

**SUPERIOR TESTERS ENTERPRISES INC.**

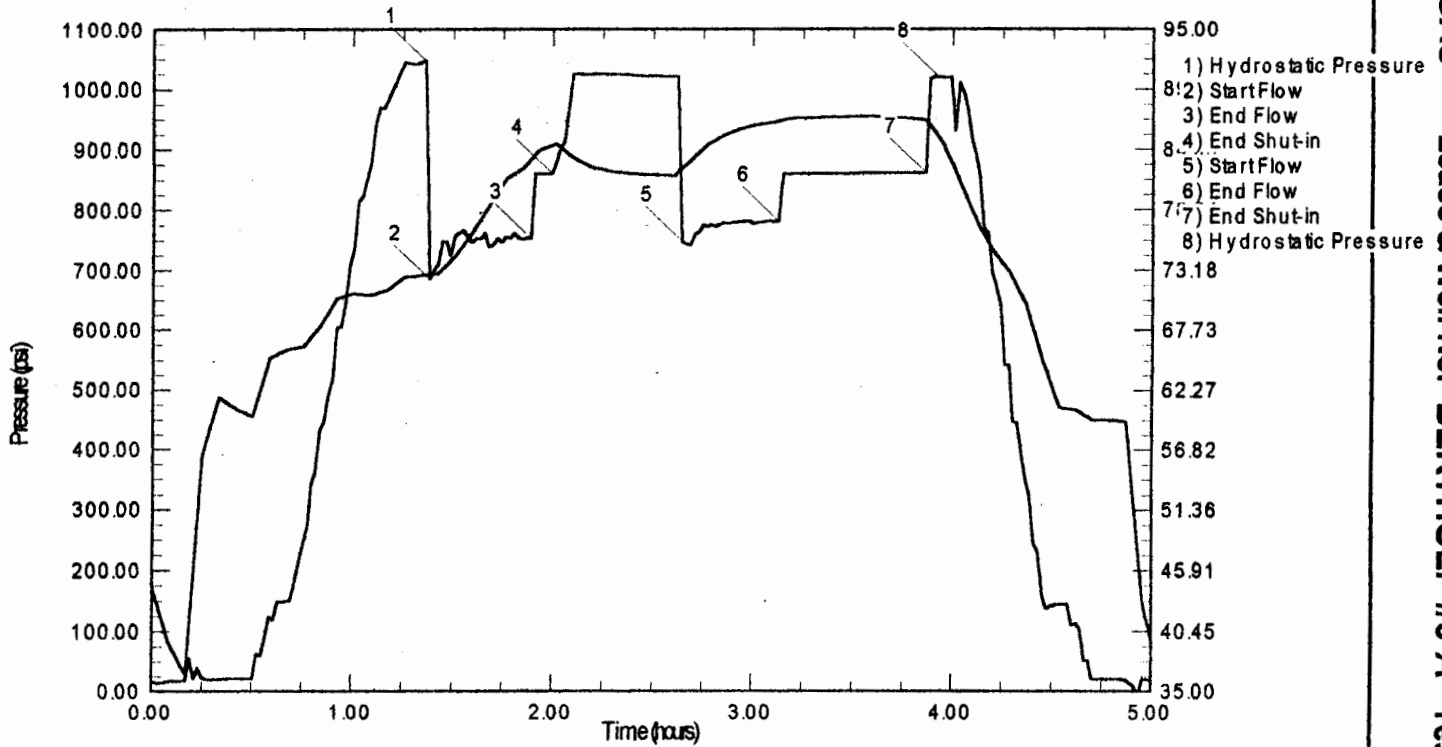
**Great Bend, Kansas**

**CHART DATA**

**(316) 792-6902**

**State** ..... KANSAS  
**County** ..... HARPER  
**Field** .....

**Test Date** ..... February 15, 2003  
**Sec Town Range** ..... 24-31S-9W  
**Report Number** ..... 12348



**Field Reading**

(1)	Initial Hydrostatic Pressure	1047
(2)	Initial Flow Pressure	685
(3)	Final Initial Flow Pressure	753
(4)	Initial Shut-In Pressure	860
(5)	Initial Final Flow Pressure	748
(6)	Final Flow Pressure	781
(7)	Final Shut-In Pressure	861
(8)	Final Hydrostatic Pressure	1020

