

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

ORIGINAL

API NO. 15- 051-24,717-0000
County Ellis
N2 N2 NW Sec. 18 Twp. 11 Rge. 17 X V

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: Red Tiger Drilling Company

License: 5302

Wellsite Geologist: Jim Musgrove

Designate Type of Completion
 New Well Re-Entry Workover

Oil SWD S10W Temp. Abd.
 Gas ENHR S16W
 Dry Other (Core, WSW, Expl., Cathodic, etc.)

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

Operator: FEB 28 1992

Well Name: 02-28-92

Comp. Date 11/20/90 Old Total Depth 11/29/90 12/19/90

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

Spud Date 11/20/90 Date Reached TD 11/29/90 Completion Date 12/19/90

4950 Feet from S/N (circle one) Line of Section
3960 Feet from E/W (circle one) Line of Section

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

Lease Name Carmichael A Well # 14

Field Name Bemis-Shutts

Producing Formation Arbuckle

Elevation: Ground 1846 KB 1851

Total Depth 3451 PBSD 3348

Amount of Surface Pipe Set and Cemented at 1088 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

RECEIVED
KANSAS CORPORATION COMMISSION
Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit) 1/12

Chloride content 7000 ppm Fluid volume 293 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 Martin Ball

Title Sr. Engineering Tech Date 2/27/92

Subscribed and sworn to before me this 27th day of February, 1992.

Notary Public Colene Kous

Date Commission Expires May 21, 1994

K.C.C. OFFICE USE ONLY

F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received

Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other (Specify)

Operator Name Hallwood Petroleum, Inc. Lease Name Carmichael A Well # 14
 Sec. 18 Twp. 11 Rge. 17 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 (Attach Additional Sheets.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datums	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Anhydrite	1079' (+772')	
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Topeka	2781' (-930')	
List All E.Logs Run:		Heebner	3006' (-1155')	
Dual Guard		Lansing	3051' (-1200')	
Neut./Density		Base Kansas City	3282' (-1431')	
Cal.		Arbuckle	3337' (-1486')	

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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#	1088'	60/40 poz	500	See attached
Production	7 7/8"	5 1/2"	15.5#	3450'	common	200	"

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 checked="" type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	3343-3348	common	1	-

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)	Depth
1	3389			
1	3379			
1	3367			
1	3353			
4 shots Total	3336-38		100 gals. 15% MCA + 100 gals 15% NE acid	

TUBING RECORD		Size	Set At	Packer At	Liner Run		
		2 7/8"	3328'	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Date of First, Resumed Production, SWD or Inj.				Producing Method			
12/20/90				<input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water	Bbls.	Gas-Oil Ratio
	17		0		326		0
Gravity							

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 _____

ORIGINAL

HALLWOOD PETROLEUM, INC.

Carmichael A #14

Sec. 18-T11S-R17W
API #051-24,717

Surface:

300 sx HCB, 2% cc, 1/4# Flocele; tailed w/200 sx 60/40, 3% cc,
no gel.

Production:

200 sx common w/5% EA2 10% salt .75% Halid 322, 1/4# Flocele. 5#
gilsonite last 125 sx.

RECEIVED

KANSAS CORPORATION COMMISSION

FEB 28 1992

CONSERVATION DIVISION
WICHITA, KS

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. <u>CARMICHAEL "A" #14</u>		Test No. <u>1</u>	Date <u>11/25/90</u>
Company <u>HALLWOOD PETROLEUM INC</u>		Zone Tested <u>LANSING-KS CITY</u>	
Address <u>P.O. BOX 378111 DENVER COLORADO 80237</u>		Elevation <u>1846 GL</u>	
Co. Rep./Geo. <u>MR JIM MUSGROVE</u>		Cont. <u>RED TIGER RIG #7</u> Est. Ft. of Pay <u>0</u>	
Location: Sec. <u>18</u>	Twp. <u>11S</u>	Rge. <u>17W</u>	Co. <u>ELLIS</u> State <u>KANSAS</u>

Interval Tested <u>3063-3140</u>	Drill Pipe Size <u>5" XH</u>
Anchor Length <u>77</u>	Top Choke — 1" _____ Bottom Choke — ¼" _____
Top Packer Depth <u>3058</u>	Hole Size — 77/8" _____ Rubber Size — 63/4" _____
Bottom Packer Depth <u>3063</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>470</u>
Total Depth <u>3140</u>	Drill Collar — 2.25 Ft. Run <u>0</u>
Mud Wt. <u>9.4</u> lb/gal.	Viscosity <u>42</u> Filtrate <u>8.8</u>
Tool Open @ <u>2:50 PM</u> Initial Blow <u>WEAK THROUGHOUT-LESS THAN 1"</u>	
WATER	

Final Blow SAME AS INITIAL

Recovery — Total Feet <u>40</u>	Flush Tool? <u>NO</u>
Rec. <u>140</u> Feet of <u>GAS IN PIPE</u>	
Rec. <u>40</u> Feet of <u>OIL SPECKED MUD</u>	
Rec. <u>0</u> Feet of _____	
Rec. <u>0</u> Feet of _____	
Rec. <u>0</u> Feet of _____	
BHT <u>92</u> °F Gravity _____ °API @ <u>0</u> °F Corrected Gravity <u>0</u> °API	

RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides <u>6800</u> ppm System <u>4325</u>
(A) Initial Hydrostatic Mud <u>1521.3</u> PSI AK1 Recorder No. <u>13851</u> Range _____
(B) First Initial Flow Pressure <u>11.2</u> PSI @ (depth) <u>3068</u> w/Clock No. <u>31154</u>
(C) First Final Flow Pressure <u>21.3</u> PSI AK1 Recorder No. <u>13850</u> Range _____
(D) Initial Shut-In Pressure <u>178.9</u> PSI @ (depth) <u>3140</u> w/Clock No. <u>27585</u>
(E) Second Initial Flow Pressure <u>21.3</u> PSI AK1 Recorder No. <u>0</u> Range <u>0</u>
(F) Second Final Flow Pressure <u>33.4</u> PSI @ (depth) <u>0</u> w/Clock No. <u>0</u>
(G) Final Shut-In Pressure <u>101.2</u> PSI Initial Opening <u>30</u>
(H) Final Hydrostatic Mud <u>1501.2</u> PSI Initial Shut-In <u>45</u>
Final Flow <u>45</u>
Final Shut-In <u>45</u>

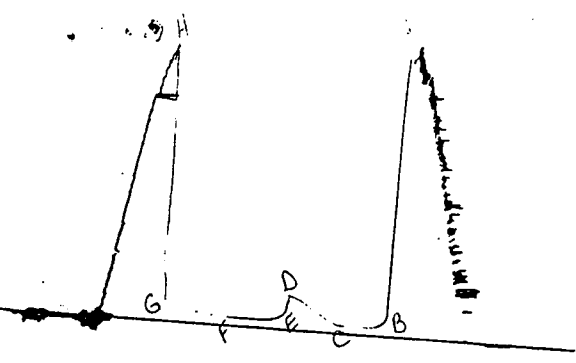
MR HARRY SCHMIDT

800

Our Representative _____

TOTAL PRICE \$ _____

H 13850
T 15 3560



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

Our Representative _____

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

No 3560

Test Ticket

CARMICHAEL A" 14

Well Name & No. <u>BENJ-SHALITS</u>		Test No. <u>ONE</u>	Date <u>11-25-90</u>
Company <u>HALLWOOD PETROLEUM, INC.</u>		Zone Tested <u>LISC. - B - 1-</u>	
Address <u>PO BOX 378111 DENVER CO. 80237</u>		Elevation <u>1846 GL</u>	
Co. Rep./Geo. <u>JIM MUSGROVE</u>		Cont. <u>RED TIGER #7</u>	Est. Ft. of Pay _____
Location: Sec. <u>18</u>	Twp. <u>11 S</u>	Rge. <u>17 W</u>	Co. <u>12 LLS</u> State <u>155</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____	Turnkey _____ Yes _____ No _____
Evaluation _____			

Interval Tested <u>3063 TO 3140</u>	Drill Pipe Size <u>5" X-14.</u>
Anchor Length <u>77'</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3058</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3063</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>470</u>
Total Depth <u>3140</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.4</u> lb/gal.	Viscosity <u>42</u> Filtrate <u>8.8</u>
Tool Open @ <u>2:50 P</u>	Initial Blow <u>WEAK THROUGHOUT LESS THAN 1" IN WATER</u>

Final Blow SAME AS INITIAL

Recovery — Total Feet <u>40</u>	Feet of Gas In Pipe <u>140</u>	Flush Tool? <u>NO</u>
Rec. <u>40</u> Feet Of <u>OIL SPEC. MUD</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 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. 31154
- (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 550⁰⁰
- (H) Final Hydrostatic Mud 1500 PSI Initial Shut-In 45 Jars 200⁰⁰

Final Flow 45 Safety Joint 50⁰⁰
 Final Shut-In 45 Straddle _____
 Circ. Sub _____
 Sampler _____

Approved By [Signature] Extra Packer _____

Our Representative [Signature] Other _____

Printcraft Printers - Hays, KS TOTAL PRICE \$ 800⁰⁰

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 & 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 — 3/4"
Top Packer Depth	3135	Hole Size — 7 7/8"	Rubber Size — 6 3/4"
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

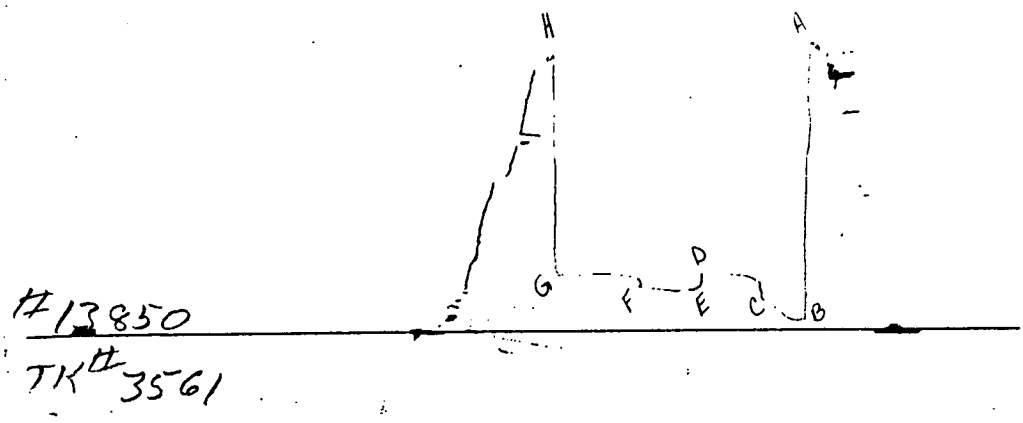
800

Our Representative _____

TOTAL PRICE \$ _____

ORIGINAL

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

No 3561

Test Ticket

Well Name & No. CARMICHAEL "A" #14 Test No. TWO Date 11-26-90
 Company HALLWOOD PETROLEUM INC. Zone Tested LICC - C
 Address P.O. BOX 37811 DENVER CO. 80237 Elevation 18464
 Co. Rep./Geo. JIM MUSGROVE Cont. R.T. #7 Est. Ft. of Pay _____
 Location: Sec. 18 Twp. 11S Rge. 17W Co. 1241S State KAN.
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 3140 TO 3152 Drill Pipe Size 5 1/2" X 1 1/2"
 Anchor Length 12' Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3135 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 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 ROT. OF BUCKET IN 15 MIN

Final Blow FAIR ROT. OF BUCKET IN 25 MIN.

