OK. Open master valve and pressure test lubricator valve. 5000 PSIG below and 500 PSIG above for 10 mins below and 500 PSIG above for 10 mins test OK. Pressure test wireline BOP's to 3000 PSIG for 10 mins. Test OK. Flush lines
15.04.84.	Thru to burners. Pressure test against heater inlet and bypass valves to 3000 PSIG for 10 mins. Leak. Pressure test against choke manifold upstream valves to 3000 PSIG for 10 mins. Leak on Coflex connection. Tighten connection, re-pressure test choke manifold upstream valves to 3000 PSIG for 10 mins. Test OK. Pressure test against choke manifold downstream valves to 3000 PSIG for 10 mins. Test OK. Pressure test against heater bypass and inlet valves. Leak. Inject sealing compound and work valves. Re-pressure test. Leak. Flush lines thru Re-Pressure test leak. Pressure test against choke manifold upstream valves to 3000 PSIG for 10 mins. Test OK. Pressure test separator inlet and bypass valves to 1300 PSIG for 10 mins Test OK. Commence Pre-gravel pack test (refer to well test report).
16.04.84.	Finish pre gravel pack test. Rig down choke manifold, surface lines, STT and SSTT.

DATE & TIME	OPERATIONS LOG
.04.84.	Pressure test SSTT body and balls to 3000 PSIG for 10 mins.
	Test OK. Test out glycol injection sub. Function test SSTT.
	Flush thru control lines and control housing. Pressure
	test choke manifold upstream valves and bypass valve
	to 3000 PSIG for 10 mins. Test OK. Pressure test against
	downstream valves and bypass valve on choke manifold to
	3000 PSIG for 10 mins. Test OK. Pressure test from below
	downstream valves on choke manifold to 3000 PSIG for 10 mins.
	Leak. Inject sealant and work valves. Pressure test to
	3000 PSIG for 10 mins. Test OK. Wireline rig up and R.I.H.
	to retrieve B.H.P. guages. Wireline O.O.H. Rig Down .
17.04.84.	Pressure test SSTT body and wireline BOP's to 5000 PSIG for
	10 mins test OK. Pressure test against master valve from
	below to 5000 PSIG for 10 mins Test OK. Pressure test against
	kill valve to 5000 PSIG for 10 mins. Test OK. Re-seat dump
	valves on separator. Replace level trol pilot relay.
	Bourdon tube and flapper assembly on oil level trol.
	Function test same OK re-run E.S.D. line for STT. Maintain
	SSTT and wireline equipment. S. Jones and T.Seksa depart
	base for rig to relieve M. Singleton and L. Johnson. Arrive
	rig. M. Singleton and L. Johnson depart rig for base.
	Fit check valve into steam inlet line.
18.04.84.	Maintain wireline and SSTT equipment maintain testing
	equipment wireline R.I.H. to set 'F' nipple and RN Nipple
	and set 2.125" RN Plug R.I.H. with 2"GS/EQL - prong. To pull
	plug. POOH. Not sheared. Re-run prong. Did not latch.
	POOH. R.I.H. with 2.25" impression block. POOH, R.I.H. with
	2.25" impression block.

[illegible]

*Well
Test
Report*

3

Pre Gravel Pack Test





Well Test Report

PAGE 1 OF 1

COMPANY Norsk Hydro WELL NO. 31/3-2

FIELD Troll INTERVAL TESTED 1577m-1567m

COUNTRY Offshore Norway BAKER TECHNICIAN N. Brown

BASE CONDITIONS: 14.73 POUNDS PER SQUARE INCH AT 60° F PRE GRAVEL TEST

1545 metres	TUBING SIZE: <u>3 1/8 PHG</u>	WEIGHT: <u>12.95 lbs/ft</u>	LENGTH
:	PACKER TYPE: _____	SIZE: _____	DEPTH
TO DATUM DEPTH: _____	CASING SIZE: _____	WEIGHT _____	LENGTH
RANGE: _____	LINER SIZE: _____	WEIGHT _____	TOP: _____
DATE: _____			

DATE:

BHP GAUGE DEPTH:

ELEVATION OF ZERO POINT:

PRESSURES COR

BHP GAUGE NO.

CALIBRATION NO.

[illegible]

Well Test Report Continuation Form

PAGE _____ OF _____

TIME DATA		CHOKE SIZE 64THS INCH	SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		PRESSURE PSI	TEMP. °F	GRAVITY	GAS SP. GR.	BS&W %					
15-4-84																		
1026		16			342													
1027		"			315													
1028		24			325													
1029		"			340													
1030		"			360													
1035		"			735													
1037		S.I.																
1038		"			1025													
1039		"			1030													
1040		"			1030													
1041		"			1035													
1042		"			1040													
1043		"			1042													
1044		"			1045													
1045		"			1047													
1050		"			1055													
1055		"			1060													

INCREASE CHOKE TO 24/64THS

SHUT WELL IN A CHOKE MANIFOLD & TESTER VALVE
& OBSERVE PRESSURE . 24.39 BBLS FLOWED BACK DURING FLOW

PERIOD APPROX FLOW RATE = 2065.98 BBLS/DAY.

Well Test Report Continuation Form

[illegible]

Well Test Report Continuation Form

TIME DATA		SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME	CHOKE SIZE INCH	PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY OIL °API	GAS SP. GR.	BSAW %			
15/4/84		16/45			1480	46										
1740		"			1500	45										
1741		"			1550	45										
1742		"			1565	44										
1743		"			1575	44										
1744		"			1590	44										
1745		"														
1756		"							CHANGE TO 16/64 FIXED BEAN CHOKE							
1800		"			1650	43										
1815		"			1620	44										
1830		"			1570	44										
1845		"			1600	45										
1855		"							FORMATION FLUIDS TO SURFACE							
1900		"			1720	44										
1915		"			1680	43										
1930		"			1670	43			NO H2S NO CO2							
1932		"							DIVERT FLOW THROUGH STEAM HEATER COILS							
1934		24/64							CHANGE TO 24/64 ADJUSTABLE CHOKE							
1945		"			1630	43			CHANGE TO 24/64 FIXED BEAN CHOKE							
2000		"			1625	43			NO H2S 1% CO2							
2010		"							DIVERT FLOW THROUGH SEPARATOR							

[illegible]

*Gas Flow Rate
Calculation
Report*

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Pre Gravel Pack Test



**ORIFICE METER GAS FLOW MEASUREMENT
BASED ON
AGA GAS MEASUREMENT COMMITTEE REPORT NO. 3**

BASIC EQUATION

$Q = C' \sqrt{hwPf}$ = Flowrate at base conditions in Cu. Ft./Hr.

C' = Orifice Flow constant

hw = Differential pressure in inches of water

Pf = Static pressure in PSIA

$C' = F_b \times F_{pb} \times F_{tb} \times F_g \times F_{tf} \times F_r \times Y \times F_{pv}$

F_b = Basic Hourly orifice flow factor

F_{pb} = Pressure Base Factor

F_{tb} = Temperature Base Factor

F_g = Specific Gravity Factor

F_{tf} = Flowing Temperature Factor

F_r = Reynolds Number Factor

Y = Expansion Factor

F_{pv} = Super Compressibility Factor

STANDARD CONDITIONS

Base Temperature = 60.. F.

Base Pressure = 14.73 PSI

Specific Gravity = 1.000



DATE: 15.04.84.

COMPANY NORSK HYDRO

WELL NO. 31/3 - 2

FIELD TROLL

INTERVAL TESTED 1577m - 1567m

COUNTRY OFFSHORE NORWAY

BAKER TECHNICIAN N. BROWN

BASE CONDITIONS: 14.73 POUNDS PER SQUARE INCH AT 60°F PRE GRAVEL PACK TEST

ORIFICE FITTING SIZE: 2.900

X

FLANGE TAPS. ☐ PIPE TAPS.

ORIFICE FITTING TYPE: DANIELS

GAS FLOW RECORDER TYPE: BARKON SER. NO.

PRESSURE RANGE: 0-

DIFFERENTIAL RANGE:

DATE OF LAST CALIBRATION: 10-4-84 GAS SPECIFIC GRAVITY

CALIBRATED BY: G. Melling

Gas Flow Rate Calculations

PAGE 1 OF

TIME DATA			CHOKE		METER RUN DATA						C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _r x Y x F _{PV}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	64THS.	PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P _f x h _w	F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _r	Y	F _{PV}	C'	Q = C' x 24 x √P _f x h _w MMSCF/DAY					
15.4.84 2045		24	135	130	73	2.00	132.48	930.65	1.0	1.01.2039	1.0	0.9877	1.0	1.0	1.011	1118.80	3.557	SGz = 0-690				
2100		"	135	130	76	"	132.48	930.65	1.0	1.01.2093	1.0	0.9850	1.0	1.0	1.011	1115.74	3.548					
2115		"	135	130	78	"	132.48	930.65	1.0	1.01.1868	1.0	0.9831	1.0	1.0	1.012	1098.86	3.494	SG = 0.710				
2130		"	135	130	77	"	132.48	930.65	1.0	1.01.1868	1.0	0.9840	1.0	1.0	1.012	1099.87	3.497					
2145		"	135	126	80	"	130.42	930.65	1.0	1.01.2074	1.0	0.9313	1.0	1.0	1.011	1114.78	3.498	SG = 0.686				
2200		"	135	124	81	"	129.38	930.65	1.0	1.01.2074	1.0	0.9804	1.0	1.0	1.011	1113.76	3.458					
2215		"	135	124	80	"	129.38	930.65	1.0	1.01.1969	1.0	0.9813	1.0	1.0	1.011	1105.12	3.431	SG = 0.698				
2230		"	135	126	78	"	130.42	930.65	1.0	1.01.1969	1.0	0.9831	1.0	1.0	1.011	1107.12	3.465					
2245		"	135	126	80	"	130.42	930.65	1.0	1.01.1901	1.0	0.9813	1.0	1.0	1.011	1098.81	3.439	SG = 0.706				
2300		"	135	126	80	"	130.42	930.65	1.0	1.01.1901	1.0	0.9813	1.0	1.0	1.011	1098.81	3.439					
2301		"		BYPASS SEPARATOR END OF TEST									1.0									
													1.0									
													1.0									
													1									

*Liquid
Flow Rate
Calculation
Report*

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Pre Gravel Pack Test





**Liquid
Flow Rate
Calculation
Report**

PAGE 1 OF

PAGE 1 OF 1

COMPANY NORSK HYDRO WELL NO. 31/3-2

FIELD TROLL INTERVAL TESTED 1577m - 1567m

COUNTRY OFFSHORE NORWAY BAKER TECHNICIAN N. Brown

BASE CONDITIONS: 14.73 POUNDS PER SQUARE INCH AT 60° F

SEPARATOR SIZE: 42" ID X 15"	8" OD X 10"
SEPARATOR W.P.: 1440	TEST TANK SIZE: 90 BBLS
LIQUID VOLUME CAP. 10,000 B/D	TEST TANK VOLUME: 1.78
GAS VOLUME CAP. 62.1 MMSCFD	BBLS. PER INCH:
TYPE LIQUID METERS FLOCO	

TEST TANK SIZE: 8' OD X 10'
TEST TANK VOLUME: 90 BBLS
BBLS. PER INCH: 1.78

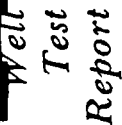
[illegible]

*Well
Test
Report*

3

Post Gravel Pack Test



WELL NO. 31/3-2

INTERVAL TESTED:

BAKER TECHNICIAN N. Brown

PAGE 1 OF 1

BHP GAUGE DEPTH: 1549.23/1559.66m (Flopetrol.)

ELEVATION OF ZERO POINT: R.K.B.

PRESSURES CORRECTED TO DATUM DEPTH:

BHP GAUGE NO. _____ RANGE: _____

CALIBRATION NO. _____ DATE: _____

TUBING SIZE: _____

PACKER TYPE:

CASING SIZE: _____

LINER SIZE:

__WEIGHT:

SIZE:

WEIGHT

TOP: -

LENGTH:

DEPTH:

LENGTH:

[illegible]

Well Test Report Continuation Form

PAGE _____ OF _____

TIME DATA		CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR	SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		AMBI- ENT TEMP. °F	GRAVITY	OIL °API					
20/4-84																
0400		24			1390	50										
0403		"														
0405		"			1415	48										
0410		"			1430	"										
0415		"			1465	"										
0420		"			1480	47										
0425		"			1497	48										
0430		"			1500	"										
0435		32			1509	"										
0438		48														
0440		"			1400	47										
0442		64														
0445		S.I.			1090	47										
0446		"			1265											
0447		"			1450											
0448		"			1455											
0449		"			1556											
0450		"			1452											
0455		"			1450											

OIL TO SURFACE, BURNER RELIT.

70 OIL
30 H2O TRACE SED

DRAEGER GAS TEST H2S NEGATIVE CO2 NEGATIVE

85 OIL
10 H2O TRACE SED

INCREASE CHOKE TO 32/64 TH'S

" " 48/64 "

90 OIL
10 H2O TRACE SED

INCREASE CHOKE TO 64/64 TH'S

WELL SHUT IN AT CHOKE MANIFOLD. MONITOR BUILD UP.

[illegible]

Well Test Report Continuation Form

TIME DATA		CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/8BL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY						
											OIL °API	GAS SP. GR.					
24/4/84																	
0935		28			834	46			ACID TO SURFACE. BURNER FLAME OUT.								
0940		"			910	45											
0943		32							INCREASE CHOKE TO 32/64 TH'S								
0945		"			965	45											
0950		"			1070	"											
0955		"			1130	"											
1000		"			1135	46			DREAAGER TEST H2S and CO2 NEGATIVE								
1005		"			1105	45											
1010		"			1195	46											
1015		"			1210	48											
1020		"			1227	52			TRACES OF OIL TO SURFACE. BURNER RELIT								
1025		"			1245	54											
1030		"			1249	55											
1034		S.I.			1252	"			WELL SHUT IN AT CHOKE MANIFOLD								
1036									CLOSE SUB SEA LUBRICATOR VALVE AND BLEED DOWN PRESSURE THRU CHOKE								
									MANIFOLD TO BURNER.								
1040									RIG UP WIRELINE								
1045									STRIP OUT ADJUSTABLE CHOKE STEM AND SEAT, CHECK FOR ANY DAMAGE, BOTH OK								
									REPLACE SAME.								

Well Test Report Continuation Form

[illegible]

Well Test Report Continuation Form

PAGE 6 OF 6

TIME DATA		SUBSURFACE		WELLHEAD DATA			SEPARATOR	SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME	CHOKE SIZE 64THS. INCH	PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	AMBI- ENT TEMP. °F	GRAVITY		BS&W %					
								OIL °API	GAS SP. GR.						
20/4/84															
1544		24			1348										
1545		"			1342	44									
1550		"			1350	44				Trace H2O					
1555		"			1340	44									
1600		"			1345	44				0.4% H2O					
1605		"			1365	44									
1610		"			1397	46									
1615		"			1419	46									
1630		"			1480	46					2.203				
1645		"	0% H2S 0.75% CO2		1479	46				1.4% H2O	2.264				
1700		"			1480	46				0.3% H2O	2.199	948.52		2318.35	
1750		"	0% H2S 0.5% CO2		1482	48				trace H2O	2.134	967.88		2204.82	
1730		"			1489	48				trace H2O	2.135	890.45		2397.66	
1745			0% H2S 0.5% CO2		1487	48				trace H2O	2.373	899.16		2639.13	
1800					1489	48				5% H2O	2.188	1145.68	60.30	1909.78	
1815			0% H2S 0% CO2		1489	48				1% H2O	2.012	713.86	7.21	2818.48	
1830					1492	48				7% H2O	2.199	941.53	70.87	2335.56	
1845					1495	48				1% H2O	2.134	1084.68	10.96	1967.40	
1900			0% H2S 0% CO2		1500	48				1% H2O	2.073	1089.47	11.00	1902.76	

SWITCH FLOW THRU SEPARATOR

Well Test Report Continuation Form

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TIME DATA		CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES				OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %	GAS FLOW RATE MMSCFD				
											OIL °API	GAS SP. GR.						
20-4-84 1915		24			1504	48		150	75		25.6	.611	1% H2O	2.135	1068.39	10.79	1998.33	
1930		"			1502	48		170	74		24.9	.680	0.5% H2O	2.154	1126.76	5.66	1911.68	
1945		"			1511	48		150	74				0.2% H2O	1.973	1072.20	2.15	1840.14	
2000		"			1515	48		180	72		25.9	.651	0.5% H2O	2.403	1097.85	5.52	2188.78	
2030		"			1507	48		140	76				0.3%	2.122	1080.78	3.25	1963.40	
2040		"																
2100		"			1511	49		150	76		25.8	.660	1.5%	2.261	1163.10	17.71	1943.94	
2130		"			1512	49		150	73		26.5		1%	2.349	962.99	9.73	2439.28	
2200		"			1515	49		150	74		27.0	.652	0.1%	2.276	401.73	0.40	5665.50	
2230		"			1517	49		160	74		26.9	.652	3.5%	2.373	958.17	34.75	2476.60	
2300		"			1512	49		150	76		26.6		0.3%	2.272	1069.14	3.22	2125.07	
2330		"			1520	50		120	77		26.9	.652	3%	1.924	992.03	30.68	1939.46	
2400		"			1527	50		140	76		26.8	.652	0.25%	2.281	1129.11	2.83	2020.18	
21-4-84 0030		"			1525	50		150	77		26.7	.653	0.4%	2.403	746.66	3.00	3218.33	
0100		"			1520	50		130	76		"	.653	Trace	2.205	1365.27	NIL	1615.07	
0130		"			1525	50		160	76		26.9	.652	0.3%	2.253	1093.89	3.29	2059.62	
0145		"																
0200		"			1530	50		170	76		26.6	.651	0.2%	2.204	1253.54	2.51	1758.22	

DRAEGER TEST H2S-CO2 NEGATIVE

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Well Test Report Continuation Form

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TIME DATA		CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %					
										OIL °API	GAS SP. GR.							
21-4-84																		
0705		S.I.			1472													
0710		"			1465													
0715		"			"													
0745		"			1457													
0815		"			1455													
0845		"			"													
0915		"			1457													
0945		"			1458													
1015		"			1460													
1045		28			"													
1053		"																
1115		"			1470	52			230	66	.650		3.328	(Change choke to fixed bean)				
1130		"			"	"			210	67	"	Trace	3.066	1846.84	NIL	1660.13		
1145		"			1480	52			"	69	.652	0.1%	2.994	1646.61	1.65	1818.28		
1200		"			1485	54			"	70	"	"	3.050	1636.69	1.64	1863.52		
1215		"			1487	56			"	"	.650	0.2%	3.145	1595.42	3.20	1971.27		
1230		"			1489	58			210	"	27.5	Trace	3.145	1618.47		1943.19		
1245		"			1492	59			190	"	.612	0.2%	2.981	1565.69	3.14	1903.95		

OPEN WELL ON 28/64 TH'S ADJUSTABLE CHOKE TO

STANBOARD BURNER

Divert flow thru separator

Well Test Report Continuation Form

TIME DATA	CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	PRESSURE PSI	TEMP. °F	GRAVITY	GAS SP. GR.	BSAW %					
21-4-84 1300	28			1494	59		240	70	27.6	.612	0.2%	3.135	1574.70	3.16	1990.86	
1315	"			1495	59		240	70		.609	0.4%	3.067	1487.35	5.97	2062.06	
1330	"			1497	59		240	71	27.6	.609		2.990	1117.65		2675.26	
1345	"			1497	59		270	69		.607	0.3%	2.936	1123.66	3.38	2612.89	
1400	"			1497	59		400	71				2.997	2160.16		1387.40	
1415	"			1500	59		430	72			0.1%	3.118	1078.99	1.08	2889.74	
1630	"			1500	60		420	73	27.5			3.014	1277.31		2359.65	
1445	"			1501	60		520	74			0.1%	3.151	1782.69	1.78	1767.55	
1500	"			1503	60		510	74	27.7	.605		2.942	1023.73		2873.80	
1515	"			1504	60		525	72			0.4%	2.919	1449.93	5.82	2013.20	
1530	"			1510	60		540	73			0.1%	2.956	1678.32	1.68	1761.29	
1545	"			1510	60		560	74			0.15%	3.006	1566.11	2.35	1919.41	
1600	"			1508	60		470	72	28.3	.605		2.910	1446.37		2011.93	
1615	"			1508	60		480	72			0.3%	2.940	1413.94	4.25	2079.30	
1630	"			1507	50		500	72			0.1%	2.999	1491.83	1.49	2010.28	
1645	"			1507	60		510	74				3.016	1502.72		2007.03	
1700	"			1507	60		510	74	28.7	.605		2.985	1352.75		2206.62	
1710	36			CHANGE CHOKES TO 36/64THS FIXED BEAN			34/64" ADJ. Choke									
1721																
1730	"			1412	60		420	72				4.189	4301.53			

