

15-051-24767

# TRILOBITE TESTING COMPANY

22-13-18W

P.O. Box 362 • Hays, Kansas 67601

Computer Inventoried

## Drill-Stem Test Data

Well Name BRAUN "B" #4 Test No. 1 Date 12/18/91  
 Company HALLWOOD PETROLEUM INC Zone Tested QUEEN HILL  
 Address 4582 S ULSTER ST PRKSWY DENVER CO Elevation 2066 K.B.  
 Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN #1 Est. Ft. of Pay \_\_\_\_\_  
 Location: Sec. 22 Twp. 13S Rge. 18W Co. ELLIS State KS

Interval Tested 3250-3286  
 Anchor Length 36  
 Top Packer Depth 3245  
 Bottom Packer Depth 3250  
 Total Depth 3286

Drill Pipe Size 4.5 XH  
 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
 Drill Collar - 2.25 Ft. Run \_\_\_\_\_

Mud Wt. 9.2 lb / gal. Viscosity 45 Filtrate 8.8

Tool Open @ 6:35 PM Initial Blow WEAK-BUILDING TO 1/2"

Final Blow NO BLOW

Recovery - Total Feet 15 Flush Tool? NO

Rec. 15 Feet of DRILLING MUD

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 104 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1670.2 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 12.1 PSI @ (depth) 3254 w/Clock No. 26199

(C) First Final Flow Pressure 12.1 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 680.2 PSI @ (depth) 3282 w/Clock No. 8179

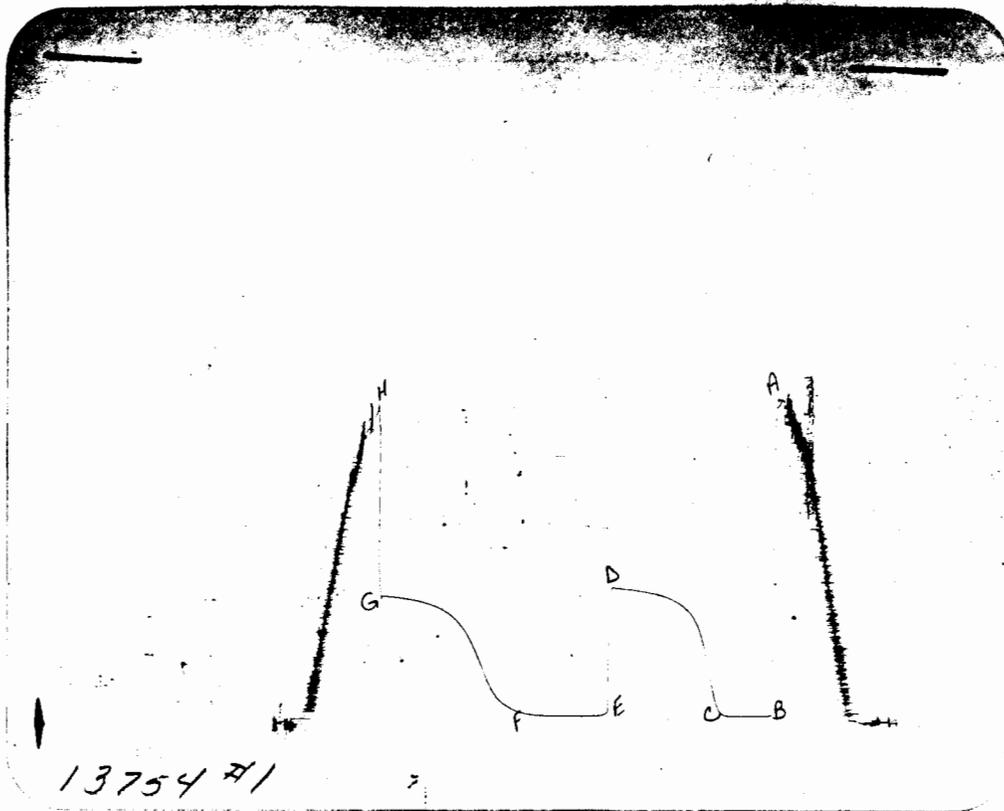
(E) Second Initial Flow Pressure 12.1 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(F) Second Final Flow Pressure 12.1 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 622.1 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 1610.2 PSI Initial Shut-in 90 Final Shut-in 120

Our Representative DAN BANGLE TOTAL PRICE \$ 550



POINT

This is an actual photograph of recorder chart  
PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1667	1670.2
(B) FIRST INITIAL FLOW PRESSURE	11	12.1
(C) FIRST FINAL FLOW PRESSURE	11	12.1
(D) INITIAL CLOSED-IN PRESSURE	676	680.2
(E) SECOND INITIAL FLOW PRESSURE	11	12.1
(F) SECOND FINAL FLOW PRESSURE	11	12.1
(G) FINAL CLOSED-IN PRESSURE	621	622.1
(H) FINAL HYDROSTATIC MUD	1602	1610.2