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>500</u>		<u>NO</u>
Rec. <u>500</u> Feet Of <u>WATER</u>	%gas	%oil
Rec. _____ Feet Of _____	%gas	%oil
Rec. _____ Feet Of _____	%gas	%oil
Rec. _____ Feet Of _____	%gas	%oil
Rec. _____ Feet Of _____	%gas	%oil

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 44 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 550⁰⁰
 (H) Final Hydrostatic Mud 1515 PSI Initial Shut-In 45 Jars 200⁰⁰

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Final Flow 45 Safety Joint 50⁰⁰
 Final Shut-In 60 Straddle _____
 Circ. Sub _____
 Sampler _____

Approved By Jim Musgrove
 Our Representative [Signature]
 Printcraft Printers - Hays, KS
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 800⁰⁰

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. <u>CARMICHAEL "A" #14</u>	Test No. <u>3</u>	Date <u>11/27/90</u>
Company <u>HALLWOOD PETROLEUM INC</u>	Zone Tested <u>ARBUCKLE</u>	
Address <u>P.O. BOX 378111 DENVER COLORADO 80237</u>	Elevation <u>1846 GL</u>	
Co. Rep./Geo. <u>MR JIM MUSGROVE</u>	Cont. <u>RED TIGER RIG #7</u>	Est. Ft. of Pay <u>4</u>
Location: Sec. <u>18</u>	Twp. <u>11S</u>	Rge. <u>17W</u> Co. <u>ELLIS</u> State <u>KANSAS</u>

Interval Tested <u>3276-3340</u>	Drill Pipe Size <u>5" XH</u>
Anchor Length <u>64</u>	Top Choke — 1" _____ Bottom Choke — 1/4" _____
Top Packer Depth <u>3271</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>3276</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>470</u>
Total Depth <u>3340</u>	Drill Collar — 2.25 Ft. Run <u>0</u>
Mud Wt. <u>9.1</u> lb/gal.	Viscosity <u>68</u> Filtrate <u>9.4</u>
Tool Open @ <u>8:42</u>	Initial Blow <u>GOOD THROUGHOUT - BOTTOM OF BUCKET IN</u>
<u>30 SECONDS</u>	

Final Blow SAME AS INITIAL

Recovery — Total Feet <u>2130</u>	Flush Tool? <u>NO</u>
Rec. <u>300</u> Feet of <u>FROTHY OIL -20%GAS/60%OIL/10%WTR/10%MUD</u>	
Rec. <u>850</u> Feet of <u>FROTHY OIL -30%GAS/50%OIL/12%WTR/8%MUD</u>	
Rec. <u>920</u> Feet of <u>FROTHY OIL -40%GAS/40%OIL/12%WTR/8%MUD</u>	
Rec. <u>60</u> Feet of <u>WATER</u>	
Rec. <u>0</u> Feet of _____	

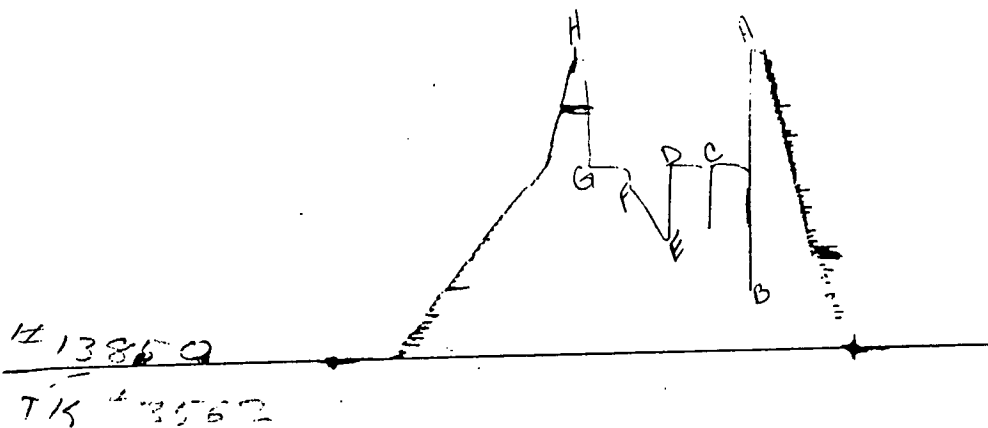
BHT <u>106</u> °F Gravity _____	°API @ _____	°F Corrected Gravity <u>25</u>	°API _____
RW <u>0.8</u> @ <u>30</u> °F Chlorides _____	<u>20000</u> ppm Recovery	Chlorides <u>6800</u>	ppm System _____
(A) Initial Hydrostatic Mud <u>2151.7</u>	PSI Ak1 Recorder No. <u>13851</u>	Range _____	<u>4325</u>
(B) First Initial Flow Pressure <u>161.1</u>	PSI @ (depth) <u>3281</u>	w/Clock No. _____	<u>31154</u>
(C) First Final Flow Pressure <u>1035.2</u>	PSI AK1 Recorder No. <u>13850</u>	Range _____	<u>4425</u>
(D) Initial Shut-in Pressure <u>1035.2</u>	PSI @ (depth) <u>3340</u>	w/Clock No. _____	<u>27585</u>
(E) Second Initial Flow Pressure <u>609.1</u>	PSI AK1 Recorder No. <u>0</u>	Range _____	<u>0</u>
(F) Second Final Flow Pressure <u>903.9</u>	PSI @ (depth) <u>0</u>	w/Clock No. _____	<u>0</u>
(G) Final Shut-in Pressure <u>1035.2</u>	PSI Initial Opening <u>30</u>		
(H) Final Hydrostatic Mud <u>2136.1</u>	PSI Initial Shut-in <u>30</u>		
	Final Flow <u>30</u>		
	Final Shut-in <u>30</u>		

