

REPORT NO.
1070324

PAGE NO. 1

TEST DATE:
12-MAR-1998

STAR

Schlumberger Testing Data Report

Pressure Data Report

Schlumberger

COMPANY: CHI OPERATING, INC.

WELL: BIG EDDY UNIT #140

TEST IDENTIFICATION

Test Type OPEN HOLE DST
Test No. ONE
Formation MORROW
Test Interval (ft) 12842 to 13016
Depth Reference GL

WELL LOCATION

Field GOLDEN LANE M.
County EDDY
State NEW MEXICO
Sec/Twn/Rng 16-21S-29E
Elevation (ft) 3151

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) 13016/13016
Hole Size (in) 7.875
Casing/Liner I.D. (in) 9.625 @ 3055'
Perf'd Interval/Net Pay (ft)..
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type DUOVIS-PAC
Mud Weight (lb/gal) 10.2
Mud Resistivity (ohm.m)
Filtrate Resistivity (ohm.m) .. 0.089 @ 60F
Filtrate Chlorides (ppm) 100000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 6837.35
Gas Cushion Type
Surface Pressure (psi)
Liquid Cushion Type FRESH WATER
Cushion Length (ft) 3016

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 12092 / 3.640
Collar Length (ft)/I.D. (in) .. 863 / 2.250
Packer Depths (ft) 12837, 12842,
Bottomhole Choke Size (in) ... 1.00
Gauge Depth (ft)/Type 12854/SLSR-884

NET PIPE RECOVERY

Volume	Fluid Type	Properties
3016 ft	H2O CUSHION	Rw 3.216 @ 60F 2000ppm
90 ft	RAT HOLE MUD	Rw 0.092 @ 64F 90000ppm

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
2.2 cuft	Gas	
1700 cc	Mud	Rw 0.092 @ 64F 90000ppm
Pressure: 940		GOR: 0
		GLR: 206

INTERPRETATION RESULTS

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

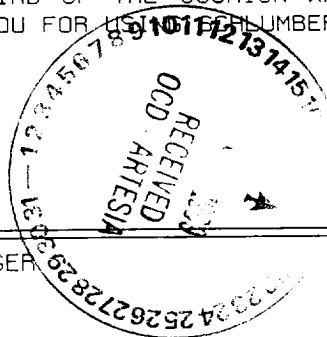
ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
Basic Solids (%)
Gas Gravity
GOR (scf/STB)
Water Cut (%)
Viscosity (cp)
Total Compressibility (1/psi).
Porosity (%)
Reservoir Temperature (F) 192
Form.Vol.Factor (bbl/STB)

PRODUCTION RATE DURING TEST: Data Report

COMMENTS:

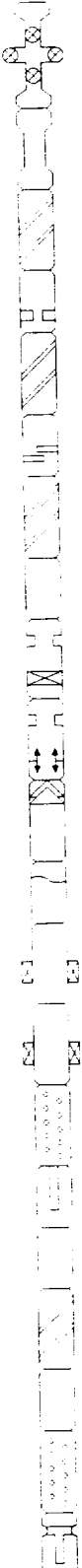
THIS IS DST #1. THE MORROW FORMATION WAS EVALUATED FROM 12842' TO 13016' BY LOG MEASUREMENTS. THE TEST WAS CONCLUSIVE. THE BOTTOM THIRD OF THE CUSHION WAS GAS CUT, AND THERE WAS 1.3 BBLs. OF RAT HOLE MUD RECOVERED. THANK YOU FOR USING SCHLUMBERGER.



WELL TEST INTERPRETATION REPORT #:1070324		PAGE: 2,
CLIENT : CHI OPERATING, INC.		13-MAR-98
REGION :CSD	SEQUENCE OF EVENTS	FIELD:GOLDEN LANE M.
DISTRICT:HOBBS		ZONE :MORROW
BASE :MIDLAND		WELL :BIG EDDY #140
ENGINEER:KIRK BEASLEY		LOCATION:16-21S-29E

DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	BHP (PSIA)	WHP (PSIG)
=====					
12-MAR		OPEN TO BUBBLE HOSE ONLY			
	11:39	SET PACKER	-1		
	11:40	START FLOW	0	1356	
	11:45	BLOW DESCRIBED IN INCHES	5		2"
	11:50		10		3"
	12:00		20		2.75"
	12:15		35		2"
	12:30		50		2.5"
	12:45		65		3.5"
	13:00	BOTTOM OF THE BUCKET	80		12"
		GAS BROKE THROUGH CUSHION			
	13:05	BLW DESCRIBED IN PSI	85		1 PSI
	13:10	END FLOW & START SHUT-IN	90	1449	2 PSI
	19:10	END SHUT-IN	450	5203	
	19:13	PULLED LOOSE	453		

CHI OPERATING, INC.
BIG EDDY UNIT #140
TOOL STRING SCHEMATIC

	TOOL DESCRIPTION	OD	ID	LENGTH	DEPTH
	SURFACE FLOWHEAD				0
	DRILL PIPE (20#)	4.50	3.640	12092	12092
	DRILL COLLARS	6.25	2.250	526	12618
	PUMPOUT DISK REVERSING VALVE	6.25	3.250	1.20	12619.2
	DRILL COLLARS	6.25	2.250	93.96	12713.16
	BREAKOFF PIN REVERSING VALVE	6.25	3.000	0.86	12714.02
	DRILL COLLARS	6.25	2.250	93.87	12807.89
	CROSS OVER SUB	6.00	2.000	0.93	12808.82
	MFE (MFEV-B)	5.00	1.000	9.83	12818.65
	MFE OH BYPASS (MBYP-B)	5.00	1.000	2.98	12821.63
	D&C HYDRAULIC JAR	4.75	1.875	6.80	12828.43
	SAFETY JOINT (SAJ-BA)	4.75	2.500	2.46	12830.89
	BOB TAIL PACKER	7.00	1.500	6.19	12837.08
	BOB TAIL PACKER	7.00	1.500	4.92	12842
	PERFORATED ANCHOR	4.75	2.250	6.30	12848.3
	INSIDE RECORDER CARRIER	4.88	1.500	5.91	12854.21
	CROSS OVER SUB	6.00	2.750	0.63	12854.84
	DRILL COLLARS	6.25	2.250	149.5	13004.34
	CROSS OVER SUB	6.00	2.440	0.75	13005.09
	PERFORATED ANCHOR	4.75	2.250	5.00	13010.09
	OUTSIDE RECORDER CARRIER	4.88	1.500	5.91	13016

