4-15-13W

TRILOBITE TESTING, L.L.C.

Computer Inventoried

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #11 Test No. 1 Date 6/16/92

Company HALLWOOD PETROLEUM INC. Zone TORONTO

Address P.O. BOX 378111 DENVER CO 80237 Elevation 1794

Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN RIG #3 Est. Ft. of Pay

Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 2896-2935 Drill Pipe Size 4.5 XH

Anchor Length 39 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 2891 Drill Collar – 2.25 Ft. Run

Bottom Packer Depth 2896 Mud Wt. 9.2 lb/Gal.

Total Depth 2935 Viscosity 43 Filtrate N/A

Tool Open @ 3:58 AM Initial Blow WEAK 1/2" BLOW BUILDING TO 4"

Final Blow SURFACE BLOW DIED IN 5 MINUTES

Recovery - Total Feet 80 Flush Tool? NO

Rec. 80 Feet of THIN WATERY MUD W/ FEW SPECKS OIL IN TOOL

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 99 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides N/A ppm System

(A) Initial Hydrostatic Mud 1510.2 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 21.2 PSI @ (depth) 2898 w / Clock No. 19960

(C) First Final Flow Pressure 30.4 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 1306.9 PSI @ (depth) 2934 w / Clock No. 27573

(E) Second Initial Flow Pressure 40.2 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 40.2 PSI @ (depth) w / Clock No.

(G) Final Shut-in Pressure 1274.5 PSI Initial Opening 45 Final Flow 45

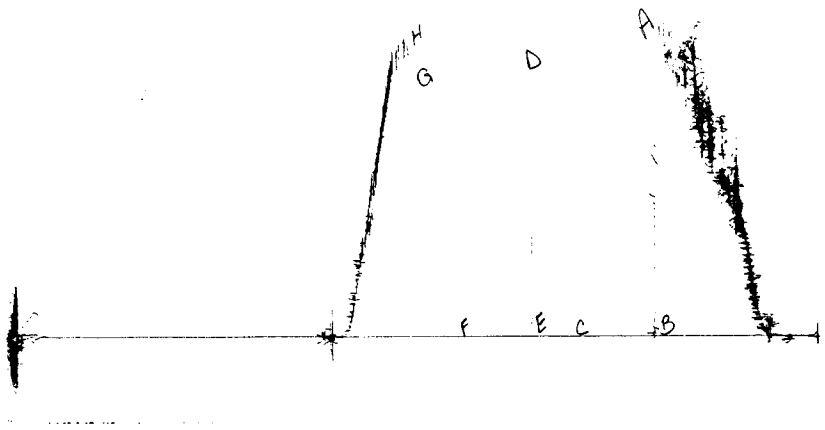
(H) Final Hydrostatic Mud 1477.5 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE

~~4~~ 1

22150



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1508	1510.2
(B) FIRST INITIAL FLOW PRESSURE	19	21.2
(C) FIRST FINAL FLOW PRESSURE	29	30.4
(D) INITIAL CLOSED-IN PRESSURE	1303	1306.9
(E) SECOND INITIAL FLOW PRESSURE	38	40.2
(F) SECOND FINAL FLOW PRESSURE	38	40.2
(G) FINAL CLOSED-IN PRESSURE	1272	1274.5
(H) FINAL HYDROSTATIC MUD	1478	1477.5

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 4913

Well Name & No. Getsch B #11 Test No. 1 Date 6-16-92

Company Hallwood Petroleum, Inc Zone Tested Toronto

Address PO Box 378111 Denver Co 80237 Elevation 1794 KB

Co. Rep./Geo. J.C. Musgrave Cont. Allen #3 Est. Ft. of Pay

Location: Sec. 4 Twp. 15s Rge. 13w Co. Russell State KS

No. of Copies Distribution Sheet Yes No Turnkey Yes No Evaluation

Interval Tested 2896-2935 Drill Pipe Size 4½ XH

Anchor Length 39 Top Choke — 1" Bottom Choke — ¾"

Top Packer Depth 2891 Hole Size — 7⅞" Rubber Size — 6¾"

Bottom Packer Depth 2896 Wt. Pipe I.D. — 2.7 Ft. Run —

Total Depth 2935 Drill Collar — 2.25 Ft. Run

Mud Wt. 9.2 lb / gal. Viscosity 43 Filtrate

Tool Open @ 3:58 AM Initial Blow weak ½" blow building to 4"

Final Blow surface blow died in 5 mins

Recovery — Total Feet 80 Feet of Gas in Pipe Flush Tool?