Well Test Report Continuation Form

TIME DATA			CHOKES SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES				GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME	ELAPSED TIME	PRESSURE PSI		TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %						
HOURS	MIN.	SEC.									OIL °API	GAS SP. GR.							
1745	04		36		1420	64			330	72	28.7			3.921	2629.76		1491.01		
1800			"		1425	65			615	74	26.7	.625		4.929	2479.40		1987.98		
1815			"		1437	65			660	74			.5%	4.144	2308.22	11.60	1795.32		
1830			"		1439	66			650	75	27.3			4.102	2526.44		1623.63		
1845			"		1439	66			930	79				3.976	2371.06		1676.89		
1900			"		1435	67			670	78	27.5	.640	.25%	4.411	2090.41	5.24	2110.11		
1915			"		1430	67			660	78				4.344	2185.20		1987.92		
1930			"		1410	67			660	78	27.6		.5%	4.513	2290.12	11.51	1970.64		
1945			"		1445	70			600	79				4.528	2274.76		1990.54		
2000			"		1421	70			570	79	27.5	.640		4.474	2346.41		1906.74		
2015			"		1469	70			570	78			.3%	4.494	2339.37	7.04	1921.03		
2030			"		1444	70			570	78	27.7			4.494	2292.67		1960.16		
2045			"		1407	70			570	78				4.429	2301.63		1924.29		
2100			"		1404	70			570	79		.653		4.482	2301.63		1947.32		
2106 2115			44	CHANGE CHOKE TO 44/64ths	44/64ths	Adj. Choke FIXED BEAN													
2130			"		1336	74			795	78	28.0			5.520					
2145			"		1370	74			920	78				4.770	3179.29		1500.33		
2200			"		1340	74			630	78		.621		5.853	3151.89	9.48	1856.98		
2215			"		1390	74			635	78		"		5.876	3199.04	16.08	1836.80		

Well Test Report Continuation Form

TIME DATA	DATE & TIME HOURS	CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
			PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %				
											OIL °API	GAS SP. GR.					
21-4-84																	
2230		44			1390	74			640	78	28.1	.621	0.3%	5.947	3107.25	9.35	1913.91
2245		"			1390	74			630	77	27.4		0.4%	5.859	3121.97	12.54	1876.70
2300		"			1330	74			640	76		.619	0.4%	5.908	3336.05	13.40	1770.96
2315		"			1415	76			780	78	27.9		Trace	5.817	3089.73		1882.69
2330		"			1105	76			880	78			Trace	5.538	3000.18		1845.89
2345		"			1090	74			890	78	28.0		Trace	5.569	2955.40		1884.35
2400		"			1080	70			420	78	27.8	.620	Trace	6.326	3116.60	2029.78	
22.4-84		"			1060	69			"	"			0.5%	6.268	3234.69	16.25	1937.74
0015		"			1042	69			430	78			Trace	6.340	3152.42	2011.15	
0030		"			1034	70			430	78	27.7	.620	0.4%	6.340	3202.25	12.86	1979.86
0100		"			1020	71			430	78	27.6		Trace	6.340	3259.80	1944.90	
0105		56			BYPASS	HEATER, INCREASE			CHOKE TO 56/64	56/64	Add Choke ON FIXED BEAN						
0113		"			955	72			750	78			Trace	7.346			
0115		"			Switch over to Ball Vortex meter												
0125		"			940	74			820	78			0.5%	8.247			
0130		"			930	75			760	76			Trace				
0145					Switch flow to tank to obtain meter factor												
0200					920	76			840	74	27.8						

Well Test Report Continuation Form

TIME DATA	CHOKES	SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %					
DATE & TIME HOURS	SIZE 64THS. INCH									OIL °API	GAS SP. GR.						
22-04-84 0215	56			920	76			400	73			Trace	3.729	4328.60		861.14	
0230	"			907	76			400	73	27.6		"	3.635	4799.94		757.30	
0245	"			902	76			400	73			"	3.635	4915.37		739.52	
0300	"			900	74			400	72	27.7	0.620	"	3.492	6223.56		561.09	
				Switch to 8" meter run with 3.000" orifice plate													
0315	"			897	74			200	70			Trace	9.705	5646.42		1718.79	
0330	"			887	74			200	68	27.8		"	9.653	5607.94		1703.09	
0345	"			875	74			210	66			0%	9.819	5886.90		1667.94	
0400	"			875	74			200	64	27.6	0.620	"	9.699	5627.18		1723.60	
0415	"	Pump out tank		871	74			190	64			"	9.541	5367.46		1777.56	
0430	"			870	72			190	64	27.7		"	9.611	3087.73		3112.64	
0445	"			868	72			200	64			Trace	9.913	6348.61		1561.44	
0500	"			862	74			200	64	27.9	0.620	0%	10.054	5713.75		1759.61	
0515	64			862	72			200	64			0%	10.124	5646.42		1792.99	
0518				Adj. Choke													
0526				Increase choke to 64/64" on fixed bean													
0530	"			835	68			220	64	27.5		0%	11.687	6906.52		1692.17	
0545	"			829	68			210	63			0%	11.186	6896.90		1621.89	
0600	"			825	68			205	63	27.6		0%	11.061	6714.14		1647.42	
0615				819	68			195	63			0%	10.870	7127.76		1525.02	

Well Test Report Continuation Form

TIME DATA	CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY	BS&W %					
DATE & TIME HOURS										OIL °API	GAS SP. GR.					
22-04-84 0630	64			814	70			210	63	27.5		11.251	6637.19		1695.15	
0645	"			809	72			220	64			11.488	6733.38		1706.13	
0700	"			807	74			210	64	27.4	0.620	11.110	6666.04		1666.66	
0715	"			805	73			210	64			11.110	6531.38		1701.02	
0730	"			802	73			215	64	27.6		11.165	7060.43		1581.35	
0745	"			806	74			225	63			11.552	6945.00		1663.35	
0800	"			807	74			230	63	27.4	0.620	11.787	7358.62		1601.79	
0815	"			807	74			230	63			11.787	6694.90		1760.59	
0830	"			805	73			230	63	27.5		11.855	6714.14		1765.68	
0833				Open bypass on choke manifold - Increase orifice plate to 3.500"												
0845	160			775	73			310	75	27.6		14.699	8291.67		1772.75	
0900	"			690	74			375	72		0.620	16.138	9.917.30		1627.26	
0915	"			663	78			300	73	27.4		15.409	10003.87		1540.30	
0930	"			809	78			300	72			15.297	9551.78		1601.48	
0945	"			814	78			310	72	27.5		15.922	9946.16		1600.80	
1000	"			814	79			315	72		0.620	15.787	9513.30		1659.47	
1015	"			820	79			315	72			16.044	9676.83		1659.44	
1030	"			821	79			325	72	27.5		16.025	9705.68		1651.10	
1045	"			822	81			315	72			15.916	9715.30		1638.25	

Well Test Report Continuation Form

TIME DATA			CHOKE SIZE BATHS. INCH	SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME	PRESSURE PSI		TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	PRESSURE PSI		TEMP. °F	OIL API	GRAVITY SP. GR.	BS&W %						
22.04.84		160			825	81		345	72	27.4	0.620	0%	16.171	9436.35		1713.66			
1115		"			827	"		325	71			0%	16.300	9484.44		1718.62			
1130		"			828	77		335	71	27.4		0%	16.750	9436.35		1775.06			
1145		"			833	78		345	70			0%	17.135	9167.01		1869.20			
1200		"			834	78		345	70	27.6	0.620	0%	17.135	9205.49		1861.39			
1215		"			835	78		345	72			0%	17.366	9109.30		1906.40			
1230		"			839	78		345	72	27.6		0%	17.366	9224.73		1882.55			
1245		"			840	78		345	72			0%	17.104	9138.16		1871.71			
1300		"			842	78		345	72	27.3	0.620	0%	17.495	9013.11		1941.06			
1315		"			845	78		345	72			0%	17.495	9003.49		1943.14			
1330		"			846	78		345	72	27.3		0%	17.623	8907.30		1978.49			
1345		"			846	78		345	72			0%	18.001	8916.92		2018.75			
1400		"			846	78		345	72	27.3	0.620	0%	18.001	8907.30		2020.93			
1415		"			850	78		345	72			0%	18.001	8849.58		2034.11			
1430		"			850	78		345	72	27.3		0%	18.001	8580.25		2097.96			
1445		"			845	78		345	72			0%	17.750	8618.72		2059.47			
1500		"			855	78		360	72	27.3	0.620	0%	18.245	8724.53		2091.23			
1515		"			857	78		360	72			0%	18.245	8551.39		2133.57			
1530		"			860	78		360	72	27.4		0%	18.116	8867.62		2042.94			

Well Test Report Continuation Form

TIME DATA		CHOKE SIZE 64THS. INCH	SUBSURFACE		WELLHEAD DATA			SEPARATOR		SAMPLES				GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
DATE & TIME HOURS	ELAPSED TIME		PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI	AMBI- ENT TEMP. °F	PRESSURE PSI	TEMP. °F	GRAVITY		BSAW %					
											OIL °API	GAS SP. GR.						
22-04-84																		
1545		160			860	78			370	72				0%	18.487	8522.53		2169.19
1600		"			860	"			370	72	27.4	0.620	0%	18.617	8512.91		2186.91	
1615		"			862	"			370	72			0%	18.745	8474.44		2211.95	
1630		"			862	"			370	72	27.4		0%	18.745	8435.96		2222.04	
1645		"			862	"			370	71			0%	18.890	8435.96		2239.22	
1700		"			863	77			370	70	27.4	0.620	0%	18.907	8407.10		2248.93	
1715		"			863	"			370	70			0%	18.907	8426.34		2243.80	
1730		"			866	76			370	70	27.4		0%	18.971	8435.96		2248.83	
1745		"			868	77			375	70			0%	19.158	8253.20		2321.28	
1800		"			871	76			375	70	27.4	0.620	0%	19.158	8262.82		2318.58	
1815		"			873	76			375	69			0%	19.308	8282.05		2331.31	
1830		"			873	76			375	69	27.4		0%	19.308	8359.01		2309.84	
1845		"			877	76			375	69			0%	19.308	8060.82		2395.29	
1900		"			877	76			375	69	27.4	0.620	0%	19.500	8233.96		2368.24	
1915		"			880	76			375	69			0%	19.500	8176.24		2384.96	
1930		"			880	76			380	70	27.4		0%	19.669	8147.39		2414.15	
1945		"			880	76			380	70			0%	19.796	8089.67		2447.07	
2000		"			885	76			390	70	27.4	0.620	0%	19.940	8080.05		2467.81	
2015		"			885	76			390	70			0%	20.069	8118.53		2471.99	

Well Test Report Continuation Form

DATE & TIME HOURS	TIME DATA ELAPSED TIME	CHOKE		SUBSURFACE		WELLHEAD DATA			AMBI- ENT TEMP. °F	SEPARATOR		SAMPLES			GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL/DAY	WATER FLOW RATE BBL/DAY	GAS OIL RATIO CF/BBL	CHLORIDE PPM
		SIZE 64THS. INCH	TEMP. °F	PRESSURE PSI	TEMP. °F	TUBING PRESS. PSI	TEMP. °F	CASING PRESS. PSI		PRESSURE PSI	TEMP. °F	GRAVITY		BS&W %					
22-4-84 2030		160			74	890				390	68			0%	20.127	8108.91		2482.08	
2045		"			"	885				390	68			0%	20.127	8128.15		2476.21	
2100		"			"	885				380	68		0.614	0%	19.908	8262.82		2409.35	
2115		"			"	886				390	68			0%	20.029	7878.05		2542.38	
2130		"			"	905				390	68		27.5	0%	19.898	7955.00		2501.32	
2145																			
2200		56/64								480	62		27.5	0%	13.164	4796.88		2744.28	
2215		"								480	59			0%	13.082	3445.03		3797.35	
2230		"								450	56			0%	13.625	4160.20		3275.08	
2245		"								425	58		27.5	0%					
2300		"								315			0.614	0%					
2305		"																	
2324																			
2327		56																	
2332		"																	
2337		"																	
23-4-84 0015		"			70	1377				300	55		27.5	0%	15.400	12907.96		1193.06	
0030		"			69	1375				285	53		"	"	14.538	2049.58		7093.16	

Decrease choke size to 56/64ths fixed bean

Fail safe failed on S.T.T. well shut in-bypass separator

Re-open fail safe well S.I. a choke manifold

Open well on adjustable choke slowly increasing to

56/64ths choke.

Switch to 56/64ths fixed bean choke

Switch flow back thru separator

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Bypass separator shut in well at P.C.T. - Valve shut in at choke manifold, monitor pressures.

*Gas Flow Rate
Calculation
Report*

4

Post Gravel Pack Test



**ORIFICE METER GAS FLOW MEASUREMENT
BASED ON
AGA GAS MEASUREMENT COMMITTEE REPORT NO. 3**

BASIC EQUATION

$Q = C' \sqrt{hwPf}$ = Flowrate at base conditions in Cu. Ft./Hr.

C' = Orifice Flow constant

hw = Differential pressure in inches of water

Pf = Static pressure in PSIA

$C' = F_b \times F_{pb} \times F_{tb} \times F_g \times F_{tf} \times F_r \times Y \times F_{pv}$

F_b = Basic Hourly orifice flow factor

F_{pb} = Pressure Base Factor

F_{tb} = Temperature Base Factor

F_g = Specific Gravity Factor

F_{tf} = Flowing Temperature Factor

F_r = Reynolds Number Factor

Y = Expansion Factor

F_{pv} = Super Compressibility Factor

STANDARD CONDITIONS

Base Temperature = 60.° F.

Base Pressure = 14.73 PSI

Specific Gravity = 1.000

TIME DATA		CHOKE SIZE 64THS. INCH	METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Tg} x F _r x Y x F _{pv}										FLOW RATE Q = C' x 24 x √P ₁ x h _w MMSCF/DAY	REMARKS
DATE & TIME HOURS	ELAPSED TIME HOURS		PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P ₁ x h _w	F _b	F _{pb}	F _{Tb}	F _g	F _{Tg}	F _r	Y	F _{pv}	C'		
20.4.84 1615		24	SWITCH FLOW			THROUGH SEPARATOR												
1630		24	155	38	69	2.00	76.746	930.65	1.01	1.0	1.2793	0.9915	1.0	1.0	1.013	1195.81	2.203	S.G=.611
1645		24	165	38	72	2.00	79.18	930.65	1.01	1.0	1.2793	0.9887	1.0	1.0	1.012	1191.25	2.264	
1700		24	165	36	73	2.00	77.07	930.65	1.01	1.0	1.2783	0.9877	1.0	1.0	1.012	1189.12	2.199	S.G=.612
1715		24	160	35	74	2.00	74.83	930.65	"	"	1.2783	0.9868	1.0	1.0	1.012	1188.03	2.134	
1730		"	160	35	75	"	74.83	930.65	"	"	1.2804	0.9859	1.0	1.0	1.012	1188.90	2.135	S.G=.610
1745		"	165	42	76	"	83.25	930.65	"	"	1.2804	0.9850	1.0	1.0	1.012	1187.81	2.373	
1800		"	155	38	74	"	76.75	930.65	"	"	1.2783	0.9868	1.0	1.0	1.012	1188.03	2.188	S.G=.612
1815		"	155	32	72	"	70.43	930.65	"	"	1.2783	0.9887	1.0	1.0	1.012	1190.32	2.012	
1830		"	165	36	73	"	77.07	930.65	"	"	1.2783	0.9877	1.0	1.0	1.012	1189.12	2.199	S.G=.612
1845		"	165	34	75	"	74.90	930.65	"	"	1.2783	0.9859	1.0	1.0	1.012	1186.95	2.134	
1900			165	32	74	"	72.66	930.63	"	"	1.2793	0.9868	1.0	1.0	1.012	1188.96	2.073	S.G=.611
1915			165	34	75	"	74.90	930.65	"	"	1.2793	0.9859	1.0	1.0	1.012	1187.88	2.135	
1930 1945			185 165	34 22	74 74	" "	79.31 79.31	930.65 930.65	" "	" "	1.2127 1.2127	0.9868 0.9868	1.0 1.0	1.0 1.0	1.016 1.016	1131.52 1131.52	2.154 1.072	S.G=.680

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE	METER RUN DATA				C = F _b x F _{pb} x F _{tb} x F _g x F _{ti} x F _r x Y x F _{pv}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	SIZE	PRESS.	DIFF.	TEMP.	PLATE	√P ₁ Xh _w	F _b	F _{pb}	F _{tb}	F _g	F _{ti}	F _r	Y	F _{pv}	C'	Q = C' x 24 x √P ₁ x h _w MMSCF/DAY	
20.4.84																		
2000		24	195	38	72	2.00	86.08	930.65	1.01	1.0	1.2396	0.9887	1.0	1.0	1.020	1163.22	2.403	S.G.=.651
2030		24	155	38	76	"	76.75	930.65	"	"	1.2394	0.9850	"	"	1.014	1152.05	2.122	
2100		"	165	41	76	"	82.25	930.65	"	"	1.2309	0.9850	"	"	1.015	1145.28	2.261	S.G.=.660
2130		"	165	44	73	"	85.21	930.65	"	"	1.2309	0.9877	"	"	1.015	1148.42	2.349	
2200		"	165	41	74	"	82.25	930.65	"	"	1.2384	0.9868	"	"	1.014	1153.23	2.276	S.G.=.652
2230		"	175	42	74	"	85.73	930.65	"	"	1.2384	0.9868	"	"	1.014	1153.23	2.373	S.G.=.652
2300		"	165	41	76	"	82.25	930.65	"	"	1.2384	0.9850	"	"	1.014	1151.12	2.272	
2330		"	135	36	77	"	69.71	930.65	"	"	1.2384	0.9840	"	"	1.014	1149.95	1.924	S.G.=.652
2400		"	155	44	76	"	82.58	"	"	"	"	0.9850	"	"	"	1151.12	2.281	S.G.=.652
21.4.84		"	165	46	77	"	87.12	"	"	"	1.2375	0.9840	"	"	"	1149.12	2.403	S.G.=.653
0030		"	145	44	76	"	79.87	"	"	"	"	0.9850	"	"	"	1150.29	2.205	S.G.=.653
0100		"	175	38	"	"	81.55	"	"	"	1.2384	"	"	"	"	1151.12	2.253	S.G.=.652
0130		"	185	34	"	"	79.31	"	"	"	1.2394	"	"	"	1.019	1157.73	2.204	S.G.=.651
0200		"	205	33	"	"	82.25	"	"	"	1.2384	"	"	"	"	1156.80	2.284	S.G.=.652
0230		"	215	30	"	"	80.31	"	"	"	"	"	"	"	"	1156.80	2.230	S.G.=.652
0300		"	INCREASE PLATE SIZE TO 1.750															
0305		"																
0330		"	215	80	77	1.750	131.15	674.44	1.01	1.0	1.2375	0.9840	100	1.0	1.019	836.87	2.634	S.G.=.653
0400		"	"	78	"	"	129.50	"	"	"	1.2384	"	"	"	"	837.84	2.603	S.G.=.652
0430		"	"	76	"	"	127.83	"	"	"	1.2394	"	"	"	"	838.15	2.571	S.G.=.651

