Superior Testers Enterprises, Inc.

R.R. 3, Box 295B, Great Bend, Kansas 67530

(316) 792-6902

Date 10-25-01 Location 100'N C-N/2-N/2 13-24S-17W Elevation 2008 KB 2000 GL County Edwards

Company F.G. Holl Company L.L.C.

Number of Copies 5

Charts Mailed to 6427 East Kellogg P.O. Box 780167 Wichita, KS 67278-0167

Drilling Contractor Sterling Drilling Co.

Length Drill Pipe 2045 I.D. Drill Pipe 3.80 Tool Joint Size 4½ XH

Length Weight Pipe None I.D. Weight Pipe None Tool Joint Size None

Length Drill Collars 249 I.D. Drill Collars 2.25 Tool Joint Size 4½ XH

Top Packer Depth 2315 Bottom Packer Depth 2320 Number of Packers 2 Packer Size 6¾"

TESTED FROM 2320 TO 2345 ANCHOR LENGTH 25 TOTAL DEPTH 2345 Hole Size 7⅞"

LEASE & WELL NO. Hadley #12-13 FORMATION TESTED Toronto TEST NO. 1

Mud Weight 8.9 Viscosity 58 Water Loss 8.8 Chlorides - Pits 12000 D.S.T.

Maximum Temp. 84 °F Initial Hydrostatic Pressure (A) 1137 P.S.I. Final Hydrostatic Pressure (H) 1151 P.S.I.

Tool Open I.F.P. from 12:15 Am to 12:45 Am 30 min

Tool Closed I.C.I.P. from 12:45 Am to 1:45 Am 60 min

Tool Open F.F.P. from 1:45 Am to 2:45 Am 60 min

Tool Closed F.C.I.P. from 2:45 Am to 4:15 Am 90 min

from [B]	143 P.S.I. to [C]	209	P.S.I.
[D]	504		P.S.I.
from [E]	160 P.S.I. to [F]	208	P.S.I.
[G]	493		P.S.I.

Initial Blow Strong Blow - Gas to Surface in 5 minutes

Final Blow Strong Blow - See Gas Flow Report

Total Feet Recovered 125 Gravity of Oil Corrected

125 Feet of Gassy Mud %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Feet of %Gas %Oil %Mud %Water

Remarks

Extra Equipment - Jars Yes Safety Joint Yes Extra Packer None Straddle None Hook Wall None

Top Recorder No. 7825 Clock No. Electronic Depth 2338 Cir. Sub None Sampler None

Bottom Recorder No. 5463 Clock No. 4441 Depth 2342 Insurance None

Price of Job

Tool Operator Lee Ruby

Approved By

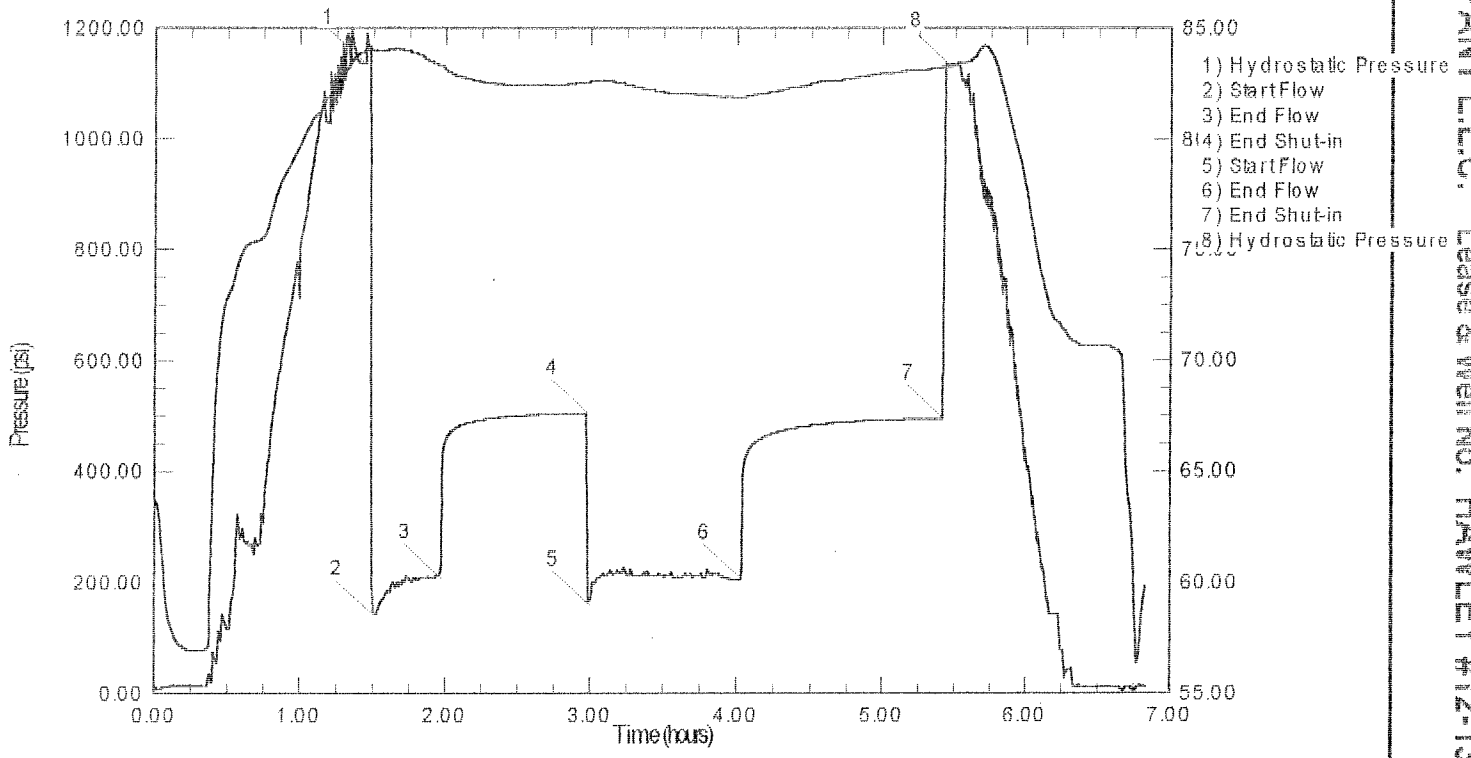
No. 14020

Superior Testers Enterprises, Inc. shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made, of for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

SUPERIOR TESTERS ENTERPRISES INC.

Great Bend, Kansas | CHART DATA | (316) 792-6902

State ..... KANSAS	*Test Date* ..... October 25, 2001
County ..... EDWARDS	*Sec Town Range* 13-24S-17W
Field	*Report Number* 14020



Field Reading

(1)	Initial Hydrostatic Pressure	1139
(2)	Initial Flow Pressure	143
(3)	Final Initial Flow Pressure	209
(4)	Initial Shut-In Pressure	504
(5)	Initial Final Flow Pressure	160
(6)	Final Flow Pressure	208
(7)	Final Shut-In Pressure	493
(8)	Final Hydrostatic Pressure	1131

ELECTRONIC RECORDER DEPTH 2338 FT, RECORDER NUMBER 78225

Company: F.G.HOLL COMPANY, L.L.C. Lease & Well No. HAWLEY #2-13 Test #: 1 Date: 10-25-2001 SEC. 13 TWP. 24S RGE. 17W

SUPERIOR TESTERS ENTERPRISES INC.

