

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Computer inventoried Drill-Stem Test Data

See Sus Sus

Well Name LETSCH "B" #10 Test No. 1 Date 4/6/92
Company HALLWOOD PETROLEUM INC. Zone Tested TARKIO
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE cont. ALLEN DRLG #3 Est. Ft. of Pay 6
Location: Sec. 4 Twp. 15S Rge. 13W co. RUSSELL State KS

Interval Tested 2376-2455 Drill Pipe Size 4.5 XH
Anchor Length 77 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 2371 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 2376
Total Depth 2455

Mud Wt. 8.8 lb / gal. Viscosity 39 Filtrate 10.2

Tool Open @ 5:05 PM Initial Blow STRONG-OFF BOTTOM OF BUCKET WHEN TOOL OPENED
GAS TO SURFACE IN 1 MINUTE-GAUGED
Final Blow STRONG-GAS SAMPLE TAKEN

Recovery - Total Feet 62 Flush Tool? NO

Rec. 62 Feet of GASSY MUD-20%GAS/80%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. 89 Feet of _____
BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1189.1 PSI AK1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 265.5 PSI @ (depth) 2380 w/Clock No. 8179

(C) First Final Flow Pressure 353.3 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 676.2 PSI @ (depth) 2451 w/Clock No. 26199

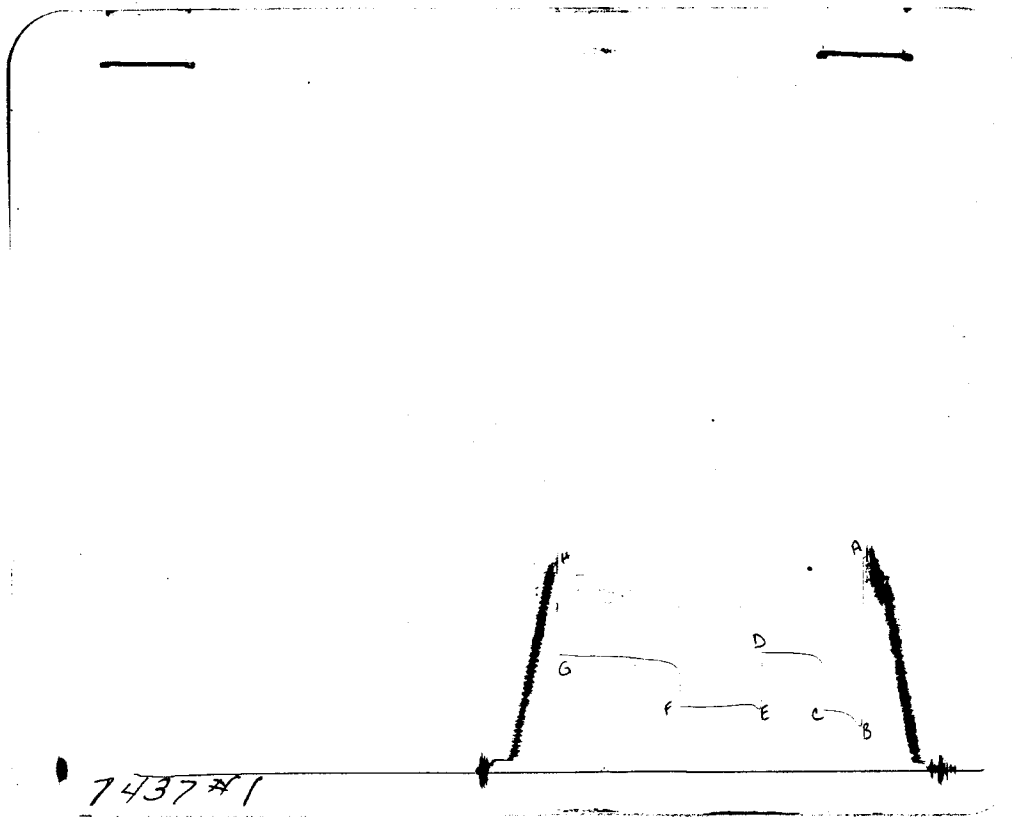
(E) Second Initial Flow Pressure 357.7 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 357.7 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 656.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1186.9 PSI Initial Shut-In 45 Final Shut-In 90

Our Representative DAN BANGLE TOTAL PRICE \$ 600



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1216	1189.1
(B) FIRST INITIAL FLOW PRESSURE	266	265.5
(C) FIRST FINAL FLOW PRESSURE	355	353.3
(D) INITIAL CLOSED-IN PRESSURE	676	676.2
(E) SECOND INITIAL FLOW PRESSURE	355	357.7
(F) SECOND FINAL FLOW PRESSURE	355	357.7
(G) FINAL CLOSED-IN PRESSURE	643	656.4
(H) FINAL HYDROSTATIC MUD	1216	1186.9

LETSCH "B" #10 DST #1
 INITIAL SHUTIN
 30 FLOW TIME

 Slope psi/cycle
 P * 694 psi

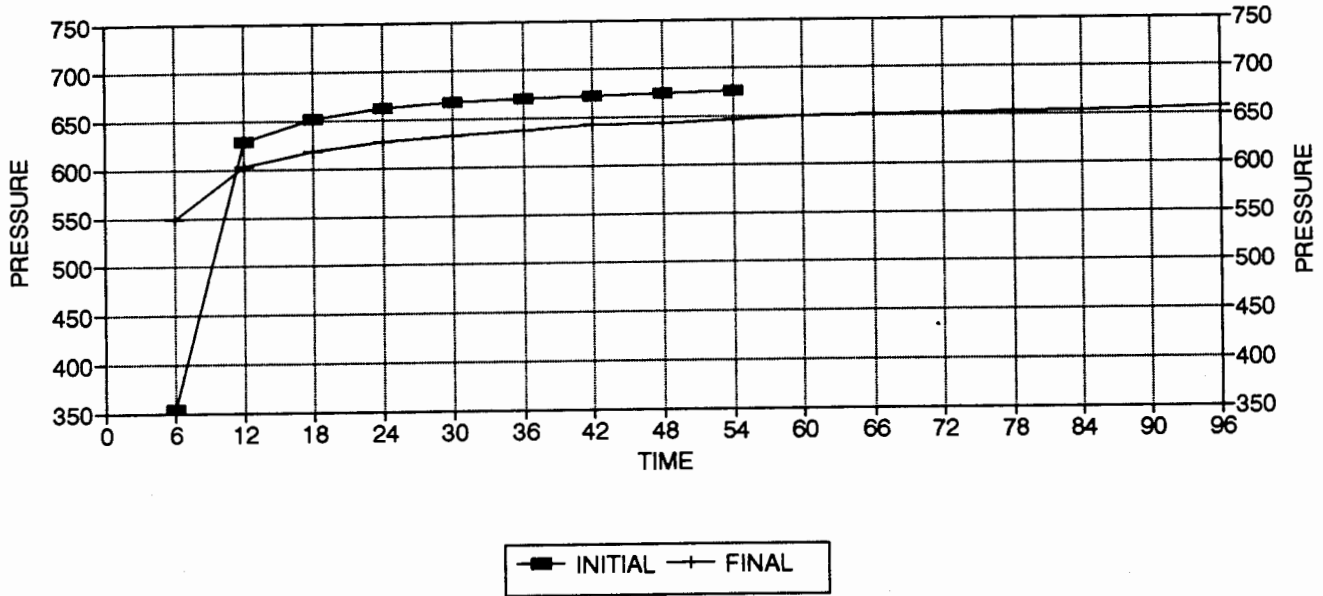
TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
6	353.3	6	0.778	353.3
12	627.7	4	0.544	274.4
18	652.0	3	0.426	24.3
24	661.9	2	0.352	9.9
30	667.4	2	0.301	5.5
X 36	669.6	2	0.263	2.2
42	671.8	2	0.234	2.2
48	674.0	2	0.211	2.2
X 54	676.2	2	0.192	2.2