MR HARRY SCHMIDT

850

Our Representative _____

TOTAL PRICE \$ _____

DST# 3RECORDER# 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

ORIGINAL

TEST PARAMETERS

ELEVATION: 1846 KB EST. PAY: 4 FT
DATUM: -1436 ZONE TESTED: ARBUCKLE
TEST INTERVAL: 3276-3340
TIME INTERVALS: 30-30-30-30
RECORDER DEPTH: 3281 VISCOSITY: 47.16892 CP
BOTTOM HOLE TEMP: 106 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
API GRAVITY: 24
CORRECTED PIPE FILLUP: 2294.163
UNCORR. INIT. PRD.: 645.4848 BBL/DAY
FLUID GRADIENT: .394
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
THEORETICAL 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		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	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 WATER 3.511704 * 84.2808
 BBL MUD= 3.04246

ORIGINAL

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

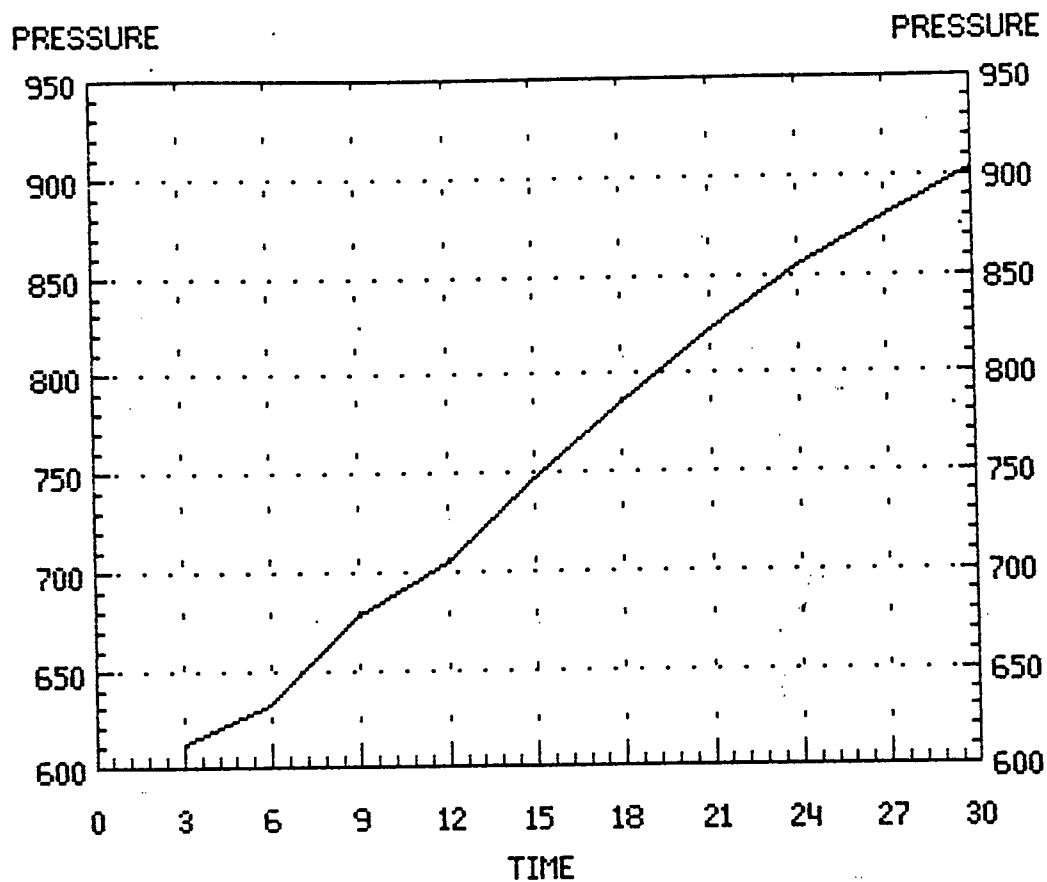
FINAL FLOW

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

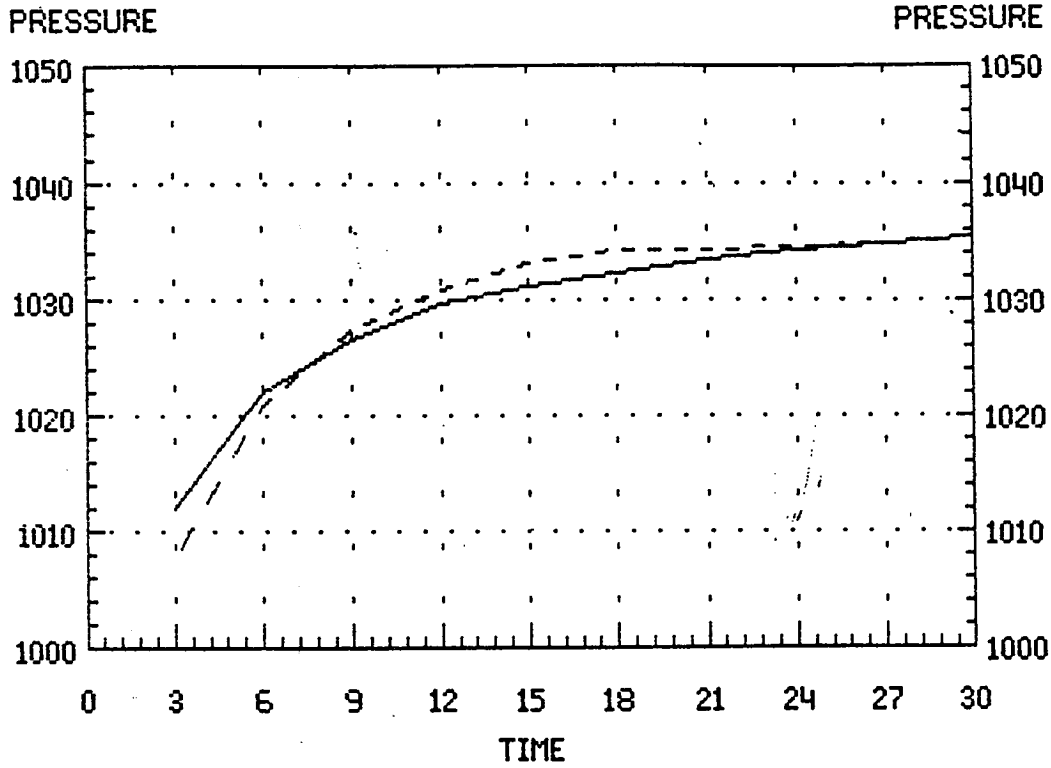


INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 591.4395 BBL/DAY

ORIGINAL

DELTA T DELTA P
DST #3 INITIAL & FINAL SHUTIN
RECORDER # 13851

FINAL INITIAL

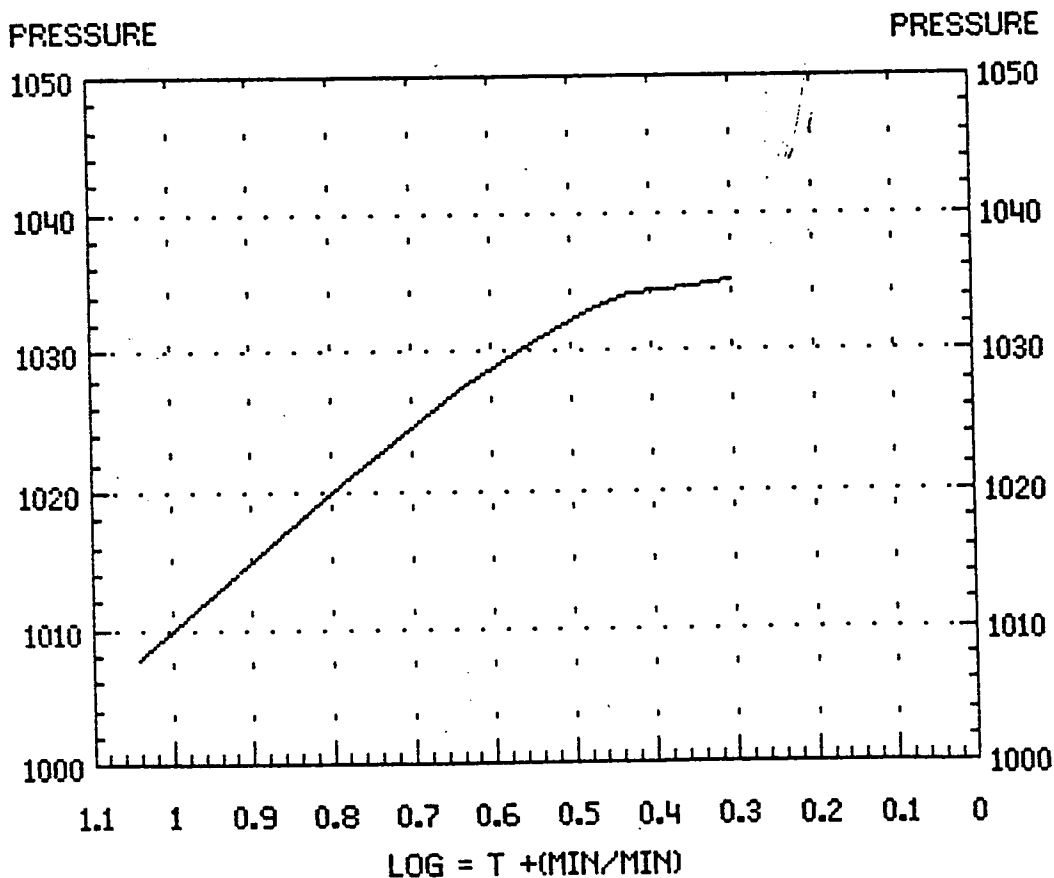


CARMICHAEL "DST #3
 INITIAL SHUTIN
 30 INITIAL FLOW TIME

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

TIME(MIN)	Pws (psi)	Log		< > PRESSURE	
		Horn T	Horn T		
	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



