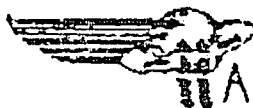


Lease Name Cavilan
Lease Owner NW Expl.



HALLIBURTON SERVICES

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

NORTHWEST EXHIBIT NO. 15

CASE NO. 8042

THIS REPORT IS BASED ON SOUND ENGINEERING PRACTICES, BUT
BECAUSE OF VARIABLE WELL CONDITIONS AND OTHER INFORMATION
WHICH MUST BE RELIED UPON HALLIBURTON MAKES NO WARRANTY,
EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE DATA OR ANY
CALCULATIONS OR OPINIONS EXPRESSED HEREIN. YOU AGREE THAT
HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE,
WHETHER DUE TO NEGLIGENCE OR OTHERWISE, ARISING OUT OF OR
IN CONNECTION WITH SUCH DATA, CALCULATIONS, OR OPINIONS.

Well No. 1-E
Date 6-29-83

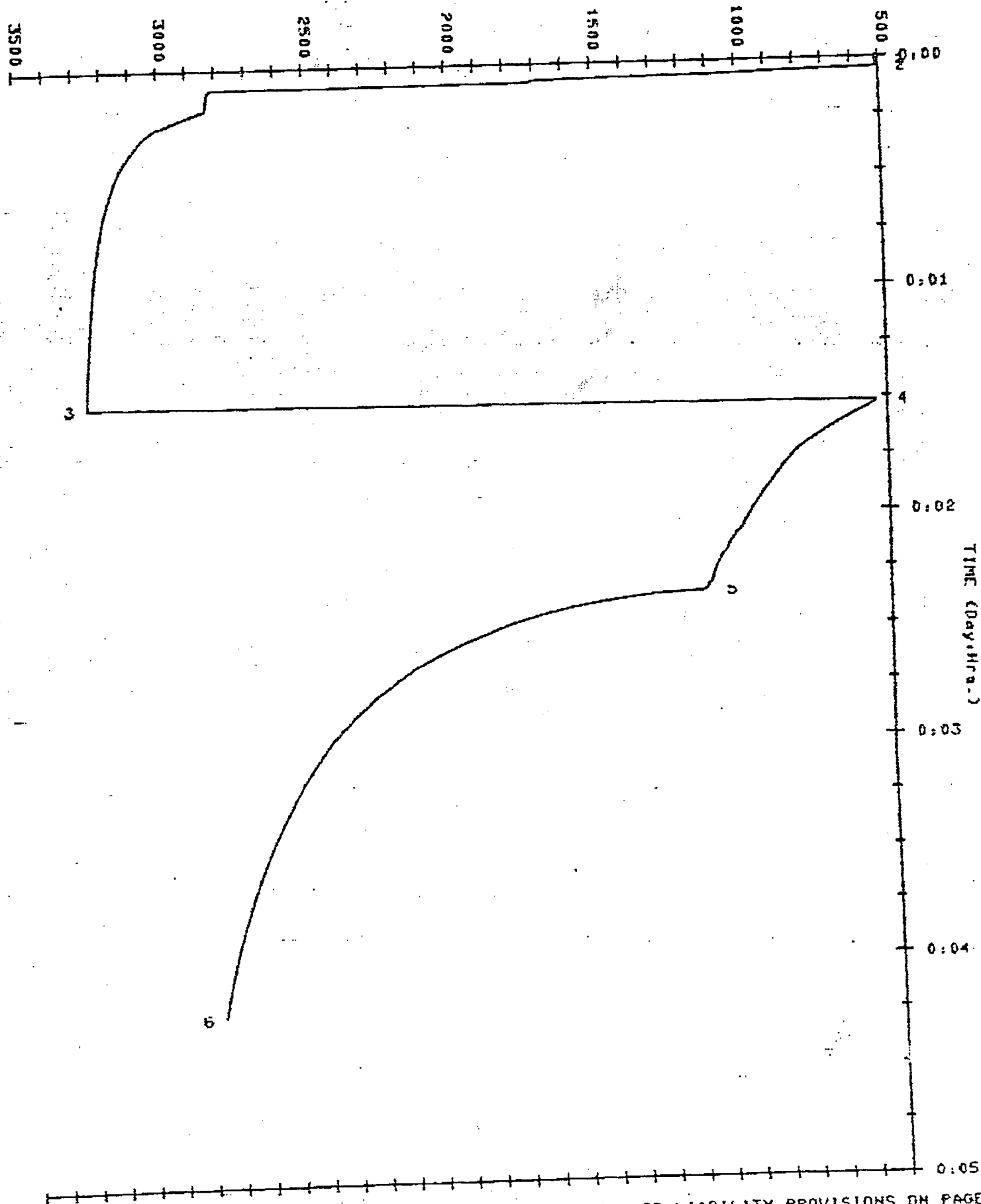
Test No. 1
Ticket No. 2696

TICKET NUMBER- 269611



	O.D.	I.D.	LENGTH	DEPTH
TUBING	2.375	1.995	7764.3	
DUAL C.I.P. VALVE	3.030	0.440	5.5	
HYDROSPRING TESTER	3.030	0.500	4.4	7761.0
RUNNING CASE - A.P.	3.030	1.600	4.7	7766.2
V.R. SAFETY JOINT	3.030	0.500	2.7	
PACKER - CASED HOLE RETRIEVABLE	3.890	1.920	3.4	7769.0
PERFORATED TAIL PIPE	2.375	1.995	5.6	
RUNNING CASE - BLANKED OFF	3.030	2.310	4.1	7772.5