LETSCH "B" #10 DST #1
 FINAL SHUTIN
 90 TOTAL FLOW TIME

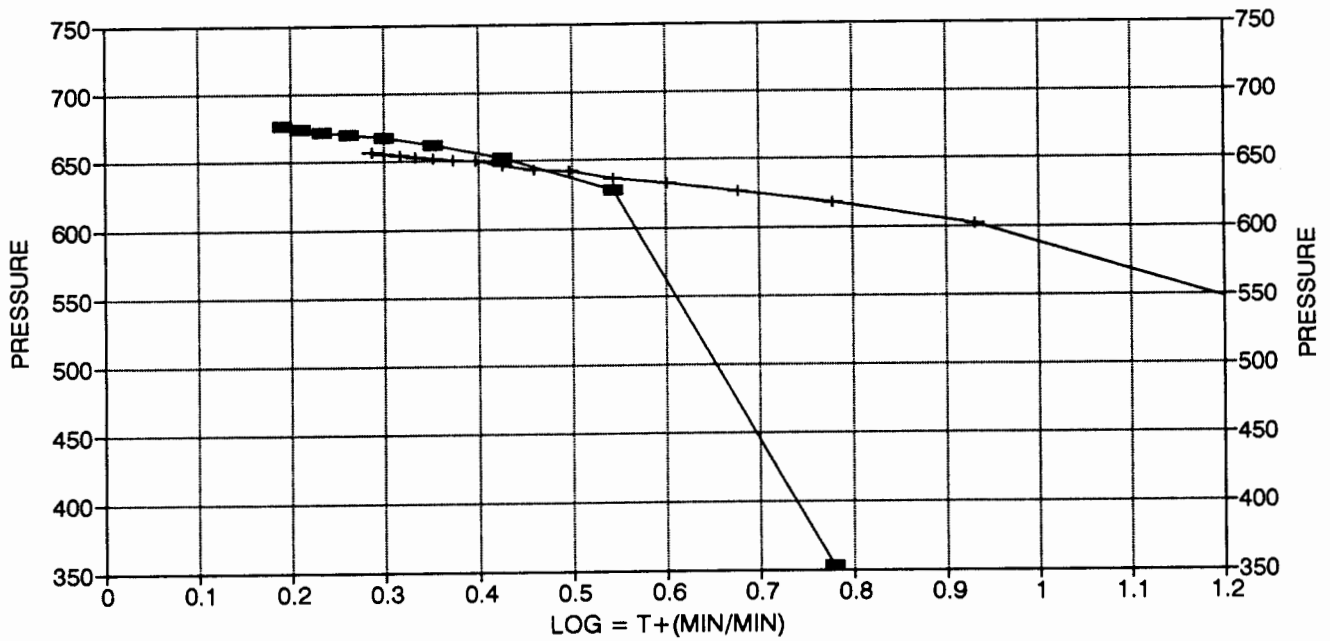
 Slope psi/cycle
 P * 677 psi

TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
6	548.4	16	1.204	548.4
12	602.4	9	0.929	54.0
18	617.8	6	0.778	15.4
24	626.6	5	0.677	8.8
30	632.1	4	0.602	5.5
36	636.5	4	0.544	4.4
42	642.0	3	0.497	5.5
48	643.1	3	0.459	1.1
54	646.4	3	0.426	3.3
60	649.7	3	0.398	3.3
66	650.8	2	0.374	1.1
72	652.0	2	0.352	1.2
X 78	653.1	2	0.333	1.1
84	654.2	2	0.316	1.1
90	655.3	2	0.301	1.1
X 9.6	656.4	2	0.287	1.1

LETSCH "B" #10 / DST #1 DELTA T DELTA P



HORNER PLOT



TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4896

Well Name & No. Lettsch 'B' #10 Test No. 1 Date 4-6-92
Company Hallwood Petro. Inc. Zone Tested Tarkio
Address 45825, Ulster, St. Parkway, Denver, Colo 80237 Elevation 1805 K.B.
Co. Rep./Geo. Jim Musgrove cont. Allen #3 Est. Ft. of Pay 6
Location: Sec. 4 Twp. 15 Rge. 12 Co. Russell State Ks.
No. of Copies 5 Distribution Sheet Yes X No Turnkey Yes X No X Evaluation

Interval Tested 2376-2455 Drill Pipe Size 4.5 XH
Anchor Length 77 Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth 2371 Hole Size — 77/8" Rubber Size — 63/4"
Bottom Packer Depth 2376 Wt. Pipe I.D. — 2.7 Ft. Run
Total Depth 2455 Drill Collar — 2.25 Ft. Run
Mud Wt. 8.8 lb/gal. Viscosity 39 Filtrate 10.2
Tool Open @ 5:05 P.M. Initial Blow Strong - off bottom of bucket
when tool opened. (G.F.S. 1 min) (Gauged)
Final Blow Strong
(Gas sample taken)

Recovery — Total Feet 62 Feet of Gas in Pipe _____ Flush Tool? _____

Rec.	Feet Of	% gas	% oil	% water	% mud
<u>62</u>	<u>Gsy Mud</u>	<u>20%</u>			
_____	_____	% gas	% oil	% water	% mud
_____	_____	% gas	% oil	% water	% mud
_____	_____	% gas	% oil	% water	% mud
_____	_____	% gas	% oil	% water	% mud

BHT 89 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System
(A) Initial Hydrostatic Mud 1216 PSI Ak1 Recorder No. 7437 Range 4200
(B) First Initial Flow Pressure 266 PSI @ (depth) 2380 w/Clock No. 8179
(C) First Final Flow Pressure 355 PSI Ak1 Recorder No. 13849 Range 4375
(D) Initial Shut-in Pressure 676 PSI @ (depth) 2451 w/Clock No. 26199
(E) Second Initial Flow Pressure 355 PSI Ak1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 355 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-in Pressure 643 PSI Initial Opening .30 Test _____
(H) Final Hydrostatic Mud 1216 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 60 Safety Joint X
Final Shut-in 90 Straddle _____
Circ. Sub _____
Sampler _____

Approved By _____

Our Representative Ray Baner

Extra Packer _____

Other evaluation

TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #10 Test No. 2 Date 4/8/92
Company HALLWOOD PETROLEUM INC. Zone Tested TORONTO
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE cont. ALLEN DRLG #3 Est. Ft. of Pay 5
Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 2948-2984 Drill Pipe Size 4.5 XH
Anchor Length 36 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 2943 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 2948
Total Depth 2984

Mud Wt. 9.2 lb / gal. Viscosity 48 Filtrate 10.4

Tool Open @ 2:00 AM Initial Blow WEAK-BUILDING TO STRONG BLOW OFF BOTTOM
OF BUCKET IN 30 MINUTES
Final Blow WEAK-BUILDING TO STRONG BLOW OFF BOTTOM OF BUCKET
IN 15 MINUTES

Recovery — Total Feet 120 Flush Tool? NO

Rec. 488 Feet of GAS IN PIPE

Rec. 120 Feet of HEAVY OIL CUT GASSY MUD-20%GAS/20%OIL/60%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 103 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 7000 ppm System

(A) Initial Hydrostatic Mud 1531.3 PSI Ak1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 65.5 PSI @ (depth) 2952 w/Clock No. 8179

(C) First Final Flow Pressure 61.1 PSI Ak1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 569.4 PSI @ (depth) 2980 w/Clock No. 26199