DRILL STEM TEST REPORT

GREAT BEND ,KANSAS 67530 (316)792-6902

GENERAL INFORMATION

COMPANY NAME	F.G.HOLL COMPANY L.L.C.		
TEST DATE	10/25/01	LEASE AND WELL NUMBER	HAWLEY #12-13
SECTION-TOWN-RANGE	13-24S-17W	FORMATION TESTED	FORT RILEY
STATE	KANSAS	DRILL STEM TEST NUMBER	1
COUNTY	EDWARDS	REPORT NUMBER	14020
ELEVATION GROUND LEVEL	2097	ELEVATION KELLY BUSHINGS	2108
COMPANY REPRESENTATIVE	KENT ROBERTS	TESTING ENGINEER	GENE BUDIG

TOOL SETTING INFORMATION

		TOP PACKER DEPTH	2315
TEST INTERVAL (From)	2320	BOTTOM PACKER DEPTH	2320
TEST INTERVAL (to)	2345	NUMBER OF PACKERS	2
ANCHOR LENGTH	25	PACKER SIZE	6 3/4
TOTAL DEPTH (ft)	2345	HOLE SIZE	7 7/8

FLOW TIMES

INITIAL OPEN

TOOL OPEN (from)	12:15
TOOL OPEN (to)	12:45
DURATION (min.)	30

INITIAL SHUT-IN

TOOL CLOSED (from)	12:45
TOOL CLOSED (to)	1:45
DURATION (min.)	60

FINAL OPEN

TOOL OPEN (from)	1:45
TOOL OPEN (to)	2:45
DURATION (min.)	60

FINAL SHUT-IN

TOOL CLOSED (from)	2:45
TOOL CLOSED (to)	4:15
DURATION (min.)	90

PRESSURE READINGS

INITIAL HYDROSTATIC	1139
INITIAL FLOW	143
FINAL INITIAL FLOW	209
INITIAL SHUT-IN	504
INITIAL FINAL FLOW	160
FINAL FLOW	208
FINAL SHUT-IN	493
FINAL HYDROSTATIC	1131
MAXIMUM TEMPERATURE	84
TOP RECORDER DEPTH	2338
RECORDER NUMBER	78225
BOTTOM RECORDER DEPTH	2342
RECORDER NUMBER	5463

INITIAL BLOW: STRONG BLOW WITH GAS TO SURFACE IN 3 MINUTES

FINAL BLOW: STRONG BLOW-SEE GAS FLOW REPORT

EXTRA EQUIPMENT

		EXTRA PACKER (3RD)	NO
JARS	YES	EXTRA PACKER (4TH)	NO
SAFETY JOINT	YES	STRADDLE	NO
ELECTRONIC RECORDER	YES	HOOK WALL	NO
CIRCULATING SUB	NO	SAMPLER	NO

SUPERIOR TESTERS ENTERPRISES INC.

DRILL STEM TEST REPORT

GREAT BEND ,KANSAS 67530 (316)792-6902

WELL INFORMATION

DRILLING CONTRACTOR	STERLING DRILLING RIG#4		
DRILL PIPE LENGTH	2045	DRILL COLLAR LENGTH	249
DRILL PIPE I.D.	3.8	DRILL COLLAR I.D.	2.25
TOOL JOINT SIZE	4 1/2 X.H.	TOOL JOINT SIZE	4 1/2 X.H.
WEIGHT PIPE LENGTH		MUD WEIGHT #/GAL	8.9
WEIGHT PIPE I.D.	2.25	VISCOSITY	78
TOOL JOINT SIZE	4 1/2 X.H.	WATER LOSS	8.8
		CHLORIDES-PITS	12000
		CHLORIDES-DST	

	FEET OF RECOVERY	RECOVERY DECRIPTION	% GAS	% OIL	% MUD	% WATER
1)	125	GASSY MUD				
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						
		TOTAL RECOVERY				

COMMENTS

SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND,KANSAS | GAS FLOW RATE | (316) 792-6902

#

STATE..... KANSAS — *Test Date* ..... ######

COUNTY..... EDWARDS — *Sec Town Range* 13-24S-17W

FIELD..... — *Report Number* 14020

Initial Flow

Comments	Time (hh:mm:ss)	Period dt (min)	Inches H20 Orfice Tester	PSI on Orfice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)
TOOL OPENED	12:20	5	20	3.00		1 1/2	311.000
AT 12:15	12:30	15		3.50		1 1/2	654.000
WITH GAS TO	12:40	25		3.50		1 1/2	709.000
SURFACE IN 3	12:45	30		3.50		1 1/2	709.000
MINUTES AT							
12:18							

Final Flow

Comments	Time (hh:mm:ss)	Period dt (min)	Inches H20 Orfice Tester	PSI on Orfice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)
TOOL OPENED	1:55	10		4.00		1 1/2	764.000
AT 1:45	2:05	20		4.00		1 1/2	764.000
	2:15	30		4.00		1 1/2	764.000
	2:25	40		4.00		1 1/2	764.000
	2:35	50		4.00		1 1/2	764.000
	2:45	60		4.00		1 1/2	764.000

SUPERIOR TESTERS ENTERPRISES INC.

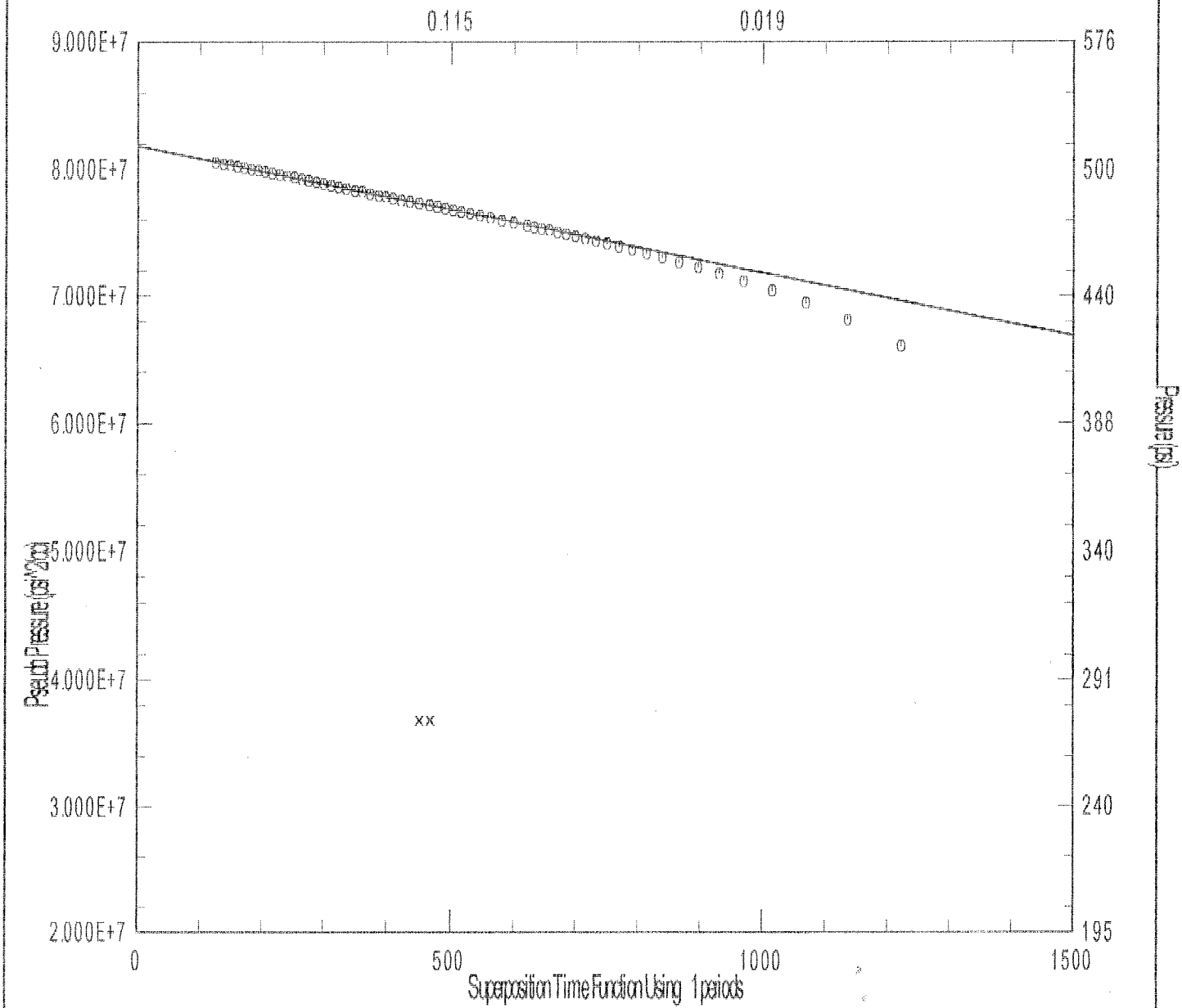
GREAT BEND,KANSAS

SUPERPOSITION ANALYSIS

(316) 792-6902

1ST SHUT-IN

State ..... KANSAS	*Test Date* 10/25/01
County ..... EDWARDS	*Sec Town Range* 13-24S-17W
Field	*Report Number* 14020