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 4683

Well Name & No. <u>Braun 'B' #4</u>	Test No. <u>1</u>	Date <u>12-18-91</u>
Company <u>Hallwood Petro, Inc.</u>	Zone Tested <u>Queen Hill</u>	
Address <u>4582 S. Ulster St. Denver, Co. 80237</u>	Elevation <u>2066 K.B.</u>	
Co. Rep./Geo. <u>Jim Musgrove</u>	Cont. <u>Allen #1</u>	Est. Ft. of Pay _____
Location: Sec. <u>22</u>	Twp. <u>13</u>	Rge. <u>18</u> Co. <u>Ellis</u> State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>3250 - 3286</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>36</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3245</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3250</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>3286</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.2</u> lb/gal.	Viscosity <u>45</u> Filtrate <u>8.8</u>
Tool Open @ <u>6:35 P.M.</u>	Initial Blow <u>Weak - building to 42"</u>

Final Blow No blow

Recovery — Total Feet <u>15</u>	Feet of Gas in Pipe _____	Flush Tool? _____
Rec. <u>15</u> Feet Of <u>D.M.</u>	% gas _____ % oil _____ % water <u>100</u> % mud _____	
Rec. _____ Feet Of _____	% gas _____ % oil _____ % water _____ % mud _____	
Rec. _____ Feet Of _____	% gas _____ % oil _____ % water _____ % mud _____	
Rec. _____ Feet Of _____	% gas _____ % oil _____ % water _____ % mud _____	
Rec. _____ Feet Of _____	% gas _____ % oil _____ % water _____ % mud _____	

BHT 104 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 5,000 ppm System

- (A) Initial Hydrostatic Mud 1667 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 11 PSI @ (depth) 3254 w/Clock No. 26199
- (C) First Final Flow Pressure 11 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-in Pressure 676 PSI @ (depth) 3282 w/Clock No. 8179
- (E) Second Initial Flow Pressure 11 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_
- (F) Second Final Flow Pressure 11 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_
- (G) Final Shut-in Pressure 621 PSI Initial Opening 30 Test \_\_\_\_\_
- (H) Final Hydrostatic Mud 1602 PSI Initial Shut-in 90 Jars \_\_\_\_\_

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, 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.

Final Flow 45 Safety Joint \_\_\_\_\_  
Final Shut-in 120 Straddle \_\_\_\_\_  
Circ. Sub \_\_\_\_\_  
Sampler \_\_\_\_\_

Approved By \_\_\_\_\_  
Our Representative Dan Rangle

Extra Packer \_\_\_\_\_  
Other \_\_\_\_\_  
TOTAL PRICE \$ \_\_\_\_\_

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name BRAUN "B" #4 Test No. 2 Date 12/20/91  
Company HALLWOOD PETROLEUM INC Zone Tested LKC-"F-G"  
Address 4582 S ULSTER ST PRKSWY DENVER CO Elevation 2066 K.B.  
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN #1 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 22 Twp. 13S Rge. 18W Co. ELLIS State KS

Interval Tested 3432-3484 Drill Pipe Size 4.5 XH  
Anchor Length 52 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3427 Drill Collar - 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 3432  
Total Depth 3484

Mud Wt. 9.3 lb / gal. Viscosity 48 Filtrate 10

Tool Open @ 12:15 AM Initial Blow WEAK-BUILDING TO 1/2"

Final Blow WEAK STEADY SURFACE BLOW

Recovery - Total Feet 140 Flush Tool? NO

Rec. 140 Feet of SALT WATER

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. 110 Feet of \_\_\_\_\_

BHT \_\_\_\_\_ °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW 0.07 @ 80 °F Chlorides 52000 ppm Recovery Chlorides 7000 ppm System

(A) Initial Hydrostatic Mud 1802.3 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 60.2 PSI @ (depth) 3436 w/Clock No. 26199

(C) First Final Flow Pressure 60.2 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 532.2 PSI @ (depth) 3480 w/Clock No. 8179

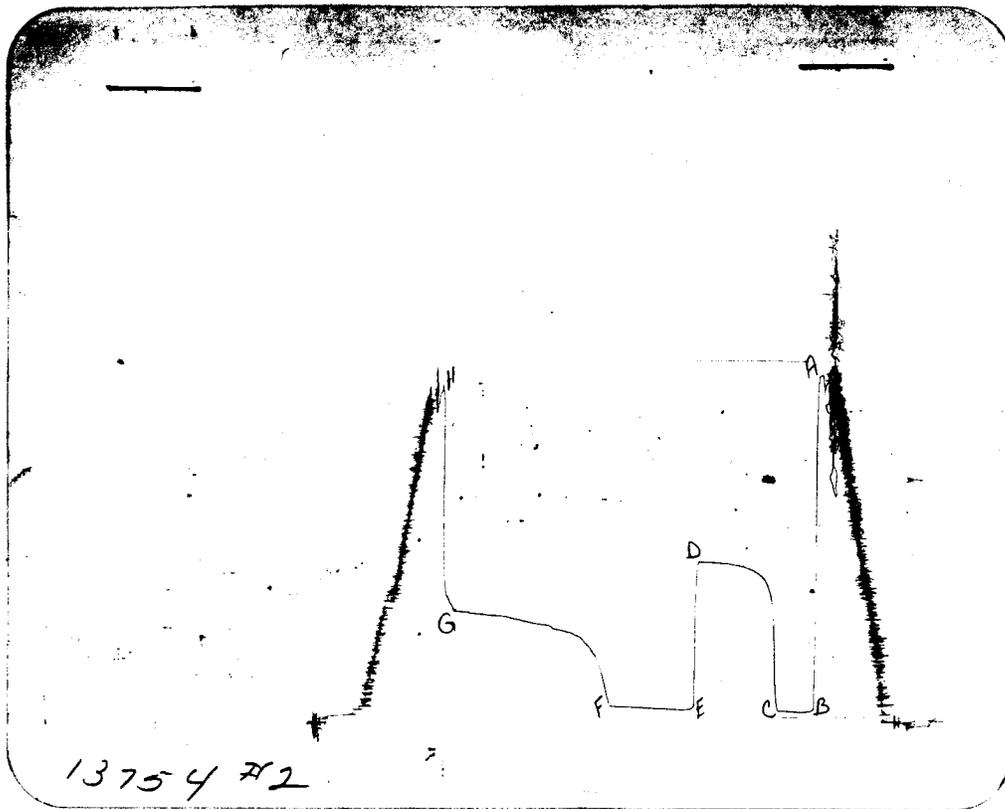
(E) Second Initial Flow Pressure 70.2 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(F) Second Final Flow Pressure 91.2 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(G) Final Shut-In Pressure 570.2 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1712.2 PSI Initial Shut-In 60 Final Shut-In 120