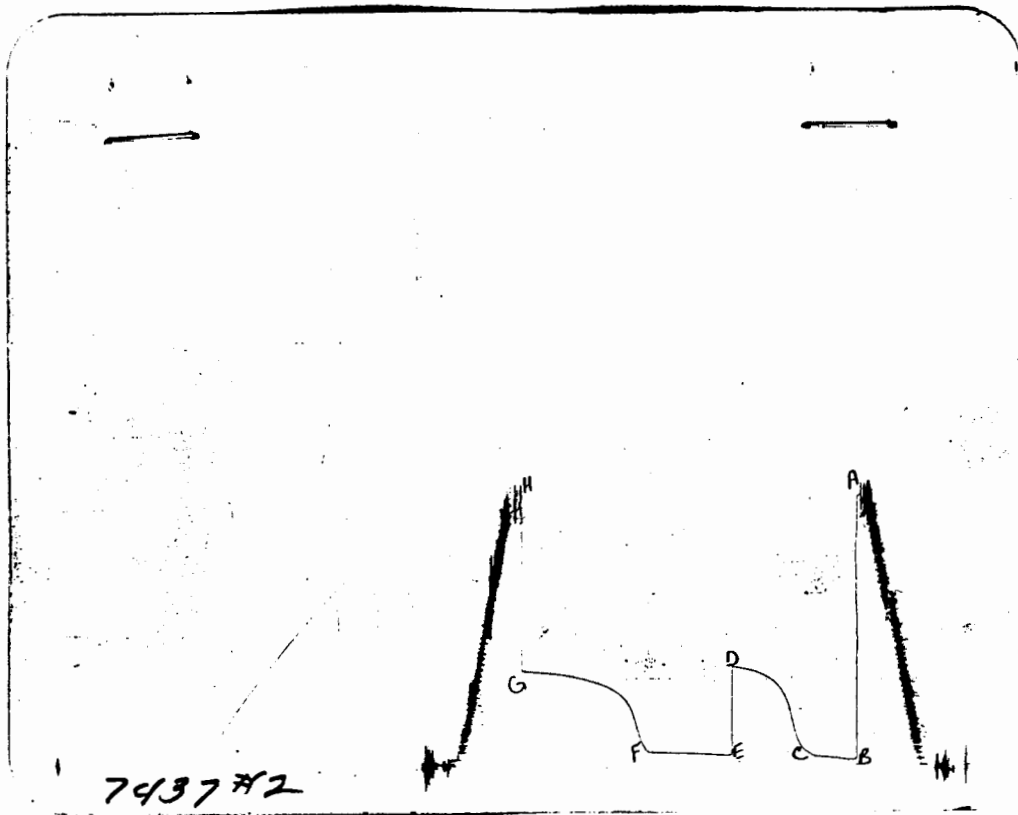
(E) Second Initial Flow Pressure 78.8 PSI Ak1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 84.4 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 544 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1520.3 PSI Initial Shut-in 60 Final Shut-in 90

Our Representative DAN BANGLE TOTAL PRICE \$ 600

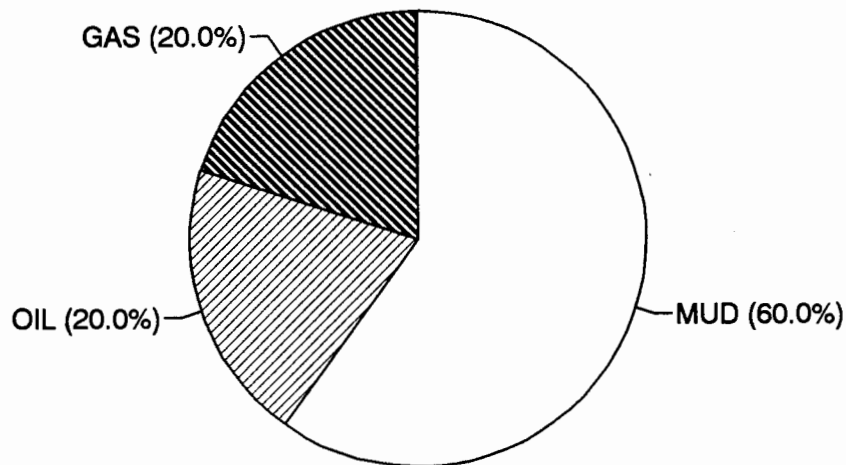


POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1591	1531.3
(B) FIRST INITIAL FLOW PRESSURE	44	65.5
(C) FIRST FINAL FLOW PRESSURE	55	61.1
(D) INITIAL CLOSED-IN PRESSURE	555	569.4
(E) SECOND INITIAL FLOW PRESSURE	66	78.8
(F) SECOND FINAL FLOW PRESSURE	77	84.4
(G) FINAL CLOSED-IN PRESSURE	533	544
(H) FINAL HYDROSTATIC MUD	1547	1520.3

DST #	CALCULATED RECOVERY ANALYSIS					DRILL	PIPE		
	2	TICKET					4897		
SAMPLE #	TOTAL FEET	GAS %	FEET	OIL %	FEET	WATER %	FEET	MUD %	FEET
1	120	20	24	20	24	0	0	60	72
2	0	0	0	0	0	0	0	0	0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	120	20	24	20	24	0	0	60	72

		HRS	BBL/DAY
BBL OIL=	0.34128	*	1.5 5.4605
BBL WATER=	0	*	0
BBL MUD=	1.02384		
BBL GAS	0.34128		



INITIAL FLOW

RECORDER # 13849

DST #2

DT(MIN)	PRESSURE	<>	PRESSURE
0	65.5		65.5
3	54.4		-11.1
6	52.2		-2.200001
9	51.1		-1.100002
12	55.5		4.400002
15	56.6		1.099999
18	58.8		2.200001
21	60		1.200001
24	60		0
27	61.1		1.099999
30	61.1		0

FINAL FLOW

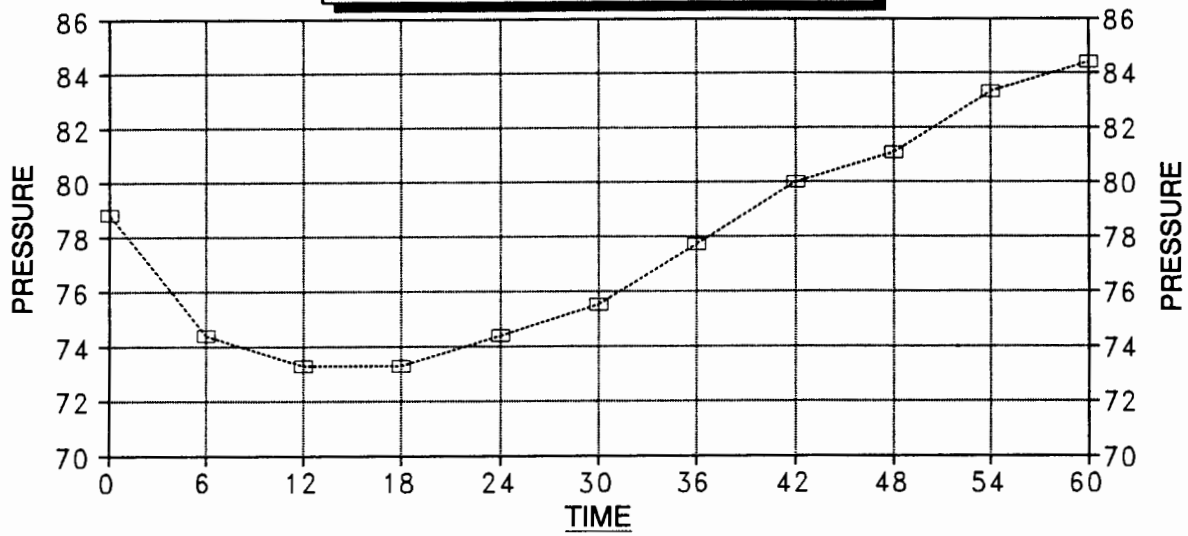
RECORDER # 13849

DST #2

DT(MIN)	PRESSURE	<>	PRESSURE
0	78.8		78.8
6	74.4		-4.400002
12	73.3		-1.099999
18	73.3		0
24	74.4		1.099999
30	75.5		1.099999
36	77.7		2.199997
42	80		2.300003
48	81.1		1.099999
54	83.3		2.200005
60	84.4		1.099999