Rec. 80	Feet Of thin watery mud (few specks in tool)	%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 99 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud	1508 PSI	AK1 Recorder No. 22150		Range 3925	
(B) First Initial Flow Pressure	19 PSI	@ (depth) 2898		w/Clock No. 19960	
(C) First Final Flow Pressure	29 PSI	AK1 Recorder No.		Range	
(D) Initial Shut-In Pressure	1303 PSI	@ (depth)		w/Clock No.	
(E) Second Initial Flow Pressure	38 PSI	AK1 Recorder No. 10332		Range 4050	
(F) Second Final Flow Pressure	38 PSI	@ (depth) 2934		w/Clock No. 20573	
(G) Final Shut-In Pressure	1272 PSI	Initial Opening 45		Test X	
(H) Final Hydrostatic Mud	1478 PSI	Initial Shut-In 45		Jars	
		Final Flow 45		Safety Joint	
		Final Shut-In 45		Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Other	
				TOTAL PRICE $ 550.00	

Approved By

Our Representative Paul Simpson

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #11 Test No. 2 Date 6/16/92

Company HALLWOOD PETROLEUM INC. Zone LKC

Address P.O. BOX 378111 DENVER CO 80237 Elevation 1794

Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN RIG #3 Est. Ft. of Pay

Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 2995-3009 Drill Pipe Size 4.5 XH

Anchor Length 14 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 2990 Drill Collar – 2.25 Ft. Run

Bottom Packer Depth 2995 Mud Wt. 9.2 lb/Gal.

Total Depth 3009 Viscosity 45 Filtrate 10

Tool Open @ 4:40 PM Initial Blow VERY WEAK SURFACE BLOW BUILDING TO 1 1/2"

Final Blow VERY WEAK SURFACE BLOW BUILDING TO 1 1/2"

Recovery - Total Feet 65 Flush Tool? NO

Rec. 65 Feet of MUDDY WATER WITH OIL SPOTS

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 94 °F Gravity °API @ °F Corrected Gravity °API

RW 0.28 @ 85 °F Chlorides 20000 ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud 1510.2 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 21.2 PSI @ (depth) 2999 w / Clock No. 19960

(C) First Final Flow Pressure 30.4 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 820.6 PSI @ (depth) 3008 w / Clock No. 27573

(E) Second Initial Flow Pressure 40.2 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 44.6 PSI @ (depth) w / Clock No.

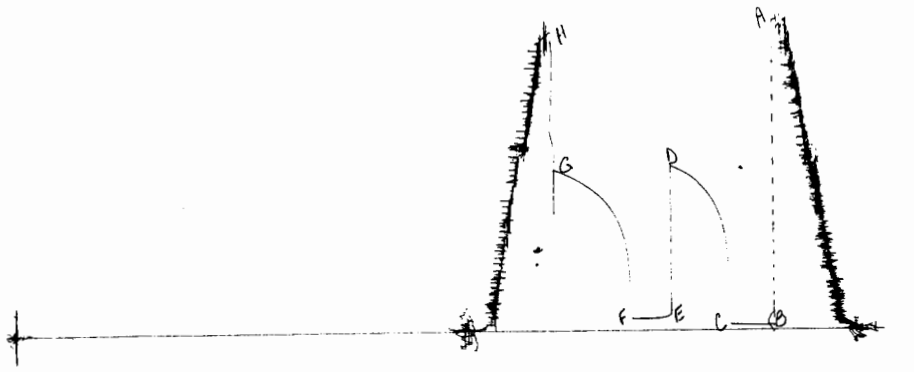
(G) Final Shut-in Pressure 801.2 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1502.6 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative PAUL SIMPSON

CHART PAGE

#2
22150



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1526	1510.2
(B) FIRST INITIAL FLOW PRESSURE	19	21.2
(C) FIRST FINAL FLOW PRESSURE	29	30.4
(D) INITIAL CLOSED-IN PRESSURE	818	820.6
(E) SECOND INITIAL FLOW PRESSURE	38	40.2
(F) SECOND FINAL FLOW PRESSURE	47	44.6
(G) FINAL CLOSED-IN PRESSURE	798	801.2
(H) FINAL HYDROSTATIC MUD	1498	1502.6

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 4914

Well Name & No. Retsch 'B' #11 Test No. 2 Date 6-16-92

Company Hallwood Petroleum Inc Zone Tested LKC

Address _____ Elevation _____

Co. Rep./Geo. J.C. Musgrove Cont. Alka #3 Est. Ft. of Pay _____

Location: Sec. 4 Twp. 15s Rge. 13w Co. Russell State KS

No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation

Interval Tested 2995-3009 Drill Pipe Size 4½ XH

Anchor Length 14 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 2990 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 2995 Wt. Pipe I.D. — 2.7 Ft. Run —

