

ORIGINAL SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS  
OIL & GAS CONSERVATION DIVISION  
WELL COMPLETION FORM  
ACO-1 WELL HISTORY  
DESCRIPTION OF WELL AND LEASE

APY NO. 15- 051-24,767-00-00

Operator: License # 03613

Name: Hallwood Petroleum, Inc.

Address 4582 S Ulster St. Parkway#1700

P.O. Box 378111

City/State/Zip Denver, CO 80237

Purchaser: Koch Oil Company

Operator Contact Person: George Hutton

Phone (316) 792-2756

Contractor: Name: Allen Drilling

License: 5418

Wellsite Geologist: Jim Musgrove

Designate Type of Completion  
 New Well  Re-Entry  Workover

Oil  SWD  SLOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, etc)

If Workover/Re-Entry: old well info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Deepening  Re-perf.  Conv. to Inj/SWD  
 Plug Back  PBTD  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_

12/15/91 12/21/91 1/14/92  
Spud Date Date Reached TD Completion Date

County Ellis

C NE NE SW Sec. 22 Twp. 13 Rge. 18  E  W

2970 Feet from  N (circle one) Line of Section

2970 Feet from  E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
NE, SE, NW or SW (circle one)

Lease Name Braun B Well # 4

Field Name Marvin

Producing Formation Lansing-Kansas City

Elevation: Ground 2072 KB 2077

Total Depth 3715 PBTD 3681

Amount of Surface Pipe Set and Cemented at 333 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set 1344 Feet

If Alternate II completion, cement circulated from 1347

feet depth to surface w/ 350 ex cmt.

Drilling Fluid Management Plan 4-17-92  
(Data must be collected from the Reserve Pit)

Chloride content 8000 ppm Fluid volume 310 bbls

Dewatering method used evaporation

Location of fluid disposal if hauled offsite:

Operator Name \_\_\_\_\_

Lease Name \_\_\_\_\_ License No. \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Rng. \_\_\_\_\_ E/W

County \_\_\_\_\_ Docket No. \_\_\_\_\_

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Mary Ball  
Title Sr. Eng. Tech. Date 3/26/92

Subscribed and sworn to before me this 26th day of March 19 92.

Notary Public Judy E. Atkins  
Date Commission Expires 4/19/93

STATE CORPORATION COMMISSION  
K.C.C. OFFICE USE ONLY  
F  Letter of Confidentiality Attached  
C  Wireline Logs Received  
C  Geologist Report Received  
Wichita, Kansas  
K.C.C. OFFICE USE ONLY  
DISTRIBUTION  
S/C/Rep \_\_\_\_\_ NGPA  
PLU \_\_\_\_\_ Other  
(Specify)  
03-30-92

Operator Name Hallwood Petroleum, Inc. Lease Name Braun B Well # 4  
 Sec. 22 Twp. 13 Rge. 18  East County Ellis  
 West

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No  
 (Attach Additional Sheets.)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No  
 (Submit Copy.)

List All E.Logs Run:

Log Formation (Top), Depth and Datum  Sample

Name	Top	Datum
Anhydrite	1344'	+ 733'
Severy	3033'	- 956'
Topeka	3065'	- 988'
Heebner	3321'	-1244'
Toronto	3348'	-1271'
Lansing	3369'	-1292'
Base Kansas City	3612'	-1535'
Arbuckle	3647'	-1570'

DIL  
Mirco  
Coral  
CDL

CASING RECORD

New  Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4"	8 5/8"	24#	333	60/40 poz	200	2% qe1 3% cc
Production	7 7/8"	5 1/2"	15.5#	3710	see attached		

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3509-13'	1500 gals 15% NE acid	

TUBING RECORD	Size 2 7/8"	Set At 3679'	Packer At N/A	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or Inj. 1/15/92	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil 13 Bbls.	Gas 0 Mcf	Water trace	Bbls.	Gas-Oil Ratio 0	Gravity
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Disposition of Gas:  Vented  Sold  Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION:  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify)

Production Interval: 3509-13'

ORIGINAL

HALLWOOD PETROLEUM, INC.

Braun B #4

Sec. 22-T13S-R18W  
API # 15-051-24,767-~~(10-00)~~

Production:

Bottom - 250 sx common 5% EA2, 10% salt, 3/4% Halid 322, 5#  
Gilsonite per sk last 125 sx, 1/4# Flocele per sk.  
Top - 350 sx Howcolight with 1/4# Flocele.

RECEIVED  
STATE CONFIRMATION COMMISSION  
MAR 30 1992  
CONSERVATION DIVISION  
Wichita, Kansas

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

# ORIGINAL

## Drill-Stem Test Data

15-057-24767-00-00

Well Name BRAUN "R" #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 Drill Pipe Size 4.5 XH  
Anchor Length 36 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3245 Drill Collar - 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 3250  
Total Depth 3286

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 \_\_\_\_\_

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

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

Rec. 104 Feet of \_\_\_\_\_  
BHT \_\_\_\_\_ °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) \_\_\_\_\_ 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) \_\_\_\_\_ w/Clock No. 8179

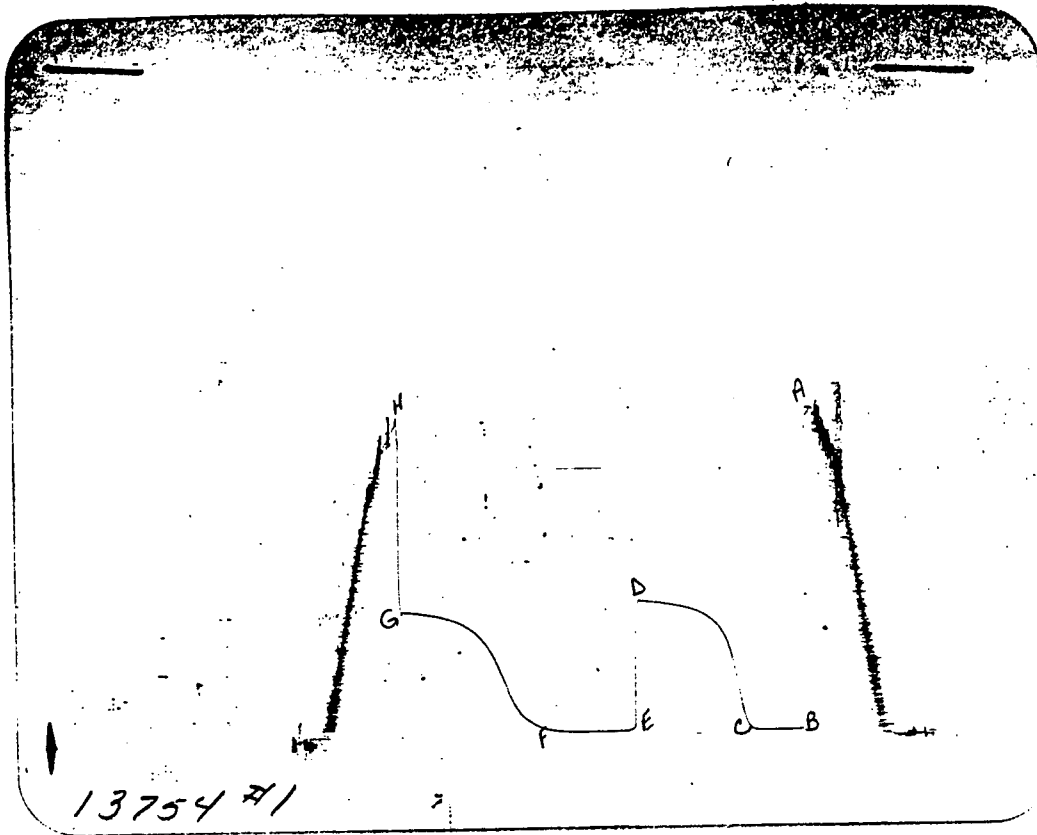
(E) Second Initial Flow Pressure 12.1 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(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