Our Representative DAN BANGLE TOTAL PRICE \$ 550



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1797	1802.3
(B) FIRST INITIAL FLOW PRESSURE	55	60.2
(C) FIRST FINAL FLOW PRESSURE	55	60.2
(D) INITIAL CLOSED-IN PRESSURE	830	532.2
(E) SECOND INITIAL FLOW PRESSURE	66	70.2
(F) SECOND FINAL FLOW PRESSURE	88	91.2
(G) FINAL CLOSED-IN PRESSURE	566	570.2
(H) FINAL HYDROSTATIC MUD	1710	1712.2

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 4684

Well Name & No. <u>Brown 'B' #4</u>	Test No. <u>2</u>	Date <u>12-20-91</u>
Company <u>Hallwood Petro, Inc.</u>	Zone Tested <u>F-G-#1</u>	<u>L.K.C.</u>
Address _____	Elevation <u>2066 K.B.</u>	
Co. Rep./Geo. <u>Jim Musgrove</u>	Cont. <u>Allen #1</u>	Est. Ft. of Pay _____
Location: Sec. <u>22</u>	Twp. <u>13</u>	Rge. <u>18</u>
Co. <u>Ellis</u>	State <u>Ks.</u>	
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes <u>X</u>	No _____
Evaluation _____		

Interval Tested <u>3432 - 3484</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>52</u>	Top Choke — 1" _____ Bottom Choke — 1/4" _____
Top Packer Depth <u>3427</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3432</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>3484</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.3</u> lb/gal.	Viscosity <u>48</u> Filtrate <u>10</u>
Tool Open @ <u>12:15 P.M.</u>	Initial Blow <u>Weak - building to 1/2"</u>

Final Blow Weak steady surface blow.

Recovery — Total Feet <u>140</u>	Feet of Gas in Pipe _____	Flush Tool? _____
Rec. <u>140</u> Feet Of <u>S.W</u>	% gas _____ % oil <u>100</u>	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____

BHT 110 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW .07 @ 80 °F Chlorides 52,000 ppm Recovery Chlorides 7,000 ppm System

- (A) Initial Hydrostatic Mud 1797 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 55 PSI @ (depth) 3436 w/Clock No. 26199
- (C) First Final Flow Pressure 55 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-In Pressure 830 PSI @ (depth) 3480 w/Clock No. 8179
- (E) Second Initial Flow Pressure 66 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_
- (F) Second Final Flow Pressure 88 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_
- (G) Final Shut-In Pressure 566 PSI Initial Opening 30 Test \_\_\_\_\_
- (H) Final Hydrostatic Mud 1710 PSI Initial Shut-In 60 Jars \_\_\_\_\_

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, 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.

Final Flow 60 Safety Joint \_\_\_\_\_  
Final Shut-In 120 Straddle \_\_\_\_\_

Approved By [Signature]

Our Representative [Signature]

Circ. Sub \_\_\_\_\_  
Sampler \_\_\_\_\_  
Extra Packer \_\_\_\_\_  
Other \_\_\_\_\_  
TOTAL PRICE \$ \_\_\_\_\_

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name BRAUN "B" #4 Test No. 3 Date 12/20/91  
Company HALLWOOD PETROLEUM INC Zone Tested LKC-"H"  
Address 4582 S ULSTER ST PRKSWY DENVER CO Elevation 2066 K.B.  
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN #1 Est. Ft. of Pay 4  
Location: Sec. 22 Twp. 13S Rge. 18W Co. ELLIS State KS

Interval Tested 3483-3424  
Anchor Length 41  
Top Packer Depth 3478  
Bottom Packer Depth 3483  
Total Depth 3424

Drill Pipe Size 4.5 XH  
Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Drill Collar - 2.25 Ft. Run \_\_\_\_\_

Mud Wt. 9.4 lb / gal. Viscosity 47 Filtrate 10

Tool Open @ 2:27 PM Initial Blow STRONG-OFF BOTTOM OF BUCKET IN 4 MINUTES

Final Blow STRONG-OFF BOTTOM OF BUCKET IN 1 MINUTE

Recovery — Total Feet 90 Flush Tool? NO

Rec. 2014 Feet of GAS IN PIPE

Rec. 90 Feet of OIL CUT GASSY MUD-10%GAS/15%OIL/75%MUD

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 110 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity 36 °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 7000 ppm System