Total Depth 3009 Drill Collar — 2.25 Ft. Run —

Mud Wt. 9.2 lb/gal. Viscosity 45 Filtrate 10.0

Tool Open @ 4:50PM Initial Blow w/ weak surface blow - building to 1½"

Final Blow w/ weak surface blow building to 1½

Recovery — Total Feet 65 Feet of Gas in Pipe — Flush Tool? —

Rec. 65	Feet Of	muddy water w/ oil spots	%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 94 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW .28 @ 85 °F Chlorides 20,000 ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud	1526 PSI	AK1 Recorder No.	22150	Range	3925
(B) First Initial Flow Pressure	19 PSI	@ (depth)	2999	w/Clock No.	K9960
(C) First Final Flow Pressure	29 PSI	AK1 Recorder No.	10332	Range	4050
(D) Initial Shut-In Pressure	818 PSI	@ (depth)	3004	w/Clock No.	22523
(E) Second Initial Flow Pressure	38 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	47 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	798 PSI	Initial Opening	30	Test	
(H) Final Hydrostatic Mud	1498 PSI	Initial Shut-In	45	Jars	
		Final Flow	30	Safety Joint	
		Final Shut-In	60	Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Other	
				TOTAL PRICE $	

Approved By _____

Our Representative Paul Simpson

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #11 Test No. 3 Date 6/18/92

Company HALLWOOD PETROLEUM INC. Zone ARBUCKLE

Address P.O. BOX 378111 DENVER CO 80237 Elevation 1794

Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN RIG #3 Est. Ft. of Pay 5

Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3260-3270 Drill Pipe Size 4.5 XH

Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 3255 Drill Collar -- 2.25 Ft. Run

Bottom Packer Depth 3260 Mud Wt. 9.4 lb/Gal.

Total Depth 3270 Viscosity 46 Filtrate 12

Tool Open @ 6:45 AM Initial Blow WEAK 1/2" BLOW BUILDING TO 2" THEN DECREASED TO 1 1/2"

Final Blow WEAK 1/4" BLOW BUILDING TO 1"

Recovery - Total Feet 170 Flush Tool? NO

Rec. 15 Feet of GAS IN PIPE

Rec. 120 Feet of CLEAN GASSY OIL-10%GAS/90%OIL

Rec. 50 Feet of SLTLY OIL & WTR CUT MUD-5%OIL/5%WTR/90%MUD

Rec. Feet of

Rec. Feet of

BHT 106 °F Gravity 36 °API @ 90 °F Corrected Gravity 33 °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud 1716.5 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 30.6 PSI @ (depth) 3264 w / Clock No. 19960

(C) First Final Flow Pressure 30.6 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 938.9 PSI @ (depth) 3269 w / Clock No. 27501

(E) Second Initial Flow Pressure 59.3 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 65.1 PSI @ (depth) w / Clock No.

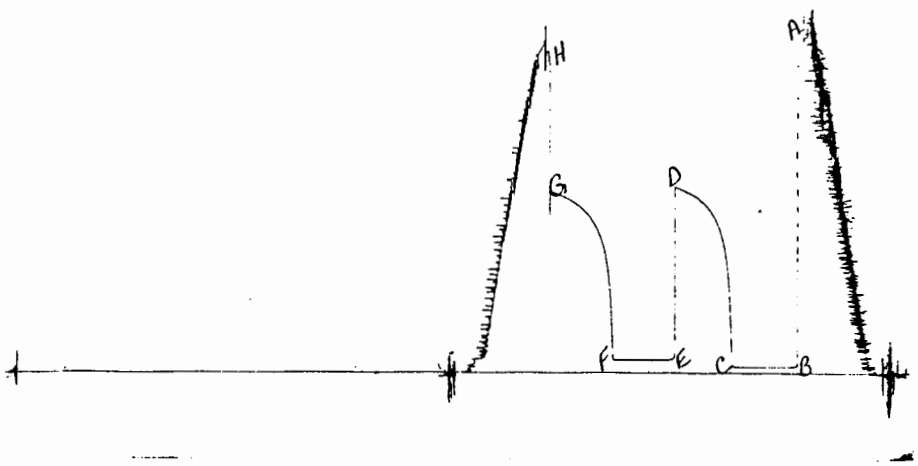
(G) Final Shut-in Pressure 918.5 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 1622.0 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE

4-3
2215 D



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1744	1716.5
(B) FIRST INITIAL FLOW PRESSURE	29	30.6
(C) FIRST FINAL FLOW PRESSURE	38	30.6
(D) INITIAL CLOSED-IN PRESSURE	934	938.9
(E) SECOND INITIAL FLOW PRESSURE	48	59.3
(F) SECOND FINAL FLOW PRESSURE	67	65.1
(G) FINAL CLOSED-IN PRESSURE	914	918.5
(H) FINAL HYDROSTATIC MUD	1675	1622

COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.