DELTA T DELTA P

FINAL FLOW - DST #2



---□--- LETSCH 'B' #10

LETSCH "B" #10 DST #2
 INITIAL SHUTIN
 30 FLOW TIME

 Slope -419.04 psi/cycle
 P * 638 psi

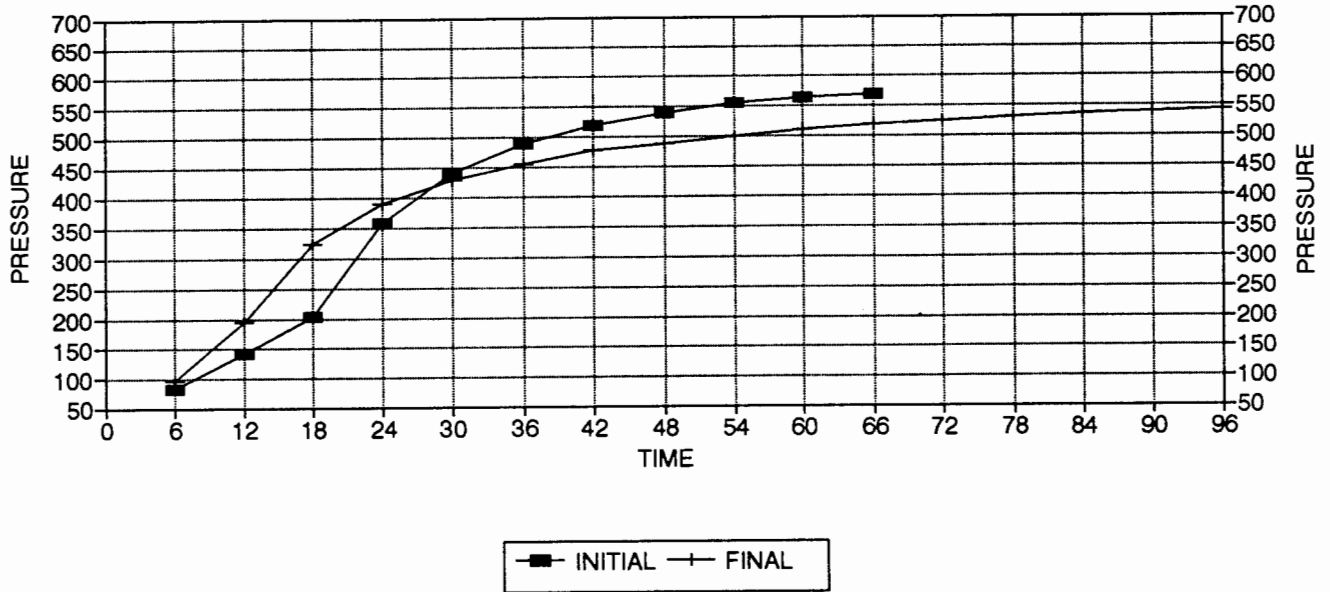
TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
6	82.2	6	0.778	82.2
12	141.1	4	0.544	58.9
18	202.2	3	0.426	61.1
24	358.8	2	0.352	156.6
30	442.2	2	0.301	83.4
36	489.8	2	0.263	47.6
42	518.5	2	0.234	28.7
48	539.5	2	0.211	21.0
54	555.0	2	0.192	15.5
X 60	563.8	2	0.176	8.8
X 66	569.4	1	0.163	5.6

LETSCH "B" #10 DST #2
 FINAL SHUTIN
 90 TOTAL FLOW TIME

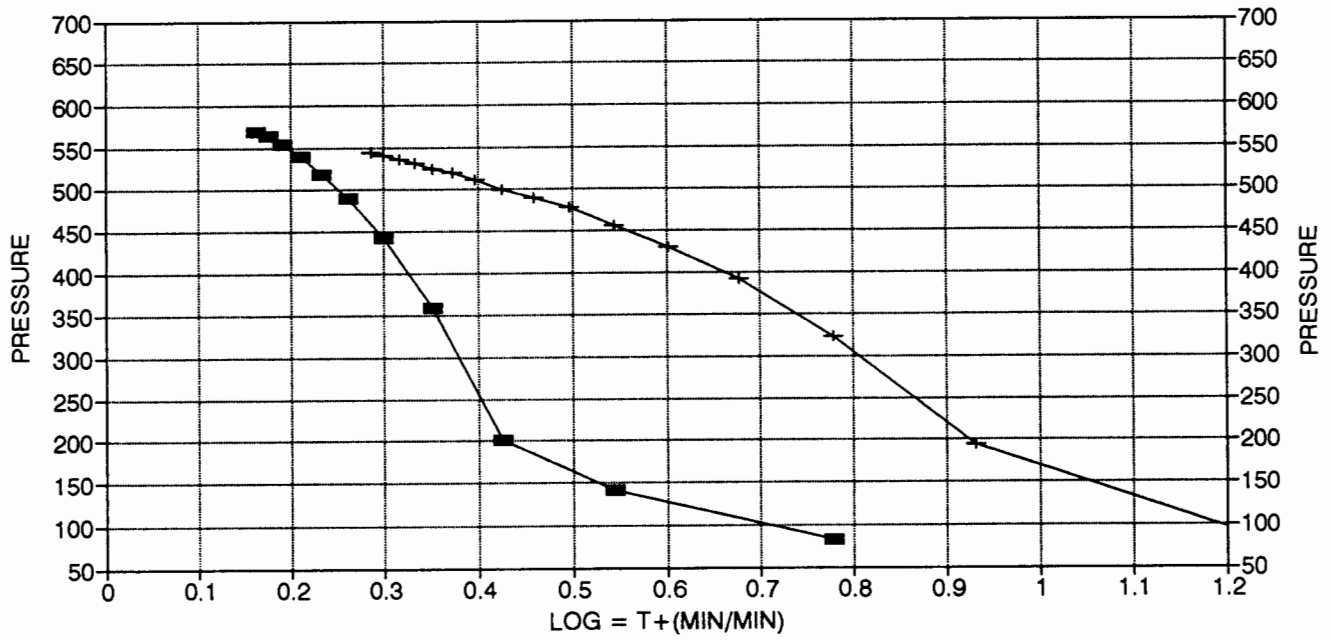
 Slope -268.70 psi/cycle
 P * 621 psi

TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
6	95.5	16	1.204	95.5
12	194.4	9	0.929	98.9
18	323.3	6	0.778	128.9
24	392.2	5	0.677	68.9
30	429.9	4	0.602	37.7
36	455.5	4	0.544	25.6
42	477.6	3	0.497	22.1
48	488.7	3	0.459	11.1
54	499.7	3	0.426	11.0
60	510.8	3	0.398	11.1
66	519.6	2	0.374	8.8
72	525.2	2	0.352	5.6
78	530.7	2	0.333	5.5
X 84	536.2	2	0.316	5.5
90	540.6	2	0.301	4.4
X 96	544.0	2	0.287	3.4

LETSCH "B" #10 /DST #2 DELTA T DELTA P



HORNER PLOT



TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4897

Well Name & No. Letsch 'B' #10 Test No. 2 Date 4-8-92
Company Hallwood Petro. Inc. Zone Tested Toronto
Address _____ Elevation 1805 K.B.
Co. Rep./Geo. Jim Musgrove Cont. Allen #3 Est. Ft. of Pay 5
Location: Sec. 4 Twp. 15 Rge. 13 Co. Russell State Ks.
No. of Copies 5 Distribution Sheet _____ Yes No Turnkey _____ Yes No Evaluation

Interval Tested 2948-2984 Drill Pipe Size 4.5 x H
Anchor Length 36 Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth 2943 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth 2948 Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth 2984 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.2 lb/gal. Viscosity 48 Filtrate 10.4

Tool Open @ 2:00 A.M. Initial Blow Weak - building to strong blow off bottom of bucket in 30 min.
Final Blow Weak - building to strong blow off bottom of bucket in 15 min.