Pressure



Lease Name <u>Cavilan</u>	Well No. <u>1-t</u>	Test No. <u>1</u>
Lease Owner <u>NW Expl.</u>	Date <u>6-29-83</u>	Ticket no. <u>269611</u>
Gauge Sn. <u>002033</u>		

loc.	Time	Description	Press.	Delta t	Time int.
0	0:00:00:00	Start Time			
1	0:00:00:50	Initial Flow # 1	511.81	0.833	0 - 1
2	0:00:02:42	Final Flow # 1	511.81	1.867	1 - 2
3	0:01:30:41	Closed In # 1	3268.18	87.983	2 - 3
4	0:01:31:02	Initial Flow # 2	538.57	0.350	3 - 4
5	0:02:21:06	Final Flow # 2	1138.63	50.067	4 - 5
6	0:04:14:55	Closed In # 2	2852.41	113.817	5 - 6

60
53
113

Period # 0

~~NOTICE, THIS INFORMATION IS SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS ON PAGE 3~~

Lease Name Devlan

Well no. 1-A

Test No. 1

Lease Owner NW Expl.

Date 6-29-83

Ticket no. 269611

Gauge Sn. 002033

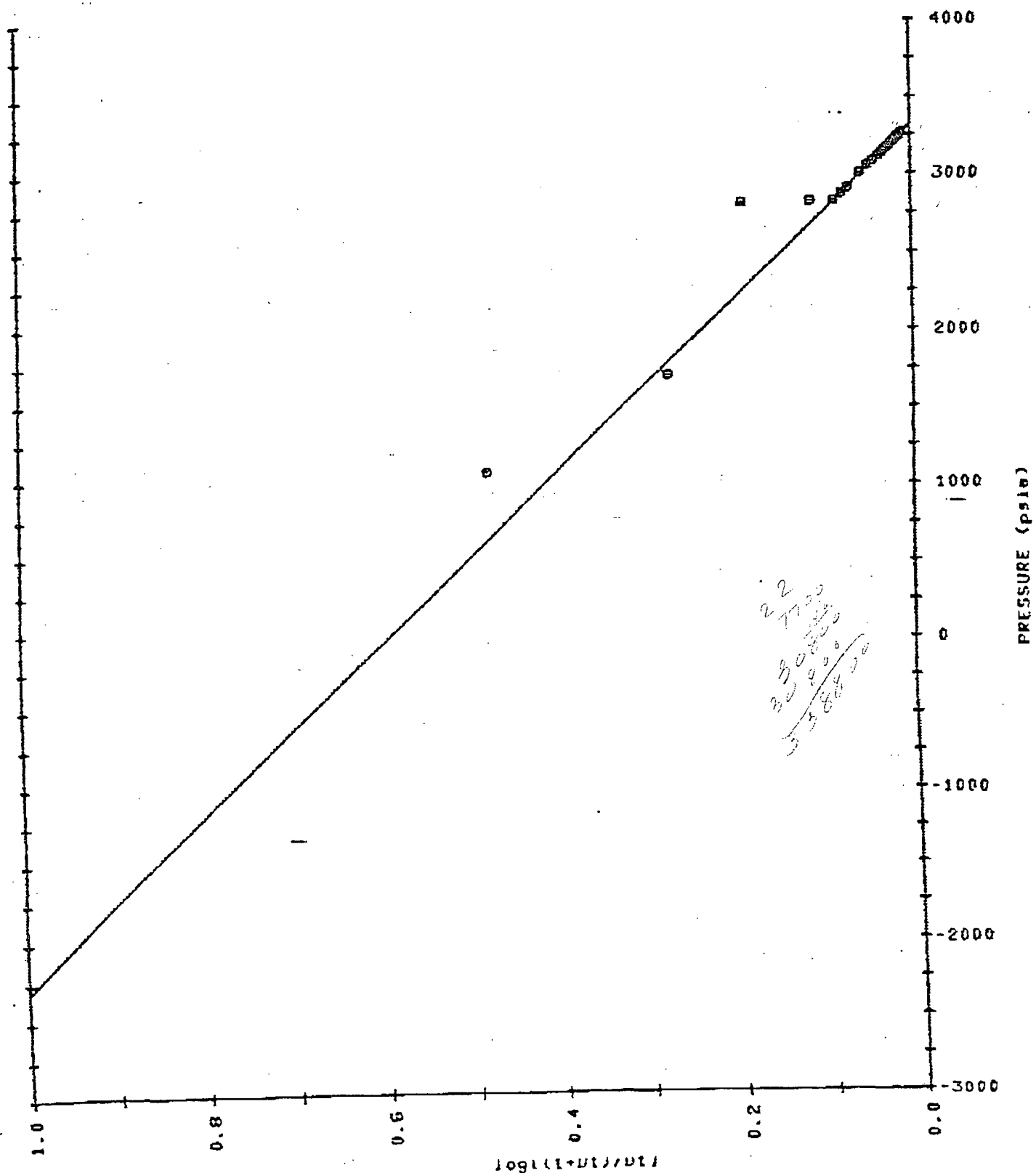
MORNER PLOT

$P_s = 3320.48$

$P_{10} = -2306.46$

$QC = 0.999952$

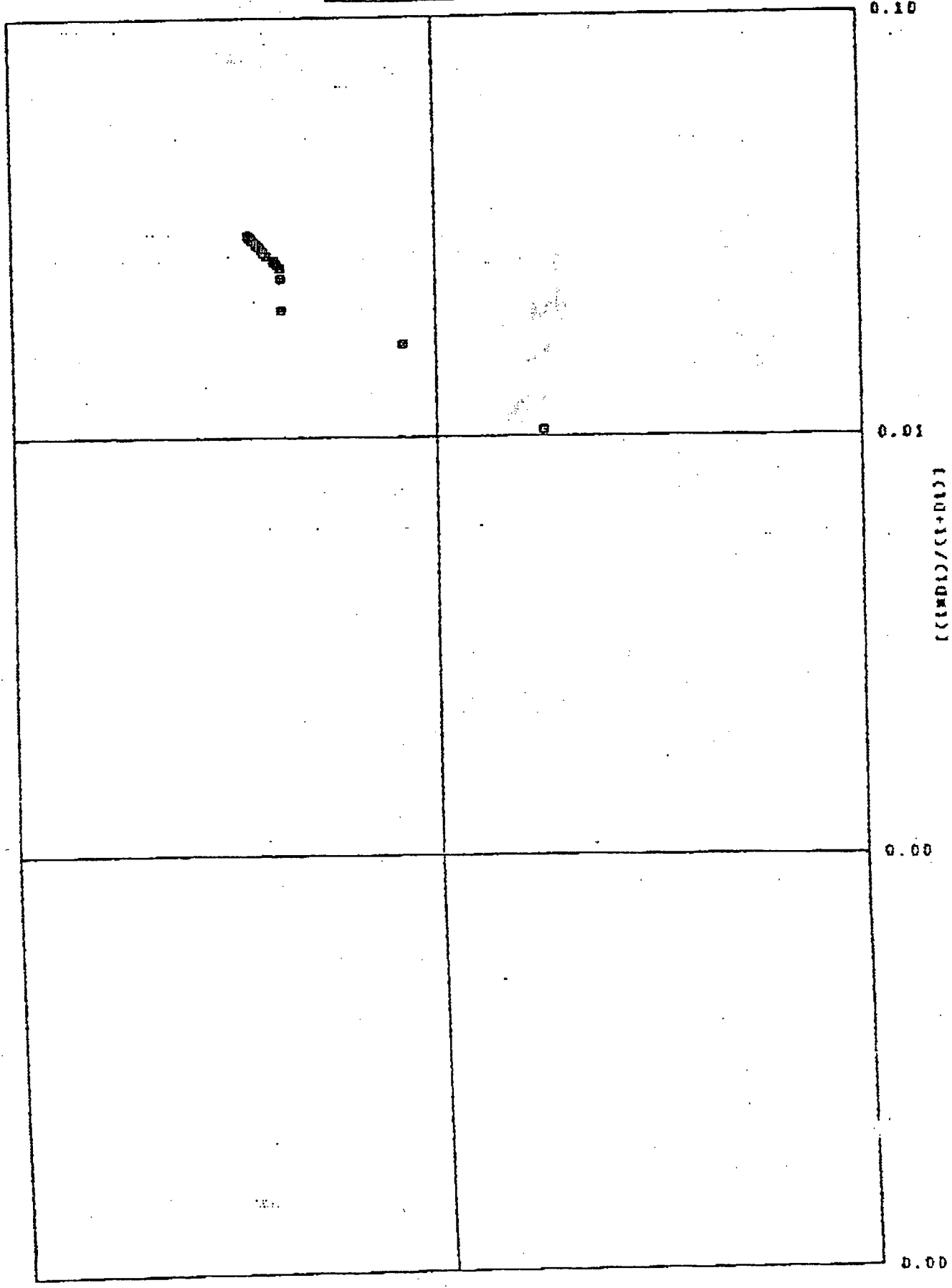
PERIOD = 1