**ELECTRONIC RECORDER DEPTH 2098 FT, RECORDER NUMBER 87507**

**Company: R & B OIL AND GAS**  
**RGE: 9W**  
**Lease & Well No. BERTHOLF #3-A**  
**Test #: 1**  
**Date: 02-15-2003**  
**SEC. 24 TWP. 31S**

# SUPERIOR TESTERS ENTERPRISES INC.

## DRILL STEM TEST REPORT

GREAT BEND, KANSAS 67530 (316)792-6902

### GENERAL INFORMATION

COMPANY NAME	R & B OIL AND GAS	LEASE AND WELL NUMBER	BERTHOLF #3-A
TEST DATE	2/15/03	FORMATION TESTED	RED EAGLE
SECTION-TOWN-RANGE	24-31S-9W	DRILL STEM TEST NUMBER	1
STATE	KANSAS	REPORT NUMBER	12348
COUNTY	HARPER	ELEVATION KELLY BUSHINGS	1608
ELEVATION GROUND LEVEL	1600	TESTING ENGINEER	GENE BUDIG
COMPANY REPRESENTATIVE	TIM PIERCE		

### TOOL SETTING INFORMATION

TEST INTERVAL (From)	2084	TOP PACKER DEPTH	2079
TEST INTERVAL (to)	2105	BOTTOM PACKER DEPTH	2084
ANCHOR LENGTH	21	NUMBER OF PACKERS	2
TOTAL DEPTH (ft)	2105	PACKER SIZE	6 3/4
		HOLE SIZE	7 7/8

### FLOW TIMES

<i>INITIAL OPEN</i>	
TOOL OPEN (from)	7:30
TOOL OPEN (to)	8:00
DURATION (min.)	30
<i>INITIAL SHUT-IN</i>	
TOOL CLOSED (from)	8:00
TOOL CLOSED (to)	8:45
DURATION (min.)	45
<i>FINAL OPEN</i>	
TOOL OPEN (from)	8:45
TOOL OPEN (to)	9:15
DURATION (min.)	30
<i>FINAL SHUT-IN</i>	
TOOL CLOSED (from)	9:15
TOOL CLOSED (to)	10:00
DURATION (min.)	45

### PRESSURE READINGS

INITIAL HYDROSTATIC	1047
INITIAL FLOW	685
FINAL INITIAL FLOW	753
INITIAL SHUT-IN	860
INITIAL FINAL FLOW	748
FINAL FLOW	781
FINAL SHUT-IN	861
FINAL HYDROSTATIC	1020
MAXIMUM TEMPERATURE	87
TOP RECORDER DEPTH	2098
RECORDER NUMBER	87507
BOTTOM RECORDER DEPTH	2102
RECORDER NUMBER	13208

INITIAL BLOW

**STRONG BLOW WITH GAS TO SURFACE IN 1 MINUTE**

FINAL BLOW

**STRONG BLOW-SEE GAS FLOW REPORT**

### EXTRA EQUIPMENT

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

# SUPERIOR TESTERS ENTERPRISES INC.

## DRILL STEM TEST REPORT

GREAT BEND ,KANSAS 67530 (316)792-6902

### WELL INFORMATION

DRILLING CONTRACTOR ..... **DUKE DRILLING RIG #2**

DRILL PIPE LENGTH ..... **1806**

DRILL PIPE I.D. .... **3.8**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

DRILL COLLAR LENGTH ..... **238**

DRILL COLLAR I.D. .... **2.25**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

WEIGHT PIPE LENGTH .....

WEIGHT PIPE I.D. .... **2.25**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

MUD WEIGHT #/GAL ..... **8.7**

VISCOSITY ..... **27**

WATER LOSS .....

CHLORIDES-PITS .....

