TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. CARMICHAEL "A" #14 Test No. 1 Date 11/25/90

Company HALLWOOD PETROLEUM INC Zone Tested LANSING-KS CITY

Address P.O. BOX 378111 DENVER COLORADO 80237 Elevation 1846 GL

Co. Rep./Geo. MR JIM MUSGROVE Cont. RED TIGER RIG #7 Est. Ft. of Pay 0

Location: Sec. 18 Twp. 11S Rge. 17W Co. ELLIS State KANSAS

Interval Tested 3063-3140 Drill Pipe Size 5" XH

Anchor Length 77 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 3058 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3063 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3140 Drill Collar — 2.25 Ft. Run 0

Mud Wt. 9.4 lb/gal. Viscosity 42 Filtrate 8.8

Tool Open @ 2:50 PM Initial Blow WEAK THROUGHOUT-LESS THAN 1"
WATER

Final Blow SAME AS INITIAL

Recovery — Total Feet 40 Flush Tool? NO

Rec. 140 Feet of GAS IN PIPE

Rec. 40 Feet of OIL SPECKED MUD

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

BHT 92 °F Gravity _____ °API @ 0 °F Corrected Gravity 0 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6800 ppm System

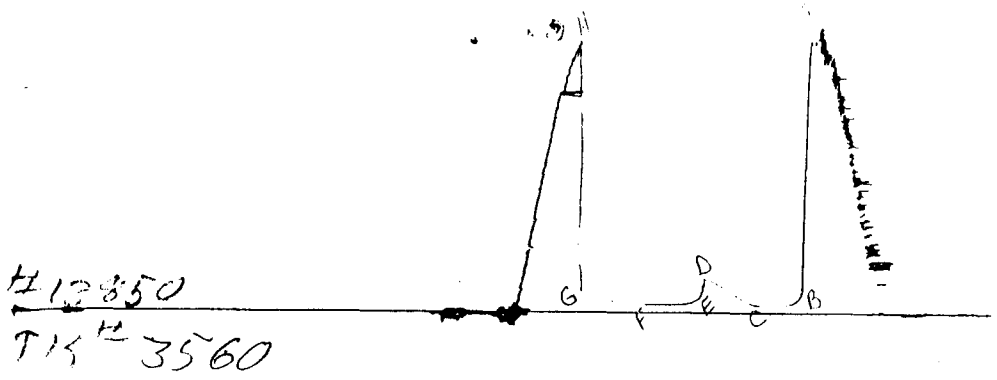
(A) Initial Hydrostatic Mud	1521.3	PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	11.2	PSI	@ (depth)	3068	w/Clock No.	31154
(C) First Final Flow Pressure	21.3	PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	178.9	PSI	@ (depth)	3140	w/Clock No.	27585
(E) Second Initial Flow Pressure	21.3	PSI	AK1 Recorder No.	0	Range	0
(F) Second Final Flow Pressure	33.4	PSI	@ (depth)	0	w/Clock No.	0
(G) Final Shut-In Pressure	101.2	PSI	Initial Opening	30		
(H) Final Hydrostatic Mud	1501.2	PSI	Initial Shut-In	45		
			Final Flow	45		
			Final Shut-In	45		

MR HARRY SCHMIDT 800

Our Representative _____ TOTAL PRICE $ _____

Printcraft Printers - Hays, KS

DST# 1 RECORDER# 13850



This is an actual photograph of recorder chart.

POINT	PRESSURE Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1519	1521.3	PSI
(B) First Initial Flow Pressure	10	11.2	PSI
(C) First Final Flow Pressure	20	21.3	PSI
(D) Initial Closed-In Pressure	177	178.9	PSI
(E) Second Initial Flow Pressure	20	21.3	PSI
(F) Second Final Flow Pressure	30	33.4	PSI
(G) Final Closed-In Pressure	100	101.2	PSI
(H) Final Hydrostatic Mud	1500	1501.2	PSI

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Nº 3560

Test Ticket

CARMICHAEL "A" 14

Well Name & No. ~~BEALS-SHALLIS~~ Test No. ONE Date 11-25-90

Company HALLWOOD PETROLEUM, INC. Zone Tested L/K.C. - B - I

Address POBOX 378111 DENVER CO. 80237 Elevation 1846 GL

Co. Rep./Geo. JIM MUSGROVE Cont. RED TIGER #7 Est. Ft. of Pay

Location: Sec. 18 Twp. 11 S Rge. 17 W Co. ELLIS State KS

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

Interval Tested 3063 TO 3140 Drill Pipe Size 5" X-H.

Anchor Length 77' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3058 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3063 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3140 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.4 lb / gal. Viscosity 42 Filtrate 8.8

Tool Open @ 2:50 P Initial Blow WEAK THROUGHOUT LESS THEN 1" IN WATER

Final Blow SAME AS INITIAL

Recovery — Total Feet 40 Feet of Gas in Pipe 140' Flush Tool? NO

Rec. 40	Feet Of OIL SPKD. MUD	%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 92° °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 6800 ppm System

(A) Initial Hydrostatic Mud	1519 PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	10 PSI	@ (depth)	3068	w/Clock No.	J1154
(C) First Final Flow Pressure	20 PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	177 PSI	@ (depth)	3140	w/Clock No.	27585
(E) Second Initial Flow Pressure	20 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	30 PSI	@ (depth)	____	w/Clock No.	____
(G) Final Shut-In Pressure	100 PSI	Initial Opening	30	Test	550.00
(H) Final Hydrostatic Mud	1500 PSI	Initial Shut-In	45	Jars	200.00
		Final Flow	45	Safety Joint	50.00
		Final Shut-In	45	Straddle	____
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	800.00

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.

