

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

API NO. 15-051-24813-00-00 ORIGINAL

County Ellis

SW-NW-SW Sec. 8 Twp. 11 Rge. 17 X ^E _W

1650 Feet from S/N (circle one) Line of Section

4950 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 D Well # 6

Field Name Bemis Shutts

Producing Formation Arbuckle

Elevation: Ground 1824 KB 182.9

Total Depth 3521 PBDT 3498.5

Amount of Surface Pipe Set and Cemented at 1083 Feet

Multiple Stage Cementing Collar Used? Yes X No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan PLS 1 2-22-93
(Data must be collected from the Reserve Pit)

Chloride content _____ ppm Fluid volume _____ bbls

Dewatering method used _____

Location of fluid disposal if hauled offsite: _____

Operator Name _____

Lease Name _____ License No. _____

Quarter _____ Sec. _____ Twp. _____ S Rng. _____ E/W

County _____ Docket No. _____

Operator: License # 3613

Name: Hallwood Petroleum, Inc.

Address 4582 So. Ulster Street Parkway

Suite 1700

City/State/Zip Denver, CO 80237

Purchaser: Koch Oil Co.

Operator Contact Person: George Hutton

Phone (316) 792-2756

Contractor: Name: Duke Drilling

License: 5929

Wellsite Geologist: Jim Musgrove

Designate Type of Completion

X New Well _____ Re-Entry _____ Workover

X Oil _____ SWD _____ SLOW _____ Temp. Abd.

_____ Gas _____ ENHR _____ SIGW

_____ Dry _____ Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

_____ Deepening _____ Re-perf. _____ Conv. to Inj/SWD
_____ Plug Back _____ PBDT

_____ Commingled _____ Docket No. _____

_____ Dual Completion _____ Docket No. _____

_____ Other (SWD or Inj?) _____ Docket No. _____

10/17/92 10/24/92 11/7/92
Spud Date Date Reached TD Completion Date

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 Pall

Title Sr. Eng. Tech Date 1/25/93

Subscribed and sworn to before me this 25 day of January 1993.

Notary Public Adam M. Christian

Date Commission Expires 9/1/93

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)

RECEIVED
KANSAS CORPORATION COMMISSION
JAN 27 1993
CONSERVATION DIVISION
WICHITA, KS
7-27-93

Form ACO-1 (7-91) RECEIVED
STATE CORPORATION COMMISSION
FEB 22 1993
CONSERVATION DIVISION
Wichita, Kansas

SIDE TWO

Operator Name Hallwood Petroleum, Inc. Lease Name Carmichael D Well # 6

Sec. 8 Twp. 11 Rge. 17 East West County Ellis

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 Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run (Submit Copy.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No List All E.Logs Run: Dual Guard For <input checked="" type="checkbox"/> CDL/DSN CAL	<input checked="" type="checkbox"/> Log <input type="checkbox"/> Sample Formation (Top), Depth and Datum <table border="0" style="width:100%"> <tr> <td style="width:60%">Name</td> <td style="width:20%">Top</td> <td style="width:20%">Datum</td> </tr> <tr> <td>Anhydrite</td> <td>1067</td> <td>+762</td> </tr> <tr> <td>Topeka</td> <td>2782</td> <td>-953</td> </tr> <tr> <td>Toronto</td> <td>3031</td> <td>-1202</td> </tr> <tr> <td>Lansing</td> <td>3054</td> <td>-1225</td> </tr> <tr> <td>Base KC</td> <td>3284</td> <td>-1455</td> </tr> <tr> <td>Arbuckle</td> <td>3372</td> <td>-1543</td> </tr> </table>	Name	Top	Datum	Anhydrite	1067	+762	Topeka	2782	-953	Toronto	3031	-1202	Lansing	3054	-1225	Base KC	3284	-1455	Arbuckle	3372	-1543
Name	Top	Datum																				
Anhydrite	1067	+762																				
Topeka	2782	-953																				
Toronto	3031	-1202																				
Lansing	3054	-1225																				
Base KC	3284	-1455																				
Arbuckle	3372	-1543																				

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#	1083'	HL 40/60 poz	350 200	2% cc 1/4#/SK Flocele, 2% cc
Production	7 7/8	5 1/2	15.5#	3519'	common	225	5% EA2, 10% salt, 0.75% Halid 322, 5#/sk gilsonite & 1/4#/sk flocele last 125 sx