PAGE - 2

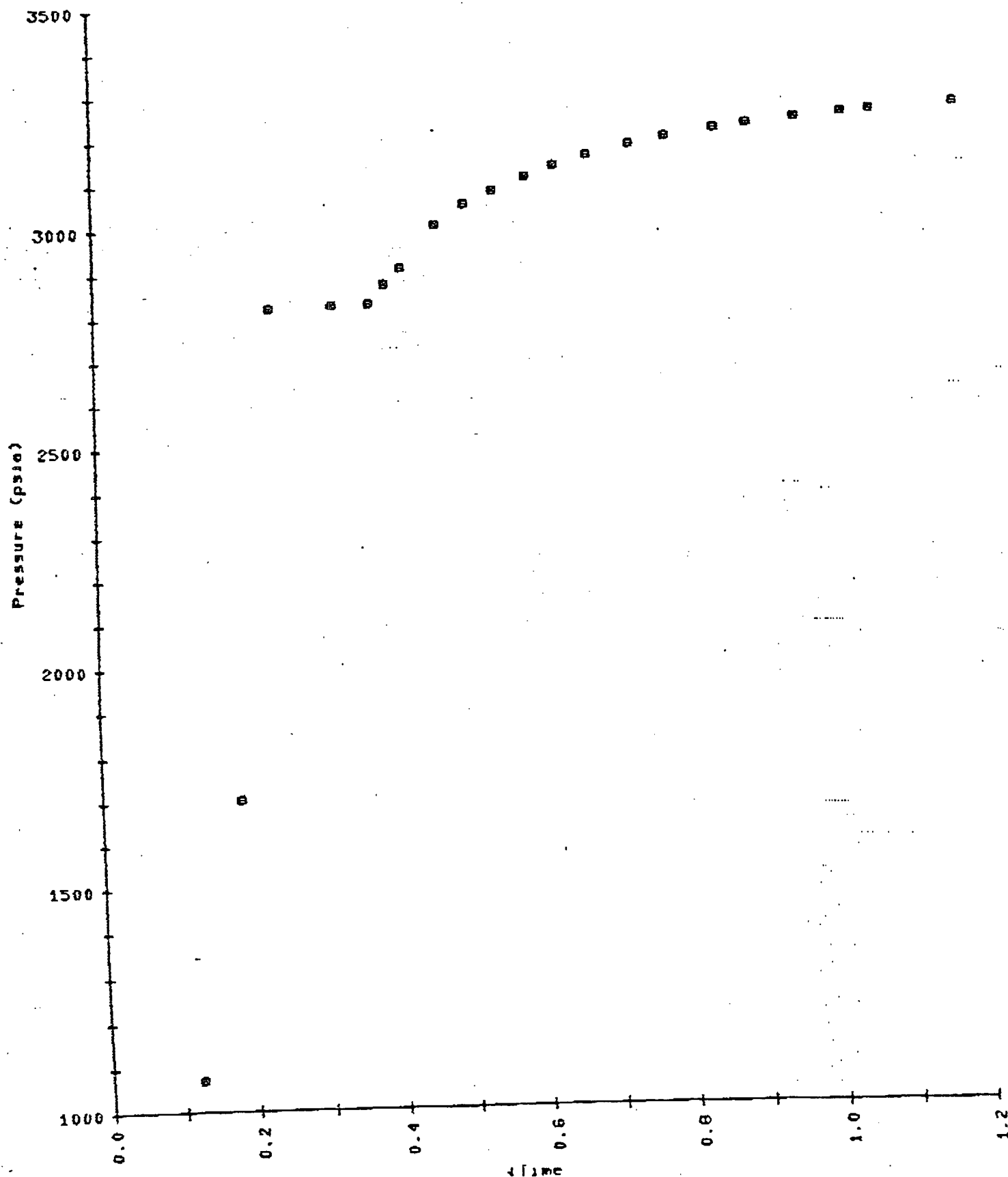
THIS INFORMATION IS SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS ON PAGE 1

Lease Name Gavilan Well No. 1-1 Test No. 1
 Lease Owner NW Expl. Date 6-29-83 Ticket no. 269611
 Gauge Sn. 002033 Log-Log PL01
 PERIOD # 1



10000 1000 100
 Delta Pressure

PRESS. vs TIME
PERIOD # 1



HALLIBURTON SERVICES

Lease Name	Gavilan	Well No.	1-E	Test No.	1
Lease Owner	HM Expl.	Date	6-29-83	Ticket no.	269611
Gauge Sn.	002033				