CHLORIDES-DST ..... **89000**

FEET OF RECOVERY	RECOVERY DECIPTION	RECOVERY DECIPTION	% GAS	% OIL	% MUD	% WATER
1)	90	GASSY MUD				
2)	180	SLIGHTLY MUD CUT GASSY MUD				
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						
		CHLORIDES 89000				
		TOTAL RECOVERY				

### COMMENTS

**SUPERIOR TESTERS ENTERPRISES INC:**

GREAT BEND, KANSAS

**GAS FLOW RATE**

(316) 792-6902

#

STATE.....	KANSAS	Test Date .....	2/15/03
COUNTY.....	HARPER	Sec Town Range .....	24-31S-9W
FIELD.....		Report Number .....	12348

**Initial Flow**

Comments	Time (hh:mm:ss)	Period dt (min)	Inches H2O Orifice Tester	PSI on Orifice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)
TOOL OPENED AT	7:35	5		10		1 1/2	1274.000
7:30 WITH GAS TO	7:45	15		16		1 1/2	1694.000
SURFACE IN 1	7:55	25		18		1 1/2	1824.000
MINUTE AT 7:31	8:00	30		16		1 1/2	1694.000
STARTED SPRAYING MUD 1 MINUTE BEFORE THE FINAL READING AT 7:59							

**Final Flow**

Comments	Time (hh:mm:ss)	Period dt (min)	Inches H2O Orifice Tester	PSI on Orifice Tester	PSI on Pitot Tube	Choke Size (in)	Gas Rate (MCF/Day)
TOOL OPENED AT	8:55	10		18		1 1/2	1824.000
8:45	9:05	20		18		1 1/2	1824.000
	9:15	30		18		1 1/2	1824.000
SPRAYED MUD DURING THE ENTIRE OPENING							
THERE WAS A GAS SAMPLE TAKEN							

Field :  
County or Parish :  
State :

Date Printed: 02/17/03 10:29:05  
Analysis Period : 2ND SHUT-IN  
Comment : Line #

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Superposition Slope -> m' ..... -183.176100  
Horner Slope -> m ..... -3.341133E+5  
Intercept ..... 1.328E+8  
P(dt=1 hr) ..... 1.327E+8  
Pwf ..... 1.206E+8  
R Sqr ..... 0.8221

Intercept (psi) ..... 861.657  
k (md) ..... 488.84043  
kh (md-ft) ..... 4888.40434  
k/u (md/cp) ..... 9206.03436  
kh/uB (md-ft/cp) ..... 92060.34357  
Skin ..... 38.9490  
DP Skin ..... 75.0629  
Total DP ..... 80.8358  
Percent DP ..... 92.86%

Radius Invest (ft) ..... 56  
Radius Time (hrs) ..... 0.71

Delta Q = ..... 1824  
h (ft)= ..... 10  
mu (cp) = ..... 0.0531  
B (stb/scf) = ..... 0.6928

First Point # ..... 3  
Second Point # ..... 33  
Start Real Time ..... 0.042  
End Real Time ..... 0.672  
Start SF Time ..... 2244.679