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type	Acid, Fracture, Shot, Cement Squeeze Record
	Specify Footage of Each Interval Perforated	(Amount and Kind of Material Used) Depth
4	3372-4	

TUBING RECORD	Size 2 7/8	Set At 3285	Packer At NA	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj.	Producing Method <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 12 Bbls.	Gas 0	Mcf 80	Water 80 Bbls. Gas-Oil Ratio 0 Gravity

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION Open Hole Perf. Dually Comp. Commingled 3372-4

Other (Specify) _____

Production Interval

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

ORIGINAL

Well Name CARMICHAEL D #6 Test No. 1 Date 10/22/92
Company HALLWOOD PETROLEUM INC. Zone LKC
Address P.O. BOX 378111 DENVER CO. 80237-8111 Elevation 1830
Co. Rep./Geo. JIM MUSGROVE Cont. DUKE RIG #1 Est. Ft. of Pay _____
Location: Sec. 8 Twp. 11S Rge. 17W Co. ELLIS State KS

Interval Tested 3166-3241 Drill Pipe Size 4.5" FH
Anchor Length 75 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3161 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3166 Mud Wt. _____ 9.2 lb/Gal.
Total Depth 3241 Viscosity 44 Filtrate 10

Tool Open @ 4:41 PM Initial Blow VERY WEAK SURFACE BLOW DIED IN 7 MINUTES

Final Blow NO BLOW

Recovery - Total Feet 3 Flush Tool? NO

Rec. 3 Feet of MUD
Rec. _____ Feet of _____
Rec. _____ Feet of 0
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 88 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1644.2 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 41.3 PSI @ (depth) 3171 w / Clock No. 27573

(C) First Final Flow Pressure 41.3 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 748.9 PSI @ (depth) 3240 w / Clock No. 27501

(E) Second Initial Flow Pressure 50.6 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 50.6 PSI @ (depth) _____ w / Clock No. _____

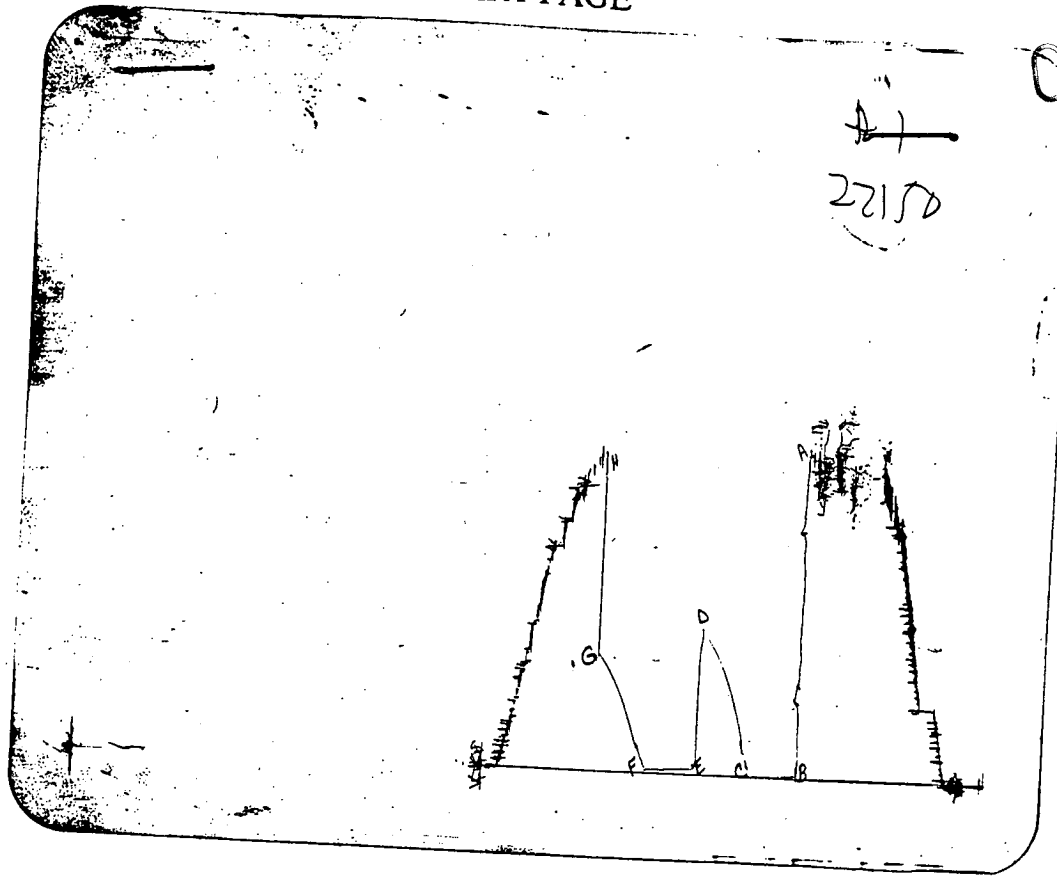
(G) Final Shut-in Pressure 625.9 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1602.3 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE

ORIGINAL



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1636	1644.2
(B) FIRST INITIAL FLOW PRESSURE	37	41.3
(C) FIRST FINAL FLOW PRESSURE	37	41.3
(D) INITIAL CLOSED-IN PRESSURE	743	748.9
(E) SECOND INITIAL FLOW PRESSURE	44	50.6
(F) SECOND FINAL FLOW PRESSURE	44	50.6
(G) FINAL CLOSED-IN PRESSURE	621	625.9
(H) FINAL HYDROSTATIC MUD	1597	1602.3

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL
No 5530

Test Ticket

Well Name & No. Cornicheal D #6 Test No. 1 Date 10-22-92
 Company Hallwood Petroleum Zone Tested LKC
 Address P.O. Box 378111 Denver Co 80237-8111 Elevation 1830
 Co. Rep./Geo. Jim M. Moore cont. Duke #1 Est. Ft. of Pay _____
 Location: Sec. 8 Twp. 11s Rge. 17w Co. Ellis State KS
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 3166-3241 Drill Pipe Size 4 1/2 FA
 Anchor Length 75 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3161 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3166 Wt. Pipe I.D. — 2.7 Ft. Run _____
 Total Depth 3241 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.2 lb/gal. Viscosity 44 Filtrate 10%
 Tool Open @ 4:41 PM Initial Blow v/went surface blow died in 7 min way

Final Blow No blow

Recovery — Total Feet	Feet of Gas In Pipe	Flush Tool?			
Rec.	Feet Of	% gas	% oil	% water	% mud
<u>3</u>	<u>Mud</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

BHT 88 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

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

- (A) Initial Hydrostatic Mud 1636 PSI Ak1 Recorder No. 22150 Range 3925
- (B) First Initial Flow Pressure 37 PSI @ (depth) 3171 w/Clock No. 27323
- (C) First Final Flow Pressure 37 PSI Ak1 Recorder No. 24174 Range 3050
- (D) Initial Shut-In Pressure 243 PSI @ (depth) 3240 w/Clock No. 27501
- (E) Second Initial Flow Pressure 44 PSI Ak1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 44 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-In Pressure 621 PSI Initial Opening 310 Test _____
- (H) Final Hydrostatic Mud 1597 PSI Initial Shut-In 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow 30 Safety Joint _____
 Final Shut-In 45 Straddle _____
 Circ. Sub _____
 Sampler _____

Approved By Jim Moore

Our Representative John S. [Signature]

Extra Packer _____

Other _____

TOTAL PRICE \$ _____

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Drill-Stem Test Data

Well Name CARMICHAEL D #6 Test No. 2 Date 10/23/92
Company HALLWOOD PETROLEUM INC. Zone ARBUCKLE
Address P.O. BOX 378111 DENVER CO 80237-8111 Elevation 1830
Co. Rep./Geo. JIM MUSGROVE Cont. DUKE RIG #1 Est. Ft. of Pay 7
Location: Sec. 8 Twp. 11S Rge. 17W Co. ELLIS State KS

Interval Tested 3371-3378 Drill Pipe Size 4.5" FH
Anchor Length 7 Wt. Pipe I.D. - 2.7 Ft. Run 631
Top Packer Depth 3366 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3371 Mud Wt. 9.3 lb/Gal.
Total Depth 3378 Viscosity 48 Filtrate 10