Report Number: 1070324

Test Number: ONE

Test Date: 12-MAR-1998

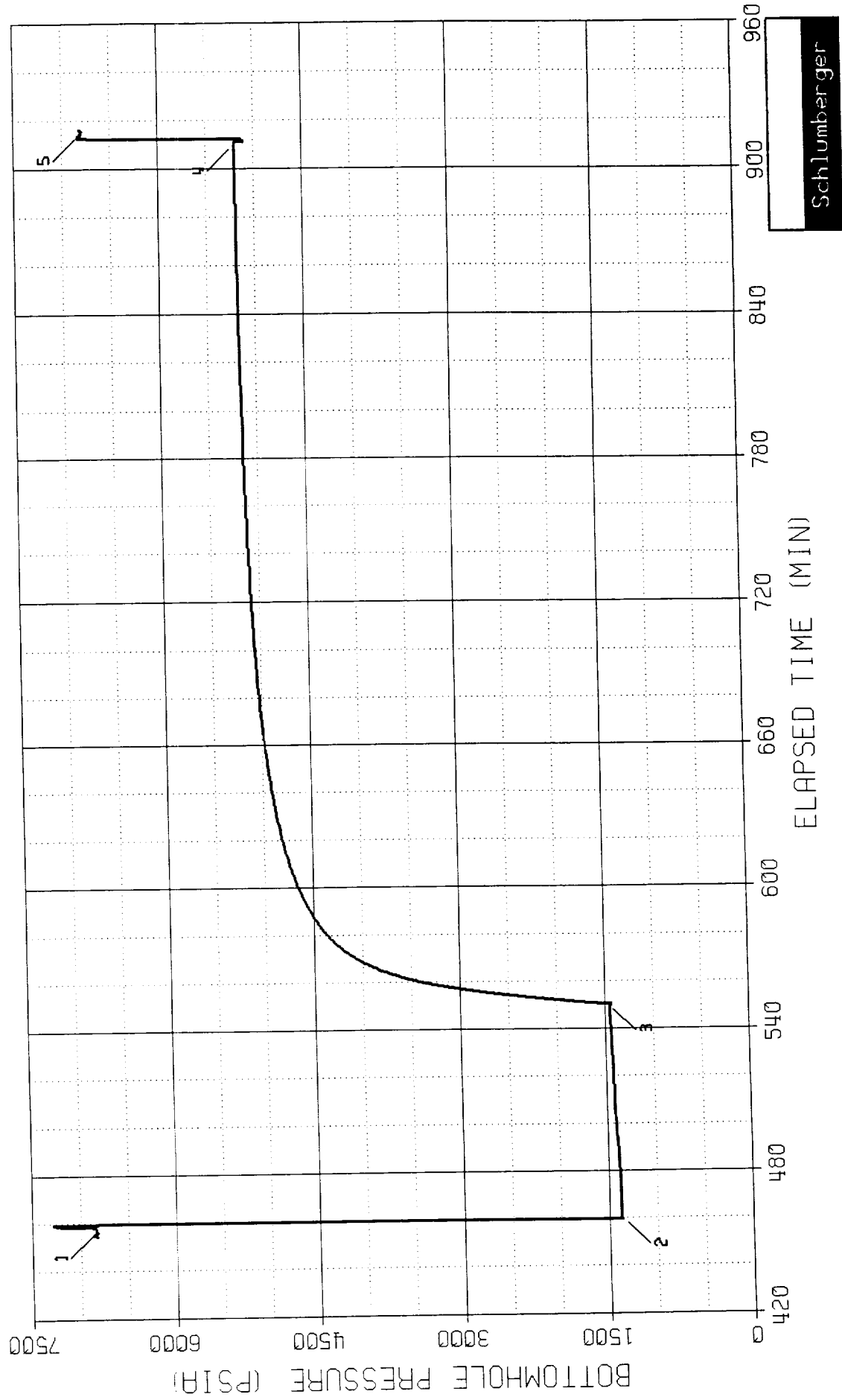
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BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 1070324
INSTRUMENT NO. SLSR-884