Approved By ____

Our Representative ____

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. CARMICHAEL "A" #14 Test No. 2 Date 11/26/90

Company HALLWOOD PETROLEUM INC Zone Tested LANSING-KS CITY

Address P.O. BOX 378111 DENVER COLORADO 80237 Elevation 1846 GL

Co. Rep./Geo. MR JIM MUSGROVE Cont. RED TIGER RIG #7 Est. Ft. of Pay 0

Location: Sec. 18 Twp. 11S Rge. 17W Co. ELLIS State KANSAS

Interval Tested 3140-3152 Drill Pipe Size 5" XH

Anchor Length 12 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 3135 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3140 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3152 Drill Collar — 2.25 Ft. Run 0

Mud Wt. 9.4 lb/gal. Viscosity 42 Filtrate 8.8

Tool Open @ 2:12 AM Initial Blow FAIR TO GOOD BLOW - BOTTOM OF BUCKET IN 5 MINUTES

Final Blow FAIR BLOW-BOTTOM OF BUCKET IN 25 MINUTES

Recovery — Total Feet 500 Flush Tool? NO

Rec. 500 Feet of WATER

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

BHT _____ °F Gravity _____ °API @ 0 °F Corrected Gravity 0 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6800 ppm System

(A) Initial Hydrostatic Mud	1531.2 PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	45.6 PSI	@ (depth)	3145	w/Clock No.	31154
(C) First Final Flow Pressure	201.3 PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	333.4 PSI	@ (depth)	3152	w/Clock No.	27585
(E) Second Initial Flow Pressure	225.8 PSI	AK1 Recorder No.	0	Range	0
(F) Second Final Flow Pressure	271.4 PSI	@ (depth)	0	w/Clock No.	0
(G) Final Shut-In Pressure	333.4 PSI	Initial Opening	30		
(H) Final Hydrostatic Mud	1510.2 PSI	Initial Shut-In	45		
		Final Flow	45		
		Final Shut-In	60		

MR HARRY SCHMIDT

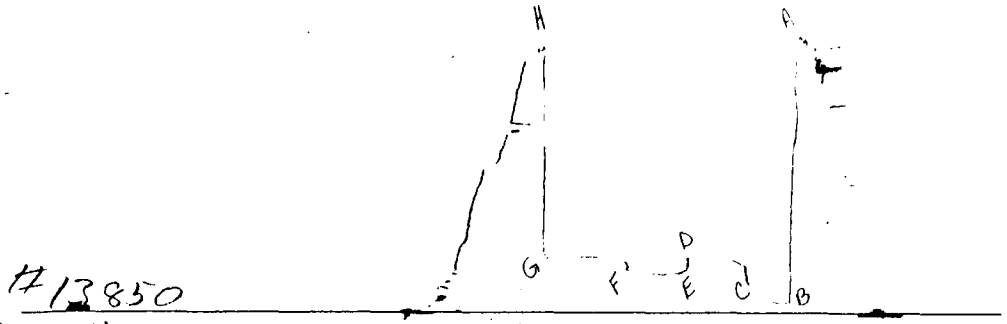
Our Representative _____

800

TOTAL PRICE $ _____

Printcraft Printers - Hays, KS

DST# 2 RECORDER# 13850



This is an actual photograph of recorder chart.

POINT	PRESSURE Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1525	1531.2	PSI
(B) First Initial Flow Pressure	44	45.6	PSI
(C) First Final Flow Pressure	200	201.3	PSI
(D) Initial Closed-in Pressure	330	333.4	PSI
(E) Second Initial Flow Pressure	222	225.8	PSI
(F) Second Final Flow Pressure	266	271.4	PSI
(G) Final Closed-in Pressure	330	333.4	PSI
(H) Final Hydrostatic Mud	1515	1510.2	PSI

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 3561

Well Name & No. CARMICHAEL "A" #14 Test No. TWO Date 11-26-90

Company HALLWOOD PETROLEUM INC. Zone Tested LKC - C

Address P.O.BOX 378111 DENVER CO. 80237 Elevation 1846 GL

Co. Rep./Geo. JIM MUSGROVE Cont. R.T. #7 Est. Ft. of Pay

Location: Sec. 18 Twp. 11 S Rge. 17 W Co. ELLIS State KS.

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

Interval Tested 3140 TO 3152 Drill Pipe Size ~~4½~~ 4½ X 16

Anchor Length 12' Top Choke — 1" Bottom Choke — ¾"

Top Packer Depth 3135 Hole Size — 7⅞" Rubber Size — 6¾"

Bottom Packer Depth 3140 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3152 Drill Collar — 2.25 Ft. Run —

Mud Wt. 9.4 lb/gal. Viscosity 42 Filtrate 8.8

Tool Open @ 2:12 A Initial Blow FAIR TO GOOD BOT. OF BUCKET IN 15 MIN

Final Blow FAIR BOT. OF BUCKET IN 25 MIN.

Recovery — Total Feet 500 Feet of Gas In Pipe Flush Tool? NO

Rec. 500	Feet Of WATER	%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 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 6800 ppm System

(A) Initial Hydrostatic Mud	1525 PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	41 PSI	@ (depth)	3145	w/Clock No.	31154
(C) First Final Flow Pressure	200 PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	330 PSI	@ (depth)	3152	w/Clock No.	27585
(E) Second Initial Flow Pressure	222 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	266 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	330 PSI	Initial Opening	30	Test	550.00
(H) Final Hydrostatic Mud	1515 PSI	Initial Shut-In	45	Jars	200.00
		Final Flow	45	Safety Joint	50.00
		Final Shut-In	60	Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Other	
				TOTAL PRICE $	800.00

Approved By Jim Musgrove

Our Representative

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. CARMICHAEL "A" #14 Test No. 3 Date 11/27/90

Company HALLWOOD PETROLEUM INC Zone Tested ARBUCKLE

Address P.O. BOX 378111 DENVER COLORADO 80237 Elevation 1846 GL

Co. Rep./Geo. MR JIM MUSGROVE Cont. RED TIGER RIG #7 Est. Ft. of Pay 4

Location: Sec. 18 Twp. 11S Rge. 17W Co. ELLIS State KANSAS

Interval Tested 3276-3340 Drill Pipe Size 5" XH

Anchor Length 64 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 3271 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3276 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3340 Drill Collar — 2.25 Ft. Run 0

Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 9.4

Tool Open @ 8:42 Initial Blow GOOD THROUGHOUT - BOTTOM OF BUCKET IN 30 SECONDS

Final Blow SAME AS INITIAL

Recovery — Total Feet 2130 Flush Tool? NO

Rec. 300 Feet of FROTHY OIL-20%GAS/60%OIL/10%WTR/10%MUD

Rec. 850 Feet of FROTHY OIL-30%GAS/50%OIL/12%WTR/8%MUD

Rec. 920 Feet of FROTHY OIL-40%GAS/40%OIL/12%WTR/8%MUD

Rec. 60 Feet of WATER

Rec. 0 Feet of _____

BHT 106 °F Gravity _____ °API @ _____ °F Corrected Gravity 25 °API

RW 0.8 @ 30 °F Chlorides 20000 ppm Recovery Chlorides 6800 ppm System

(A) Initial Hydrostatic Mud	2151.7 PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	161.1 PSI	@ (depth)	3281	w/Clock No.	31154
(C) First Final Flow Pressure	1035.2 PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	1035.2 PSI	@ (depth)	3340	w/Clock No.	27585
(E) Second Initial Flow Pressure	609.1 PSI	AK1 Recorder No.	0	Range	0
(F) Second Final Flow Pressure	903.9 PSI	@ (depth)	0	w/Clock No.	0
(G) Final Shut-In Pressure	1035.2 PSI	Initial Opening	30		
(H) Final Hydrostatic Mud	2136.1 PSI	Initial Shut-In	30		
		Final Flow	30		
		Final Shut-In	30		

MR HARRY SCHMIDT

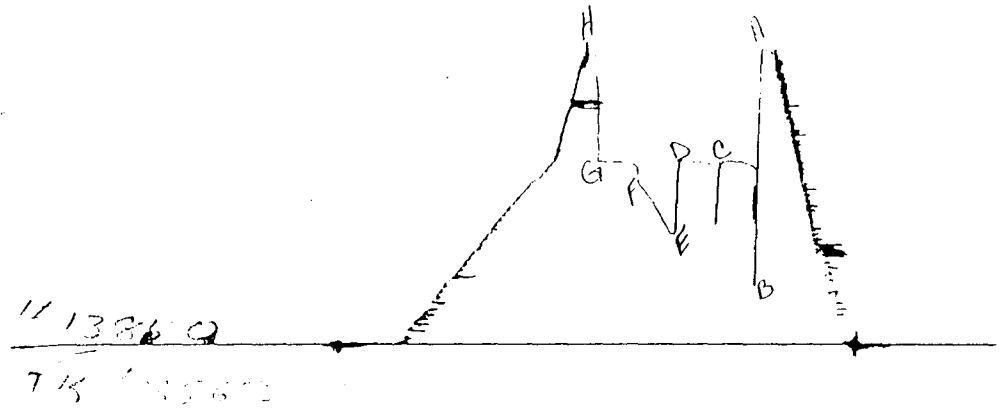
Our Representative _____

850

TOTAL PRICE $ _____

Printcraft Printers - Hays, KS

DST# 3 RECORDER# 13850



This is an actual photograph of recorder chart.

POINT	PRESSURE Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2151	2151.7	PSI
(B) First Initial Flow Pressure	166	161.1	PSI
(C) First Final Flow Pressure	1024	1035.2	PSI
(D) Initial Closed-In Pressure	1024	1035.2	PSI
(E) Second Initial Flow Pressure	609	609.1	PSI
(F) Second Final Flow Pressure	914	903.9	PSI
(G) Final Closed-In Pressure	1024	1035.2	PSI
(H) Final Hydrostatic Mud	2140	2136.1	PSI

COMPUTER EVALUATION BY TRILOBITE TESTING
HALLWOOD PETROLEUM INC
REPORT FOR DST#3 FOR THE CARMICHAEL "A" #14
18-11S-17W ELLIS KANSAS

****

TEST PARAMETERS

ELEVATION: 1846 KB
DATUM: -1436
TEST INTERVAL: 3276-3340

RECORDER DEPTH: 3281
BOTTOM HOLE TEMP: 106

EST. PAY: 4 FT
ZONE TESTED: ARBUCKLE

TIME INTERVALS: 30-30-30-30
VISCOSITY: 47.16892 CP
HOLE SIZE: 7.875 IN

****

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 7.983938

TOTAL FEET OF RECOVERY: 2130
BARRELS IN DRILL PIPE: 23.6052
BARRELS IN WEIGHT PIPE: 3.29
GAS OIL RATIO: .2968537 CU.FT./BBL
BUBBLE POINT PRESSURE: ; 6.01891E-03
TOTAL BARRELS OF RECOVERY: 26.8952

UNCORR. INIT. PROD.: 645.4848 BBL/DAY

API GRAVITY: 24

FLUID GRADIENT: .394

CORRECTED PIPE FILLUP: 2294.163

CORR. BARRELS OF RECOVERY: 29.22728 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 701.4547 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
591.4395

****

INITIAL SLOPE 8.8 PSI/CYCLE
INITIAL P* 1038 PSI

FINAL SLOPE 18.48 PSI/CYCLE
FINAL P* 1044 PSI

****

TRANSMISSIBILITY 6171.891 (MD.-FT./CP.)
PERMEABILITY 72780.35 (MD.)
INDICATED FLOW CAPACITY 291121.4 (MD.FT)
PRODUCTIVITY INDEX 6.974237 (BARRELS/DAY/PSI)
DAMAGE RATIO 1.387354
RADIUS OF INVESTIGATION 2089.694 (FT.)
THEORETICAL POTENTIAL FROM FINAL FLOW PRESSURE 973.1658 BBL/DAY
THEORITICAL POTENTIAL FROM PSEUDO STEADY FLOW STATE 820.5358 BBL/DAY
POTENTIOMETRIC SURFACE 986.0359 (FT.)
DRAWDOWN FACTOR -.578034 (%)

CALCULATED RECOVERY ANALYSIS

DST # 3 TICKET # 3562

SAMPLE	#	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL	1	300	20	60	60	180	10	30	10	30
PIPE	2	850	30	255	50	425	12	102	8	68
	3	510	40	204	40	204	12	61.2	8	40.8
	4			0		0		0		0
	5			0		0		0		0
WEIGHT	1	410	40	164	40	164	12	49.2	8	32.8
PIPE	2	60	0	0	0	0	100	60	0	0
	3			0		0		0		0
	4			0		0		0		0
DRILL	1			0		0		0		0
COLLAR	2			0		0		0		0
	3			0		0		0		0
	4			0		0		0		0
TOTAL		2130		683		973		302.4		171.6