# SUPERIOR TESTERS ENTERPRISES INC.

GREAT BEND, KANSAS

SUPERPOSITION ANALYSIS

(316) 792-6902

2ND SHUT-IN

State ..... KANSAS

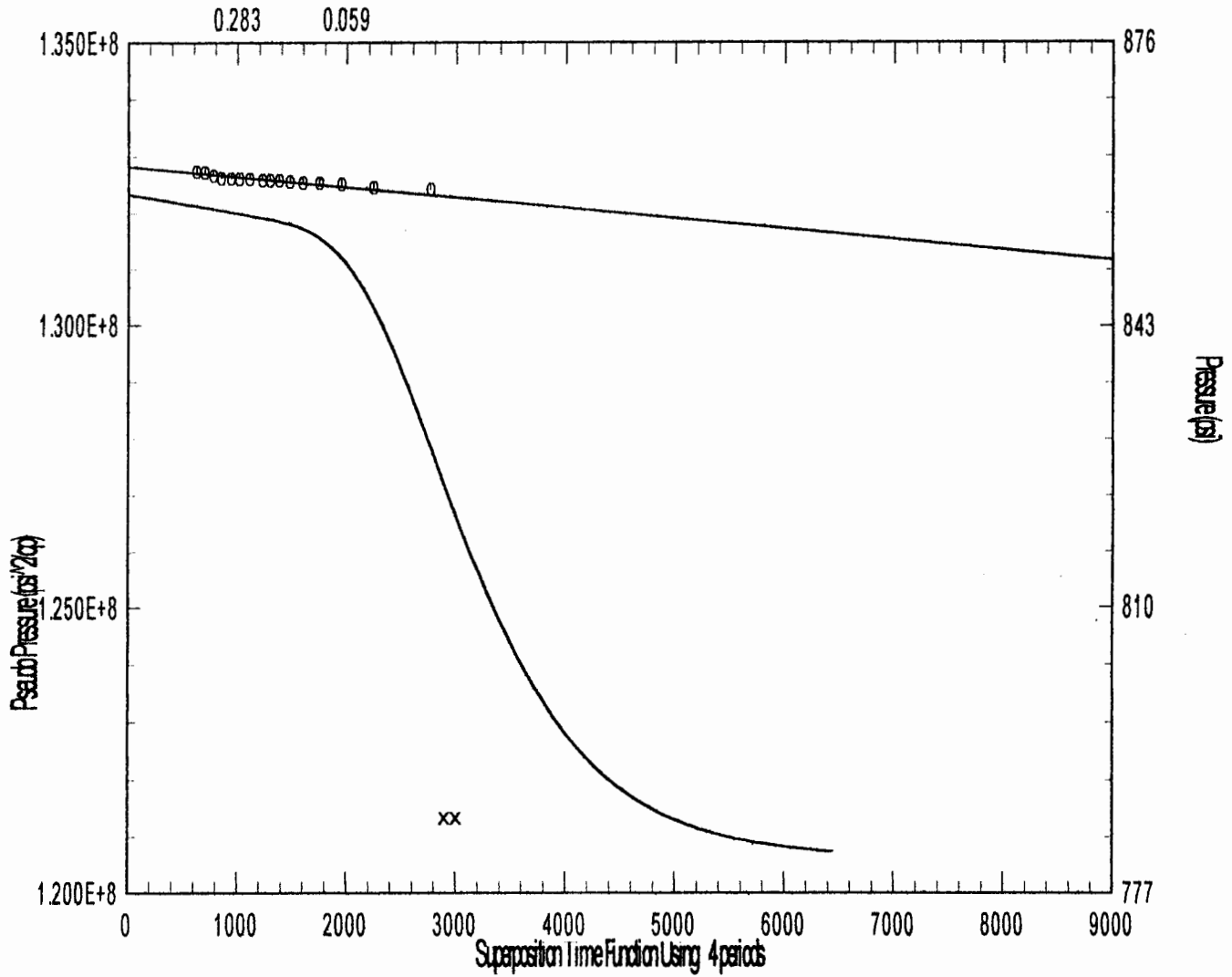
Test Date ..... 2/15/03

County ..... HARPER

Sec Town Range ..... 24-31S-9W

Field .....

Report Number ..... 12348



**MODEL RESULTS**

Constant Storage	Skin Model	Homogeneous	No Boundaries	h : 10 ft
C1 : 0.014 bbl/psi	Skin : 20.40	k : 274.824 md		mu : 0.053 cp
		Est Pi: 858.4 psi		phi : 18.0%
				ct : 1.225E-02 1/psi
				rw : 3.208 ft
				BHT : 87 F
				FVF : 0.69

# Superior Testers Enterprises, Inc.

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

(316) 792-6902

Date 12-15-03 Location C-NW-1/4 24-31-9N Elevation 1608ft County HACPER

Company REB OIL AND GAS Number of Copies 5

Charts Mailed to P.O. Box 195 Attica Kansas 67009-0195

Drilling Contractor Duke Drilling Rig #2

Length Drill Pipe 1806 I.D. Drill Pipe 3.80 Tool Joint Size 4 1/2" X.H.

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

Length Drill Collars 238 I.D. Drill Collars 2.25 Tool Joint Size 4 1/2" X.H.

Top Packer Depth 2079 Bottom Packer Depth 2084 Number of Packers 2 Packer Size 6-3/4"

TESTED FROM 2084 TO 2105 ANCHOR LENGTH 21 TOTAL DEPTH 2105 Hole Size 7 7/8

LEASE & WELL NO. Bertholf #3-A FORMATION TESTED Red Eagle TEST NO. 1

Mud Weight 8.71 Viscosity 27 Water Loss \_\_\_\_\_ Chlorides - Pits 200 D.S.T. 89000

Maximum Temp. 87 °F Initial Hydrostatic Pressure (A) 1047 P.S.I. Final Hydrostatic Pressure (H) 1080 P.S.I.