Gas Flow Rate Calculation Report Continuation Form

TIME DATA			CHOKE		METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _r x Y x F _{pv}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	84THS.	PRESS.	DIFF.	TEMP.	PLATE	√P _i xh _w	F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _r	Y	F _{pv}	C'	Q = C' x 24 x √P _i x h _w MMSCF/DAY			
21.4.84																				
0500		24	205	74	77	1.750	123.17	674.44	1.0	1.0	1.2375	.9840	1.000	1.000	1.019	836.87	2.474	SG=.653		
0530		"	"	72	"	"	121.49	"	"	"	1.2384	"	"	"	"	837.48	2.442	SG=.652		
0600		"	"	"	78	"	"	"	"	"	1.2375	.9831	"	"	"	836.10	2.438	SG=.653		
0630		"	"	"	79	"	"	"	"	"	"	.9822	"	"	"	835.34	2.436	SG=.653		
0640		BYPASS SEPARATOR																		
1053																				
		DIVERT FLOW THRU SEPARATOR																		
1115		28	245	108	66	1.750	162.67	674.44	1.0	1.0	1.2403	.9943	1.000	1.000	1.025	852.53	3.328	SG=.650		
1130		"	225	100	67	"	150.00	"	"	"	"	.9933	"	"	"	851.68	3.066			
1145		"	225	96	69	"	146.97	"	"	"	1.2384	.9915	"	"	"	848.83	2.994	SG=.652		
1200		"	"	100	70	"	150.00	"	"	"	"	.9905	"	"	1.024	847.15	3.050			
1215		"	"	106	"	"	154.43	"	"	"	1.2403	"	"	"	"	848.45	3.145	SG=.650		
1230		"	"	106	"	"	"	"	"	"	"	"	"	"	"	848.45	3.145			
1245		"	205	100	"	"	143.18	"	"	"	1.2783	"	"	"	1.016	867.61	2.981	SG=.612		
1300		"	255	88	"	"	149.80	"	"	"	"	"	"	"	1.021	871.61	3.135			
1315		"	"	84	"	"	146.36	"	"	"	1.2814	"	"	"	1.020	873.14	3.067	SG=.609		
1330		"	"	80	71	"	142.83	"	"	"	"	0.9896	"	"	1.020	872.34	2.990			
1345		"	285	68	69	"	139.21	"	"	"	1.2835	0.9915	"	"	1.024	878.88	2.936	SG=.607		
1400		"	415	48	71	"	141.14	"	"	"	"	0.9915	"	"	1.031	884.89	2.997			

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _{Ti} x F _T x F _Y x F _{PV}								FLOW RATE	REMARKS			
DATE & TIME HOURS	ELAPSED TIME HOURS	CHOKE SIZE 64THS. INCH	PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P ₁ XHw	F _b	F _{pb}	F _{Tb}	F _{Ti}	F _T	Y	F _{PV}		C'	Q = C' x 2.4 x √P ₁ x Hw MMSCF/DAY	
1415		28	445	48	72	1.750	146.15	674.44	1.0	1.0	0.9887	1.0	1.0	1.0	1.035	888.78	3.118	SG=.603
1430		"	435	46	73	"	141.46	"	"	"	0.9877	"	"	"	1.035	887.89	3.014	
1445		"	535	40	74	"	146.29	"	"	"	0.9868	"	"	"	1.047	897.36	3.151	
1500		"	525	36	74	"	137.48	"	"	1.2856	0.9868	"	"	"	1.042	891.55	2.942	SG=.605
1515		"	540	34	72	"	135.50	"	"	"	0.9887	"	"	"	1.047	897.55	2.919	
1530		"	555	34	73	"	137.37	"	"	"	0.9877	"	"	"	1.047	896.65	2.956	
1545		"	575	34	74	"	139.82	"	"	"	0.9868	"	"	"	1.047	895.83	3.006	
1600		"	485	38	72	"	135.76	"	"	"	0.9887	"	"	"	1.042	893.27	2.910	SG=.605
1615		"	495	38	72	"	137.15	"	"	"	"	"	"	"	1.042	893.27	2.940	
1630		"	515	38	72	"	139.89	"	"	"	"	"	"	"	1.042	893.27	2.999	
1645		"	525	38	74	"	141.24	"	"	"	0.9868	"	"	"	1.040	889.84	3.016	
1700		"	515	38	75	"	139.89	"	"	"	0.9859	"	"	"	1.040	889.03	2.985	SG=.605
1715																		
1730		36	435	90	72	"	197.86	"	"	"	0.9897	"	"	"	1.029	882.12	4.189	
1745		"	345	100	72	"	185.74	"	"	"	0.9887	"	"	"	1.026	879.55	3.921	
1800		"	630	86	74	"	232.77	"	"	1.2649	0.9868	"	"	"	1.048	882.25	4.929	SG=.625
1815		"	675	56	74	"	194.42	"	"	"	0.9868	"	"	"	1.055	888.14	4.144	
1830		"	665	56	75	"	192.98	"	"	"	0.9859	"	"	"	1.053	885.65	4.102	
1845		"	945	35	79	"	181.87	"	"	"	0.9822	"	"	"	1.087	910.81	3.976	

Changed to 36/64 choke on fixed bean

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE	METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _{Ti} x F _T x F _Y x F _{pv}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	SIZE	PRESS.	DIFF.	TEMP.	PLATE	$\sqrt{P_1 \times h_w}$	F _b	F _{pb}	F _{Tb}	F _{Ti}	F _T	Y	F _{pv}	C'	Q = C' x 24 x $\frac{\sqrt{P_1 \times h_w}}{\text{MMSCF/DAY}}$		
HOURS	HOURS	INCH	PSIA	INCHES	°F	INCHES	INCHES											
21.4.84																		
1900		36	685	64	78	1.750	209.38	674.44	1.0	1.01	2.500	0.9831	1.0	1.059	877.70	4.411	SG = .640	
1915		"	675	63	"	"	206.22	"	"	"	"	"	"	"	"	"	4.344	
1930		"	675	68	"	"	214.24	"	"	"	"	"	"	"	"	"	4.513	
1945		"	615	76	79	"	216.19	"	"	"	0.9822	"	"	1.054	872.76	4.528		
2000		"	585	78	79	"	213.61	"	"	"	0.9822	"	"	1.054	872.76	4.474	SG = .640	
2015		"	"	79	78	"	214.98	"	"	"	0.9831	"	"	1.051	871.07	4.494		
2030		"	"	79	"	"	214.98	"	"	"	"	"	"	1.051	871.07	4.494		
2045		"	"	78	"	"	213.61	"	"	"	"	"	"	1.053	864.00	4.429	SG = .653	
2100		"	"	80	79	"	216.33	"	"	"	0.9822	"	"	1.053	863.21	4.482		
2115		44/64	Changed to 44/64 choke on fixed beam. Changed to 2" Orifice plate															
2130		"	810	44	78	2.000	188.79	930.65	"	"	"	0.9831	"	1.076	1218.26	5.520		
2145		"	935	28	"	"	161.80	"	"	"	"	"	"	1.085	1228.45	4.770		
2200		"	645	61	"	"	198.36	"	"	"	1.2690	"	"	1.059	1229.54	5.853	SG = .621	
2215		"	650	61	"	"	199.12	"	"	"	"	"	"	"	"	"	5.876	
2230		"	655	62	"	"	201.52	"	"	"	"	"	"	"	"	"	5.947	
2245		"	645	61	77	"	198.36	"	"	"	0.9840	"	"	"	1230.66	5.859		
2300		"	655	61	76	"	199.89	"	"	"	1.2710	0.9850	"	1.057	1231.52	5.908	SG = .619	
2315		"	795	48	78	"	195.35	"	"	"	0.9831	"	"	1.067	1240.78	5.817		
2330		"	895	38	"	"	184.42	"	"	"	"	"	"	1.076	1251.24	5.538		
2345		"	905	38	"	"	185.45	"	"	"	"	"	"	1.076	"	5.569		

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE	METER RUN DATA				C = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _r x Y x F _{PV}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	SIZE 64THS. INCH	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P ₁ Xh _w	F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _r	Y	F _{PV}	C'	O = C' x 24 x √P ₁ x h _w MMSCF/DAY		
21-4-84	2400	44	110	78	2.000	218.75	930.65	1.0	1.0	1.2700	.9831	1.000	1.000	1.037	1204.94	6.326	SG= .620	
	0015	"	108	"	"	216.75	"	"	"	"	"	"	"	"	1204.94	6.268		
	0030	"	"	"	"	219.23	"	"	"	"	"	"	"	"	1204.94	6.340		
	0045	"	108	"	"	219.23	"	"	"	"	"	"	"	"	1204.94	6.340		
	0100	"	108	"	"	219.23	"	"	"	"	"	"	"	"	1204.94	6.340	SG .620	
	0105	56					Bypass heater increase choke to 56/64 on fixed bean. Commence 20 litre sample											
	0115	"	80	78	"	247.33	"	"	"	"	"	"	"	1.065	1237.48	7.346		
	0125	"					Switch over to Ball Vortex meter											
	0130	"	92	78	"	277.16	"	"	"	"	"	"	"	1.067	1239.80	8.247		
	0145	"	96	76	"	272.76	"	"	"	"	0.9850	"	"	1.065	1239.87	8.116		
	0200	"	100	74	"	292.40	"	"	"	"	0.9868	"	"	1.078	1257.30	8.823	SG. .620	
	0205	"	40	73	2.000	128.84	"	"	"	"	0.9877	"	"	1.033	1205.91	3.729		
	0215	"	38	73	"	125.58	"	"	"	"	"	"	"	"	1205.91	3.635		
	0230	"	38	73	"	125.58	"	"	"	"	"	"	"	"	1205.91	3.635		
	0235	"	38	73	"	125.58	"	"	"	"	"	"	"	"	1205.91	3.635		
	0245	"	35	72	"	sample 120.52	"	"	"	"	0.9887	"	"	"	1207.13	3.492	SG .620	
	0300	"	136	70	3.000	170.99	1848.6	"	"	1.2700	0.9905	"	"	1.017	2364.95	9.705		
	0310	"	134	68	"	169.74	"	"	"	"	0.9924	"	"	1.017	2369.49	9.653		
	0315	"	132	66	3.000	172.34	1848.6	"	"	1.2700	0.9943	"	"	1.017	2374.02	9.819		
	0330	"	134	64	"	169.74	"	"	"	"	0.9962	"	"	1.018	2380.90	9.699	SG .620	
	0345	"	132	66	3.000	172.34	1848.6	"	"	1.2700	0.9943	"	"	1.017	2374.02	9.819		
	0400	"	134	64	"	169.74	"	"	"	"	0.9962	"	"	1.018	2380.90	9.699	SG .620	

Bypass heater increase choke to 56/64 on fixed bean. Commence 20 litre sample

Switch over to Ball Vortex meter

Gas Flow Rate Calculation Report Continuation Form

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TIME DATA		CHOKE	METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _{Ti} x F _T x F _Y x F _{PV}								FLOW RATE	REMARKS	
DATE & TIME	ELAPSED TIME HOURS	SIZE 64THS. INCH	PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P ₁ xhw	F _b	F _{pb}	F _{Tb}	F _{Ti}	F _T	F _Y	F _{PV}	C'		Q = C'x24x √P ₁ x hw MMSCF/DAY
22-04-84																	
0415		56	205	136	64	3.000	166.97	1848.6	1.0	1.0	0.9962	1.0	1.0	1.018	2380.90	9.541	
0430		"	205	138	64	"	168.20	"	"	"	"	"	"	"	2380.90	9.611	
0445		"	215	140	64	"	173.49	"	"	"	"	"	"	"	2380.90	9.913	
0500		"	215	144	64	"	175.95	"	"	"	"	"	"	"	2380.90	10.054	Sg .620
0515		64	215	146	64	"	177.17	"	"	"	"	"	"	"	2380.90	10.124	
			Increase choke to 64/64 on fixed bean														
0530		"	235	178	64	3.000	204.52	1848.6	1.0	1.0	0.9962	1.0	1.0	1.018	2380.90	11.687	
0545		"	225	170	63	"	195.58	"	"	"	0.9971	"	"	"	2383.05	11.186	
0600		"	220	170	63	"	193.39	"	"	"	"	"	"	"	2383.05	11.061	Sg .620
0615		"	210	172	63	"	190.05	"	"	"	"	"	"	"	2383.05	10.870	
0630		"	225	172	63	"	196.72	"	"	"	"	"	"	"	2383.05	11.251	
0645		"	235	172	64	"	201.05	"	"	"	0.9962	"	"	"	2380.90	11.488	
0700		"	225	168	64	"	194.42	"	"	"	"	"	"	"	2380.90	11.110	Sg .620
0715		"	225	168	64	"	194.42	"	"	"	"	"	"	"	2380.90	11.110	
0730		"	230	166	64	"	195.40	"	"	"	"	"	"	"	2380.90	11.165	
0745		"	240	170	63	"	201.99	"	"	"	0.9971	"	"	"	2383.05	11.552	
0800		"	245	172	63	"	205.28	"	"	"	"	"	"	1.022	2392.41	11.787	Sg.620
0815		"	245	172	63	"	205.28	"	"	"	"	"	"	"	2392.41	11.787	
0830		"	245	174	63	"	206.47	"	"	"	"	"	"	"	2392.41	11.855	

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE			METER RUN DATA			C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _r x Y x F _{PV}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	CHOKE SIZE	CHOKE	CHOKE	DIFF. INCHES	TEMP. °F	PLATE SIZE INCHES	√P ₁ XHW	F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _r	Y	F _{PV}	C'	Q = C' x 24 x √P ₁ x HW MMSCF/DAY	
22-04-84																			
									Open bypass on choke manifold. Increase orifice plate to 3.500"										
0845		160	325	108	75		3.500	187.35	2549.7	1.0	1.0	1.27000	0.9859	1.0	1.0	1.024	3269.08	14.699	
0900		"	390	106	72		3.500	203.32	2549.7	1.0	1.0	1.27000	0.9887	1.0	1.0	1.033	3307.18	16.138	Sg .620
0915		"	315	122	73		"	196.04	"	"	"	"	0.9877	"	"	1.024	3275.05	15.409	
0930		"	315	120	72		"	194.42	"	"	"	"	0.9887	"	"	"	3278.36	15.297	
0945		"	325	126	72		"	202.36	"	"	"	"	"	"	"	"	3278.36	15.922	
1000		"	330	122	72		"	200.65	"	"	"	"	"	"	"	"	3278.36	15.787	Sg .620
1015		"	330	126	72		"	203.91	"	"	"	"	"	"	"	"	3278.36	16.044	
1030		"	340	122	72		"	203.67	"	"	"	"	"	"	"	"	3278.36	16.025	
1045		"	330	124	72		"	202.29	"	"	"	"	"	"	"	"	3278.36	15.916	
1100		"	330	128	72		"	205.52	"	"	"	"	"	"	"	"	3278.36	16.171	Sg .620
1115		"	340	126	71		"	206.98	"	"	"	"	.9896	"	"	"	3281.35	16.300	
1130		"	350	128	71		"	211.66	"	"	"	"	"	"	"	1.029	3297.37	16.750	
1145		"	360	130	70		"	216.33	"	"	"	"	0.9905	"	"	"	3300.37	17.135	
1200		"	360	130	70		"	216.33	"	"	"	"	"	"	"	"	3300.37	17.135	Sg .620
1215		"	360	134	72		"	219.64	"	"	"	"	0.9887	"	"	"	3294.37	17.366	
1230		"	360	134	72		"	219.64	"	"	"	"	"	"	"	"	3294.37	17.366	
1245		"	360	130	72		"	216.33	"	"	"	"	"	"	"	"	3294.37	17.104	
1300		"	360	136	72		"	221.27	"	"	"	"	"	"	"	"	3294.37	17.495	Sg .620

Gas Flow Rate Calculation Report Continuation Form

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TIME DATA		CHOKE	METER RUN DATA				C' = F _b x F _{pb} x F _{Tb} x F _{Tl} x F _T x Y x F _{pv}								FLOW RATE	REMARKS	
DATE & TIME	ELAPSED TIME	SIZE	PRESS.	DIFF.	TEMP.	PLATE	√P ₁ XhW	F _b	F _{pb}	F _{Tb}	F _{Tl}	F _T	Y	F _{pv}	C'	Q = C' x 24 x √P ₁ x hW MMSCF/DAY	
22-04-84																	
1315		160	360	136	72	3.500	221.27	2549.7	1.0	1.0	0.9887	1.0	1.0	1.029	3294.37	17.495	Sg = .620
1330		"	360	138	72	"	222.89	"	"	"	"	"	"	"	3294.37	17.623	
1345		"	360	144	72	"	227.68	"	"	"	"	"	"	"	3294.37	18.001	
1400		"	360	144	72	"	227.68	"	"	"	"	"	"	"	3294.37	18.001	Sg = .620
1415		"	360	144	72	"	227.68	"	"	"	"	"	"	"	3294.37	18.001	
1430		"	360	144	72	"	227.68	"	"	"	"	"	"	"	3294.37	18.001	
1445		"	360	140	72	"	224.50	"	"	"	"	"	"	"	3294.37	17.750	Sg = .620
1500		"	375	142	72	"	230.76	"	"	"	"	"	"	"	3294.37	18.245	
1515		"	375	142	72	"	230.76	"	"	"	"	"	"	"	3294.37	18.245	
1530		"	375	140	72	"	229.13	"	"	"	"	"	"	"	3294.37	18.116	Sg = .620
1545		"	385	142	72	"	233.82	"	"	"	"	"	"	"	3294.37	18.487	
1600		"	385	144	72	"	235.46	"	"	"	"	"	"	"	3294.37	18.617	
1615		"	385	146	72	"	237.09	"	"	"	"	"	"	"	3294.37	18.745	Sg = .620
1630		"	385	146	72	"	237.09	"	"	"	"	"	"	"	3294.37	18.745	
1645		"	385	148	71	"	238.70	"	"	"	0.9896	"	"	"	3297.37	18.890	
1700		"	385	148	70	"	238.70	"	"	"	0.9905	"	"	"	3300.37	18.907	Sg = .620
1715		"	385	148	70	"	238.70	"	"	"	"	"	"	"	3300.37	18.907	
1730		"	385	149	70	"	239.51	"	"	"	"	"	"	"	3300.37	18.971	
1745		"	390	150	70	"	241.87	"	"	"	"	"	"	"	3300.37	19.158	Sg = .620
1800		"	390	150	70	"	241.87	"	"	"	"	"	"	"	3300.37	19.158	

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE	METER RUN DATA				$\sqrt{P_1 \Delta h_w}$	C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _T x Y x F _{PV}								FLOW RATE	REMARKS	
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS. INCH	PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES		F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _T	Y	F _{PV}	C'		Q = C' x 24 x $\sqrt{P_1 \Delta h_w}$ MMSCF/DAY
1815		160	390	150	69	3.500	241.87	2549.7	1.01	1.0	1.2700	0.9915	1.0	1.0	1.036	3326.18	19.308	Sg= .620
1830		"	390	150	69	"	241.87	"	"	"	"	"	"	"	"	3326.18	19.308	
1845		"	390	150	69	"	241.87	"	"	"	"	"	"	"	"	3326.18	19.308	
1900		"	390	153	69	"	244.27	"	"	"	"	"	"	"	"	3326.18	19.500	
1915		"	390	153	69	"	244.27	"	"	"	"	"	"	"	"	3326.18	19.500	Sg=.620
1930		"	395	154	70	"	246.64	"	"	"	"	0.9905	"	"	"	3322.82	19.669	
1945		"	395	156	70	"	248.23	"	"	"	"	"	"	"	"	3322.82	19.796	
2000		"	405	154	70	"	249.74	"	"	1.2752	"	"	"	"	1.033	3326.77	19.940	Sg=.615
2015		"	405	156	70	"	251.36	"	"	"	"	"	"	"	"	3326.77	20.069	
2030		"	405	156	68	"	251.36	"	"	"	0.9924	"	"	"	1.034	3336.37	20.127	
2045		"	405	156	68	"	251.36	"	"	"	"	"	"	"	"	3336.37	20.127	Sg= .615
2100		"	395	156	68	"	248.23	"	"	1.2772	"	"	"	"	"	3341.61	19.908	Sg=.613
2115		"	405	154	68	"	249.74	"	"	"	"	"	"	"	"	3341.61	20.029	
2130		"	405	152	68	"	248.11	"	"	"	"	"	"	"	"	3341.61	19.898	
2145			Decrease choke to 56/64ths fixed bean															
			change orifice plate to 3.00"															
2200		56	495	100	62	3.00"	222.49	1848.6	1.01	1.0	1.2762	0.9981	1.0	1.0	1.047	2465.37	13.164	Sg= .614
2215		"	495	98	59	"	220.25	"	"	"	1.001	"	"	"	1.048	2474.90	13.082	
2230		"	465	114	56	"	230.24	"	"	"	1.004	"	"	"	1.041	2465.73	13.625	