		HRS OPEN	BBL/DAY
BBL OIL= 12.65198	*	1	303.647
BBL WATER3.511704	*		84.2808
BBL MUD= 3.04246			

INITIAL FLOW

RECORDER # 13851
DST #3

DT(MIN)	PRESSURE	<> PRESSURE
0	161.1	161.1
3	1017.6	856.5
6	1024.2	6.599976
9	1027.5	3.300049
12	1030.8	3.300049
15	1031.9	1.099976
18	1034.1	2.199951
21	1035.2	1.099976
24	1035.2	0
27	1035.2	0
30	1035.2	0

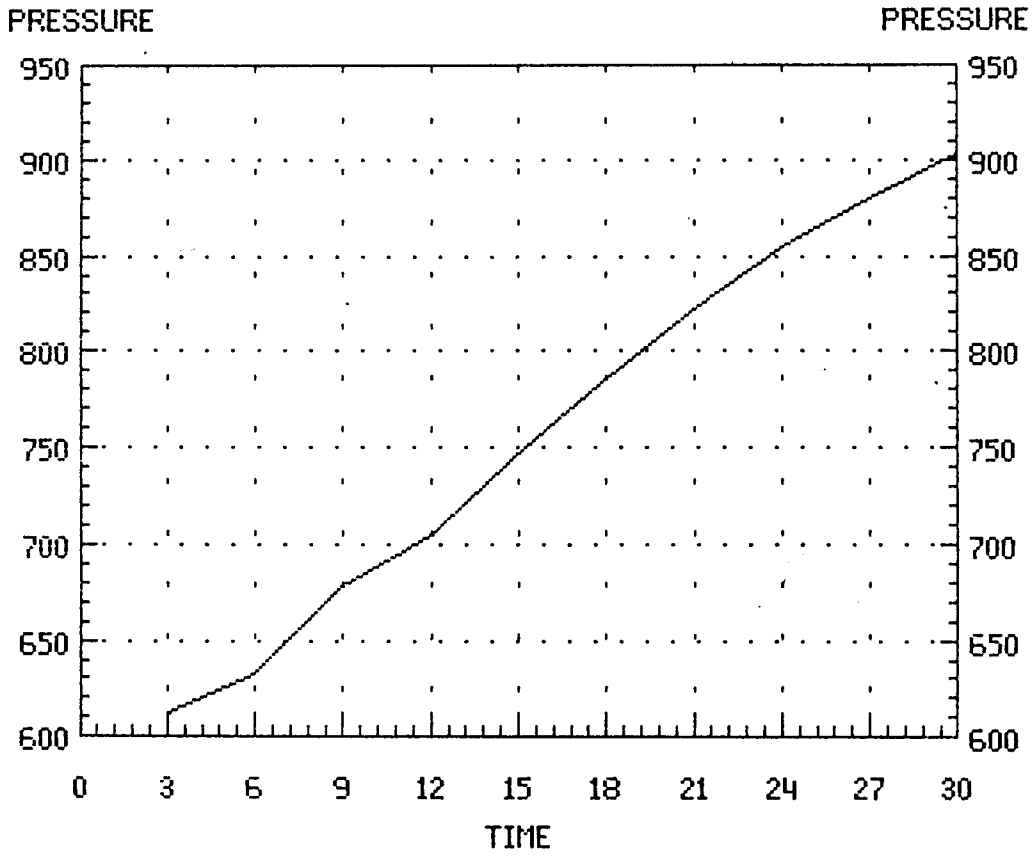
FINAL FLOW

RECORDER # 13851
DST #3

DT(MIN)	PRESSURE	<> PRESSURE
0	609.1	609.1
3	612.4	3.300049
6	633.1	20.69995
9	677.9	44.80005
12	705.2	27.29999
15	746.7	41.5
18	784.9	38.20001
21	823.1	38.19995
24	854.8	31.70001
27	879.9	25.10004
30	903.9	24