Recovery — Total Feet 120 Feet of Gas in Pipe 488 Flush Tool? _____
Rec. 120 Feet Of H.O.C Gsym 20% gas 20% oil %water 60% 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 103 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 7,000 ppm System

(A) Initial Hydrostatic Mud 1591 PSI Ak1 Recorder No. 7437 Range 4200
(B) First Initial Flow Pressure 44 PSI @ (depth) 2952 w/Clock No. 8179
(C) First Final Flow Pressure 55 PSI Ak1 Recorder No. 13849 Range 4375
(D) Initial Shut-in Pressure 555 PSI @ (depth) 2980 w/Clock No. 26199
(E) Second Initial Flow Pressure 66 PSI Ak1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 77 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-in Pressure 533 PSI Initial Opening 30 Test _____
(H) Final Hydrostatic Mud 1547 PSI Initial Shut-in 60 Jars _____

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Final Flow 60 Safety Joint
Final Shut-in 90 Straddle _____
Circ. Sub _____
Sampler _____

Approved By _____

Our Representative Jim Musgrove

Extra Packer _____

Other partial evaluation

TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #10 Test No. 3 Date 4/8/92
Company HALLWOOD PETROLEUM INC. Zone Tested LKC-"C"
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN DRLG #3 Est. Ft. of Pay _____
Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3028-3060 Drill Pipe Size 4.5 XH
Anchor Length 32 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3023 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 3028
Total Depth 3060

Mud Wt. 9 lb / gal. Viscosity 44 Filtrate 9.2

Tool Open @ 2:27 PM Initial Blow WEAK-BUILDING TO STRONG-OFF BOTTOM OF BUCKET
IN 18 MINUTES

Final Blow WEAK-BUILDING TO STRONG-OFF BOTTOM OF BUCKET IN 45
MINUTES

Recovery — Total Feet 305 Flush Tool? NO

Rec. 305 Feet of SALT WATER

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 108 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.25 @ 72 °F Chlorides 37000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 1630.9 PSI Ak1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 62.4 PSI @ (depth) 3032 w/Clock No. 8179

(C) First Final Flow Pressure 97.3 PSI Ak1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 615.4 PSI @ (depth) 3056 w/Clock No. 26199

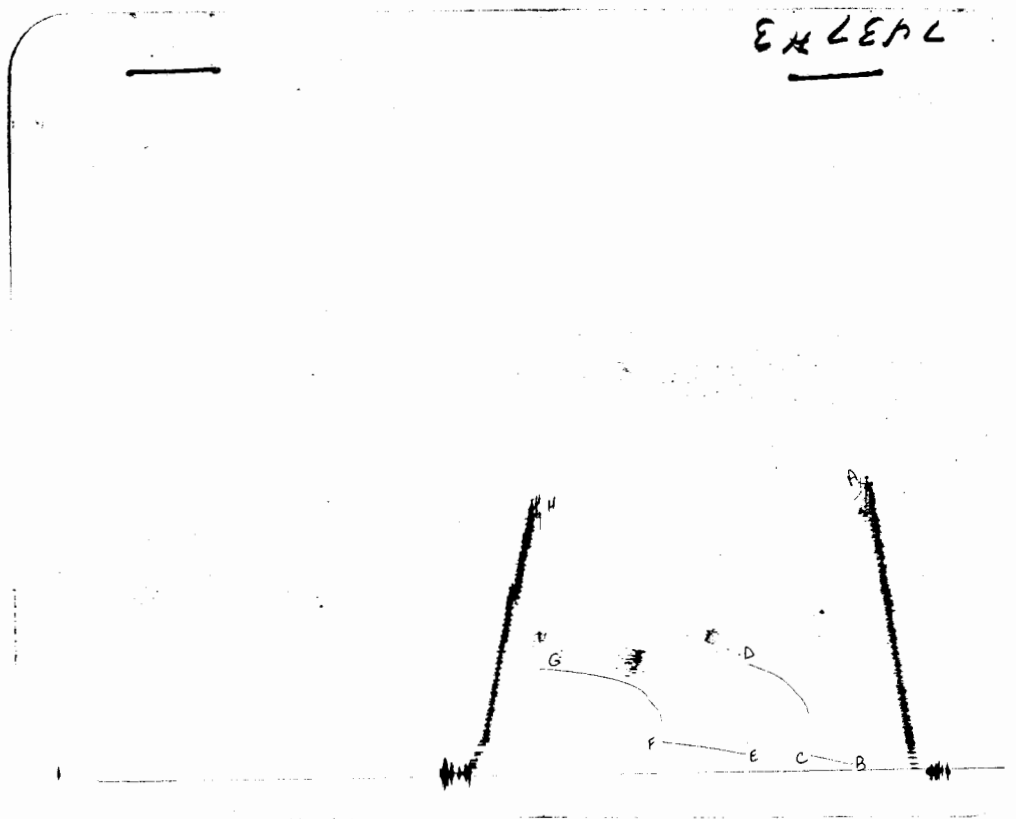
(E) Second Initial Flow Pressure 115.8 PSI Ak1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 170.9 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 603.2 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1550.7 PSI Initial Shut-in 45 Final Shut-in 90

Our Representative DAN RANGLE TOTAL PRICE \$ 600



POINT

This is an actual photograph of recorder chart
PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1623	1630.9
(B) FIRST INITIAL FLOW PRESSURE	55	62.4
(C) FIRST FINAL FLOW PRESSURE	88	97.3
(D) INITIAL CLOSED-IN PRESSURE	610	615.4
(E) SECOND INITIAL FLOW PRESSURE	111	115.8
(F) SECOND FINAL FLOW PRESSURE	166	170.9
(G) FINAL CLOSED-IN PRESSURE	599	603.2
(H) FINAL HYDROSTATIC MUD	1547	1550.7

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4898

Well Name & No. Letsch 'B' #10 Test No. 3 Date 4-8-92
 Company Hallwood Petro. Inc. Zone Tested C L.K.C
 Address _____ Elevation 1805 K.A.
 Co. Rep./Geo. Jim Musgrove Cont. Allen #3 Est. Ft. of Pay _____
 Location: Sec. 4 Twp. 15 Rge. 13 Co. Russell State Ks.
 No. of Copies 5 Distribution Sheet _____ Yes NO Turnkey _____ Yes No _____ Evaluation _____

Interval Tested 3028-3060 Drill Pipe Size 4.5 X H
 Anchor Length 32 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3023 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3028 Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 3060 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9 lb/gal. Viscosity 44 Filtrate 9.2

Tool Open @ 2:27 P.M. Initial Blow Weak-building to strong-off
bottom of bucket in 18 min.