(A) Initial Hydrostatic Mud 1869.5 PSI Ak1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 34.4 PSI @ (depth) 3487 w/Clock No. 26191

(C) First Final Flow Pressure 44.4 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 168.8 PSI @ (depth) 3420 w/Clock No. 8179

(E) Second Initial Flow Pressure 60 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

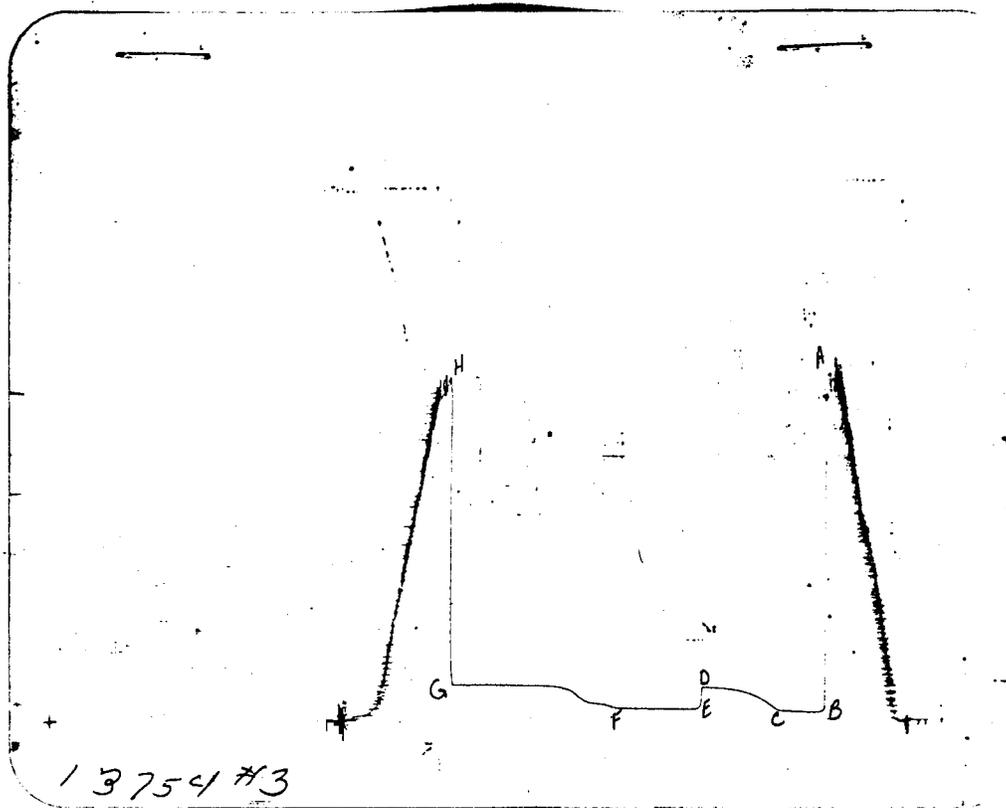
(F) Second Final Flow Pressure 72.2 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(G) Final Shut-In Pressure 195.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1760.8 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative DAN BANGLE

TOTAL PRICE \$ 550



POINT

This is an actual photograph of recorder chart  
PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1841	1869.5
(B) FIRST INITIAL FLOW PRESSURE	66	34.4
(C) FIRST FINAL FLOW PRESSURE	66	44.4
(D) INITIAL CLOSED-IN PRESSURE	200	168.8
(E) SECOND INITIAL FLOW PRESSURE	88	60
(F) SECOND FINAL FLOW PRESSURE	122	72.2
(G) FINAL CLOSED-IN PRESSURE	222	195.5
(H) FINAL HYDROSTATIC MUD	1786	1760.8

COMPUTER EVALUATION BY TRILOBITE TESTING  
HALLWOOD PETROLEUM INC  
REPORT FOR DST#3 FOR THE BRAUN "B" #4  
22-13S-18W ELLIS KANSAS

\*\*\*\*\*

TEST PARAMETERS

ELEVATION: 2066 KB EST. PAY: 4 FT  
DATUM: -1355 ZONE TESTED: LANSING-KS CITY "H"  
TEST INTERVAL: 3483-3424  
RECORDER DEPTH: 3420 TIME INTERVALS: 30-60-60-120  
BOTTOM HOLE TEMP: 110 VISCOSITY: 2.124514 CP  
HOLE SIZE: 7.875 IN

\*\*\*\*\*

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 160.7965  
TOTAL FEET OF RECOVERY: 90  
BARRELS IN DRILL PIPE: 1.2798  
GAS OIL RATIO: 125.6419 CU.FT./BBL  
BUBBLE POINT PRESSURE: ; 3.423541  
TOTAL BARRELS OF RECOVERY: 1.2798  
API GRAVITY: 36 UNCORR. INIT. PROD.: 20.4768 BBL/DAY  
CORRECTED PIPE FILLUP: 197.2678 FLUID GRADIENT: .366  
CORR. BARRELS OF RECOVERY: 2.804184 BBL  
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 44.86695 BBL/DAY  
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE  
10.49587