ORIGINAL  
No. 4683

## Test Ticket

15:051-24767-00-00

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

Interval Tested 3250 - 3286 Drill Pipe Size 4.5 XH  
 Anchor Length 36 Top Choke — 1" \_\_\_\_\_ Bottom Choke — 3/4" \_\_\_\_\_  
 Top Packer Depth 3245 Hole Size — 7 7/8" \_\_\_\_\_ Rubber Size — 6 3/4" \_\_\_\_\_  
 Bottom Packer Depth 3250 Wt. Pipe I.D. — 2.7 Ft. Run \_\_\_\_\_  
 Total Depth 3286 Drill Collar — 2.25 Ft. Run \_\_\_\_\_  
 Mud Wt. 9.2 lb/gal. Viscosity 45 Filtrate 8.8  
 Tool Open @ 6:35 P.M. Initial Blow Weak - building to 1/2"

Final Blow No blow

Recovery — Total Feet	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 \_\_\_\_\_

Final Flow 45 Safety Joint \_\_\_\_\_  
 Final Shut-in 120 Straddle \_\_\_\_\_  
 Circ. Sub \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ \_\_\_\_\_

Approved By \_\_\_\_\_  
 Our Representative Dan Ronge

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.

# 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  
Anchor Length 52  
Top Packer Depth 3427  
Bottom Packer Depth 3432  
Total Depth 3484

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

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 \_\_\_\_\_

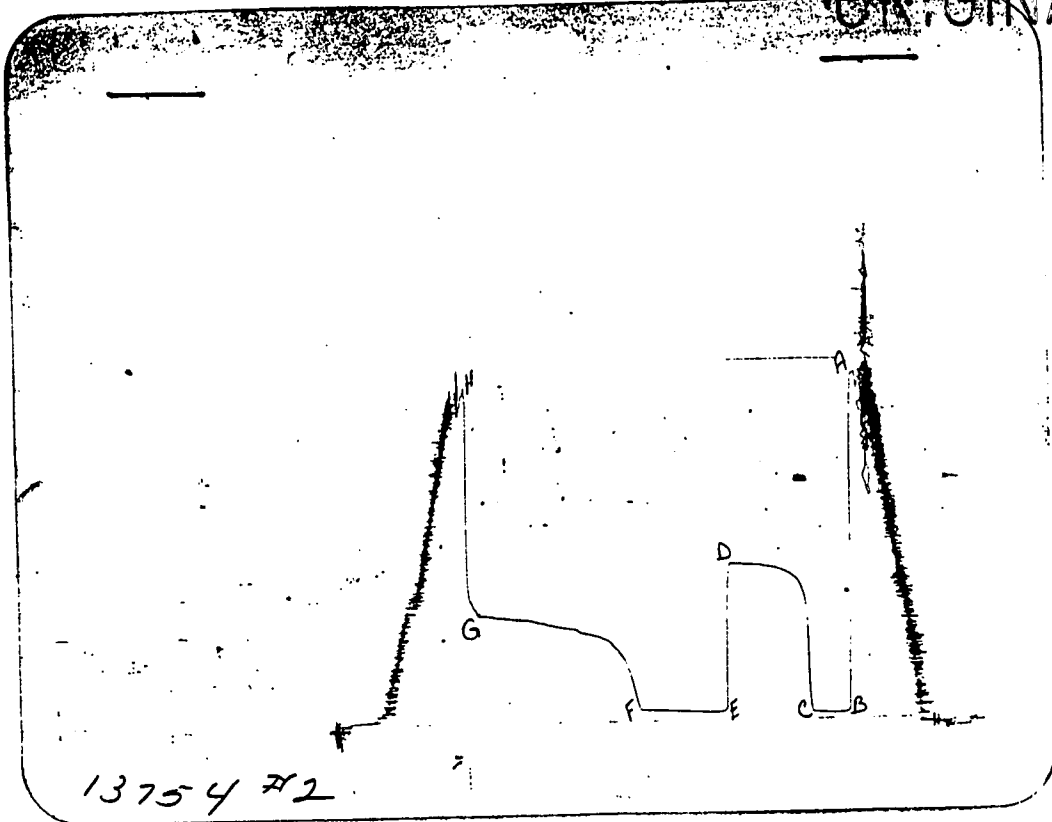
(F) Second Final Flow Pressure 91.2 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(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

ORIGINAL



This is an actual photograph of recorder chart PRESSURE

POINT

15-051-24767-00-00

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

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

Final Blow Weak steady surface blow.