CARMICHAEL DST #3
 FINAL SHUTIN
 60 TOTAL FLOW TIME

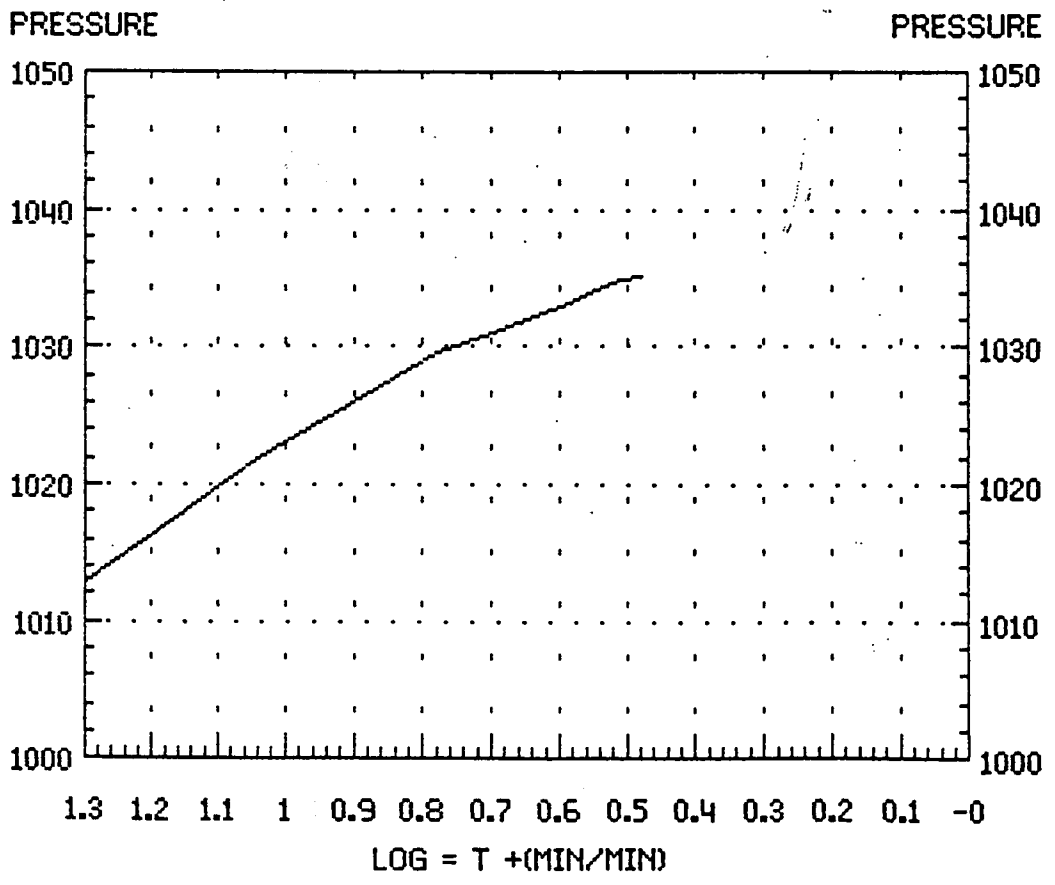
Slope -18.48 psi/cycle
 P * 1,044 psi

ORIGINAL

	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

No 3562

Test Ticket

Well Name & No. CARMICHAEL A-1214 Test No. THREE Date 11-27-90
 Company HALLWOOD PETROLEUM OK. Zone Tested ARGUMENTAL
 Address P.O. BOX 37211 DENVER CO. 80237 Elevation 1846 GL
 Co. Rep./Geo. JIM MUSGRAVE Cont. R.T. 12 1/2 Est. Ft. of Pay 4'
 Location: Sec. 18 Twp. 11 S Rge. 17 E Co. 1-22-15 State KS
 No. of Copies 5 Distribution Sheet _____ Yes Turnkey _____ Yes No Evaluation _____

Interval Tested 3276 TO 3340 Drill Pipe Size 5" x 1 1/4
 Anchor Length 64' Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3271 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 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 2.4
 Tool Open @ 8:42 Initial Blow GOOD THROUGHOUT ROT. BUCKET 30 SEC.

Final Blow SAME AS INITIAL

Recovery — Total Feet	Feet of Gas In Pipe	Flush Tool?
<u>1950</u> 1950 <u>2130</u>	_____	<u>NO</u>
Rec. <u>300'</u> Feet Of <u>FROTHY OIL</u>	<u>20</u> %gas <u>60</u> %oil <u>10</u> %water <u>10</u> %mud	
Rec. <u>850</u> Feet Of _____	<u>30</u> %gas <u>50</u> %oil <u>12</u> %water <u>8</u> %mud	
Rec. <u>920</u> Feet Of _____	<u>40</u> %gas <u>40</u> %oil <u>12</u> %water <u>8</u> %mud	
Rec. <u>60</u> Feet Of <u>WATER</u>	%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 4385
 (B) First Initial Flow Pressure 166 PSI @ (depth) 3281 w/Clock No. 31154
 (C) First Final Flow Pressure 1024 ~~1024~~ PSI AK1 Recorder No. 13850 Range 4425
 (D) Initial Shut-In Pressure 1024 ~~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 1024 ~~1024~~ PSI Initial Opening 30 Test 550 ~~550~~
 (H) Final Hydrostatic Mud 2140 PSI Initial Shut-In 30 Jars 200 ~~200~~