\*\*\*\*\*

INITIAL SLOPE 82.31 PSI/CYCLE  
INITIAL P\* 182 PSI

FINAL SLOPE 75.45 PSI/CYCLE  
FINAL P\* 213 PSI

\*\*\*\*\*

TRANSMISSIBILITY 96.69139 (MD.-FT./CP.)  
PERMEABILITY 51.35556 (MD.)  
INDICATED FLOW CAPACITY 205.4222 (MD.FT)  
PRODUCTIVITY INDEX .1092613 (BARRELS/DAY/PSI)  
DAMAGE RATIO .341503  
RADIUS OF INVESTIGATION 67.9853 (FT.)  
POTENTIOMETRIC SURFACE -860.053 (FT.)  
DRAWDOWN FACTOR -17.03297 (%)

INITIAL FLOW

RECORDER # 13849  
DST #3

DT(MIN)	PRESSURE	<> PRESSURE
0	34.4	34.4
3	35.5	1.099999
6	35.5	0
9	36.6	1.099999
12	36.6	0
15	37.7	1.100002
18	39.9	2.200001
21	41.1	1.199997
24	41.1	0
27	42.2	1.100002
30	44.4	2.200001

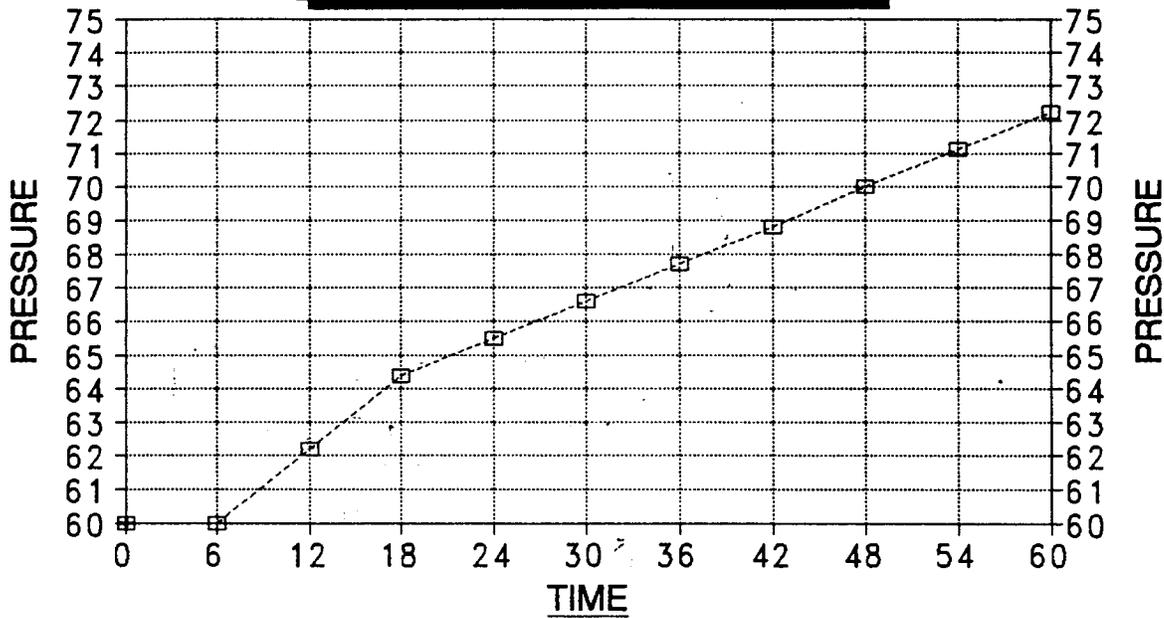
FINAL FLOW

RECORDER # 13849  
DST #3

DT(MIN)	PRESSURE	<> PRESSURE
0	60	60
6	60	0
12	62.2	2.200001
18	64.4	2.200001
24	65.5	1.099999
30	66.6	1.099999
36	67.7	1.099999
42	68.8	1.100006
48	70	1.199997
54	71.1	1.099999
60	72.2	1.099999

# DELTA T DELTA P

FINAL FLOW - DST #3



---□--- BRAUN "B" #4

INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 10.49587 BBL/DAY

BRAUN "B" #4  
INITIAL

DST #3  
SHUTIN  
30 INITIAL FLOW TIME

-----  
Slope        -82.31 psi/cycle  
P \*            182 psi  
-----

TIME(MIN)	Pws (psi)	Log		<> PRESSURE	
		Horn T	Horn T		
	6	45.5	6	0.778	45.5
	12	63.3	4	0.544	17.8
	18	92.2	3	0.426	28.9
	24	113.3	2	0.352	21.1
	30	131.1	2	0.301	17.8
	36	146.6	2	0.263	15.5
	42	153.3	2	0.234	6.7
	48	160.0	2	0.211	6.7
	54	164.4	2	0.192	4.4
X	60	167.7	2	0.176	3.3
X	66	168.8	1	0.163	1.1