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

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Final Flow 60 Safety Joint \_\_\_\_\_  
 Final Shut-in 120 Straddle \_\_\_\_\_  
 Circ. Sub \_\_\_\_\_  
 Sampler \_\_\_\_\_

Approved By [Signature]  
 Our Representative [Signature]

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

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

# ORIGINAL

## Drill-Stem Test Data

15-OST-2476700-00

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 Drill Pipe Size 4.5 XH  
Anchor Length 41 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3478 Drill Collar - 2.25 Ft. Run \_\_\_\_\_  
Bottom Packer Depth 3483  
Total Depth 3424

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

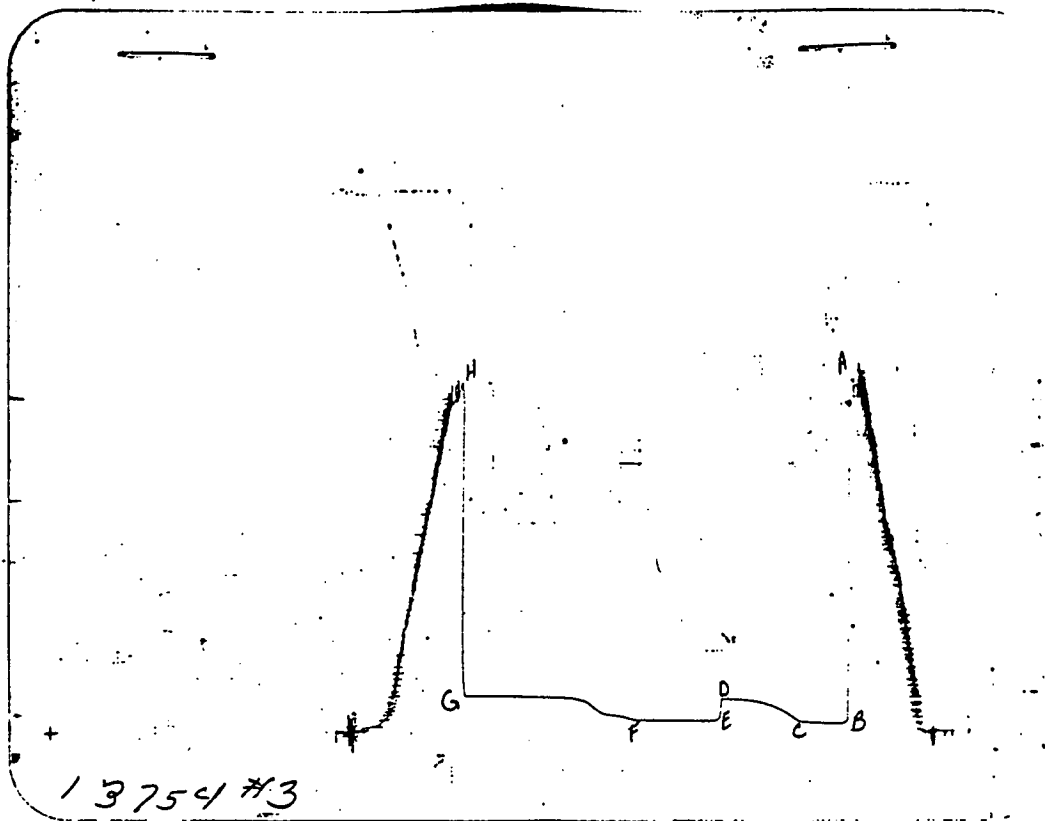
(E) Second Initial Flow Pressure 60 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

(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

ORIGINAL

15-05124467-00-02

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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

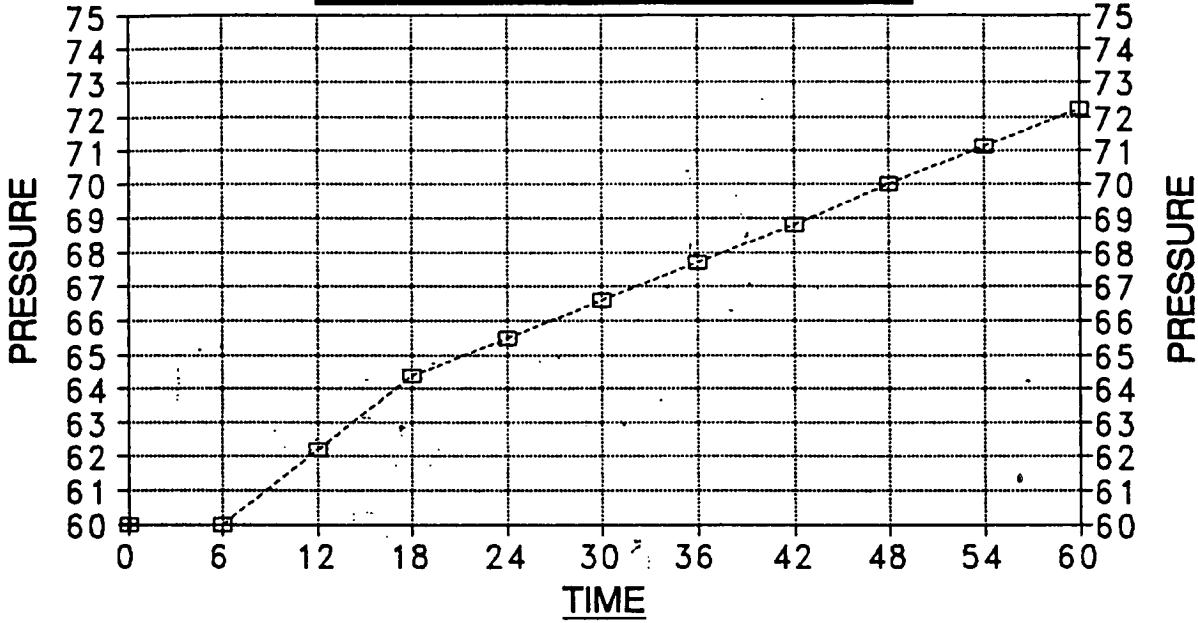
RECORDER # 13849  
DST #3

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

ORIGINAL

15-051-257161-00-00

**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

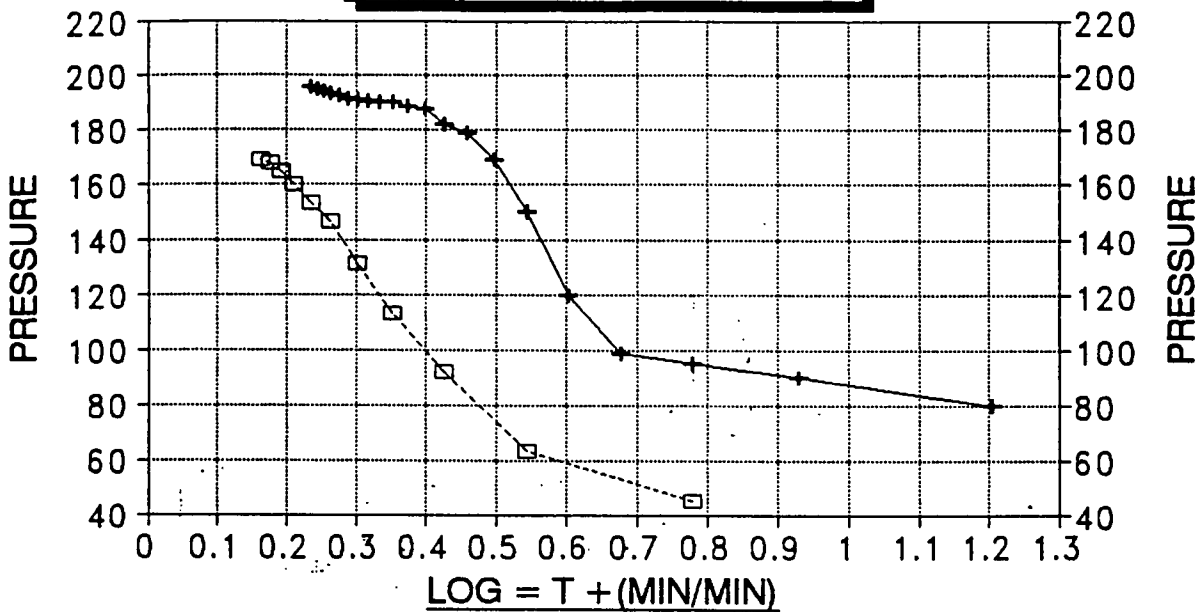
-----  
Slope -75.45 psi/cycle  
P \* 213 psi  
-----