Gas Flow Rate Calculation Report Continuation Form

TIME DATA		CHOKE	METER RUN DATA			C' = F _b x F _{pb} x F _{Tb} x F _g x F _{Ti} x F _r x Y x F _{pv}										FLOW RATE	REMARKS		
DATE & TIME	ELAPSED TIME	SIZE 64THS. INCH	PRESS. PSIA	DIFF. INCHES WATER	TEMP. °F	PLATE SIZE INCHES	√P ₁ xh _w	F _b	F _{pb}	F _{Tb}	F _g	F _{Ti}	F _r	Y	F _{pv}	C'	Q = C'x24x √P ₁ xh _w MMSCF/DAY		
22-04-84		56	540	70	58	3.00"	194.42	1848.6	1.0	1.0	1.2762	1.004	1.0	1.0	1.041	2465.73	11.505	SG= .614	
2245		"	330	166	57	"	234.05	"	"	"	"	1.003	"	"	1.032	2441.98	13.717		
2305								Failsafe failed on surface tree shut in well											
23-04-84		"	315	86	55	3.750	164.59	2952.6	1.0	1.0	1.2793	1.005	1.000	1.000	1.027	3898.64	15.400	SG= .611	
0015		"	300	80	53	"	154.92	"	"	"	"	1.007	"	"	1.028	3910.21	14.538		
0030		"	275	72	50	"	140.71	"	"	"	"	1.010	"	"	1.023	3902.78	13.180		
0045		"	"	"	"	"	"	"	"	"	"	"	"	"	"	3902.78	13.180		
0100		"	285	70	52	"	141.24	"	"	"	"	1.008	"	"	"	3895.05	13.203		
0115		"	295	"	53	"	143.70	"	"	"	1.2700	1.007	"	"	"	3862.90	13.322	SG= .620	
0130		"	"	69	"	"	142.67	"	"	"	"	"	"	"	"	3862.90	13.227		
0145		"	"	70	"	"	"	"	"	"	"	"	"	"	"	3862.90	13.227		
0200		"	"	"	"	"	"	"	"	"	"	"	"	"	"	3862.90	13.227		
0215		"	"	"	"	"	"	"	"	"	"	"	"	"	"	3862.90	13.417		
0230		"	"	71	"	"	144.72	"	"	"	"	"	"	"	"	3875.37	13.555	SG= .616	
0245		"	"	72	"	"	145.74	"	"	"	1.2741	"	"	"	"	3875.37	13.460		
0300		"	"	71	"	"	144.72	"	"	"	"	"	"	"	"	3875.37	13.394		
0315		"	305	68	"	"	144.01	"	"	"	"	"	"	"	"	3875.37	13.365		
0330		"	295	70	"	"	143.70	"	"	"	"	"	"	"	"	3875.37	13.365		
0345		24	Decrease choke to 24/64ths adjustable. Decrease orifice plate to 1.750" in the 3" meter run.																

Gas Flow Rate Calculation Report Continuation Form

TIME DATA			CHOKE		METER RUN DATA				C' = F _b x F _p x F _{Tb} x F _{Ti} x F _T x Y x F _{Pv}										FLOW RATE	REMARKS
DATE & TIME	ELAPSED TIME	SIZE	PRESS.	DIFF.	TEMP.	PLATE	$\sqrt{P_1 \times H \times W}$	F _b	F _p	F _{Tb}	F _{Ti}	F _T	Y	F _{Pv}	C'	O = C' x 24 x $\sqrt{P_1 \times H \times W}$				
HOURS	HOURS	INCH	PSIA	INCHES WATER	°F	INCHES										MMSCF/DAY				
23-04-84																				
0345		24	245	130	62	1.750	178.47	674.44	1.0	1.01	1.2741	1.000	1.000	1.022	876.54	3.754	SG= .616			
0400		"	260	120	"	"	176.64	"	"	1.2720	"	"	"	"	875.10	3.710	SG= .618			
0415		"	255	"	68	"	174.93	"	"	"	.9924	"	"	1.021	869.25	3.649				
0430		"	"	"	72	"	"	"	"	"	.9887	"	"	"	866.01	3.636				
0445		"	"	"	75	"	"	"	"	"	.9859	"	"	1.020	862.71	3.622				
0500		"	"	"	79	"	"	"	"	"	.9822	"	"	"	859.47	3.608				
0515		"	265	"	82	2.000	178.33	930.65	"	1.2720	.9795	"	"	"	1182.71	5.062	SG= .618			
			Increase orifice plate to 2.000"																	
0530		"	255	50	83	2.000	112.92	930.65	1.0	1.0	1.2720	.9786	1.000	1.020	1181.62	3.202				
0545		"	245	48	89	"	108.44	"	"	"	.9732	"	"	1.019	1173.95	3.055				
0600		"	"	40	97	"	98.99	"	"	"	.9662	"	"	1.018	1164.36	2.766				
0615		"	"	38	"	"	96.49	"	"	"	"	"	"	"	1164.36	2.696				
0630		"	"	36	"	"	93.91	"	"	"	"	"	"	"	1164.36	2.624				
			Decrease orifice plate to 1.750"																	
0645		"	245	70	100	1.750"	130.96	674.44	1.01	1.0	1.2731	.9636	1.000	1.017	841.44	2.645	SG= .617			
0700		"	"	"	92	"	"	"	"	"	.9706	"	"	1.018	848.39	2.667				
0715		"	"	"	93	"	"	"	"	"	.9697	"	"	1.018	847.60	2.664				
0730		"	"	"	97	"	"	"	"	"	.9662	"	"	"	844.54	2.654				
0745		"	"	"	"	"	"	"	"	"	"	"	"	"	844.54	2.654				

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[illegible]

*Liquid
Flow Rate
Calculation*

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Report
Post Gravel Pack Test



COMPANY Norsk HydroWELL NO. 31/3-2FIELD TrollINTERVAL TESTED 1577m-1567mCOUNTRY NorwayBAKER TECHNICIAN N. Brown

BASE CONDITIONS: 14.73 POUNDS PER SQUARE INCH AT 60° F

Post Gravel Pack Test

DATE:

OIL METER CALIBRATION

METER START	252.41	255.0	METER VOLUME:		GC	
METER STOP	277.41	280.0	TIME	TEMP.	RECOVERY	PERCENT
11 BARRELS	25.0	25.0	HOUR	°F	CC	RECOVERED
TEST TANK START	0	0				
TEST TANK STOP	25.17	22.62				
BARRELS	25.17	22.62				
METER FACTOR	1.007	0.9047	AVERAGE PERCENT RECOVERED X VOL. CORR.			
			FACTOR = SHRINKAGE FACTOR:			

OIL SHRINKAGE

255.0	280.0	25.0	0	25.17	22.62	1.007	0.9047
TIME	TEMP.	RECOVERY	PERCENT	RECOVERED	FACTOR	SHRINKAGE FACTOR:	

OIL GRAVITY

28.8	76	27.8	24.4	21.8	18H2O	78H2O
OBSERVED	TEMP.	CORRECTED	OIL GRAVITY	SHRINKAGE FACTOR	BS & W %	

SEPARATOR SIZE:

1440	10,000	90BBLs	4.51	1BBL
SEPARATOR W.P.:	LIQUID VOLUME CAP.	GAS VOLUME CAP.	TEST TANK SIZE:	TEST TANK VOLUME:

TIME DATA

DATE & TIME	ELAPSED TIME	CHOKE
HOURS	HOURS	SIZE

SEPARATOR CONDITIONS

20-4-84	1615	24	Oil Meter Barrels	Test Tank Barrels	Total Oil/Interval Barrels	Vol. Corr. Factor	Meter Factor	Shrinkage Factor	Oil Gravity °API	BS & W %	Oil Flow Rate BBLs/Day	Water Flow Rate BBLs/Day	Chloride PPM
1645			265.10	0									
1700			265.90	10.31	9.8	1.0012	1.007		24.4		948.52		
1715			275.90	10.00	10.01	1.0012	1.007				967.88		
1718			Bypass stock tank										
1730			285.10		9.20	1.0012	1.007				890.45		
1745			294.39		9.29	1.0012	1.007				899.16		
1800			306.85		12.46	1.0012	1.007		21.8	5% H2O	1145.68	60.30	
1815			314.30		7.45	1.0012	1.007			1% H2O	713.86	7.21	
1830			324.76		10.46	1.0012	1.007			7% H2O	941.53	70.87	

STOCK TANK CONDITIONS

Oil Meter Barrels	Test Tank Barrels	Total Oil/Interval Barrels	Vol. Corr. Factor	Meter Factor	Shrinkage Factor	Oil Gravity °API	BS & W %	Oil Flow Rate BBLs/Day	Water Flow Rate BBLs/Day	Chloride PPM
265.10	0									
265.90	10.31	9.8	1.0012	1.007		24.4		948.52		
275.90	10.00	10.01	1.0012	1.007				967.88		
Bypass stock tank										
285.10		9.20	1.0012	1.007				890.45		
294.39		9.29	1.0012	1.007				899.16		
306.85		12.46	1.0012	1.007		21.8	5% H2O	1145.68	60.30	
314.30		7.45	1.0012	1.007			1% H2O	713.86	7.21	
324.76		10.46	1.0012	1.007			7% H2O	941.53	70.87	

Liquid Flow Rate Calculation Report Continuation Form

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TIME DATA				SEPARATOR CONDITIONS					STOCK TANK CONDITIONS						
DATE & TIME HOURS	ELAPSED TIME HOURS	CHOKE SIZE 84THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/DAY	CHLORIDE PPM
20-4-84															
1845		24	57	336.08		11.32	1.0012	1.007			18H2O	1084.68		10.96	
1900		"	57	347.45		11.37	1.0012	1.007		25.6	18H2O	1089.47		11.00	
1945		"	57	358.60		11.15	1.0012	1.007			18H2O	1068.39		10.79	
1930		"	57	370.30		11.70	1.0012	1.007		24.9	0.5%	1126.76		5.66	
1945		"	57	381.40		11.10	1.0012	1.007			0.2%	1072.20		2.15	
2000		"	57	392.80		11.40	1.0012	1.007		25.9	0.5%	1097.87		5.52	
2030		"	57	415.20		22.40	1.0012	1.007			0.3%	1080.78		3.25	
2100		"	57	439.60		24.40	1.0012	1.007		25.8	1.5%	1163.10		17.71	
2130		"	57	459.70		20.10	1.0012	1.007		26.5	1%	962.99		9.73	
2149		"	Switch oil flow thru to stock tank to obtain												
			meter factor												
2200		"	52	467.8		8.10	1.031	1.0032		27.0	0.1%	401.73		0.40	
2225		"	Bypass stock tank					1.0032							
2230		"	52	487.8		20.0	1.031	1.0032		26.9	3.5%	958.17		34.75	
2300		"	52	509.4		21.6	1.031	1.0032		26.6	0.3%	1069.14		3.22	
2330		"	52	530.0		20.6	1.031	1.0032		26.9	3%	992.03		30.68	
2400		"	52	552.8		22.8	1.031	1.0032		26.8	0.25%	1129.11		2.83	
21-4-84 0030		"	52	567.9		15.1	1.031	1.0032		26.7	0.4%	746.66		3.00	
0100		"	52	595.4		27.5	1.031	1.0032		26.7	Trace	1365.27		NIL	

Liquid Flow Rate Calculation Report Continuation Form

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TIME DATA				SEPARATOR CONDITIONS					STOCK TANK CONDITIONS						
DATE & TIME HOURS	ELAPSED TIME HOURS	CHOKE SIZE INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/DAY	CHLORIDE PPM
0130	24	24	52	617.5		22.1	1.031	1.0032		26.9	0.3%	1093.89		3.29	
0115		"	"	Commence taking		P.V.T. sample from separator	"	"		26.6	0.2%	1253.54		2.51	
0200		"	"	642.8		25.3	"	"		26.7	Trace	863.85		NIL	
0220		"	"	Finish taking P.V.T. sample		17.4	"	"		26.8	"	1583.72		"	
0230		"	"	660.2		31.9	"	"		"	"	968.10		"	
0250		"	"	Commence taking		19.5	"	"		26.9	0.2%	1065.26		2.13	
0300		"	"	692.1		21.5	"	"		"	Trace	1290.81		NIL	
0330		"	"	711.6		26.0	"	"		"	0.2%	911.67		1.83	
0400		"	"	733.1		18.4	"	"		26.7	"	1035.53		2.08	
0430		"	"	759.1		20.9	"	"		26.8	Trace	1022.72		NIL	
0500		"	"	777.5		20.6	"	"		"	"	1032.64		"	
0530		"	"	798.4		20.8	"	"							
0600		"	"	819.0											
0630		"	"	839.8											
0640		BYPASS SEPARATOR													
1053		28	52	Divert flow thru separator											
1115		"	"	863.0 meter start change to fixed bean choke											
1130		"	"	881.6		18.6	1.031	1.0032		28.2	Trace	1846.84		NIL	
1145		"	"	898.2		16.6	"	"		"	0.1%	1646.61		1.65	
1200		"	"	914.7		16.5	"	"		27.9	0.1%	1636.69		1.64	
1215		"	"	930.8		16.1	"	"		"	0.2%	1595.42		3.20	

Liquid Flow Rate Calculation Report Continuation Form

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TIME DATA				CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS					
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/S/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/S/DAY	CHLORIDE PPM		
21-4-84 1230		28	52	947.1		16.3	1.031	1.0032		27.5	Trace	1618.47					
1245		"	52	962.9		15.8	1.031	1.0032			0.2%	1565.69		3.14			
1248		"	Switth oil flow		thru to tank to obtain meter factor												
1300		"	53	979.7		16.8	1.0028	0.9756		27.6	0.2%	1574.70		3.16			
1310		"	Bypass stock tank														
1315		"	53	995.6		15.9	1.0028	0.9756			0.4%	1487.35		5.97			
1330		"	53	1007.5		11.9	1.0028	0.9756		27.6		1117.65					
1345		"	53	1019.5		12.0	1.0028	0.9756			0.3%	1123.66		3.38			
1400		"	53	1042.5		23.0	1.0028	0.9756		27.6		2160.16					
1415		"	53	1054.0		11.5	1.0028	0.9756			1.0%	1078.99		1.08			
1430		"	53	1067.6		13.6	1.0028	0.9756		27.5		1277.31					
1445		"	53	1086.8		19.0	1.0028	0.9756			1.0%	1782.69		1.78			
1500		"	53	1097.7		10.9	1.0028	0.9756		27.7		1023.73					
1515		"	53	1113.2		15.5	1.0028	0.9756			0.4%	1449.93		5.82			
1530		"	53	1130.7		17.5	1.0028	0.9756			0.1%	1678.32		1.68			
1545		"	53	1147.4		16.7	1.0028	0.9756			0.15%	1566.11		2.35			
1600		"	53	1162.8		15.4	1.0028	0.9756		28.3		1446.37					
1615		"	53	1177.9		15.1	1.0028	0.9756			0.3%	1413.94		4.25			
1630		"	53	1193.8		15.9	1.0028	0.9756			0.1%	1491.83		1.49			

Liquid Flow Rate Calculation Report Continuation Form

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SEPARATOR CONDITIONS

STOCK TANK CONDITIONS

TIME DATA	CHOKE	DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBLSDAY	WATER METER BARRELS	WATER FLOW RATE BBLSDAY	CHLORIDE PPM
21-04-84																	
1645	28				53	1209.8		16.0	1.0028	0.9756				1502.72			
1700	"				53	1224.2		14.4	1.0028	0.9756		28.7		1352.45			
1715	"							Changed to 36/64 choke on fixed bean									
1720	36																
1730	"				53	1270.0		45.8	1.0028	0.9756				4301.53			
1745	"				53	1298.0		28.0	1.0028	0.9756				2629.76			
1800	"				53	1324.4		26.4	1.0028	0.9756		26.7		2479.40			
1815	"				53	1349.1		24.7	1.0028	0.9756			.5%	2308.22		11.60	
1830	"				53	1376.0		26.9	1.0028	0.9756		27.3		2526.44			
1840	"				Switch oil flow thru to tank to obtain meter factor												
1845					56	1402.1		26.1	1.0016	0.9314				2371.06			
1900					56	1425.5		23.4	1.0016	0.9314		27.5	.25%	2090.41		5.24	
					Bypass tank												
1915					56	1449.9		24.4	1.0016	0.9314				2185.20			
1930					56	1475.6		25.7	1.0016	0.9314		27.6	.5%	2290.12		11.51	
1945					56	1501.0		25.4	1.0016	0.9314				2274.76			
2000					56	1527.2		26.2	1.0016	0.9314		27.5		2346.41			
2015					56	1553.4		26.2	1.0016	0.9314			.3%	2339.37		7.04	

Liquid Flow Rate Calculation Report Continuation Form

TIME DATA				CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS						
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBLs/DAY	WATER METER BARRELS	WATER FLOW RATE BBLs/DAY	CHLORIDE PPM			
21-4-84 2030		36	56	1579.0		25.6	1.0016	0.9314		27.7		2292.67						
2045		"	56	1604.7		25.7	1.0016	0.9314				2301.63						
2100		"	56	1630.4		25.7	1.0016	0.9314				2301.63						
2115		44	56	Changed	to 44/64 choke on fixed bean													
2130		"	56	1703.3			1.0016	0.9314		28.0								
2145		"	56	1738.0		35.5	1.0016	0.9314				3179.29						
2200		"	56	1773.3		35.3	1.0016	0.9314		28.1	0.3%	3151.89		9.48				
2215		"	56	1809.2		35.9	1.0016	0.9314			0.5%	3199.04		16.08				
2230		"	56	1844.4		34.8	1.0016	0.9314			0.3%	3107.25		9.35				
2245		"	56	1879.4		35.0	1.0016	0.9314		27.4	0.4%	3121.97		12.54				
2300		"	56	1916.8		37.4	1.0016	0.9314			0.4%	3336.05		13.40				
2315		"	56	1951.3		34.5	1.0016	0.9314		27.9	Trace	3089.73						
2330		"	56	1984.8		33.5	1.0016	0.9314			Trace	3000.18						
2345		"	56	2017.8		33.0	1.0016	0.9314		28.0	Trace	2955.40						
2400		"	56	2052.6		34.8	1.0016	0.9314			Trace	3116.60						
22-4-84 0015		"	56	2088.9		36.3	1.0016	0.9314		27.8	0.5%	3234.69		16.25				
0030		"	56	2124.1		35.2	1.0016	0.9314			Trace	3152.42						
0045		"	56	2160.0		35.9	1.0016	0.9314		27.7	0.4%	3202.25		12.86				
0100		"	56	2196.4		36.4	1.0016	0.9314		27.6	Trace	3259.89						