DEPTH : 12854 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : CHI OPERATING, INC.
WELL : BIG EDDY UNIT #140

Electronic Pressure Data



BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 1070324

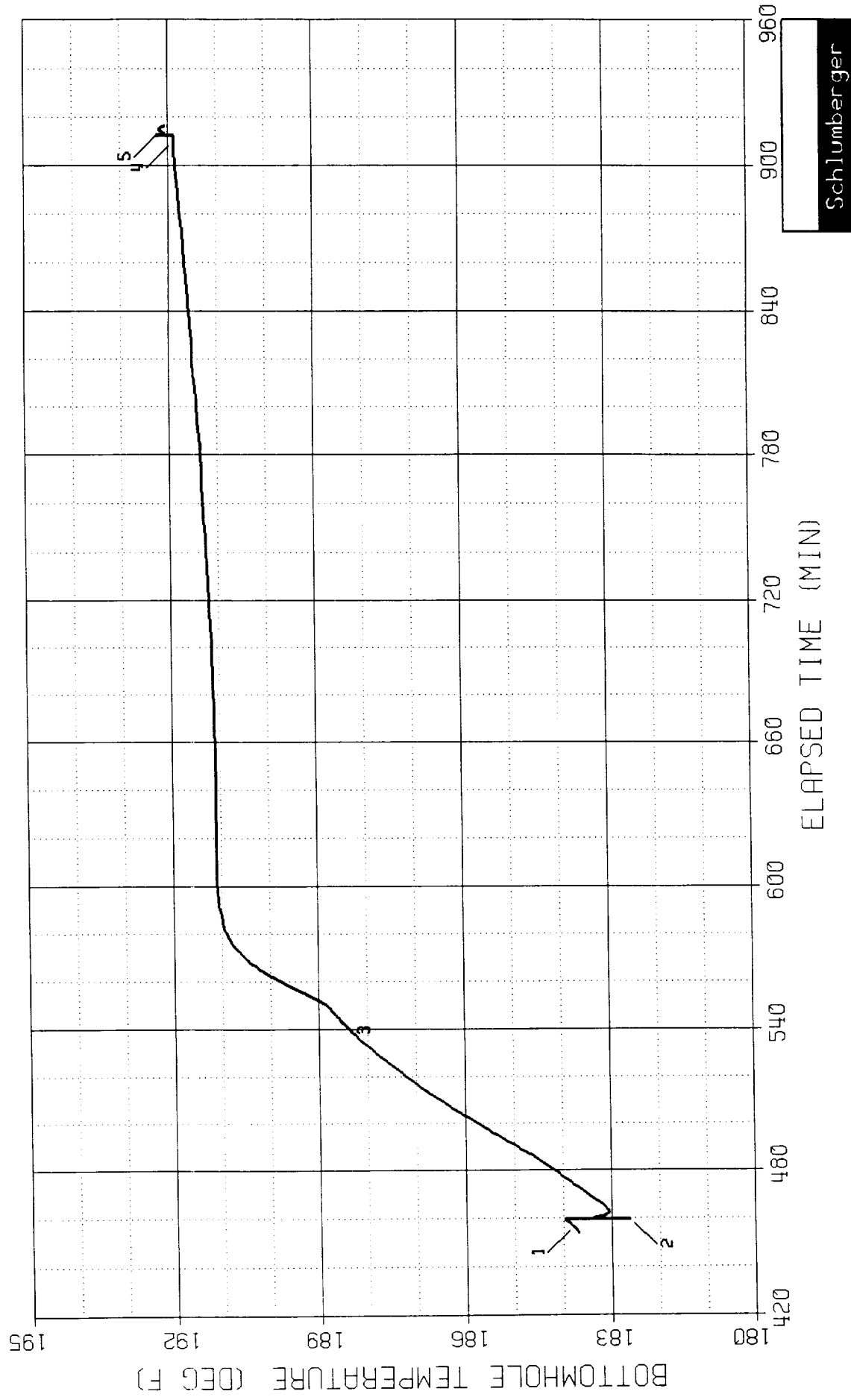
COMPANY : CHI OPERATING, INC.