DELTA T DELTA P

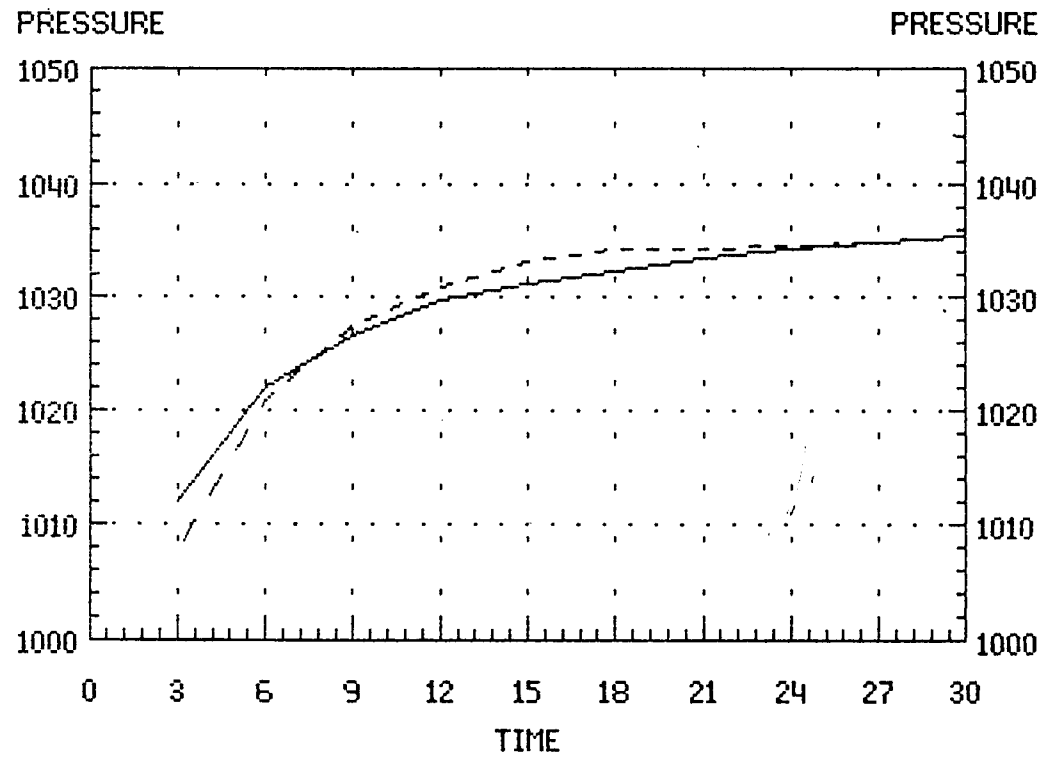
DST #3 FINAL FLOW
RECORDER # 13851



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 591.4395 BBL/DAY

DELTA T DELTA P

DST #3 INITIAL & FINAL SHUTIN
RECORDER # 13851



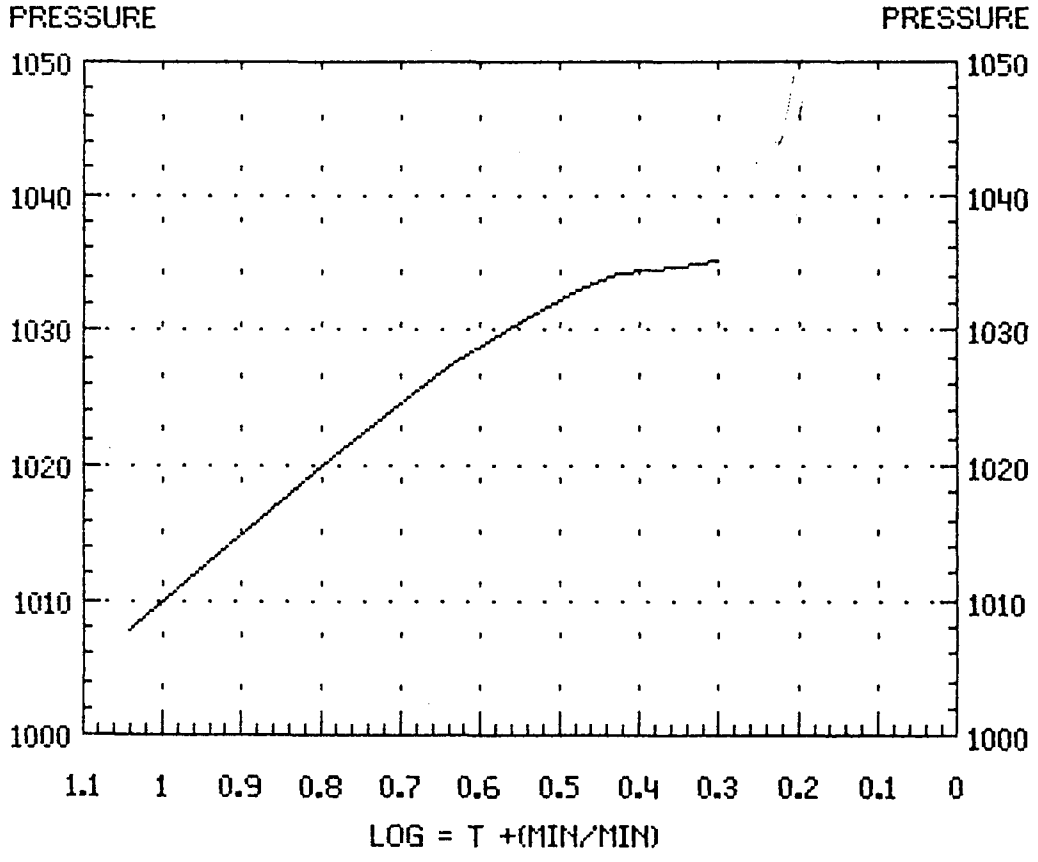
CARMICHAEL "DST #3
INITIAL SHUTIN
30 INITIAL FLOW TIME

Slope	-8.80 psi/cycle
P *	1,038 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	1007.7	11	1.041	1007.7
	6	1020.9	6	0.778	13.2
	9	1027.5	4	0.637	6.6
	12	1030.7	4	0.544	3.2
	15	1033.0	3	0.477	2.3
X	18	1034.1	3	0.426	1.1
	21	1034.3	2	0.385	0.2
	24	1034.6	2	0.352	0.3
	27	1034.9	2	0.325	0.3
X	30	1035.2	2	0.301	0.3