Final Blow Weak-building to strong-off
bottom of bucket in 45 min.

Recovery — Total Feet 305 Feet of Gas in Pipe _____ Flush Tool? _____

Rec.	Feet Of	% gas	% oil	% water	% mud
<u>305</u>	<u>5.W</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

BHT 108 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW .25 @ 72 °F Chlorides 32,000 ppm Recovery Chlorides 6,000 ppm System

(A) Initial Hydrostatic Mud 1623 PSI AK1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 55 PSI @ (depth) 30.32 w/Clock No. 8179

(C) First Final Flow Pressure 88 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 610 PSI @ (depth) 30.56 w/Clock No. 26199

(E) Second Initial Flow Pressure 111 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 166 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 599 PSI Initial Opening 30 Test 550.00

(H) Final Hydrostatic Mud 1547 PSI Initial Shut-in 45 Jars _____

Final Flow 60 Safety Joint 50.00

Final Shut-in 90 Straddle _____

Circ. Sub _____

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ 600.00

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Approved By [Signature]

Our Representative [Signature]

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #10 Test No. 4 Date 4/9/92
Company HALLWOOD PETROLEUM INC. Zone Tested LKC-"G"
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN DRLG #3 Est. Ft. of Pay _____
Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3116-3130 Drill Pipe Size 4.5 XH
Anchor Length 14 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3111 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3116
Total Depth 3130

Mud Wt. 9.2 lb / gal. Viscosity 47 Filtrate 9.2

Tool Open @ 4:18 AM Initial Blow WEAK-BUILDING TO STRONG-OFF BOTTOM OF BUCKET
IN 20 MINUTES
Final Blow WEAK-BUILDING TO STRONG-OFF BOTTOM OF BUCKET
IN 40 MINUTES

Recovery - Total Feet 472 Flush Tool? NO

Rec. 472 Feet of SALT WATER

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 110 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.19 @ 76 °F Chlorides 42000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 1660.9 PSI Ak1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 62.4 PSI @ (depth) 3120 w/Clock No. 8179

(C) First Final Flow Pressure 127.8 PSI Ak1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 1066.9 PSI @ (depth) 3126 w/Clock No. 26199

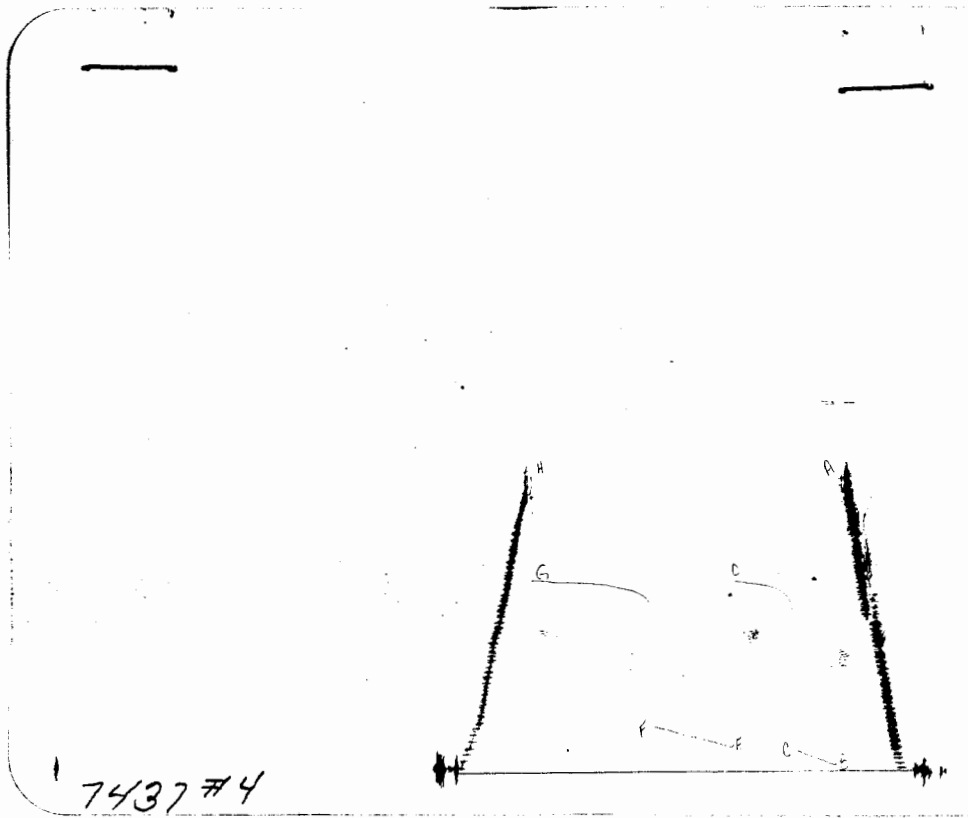
(E) Second Initial Flow Pressure 161.4 PSI Ak1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 262.5 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 1066.9 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1630.4 PSI Initial Shut-In 45 Final Shut-In 90

Our Representative DAN BANGLE TOTAL PRICE \$ 600



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1656	1660.9
(B) FIRST INITIAL FLOW PRESSURE	55	62.4
(C) FIRST FINAL FLOW PRESSURE	122	127.8
(D) INITIAL CLOSED-IN PRESSURE	1061	1066.9
(E) SECOND INITIAL FLOW PRESSURE	155	161.4
(F) SECOND FINAL FLOW PRESSURE	255	262.5
(G) FINAL CLOSED-IN PRESSURE	1061	1066.9
(H) FINAL HYDROSTATIC MUD	1623	1630.4

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4899

Well Name & No.	<u>letsch 'B' #10</u>	Test No.	<u>4</u>	Date	<u>4-9-92</u>
Company	<u>Hallwood Petro. Inc</u>	Zone Tested	<u>G</u>	<u>h.K.C.</u>	
Address		Elevation	<u>1805 K.B</u>		
Co. Rep./Geo.	<u>Jim Musgrove cont. Allen #3</u>	Est. Ft. of Pay			
Location: Sec.	<u>4</u>	Twp.	<u>15</u>	Rge.	<u>13</u>
		Co.	<u>Russell</u>	State	<u>Ks.</u>
No. of Copes	<u>5</u>	Distribution Sheet	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Turnkey	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		Evaluation			

Interval Tested	<u>3116 - 3130</u>	Drill Pipe Size	<u>4.5 XH</u>
Anchor Length	<u>14</u>	Top Choke — 1"	Bottom Choke — $\frac{1}{4}$ "
Top Packer Depth	<u>3111</u>	Hole Size — $7\frac{7}{8}$ "	Rubber Size — $6\frac{3}{4}$ "
Bottom Packer Depth	<u>3116</u>	Wt. Pipe I.D. — 2.7 Ft. Run	
Total Depth	<u>3130</u>	Drill Collar — 2.25 Ft. Run	
Mud Wt.	<u>9.2</u> lb/gal.	Viscosity	<u>47</u>
		Filtrate	<u>9.2</u>

Tool Open @ 4:18 P.M. Initial Blow Weak - building to strong - off bottom of bucket in 20 min.

Final Blow Weak - building to strong - off bottom of bucket in 40 min.