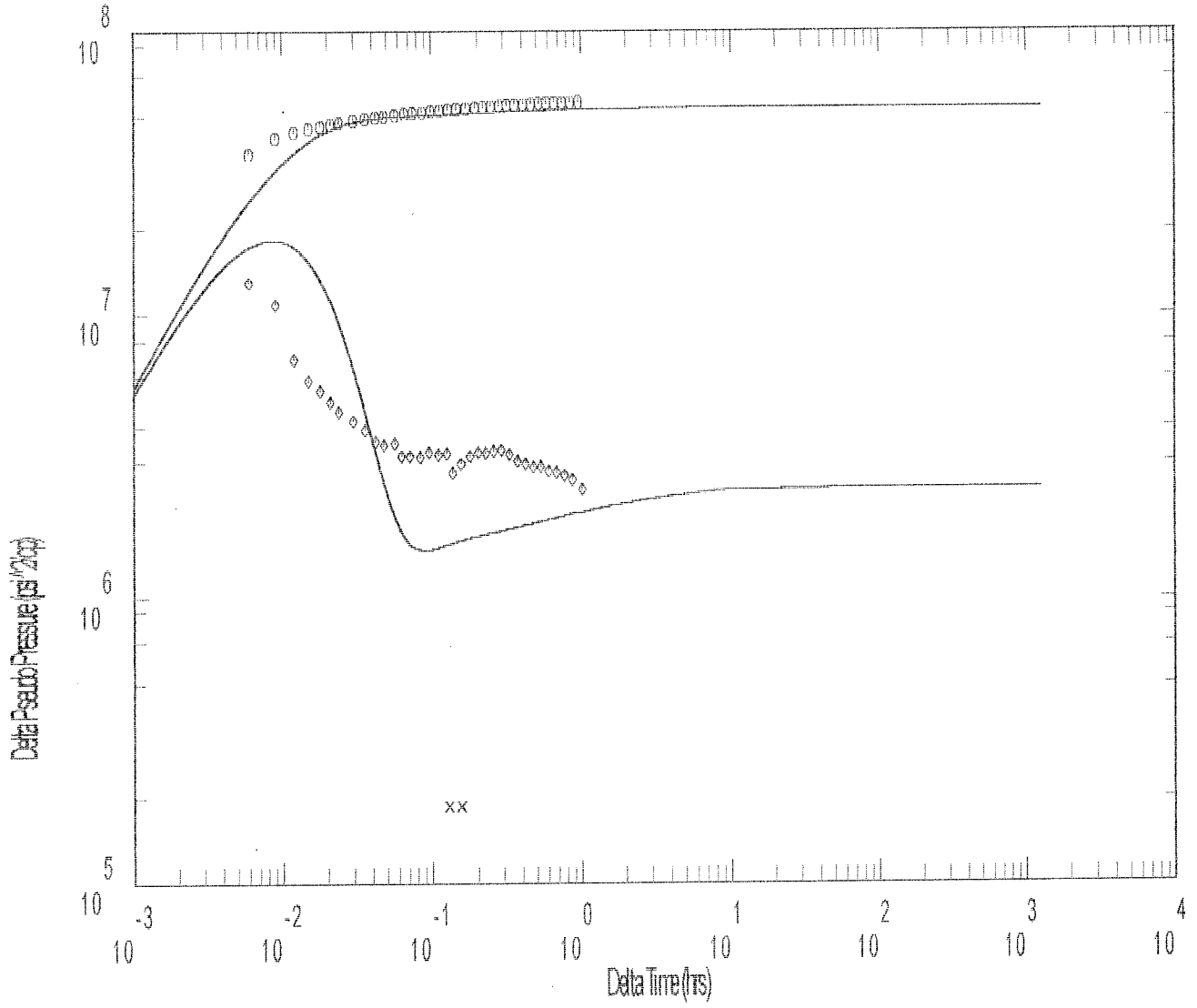


SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND,KANSAS | LOG-LOG ANALYSIS | (316) 792-6902

1ST SHUT-IN

State ..... KANSAS	*Test Date* 10/25/01
County ..... EDWARDS	*Sec Town Range* 13-24S-17W
Field	*Report Number* 14020



MODEL RESULTS

Constant Storage	Skin Model	Homogeneous	No Boundaries	h : 10 ft
C1 : 0.002 bbl/psi	Skin : 9.55	k : 10.953 md		mu : 0.013 cp
		Est Pi: 488.0 psi		phi : 18.0%
				ct : 3.675E-03 1/psi
				rw : 6.417 ft
				BHT : 84 F
				FVF : 2.29

Field :		**Date Printed:**	10/28/01 20:45:40
County or Parish :		**Analysis Period :**	End Flow - End 1st Shut-in
State :		**Comment :**	Line #

Superposition Slope -> m'	-9976.483000
Horner Slope -> m	-7.073327E+6
Intercept	8.183E+7
P(dt=1 hr)	8.065E+7
Pwf	2.411E+7
R Sqr	0.9994
Intercept (psi)	512.111
k (md)	8.92627
kh (md-ft)	89.26272
k/u (md/cp)	676.23270
kh/uB (md-ft/cp)	6762.32697
Skin	7.8567
DP Skin	242.7492
Total DP	300.8522
Percent DP	80.69%
Radius Invest (ft)	33
Radius Time (hrs)	1.01
Delta Q =	709
h (ft)=	10
mu (cp) =	0.0132
B (stb/scf) =	2.2900
First Point #	26
Second Point #	298
Start Real Time	0.081
End Real Time	0.954
Start SF Time	589.209

SUPERIOR TESTERS ENTERPRISES INC.

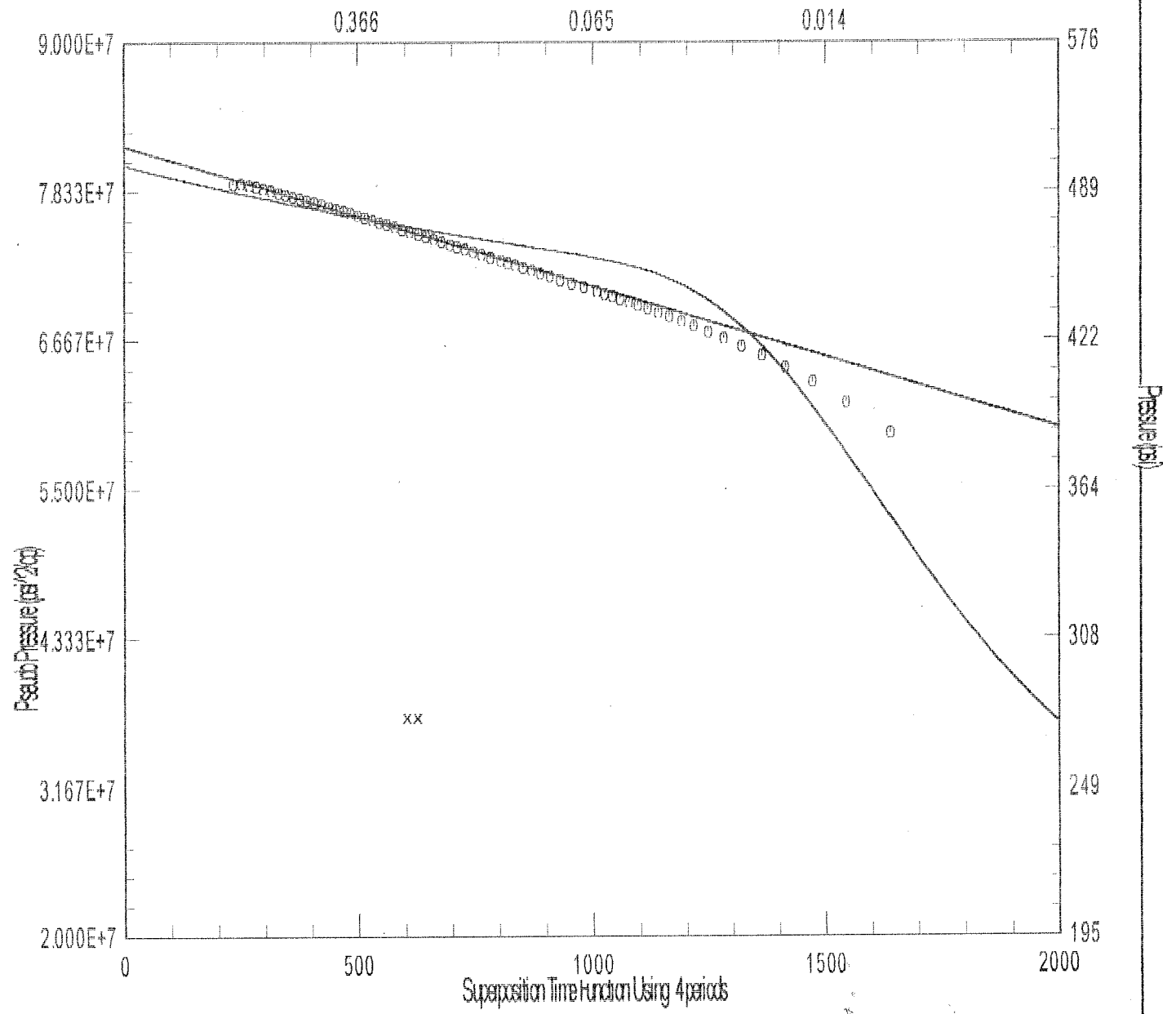
GREAT BEND,KANSAS

SUPERPOSITION ANALYSIS

(316) 792-6902

2ND SHUT-IN

State ..... KANSAS	*Test Date* 10/25/01
County ..... EDWARDS	*Sec Town Range* 13-24S-17W
Field	*Report Number* 14020



SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND ,KANSAS

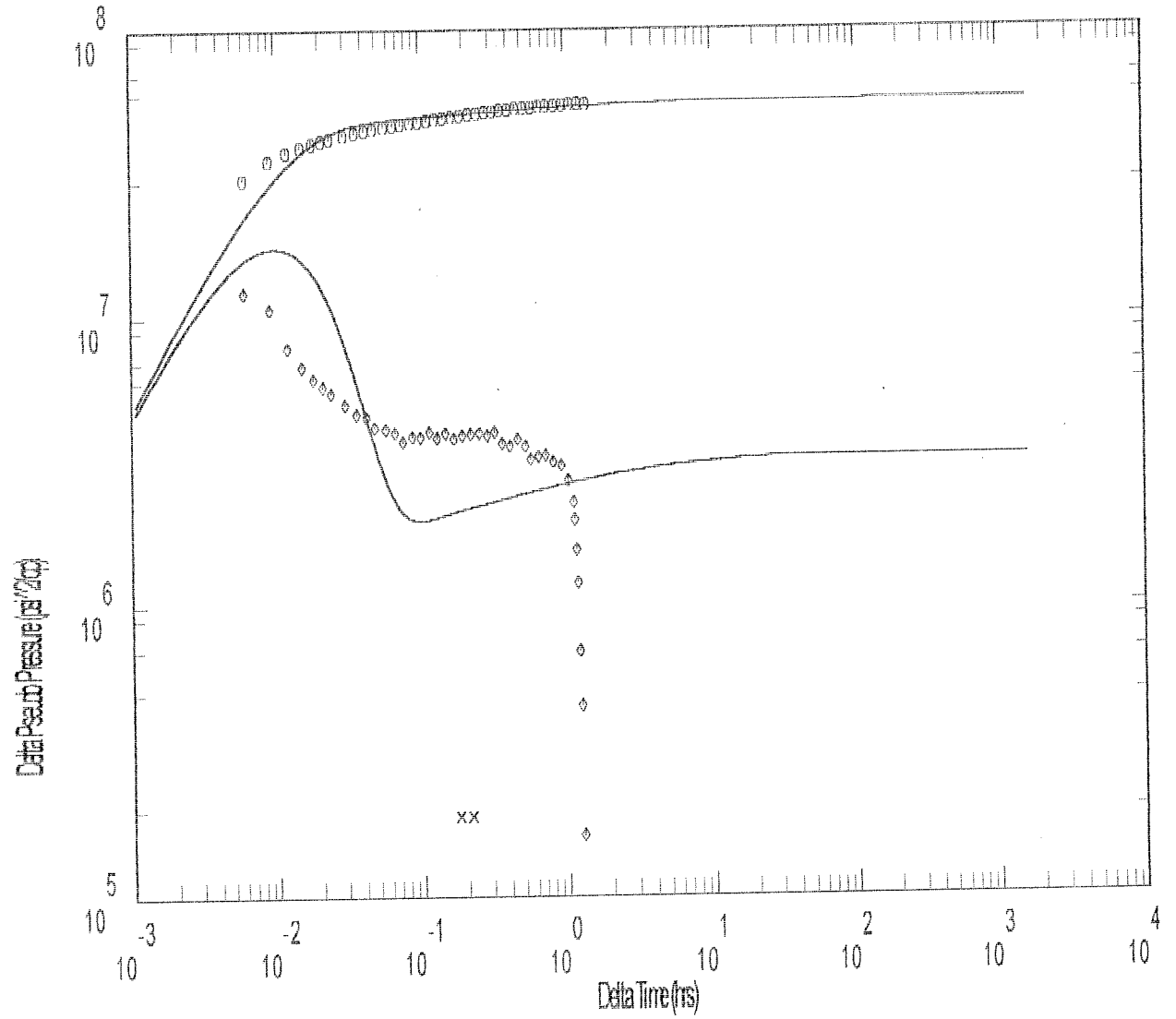
LOG-LOG ANALYSIS

(316) 792-6902

2ND SHUT-IN

State ..... KANSAS
County ..... EDWARDS
Field .....

Test Date 10/25/01
Sec Town Range 13-24S-17W
Report Number 14020



MODEL RESULTS

Constant Storage	Skin Model	Homogeneous	No Boundaries	h : 10 ft
C1 : 0.003 bbl/psi	Skin : 6.90	k : 8.847 md		mu : 0.013 cp
		Est Pi: 502.6 psi		phi : 18.0%
				ct : 3.675E-03 1/psi
				rw : 6.417 ft
				BHT : 84 F
				FVF : 2.29

Field :		**Date Printed:**	10/28/01 20:56:51
County or Parish :		**Analysis Period :**	End Flow - End 2nd Shut-in
State :		**Comment :**	Line #

Superposition Slope -> m'	-11035.430000
Horner Slope -> m	-8.431066E+6
Intercept	8.188E+7
P(dt=1 hr)	7.879E+7
Pwf	2.388E+7
R Sqr	0.9969
Intercept (psi)	512.455
k (md)	8.06972
kh (md-ft)	80.69720
k/u (md/cp)	611.34240
kh/uB (md-ft/cp)	6113.42400
Skin	6.2038
DP Skin	226.4610
Total DP	302.0565
Percent DP	74.97%
Radius Invest (ft)	37
Radius Time (hrs)	1.40
Delta Q =	764
h (ft)=	10
mu (cp) =	0.0132
B (stb/scf) =	2.2900
First Point #	39
Second Point #	299
Start Real Time	0.120
End Real Time	1.341
Start SF Time	811.152

Superior Testers Enterprises, Inc.

R.R. 3, Box 295B, Great Bend, Kansas 67530
(316) 792-6902

Date 10-26-2001 Location 50'W C NE-NW 13-20S-17W Elevation 2008 KB 2007 GL County Edwards

Company F.G. Holl Company LLC, Number of Copies 5

Charts Mailed to 6427 East Kellogg P.O. Box 780167 Wichita Kansas 67278-0167

Drilling Contractor Sterling Drilling Co. #4

Length Drill Pipe 2103 I.D. Drill Pipe 3.80 Tool Joint Size 4½" X.H

Length Weight Pipe None I.D. Weight Pipe None Tool Joint Size None

Length Drill Collars 249 I.D. Drill Collars 2.25 Tool Joint Size 4½" X.H.

Top Packer Depth 2372 Bottom Packer Depth 2377 Number of Packers 2 Packer Size 6¾"

TESTED FROM 2377 TO 2403 ANCHOR LENGTH 26 TOTAL DEPTH 2403 Hole Size 7⅞"

LEASE & WELL NO. Hawley #12-13 FORMATION TESTED Florence TEST NO. 2

Mud Weight 9.3 Viscosity 69 Water Loss 12.4 Chlorides - Pits 3200 D.S.T. 68000

Maximum Temp. 90 °F Initial Hydrostatic Pressure (A) 1162 P.S.I. Final Hydrostatic Pressure (H) 1133 P.S.I

Tool Open I.F.P. from 7:45 pm to 8:15 pm 30 min

Tool Closed I.C.I.P. from 8:15 pm to 9:15 pm 60 min

Tool Open F.F.P. from 9:15 pm to 9:45 pm 30 min

Tool Closed F.C.I.P. from 9:45 pm to 10:45 pm 60 min

from [B]	61 P.S.I.	to [C]	85 P.S.I.
[D]	516 P.S.I.		
from [E]	79 P.S.I.	to [F]	160 P.S.I.
[G]	510 P.S.I.		