Liquid Flow Rate Calculation Report Continuation Form

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SEPARATOR CONDITIONS

STOCK TANK CONDITIONS

TIME DATA

CHOKES

DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/DAY	CHLORIDE PPM
22-04-84															
0105		56		Bypass	heater,	increase	choke to 56/64	on fixed	bean						
0115		"		2241.5							Trace				
0125		"		Switch	over to Ball Vortex meter										
0130		"		6002.4							Trace				
0145		"		6046.6		44.2	1.0042	0.9978			Trace	4251.65			
		"		Switch	Flow to tank to obtain meter factor										
0200		"	50	6093.6		47.0	1.0042	0.9978		27.8	Trace	4520.98			
0215		"	50	6138.6		45.0	"	"			Trace	4328.60			
0230		"	50	6188.5		49.9	"	"		27.6	Trace	4799.94			
0245		"	"	6239.6		51.1	"	"			Trace	4915.37			
0300		"	"	6304.3		64.7	"	"		27.7	Trace	6223.56			
0315		"	"	6363.0		58.7	"	"			Trace	5646.42			
0330		"	"	6421.3		58.3	"	"		27.8	Trace	5607.94			
0345		"	"	6482.5		61.2	"	"			0%	5886.90			
0400		"	"	6541.0		58.5	"	"		27.6	0%	5627.18			
0415		"	"	6596.8		55.8	"	"			0%	5367.46	Pump Out tank		
0430		"	"	6628.9		32.1	"	"		27.7	0%	3087.73			
0445		"	"	6694.9		66.0	"	"			Trace	6348.61			
0500		"	"	6754.3		59.4	"	"		27.9	0%	5713.75			

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Liquid Flow Rate Calculation Report Continuation Form

TIME DATA				CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS					
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 84THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBLSDAY	WATER METER BARRELS	WATER FLOW RATE BBLSDAY	CHLORIDE PPM		
22-04-84																	
0930		160	50	8130.7		99.3	1.0042	0.9978		27.4	0%	9551.78					
0945		"	"	8234.1		103.4	"	"			0%	9946.16					
1000		"	"	8333.0		98.9	"	"		27.5	0%	9513.30					
1015		"	"	8433.6		100.6	"	"			0%	9676.83					
1030		"	"	8534.5		100.9	"	"		27.6	0%	9705.68					
1045		"	"	8635.5		101.0	"	"			0%	9715.30					
1100		"	"	8733.6		98.1	"	"		27.4	0%	9436.35					
1115		"	"	8832.2		98.6	"	"			0%	9484.44					
1130		"	"	8930.3		98.1	"	"		27.4	0%	9436.35					
1145		"	"	9025.6		95.3	"	"			0%	9167.01					
1200		"	"	9121.3		95.7	"	"		27.6	0%	9205.49					
1215		"	"	9216.0		94.7	"	"			0%	9109.30					
1230		"	"	9311.9		95.9	"	"		27.6	0%	9224.73					
1245		"	"	9406.9		95.0	"	"			0%	9138.16					
1300		"	"	9500.6		93.7	"	"		27.3	0%	9013.11					
1315		"	"	9594.2		93.6	"	"			0%	9003.49					
1330		"	"	9686.8		92.6	"	"		27.3	0%	8907.30					
1345		"	"	9779.5		92.7	"	"			0%	8916.92					
1400		"	"	9872.1		92.6	"	"		27.3	0%	8907.30					

Liquid Flow Rate Calculation Report Continuation Form

TIME DATA			CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS					
DATE & TIME	ELAPSED TIME	SIZE	SEP. TEMP.	OIL METER	TEST TANK	TOTAL OIL/INTERVAL	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY	BS & W	OIL FLOW RATE	WATER METER	WATER FLOW RATE	CHLORIDE	
HOURS	HOURS	INCH	°F	BARRELS	BARRELS	BARRELS				°API	%	BBLS/DAY	BARRELS	BBLS/DAY	PPM	
22-04-84																
1415		160	50	9964.1		92	1.0042	0.9978			0%	8849.58				
1430		"	"	10054.3		89.2	"	"		27.3	0%	8580.25				
1445		"	"	10143.9		89.6	"	"			0%	8618.72				
1500		"	"	10234.6		90.7	"	"		27.3	0%	8724.53				
1515		"	"	10323.5		88.9	"	"			0%	8551.39				
1530		"	"	10412.0		88.5	"	"		27.4	0%	8867.62				
1545		"	"	10500.6		88.6	"	"			0%	8522.53				
1600		"	"	10589.1		88.5	"	"		27.4	0%	8512.91				
1615		"	"	10677.2		88.1	"	"			0%	8474.44				
1630		"	"	10764.9		87.7	"	"			0%	8435.96				
1645		"	"	10852.6		87.7	"	"		27.4	0%	8435.96				
1700		"	"	10940.0		87.4	"	"			0%	8407.10				
1715		"	"	11027.6		87.6	"	"			0%	8426.34				
1730		"	"	1115.3		87.7	"	"		27.4	0%	8435.96				
		Adjust separator level														
1745		"	"	11201.1		85.8	1.0042	0.9978			0%	8253.20				
1800		"	"	11287.0		85.9	"	"			0%	8262.82				
1815		"	"	11373.1		86.1	"	"			0%	8282.05				
1830		"	"	11460.0		86.9	"	"		27.4	0%	8359.01				
1845		"	"	11543.8		83.8	"	"			0%	8060.82				

Liquid Flow Rate Calculation Report Continuation Form

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TIME DATA				CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS					
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/DAY	CHLORIDE PPM		
1900		160	50	11629.4		85.6	1.0042	0.9978			Trace	8233.96					
1915		"	50	11714.4		85.0	"	"			Trace	8176.24					
1930		"	50	11799.1		84.7	"	"				8147.39					
1945		"	50	11883.2		84.1	"	"			0%	8089.67					
2000		"	50	11967.2		84.0	"	"			0%	8080.05					
2015		"	50	12051.6		84.4	"	"			0%	8118.53					
					Alter separator level												
2030		"		12135.9		84.3	"	"			0%	8108.91					
2045		"	50	12220.4		84.5	"	"			0%	8128.15					
2051					Switch flow thru to tank to obtain meter factor												
2055					Bypass tank												
2100		"	50	12306.3		85.9	"	"			0%	8262.82					
2115		"		12388.2		81.9					0%	7878.05					
2130		"		12470.9		82.7	"	"			0%	7955.00					
2145		56/64	Decrease choke size to 56/64ths fixed bean														
2145		"	50	12556.8			1.0042	0.9047		27.5							
2200		"	"	12611.8		55.0	"	"		"	0%	4796.88					
2215		"	"	12651.3		39.5	"	"		"	0%	3445.03					
2230		"	"	12699.0		47.7	"	"		"	0%	4160.20					

Liquid Flow Rate Calculation Report Continuation Form

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TIME DATA			CHOKE	SEPARATOR CONDITIONS						STOCK TANK CONDITIONS					
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 64THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/S/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/S/DAY	CHLORIDE PPM
22-04-84															
2245		56	50	12743.5		44.5	1.0042	0.9047		27.5	0%	3881.11			
2300		"	"	12790.3		46.8	"	"		"	"	4081.71			
2305		"	"	Fail-safe	failed on surface tree shut in well										
2400		"	"	12840.0	Meter start										
0015		"	"	12988.0		148.0	1.0042	.9047		27.5	0%	12907.96			
0030		"	"	13011.5		23.5	"	"		"	"	2049.58			
0045		"	"	13041.2		29.7	"	"		"	"	2590.31			
0100		"	"	13091.3		50.1	"	"		27.7	0%	4369.52			
0115		"	"	13141.0		49.7	"	"		"	"	4334.63			
0130		"	"	13191.6		50.6	"	"		"	"	4413.13			
0145		"	"	13242.3		50.7	"	"		"	"	4421.85			
0200		"	"	13292.7		50.4	"	"		"	"	4395.69			
0215		"	"	13343.7		51.0	"	"		27.2	"	4448.01			
0230		"	"	13393.4		49.7	"	"		"	"	4334.63			
0245		"	"	13443.8		50.4	"	"		"	"	4395.69			
0300		"	"	13494.0		50.2	"	"		"	"	4378.24			
0315		"	"	13545.0		51.0	"	"		27.2	"	4448.01			
0330		"	"	13595.5		50.5	"	"		"	"	4404.41			
0345		24	Decrease choke to 24/64 th's adjustable												
0345		"		13608.7		13.2	1.0042	.9047		27.2	0%	1151.25			

Liquid Flow Rate Calculation Report Continuation Form

PAGE 3 OF

TIME DATA				CHOKE	SEPARATOR CONDITIONS							STOCK TANK CONDITIONS					
DATE & TIME HOURS	ELAPSED TIME HOURS	SIZE 84THS INCH	SEP. TEMP. °F	OIL METER BARRELS	TEST TANK BARRELS	TOTAL OIL/INTERVAL BARRELS	VOL. CORR. FACTOR	METER FACTOR	SHRINKAGE FACTOR	OIL GRAVITY °API	BS & W %	OIL FLOW RATE BBL/S/DAY	WATER METER BARRELS	WATER FLOW RATE BBL/S/DAY	CHLORIDE PPM		
23-4-84 0400		24	50	13611.7		3.0	1.0042	.9047		27.2	0%	261.65					
0415		"	"	13614.0		2.3	"	"		"	"	200.60					
0415		"	"	2271.6	Meter start, divert flow thru floco meter and heater												
0430		"	"	2281.6		10.0	1.0042	.9047		27.2	0%	872.16					
0435		"			Divert flow to tank to obtain meter factor												
0443		"			Bypass tank												
0445		"	"	2292.5		10.9	1.0042	.9047		27.2	0%	950.65					
0500		"	"	2304.6		12.1	"	"		"	"	1055.31					
0515		"	"	2313.3		8.7	"	"		"	"	758.78					
0530		"	"	2321.6		8.3	"	"		27.6	0%	723.89					
0545		"	"	2328.1		6.5	"	"		"	"	566.90					
0600		"	52	2333.3		5.2	1.0031	1.0030		"	"	502.25					
0615		"	"	2339.3		6.0	"	"		"	"	579.52					
0630		"	"	2345.0		5.7	"	"		"	"	550.54					
0645		"	"	2351.1		6.1	"	"		"	"	589.18					
0700		"	"	2357.1		6.0	"	"		27.0	"	579.52					
0715		"	"	2363.1		6.0	"	"		"	"	579.52					
0730		"	"	2370.0		6.9	"	"		"	"	666.45					
0745		"	"	2375.6		5.6	"	"		"	"	540.88					

Liquid Flow Rate Calculation Report Continuation Form

[illegible]

*Well Fluids
Surface Sample
Report* **10**



COMPANY NORSK HYDROWELL NAME 2/3-2FIELD TROLLTEST INTERVAL 1577 - 1567mCOUNTRY OFFSHORE NORWAYBAKER TECHNICIAN N. Brown

Well Fluids Surface Sample Report

DATE 21.04.84.PAGE 1 OF

GENERAL INFORMATION

ELEVATION OF ZERO POINT: <u>R.K.B.</u>		ELEVATION OF DF:		DATUM DEPTH:	
TUBING SIZE: <u>5" TAC-1</u>		WEIGHT: <u>8 lbs/FT</u>		LENGTH: <u>1570.79 (tail)</u>	
PACKER TYPE: <u>BAKER SC-JL 96-60</u>		SIZE: <u>6.00"</u>		DEPTH:	
CASING SIZE:		WEIGHT:		THREAD:	
LINER SIZE: <u>-</u>		WEIGHT: <u>-</u>		THREAD: <u>-</u>	
PRODUCING INTERVAL FROM <u>1577m</u>		TO: <u>1567m</u>		TOP: <u>-</u>	
INITIAL STATIC BHP:		AT DEPTH:		DATE:	
LAST STATIC BHP		AT DEPTH:		DATE:	

SAMPLING CONDITIONS

CHOKE SIZE: <u>24/46</u>		FLOWING WELLHEAD TEMPERATURE: <u>50 F</u>		FLOWING WELLHEAD PRESSURE: <u>1535</u>	
FLOWING BHP:		AT DEPTH:		TIME:	
TIME SAMPLES WERE TAKEN: <u>0355 - 0640</u>					
TEST DURATION: START <u>1536 20-4-84</u> FINISH: <u>0800 hrs 23.4.84.</u>					
PRODUCTION RATE: OIL <u>1065,26</u> BBL/DAY GAS: <u>2.603</u> MMSCF/DAY WATER: <u>2,13</u> BBL/DAY					
GAS/OIL RATIO: <u>2443,53</u> CUBIC FEET PER BARREL GAS/LIQUID RATIO: <u> </u> CUBIC FEET PER BARREL					
SPECIFIC GRAVITY OIL: <u>0,8944</u> API GRAVITY OIL: <u>2,603</u> SPECIFIC GRAVITY GAS: <u>2,13</u>					
ATMOSPHERIC PRESSURE: <u>-</u> MM OF Hg ATMOSPHERIC TEMPERATURE: <u>-</u> °F					
STOCK TANK TEMPERATURE: <u>-</u> °F STOCK TANK VOLUME <u>-</u> BARRELS					
SEPARATOR PRESSURE: <u>200</u> PSIG SEPARATOR TEMPERATURE: <u>77</u> °F					

TYPE OF SAMPLE	OIL	OIL	OIL	OIL	OIL
OIL OR GAS					
TIME	<u>0355</u>	<u>0440</u>	<u>0540</u>	<u>0540</u>	<u>0610</u>
PRESSURE	<u>170PSIG</u>	<u>205PSIG</u>	<u>205PSIG</u>	<u>205PSIG</u>	<u>205PSIG</u>
TEMP.	<u>77D.F.</u>	<u>77 D.F.</u>	<u>77 D.F.</u>	<u>77 D.F.</u>	<u>78 D.F.</u>
CONTAINER VOLUME	<u>20 litres</u>	<u>20 litres</u>	<u>20 litres</u>	<u>20 litres</u>	<u>20 litres</u>
CONTAINER NUMBER	<u>A-14335</u>	<u>A-14339</u>	<u>A-14340</u>	<u>A-14347</u>	<u>A-14324</u>
SHIPPING PRESSURE:					

DISPOSITION OF SAMPLE

SHIPPED BY:	<u>BOAT</u>
SHIPPED TO:	
VIA:	SHIPPING DATE:

Samples

REMARKS

Sample were taken from oil outlet on separator.

COMPANY NORSK HYDROWELL NAME 32/3-2FIELD TROLL TEST INTERVAL 1577-1567mCOUNTRY OFFSHORE NORWAYBAKER TECHNICIAN N. Brown*Well Fluids
Surface Sample
Report*

DATE: _____

PAGE 1 OF _____**GENERAL INFORMATION**ELEVATION OF
ZERO POINT: R.K.B.

ELEVATION OF DF: _____

DATUM DEPTH: _____

TUBING SIZE: 5" TAC-1WEIGHT: 18lbs/FtLENGTH: 1570.79 (tail),

THREAD: _____

PACKER TYPE: BAKER SC-IL 96-60SIZE: 6.00"DEPTH: 1527.98m

CASING SIZE: _____

WEIGHT: _____

THREAD: _____

LENGTH: _____

LINER SIZE: _____

WEIGHT: _____

THREAD: _____

TOP: _____

BOTTOM: -PRODUCING INTERVAL FROM 1577mTO: 1567m

INITIAL STATIC BHP: _____

AT DEPTH: _____

DATE: _____

LAST STATIC BHP _____

AT DEPTH: _____

DATE: _____

SAMPLING CONDITIONSCHOKE SIZE: 24/64FLOWING WELLHEAD TEMPERATURE: 50 D.F.FLOWING WELLHEAD PRESSURE: 1525 PSI

FLOWING BHP: _____

AT DEPTH: _____

TIME: _____

DATE: _____

TIME SAMPLES WERE TAKEN: 0110 - 0220 0250 - 0330TEST DURATION: START 1536 20-4-84 FINISH: 0800 hrs 23-4-84PRODUCTION RATE: OIL 1093.89 BBL/DAY GAS: _____ MMSCF/DAY WATER: 3.29 BBL/DAYGAS/OIL RATIO: 2059.62 CUBIC FEET PER BARREL GAS/LIQUID RATIO: 2053.45 CUBIC FEET PER BARRELSPECIFIC GRAVITY OIL: 0.8944 API GRAVITY OIL: 26.9 SPECIFIC GRAVITY GAS: 0.653

ATMOSPHERIC PRESSURE: _____ MM OF Hg ATMOSPHERIC TEMPERATURE: _____ °F

STOCK TANK TEMPERATURE: _____ °F STOCK TANK VOLUME _____ BARRELS

SEPARATOR PRESSURE: 160 PSIG PSIG SEPARATOR TEMPERATURE: 76 °F**TYPE OF SAMPLE**

OIL OR GAS

OIL

OIL

TIME

01.10 hrs0250 hrs

PRESSURE

160 PSIG160 PSIG

TEMP.

76 D.F.78 D.F.

CONTAINER VOLUME

1055 CC1080 CC

CONTAINER NUMBER

81A325475A1162

SHIPPING PRESSURE:

60 PSIG60 PSIG**DISPOSITION OF SAMPLE**SHIPPED BY: BOAT

SHIPPED TO: _____

VIA: _____

SHIPPING DATE: _____

REMARKS

900 CC's of mercury were drained during taken of sample. A further 100 CC's was
then drained to create gas cap- 55 + 80 CC remaining.
in bottle



COMPANY NORSK HYDRO
WELL NAME 32/3-2
FIELD TROLL TEST INTERVAL 1577-1567m
COUNTRY OFFSHORE NORWAY
BAKER TECHNICIAN N. Brown

*Well Fluids
Surface Sample
Report*

DATE: _____

PAGE 1 OF _____

GENERAL INFORMATION

ELEVATION OF ZERO POINT: <u>R.K.B.</u>		ELEVATION OF DF: _____		DATUM DEPTH: _____	
TUBING SIZE: <u>5" TAC-1</u>	WEIGHT: <u>18Lbs/ft</u>	LENGTH: <u>1570.79m(tail)</u>		THREAD: _____	
PACKER TYPE: <u>BAKER SC-IL 96-60</u>		SIZE: <u>6'</u>		DEPTH: _____	
CASING SIZE: _____	WEIGHT: _____	THREAD: _____		LENGTH: _____	
LINER SIZE: <u>-</u>	WEIGHT: <u>-</u>	THREAD: <u>-</u>	TOP: <u>-</u>	BOTTOM: <u>-</u>	
PRODUCING INTERVAL FROM <u>1577m</u>		TO: <u>1567m</u>			
INITIAL STATIC BHP: _____		AT DEPTH: _____		DATE: _____	
LAST STATIC BHP: _____		AT DEPTH: _____		DATE: _____	

SAMPLING CONDITIONS

CHOKE SIZE: <u>24/64</u>	FLOWING WELLHEAD TEMPERATURE: <u>50 F.</u>	FLOWING WELLHEAD PRESSURE: <u>1520</u>	
FLOWING BHP: _____	AT DEPTH: _____	TIME: _____	DATE: _____
TIME SAMPLES WERE TAKEN: <u>0105 - 0345</u>			
TEST DURATION: START <u>1536 20-4-84</u> FINISH: <u>0800 23-4-84</u>			
PRODUCTION RATE: OIL <u>1365.27</u> BBL/DAY GAS: <u>2.205</u> MMSCF/DAY WATER: _____ BBL/DAY			
GAS/OIL RATIO: <u>1615.07</u> CUBIC FEET PER BARREL GAS/LIQUID RATIO: _____ CUBIC FEET PER BARREL			
SPECIFIC GRAVITY OIL: <u>0.8944</u> API GRAVITY OIL: <u>26.7</u> SPECIFIC GRAVITY GAS: <u>0.653</u>			
ATMOSPHERIC PRESSURE: _____ MM OF Hg ATMOSPHERIC TEMPERATURE: _____ °F			
STOCK TANK TEMPERATURE: _____ °F STOCK TANK VOLUME _____ BARRELS			
SEPARATOR PRESSURE: <u>130</u> PSIG SEPARATOR TEMPERATURE: <u>76</u> °F			