Recovery — Total Feet	<u>472</u>	Feet of Gas in Pipe		Flush Tool?			
Rec.	<u>472</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	<u>110</u>	°F Gravity		°API @		°F Corrected Gravity		°API	
RW	<u>.19</u>	@	<u>76</u>	°F Chlorides	<u>42,000</u>	ppm Recovery	Chlorides	<u>6,000</u>	ppm System
(A) Initial Hydrostatic Mud	<u>1656</u>	PSI	AK1 Recorder No.	<u>7437</u>	Range	<u>4200</u>			
(B) First Initial Flow Pressure	<u>55</u>	PSI	@ (depth)	<u>3120</u>	w/Clock No.	<u>8129</u>			
(C) First Final Flow Pressure	<u>122</u>	PSI	AK1 Recorder No.	<u>13849</u>	Range	<u>4375</u>			
(D) Initial Shut-In Pressure	<u>1061</u>	PSI	@ (depth)	<u>3126</u>	w/Clock No.	<u>26199</u>			
(E) Second Initial Flow Pressure	<u>155</u>	PSI	AK1 Recorder No.		Range				
(F) Second Final Flow Pressure	<u>255</u>	PSI	@ (depth)		w/Clock No.				
(G) Final Shut-In Pressure	<u>1061</u>	PSI	Initial Opening	<u>30</u>	Test	<u>550.00</u>			
(H) Final Hydrostatic Mud	<u>1623</u>	PSI	Initial Shut-In	<u>45</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	<u>X 57.00</u>
Final Shut-In	<u>90</u>	Straddle	
		Circ. Sub	
		Sampler	
		Extra Packer	
		Other	
		TOTAL PRICE \$	<u>600.00</u>

Approved By [Signature]

Our Representative [Signature]

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #10 Test No. 5 Date 4/10/92
Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCKLE
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE Cont. ALLEN DRLG #3 Est. Ft. of Pay _____
Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3321-3329 Drill Pipe Size 4.5 XH
Anchor Length 8 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3316 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 3321
Total Depth 3329

Mud Wt. 9.2 lb / gal. Viscosity 48 Filtrate 9.2

Tool Open @ 7:15 AM Initial Blow 1/2" WEAK BLOW DECREASING TO VERY WEAK SURFACE
BLOW

Final Blow NO BLOW

Recovery — Total Feet 5 Flush Tool? YES

Rec. 5 Feet of DRILLING MUD W/ SHOW OF OIL IN TOOL

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 111 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1804.3 PSI Ak1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 46.8 PSI @ (depth) 3321 w/Clock No. 8179

(C) First Final Flow Pressure 46.8 PSI Ak1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 148.7 PSI @ (depth) 3325 w/Clock No. 26199

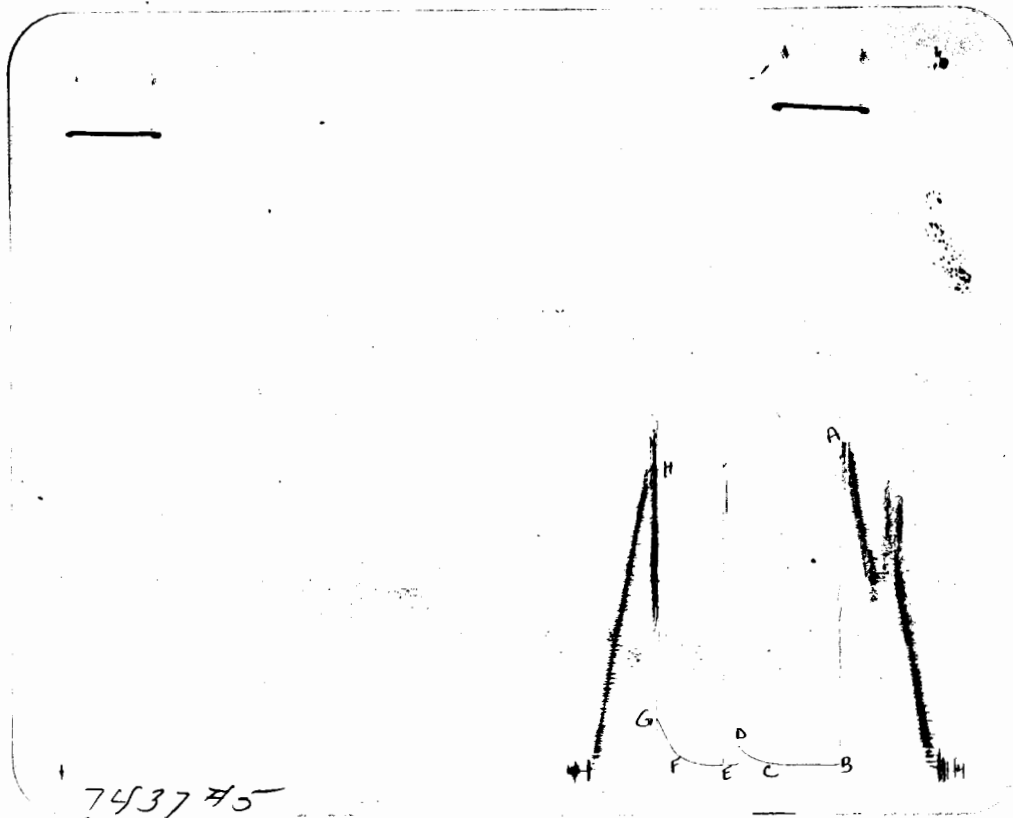
(E) Second Initial Flow Pressure 46.8 PSI Ak1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 46.8 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 280.1 PSI Initial Opening 30 Final Flow 15

(H) Final Hydrostatic Mud 1692.4 PSI Initial Shut-In 45 Final Shut-In 45

Our Representative DAN BANGLE TOTAL PRICE \$ 600



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1797	1804.3
(B) FIRST INITIAL FLOW PRESSURE	44	46.8
(C) FIRST FINAL FLOW PRESSURE	44	46.8
(D) INITIAL CLOSED-IN PRESSURE	144	148.7
(E) SECOND INITIAL FLOW PRESSURE	44	46.8
(F) SECOND FINAL FLOW PRESSURE	44	46.8
(G) FINAL CLOSED-IN PRESSURE	277	280.1
(H) FINAL HYDROSTATIC MUD	1689	1692.4

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4900

Well Name & No. <u>Let'sch 'B' #10</u>	Test No. <u>5</u>	Date <u>4-10-92</u>			
Company <u>Hallwood Petro. Inc.</u>	Zone Tested <u>Arbuckle</u>				
Address _____	Elevation <u>1805 K.B</u>				
Co. Rep./Geo. <u>Jim Musgrove</u>	Cont. <u>Allen #3</u>	Est. Ft. of Pay _____			
Location: Sec. <u>4</u>	Twp. <u>15</u>	Rge. <u>13</u>	Co. <u>Russell</u>	State <u>Ks.</u>	
No. of Copies <u>5</u>	Distribution Sheet _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Turnkey _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Evaluation _____

Interval Tested <u>3321-3329</u>	Drill Pipe Size <u>4.5" X 1 1/4"</u>
Anchor Length <u>8</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3316</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3321</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>3329</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.2</u> lb/gal.	Viscosity <u>48</u> Filtrate <u>9.2</u>
Tool Open @ <u>2:15 A.M.</u>	Initial Blow <u>1/2' weak blow decreasing to very weak surface blow</u>
Final Blow <u>No blow</u>	