INSTRUMENT NO. SLSR-884

WELL : BIG EDDY UNIT #140

DEPTH : 12854 FT

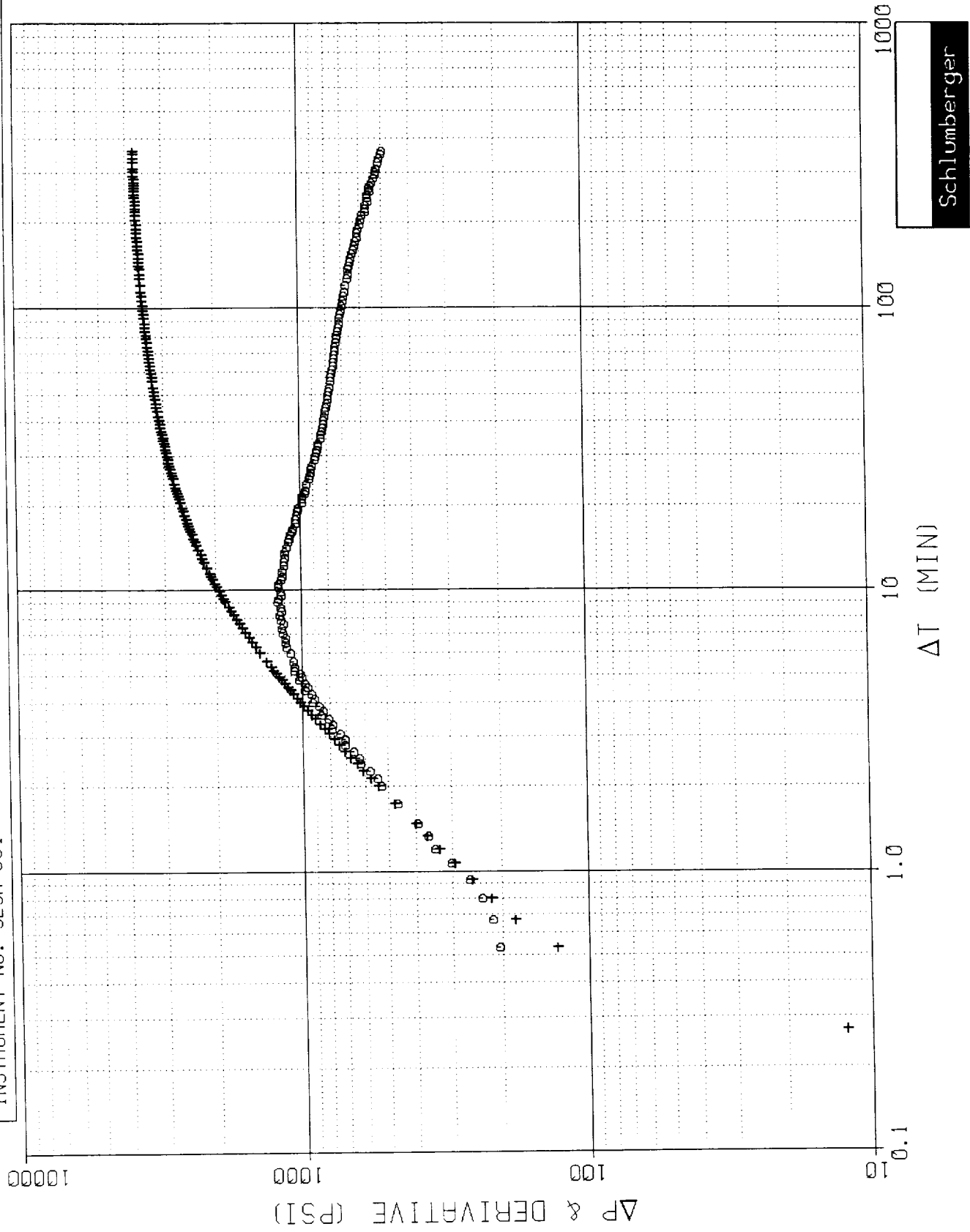
Electronic Temperature Data



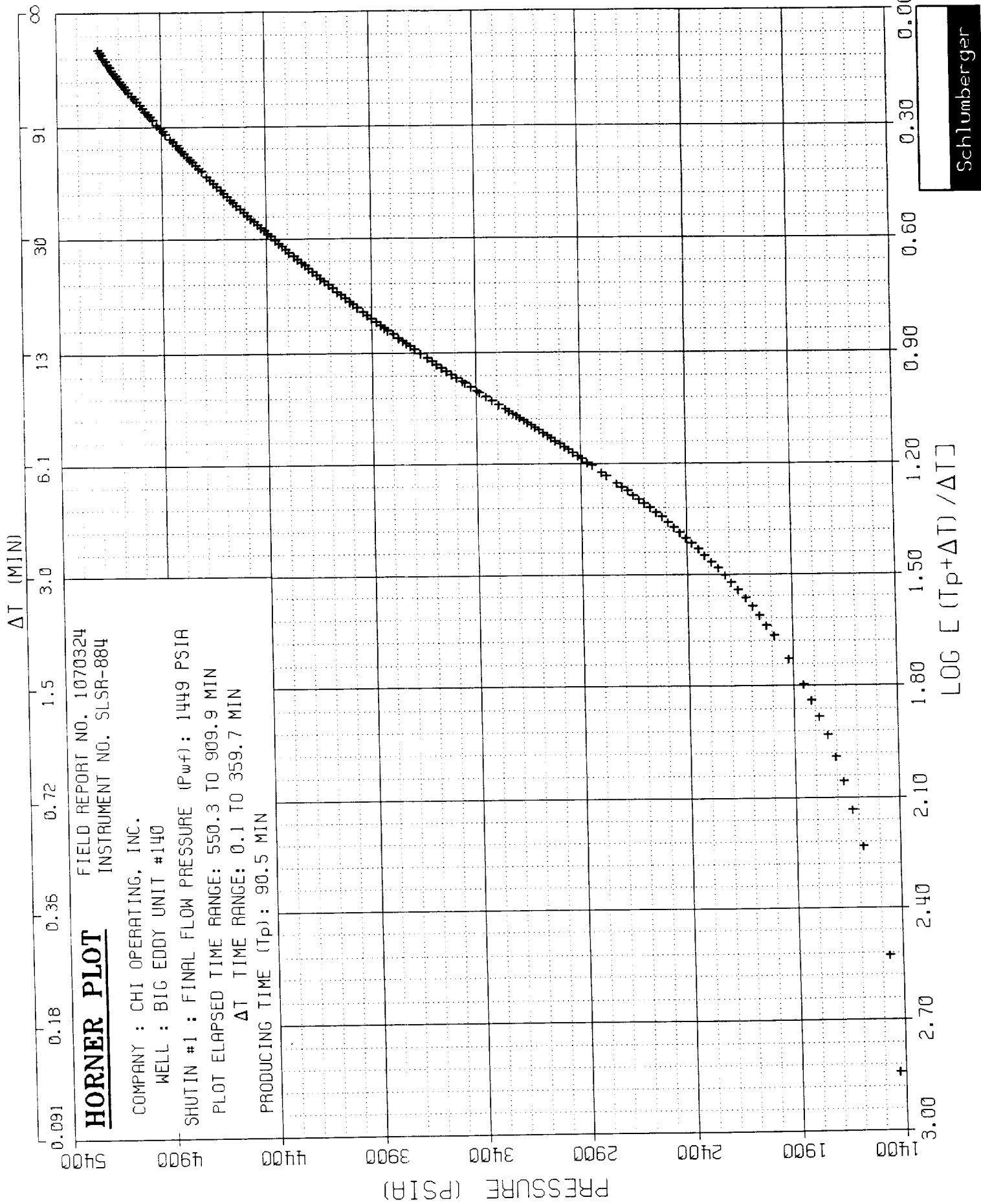
LOG LOG PLOT

COMPANY : CHI OPERATING, INC.
WELL : BIG EDDY UNIT #140
FIELD REPORT NO. 1070324
INSTRUMENT NO. SLSR-884

SHUTIN #1 : PRODUCING TIME (Tp): 90.5 MIN
FINAL FLOW PRESSURE (Pwf): 1449 PSIA
PLOT ELAPSED TIME RANGE: 550.4 TO 909.9 MIN
 ΔT TIME RANGE: 0.3 TO 359.7 MIN



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 ** WELL TEST DATA PRINTOUT **

COMPANY: CHI OPERATING, INC.
 WELL: BIG EDDY UNIT #140

FIELD REPORT NO. 1070324
 INSTRUMENT NO. SLSR-884

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 12854 FT

LABEL POINT INFORMATION

	TIME OF DAY	DATE		ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
#	HH:MM:SS	DD-MMM	EXPLANATION			
1	11:36:33	12-MAR	HYDROSTATIC MUD	456.55	6837.35	183.79
2	11:39:37	12-MAR	START FLOW	459.62	1355.99	182.62
3	13:10:09	12-MAR	END FLOW & START SHUT-IN	550.15	1448.75	188.83
4	19:09:53	12-MAR	END SHUT-IN	909.88	5203.33	191.89
5	19:14:17	12-MAR	HYDROSTATIC MUD	914.28	6812.55	192.15

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	459.62	550.15	90.53	1355.99	1448.75	1355.99

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	550.15	909.88	359.73	1448.75	5203.33	1448.75	90.53

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
11:39:37	12-MAR	459.62	0.00	182.62	1355.99
11:55:53	12-MAR	475.88	16.26	183.90	1376.19
12:12:09	12-MAR	492.15	32.53	185.09	1396.38
12:29:53	12-MAR	509.88	50.26	186.49	1417.99
12:46:41	12-MAR	526.68	67.06	187.59	1430.99
13:01:53	12-MAR	541.88	82.26	188.46	1442.35
13:10:09	12-MAR	550.15	90.53	188.83	1448.75