TYPE OF SAMPLE

OIL OR GAS	GAS	GAS	GAS	GAS
TIME	<u>0105</u>	<u>0205</u>	<u>0245</u>	<u>0315</u>
PRESSURE	<u>180 PSIG</u>	<u>200 PSIG</u>	<u>150 PSIG</u>	<u>210 PSIG</u>
TEMP.	<u>76 F.</u>	<u>76 F.</u>	<u>76 F.</u>	<u>77 F.</u>
CONTAINER VOLUME	<u>20 litres</u>	<u>20 litres</u>	<u>20 litres</u>	<u>20 litres</u>
CONTAINER NUMBER	<u>A4642</u>	<u>A3867</u>	<u>A3873</u>	<u>A12580</u>
SHIPPING PRESSURE:	<u>180 PSI</u>	<u>200 PSIG</u>	<u>150 PSIG</u>	<u>210 PSIG</u>

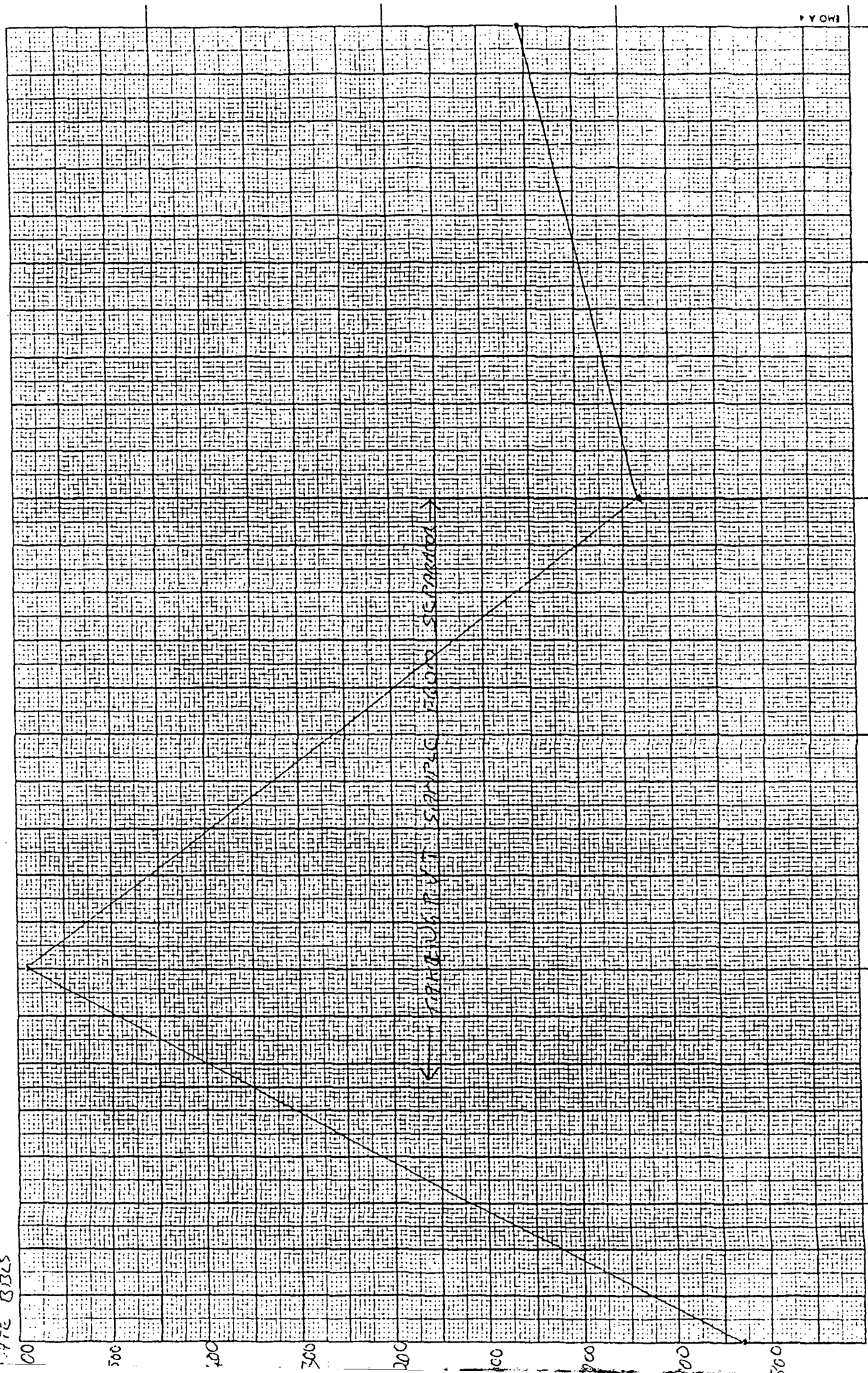
DISPOSITION OF SAMPLE

SHIPPED BY: <u>BOAT</u>
SHIPPED TO: _____
VIA: _____ SHIPPING DATE: _____

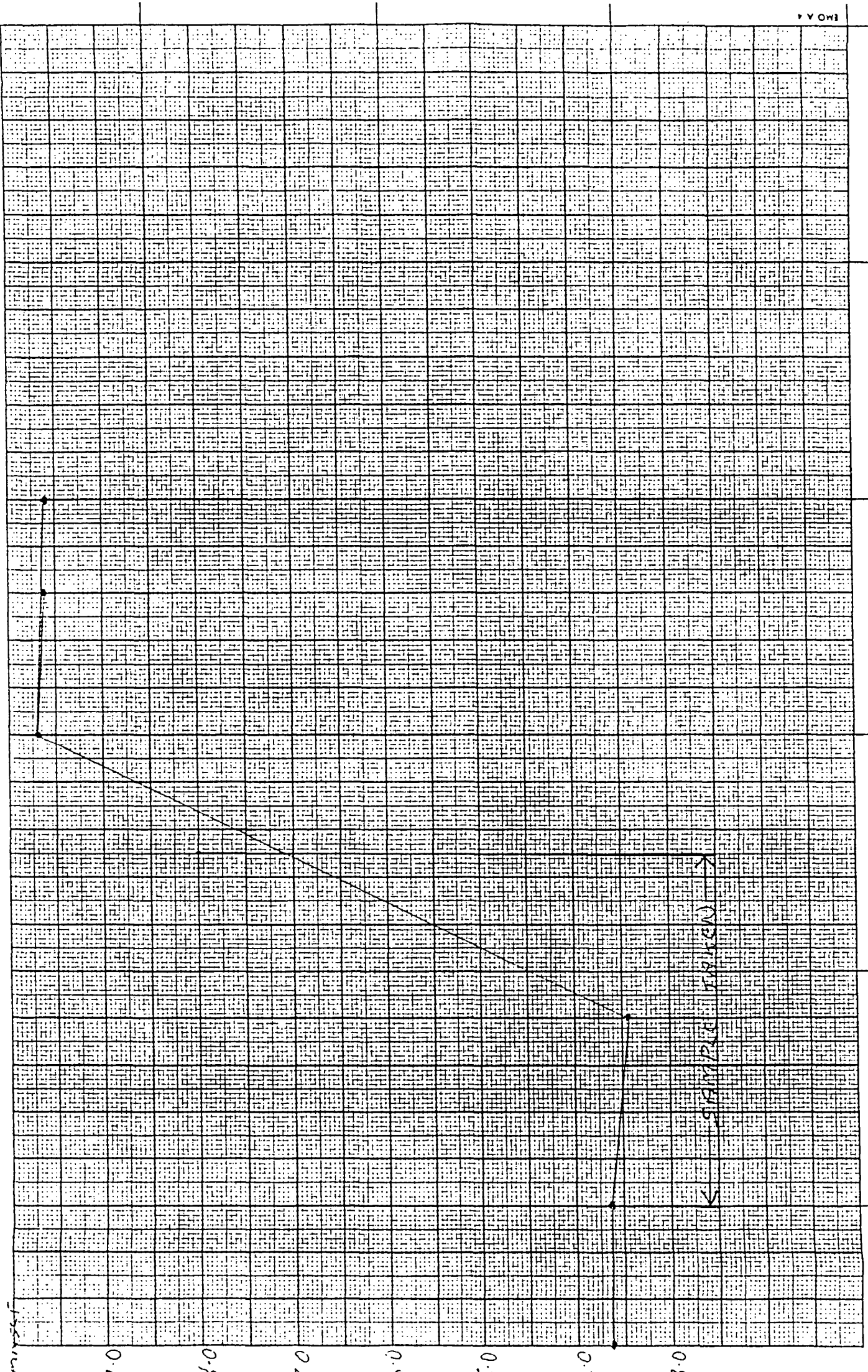
REMARKS

Samples were taken from separator gas meter run using evacuated cylinders

0400HRS 0345HRS 0330HRS 0315HRS 0300HRS 0245HRS 0230HRS



0230HRS 0245HRS 0300HRS 0315HRS 0330HRS 0345HRS 0400HRS



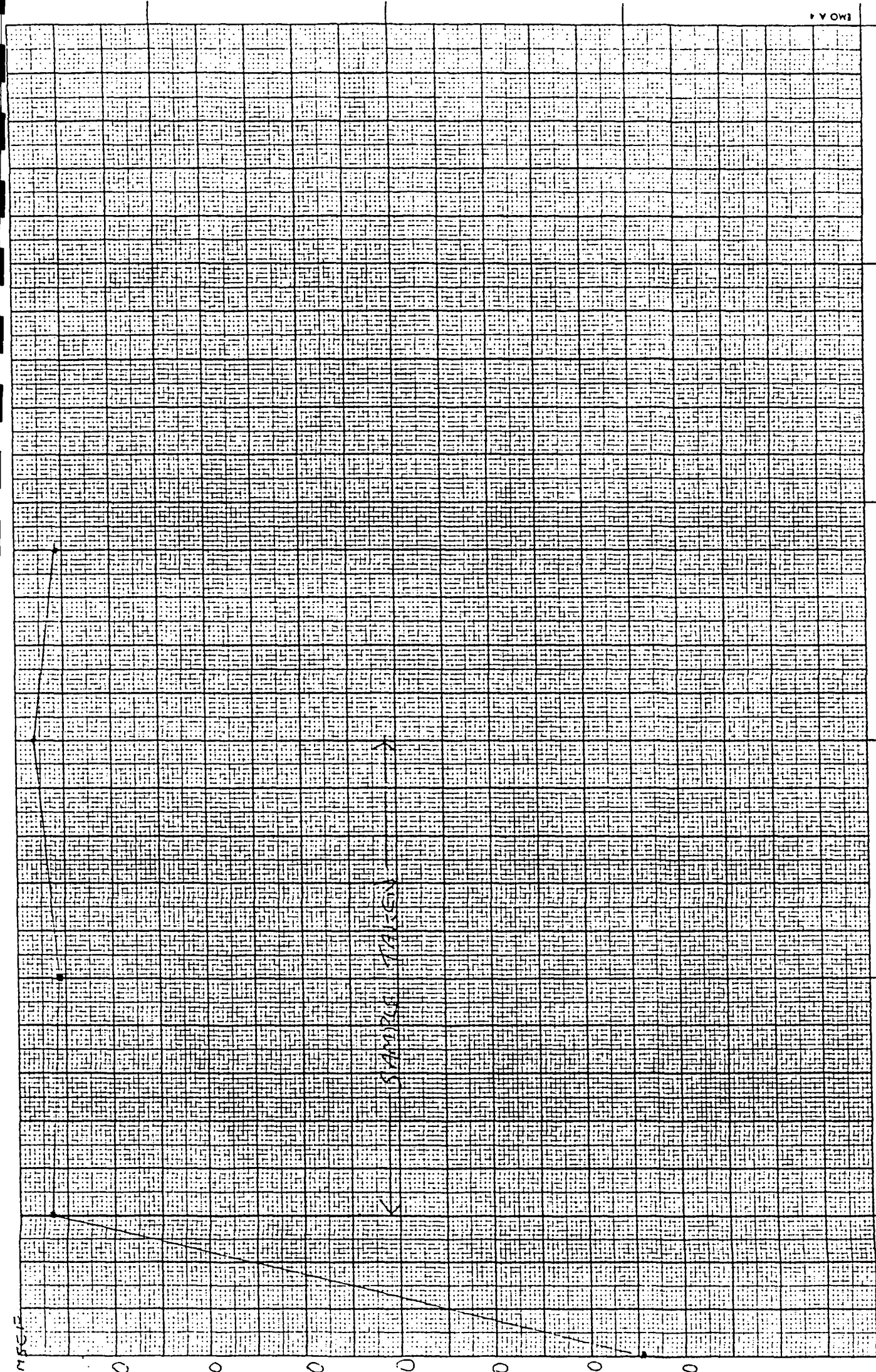
0330

0315

0300

0245

0230



0300

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3.0

4.0

5.0

6.0

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8.0

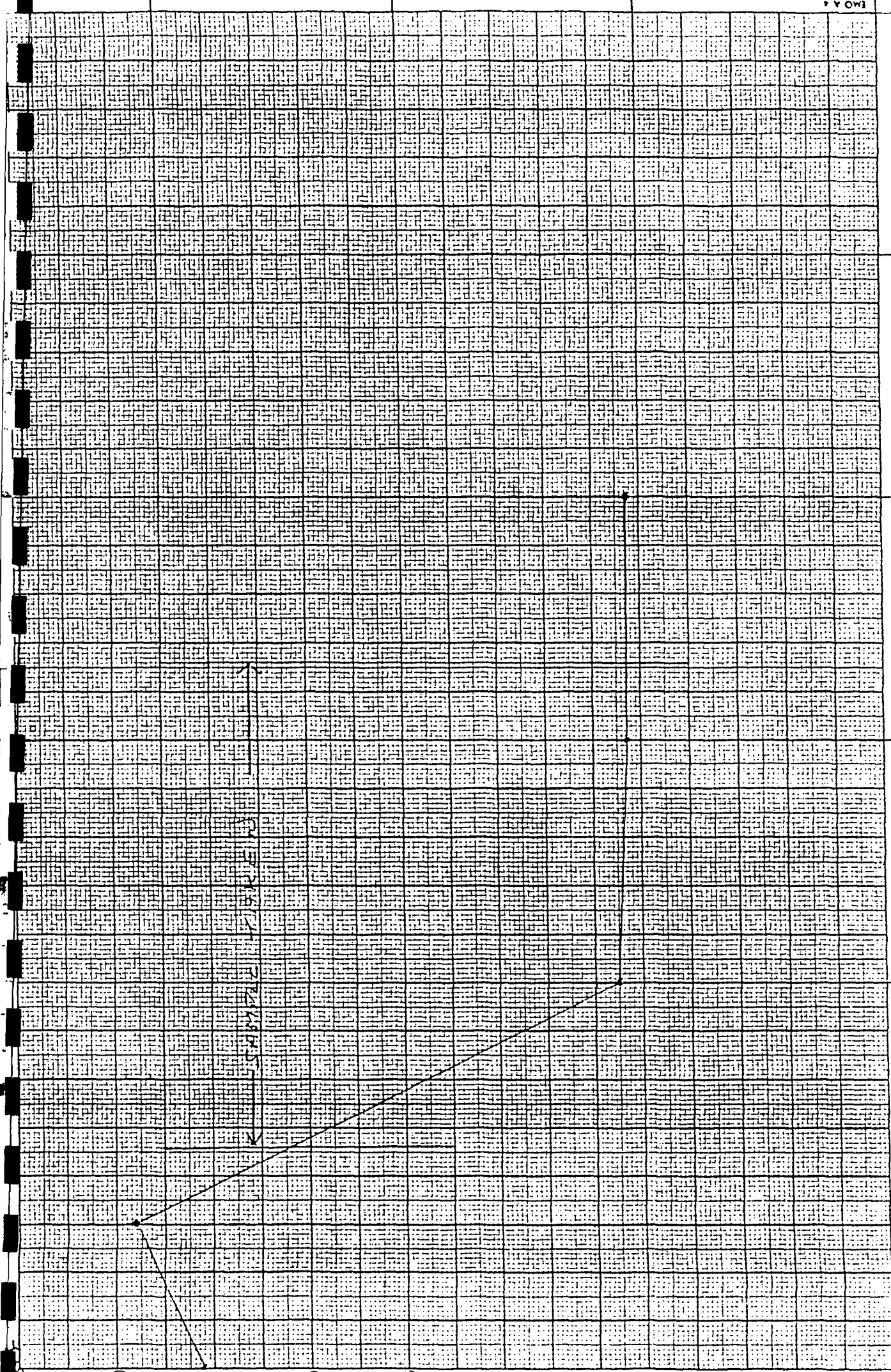
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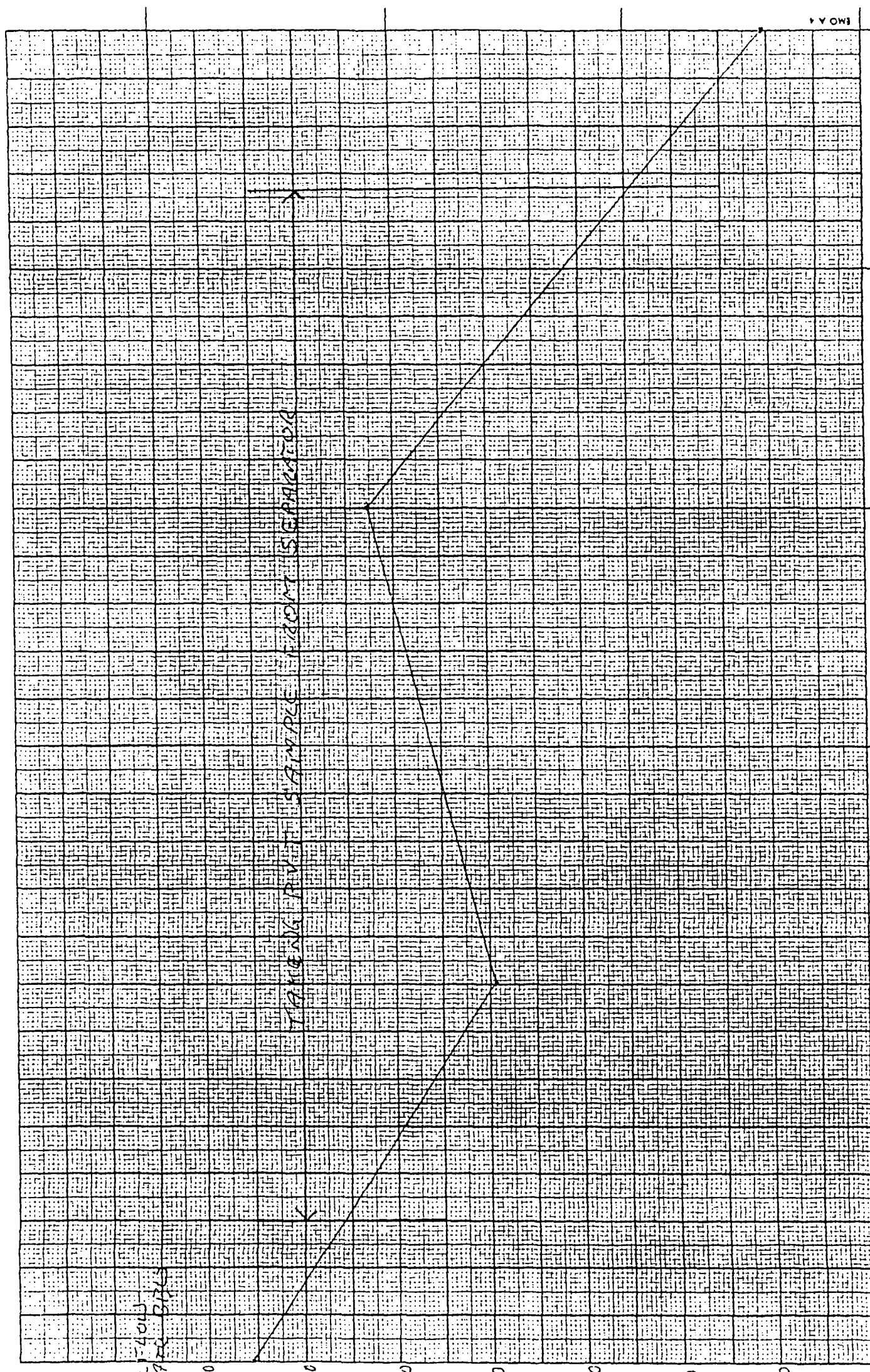
0200