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

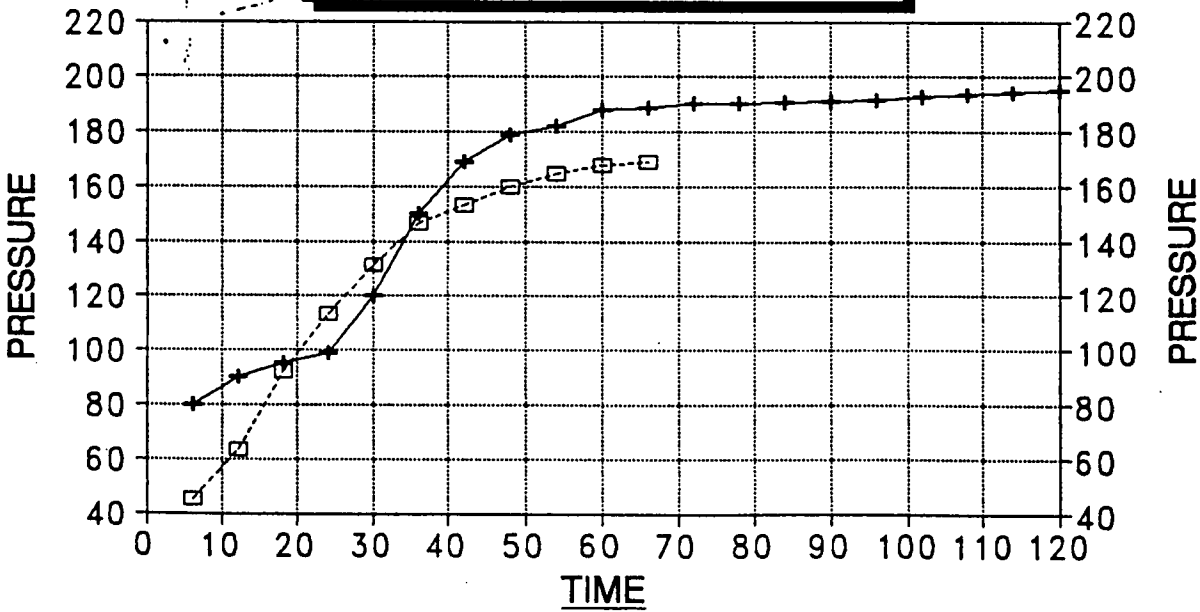
15-051-2176100-00



---□--- 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. Braun 'B' #4 Test No. 3 Date 12-20-91  
 Company Hallwood Petro, Inc. Zone Tested 'H' L.K.C.  
 Address \_\_\_\_\_ Elevation 2066 K.B.  
 Co. Rep./Geo. Jim Musgrave Cont. Allen #1 Est. Ft. of Pay 4  
 Location: Sec. 22 Twp. 13 Rge. 18 Co. Ellis State Ks.  
 No. of Copes \_\_\_\_\_ Distribution Sheet \_\_\_\_\_ Yes \_\_\_\_\_ No Turnkey \_\_\_\_\_ Yes \_\_\_\_\_ No X Evaluation

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

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>90</u>	<u>2014</u>	
Rec. <u>90</u> Feet Of <u>O.C. Osgm</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 110 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity 36 °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 7,000 ppm System  
 (A) Initial Hydrostatic Mud 1841 PSI Ak1 Recorder No. 13754 Range 4000  
 (B) First Initial Flow Pressure 66 PSI @ (depth) 3487 w/Clock No. 26191  
 (C) First Final Flow Pressure 66 PSI AK1 Recorder No. 13849 Range 4375  
 (D) Initial Shut-In Pressure 200 PSI @ (depth) 3420 w/Clock No. 8179  
 (E) Second Initial Flow Pressure 88 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_  
 (F) Second Final Flow Pressure 122 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_  
 (G) Final Shut-In Pressure 222 PSI Initial Opening 30 Test \_\_\_\_\_  
 (H) Final Hydrostatic Mud 1786 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 \_\_\_\_\_  
 Circ. Sub \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ \_\_\_\_\_

Approved By Jim Musgrave  
 Our Representative Allen Blum

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

# ORIGINAL

## Drill-Stem Test Data

15-051-28767-00-00

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  
Anchor Length 65  
Top Packer Depth 3524  
Bottom Packer Depth 3529  
Total Depth 3594