HALLWOOD PETROLEUM I LETSCH "B" #11 DST 3

4 15S 13W RUSSELL KS

****

ELEVATION:	1794 KB	EST. PAY	5	FT
DATUM:	-3265	ZONE TESTED:	ARBUCKLE	
TEST INTERVAL:	3260-3270	TIME INTERVALS:	45-45-45-45	
RECORDER DEPTH:	3264	VISCOSITY:	15.313	CP
BOTTOM HOLE TEMP:	106	HOLE SIZE:	7.875	IN

****

CUBIC FEET OF GAS IN PIPE:	1.20			
TOTAL FEET OF RECOVERY:	170.00	CORRECTED PIPE FILLUP:	174.531	
TOTAL BARRELS OF RECOVERY:	2.42	CORR. BARRELS OF RECOVERY:	2.474	BBL
BARRELS IN DRILL PIPE:	2.42	API GRAVITY:	33	
BARRELS IN WEIGHT PIPE:	0.00	FLUID GRADIENT:	0.373	
BARRELS IN DRILL COLLARS:	0.00			
GAS OIL RATIO:	0.4954	CU.FT/BBL		
BUBBLE POINT PRESSURE:	7.328			
UNCORRECTED INITIAL PRODUCTION:			38.68	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			39.59	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			7.290	

****

INITIAL SLOPE	590.34 PSI/CYCLE	FINAL SLOPE	408.77	PSI/CYCLE
INITIAL P*	1117 PSI	FINAL P*	1099	PSI

****

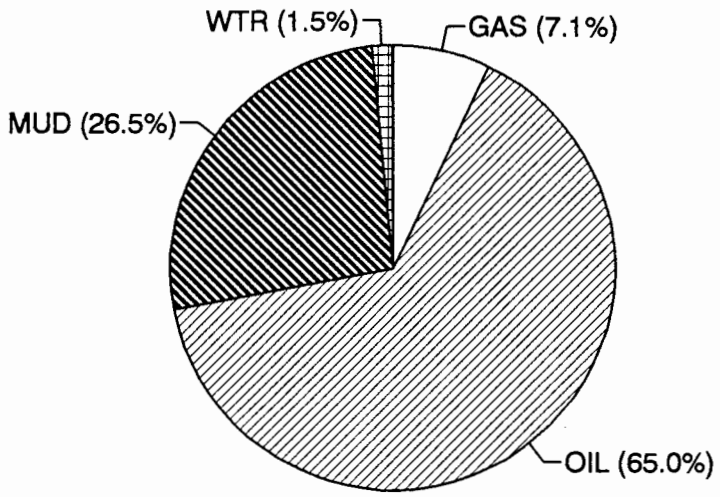
TRANSMISSIBILITY	15.75	(MD.-FT./CP.)
PERMEABILITY	48.23	(MD.)
INDICATED FLOW CAPACITY	241.14	)MD.FT)
PRODUCTIVITY INDEX	0.02	(BARRELS/DAY/PSI)
DAMAGE RATIO	0.46	
RADIUS OF INVESTIGATION	65.88	(FT,)
POTENTIOMETRIC SURFACE	-715.34	(FT.)
DRAWDOWN FACTOR	1.574	(%)

CALCULATED RECOVERY ANALYSIS DRILL PIPE

DST # 3 TICKET 4915

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	120	10	12	90	108	0	0	0	0
2	50	0	0	5	2.5	5	2.5	90	45
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	170	7.0588235	12	65	110.5	1.4705882	2.5	26.5	45