LIQUID PRODUCTION FOR OIL PERIOD # 1

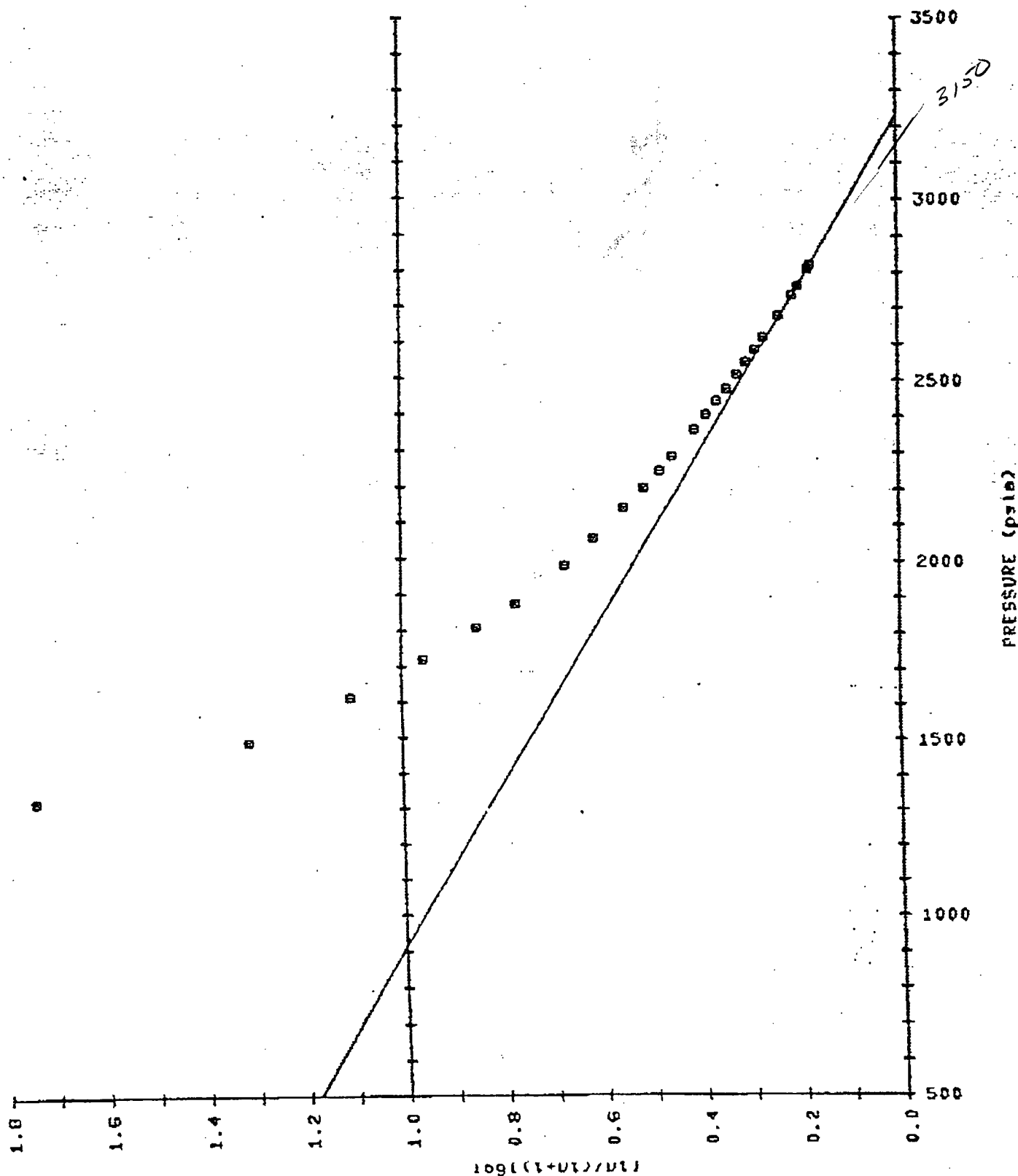
OIL GRAVITY	40.000000	#60	% SALT	0.000000
GAS GRAVITY	0.900000		FLUID GRADIENT	0.357504 psi/ft
GAS/OIL RATIO	0.000000	cfpb	FORMATION VOL FACTOR	1.000000 v/v
TEMPERATURE	185.000000	F	FLUID PROPERTIES AT	3268.181818 Psia
VISCOSITY	0.983304	cp	NET PAY	18.000000 ft
API GRAVITY	40.000000			
PIPE CAPACITY FACTORS	0.000000		0.003866 dbi/ft	

GAUGE DEPTH		7772.500000	ft
FINAL FLOW PRESSURE	Pf	511.813139	Psia
TOTAL FLOW TIME	t	1.866667	min
EXTRAPOLATED PRESS.	Ps	3320.475271	Psia
ONE CYCLE PRESSURE		-2306.462524	Psia
PRODUCTION RATE	Q	2.928000	BPD
TRANSMISSIBILITY	kh/u	0.084610	mf/c
FLOW CAPACITY	kh	0.083197	mdft
PERMEABILITY	k	0.004622	md
DAMAGE RATIO	DR	0.091344	
POTENTIAL RATE	Q1	2.928000	BPD
RADIUS OF INVEST.	ri	0.430063	ft

```
Initial Flow # 2
Final Flow # 2
Closed In # 2
```

Lease Name Cavilan Well No. 1-E Test No. 1
 Lease Owner NW Expl. Date 6-29-83 Ticket no. 269611
 Gauge Sn. 002033

MORNER PLUT
P₁ = 3229.27
P₁₀ = 918.71
CC = 0.999948
PERIOD = 2



$\log((1-Dt)/Dt)$

PRESSURE (psia)

THIS INFORMATION IS SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS ON PAGE 1.