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

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 \_\_\_\_\_

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

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

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 \_\_\_\_\_

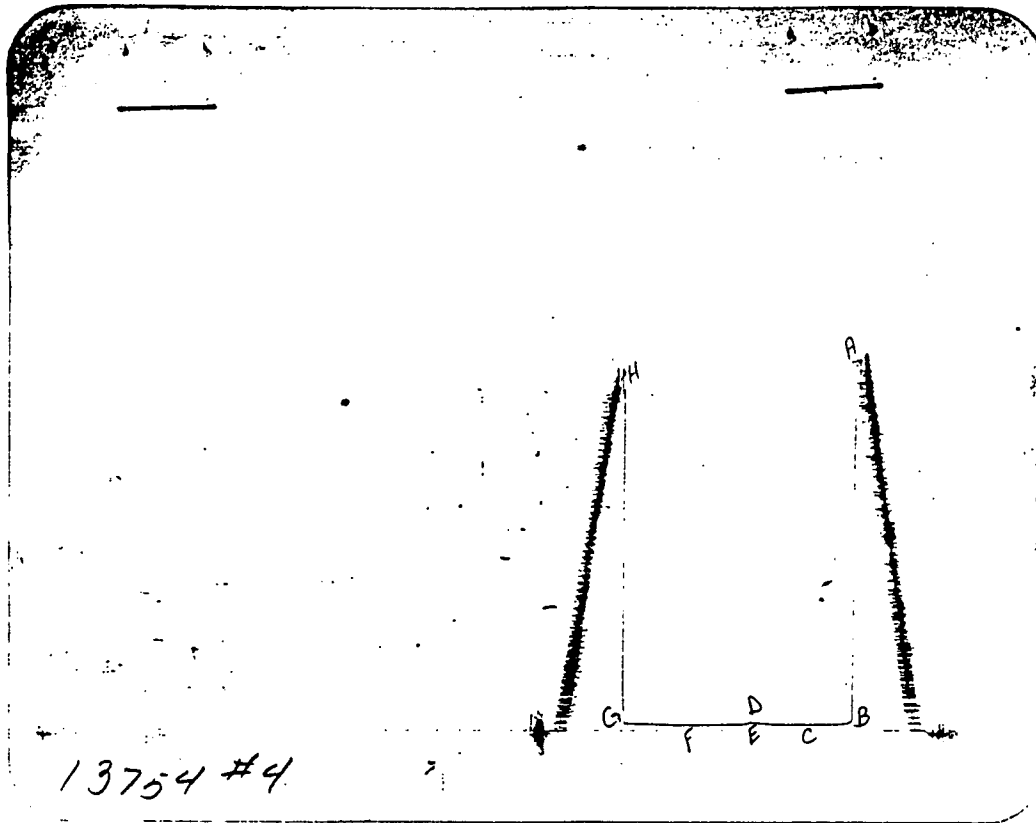
(F) Second Final Flow Pressure 21.2 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_

(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 ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 4686

15-0512-176700-00

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 I.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 A.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?	% gas	% oil	% water	% mud
<u>5</u>	<u>Mud/oil spots</u>					
_____	_____					
_____	_____					
_____	_____					
_____	_____					

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 4325
- (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 45 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 Dan Krange

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

ORIGINAL



ORIGINAL

REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046

INVOICE

HALLIBURTON SERVICES

A Halliburton Company

INVOICE NO.	DATE
208553	12/15/1991

WELL LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER	
BRAUN B-4		ELLIS		KS	SAME	
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE		TICKET DATE
HAYS		ALLEN DR LG.		CEMENT SURFACE CASING		12/15/1991
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.	
355880	AVEN WEAVERLING			COMPANY TRUCK	27216	

HALLWOOD PETROLEUM, INC. P.O. BOX 404 PLAINVILLE, KS 67663-0404

DIRECT CORRESPONDENCE TO: FIRST OKLAHOMA TOWER 210 WEST PARK AVENUE SUITE 2050 OKLAHOMA CITY, OK 73102-5601

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
000-117	MILEAGE	4	MI	2.60	10.40
		1	UNT		
001-016	CEMENTING CASING	334	FT	515.00	515.00
		1	UNT		
40	CENTRALIZER 8-5/8" X 12.25"	1	EA	62.00	62.00
807.93059					
030-503	CMTG PLUG LA-11,CP-1,CP-3,TOP	8	5/8 IN	90.00	90.00
		1	EA		
504-308	STANDARD CEMENT	120	SK	5.45	654.00
506-105	POZMIX A	80	SK	3.40	272.00
506-121	HALLIBURTON-GEL 2%	3	SK	.00	N/C
509-406	ANHYDROUS CALCIUM CHLORIDE	5	SK	26.25	131.25
500-207	BULK SERVICE CHARGE	216	CFT	1.15	248.40
500-306	MILEAGE CMTG MAT DEL OR RETURN	35.800	TMI	.80	60.00M
INVOICE SUBTOTAL					2,043.05
DISCOUNT - (BID)					408.61-
INVOICE BID AMOUNT					1,634.44
PROPERTY NAME					*-KANSAS STATE SALES TAX 48.55
<u>Braun B #4</u>					*-HAYS CITY SALES TAX 5.72
Prop # <u>11142-000</u>					
AFE # <u>122015</u>					
ACCOUNT <u>800-040</u>					
Signature & DATE <u>Chava Weaverling</u>					
2nd APPR & DATE _____					
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$1,688.71

RECEIVED STATE CORPORATION COMMISSION APR 09 1992 CONSERVATION DIVISION Wichita, Kansas

AFFIX JOB TKT FORM 1000-R4

TERMS INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE, UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED. CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE THIS CONTRACT, THE COST OF SUCH ENFORCEMENT SHALL BE PAID BY THE CUSTOMER AND

ORIGINAL



ORIGINAL

REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046

INVOICE

RECEIVED DEC 24 1991

HALLIBURTON SERVICES

A Halliburton Company

INVOICE NO.	DATE
170595	12/22/1991

WELL LEASE NO./PLANT NAME: BRAUN B-4 KANSAS DIST  
 WELL/PLANT LOCATION: ELLIS  
 STATE: KS  
 WELL/PLANT OWNER: SAME

SERVICE LOCATION: HAYS  
 CONTRACTOR: ALLEN  
 JOB PURPOSE: CEMENT PRODUCTION CASING  
 TICKET DATE: 12/22/1991

ACCT. NO.: 355880  
 CUSTOMER AGENT: AVEN WEAVERLING  
 VENDOR NO.:  
 CUSTOMER P.O. NUMBER:  
 SHIPPED VIA: COMPANY TRUCK  
 FILE NO.: 27587

HALLWOOD PETROLEUM, INC.  
 P.O. BOX 404  
 PLAINVILLE, KS 67663-0404

DIRECT CORRESPONDENCE TO:  
 FIRST OKLAHOMA TOWER  
 210 WEST PARK AVENUE  
 SUITE 2050  
 OKLAHOMA CITY, OK 73102-5601

PRICE REF NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
	DISCOUNT - (BID)				2,593.33-
	INVOICE BID AMOUNT				10,373.35
	*-KANSAS STATE SALES TAX				320.04
	*-HAYS CITY SALES TAX				37.67
					-----
PROPERTY NAME: <u>Braun B #4</u> Prop #: <u>11142.000</u> AFD #: <u>1122015</u> ACCOUNT #: <u>805,040</u> Signature: <u>George Sutton</u> DATE: _____ 2nd APER & DATE: _____					RECEIVED STATE CONSERVATION COMMISSION APR 09 1992 CONSERVATION DIVISION Wichita, Kansas
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$10,731.06

AFFIX JOB TKT

TERMS

INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE. UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED. CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE COLLECTION OF SAID ACCOUNT, CUSTOMER AGREES TO PAY ALL COLLECTION COSTS AND