Tool Open I.F.P. from 7:30 pm to 8:00 pm 30 min

Tool Closed I.C.I.P. from 8:00 pm to 8:45 pm 45 min

Tool Open F.F.P. from 8:45 pm to 9:15 pm 30 min

Tool Closed F.C.I.P. from 9:15 pm to 10:00 pm 45 min

Initial Blow Strong blow with Gas to Surface in 1 minute

Final Blow Strong blow SEE Gas flow Report

Total Feet Recovered 270 Gravity of Oil \_\_\_\_\_ Corrected

90 Feet of Cassy mud % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water \_\_\_\_\_

180 Feet of SLIGHTLY mud cut Cassy water % 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 NONE Safety Joint NONE Extra Packer NONE Straddle NONE Hook Wall NONE

Top Recorder No. 87507 Clock No. Electronic Depth 2098 Cir. Sub NONE Sampler NONE

Bottom Recorder No. 13208 Clock No. 47441 Depth 2102 Insurance NONE

Price of Job \_\_\_\_\_

Tool Operator Steve Ludwig

Approved By \_\_\_\_\_

No. 12348

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.**

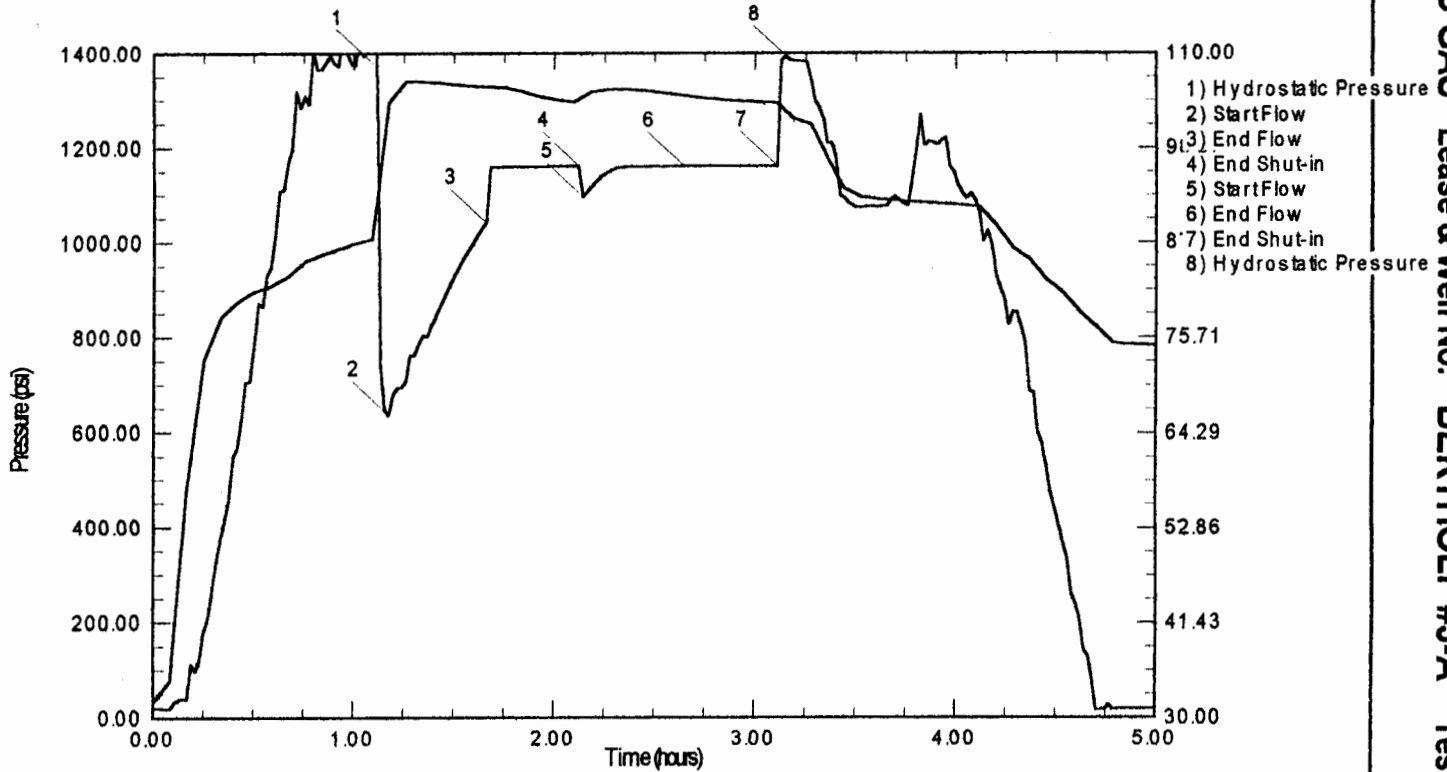
**Great Bend, Kansas**

**CHART DATA**

**(316) 792-6902**

State ..... KANSAS  
 County ..... HARPER  
 Field .....