Initial Blow Fair blow built to the Bottom of a 5 Gallon Bucket in 2 minutes

Final Blow Strong blow - Gas to Surface in 3 minutes - See Gas Flow Report

Total Feet Recovered 250 Gravity of Oil _____ Corrected

250 Feet of Muddy Gassy water %Gas ___ %Oil ___ %Mud ___ %Water

_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

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_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

_____ Feet of _____ %Gas ___ %Oil ___ %Mud ___ %Water

Remarks _____

Extra Equipment - Jars Yes Safety Joint Yes Extra Packer None Straddle None Hook Wall None

Top Recorder No. 78228 Clock No. Electronic Depth _____ Cir. Sub None Sampler None

Bottom Recorder No. 5463 Clock No. 47441 Depth 2400 Insurance None

Price of Job _____

Tool Operator Dave Bentley

Approved By _____

Superior Testers Enterprises, Inc. shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made, of for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

№ 14021

SUPERIOR TESTERS ENTERPRISES INC.

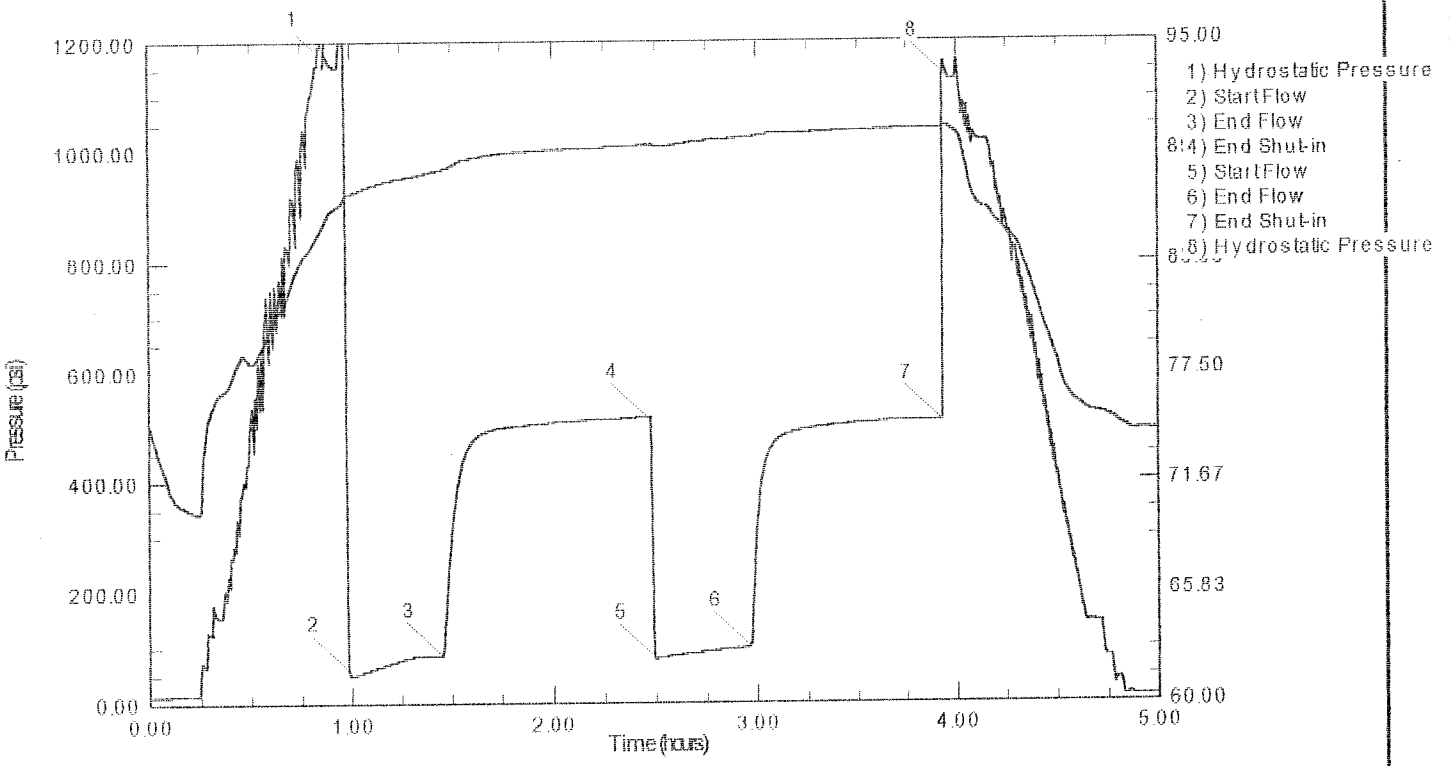
Great Bend, Kansas

CHART DATA

(316) 792-6902

State ..... KANSAS
County ..... EDWARDS
Field .....

Test Date ..... October 26, 2001
Sec Town Range 13-24S-17W
Report Number 14021



Field Reading

(1)	Initial Hydrostatic Pressure	1162
(2)	Initial Flow Pressure	61
(3)	Final Initial Flow Pressure	85
(4)	Initial Shut-In Pressure	516
(5)	Initial Final Flow Pressure	79
(6)	Final Flow Pressure	100
(7)	Final Shut-In Pressure	510
(8)	Final Hydrostatic Pressure	1133

ELECTRONIC RECORDER DEPTH 2396 FT, RECORDER NUMBER 78225

Company: F.G. HOLL COMPANY, L.L.C. Lease & Well No. HAWLEY #2-13 Test #: 2 Date: 10-26-2001 SEC. 13 TWP. 24S RGE. 17W

SUPERIOR TESTERS ENTERPRISES INC.

DRILL STEM TEST REPORT

GREAT BEND ,KANSAS 67530 (316)792-6902

GENERAL INFORMATION

COMPANY NAME	F.G.HOLL COMPANY L.L.C.'		
TEST DATE	10/26/01	LEASE AND WELL NUMBER	HAWLEY #12-13
SECTION-TOWN-RANGE	13-24S-17W	FORMATION TESTED	FLORENCE
STATE	KANSAS	DRILL STEM TEST NUMBER	2
COUNTY	EDWARDS	REPORT NUMBER	14021
ELEVATION GROUND LEVEL	2097	ELEVATION KELLY BUSHINGS	2108
COMPANY REPRESENTATIVE	KENT ROBERTS	TESTING ENGINEER	GENE BUDIG

TOOL SETTING INFORMATION

		TOP PACKER DEPTH	2372
TEST INTERVAL (From)	2377	BOTTOM PACKER DEPTH	2377
TEST INTERVAL (to)	2403	NUMBER OF PACKERS	2
ANCHOR LENGTH	26	PACKER SIZE	6 3/4
TOTAL DEPTH (ft)	2403	HOLE SIZE	7 7/8

FLOW TIMES

INITIAL OPEN

TOOL OPEN (from)	7:45
TOOL OPEN (to)	8:15
DURATION (min.)	30

INITIAL SHUT-IN

TOOL CLOSED (from)	8:15
TOOL CLOSED (to)	9:15
DURATION (min.)	60

FINAL OPEN

TOOL OPEN (from)	9:15
TOOL OPEN (to)	9:45
DURATION (min.)	30

FINAL SHUT-IN

TOOL CLOSED (from)	9:45
TOOL CLOSED (to)	10:45
DURATION (min.)	60

PRESSURE READINGS

INITIAL HYDROSTATIC	1162
INITIAL FLOW	61
FINAL INITIAL FLOW	85
INITIAL SHUT-IN	516
INITIAL FINAL FLOW	79
FINAL FLOW	100
FINAL SHUT-IN	510
FINAL HYDROSTATIC	1133
MAXIMUM TEMPERATURE	90
TOP RECORDER DEPTH	2396
RECORDER NUMBER	78225
BOTTOM RECORDER DEPTH	2403
RECORDER NUMBER	5463

INITIAL BLOW — GOOD BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 2 MINUTES

FINAL BLOW — STRONG BLOW WITH GAS TO SURFACE IN 3 MINUTES SEE GAS FLOW REPORT

EXTRA EQUIPMENT

		EXTRA PACKER (3RD)	NO
JARS	YES	EXTRA PACKER (4TH)	NO
SAFETY JOINT	YES	STRADDLE	NO
ELECTRONIC RECORDER	YES	HOOK WALL	NO
CIRCULATING SUB	NO	SAMPLER	NO

SUPERIOR TESTERS ENTERPRISES INC.