Lease Name Gavilan

Well No. 1-E

Test No. 1

Lease Owner NW Expl.

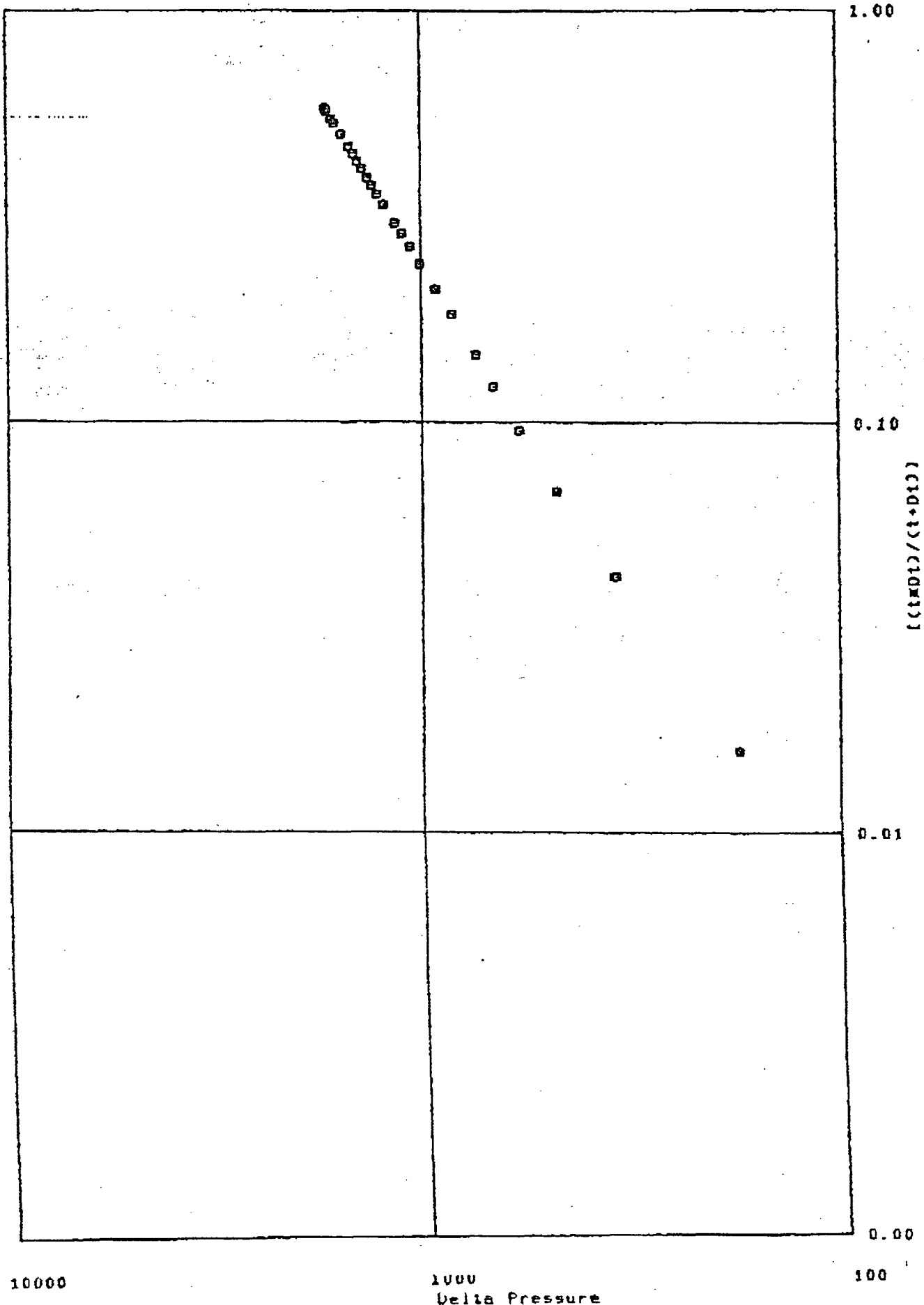
Date 6-29-83

Ticket no. 269511

Gauge Sn. 002033

Log-Log PLOT