BRAUN "B" #4  
FINAL

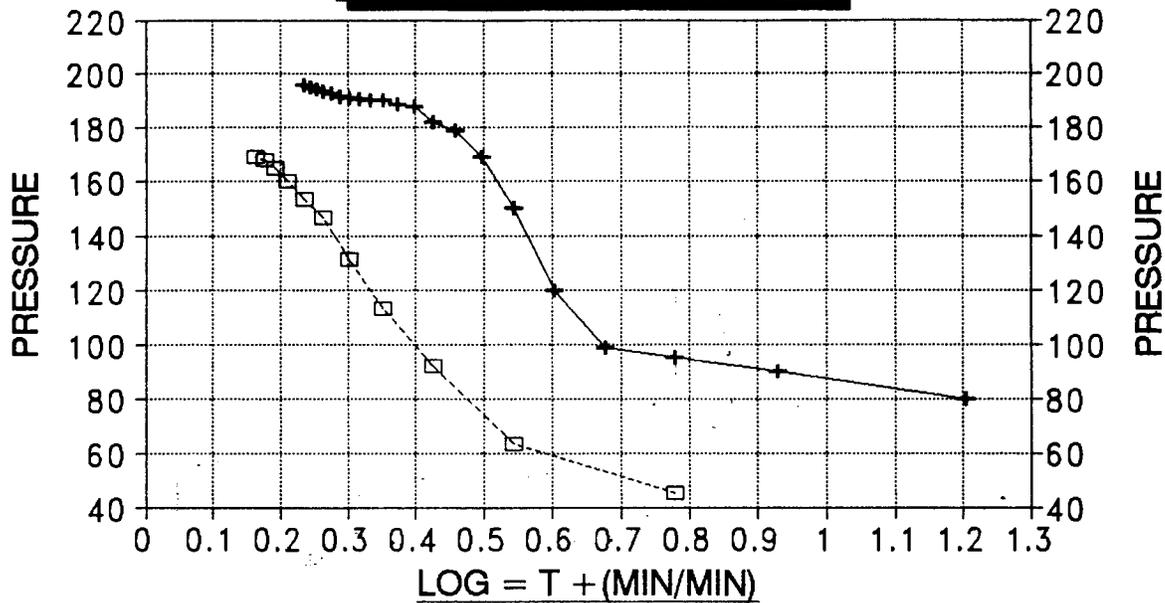
DST #3  
SHUTIN  
90 TOTAL FLOW TIME

-----  
Slope        -75.45 psi/cycle  
P \*            213 psi  
-----

TIME(MIN)	Pws (psi)	Log		<> PRESSURE	
		Horn T	Horn T		
	6	80.0	16	1.204	80.0
	12	90.0	9	0.929	10.0
	18	95.5	6	0.778	5.5
	24	98.8	5	0.677	3.3
	30	119.9	4	0.602	21.1
	36	150.0	4	0.544	30.1
	42	168.8	3	0.497	18.8
	48	178.8	3	0.459	10.0
	54	182.2	3	0.426	3.4
	60	187.7	3	0.398	5.5
	66	188.8	2	0.374	1.1
	72	189.9	2	0.352	1.1
	78	190.0	2	0.333	0.1
	84	190.5	2	0.316	0.5
	90	191.1	2	0.301	0.6
	96	191.5	2	0.287	0.4
	102	192.2	2	0.275	0.7
X	108	193.3	2	0.263	1.1
	114	194.4	2	0.253	1.1
	120	194.8	2	0.243	0.4
X	126	195.5	2	0.234	0.7