DRILL STEM TEST REPORT

GREAT BEND ,KANSAS 67530 (316)792-6902

WELL INFORMATION

DRILLING CONTRACTOR	STERLING DRILLING RIG #4		
DRILL PIPE LENGTH	2103	DRILL COLLAR LENGTH	249
DRILL PIPE I.D.	3.8	DRILL COLLAR I.D.	2.25
TOOL JOINT SIZE	4 1/2 X.H.	TOOL JOINT SIZE	4 1/2 X.H.
WEIGHT PIPE LENGTH		MUD WEIGHT #/GAL	9.3
WEIGHT PIPE I.D.	2.25	VISCOSITY	69
TOOL JOINT SIZE	4 1/2 X.H.	WATER LOSS	12
		CHLORIDES-PITS	32000
		CHLORIDES-DST	68000

	FEET OF RECOVERY	RECOVERY DECRIPTION	% GAS	% OIL	% MUD	% WATER
1)	250	GASSY MUDDY WATER CHLORIDES 68000				
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						
		TOTAL RECOVERY				

COMMENTS

SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND,KANSAS | GAS FLOW RATE | (316) 792-6902

#

STATE..... KANSAS
COUNTY..... EDWARDS
FIELD.....

Test Date ..... #######
Sec Town Range 13-24S-17W
Report Number 14021

Initial Flow

Comments	Time (hh:mm:ss)	Period dt (min)	Inches H20 Orfice Tester	PSI on Orfice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)

Final Flow

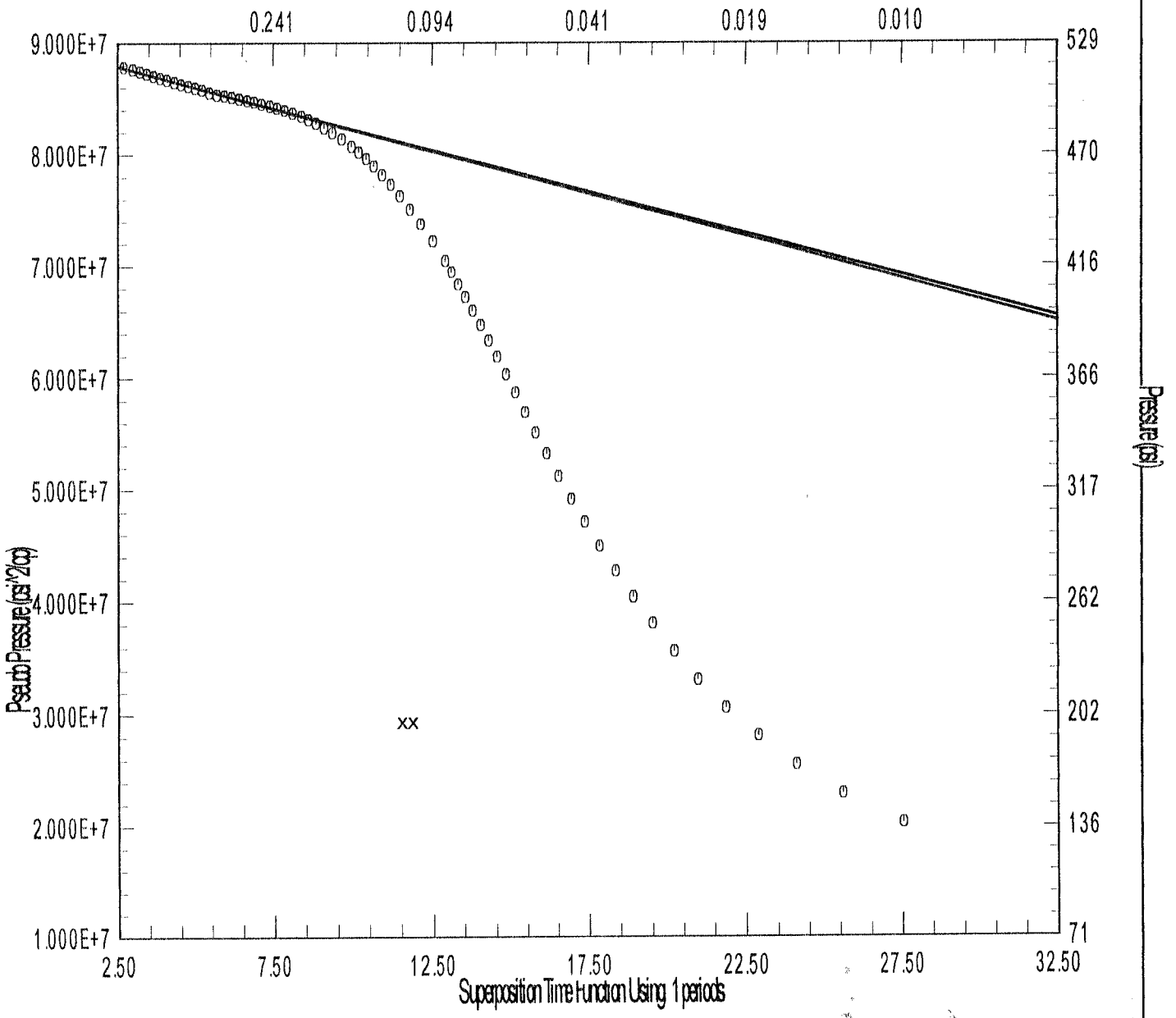
Comments	Time (hh:mm:ss)	Period dt (min)	Inches H20 Orfice Tester	PSI on Orfice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)
TOOL OPENED	9:20	5	10			1/2	19.900
AT 9:15	9:30	15	6			1/2	15.400
WITH GAS TO	9:40	25	20			1/2	15.900
SURFACE IN	9:45	30	20			1/2	15.900
3 MINUTES AT 9:18							

SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND,KANSAS | **SUPERPOSITION ANALYSIS** | (316) 792-6902

1ST SHUT-IN

State ..... KANSAS	***Test Date*** 10/26/01
County ..... EDWARDS	***Sec Town Range*** 13-24S-17W
Field	***Report Number*** 14021



Field :		**Date Printed:**	10/29/01 10:37:01
County or Parish :		**Analysis Period :**	End Flow - End Shut-in 1st
State :		**Comment :**	Line #

Superposition Slope -> m'	-7.508828E+5
Horner Slope -> m	-1.193904E+7
Intercept	8.979E+7
P(dt=1 hr)	8.777E+7
Pwf	1.217E+7
R Sqr	0.9949
Intercept (psi)	527.967
k (md)	0.11991
kh (md-ft)	1.19906
k/u (md/cp)	9.36762
kh/uB (md-ft/cp)	93.67620
Skin	7.5479
DP Skin	448.2261
Total DP	443.0967
Percent DP	101.16%
Radius Invest (ft)	3
Radius Time (hrs)	1.00
Delta Q =	16
h (ft)=	10
mu (cp) =	0.0128
B (stb/scf) =	2.4650
First Point #	74
Second Point #	300
Start Real Time	0.225
End Real Time	1.002
Start SF Time	7.856

SUPERIOR TESTERS ENTERPRISES INC.