Tool Open @ 11:13 AM ^{Initial} Blow STRONG BLOW-BOTTOM OF BUCKET IN 2 MINUTES
SURFACE BLOW ON SHUT IN
Final Blow 1.5" BLOW BUILDING TO BOTTOM OF BUCKET IN 5 MINUTES
SURFACE BLOW BACK ON SHUT IN

Recovery - Total Feet 1133 Flush Tool? NO

Rec. 180 Feet of GAS IN PIPE
Rec. 398 Feet of CLEAN GASSY OIL
Rec. 15 Feet of HEAVY OIL CUT WATER-30%OIL/70%WTR
Rec. 720 Feet of WATER WITH SHOW OF OIL
Rec. _____ Feet of _____

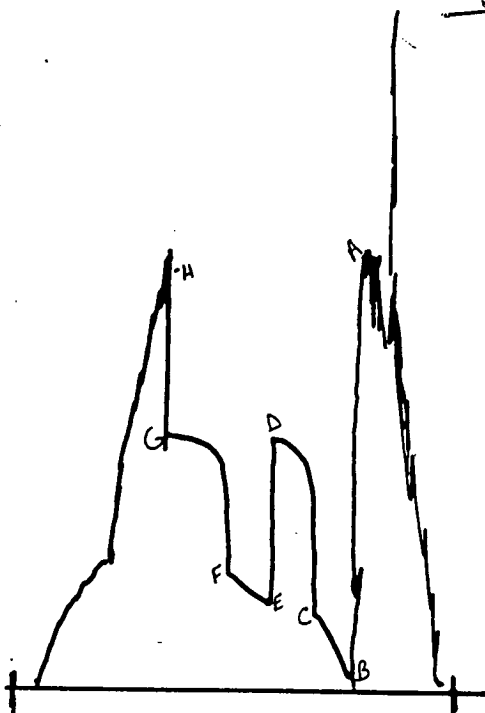
BHT 106 °F Gravity 31 °API @ 80 °F Corrected Gravity 29 °API
RW 0.27 @ 86 °F Chlorides 20000 ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1744.6 PSI AK1 Recorder No. 24174 Range 3050
(B) First Initial Flow Pressure 74.2 PSI @ (depth) 3377 w / Clock No. 27501
(C) First Final Flow Pressure 312.1 PSI AK1 Recorder No. _____ Range _____
(D) Initial Shut-in Pressure 984.0 PSI @ (depth) _____ w / Clock No. _____
(E) Second Initial Flow Pressure 346.3 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 460.9 PSI @ (depth) _____ w / Clock No. _____
(G) Final Shut-in Pressure 1002.9 PSI Initial Opening 30 Final Flow 30
(H) Final Hydrostatic Mud 1715.8 PSI Initial Shut-in 30 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE

ORIGINAL



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1742	1744.6
(B) FIRST INITIAL FLOW PRESSURE	82	74.2
(C) FIRST FINAL FLOW PRESSURE	324	312.1
(D) INITIAL CLOSED-IN PRESSURE	994	984
(E) SECOND INITIAL FLOW PRESSURE	354	346.3
(F) SECOND FINAL FLOW PRESSURE	468	460.9
(G) FINAL CLOSED-IN PRESSURE	994	1002.9
(H) FINAL HYDROSTATIC MUD	1712	1715.8