HORNER PLOT

DST #3 INITIAL SHUTIN
RECORDER # 13851



FINAL SHUTIN

60 TOTAL FLOW TIME

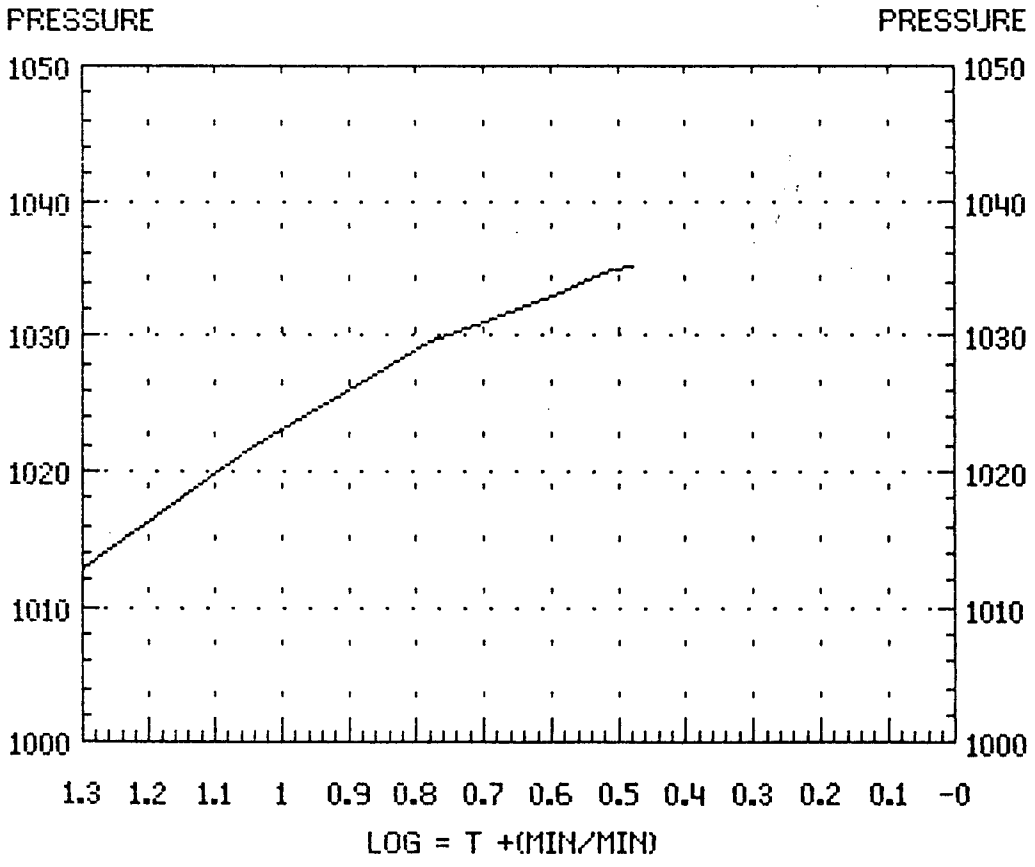
Slope	-18.48 psi/cycle
P *	1,044 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	1012.1	21	1.322	1012.1
	6	1022.0	11	1.041	9.9
	9	1026.4	8	0.885	4.4
	12	1029.7	6	0.778	3.3
X	15	1031.1	5	0.699	1.4
	18	1032.2	4	0.637	1.1
	21	1033.3	4	0.586	1.1
	24	1034.1	4	0.544	0.8
	27	1034.9	3	0.508	0.8
X	30	1035.2	3	0.477	0.3

HORNER PLOT

DST #3 FINAL SHUTIN

RECORDER # 13851



TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

№ 3562

Test Ticket

Well Name & No. CARMICHAEL A-12/14 Test No. THREE Date 11-27-90

Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCKLE

Address P.O. BOX 378111 DENVER CO. 80237 Elevation 1846 GL

Co. Rep./Geo. JIM MURRAY Cont. R.T. #7 Est. Ft. of Pay 4'

Location: Sec. 18 Twp. 11 S Rge. 17 W Co. ELLIS State KS.

No. of Copies 5 Distribution Sheet ____ Yes (NO) Turnkey ____ Yes (No) Evaluation

Interval Tested 3276 TO 3340 Drill Pipe Size 5" X 14

Anchor Length 64' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3271 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3276 Wt. Pipe I.D. — 2.7 Ft. Run 470

Total Depth 3340 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 12.4

Tool Open @ 8:42 Initial Blow GOOD THROUGHOUT BOT. BUCKET 30 SEC.

Final Blow SAME AS INITIAL

Recovery — Total Feet ~~1950~~ 2130 Feet of Gas in Pipe — Flush Tool? NO

Rec. 300'	Feet Of	FROTHY OIL	20 %gas	60 %oil	10 %water	10 %mud
Rec. 850	Feet Of	" "	30 %gas	50 %oil	12 %water	8 %mud
Rec. 920	Feet Of	" "	40 %gas	40 %oil	12 %water	8 %mud
Rec. 60	Feet Of	WATER	%gas	%oil	%water	%mud
Rec. ____	Feet Of	____	%gas	%oil	%water	%mud

BHT 106 °F Gravity ____ °API @ ____ °F Corrected Gravity 25 °API

RW 0.8 @ 30 °F Chlorides 20000 ppm Recovery Chlorides 6800 ppm System

(A) Initial Hydrostatic Mud 2151 PSI	AK1 Recorder No. 13851	Range 4325
(B) First Initial Flow Pressure 166 PSI	@ (depth) 3281	w/Clock No. 31154
(C) First Final Flow Pressure 1024 ~~1005~~ PSI	AK1 Recorder No. 13850	Range 4425
(D) Initial Shut-In Pressure ~~1005~~ 1024 PSI	@ (depth) 3340	w/Clock No. 27585
(E) Second Initial Flow Pressure 609 PSI	AK1 Recorder No. ____	Range ____
(F) Second Final Flow Pressure 914 PSI	@ (depth) ____	w/Clock No. ____
(G) Final Shut-In Pressure ~~1005~~ 1024 PSI	Initial Opening 30	Test 550 MR
(H) Final Hydrostatic Mud 2140 PSI	Initial Shut-In 30	Jars 200 MR
	Final Flow 30	Safety Joint 50 MR
	Final Shut-In 30	Straddle ____
		Circ. Sub ____
		Sampler ____
		Extra Packer ____
		Other ____
		TOTAL PRICE $ 800 MR

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.

Approved By [signature]

Our Representative [signature]

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. CARMICHAEL "A" #14 Test No. 4 Date 11/27/90

Company HALLWOOD PETROLEUM INC Zone Tested ARBUCKLE

Address P.O. BOX 378111 DENVER COLORADO 80237 Elevation 1846 GL

Co. Rep./Geo. MR JIM MUSGROVE Cont. RED TIGER RIG #7 Est. Ft. of Pay 0

Location: Sec. 18 Twp. 11S Rge. 17W Co. ELLIS State KANSAS

Interval Tested 3341-3351 Drill Pipe Size 5" XH

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

Top Packer Depth 3336 Hole Size — 7⅞" _____ Rubber Size — 6¾" 470

Bottom Packer Depth 3341 Wt. Pipe I.D. — 2.7 Ft. Run 0

Total Depth 3351 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 9.4

Tool Open @ 10:45 PM Initial Blow VERY GOOD THROUGHOUT-BOTTOM OF BUCKET IN 10 SECONDS