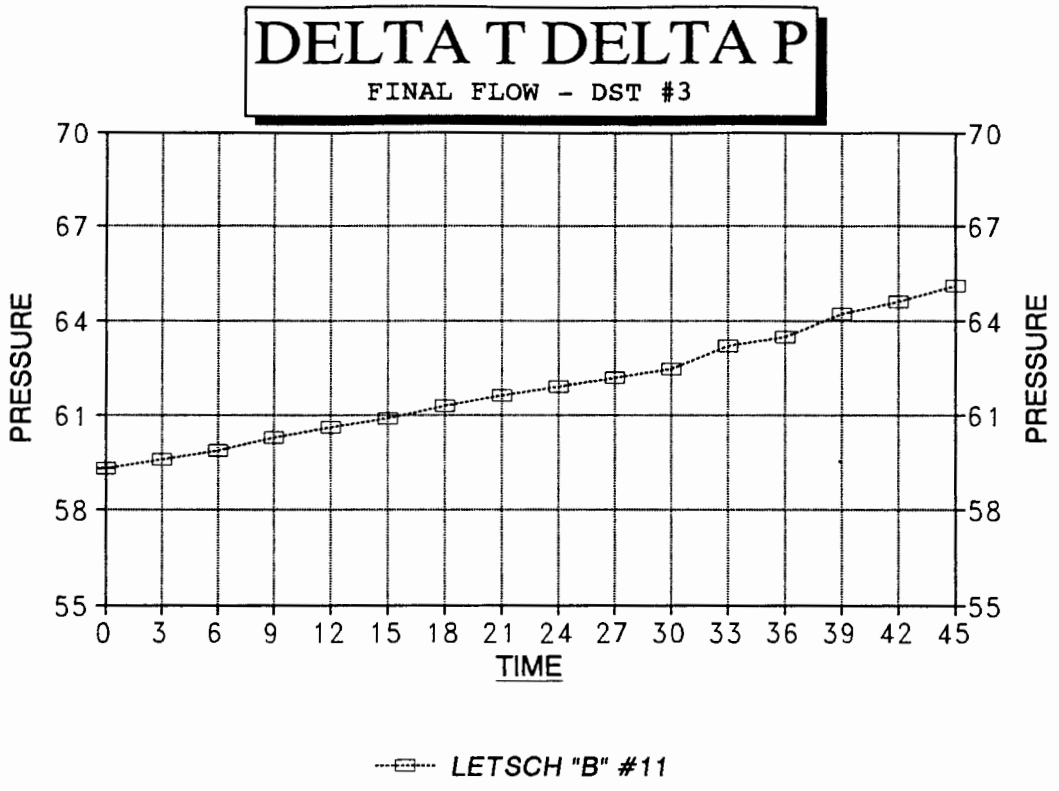
			HRS	BBL/DAY
BBL OIL=	1.57131	*	1.5	25.141
BBL WATER=	0.03555	*		0.5688
BBL MUD=	0.6399			
BBL GAS	0.17064			



FINAL FLOW

RECORDER # 22150 DST # 3

TIME(MIN)	PRESSURE	<> PRESSURE
0	59.3	59.3
3	59.3	0
6	59.3	0
9	60.3	1
12	60.3	0
15	60.3	0
18	61.3	1
21	61.3	0
24	62.2	0.9
27	62.2	0
30	63.2	1
33	63.2	0
36	64.2	1
39	64.2	0
42	65.1	0.9
45	65.1	0



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 7.290

LETSCH "B" #11 DST #3
INITIAL SHUTIN

45 TOTAL FLOW TIME

Slope 590.34 psi/cycle
P * 1117 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	329.5	1.204	329.5	16
	6	567.8	0.929	238.3	9
	9	682.1	0.778	114.3	6
	12	740.2	0.677	58.1	5
	15	788.7	0.602	48.5	4
	18	818.7	0.544	30.0	4
	21	843.9	0.497	25.2	3
	24	860.4	0.459	16.5	3
	27	877.9	0.426	17.5	3
	30	893.3	0.398	15.4	3
	33	903.0	0.374	9.7	2
	36	912.7	0.352	9.7	2
X	39	919.9	0.333	7.2	2
	42	926.3	0.316	6.4	2
X	45	938.9	0.301	12.6	2