0215

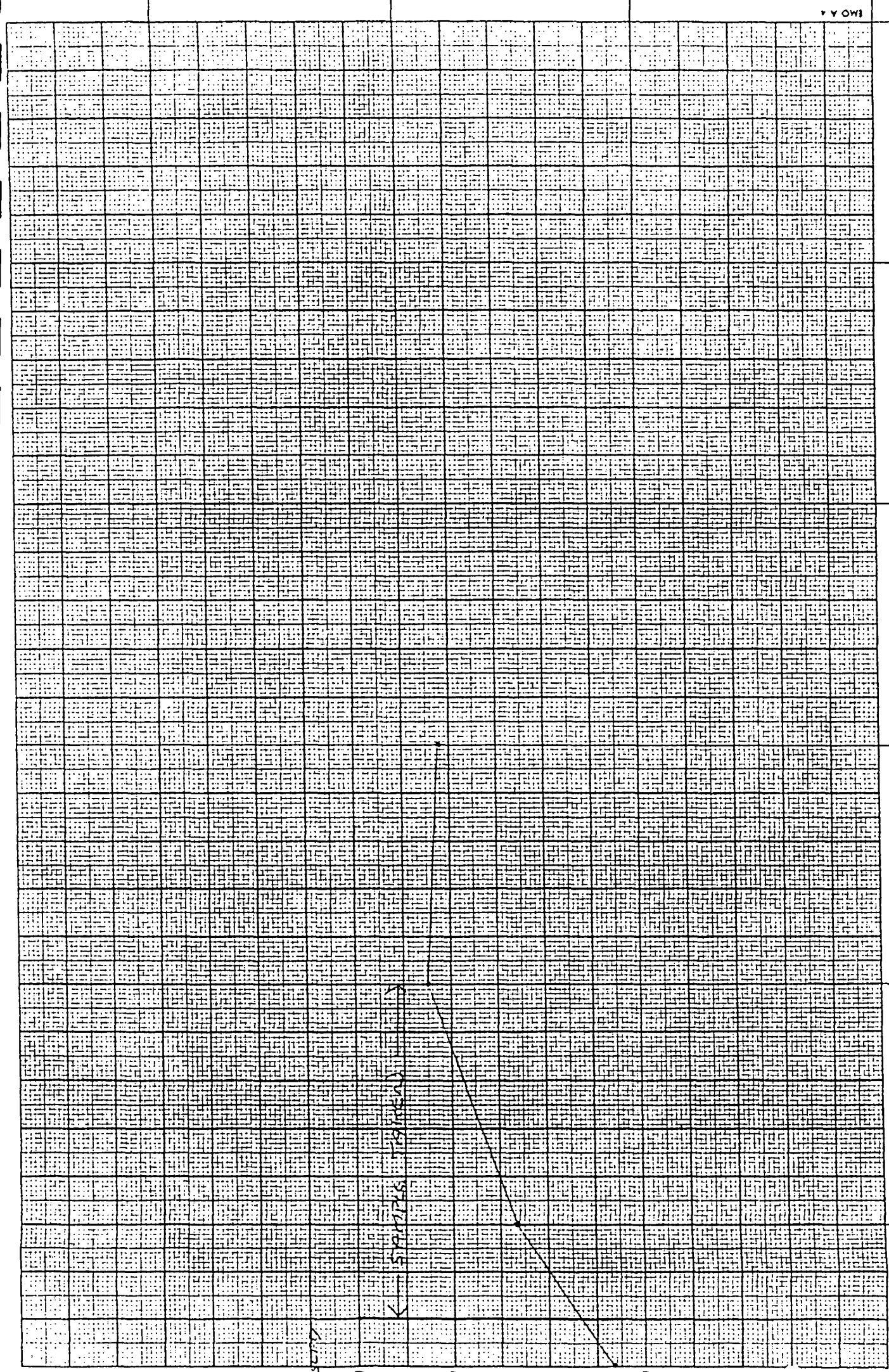
0230

0245





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0110

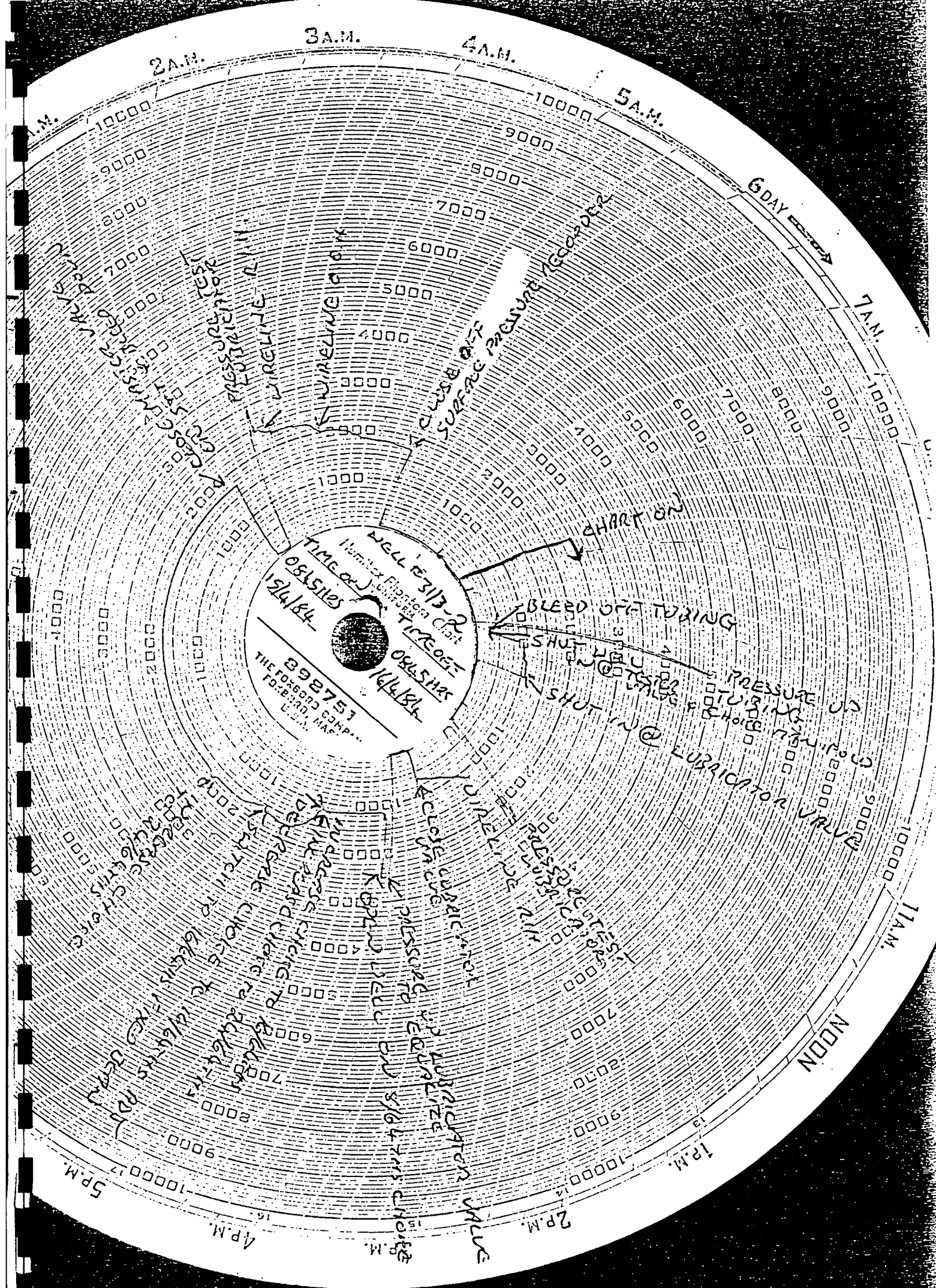
0010

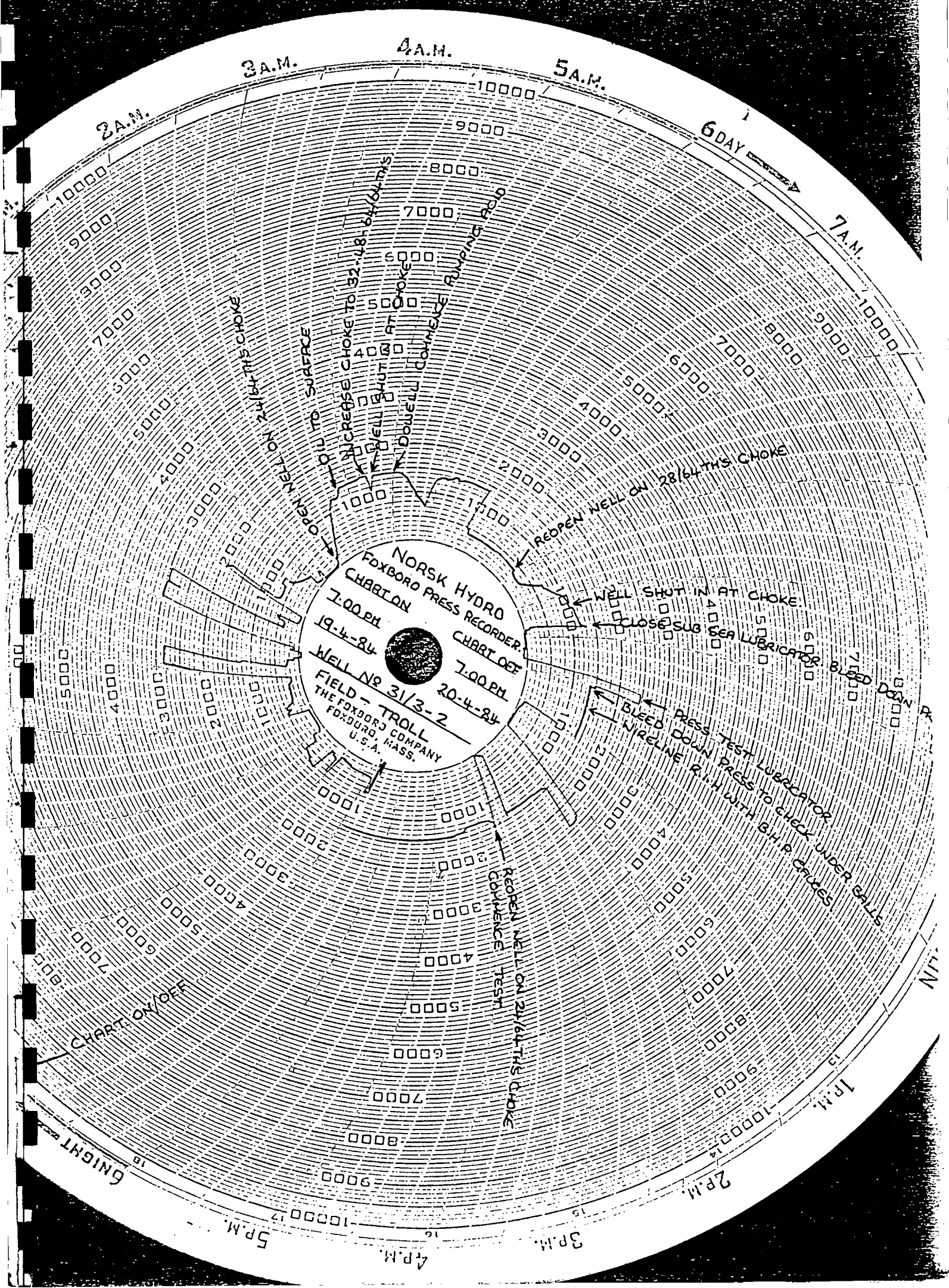
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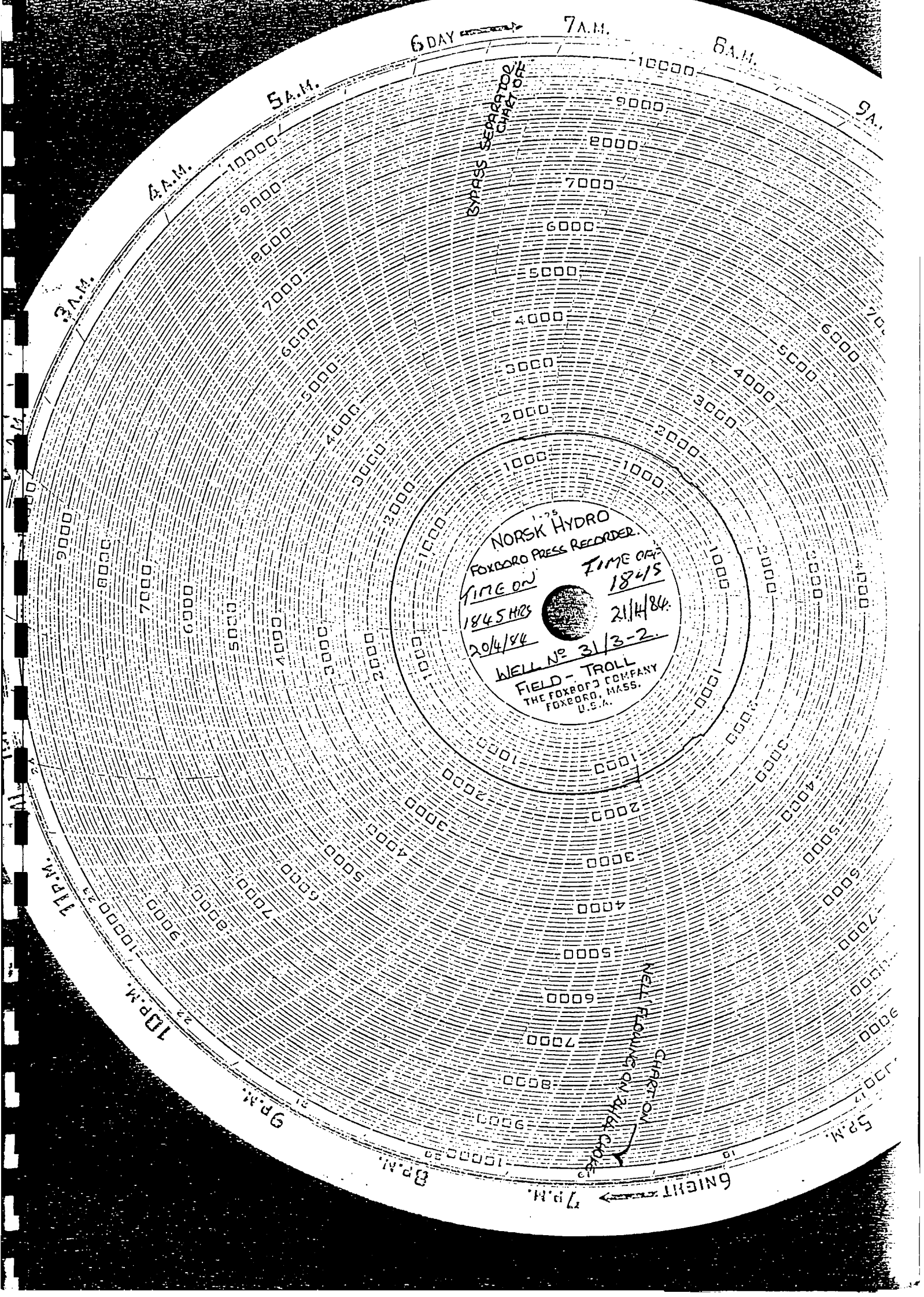
0.2

0.4

0.6







6 DAY 7 A.M.

8 A.M.

9 A.M.

3 A.M.

4 A.M.

BYPASS SECRETION
CIRCUIT ON

NORSK HYDRO
FOXBORO PRESS RECORDER
TIME ON 1845 HRS
20/4/84
TIME OFF 1845
21/4/84
WELL No 31/3-2
FIELD - TROLL
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.

WELL FLOWING ON 21/4/84
CIRCUIT ON

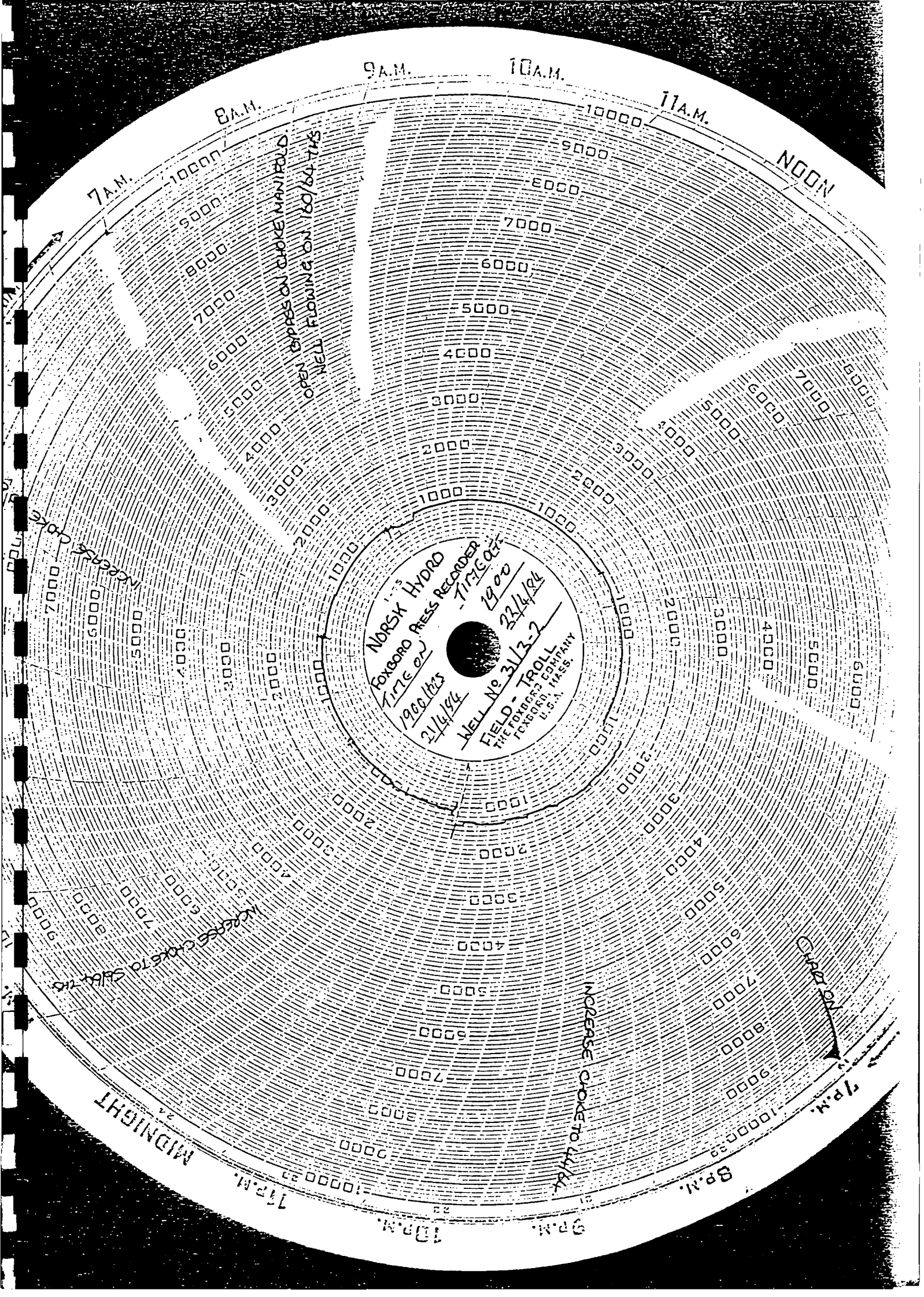
7 P.M. NIGHT

8 P.M.

9 P.M.

10 P.M.

11 P.M.



9 A.M.

10 A.M.

11 A.M.

NOON

7 A.M.

8 A.M.

OPEN EXPANSION COKE MANIFOLD
WELL FLOWING ON 10/6/64 7:45

MORSE HYDRO
FOXBORO PRESS RECORDER
TIME ON 1900/10/5
21/4/64
WELL No 31/3-2
FIELD - TROLL
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.