# HORNER PLOT

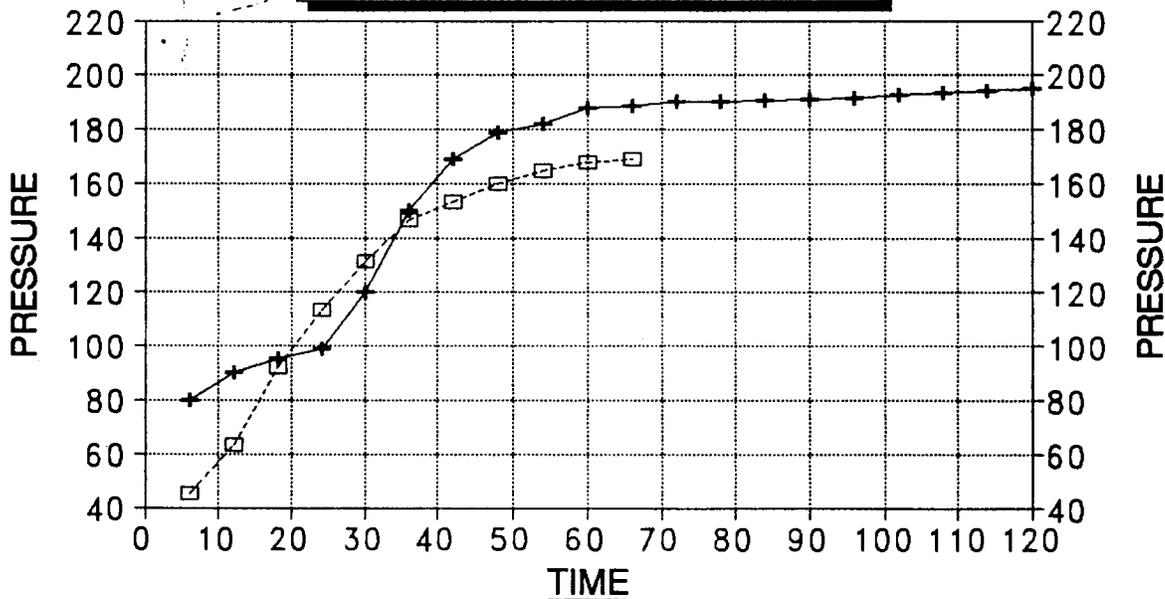
DST #3 / BRAUN "B" #4



---□--- INITIAL    +--- FINAL

# DELTA T DELTA P

DST #3 / BRAUN "B" #4



---□--- INITIAL    +--- FINAL

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 4685

Well Name & No. <u>Braun 'B' #4</u>	Test No. <u>3</u>	Date <u>12-20-91</u>
Company <u>Hallwood Petro, Inc.</u>	Zone Tested <u>H</u>	<u>L.K.C.</u>
Address _____	Elevation <u>2066 K.B.</u>	
Co. Rep./Geo. <u>Jim Musgrove</u> cont. <u>Allen #1</u>	Est. Ft. of Pay <u>4</u>	
Location: Sec. <u>22</u> Twp. <u>13</u> Rge. <u>18</u> Co. <u>Ellis</u> State <u>Ks.</u>		
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No <input checked="" type="checkbox"/> Evaluation _____

Interval Tested <u>3483 - 3424</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>41</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3472</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3483</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>3424</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.4</u> lb/gal.	Viscosity <u>47</u> Filtrate <u>10</u>
Tool Open @ <u>2:27 P.M.</u> Initial Blow <u>Strong - off bottom of bucket in 4 min.</u>	
Final Blow <u>Strong - off bottom of bucket in 1 min.</u>	

Recovery — Total Feet <u>90</u>	Feet of Gas in Pipe <u>2014</u>	Flush Tool? _____
Rec. <u>90</u> Feet Of <u>O.C. Osym</u>	<u>10</u> % gas <u>15</u> % oil	% water <u>75</u> % mud
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____

BHT <u>110</u> °F Gravity _____	°API @ _____	°F Corrected Gravity <u>36</u>	°API _____
RW _____ @ _____ °F	Chlorides _____ ppm	Recovery Chlorides <u>7,000</u> ppm	System _____
(A) Initial Hydrostatic Mud <u>1841</u> PSI	AK1 Recorder No. <u>13754</u>	Range <u>4000</u>	
(B) First Initial Flow Pressure <u>66</u> PSI	@ (depth) <u>3487</u>	w/Clock No. <u>26191</u>	
(C) First Final Flow Pressure <u>66</u> PSI	AK1 Recorder No. <u>13849</u>	Range <u>4375</u>	
(D) Initial Shut-In Pressure <u>200</u> PSI	@ (depth) <u>3420</u>	w/Clock No. <u>8179</u>	
(E) Second Initial Flow Pressure <u>88</u> PSI	AK1 Recorder No. _____	Range _____	
(F) Second Final Flow Pressure <u>122</u> PSI	@ (depth) _____	w/Clock No. _____	
(G) Final Shut-In Pressure <u>222</u> PSI	Initial Opening <u>30</u>	Test _____	
(H) Final Hydrostatic Mud <u>1786</u> PSI	Initial Shut-In <u>60</u>	Jars _____	

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, 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.

Final Flow <u>60</u>	Safety Joint _____
Final Shut-In <u>120</u>	Straddle _____
	Circ. Sub _____
	Sampler _____
	Extra Packer _____
	Other _____
	TOTAL PRICE \$ _____

Approved By Jim Musgrove  
Our Representative Alan Blum

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name BRAUN "B" #4 Test No. 4 Date 12/21/91  
Company HALLWOOD PETROLEUM INC Zone Tested LKC-"I-J-K"  
Address 4582 S ULSTER ST PRKSWY DENVER CO Elevation 2066 K.B.  
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN #1 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 22 Twp. 13S Rge. 18W Co. ELLIS State KS

Interval Tested 3529-3594 Drill Pipe Size 4.5 XH  
Anchor Length 65 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3524 Drill Collar — 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 3529  
Total Depth 3594

Mud Wt. 9.5 lb / gal. Viscosity 52 Filtrate 10.8

Tool Open @ 8:45 AM Initial Blow WEAK-BUILDING TO 1/4"

Final Blow NO BLOW

Recovery — Total Feet 5 Flush Tool? NO

Rec. 5 Feet of MUD WITH OIL SPOTS

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 112 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud 1890.2 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 21.2 PSI @ (depth) 3533 w/Clock No. 26191

(C) First Final Flow Pressure 21.2 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 32.5 PSI @ (depth) 3590 w/Clock No. 8179