PERIOD # 2



10000

1000

100

Delta Pressure

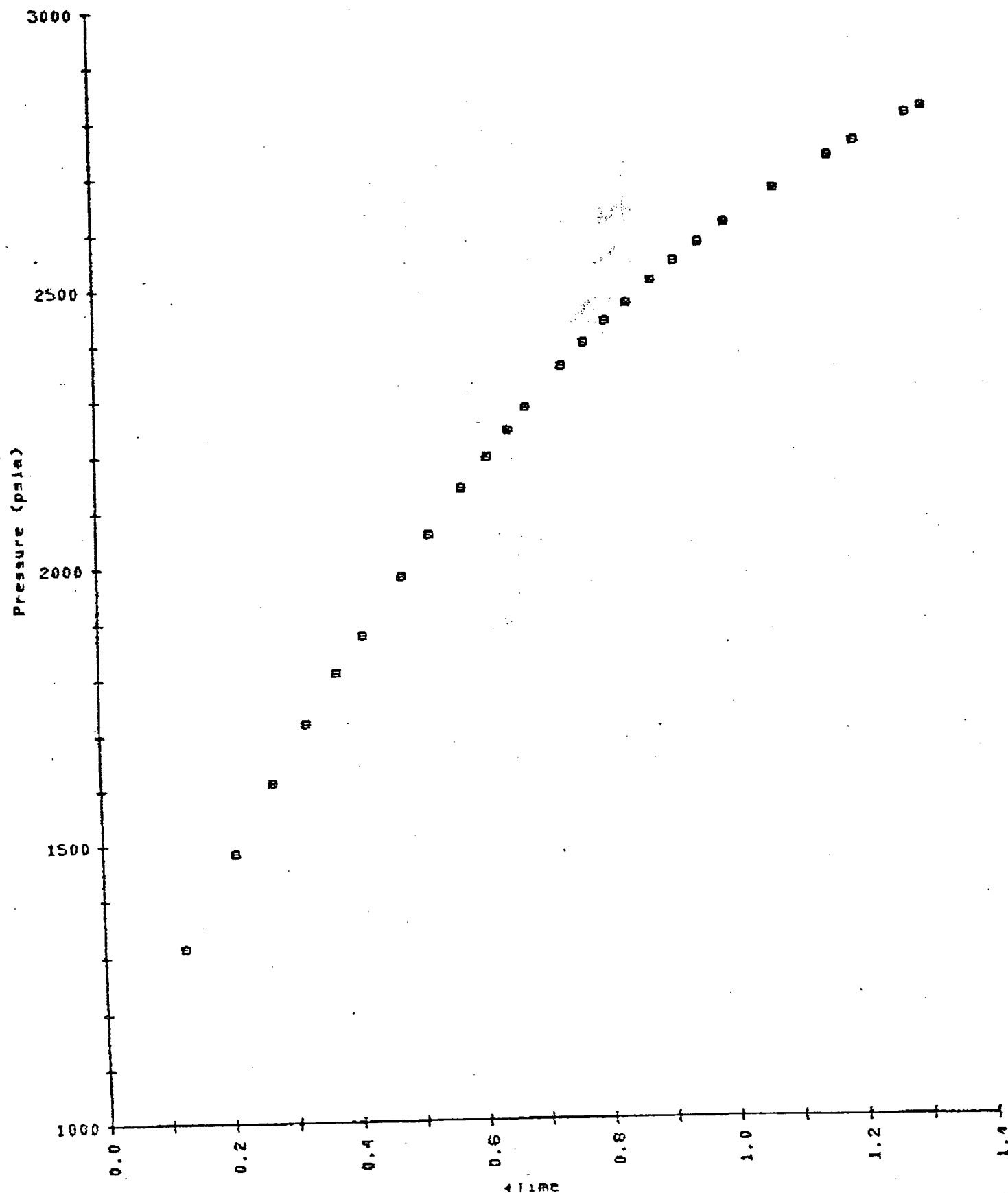
NOTICE: THIS INFORMATION IS SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS OF THE