MIDNIGHT

12 A.M.

1 P.M.

2 P.M.

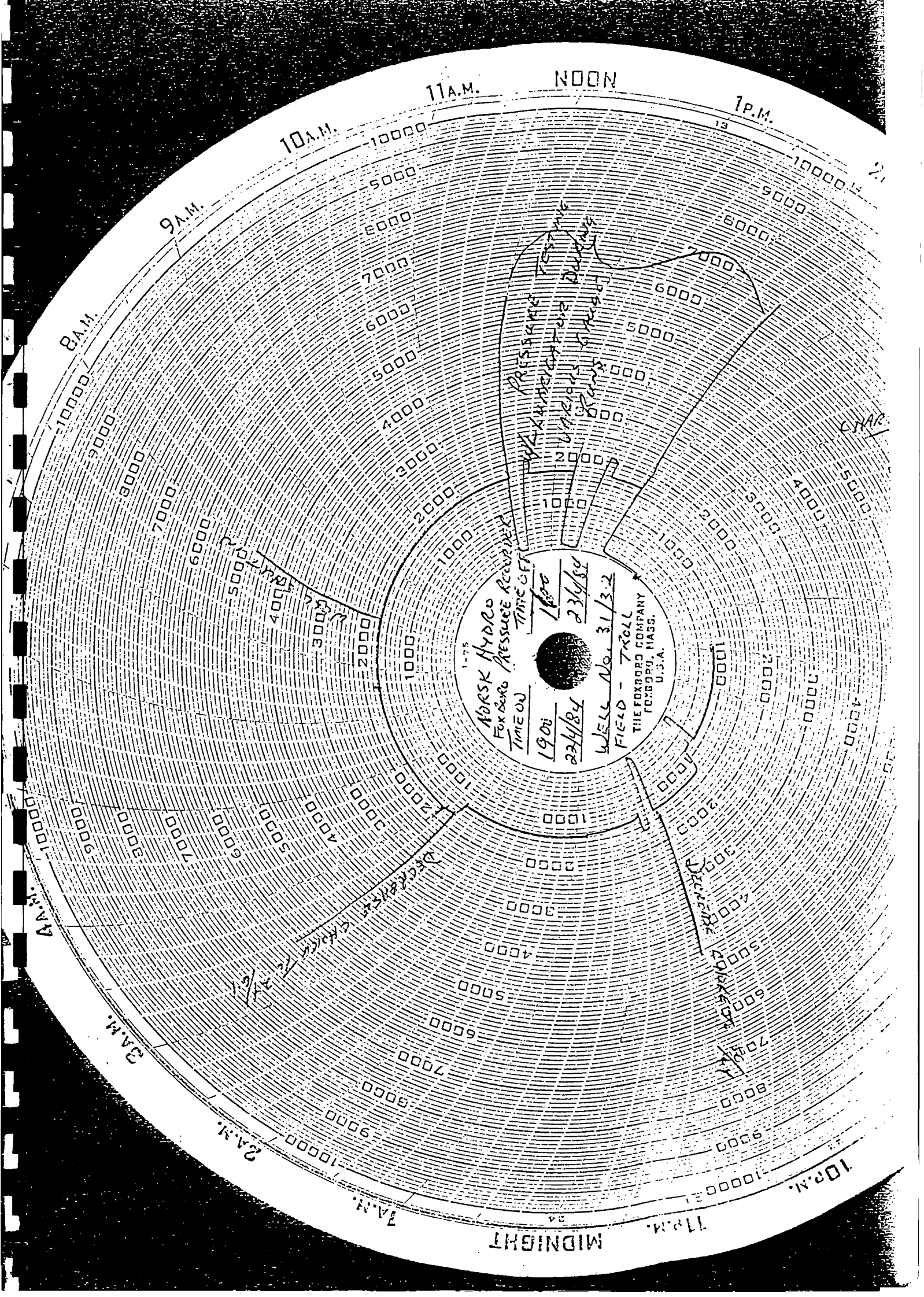
3 P.M.

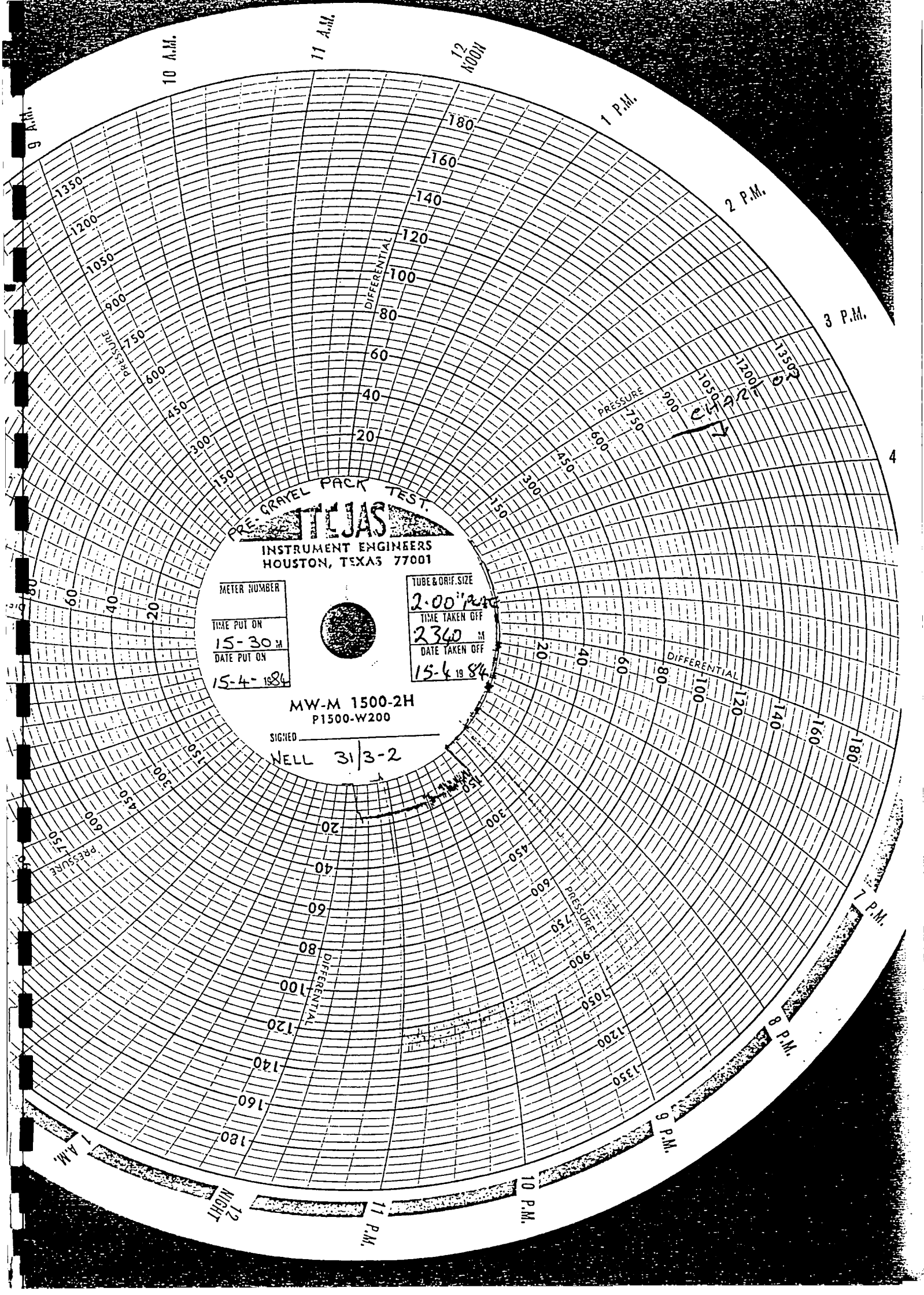
4 P.M.

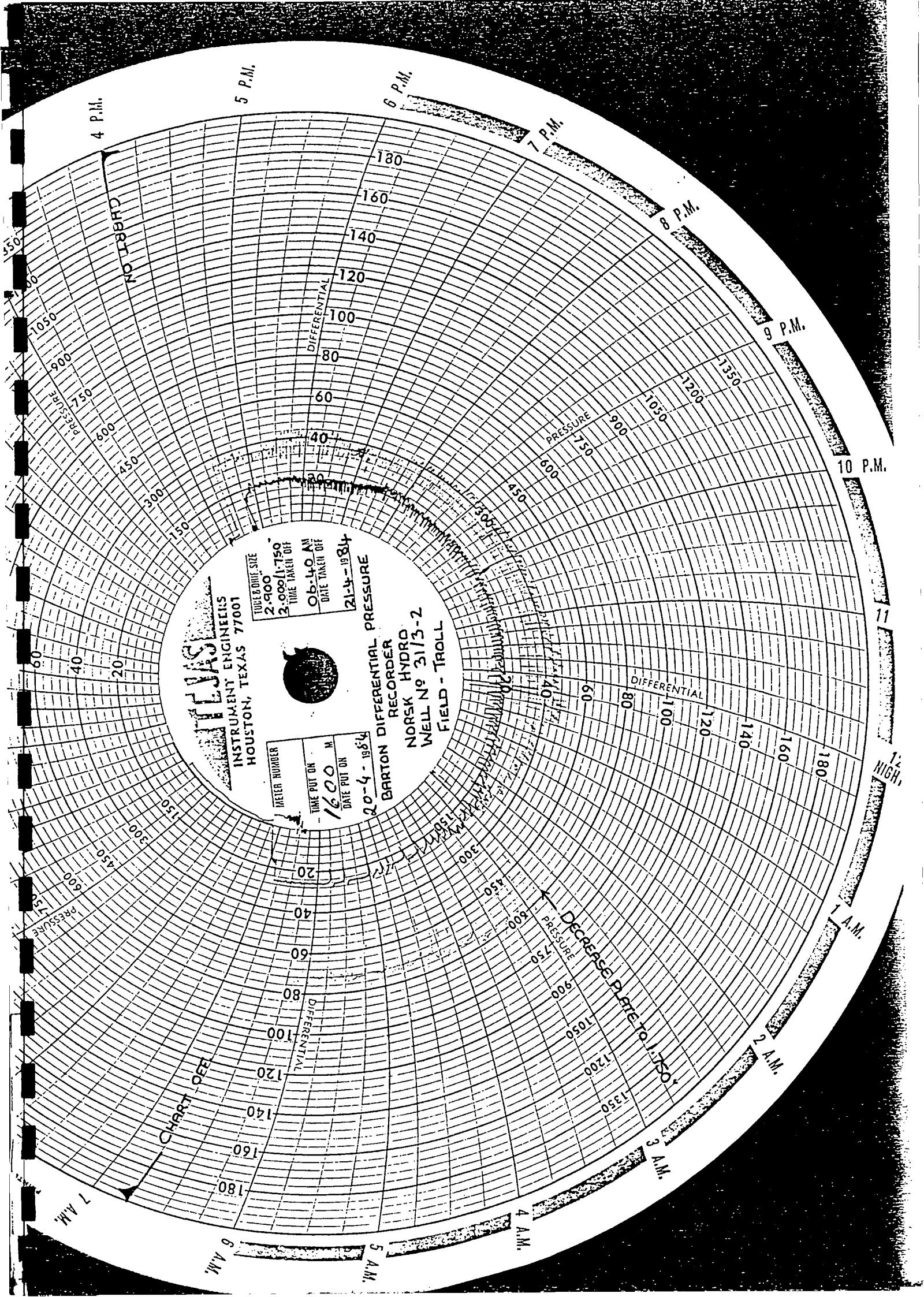
Chart of

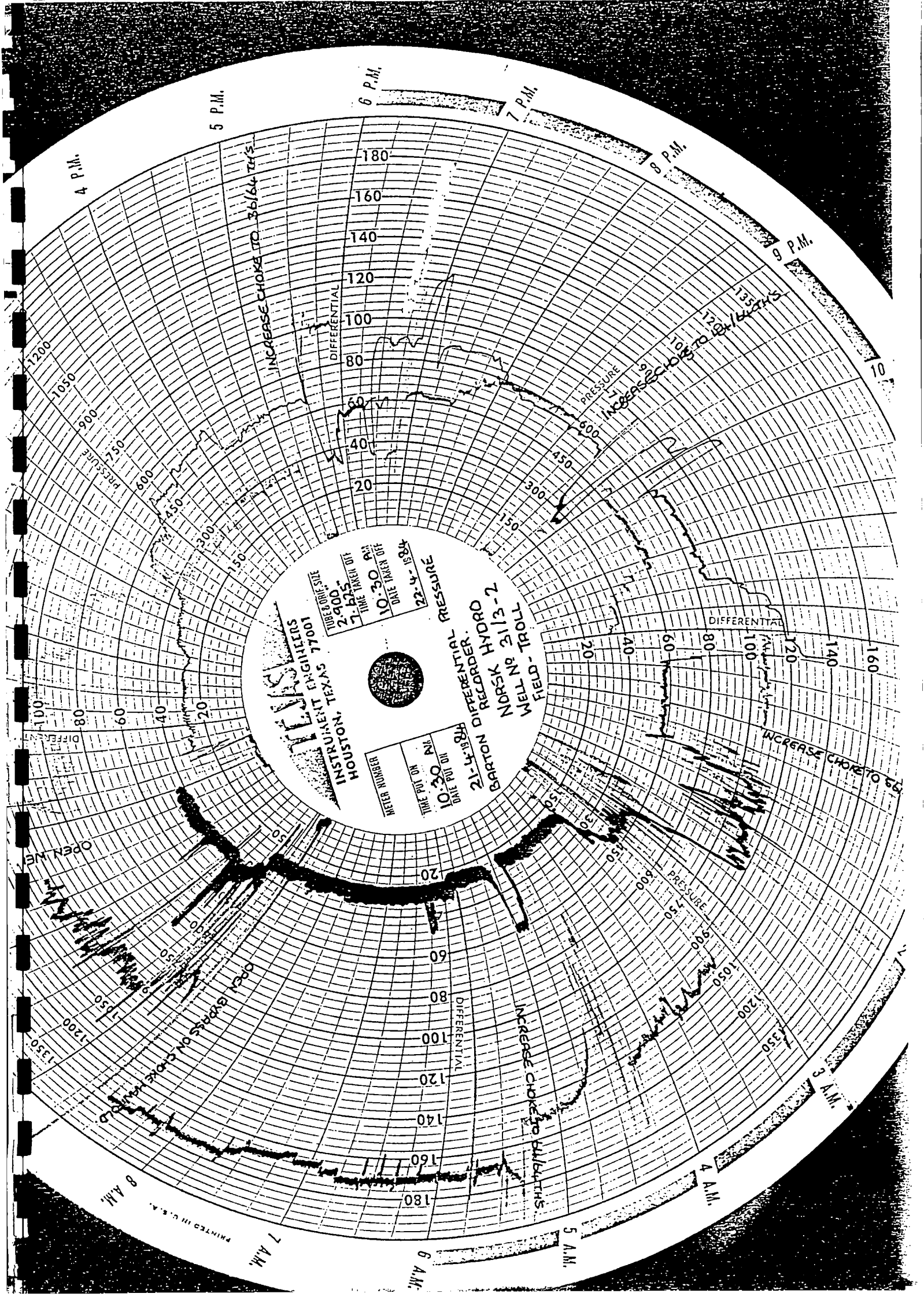
INCREASE COKE TO 44/4

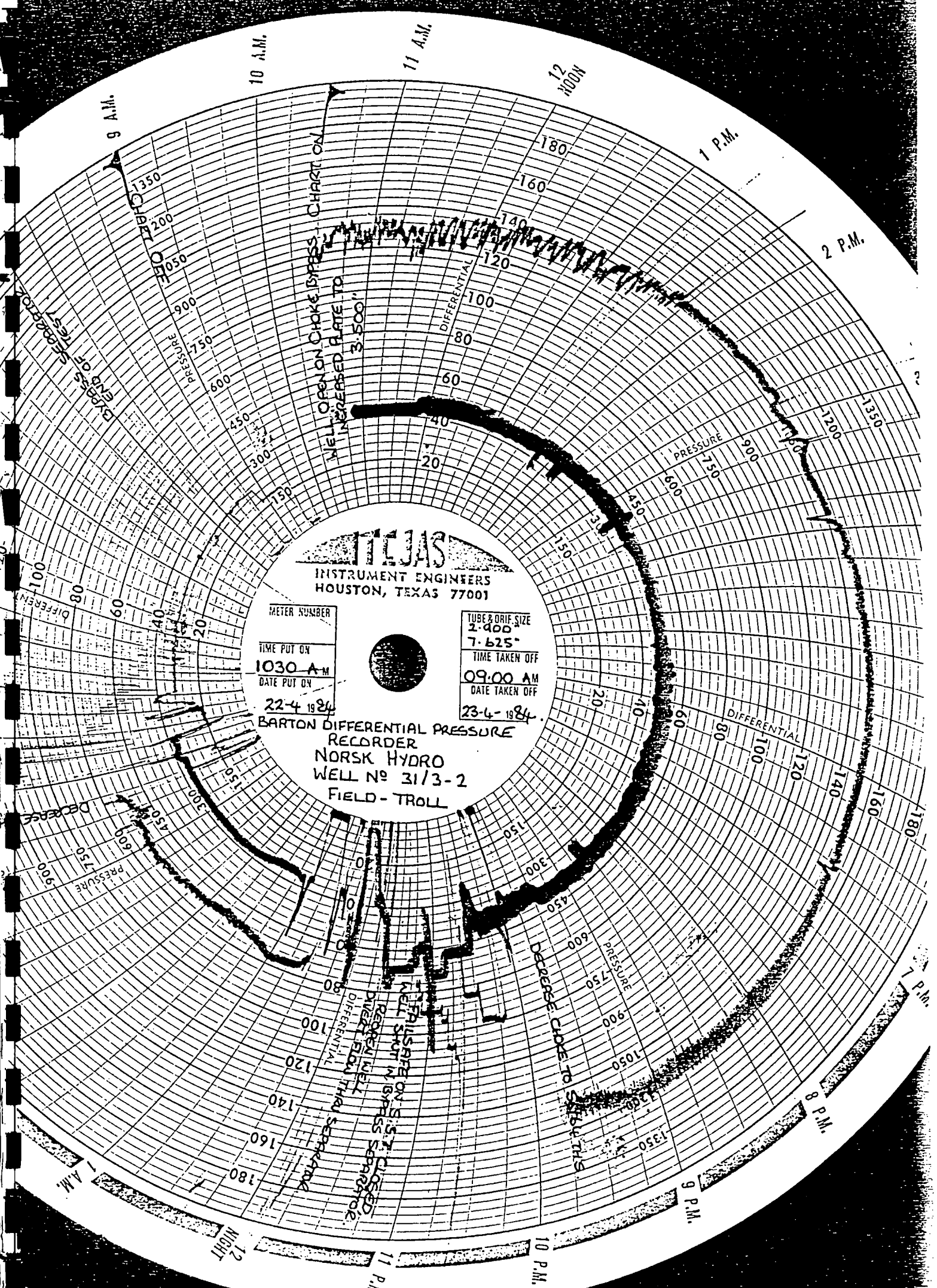
INCREASE COKE TO 54/4











TECHAS
INSTRUMENT ENGINEERS
HOUSTON, TEXAS 77001

METER NUMBER
TIME PUT ON
1030 A.M.
DATE PUT ON
22-4-1984

TUBE & ORIF. SIZE
2.400
7.625"
TIME TAKEN OFF
09:00 A.M.
DATE TAKEN OFF
23-4-1984

BARTON DIFFERENTIAL PRESSURE
RECORDER
NORSK HYDRO
WELL No 31/3-2
FIELD - TROLL

WELL SHUT IN & PRESS. SEPARATOR
WELL SHUT IN & PRESS. SEPARATOR
WELL SHUT IN & PRESS. SEPARATOR

DECREASE CHOKE TO 50% THIS