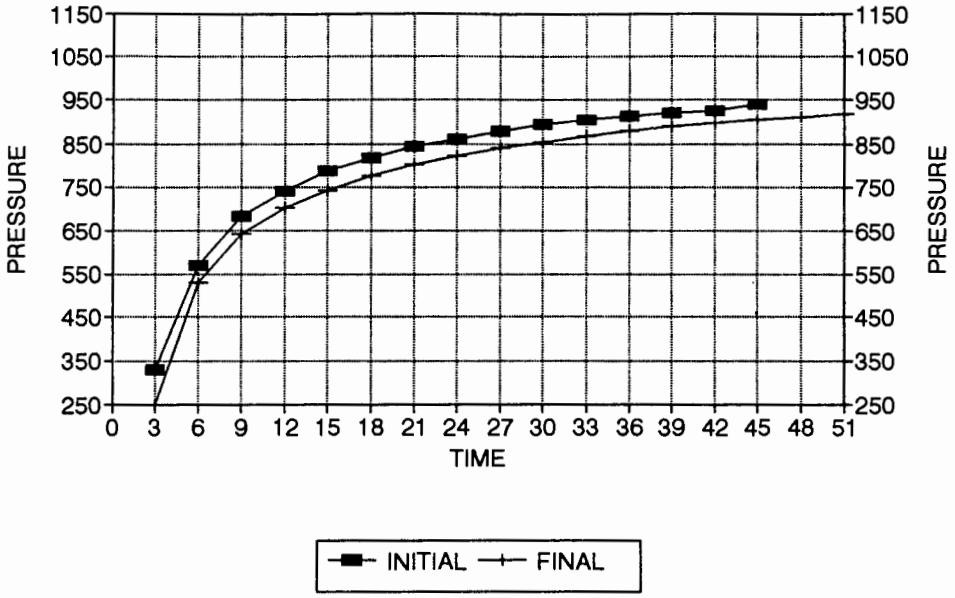
LETSCH "B" #11 DST #3
FINAL SHUTIN

90 TOTAL FLOW TIME

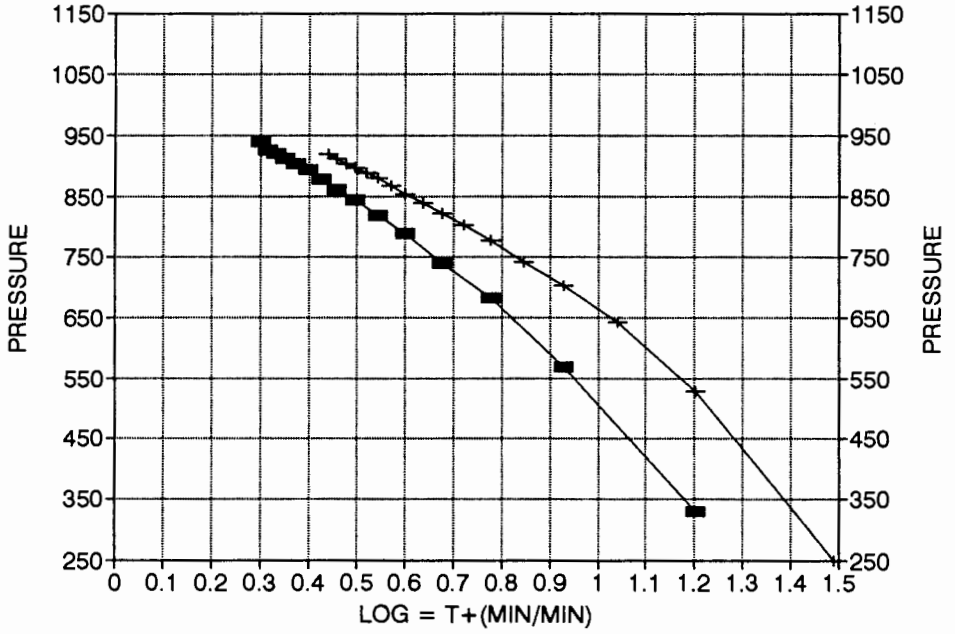
Slope 408.77 psi/cycle
P * 1099 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	250.0	1.491	250.0	31
	6	529.1	1.204	279.1	16
	9	642.4	1.041	113.3	11
	12	703.4	0.929	61.0	9
	15	742.2	0.845	38.8	7
	18	777.1	0.778	34.9	6
	21	803.2	0.723	26.1	5
	24	821.6	0.677	18.4	5
	27	839.1	0.637	17.5	4
	30	854.6	0.602	15.5	4
	33	868.2	0.571	13.6	4
	36	879.8	0.544	11.6	4
	39	888.5	0.520	8.7	3
	42	896.3	0.497	7.8	3
X	45	904.0	0.477	7.7	3
	48	911.8	0.459	7.8	3
X	51	918.5	0.442	6.7	3

LETSCH "B" #11
DELTA T DELTA P



HORNER PLOT



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4915

Well Name & No. Letsch "B" # 11 Test No. 3 Date 6-18-92

Company Hallwood Petroleum Zone Tested Arbuckle

Address _____ Elevation 1794 KB

Co. Rep./Geo. Jim Musgrove Cont. Allen # 3 Est. Ft. of Pay 5

Location: Sec. 4 Twp. 15s Rge. 13w Co. Russell State Ks

No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation

Interval Tested 3260-3270 Drill Pipe Size 4½ XH

Anchor Length 10 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 3255 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3260 Wt. Pipe I.D. — 2.7 Ft. Run _____

Total Depth 3270 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.4 lb / gal. Viscosity 46 Filtrate 12.0

Tool Open @ 6:45 AM Initial Blow weak ½" blow building to 2" 1 hr decreased to 1½

Final Blow weak ½" blow building to 1"

Recovery — Total Feet 170 Feet of Gas in Pipe 15 Flush Tool? _____

Rec. 120	Feet Of	clean oil	10 %gas	90 %oil	%water	%mud	
Rec. 50	Feet Of	SO & W CM	%gas 5	%oil 5	%water 90	%mud	
Rec. _____	Feet Of		%gas	%oil	%water	%mud	
Rec. _____	Feet Of		%gas	%oil	%water	%mud	
Rec. _____	Feet Of		%gas	%oil	%water	%mud	