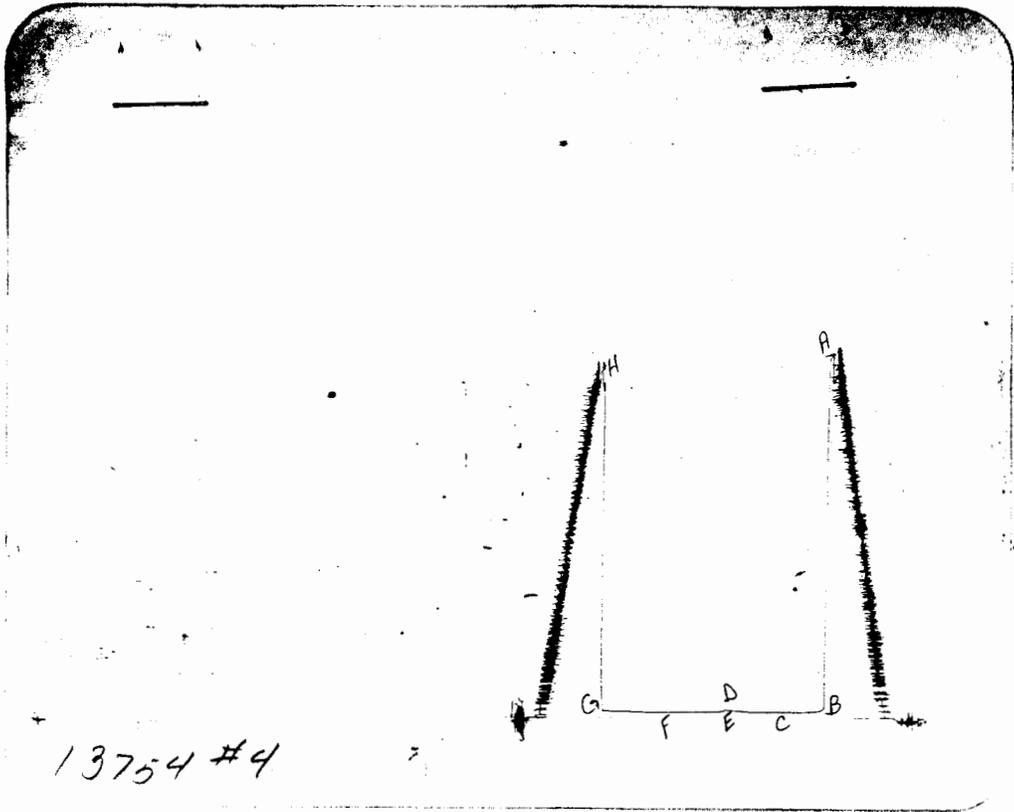
(E) Second Initial Flow Pressure 21.2 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(F) Second Final Flow Pressure 21.2 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 32.5 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1801.2 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative DAN BANGLE TOTAL PRICE \$ 550



POINT

This is an actual photograph of recorder chart  
PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1886	1890.2
(B) FIRST INITIAL FLOW PRESSURE	19	21.2
(C) FIRST FINAL FLOW PRESSURE	19	21.2
(D) INITIAL CLOSED-IN PRESSURE	29	32.5
(E) SECOND INITIAL FLOW PRESSURE	19	21.2
(F) SECOND FINAL FLOW PRESSURE	19	21.2
(G) FINAL CLOSED-IN PRESSURE	29	32.5
(H) FINAL HYDROSTATIC MUD	1796	1801.2

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 4686

Well Name & No. <u>Brown 'B' #4</u>	Test No. <u>4</u>	Date <u>12-21-91</u>
Company <u>Hallwood Petro, Inc.</u>	Zone Tested <u>I-I-K A.K.C.</u>	
Address _____	Elevation <u>2066 K.B</u>	
Co. Rep./Geo. <u>Jim Musgrove</u>	Cont. <u>Allen #1</u>	Est. Ft. of Pay _____
Location: Sec. <u>22</u> Twp. <u>13</u> Rge. <u>18</u>	Co. <u>Ellis</u> State <u>Ks.</u>	
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>3529-3594</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>65</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3524</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3529</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>3594</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.5</u> lb/gal.	Viscosity <u>52</u> Filtrate <u>10.8</u>
Tool Open @ <u>8:45 P.M.</u> Initial Blow <u>Weak - building to 1/4"</u>	

Final Blow No blow

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?				
Rec. <u>5</u> Feet Of	<u>MWJ oil spots</u>	%gas	%oil	%water	%mud	
Rec. _____ Feet Of		%gas	%oil	%water	%mud	
Rec. _____ Feet Of		%gas	%oil	%water	%mud	
Rec. _____ Feet Of		%gas	%oil	%water	%mud	
Rec. _____ Feet Of		%gas	%oil	%water	%mud	

BHT 112 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 8,000 ppm System

- (A) Initial Hydrostatic Mud 1886 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 19 PSI @ (depth) 3533 w/Clock No. 26191
- (C) First Final Flow Pressure 19 PSI AK1 Recorder No. 13849 Range 43205
- (D) Initial Shut-In Pressure 29 PSI @ (depth) 3590 w/Clock No. 8179
- (E) Second Initial Flow Pressure 19 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_
- (F) Second Final Flow Pressure 19 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_
- (G) Final Shut-In Pressure 29 PSI Initial Opening 30 Test \_\_\_\_\_
- (H) Final Hydrostatic Mud 1796 PSI Initial Shut-In 46 Jars \_\_\_\_\_

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, 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.

Final Flow 30 Safety Joint \_\_\_\_\_  
Final Shut-In 60 Straddle \_\_\_\_\_  
Circ. Sub \_\_\_\_\_  
Sampler \_\_\_\_\_

Approved By Jim Musgrove  
Our Representative Dave Kumpf

Extra Packer \_\_\_\_\_  
Other \_\_\_\_\_  
TOTAL PRICE \$ \_\_\_\_\_