Recovery — Total Feet <u>5</u>	Feet of Gas in Pipe _____	Flush Tool? <input checked="" type="checkbox"/>
Rec. <u>5</u> Feet Of <u>D.M w/show oil in tool</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 <u>111</u> °F	Gravity _____ °API @ _____ °F	Corrected Gravity _____ °API
RW _____ @ _____ °F	Chlorides _____ ppm	Recovery Chlorides <u>5,000</u> ppm System
(A) Initial Hydrostatic Mud <u>1797</u> PSI	AK1 Recorder No. <u>7437</u>	Range <u>4200</u>
(B) First Initial Flow Pressure <u>44</u> PSI	@ (depth) <u>3321</u>	w/Clock No. <u>8179</u>
(C) First Final Flow Pressure <u>44</u> PSI	AK1 Recorder No. <u>13849</u>	Range <u>4375</u>
(D) Initial Shut-in Pressure <u>144</u> PSI	@ (depth) <u>3325</u>	w/Clock No. <u>26199</u>
(E) Second Initial Flow Pressure <u>44</u> PSI	AK1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>44</u> PSI	@ (depth) _____	w/Clock No. _____
(G) Final Shut-in Pressure <u>277</u> PSI	Initial Opening <u>20</u>	Test _____
(H) Final Hydrostatic Mud <u>1689</u> PSI	Initial Shut-in <u>45</u>	Jars _____

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Final Flow <u>15</u>	Safety Joint <input checked="" type="checkbox"/>
Final Shut-in <u>45</u>	Straddle _____
	Circ. Sub _____
	Sampler _____
	Extra Packer _____
	Other _____
	TOTAL PRICE \$ _____

Approved By _____
Our Representative Don Rangle

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LETSCH "B" #10 Test No. 6 Date 4/10/92
Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCKLE
Address 4582 S ULSTER ST PKWY DENVER CO 80237 Elevation 1805 K.B.
Co. Rep./Geo. JIM MUSGROVE cont. ALLEN DRLG #3 Est. Ft. of Pay _____
Location: Sec. 4 Twp. 15S Rge. 13W Co. RUSSELL State KS

Interval Tested 3328-3338 Drill Pipe Size 4.5 XH
Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3323 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3328
Total Depth 3338

Mud Wt. 9.2 lb / gal. Viscosity 48 Filtrate 9.2

Tool Open @ 5:45 PM Initial Blow 1/2" WEAK BLOW DECREASING TO WEAK SURFACE
BLOW

Final Blow NO BLOW

Recovery — Total Feet 15 Flush Tool? YES

Rec. 15 Feet of DRILLING MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 111 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1872.6 PSI Ak1 Recorder No. 7437 Range 4200

(B) First Initial Flow Pressure 57.3 PSI @ (depth) 3332 w/Clock No. 8179

(C) First Final Flow Pressure 57.3 PSI Ak1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 833.4 PSI @ (depth) 3334 w/Clock No. 26199

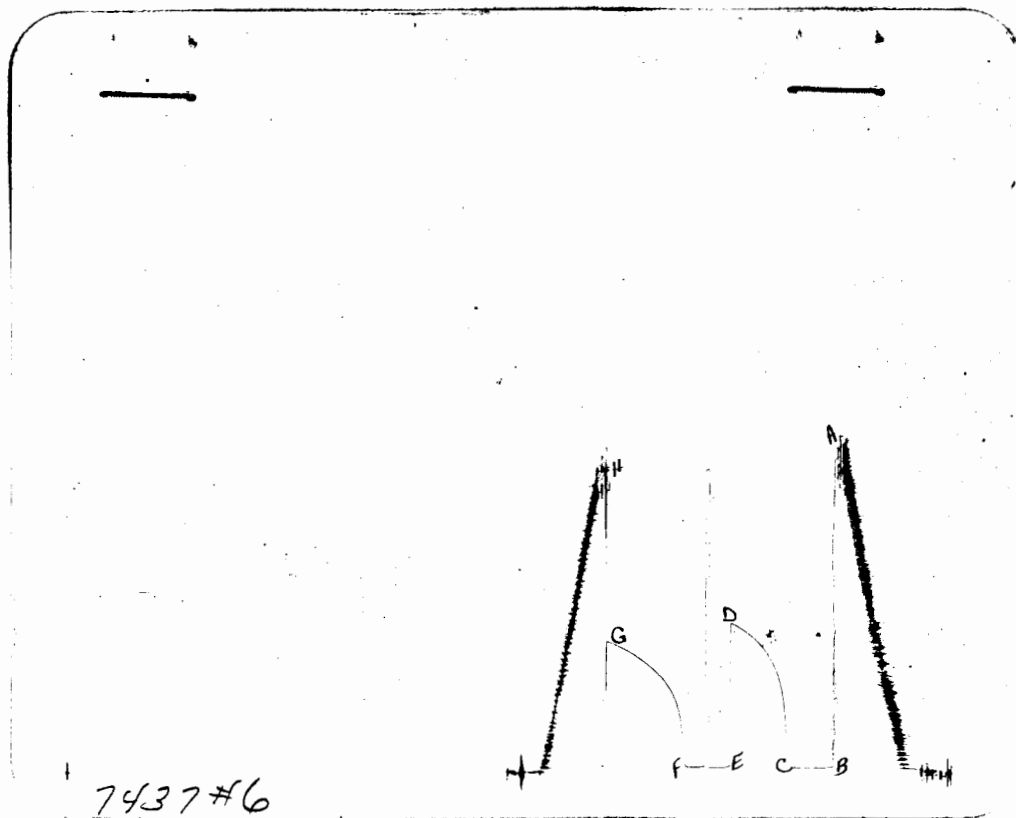
(E) Second Initial Flow Pressure 57.3 PSI Ak1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 57.3 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 744.9 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1768.4 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative DAN BANGLE TOTAL PRICE \$ 600



POINT This is an actual photograph of recorder chart PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1873	1872.6
(B) FIRST INITIAL FLOW PRESSURE	55	57.3
(C) FIRST FINAL FLOW PRESSURE	55	57.3
(D) INITIAL CLOSED-IN PRESSURE	830	833.4
(E) SECOND INITIAL FLOW PRESSURE	55	57.3
(F) SECOND FINAL FLOW PRESSURE	55	57.3
(G) FINAL CLOSED-IN PRESSURE	742	744.9
(H) FINAL HYDROSTATIC MUD	1765	1768.4

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4751

Well Name & No. Let'sch '0' #10 Test No. 6 Date 4-10-92
 Company Hallwood Petro. Inc. Zone Tested Arbuckle
 Address _____ Elevation 1805 K.B
 Co. Rep./Geo. Jim Musgrove Cont. Allen #3 Est. Ft. of Pay _____
 Location: Sec. 4 Twp. 15 Rge. 13 Co. Russell State Ks.
 No. of Copies 5 Distribution Sheet _____ Yes X No Turnkey _____ Yes X No _____ Evaluation _____

Interval Tested 3328-3338 Drill Pipe Size 4.5 XH
 Anchor Length 10 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3323 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3328 Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 3338 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.2 lb/gal. Viscosity 48 Filtrate 9.2
 Tool Open @ 5:45 P.M. Initial Blow 1/2" decreasing to weak surface blow.
 Final Blow No blow

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

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>15</u>	<u>D.M.</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

BHT 111 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5,000 ppm System

- (A) Initial Hydrostatic Mud 1873 PSI AK1 Recorder No. 7437 Range 4200
- (B) First Initial Flow Pressure 55 PSI @ (depth) 3332 w/Clock No. 8179
- (C) First Final Flow Pressure 55 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-In Pressure 830 PSI @ (depth) 3334 w/Clock No. 26199
- (E) Second Initial Flow Pressure 55 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 55 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-In Pressure 742 PSI Initial Opening 30 Test _____
- (H) Final Hydrostatic Mud 1765 PSI Initial Shut-In 45 Jars _____

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Final Flow 30 Safety Joint X

Final Shut-In 60 Straddle _____

Circ. Sub _____

Sampler _____

Approved By [Signature]

Extra Packer _____

Our Representative [Signature]

Other _____

TOTAL PRICE \$ _____