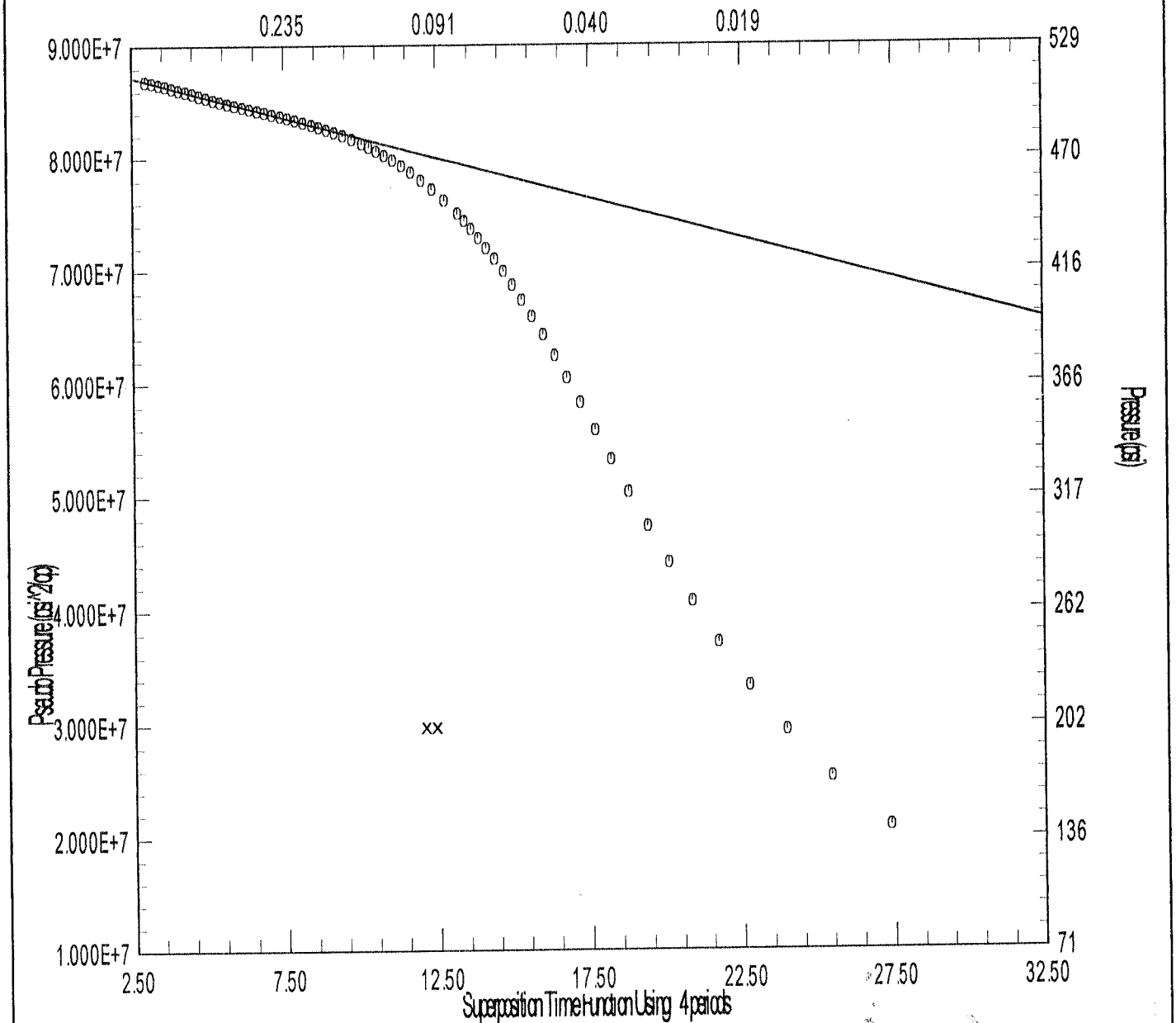
GREAT BEND,KANSAS

SUPERPOSITION ANALYSIS

(316) 792-6902

2ND SHUT-IN

State ..... KANSAS	***Test Date*** 10/26/01
County ..... EDWARDS	***Sec Town Range*** 13-24S-17W
Field	***Report Number*** 14021



SUPERIOR TESTERS ENTERPRISES INC.

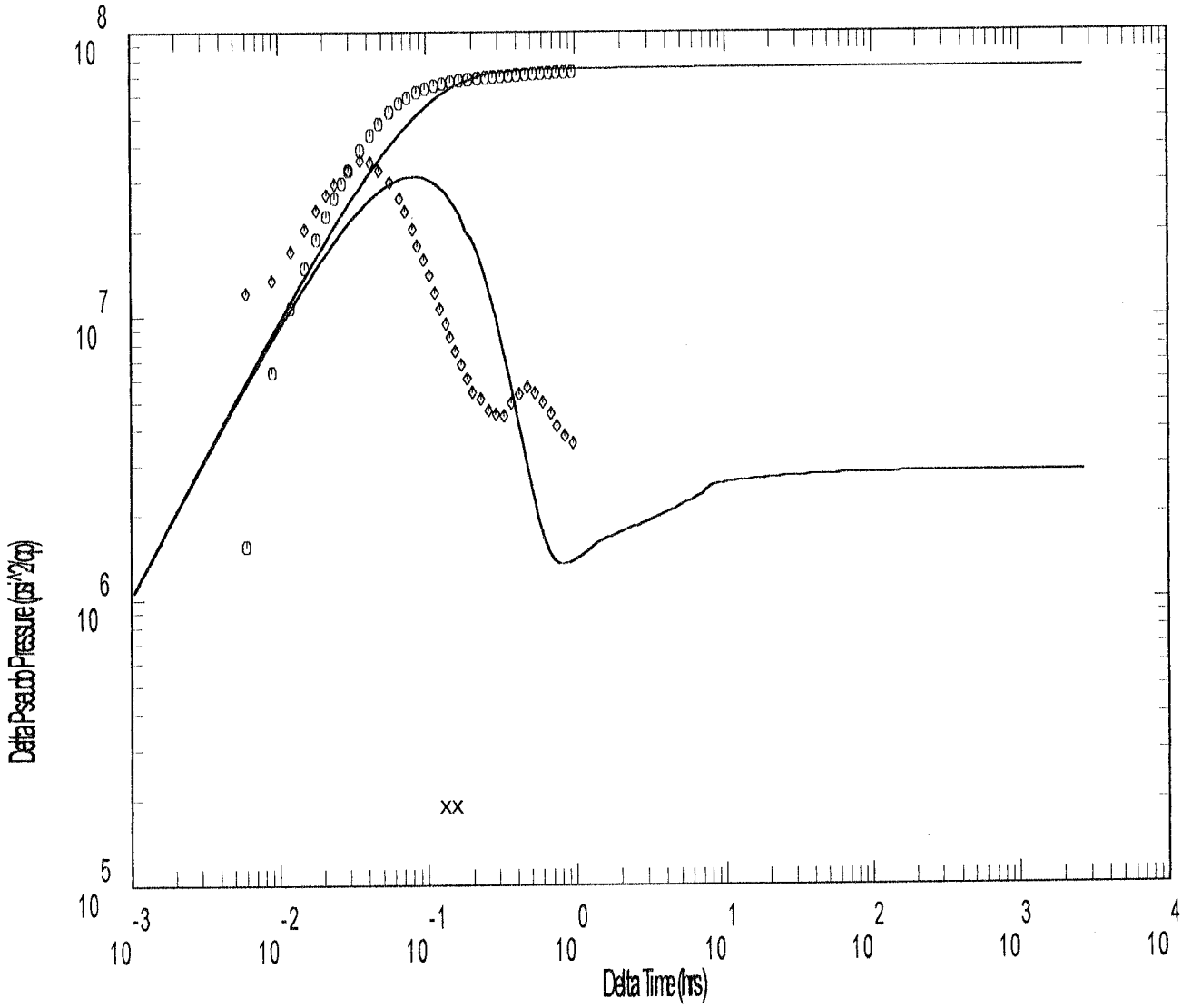
GREAT BEND ,KANSAS

LOG-LOG ANALYSIS

(316) 792-6902

2ND SHUT-IN

State ..... KANSAS	***Test Date*** 10/26/01
County ..... EDWARDS	***Sec Town Range*** 13-24S-17W
Field	***Report Number*** 14021



MODEL RESULTS

Constant Storage	Skin Model	Homogeneous	No Boundaries	h : 10 ft
C1 : 2.790E-4 bbl/psi	Skin : 9.90	k : 0.170 md		mu : 0.013 cp
		Est Pi: 526.4 psi		phi : 18.0%
				ct : 5.036E-03 1/psi
				rw : 3.208 ft
				BHT : 90 F
				FVF : 2.47

Field :		**Date Printed:**	10/29/01 10:25:52
County or Parish :		**Analysis Period :**	End Flow - End 2nd Shut-in
State :		**Comment :**	Line #

Superposition Slope -> m'	-7.243490E+5
Horner Slope -> m	-1.151715E+7
Intercept	8.904E+7
P(dt=1 hr)	8.713E+7
Pwf	1.460E+7
R Sqr	0.9989
Intercept (psi)	523.087
k (md)	0.12430
kh (md-ft)	1.24298
k/u (md/cp)	9.71077
kh/uB (md-ft/cp)	97.10767
Skin	7.4903
DP Skin	426.7602
Total DP	422.7629
Percent DP	100.95%
Radius Invest (ft)	3
Radius Time (hrs)	0.95
Delta Q =	16
h (ft)=	10
mu (cp) =	0.0128
B (stb/scf) =	2.4650
First Point #	52
Second Point #	295
Start Real Time	0.159
End Real Time	0.888
Start SF Time	9.441

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313

Company F. G. Holl Company, LLC — Lease & Well No. Hawley No. 12-13

Elevation 2105 KB — Formation Cottonwood — Effective Pay -- Ft. — Ticket No. 1599

Date 10-29-01 — Sec. 13 — Twp. 24S — Range 17W — County Edwards — State Kansas

Test Approved By Kent Roberts — Diamond Representative Roger D. Friedly

Formation Test No. 4 — Interval Tested from 2,628 ft. to 2,660 ft. — Total Depth 2,660 ft.