Final Blow GOOD THROUGHOUT-BOTTOM OF BUCKET IN 5 MINUTES-TOOL SLID 3' TO BOTTOM

Recovery — Total Feet 930 Flush Tool? NO

Rec. 930 Feet of WATER

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

BHT 0 °F Gravity 0 °API @ 0 °F Corrected Gravity 0 °API

RW 0.7 @ 30 °F Chlorides 25000 ppm Recovery Chlorides 7000 ppm System

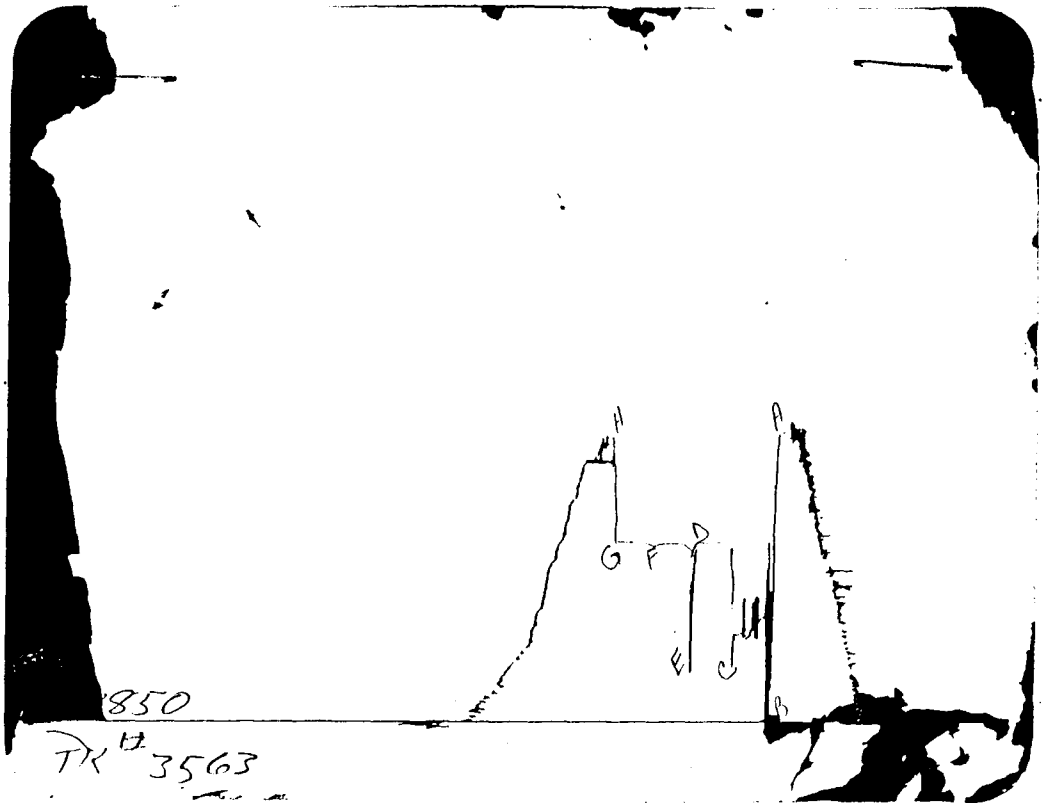
(A) Initial Hydrostatic Mud	1710.2	PSI	Ak1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	11.3	PSI	@ (depth)	3345	w/Clock No.	0
(C) First Final Flow Pressure	534.2	PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	1051.2	PSI	@ (depth)	3351	w/Clock No.	0
(E) Second Initial Flow Pressure	534.2	PSI	AK1 Recorder No.	0	Range	0
(F) Second Final Flow Pressure	1051.2	PSI	@ (depth)	0	w/Clock No.	0
(G) Final Shut-In Pressure	1051.2	PSI	Initial Opening	30		
(H) Final Hydrostatic Mud	1702.3	PSI	Initial Shut-In	30		
			Final Flow	30		
			Final Shut-In			

MR HARRY SCHMIDT 800

Our Representative _____ TOTAL PRICE $ _____

Printcraft Printers - Hays, KS

DST# 4 RECORDER# 13850



This is an actual photograph of recorder chart.

POINT	PRESSURE Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1707	1710.2	PSI
(B) First Initial Flow Pressure	10	11.3	PSI
(C) First Final Flow Pressure	532	534.2	PSI
(D) Initial Closed-In Pressure	1046	1051.2	PSI
(E) Second Initial Flow Pressure	532	534.2	PSI
(F) Second Final Flow Pressure	1046	1051.2	PSI
(G) Final Closed-In Pressure	1046	1051.2	PSI
(H) Final Hydrostatic Mud	1700	1702.3	PSI

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Nº 3563

Test Ticket

Well Name & No. CARMICHAEL "A" - 14 Test No. FOUR Date 11-27-90

Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCKLE

Address P.O. BOX 378111 DENVER CO. 80237 Elevation 1946 G.L.

Co. Rep./Geo. JIM MUSGROVE Cont. R.T. #7 Est. Ft. of Pay

Location: Sec. 18 Twp. 11 S Rge. 17 W Co. ELLIS State KS

No. of Copies REG. Distribution Sheet ____ Yes ____ (No) Turnkey ____ Yes ____ (No) Evaluation

Interval Tested 3341 TO 3351 Drill Pipe Size 5" XH.

Anchor Length 10' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3336 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3341 Wt. Pipe I.D. — 2.7 Ft. Run 420

Total Depth 3351 Drill Collar — 2.25 Ft. Run —

Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 9.4

Tool Open @ 10:45 P Initial Blow VERY GOOD THROUGHOUT BOT. BUCKET IN 10 SEC.

Final Blow GOOD THROUGHOUT BOT. BUCKET IN 5 MIN. TOOL SLID 3' TO BOTTOM

Recovery — Total Feet 930 Feet of Gas in Pipe ____ Flush Tool? NO

Rec. 930	Feet Of WATER	%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 ____ °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW 0.7 @ 30 °F Chlorides 25,000 ppm Recovery Chlorides 7,000 ppm System

(A) Initial Hydrostatic Mud	1707 PSI	AK1 Recorder No.	13851	Range	4325
(B) First Initial Flow Pressure	10 PSI	@ (depth)	3345	w/Clock No.	
(C) First Final Flow Pressure	532 PSI	AK1 Recorder No.	13850	Range	4425
(D) Initial Shut-In Pressure	1046 PSI	@ (depth)	3351	w/Clock No.	
(E) Second Initial Flow Pressure	532 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	1046 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	1046 PSI	Initial Opening	30	Test	550 00
(H) Final Hydrostatic Mud	1700 PSI	Initial Shut-In	30	Jars	200 00
		Final Flow	30	Safety Joint	50 00
		Final Shut-In	30	Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Other	
				TOTAL PRICE $	800 00