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 1448.75 PSIA
PRODUCING TIME = 90.53 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
13:10:09	12-MAR	550.15	0.00	188.83	1448.75	0.00	
13:11:13	12-MAR	551.22	1.07	188.92	1741.53	292.78	1.9325
13:12:17	12-MAR	552.28	2.13	189.01	2024.28	575.53	1.6385
13:13:21	12-MAR	553.35	3.20	189.12	2282.49	833.74	1.4667
13:14:25	12-MAR	554.42	4.27	189.23	2517.15	1068.40	1.3464
13:15:29	12-MAR	555.48	5.33	189.34	2727.72	1278.97	1.2549
13:16:33	12-MAR	556.55	6.40	189.45	2914.67	1465.92	1.1803
13:17:37	12-MAR	557.62	7.47	189.55	3079.67	1630.92	1.1179
13:18:41	12-MAR	558.68	8.53	189.66	3224.76	1776.01	1.0650
13:19:45	12-MAR	559.75	9.60	189.75	3352.62	1903.87	1.0183
13:20:49	12-MAR	560.82	10.67	189.84	3465.32	2016.57	0.9770
13:22:49	12-MAR	562.82	12.67	190.04	3643.17	2194.42	0.9109
13:24:57	12-MAR	564.95	14.80	190.18	3795.26	2346.51	0.8523
13:27:05	12-MAR	567.08	16.93	190.35	3919.11	2470.36	0.8026
13:29:13	12-MAR	569.22	19.07	190.49	4021.88	2573.13	0.7595
13:31:13	12-MAR	571.22	21.07	190.58	4103.60	2654.85	0.7240
13:33:21	12-MAR	573.35	23.20	190.69	4178.63	2729.88	0.6904
13:35:45	12-MAR	575.75	25.60	190.78	4251.17	2802.42	0.6567
13:37:53	12-MAR	577.88	27.73	190.85	4307.34	2858.59	0.6299
13:40:01	12-MAR	580.02	29.87	190.90	4357.29	2908.54	0.6054
13:42:33	12-MAR	582.55	32.40	190.96	4409.88	2961.13	0.5791
13:48:09	12-MAR	588.15	38.00	191.01	4506.59	3057.84	0.5292
13:53:45	12-MAR	593.75	43.60	191.07	4583.81	3135.06	0.4880
13:59:37	12-MAR	599.62	49.47	191.08	4650.02	3201.27	0.4518
14:05:45	12-MAR	605.75	55.60	191.10	4707.52	3258.77	0.4197
14:11:13	12-MAR	611.22	61.07	191.10	4751.19	3302.44	0.3949
14:16:57	12-MAR	616.95	66.80	191.10	4790.63	3341.88	0.3720
14:23:13	12-MAR	623.22	73.07	191.10	4828.23	3379.48	0.3500
14:28:33	12-MAR	628.55	78.40	191.10	4856.43	3407.68	0.3334
14:35:53	12-MAR	635.88	85.73	191.10	4890.54	3441.79	0.3130
14:42:33	12-MAR	642.55	92.40	191.10	4917.45	3468.70	0.2966
14:48:33	12-MAR	648.55	98.40	191.10	4939.05	3490.30	0.2833
14:56:17	12-MAR	656.28	106.13	191.10	4963.85	3515.10	0.2679
15:03:53	12-MAR	663.88	113.73	191.12	4985.26	3536.51	0.2543
15:10:01	12-MAR	670.02	119.87	191.12	5000.90	3552.15	0.2443
15:16:17	12-MAR	676.28	126.13	191.12	5015.45	3566.70	0.2350

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 1448.75 PSIA

PRODUCING TIME = 90.53 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
15:22:25	12-MAR	682.42	132.27	191.14	5028.44	3579.69	0.2265
15:28:49	12-MAR	688.82	138.67	191.14	5040.88	3592.13	0.2182
15:34:01	12-MAR	694.02	143.87	191.16	5050.30	3601.55	0.2120
15:43:53	12-MAR	703.88	153.73	191.17	5066.49	3617.74	0.2011
15:48:57	12-MAR	708.95	158.80	191.19	5074.06	3625.31	0.1959
15:54:25	12-MAR	714.42	164.27	191.21	5081.69	3632.94	0.1906
16:00:41	12-MAR	720.68	170.53	191.21	5089.92	3641.17	0.1849
16:05:53	12-MAR	725.88	175.73	191.23	5096.23	3647.48	0.1805
16:13:29	12-MAR	733.48	183.33	191.25	5104.93	3656.18	0.1743
16:33:21	12-MAR	753.35	203.20	191.30	5124.66	3675.91	0.1600
16:48:41	12-MAR	768.68	218.53	191.34	5137.52	3688.77	0.1505
17:07:13	12-MAR	787.22	237.07	191.39	5150.60	3701.85	0.1405
17:23:13	12-MAR	803.22	253.07	191.44	5160.60	3711.85	0.1328
17:38:49	12-MAR	818.82	268.67	191.52	5169.03	3720.28	0.1261
17:54:17	12-MAR	834.28	284.13	191.57	5176.49	3727.74	0.1201
18:12:57	12-MAR	852.95	302.80	191.64	5184.38	3735.63	0.1136
18:36:49	12-MAR	876.82	326.67	191.75	5193.15	3744.40	0.1062
18:59:45	12-MAR	899.75	349.60	191.86	5200.44	3751.69	0.1000
19:09:53	12-MAR	909.88	359.73	191.89	5203.33	3754.58	0.0975