ORIGINAL



REMIT T. P.O. BOX 9 046 DALLAS, TX 75395-1046

INVOICE

HALLIBURTON SERVICES

DEC 24 1991

A Halliburton Company

INVOICE NO.	DATE
170595	12/22/1991

WELL LEASE NO./PLANT NAME BRAUN B-4		WELL/PLANT LOCATION ELLIS		STATE KS	WELL/PLANT OWNER SAME	
SERVICE LOCATION HAYS		CONTRACTOR ALLEN		JOB PURPOSE CEMENT PRODUCTION CASING		TICKET DATE 12/22/1991
ACCT. NO. 355880	CUSTOMER AGENT AVEN WEAVERLING	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA COMPANY TRUCK	FILE NO. 2758	

HALLWOOD PETROLEUM, INC.  
P.O. BOX 404  
PLAINVILLE, KS 67663-0404

DIRECT CORRESPONDENCE TO:  
FIRST OKLAHOMA TOWER  
210 WEST PARK AVENUE  
SUITE 2050  
OKLAHOMA CITY, OK 73102-5601

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
000-117	MILEAGE	4	MI	2.60	10.40
007-013	MULT STAGE CEMENTING-1ST STAGE	3715	FT	1,240.00	1,240.00
001-016		1	UNT		
007-161	MULT STAGE CEMENTING-ADD STAGE	1	STG	1,025.00	1,025.00
018-317	SUPER FLUSH	1	UNT		
71	MULT STAGE CEMENTER 5-1/2" 8RD	12	SK	87.00	1,044.00
813.10354		1	EA	2,450.00	2,450.00
75	PLUG SET - FREE FALL - 2-STAGE	1	EA	439.00	439.00
813.16510					
320	CEMENT BASKET 5 1/2"	2	EA	90.00	180.00
800.8883					
40	CENTRALIZER 5-1/2" X 7 7/8"	7	EA	44.00	308.00
807.93022					
26	INSERT VALVE F. S.- 5 1/2" 8RD	1	EA	245.00	245.00
847.6318					
27	FILL-UP UNIT 5 1/2"-6 5/8"	1	EA	30.00	30.00
815.19311					
504-316	HALLIBURTON LIGHT W/STANDARD	350	SK	5.25	1,837.50
504-308	STANDARD CEMENT	250	SK	5.45	1,362.50
509-968	SALT	2350	LB	.10	235.00
508-127	CAL SEAL	12	SK	19.70	236.40
507-775	HALAD-322	176	LB	6.15	1,082.40
508-291	GILSONITE BULK	625	LB	.35	218.75
507-210	FLOCELE	119	LB	1.30	154.70
500-207	BULK SERVICE CHARGE	678	STAGE	1.15	771.65
500-306	MILEAGE CMTG MAT DEL OR RETURN	120.480	TMI		96.38
INVOICE SUBTOTAL					12,966.68

RECEIVED  
CONSERVATION DIVISION  
Wichita, Kansas  
APR 09 1992

\*\*\*\*\* CONTINUED ON NEXT PAGE \*\*\*\*\*

AFFIX JOB TKT. TERMS INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED. CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE COLLECTION OF SAID ACCOUNT, CUSTOMER AGREES TO PAY ALL COSTS INCURRED BY SAID ATTORNEY.



FORM 1908 R-11

**E 43335 RECEIVED**  
**DEC 24 1991**

15-051-2007-1-00-00

WELL NO. - FARM OR LEASE NAME <b>B-4 Braun</b>		COUNTY <b>KANSAS</b>	STATE <b>Ks</b>	CITY / OFFSHORE LOCATION	DATE <b>12-22-91</b>
CHARGE TO <b>Hallwood Pet, Inc.</b>		OWNER <b>same</b>		TICKET TYPE (CHECK ONE) SERVICE <input checked="" type="checkbox"/> SALES <input type="checkbox"/>	
ADDRESS <b>P.O. Box 404</b>		CONTRACTOR <b>Allan Drig</b>		NITROGEN JOB YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
CITY, STATE, ZIP <b>Plainville, KS, 67663-0404</b>		SHIPPED VIA <b>CO TRKS</b>		LOCATION <b>1</b>	
WELL TYPE <b>01</b>		WELL PERMIT NO.		LOCATION <b>2</b>	
WELL CATEGORY <b>01</b>		DELIVERED TO <b>Lac NE Hays</b>		LOCATION <b>3</b>	
TYPE AND PURPOSE OF JOB <b>025</b>		ORDER NO.		REFERRAL LOCATION	

As consideration, the above-named Customer agrees to pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists. Invoices payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account. These terms and conditions shall be governed by the law of the state where services are performed or materials are furnished.

Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.

PRICE REFERENCE	SECONDARY REF OR PART NO.	L O C	ACCOUNT	DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT
					QTY	MEAS	QTY	MEAS		
000-117		1		MILEAGE #51374	4	mi			260	10 40
007-013	001 016	1		Pump chg 1st stage	3715	ft				1240 00
007-161		1		Pump chg 2nd stage	1	ea				1025 00
018-317		1		Super Flush	12	ea			87 00	1044 00
71	813.10354	1		Multi-stage cmtr.	1	ea	5 1/2	in		2450 00
75	813.16518	1		Free Fall Plug	1	ea				439 00
320	809.8883	1		cmtr. Baskets	2	ea	1		90 00	180 00
40	807.93022	1		Centralizers	7	ea			44 00	308 00
26	847.6318	1		Insert Float shoe	1	ea				245 00
27	815.19311	1		Fillup Assy	1	ea				30 00

RECEIVED  
 STATE OF KANSAS  
 CONSERVATION DIVISION  
 APR 09 1992  
 Wichita, Kansas

AS PER ATTACHED BULK MATERIAL DELIVERY TICKET NO. **B- 94211** 5995 28

WAS JOB SATISFACTORILY COMPLETED? \_\_\_\_\_

WAS OPERATION OF EQUIPMENT SATISFACTORY? \_\_\_\_\_

WAS PERFORMANCE OF PERSONNEL SATISFACTORY? \_\_\_\_\_

X **AVEN WEAVER**  
 CUSTOMER OR HIS AGENT (PLEASE PRINT)

X \_\_\_\_\_

WE CERTIFY THAT THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED HAS BEEN COMPLIED WITH IN THE PRODUCTION OF GOODS AND OR WITH RESPECT TO SERVICES FURNISHED UNDER THIS CONTRACT.