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Approved By [signature]

Our Representative [signature]

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. CARMICHAEL "A" #14 Test No. 5 Date 11/28/90

Company HALLWOOD PETROLEUM INC Zone Tested ARBUCKLE

Address P.O. BOX 378111 DENVER COLORADO 80237 Elevation 1846 GL

Co. Rep./Geo. MR JIM MUSGROVE Cont. RED TIGER RIG #7 Est. Ft. of Pay 0

Location: Sec. 18 Twp. 11S Rge. 17W Co. ELLIS State KANSAS

Interval Tested 3356-3370 Drill Pipe Size 5" XH

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

Top Packer Depth 3351 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3356 Wt. Pipe I.D. — 2.7 Ft. Run 0

Total Depth 3370 Drill Collar — 2.25 Ft. Run 0

Mud Wt. 9.0 lb/gal. Viscosity 50 Filtrate 9.0

Tool Open @ _____ Initial Blow TOOL WOULD NOT GO TO BOTTOM - 18 FT FILL

Final Blow _____

Recovery — Total Feet 0 Flush Tool? _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

Rec. 0 Feet of _____

BHT 0 °F Gravity _____ °API @ 0 °F Corrected Gravity 0 °API

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

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. 0 Range 0

(B) First Initial Flow Pressure _____ PSI @ (depth) 0 w/Clock No. 0

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. 0 Range 0

(D) Initial Shut-In Pressure _____ PSI @ (depth) 0 w/Clock No. 0

(E) Second Initial Flow Pressure _____ PSI AK1 Recorder No. 0 Range 0

(F) Second Final Flow Pressure _____ PSI @ (depth) 0 w/Clock No. 0

(G) Final Shut-In Pressure _____ PSI Initial Opening 0

(H) Final Hydrostatic Mud _____ PSI Initial Shut-In 0

Final Flow 0

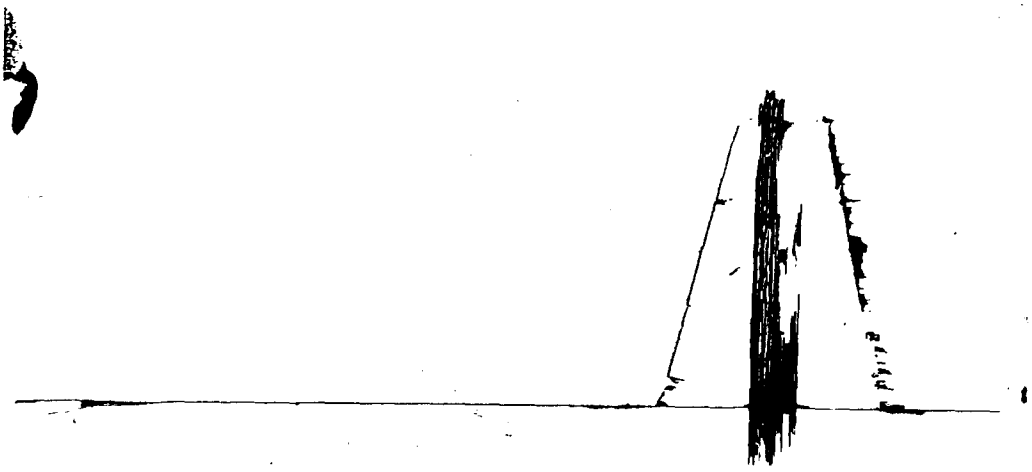
Final Shut-In 0

MR HARRY SCHMIDT 650

Our Representative _____ TOTAL PRICE $ _____

Printcraft Printers - Hays, KS

DST# 5 RECORDER# 13850



This is an actual photograph of recorder chart.

POINT	PRESSURE Field Reading	Office Reading
(A) Initial Hydrostatic Mud		PSI
(B) First Initial Flow Pressure		PSI
(C) First Final Flow Pressure		PSI
(D) Initial Closed-In Pressure		PSI
(E) Second Initial Flow Pressure		PSI
(F) Second Final Flow Pressure		PSI
(G) Final Closed-In Pressure		PSI
(H) Final Hydrostatic Mud		PSI

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

№ 3564

Test Ticket

Well Name & No. CARMICHAEL "A" #14 Test No. FIVE Date 11-28-90

Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCKEL

Address DENVER COLO. Elevation 1846 G.L.

Co. Rep./Geo. JIM MUSGROVE Cont. RT #2 Est. Ft. of Pay

Location: Sec. 18 Twp. 11 Rge. 17W Co. ELLIS State KS

No. of Copies 5 Distribution Sheet ____ Yes ____ (No) Turnkey ____ Yes ____ (No) ____ Evaluation

Interval Tested 3356 TO 3370 Drill Pipe Size 5" XH

Anchor Length 14' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3351 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3356 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 3370 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.0 lb/gal. Viscosity 50 Filtrate 9.0

Tool Open @ ____ Initial Blow ____

TOOL WOULD NOT GO TO BOTTOM

Final Blow 18' FILL

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

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
Rec. ____	Feet Of	%gas	%oil	%water	%mud

BHT ____ °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

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

(A) Initial Hydrostatic Mud ____ PSI AK1 Recorder No. ____ Range ____

(B) First Initial Flow Pressure ____ PSI @ (depth) ____ w/Clock No. ____

(C) First Final Flow Pressure ____ PSI AK1 Recorder No. ____ Range ____

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

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

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

(G) Final Shut-In Pressure ____ PSI Initial Opening ____ Test 700 MISSRUN

(H) Final Hydrostatic Mud ____ PSI Initial Shut-In ____ Jars 200

Final Flow ____ Safety Joint 50

Final Shut-In ____ Straddle ____

Circ. Sub ____

Sampler ____

Extra Packer ____

Other 650

TOTAL PRICE $ ~~600~~

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Approved By ____

Our Representative [signature]

Printcraft Printers - Hays, KS

Static Res. pr. from FSI = 1043 psi.