Final Flow 30 Safety Joint 50 ~~50~~
 Final Shut-In 30 Straddle _____
 Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 800 ~~800~~

Approved By Jim Musgrave
 Our Representative [Signature]

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

ORIGINAL

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	RED TIGER RIG #7	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 — 3/4"			
Top Packer Depth	3336	Hole Size — 7 7/8"	Rubber Size — 6 3/4"			
Bottom Packer Depth	3341	Wt. Pipe I.D. — 2.7 Ft. Run	470			
Total Depth	3351	Drill Collar — 2.25 Ft. Run	0			
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	
Rec.	0	Feet of	

BHT	0.7	°F Gravity	30	°API @	25000	°F Corrected Gravity	7000	°API	0
RW		°F Chlorides	1710.2	ppm Recovery	13851	Chlorides		ppm System	4325

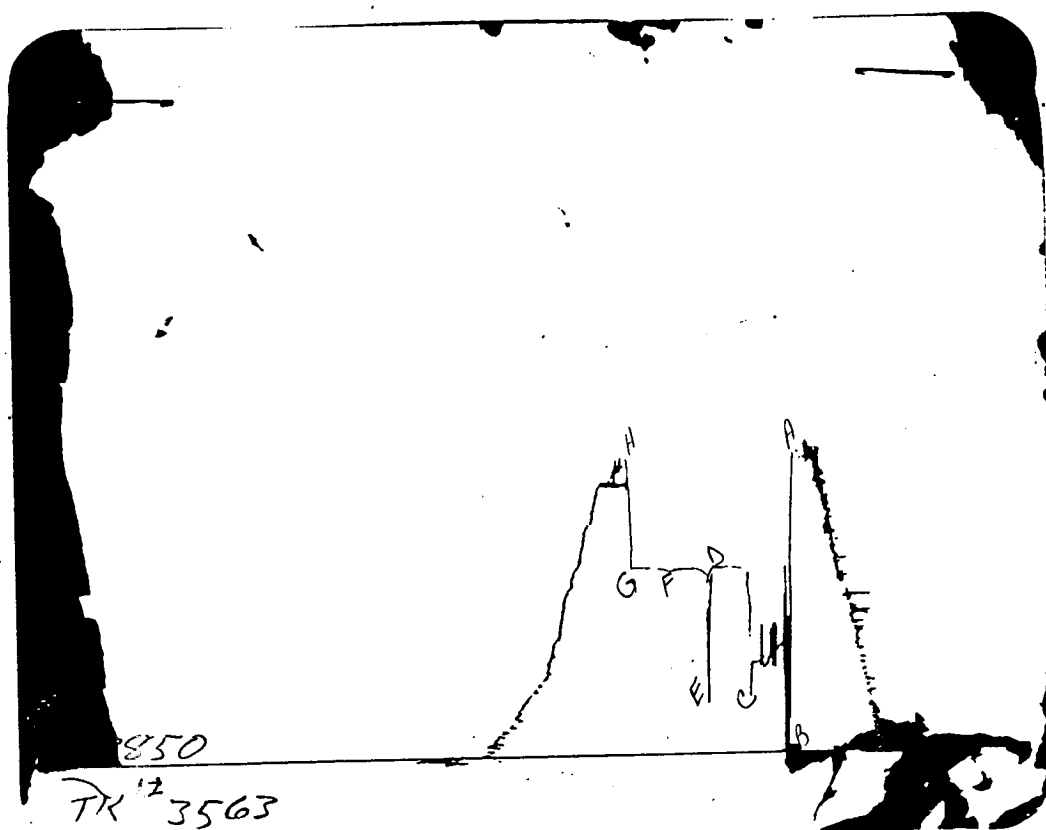
(A) Initial Hydrostatic Mud	11.3	PSI	AK1 Recorder No.	3345	Range	0
(B) First Initial Flow Pressure	534.2	PSI	@ (depth)	13850	w/Clock No.	4425
(C) First Final Flow Pressure	1051.2	PSI	AK1 Recorder No.	3351	Range	0
(D) Initial Shut-in Pressure	534.2	PSI	@ (depth)	0	w/Clock No.	0
(E) Second Initial Flow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

MR HARRY SCHMIDT

800

Our Representative _____

TOTAL PRICE \$ _____

DST# 4RECORDER# 13850

This is an actual photograph of recorder chart.

PRESSURE

POINT	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

ORIGINAL

No 3563

Test Ticket

Well Name & No. CARMICHAEL "A" - 14 Test No. FOUR Date 11-27-90
 Company HALLWOOD PETROLEUM INC. Zone Tested ARBUCIKER
 Address P.O. BOX 37811 DENVER CO. 80237 Elevation 1846 G.L.
 Co. Rep./Geo. JIM MUSEKROVE Cont. R.T. 127 Est. Ft. of Pay _____
 Location: Sec. 18 Twp. 11 S Rge. 17 W Co. 15615 State KS
 No. of Copies REG. Distribution Sheet _____ Yes _____ Turnkey _____ Yes _____ Evaluation _____

Interval Tested 3341 TO 3351 Drill Pipe Size 5" x 12
 Anchor Length 10' Top Choke — 1" _____ Bottom Choke — 1/4" _____
 Top Packer Depth 3336 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3341 Wt. Pipe I.D. — 2.7 Ft. Run 470
 Total Depth 3351 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 94
 Tool Open @ 10:45 P Initial Blow VERY GOOD THROUGHOUT
BOT. BUCKET IN 10 SEC.