Packer Depth 2,623 ft. — Size 6 3/4 in. — Packer Depth -- ft. — Size -- in.

Packer Depth 2,628 ft. — Size 6 3/4 in. — Packer Depth -- ft. — Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 2,609 ft. — Recorder Number Elec. — Cap. 5,000 psi

Bottom Recorder Depth (Outside) 2,657 ft. — Recorder Number 13387 — Cap. 4,000 psi

Below Straddle Recorder Depth ft. — Recorder Number — Cap. psi

Drilling Contractor Sterling Drlg Co. - Rig 4 — Drill Collar Length 249 ft. — I.D. 2 1/4 in.

Mud Type Chemical — Viscosity 39 — Weight Pipe Length -- ft. — I.D. -- in.

Weight 9.3 — Water Loss 8.8 cc. — Drill Pipe Length 2,348 ft. — I.D. 3 1/2 in.

Chlorides 32,000 P.P.M. — Test Tool Length 31 ft. — Tool Size 3 1/2 - IF in.

Jars: Make Bowen — Serial Number 1 — Anchor Length 32 ft. — Size 4 1/2 - FH in.

Did Well Flow? No — Reversed Out No — Surface Choke Size 1 in. — Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. — Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Fair, 2 in., blow increasing. Off bottom of bucket in 4 mins. No blow back during shut-in.
2nd Open: Strong blow. Off bottom of bucket immediately. No blow back during shut-in.

Recovered 144 ft. of slightly water & gas cut mud = .708480 bbls. (Grind out: 20%-water; 20%-gas; 60%-mud)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks No gas odor detected in drill pipe.

Time Set Packer(s) 9:44 ~~A.M.~~ P.M. — Time Started Off Bottom 12:44 ~~A.M.~~ P.M. — Maximum Temperature 95°

Initial Hydrostatic Pressure ..... (A) 1248 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 25 P.S.I. to (C) 35 P.S.I.

Initial Closed In Period ..... Minutes 60 (D) 625 P.S.I.

Final Flow Period ..... Minutes 30 (E) 35 P.S.I. to (F) 63 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 838 P.S.I.

Final Hydrostatic Pressure ..... (H) 1240 P.S.I.

DIAMOND TESTING
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(800) 542-7313

FLUID SAMPLE DATA

Company F. G. Holl Company, LLC

Lease & Well No. Hawley No. 12-13

Date 10-29-01 Sec. 13 Twp. 24 S Range 17 W

Formation Test No. 4 Interval Tested From 2,628 ft. to 2,660 ft. Total Depth 2,660 ft.

Formation Cottonwood

	MUD PIT	RECOVERY
Viscosity	39 CP	36 CP
Weight	9.3	9.0
Water Loss	8.8 CC	13.6 CC
PH Factor	6.5	6.5

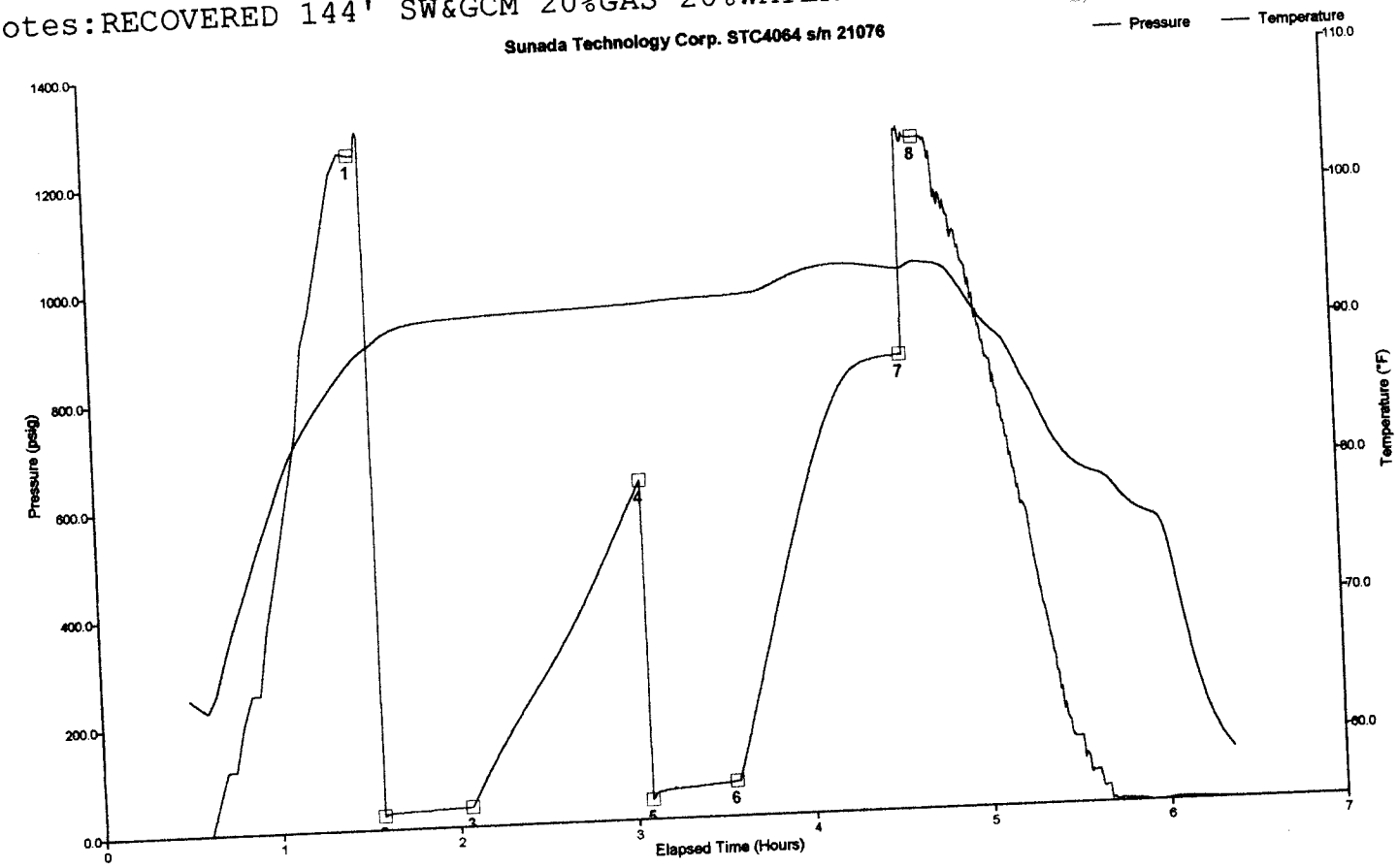
	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	-- @	-- °F.	-- ppm
Recovery Mud	.28 @	48 °F.	36,000 ppm
Recovery Mud Filtrate	.28 @	50 °F.	32,000 ppm
Mud Pit Sample	.24 @	50 °F.	40,000 ppm
Mud Pit Sample Filtrate	.25 @	54 °F.	35,000 ppm

Sample Taken By ROGER D. FRIEDLY

Witness By Kent Roberts

Remarks Pit filtrate triton dish chlorides were 32,000 Ppm.
Recovery filtrate triton dish chlorides were 26,000 Ppm.

Well LSD: DST #4 COTTONWOOD 2628'-2660'
Well Name: HAWLEY 12-13
Company: F G HOLL
Battery on: Oct 29, 2001 at 20:09:00
Notes:RECOVERED 144' SW&GCM 20%GAS 20%WATER 60%MUD.



Tag	Pressure	Temperature	Comment
1	1247.71 psig	89.42 °F	2001-10-29 21:39:30
2	24.71 psig	90.02 °F	2001-10-29 21:43:30
3	35.34 psig	91.83 °F	2001-10-29 22:13:00
4	625.20 psig	92.37 °F	2001-10-29 23:13:30
5	35.32 psig	92.36 °F	2001-10-29 23:14:00
6	63.15 psig	92.70 °F	2001-10-29 23:42:30
7	837.80 psig	94.15 °F	2001-10-30 00:43:00
8	1239.99 psig	94.61 °F	2001-10-30 00:50:00

DST # 4 Outside 13387 2628 - 2660
Clock 13392 Cottonwood LOC 26 5 8.0