Test Date ..... February 17, 2003  
 Sec Town Range ..... 24-31S-9W  
 Report Number ..... 12349



**Field Reading**

(1)	Initial Hydrostatic Pressure	1379
(2)	Initial Flow Pressure	636
(3)	Final Initial Flow Pressure	1041
(4)	Initial Shut-In Pressure	1161
(5)	Initial Final Flow Pressure	1095
(6)	Final Flow Pressure	1160
(7)	Final Shut-In Pressure	1161
(8)	Final Hydrostatic Pressure	1386

**ELECTRONIC RECORDER DEPTH 2928 FT, RECORDER NUMBER 87507**

Company: R & B OIL AND GAS Lease & Well No. BERTHOLF #3-A Test #: 2 Date: 02-17-2003 SEC. 24 TWP. 31S  
 RGE. 9W

# SUPERIOR TESTERS ENTERPRISES INC.

## DRILL STEM TEST REPORT

GREAT BEND, KANSAS 67530 (316)792-6902

### GENERAL INFORMATION

COMPANY NAME .....	<b>R &amp; B OIL AND GAS</b>	LEASE AND WELL NUMBER .....	<b>BERTHOLF #3-A</b>
TEST DATE .....	<b>2/17/03</b>	FORMATION TESTED .....	<b>TOPEKA</b>
SECTION-TOWN-RANGE .....	<b>24-31S-9W</b>	DRILL STEM TEST NUMBER .....	<b>2</b>
STATE .....	<b>KANSAS</b>	REPORT NUMBER .....	<b>12349</b>
COUNTY .....	<b>HARPER</b>	ELEVATION KELLY BUSHINGS .....	<b>1608</b>
ELEVATION GROUND LEVEL .....	<b>1600</b>	TESTING ENGINEER .....	<b>GENE BUDIG</b>
COMPANY REPRESENTATIVE .....	<b>TIM PIERCE</b>		

### TOOL SETTING INFORMATION

TEST INTERVAL (From) .....	<b>2915</b>	TOP PACKER DEPTH .....	<b>2910</b>
TEST INTERVAL (to) .....	<b>2925</b>	BOTTOM PACKER DEPTH .....	<b>2915</b>
ANCHOR LENGTH .....	<b>10</b>	NUMBER OF PACKERS .....	<b>2</b>
TOTAL DEPTH (ft) .....	<b>2925</b>	PACKER SIZE .....	<b>6 3/4</b>
		HOLE SIZE .....	<b>7 7/8</b>

### FLOW TIMES

*INITIAL OPEN*

TOOL OPEN (from) .....	<b>8:15</b>
TOOL OPEN (to) .....	<b>8:45</b>
DURATION (min.) .....	<b>30</b>

*INITIAL SHUT-IN*

TOOL CLOSED (from) .....	<b>8:45</b>
TOOL CLOSED (to) .....	<b>9:15</b>
DURATION (min.) .....	<b>30</b>

*FINAL OPEN*

TOOL OPEN (from) .....	<b>9:15</b>
TOOL OPEN (to) .....	<b>9:45</b>
DURATION (min.) .....	<b>30</b>

*FINAL SHUT-IN*

TOOL CLOSED (from) .....	<b>9:45</b>
TOOL CLOSED (to) .....	<b>10:15</b>
DURATION (min.) .....	<b>30</b>

### PRESSURE READINGS

INITIAL HYDROSTATIC .....	<b>1379</b>
INITIAL FLOW .....	<b>636</b>
FINAL INITIAL FLOW .....	<b>1041</b>
INITIAL SHUT-IN .....	<b>1161</b>
INITIAL FINAL FLOW .....	<b>1095</b>
FINAL FLOW .....	<b>1160</b>
FINAL SHUT-IN .....	<b>1161</b>
FINAL HYDROSTATIC .....	<b>1386</b>
MAXIMUM TEMPERATURE .....	<b>107</b>
TOP RECORDER DEPTH .....	<b>2928</b>
RECORDER NUMBER .....	<b>87507</b>
BOTTOM RECORDER DEPTH .....	<b>2922</b>
RECORDER NUMBER .....	<b>13208</b>