Final Blow GOOD THROUGHOUT BOT. BUCKET IN 5 MIN.
TOOK SWD 3' TO BOTTOM

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>930</u>	<u>WATER</u>	<u>NO</u>
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 0.7 @ 30 of 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
 (H) Final Hydrostatic Mud 1700 PSI Initial Shut-in 30 Jars 200
 Final Flow 30 Safety Joint 50
 Final Shut-in 30 Straddle _____
 Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 800

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]

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 — 3/4"	
Top Packer Depth	3351	Hole Size — 7 7/8"	Rubber Size — 6 3/4"	
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

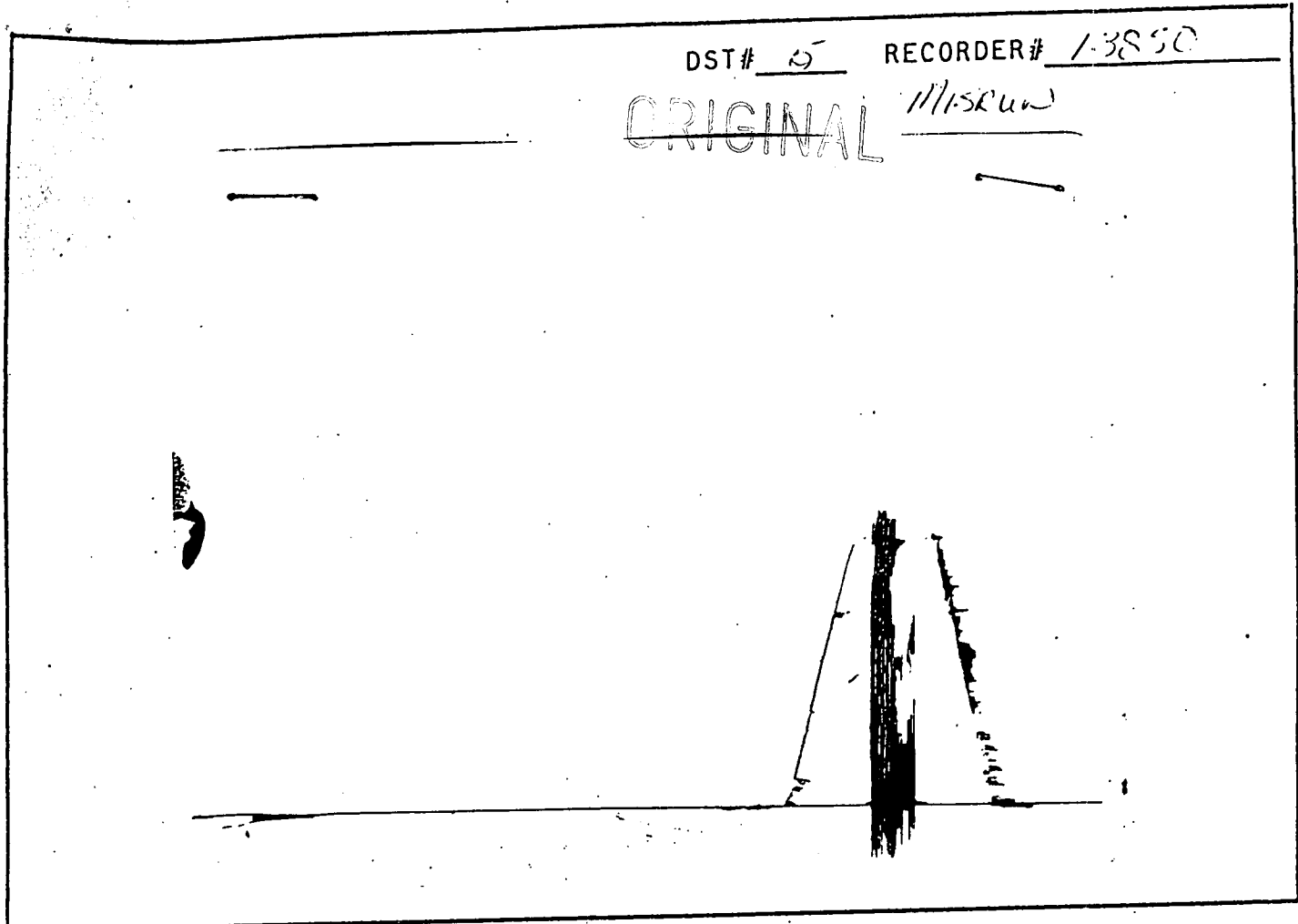
Our Representative _____

TOTAL PRICE \$ _____

DST# 5 RECORDER# 1-3850

~~ORIGINAL~~

11/15/60



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

No 3564

Test Ticket

Well Name & No. CARMICHAEL "A" #14 Test No. FIVE Date 11-28-90
 Company HALLWOOD PETROLEUM INC. Zone Tested ARRUCIEL
 Address DENVER COLO. Elevation 1846 G.L.
 Co. Rep./Geo. JIM MUSGRUVE cont. RT 127 Est. Ft. of Pay _____
 Location: Sec. 18 Twp. 11 Rge. 17 W 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 — 3/4"
 Top Packer Depth 3351 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4"
 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 PSI MISSRUM
- (H) Final Hydrostatic Mud _____ PSI Initial Shut-In _____ Jars 200 PSI

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Final Flow _____ Safety Joint 500W
 Final Shut-In _____ Straddle _____
 Circ. Sub _____
 Sampler _____

Approved By _____

Our Representative [Signature]

Extra Packer _____
 Other 650.00
 TOTAL PRICE \$ 600.00