Lease Name Gavilan
Lease Owner HW Expl.
Gauge Sn. 002033

Well No. 1-E
Date 6-29-83

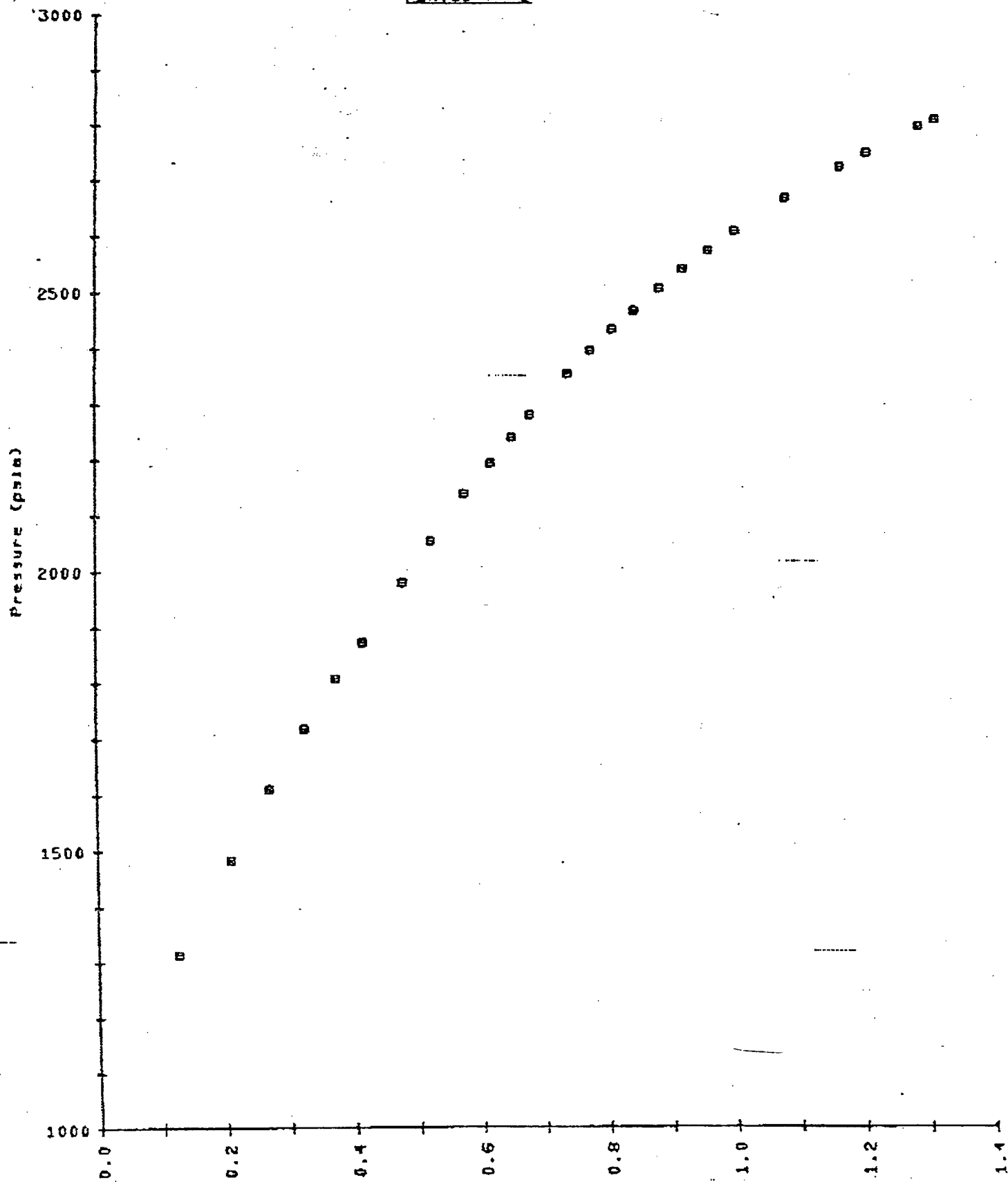
Test No. 1
Ticket no. 269611

PRESS. vs TIME
PERIOD # 2



NOTICE: THIS INFORMATION IS SUBJECT TO THE LIMITATION OF LIABILITY PROVISIONS OF CASE 1.

PERIOD # 2



HALLIBURTON SERVICES

Lease Name <u>Gavilan</u>	Well No. <u>1-E</u>	Test No. <u>1</u>
Lease Owner <u>NW Expl.</u>	Date <u>6-29-83</u>	Ticket no. <u>269611</u>
Gauge Sn. <u>002033</u>		

LIQUID PRODUCTION FOR OIL PERIOD # 2

OIL GRAVITY	40.000000	W60	% SALT	0.000000
GAS GRAVITY	0.000000		FLUID GRADIENT	0.357504 psi/ft
GAS/OIL RATIO	0.000000	cfpb	FORMATION VOL FACTOR	1.000000 v/v
TEMPERATURE	185.000000	F	FLUID PROPERTIES AT	2852.406417 Psia
VISCOSITY	0.983304	cp	NET PAY	18.000000 ft
API GRAVITY	40.000000			
PIPE CAPACITY FACTORS	0.000000		0.003866 bbl/ft	

GAUGE DEPTH		7772.500000	ft
FINAL FLOW PRESSURE	Pf	1138.634043	Psia
TOTAL FLOW TIME	t	51.9333333	min
EXTRAPOLATED PRESS.	Pa	3229.268782	Psia
ONE CYCLE PRESSURE		918.710702	Psia
PRODUCTION RATE	Q	2.928000	BPD
TRANSMISSIBILITY	kh/u	0.206051	mf/c
FLOW CAPACITY	kh	0.202611	mdft
PERMEABILITY	k	0.011256	md
DAMAGE RATIO	DR	0.165582	
POTENTIAL RATE	Q1	2.928000	BPD
RADIUS OF INVEST.	ri	3.539967	ft