### INITIAL BLOW

**STRONG BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 30 SECONDS AND DECREASED TO A FAIR BLOW**

### FINAL BLOW

**STRONG BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 30 SECONDS AND DECREASED TO A FAIR BLOW**

### EXTRA EQUIPMENT

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

# SUPERIOR TESTERS ENTERPRISES INC.

## DRILL STEM TEST REPORT

GREAT BEND, KANSAS 67530 (316)792-6902

### WELL INFORMATION

DRILLING CONTRACTOR ..... **DUKE DRILLING RIG #2**

DRILL PIPE LENGTH ..... **2896**

DRILL PIPE I.D. .... **3.8**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

DRILL COLLAR LENGTH .....

DRILL COLLAR I.D. .... **2.25**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

WEIGHT PIPE LENGTH .....

WEIGHT PIPE I.D. .... **2.25**

TOOL JOINT SIZE ..... **4 1/2 X.H.**

MUD WEIGHT #GAL ..... **9.1**

VISCOSITY ..... **46**

WATER LOSS ..... **8.8**

CHLORIDES-PITS ..... **4000**

CHLORIDES-DST ..... **122000**

FEET OF RECOVERY		RECOVERY DESCRIPTION	% GAS	% OIL	% MUD	% WATER
1)	<b>2250</b>	<b>SALT WATER CHLORIDES</b>				
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						
13)						
14)						
15)						

TOTAL RECOVERY

### COMMENTS

# Superior Testers Enterprises, Inc.

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

(316) 792-6902

Date 12-17-2002 Location CM-NE 2431-9W Elevation 16086.6 County Harper

Company R&B Oil and Gas Number of Copies 5

Charts Mailed to P.O. Box 195 Atchison Kansas 67009-0195

Drilling Contractor Duke Drilling Rig #4

Length Drill Pipe 2896 I.D. Drill Pipe 3.80 Tool Joint Size 4 1/2" X 4"

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

Length Drill Collars NONE I.D. Drill Collars NONE Tool Joint Size NONE

Top Packer Depth 2910 Bottom Packer Depth 2915 Number of Packers 2 Packer Size 6 3/4"

TESTED FROM 2915 TO 2925 ANCHOR LENGTH 10 TOTAL DEPTH 2925 Hole Size 7 7/8"

EASE & WELL NO. BERTHOFF #2-A FORMATION TESTED TOPEKA TEST NO. 2

Mud Weight 9.1 Viscosity 46 Water Loss 48.8 Chlorides - Pits 4000 D.S.T. 122000

Maximum Temp. 107 °F Initial Hydrostatic Pressure (A) 1379 P.S.I. Final Hydrostatic Pressure (H) 1386 P.S.I.

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

from [B] 636 P.S.I. to [C] 1041 P.S.I.

Tool Closed I.C.I.P. from 8:45 AM to 9:15 AM 30 min

[D] 1161 P.S.I.

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

from [E] 1095 P.S.I. to [F] 1160 P.S.I.

Tool Closed F.C.I.P. from 9:45 AM to 10:15 AM 30 min

[G] 1161 P.S.I.

Initial Blow Straw Blow built to the bottom of a bucket in 30 seconds and

Final Blow DECREASED to a fair blow on both openings

Total Feet Recovered 2250 Gravity of Oil \_\_\_\_\_ Corrected

2250 Feet of Salt water CHLORIDES 2250 % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water \_\_\_\_\_

Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water \_\_\_\_\_

Feet of REVERSED water out to the % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water \_\_\_\_\_

Feet of PITS % 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 NONE Safety Joint NONE Extra Packer NONE Straddle NONE Hook Wall NONE

Top Recorder No. 87507 Clock No. Electronic Depth 2928 Cir. Sub NONE Sampler NONE

Bottom Recorder No. 13208 Clock No. 47441 Depth 2922 Insurance NONE

Price of Job \_\_\_\_\_

Tool Operator Steve Budy

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, or 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.

No 12349