**Keenan J. P. P.**  
 HALLIBURTON OPERATOR

HALLIBURTON APPROVAL

SUB TOTAL **12966 68**

APPLYABLE TAXES WILL BE ADDED ON INVOICE.





**BULK MATERIALS DELIVERY  
AND ORIGINAL  
TICKET CONTINUATION**

FOR INVOICE AND TICKET NO. **120595**

15-051-24771-00-00

DATE <b>12-22-91</b>	CUSTOMER ORDER NO.	WELL NO. AND FARM <b>Braun B-#4</b>	COUNTY <b>Ellis</b>	STATE <b>Kansas</b>
CHARGE TO <b>Hallwood Petroleum</b>		OWNER <b>Same</b>	CONTRACTOR <b>Allen Drlg.M</b>	No. <b>B 942111</b>
MAILING ADDRESS		DELIVERED FROM <b>Hays, Ks</b>	LOCATION CODE <b>25525</b>	PREPARED BY <b>Kuhn</b>
CITY & STATE		DELIVERED TO <b>N/E Hays, Ks</b>	TRUCK NO. <b>0530 51252</b>	RECEIVED BY <i>Karl Kuhn</i>

PRICE REFERENCE	SECONDARY REF. OR PART NO.	CODE		DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT			
		L	D		QTY.	MEAS.	QTY.	MEAS.					
504-316		1	B	Halliburton Light Cement	350				5.25	1,837	50		
504-308	516,00261	1	B	Standard Cement	250				5.45	1,362	50		
509-968	516,00158	1	B	Salt	2350	1b			.80	235	00		
508-127	89050131	1	B	Cal Seal Blended	12				19.70	236	40		
507-775	516,00161	1	B	Halad-322 Blended	176	1b			6.15	1,082	40		
508-291	516,00337	1	B	Gilsonite Blended	625	1b			.35	218	75		
507-210	890,50071	1	B	Folcele Blended	119	1b			1.30	154	70		
					RETURNED MILEAGE CHARGE		TOTAL WEIGHT		LOADED MILES		CONCRETE MILES		
					SERVICE CHARGE ON MATERIALS RETURNED		WICHITA DIVISION Wichita, Kansas		CU. FEET				
500-207		1	B	SERVICE CHARGE					671	1.15	771	65	
500-306		1	B	Mileage Charge	60,240	TOTAL WEIGHT	4	LOADED MILES	120,480	.80	96	38	
No. <b>B 942111</b>					CARRY FORWARD TO INVOICE					SUB-TOTAL		5,995 28	

ORIGINAL

DISTRICT Haystack, KS 15-057-2-11151-00-00 DATE 12-22-91

TO: HALLIBURTON SERVICES YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE THE SAME AS AN INDEPENDENT CONTRACTOR TO: Hollywood Pet (CUSTOMER) AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING

WELL NO. B-4 LEASE Brown SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RANGE \_\_\_\_\_  
FIELD \_\_\_\_\_ COUNTY Ellis STATE KS OWNED BY Same

THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
PACKER: TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
TOTAL DEPTH 3715 MUD WEIGHT \_\_\_\_\_  
BORE HOLE \_\_\_\_\_  
INITIAL PROD: OIL \_\_\_\_\_ BPD, H<sub>2</sub>O \_\_\_\_\_ BPD, GAS \_\_\_\_\_ MCF  
PRESENT PROD: OIL \_\_\_\_\_ BPD, H<sub>2</sub>O \_\_\_\_\_ BPD, GAS \_\_\_\_\_ MCF

	NEW USED	WEIGHT	SIZE	FROM	TO	MAX. ALLOW. P.S.I.
CASING	U	13.5	5 1/2	64	37	
LINER						
TUBING						
OPEN HOLE						SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

PREVIOUS TREATMENT: DATE \_\_\_\_\_ TYPE \_\_\_\_\_ MATERIALS \_\_\_\_\_

TREATMENT INSTRUCTIONS: TREAT THRU TUBING  ANNULUS  CASING  TUBING/ANNULUS  HYDRAULIC HORSEPOWER ORDERED \_\_\_\_\_

cm + 5 1/2" 2 stage Batt stage w/ 250 SKS + 10 5% cal sea!  
18% salt 75% Na-322 w/ 5# Gil. + 1/4# flocc in 1st 125 SKS  
2nd stage Du@ 1339' w/ 550 SKS ALK (Ron 20 bbl salt flush +  
12 bbl Sapon flush ahead of 1st stage

CUSTOMER OR HIS AGENT WARRANTS THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

As consideration, the above-named Customer agrees: THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

- a) To pay Halliburton in accord with the rates and terms stated in Halliburton's current price list. Invoices are payable NET by the 20th of the following month after date of invoice. Upon Customer's default, payment of Customer's account by the last day of the month following the month in which the invoice is dated. Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable but never to exceed 18% per annum. In the event it becomes necessary to employ attorneys to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account.
- b) To defend, indemnify, release and hold harmless Halliburton, its divisions, subsidiaries, parent and affiliated companies and the officers, directors, employees, agents and servants of all of them from and against any claims, liability, expenses, attorneys fees, and costs of defense to the extent permitted by law for:
  1. Damage to property owned by, in the possession of, or leased by Customer, and/or the well owner (if different from Customer), including, but not limited to, surface and subsurface damage. The "well owner" shall include working and royalty interest owners.
  2. Reservoir, formation, or well loss or damage, subsurface trespass or any action in the nature thereof.
  3. Personal injury or death or property damage (including, but not limited to, damage to the reservoir, formation or well), or any damages whatsoever, growing out of or in any way connected with or resulting from pollution, subsurface pressure, losing control of the well and/or a well blowout or the use of radioactive material.

The defense, indemnity, release and hold harmless obligations of Customer provided for in this Section b) and Section c) below shall apply to claims or liability even if caused or contributed to by Halliburton negligence, strict liability, or the unseaworthiness of any vessel owned, operated, or furnished by Halliburton or any defect in the data, products, supplies, materials, or equipment of Halliburton whether in the preparation, design, manufacture, distribution, or marketing thereof, or from a failure to warn any person of such defect. Such defense, indemnity, release and hold harmless obligations of Customer shall not apply where the claims or liability are caused by the gross negligence or willful misconduct of Halliburton. The term "Halliburton" as used in said Sections b) and c) shall mean Halliburton, its divisions, subsidiaries, parent and affiliated companies, and the officers, directors, employees, agents and servants of all of them.
- c) That because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, Halliburton is unable to guarantee the effectiveness of the products, supplies or materials, nor the results of any treatment or service, nor the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by Halliburton. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be liable for and Customer shall indemnify Halliburton against any damages arising from the use of such information.
- d) That Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability, and Customer's exclusive remedy in a cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.
- e) That Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and if such equipment, tools or instruments are not recovered, Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton. If Halliburton equipment, tools or instruments are damaged in the well, Customer shall pay Halliburton the lesser of its replacement cost or the cost of repairs unless such damage is caused by the sole negligence of Halliburton. In the case of equipment, tools or instruments for marine operations, Customer shall, in addition to the foregoing, be fully responsible for loss of or damage to any of Halliburton's equipment, tools or instruments which occurs at any time after delivery to Customer at the landing or returned to the landing, unless such loss or damage is caused by the sole negligence of Halliburton.
- f) To waive the provisions of the Deceptive Trade Practices - Consumer Protection Act, to the extent permitted by law.
- g) That this contract shall be governed by the law of the state where services are performed or materials are furnished.
- h) That Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT.