BHT 106 °F Gravity 36 °API @ 90 °F Corrected Gravity 33 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud	1744 PSI	AK1 Recorder No. 22150		Range 3925	
(B) First Initial Flow Pressure	29 PSI	@ (depth) 3264		w/Clock No. 19960	
(C) First Final Flow Pressure	38 PSI	AK1 Recorder No. 10332		Range 4050	
(D) Initial Shut-In Pressure	934 PSI	@ (depth) 3269		w/Clock No. 27501	
(E) Second Initial Flow Pressure	48 PSI	AK1 Recorder No. _____		Range _____	
(F) Second Final Flow Pressure	67 PSI	@ (depth) _____		w/Clock No. _____	
(G) Final Shut-In Pressure	914 PSI	Initial Opening 45		Test _____	
(H) Final Hydrostatic Mud	1675 PSI	Initial Shut-In 45		Jars _____	
		Final Flow 45		Safety Joint _____	
		Final Shut-In 45		Straddle _____	
				Circ. Sub _____	
				Sampler _____	
				Extra Packer _____	
				Other _____	
				TOTAL PRICE $ _____	

TRILOBITE TESTING L.L.C. 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 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.

Approved By _____

Our Representative Paul Simpson

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #11 Test No. 4 Date 6/18/92

Company HALLWOOD PETROLEUM INC. Zone ARBUCKLE

Address P.O. BOX 378111 DENVER CO 80237 Elevation 1794

Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN RIG #3 Est. Ft. of Pay

Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3270-3280 Drill Pipe Size 4.5 XH

Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 3265 Drill Collar — 2.25 Ft. Run

Bottom Packer Depth 3270 Mud Wt. 9.4 lb/Gal.

Total Depth 3280 Viscosity 44 Filtrate 12

Tool Open @ 4:29 PM Initial Blow WEAK 1/2" BLOW BUILDING TO 8"

Final Blow WEAK SURFACE BLOW BUILDING TO 3"

Recovery - Total Feet 135 Flush Tool? NO

Rec. 65 Feet of CLEAN GASSY OIL-5%GAS/95%OIL

Rec. 15 Feet of OIL & WATER CUT MUD-15%OIL/20%WTR/65%MUD

Rec. 55 Feet of SLTLY OIL CUT MUDDY WATER-10%OIL/70%WTR/20%MUD

Rec. Feet of

Rec. Feet of

BHT 110 °F Gravity 36 °API @ 90 °F Corrected Gravity 33 °API

RW 0.34 @ 79.2 °F Chlorides 18000 ppm Recovery Chlorides 10000 ppm System

(A) Initial Hydrostatic Mud 1688.3 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 21.2 PSI @ (depth) 2364 w / Clock No. 19960

(C) First Final Flow Pressure 40.2 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 802.6 PSI @ (depth) 3279 w / Clock No. 27501

(E) Second Initial Flow Pressure 59.3 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 62.3 PSI @ (depth) w / Clock No.

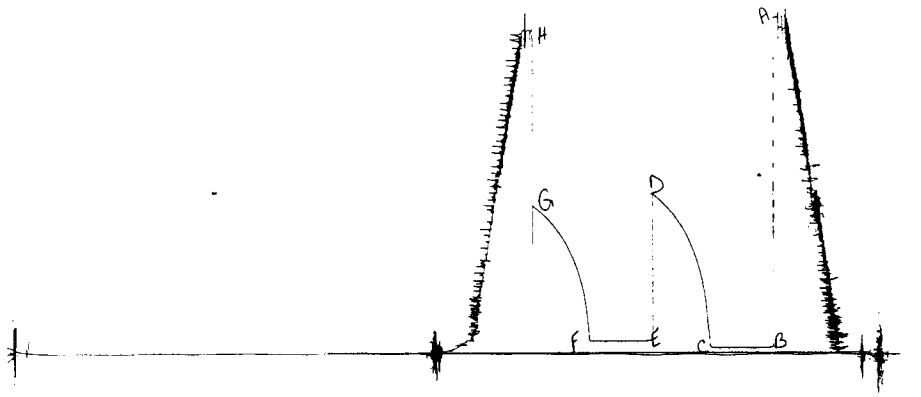
(G) Final Shut-in Pressure 725.4 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 1620.3 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE

~~#16~~
22150



This is an actual photograph of recorder chart

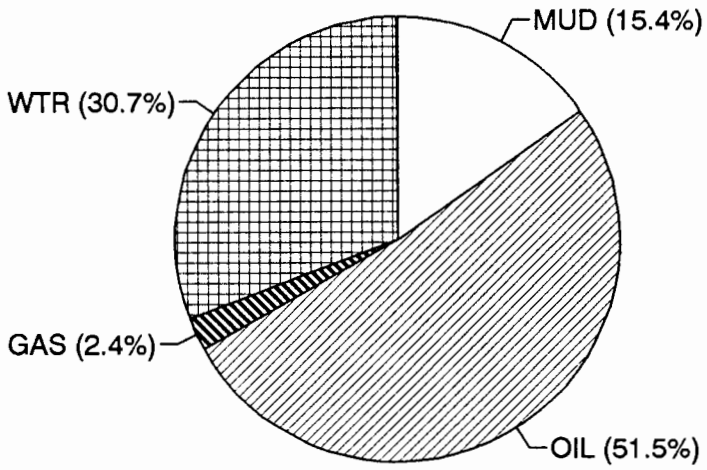
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1685	1688.3
(B) FIRST INITIAL FLOW PRESSURE	19	21.2
(C) FIRST FINAL FLOW PRESSURE	38	40.2
(D) INITIAL CLOSED-IN PRESSURE	798	802.6
(E) SECOND INITIAL FLOW PRESSURE	48	59.3
(F) SECOND FINAL FLOW PRESSURE	58	62.3
(G) FINAL CLOSED-IN PRESSURE	721	725.4
(H) FINAL HYDROSTATIC MUD	1616	1620.3

CALCULATED RECOVERY ANALYSIS DRILL PIPE

DST # 4 TICKET 4916

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	65	5	3.25	95	61.75	0	0	0	0
2	15	0	0	15	2.25	20	3	65	9.75
3	55	0	0	10	5.5	70	38.5	20	11
4			0		0		0		0
5			0		0		0		0
TOTAL	135	2.4074074	3.25	51.5	69.5	30.740741	41.5	15.4	20.75

			HRS	BBL/DAY
BBL OIL=	0.98829	*	1.5	15.813
BBL WATER=	0.59013	*		9.4421
BBL MUD=	0.295065			
BBL GAS	0.046215			



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 4916

Well Name & No. Lefsick "B" #1 Test No. 4 Date 6-18-92

Company Hallwood Petroleum Zone Tested Arbuckle

Address _____ Elevation 1794 KB

Co. Rep./Geo. Jim Musgrove Cont. Allen #3 Est. Ft. of Pay _____

Location: Sec. 4 Twp. 15s Rge. 13w Co. Russell State KS

No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation

Interval Tested 3270-3280 Drill Pipe Size 4½ XH

Anchor Length 10 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 3265 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3270 Wt. Pipe I.D. — 2.7 Ft. Run _____

Total Depth 3280 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.4 lb/gal. Viscosity 44 Filtrate 12.0

Tool Open @ 4:29PM Initial Blow weak ½" blow building to 8"

Final Blow weak surface blow building to 3"

Recovery — Total Feet 135 Feet of Gas in Pipe _____ Flush Tool? _____

Rec. 5	Feet Of	clgass, oil	5	%gas 95	%oil	%water	%mud
Rec. 15	Feet Of	O+W C.M		%gas 15	%oil 20	%water 65	%mud
Rec. 55	Feet Of	SOCMW		%gas 10	%oil 70	%water 20	%mud
Rec.	Feet Of			%gas	%oil	%water	%mud
Rec.	Feet Of			%gas	%oil	%water	%mud

BHT 110 °F Gravity 36 °API @ 90 °F Corrected Gravity 33 °API

RW .134 @ 79.2 °F Chlorides 18,000 ppm Recovery Chlorides 10,000 ppm System

(A) Initial Hydrostatic Mud	1665 PSI	AK1 Recorder No. 22150	Range 3925
(B) First Initial Flow Pressure	19 PSI	@ (depth) 3264	W/Clock No. 19960
(C) First Final Flow Pressure	38 PSI	AK1 Recorder No. 10332	Range 4050
(D) Initial Shut-In Pressure	798 PSI	@ (depth) 3279	W/Clock No. 23501
(E) Second Initial Flow Pressure	48 PSI	AK1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure	58 PSI	@ (depth) _____	W/Clock No. _____
(G) Final Shut-In Pressure	721 PSI	Initial Opening 15	Test X
(H) Final Hydrostatic Mud	1616 PSI	Initial Shut-In 45	Jars _____
		Final Flow 45	Safety Joint _____
		Final Shut-In 45	Straddle _____
			Circ. Sub _____
			Sampler _____
			Extra Packer _____
			Other _____
			TOTAL PRICE $ _____

Approved By _____

Our Representative Paul Symon

Printcraft Printers - Hays, KS