SIGNED [Signature] CUSTOMER  
DATE 12-22-91

WELL DATA

FIELD \_\_\_\_\_ SEC \_\_\_\_\_ TWP. \_\_\_\_\_ RING \_\_\_\_\_ COUNTY 15°05'12" N 23°00' E 1993 STATE Ks

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_

FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_

INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD

PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD

COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_

PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_

BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_

MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING						
LINER						
TUBING						
OPEN HOLE						SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

JOB DATA

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE	1	Neys Co
GUIDE SHOE		
CENTRALIZERS	7	11
BOTTOM PLUG		
TOP PLUG		
Basket	2	11
PACKER PIV 150+	1	11
OTHER DV @ 1339	1	11

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>12-22-91</u>	DATE <u>12-22-91</u>	DATE <u>12-22-91</u>	DATE <u>12-22-91</u>
TIME <u>1500</u>	TIME <u>1645</u>	TIME <u>1735</u>	TIME <u>2300</u>

PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>J. Richinger</u>	<u>51374</u>	
<u>B. Childers</u>	<u>cm+ Bulk</u>	<u>Neys, KS</u>
<u>B. H. Hanger</u>	<u>51352</u>	
	<u>cm+ Bulk</u>	"
<u>J. Backer</u>	<u>8530</u>	
	<u>cm+ Bulk</u>	"

MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL-API

DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL-API

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

SURFACTANT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN

WE AGENT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN

FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL-LB. \_\_\_\_\_ IN

GELLING AGENT TYPE \_\_\_\_\_ GAL-LB. \_\_\_\_\_ IN

FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL-LB. \_\_\_\_\_ IN

BREAKER TYPE \_\_\_\_\_ GAL-LB. \_\_\_\_\_ IN

BLOCKING AGENT TYPE \_\_\_\_\_ GAL-LB. \_\_\_\_\_ IN

PERFPAC BALLS TYPE \_\_\_\_\_ QTY. \_\_\_\_\_

OTHER \_\_\_\_\_

OTHER \_\_\_\_\_

DEPARTMENT Cost

DESCRIPTION OF JOB cm+ 5 1/2" L/S 2540 g

JOB DONE THRU: TUBING  CASING  ANNULUS  TBG/ANN.

CUSTOMER REPRESENTATIVE X. Overman

HALLIBURTON OPERATOR Kenneth J. Richer COPIES REQUESTED \_\_\_\_\_

CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	125	STD		B	5% Cal Seal 187050H 3/8" H 322-5" 60.5	1.34	13.6
	125	S+D		B	5% Cal Seal 187050H 3/8" H 322	1.30	13.6
	350	LLC	Neys	B		1.84	13.7

PRESSURES IN PSI

SUMMARY

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESLUSH: BBL-GAL \_\_\_\_\_

BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BKDN: BBL-GAL \_\_\_\_\_ PAD: BBL-GAL \_\_\_\_\_

AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BBL-GAL \_\_\_\_\_

SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN. \_\_\_\_\_ 15-MIN. \_\_\_\_\_ CEMENT SLURRY: BBL-GAL \_\_\_\_\_

ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_ TOTAL VOLUME: BBL-GAL \_\_\_\_\_

AVERAGE RATES IN BPM \_\_\_\_\_

TREATING \_\_\_\_\_ DISPL \_\_\_\_\_ OVERALL \_\_\_\_\_

CEMENT LEFT IN PIPE \_\_\_\_\_

FEET 25 REASON Shoe joint

STATE CORPORATION COMMISSION

APR 09 1992

CONSERVATION DIVISION WICHITA, KANSAS

Thank you  
K

CUSTOMER Hallwood Pot  
LEASE Brown  
WELL NO. B-4  
JOB TYPE 2 Stage L/S  
DATE 12-22-91

JCB LOG

15-057 24767-00-00

FORM 2013 R-2

WELL NO. A-4 LEASE Brown

TICKET NO. 170595

FORMER Hallwood Pet

PAGE NO. 1

JOB TYPE 2 stage Long string

DATE 12-22-91

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1500							called out to cmt 2 stage Long string
	1640							on loc w/ EE
	1740							ST. CSNG float shoe + insert cmt in middle of 1st jt plug stop on top of shoe w/ (25') cmt on 3rd 7th 10th 10th
	1852							65' + 8th joints cmt on 65' + 8th jts DU on top of 65' jt @ 1339'
	1920							Drop ball to knock auto fill tube
	1935							cmt to TD knock up & estab. circ rotate cmt
		6	20				250	hook up to pump yrk + ST. 20 bbl salt flush 2bbl spacer - 12bbl super flush 2bbl spacer, check lo
			2					
			14					
	2045		3					plug rat hole w/ 15 SKS
	2049						350	ST. mix cmt for both stage 250 SKS EA2
	2108	6	60.5				200	cmt mixed w/ sol plug (wash pump line)
	2110	7					250	ST. Displ - follow w/ wire line
	2129		88.5				1350	ldg plug @ 3690' check w/ wL (OK)
	2132							Rd plug (float held) recheck w/ wL
	2134							pull wire line
	2141							Drop free fall plug
	2203						1950	open DU pump 20bbl mud off + rk
	2210	5					200	ST. mix cmt for 2nd stage 350 SKS NLC
	2230	5	114				200	cmt mixed (had cmt returns to pit)
	2231	5					150	Rd plug & ST. displ (follow w/ wL)
	2238	5	32.5				1350	ldg plug @ 1340' (had looking would not hold press.)
	2239							Rd (OK) (check w/ wL OK) @ 1340'
	2250							pull wire line wash & rack up equip.
	2300							

X Richmaier #59234  
 M Childers #87383  
 J. Becker #  
 D. Kothanlunger #73104  
 STATE COMMISSION  
 CONSERVATION DIVISION  
 Wichita, Kansas