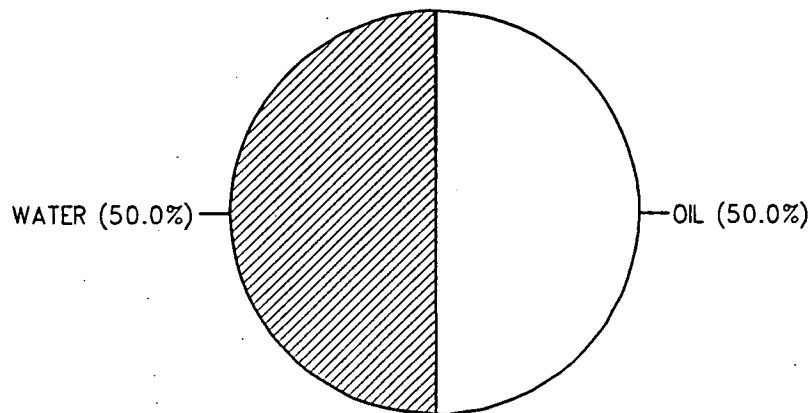
ORIGINAL

CALCULATED RECOVERY ANALYSIS

DST # 2 TICKET # 5531

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	398	0	0	100	398	0	0	0	0
PIPE 2	15	0	0	30	4.5	70	10.5	0	0
3	89	0	0	1	0.89	99	88.11	0	0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	631	0	0	1	6.31	99	624.69	0	0
PIPE 2			0		0		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
5			0		0		0		0
TOTAL	1133		0		409.7		723.3		0

		HRS OPEN	BBL/DAY
BBL OIL=	5.7803758	*	1 138.72902
BBL WATER=	5.7750642	*	138.60154
BBL MUD=	0		
BBL GAS =	0		



CARMICHAEL D DST #2
 INITIAL SHUTIN

30 TOTAL FLOW TIME

Slope 269.21 psi/cycle
 P * 1060 psi

ORIGINAL

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	805.8	1.041	805.8	11
	6	874.1	0.778	68.3	6
	9	904.5	0.637	30.4	4
	12	923.4	0.544	18.9	4
	15	937.8	0.477	14.4	3
	18	946.9	0.426	9.1	3
X	21	956.0	0.385	9.1	2
	24	965.1	0.352	9.1	2
	27	972.7	0.325	7.6	2
X	30	978.7	0.301	6.0	2

CARMICHAEL D DST #2
 FINAL SHUTIN

60 TOTAL FLOW TIME

Slope 154.42 psi/cycle
 P * 1057 psi

	Pws (psi)	Log Horn T	<> PRESSURE	Horn T	
	3	795.9	1.322	795.9	21
	6	872.6	1.041	76.7	11
	9	906.8	0.885	34.2	8
	12	928.7	0.778	21.9	6
	15	942.4	0.699	13.7	5
	18	953.0	0.637	10.6	4
	21	962.8	0.586	9.8	4
	24	971.9	0.544	9.1	4
	27	975.7	0.508	3.8	3
	30	981.8	0.477	6.1	3
X	33	987.8	0.450	6.0	3
	36	990.8	0.426	3.0	3
	39	993.1	0.405	2.3	3
	42	996.1	0.385	3.0	2
	45	998.4	0.368	2.3	2
X	48	1002.9	0.352	4.5	2

ORIGINAL

INITIAL FLOW

RECORDER # 24174

DST # DST #2

TIME(MIN)	PRESSURE	<> PRESSURE
0	74.2	74.2
3	86.9	12.7
6	126.6	39.7
9	158.2	31.6
12	192.1	33.9
15	218.6	26.5
18	247.4	28.8
21	267.2	19.8
24	283.9	16.7
27	299.1	15.2
30	312.1	13

FINAL FLOW

RECORDER # 24174

DST # DST #2

TIME(MIN)	PRESSURE	<> PRESSURE
0	346.3	346.3
3	351.7	5.4
6	359.3	7.6
9	373.1	13.8
12	383	9.9
15	395.2	12.2
18	407.4	12.2
21	419.6	12.2
24	432.6	13
27	441	8.4
30	454	13
33	460.9	6.9

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Test Ticket

No 5531

Well Name & No. Carmichael D+6 Test No. 2 Date 10-23-92
 Company Hallwood Petroleum Inc Zone Tested Arbuckle
 Address _____ Elevation 1830
 Co. Rep./Geo. Jim Musgrave Cont. Duke #1 Est. Ft. of Pay 7
 Location: Sec. 8 Twp. 11r Rge. 17w Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 3371-3378 Drill Pipe Size 4 1/2 FH
 Anchor Length 7 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3366 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3371 Wt. Pipe I.D. — 2.7 Ft. Run 631
 Total Depth 3378 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.3 lb/gal. Viscosity 48 Filtrate 10.0

Tool Open @ 11:13 AM Initial Blow strong - bottom of bucket in 2 minutes
 (Surface blow on shut in)
 Final Blow 1 1/2" blow building to bottom of bucket in 5 minutes
 (Surface blow back on shut in)

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. <u>180</u>	Feet Of <u>gas in pipe</u>	% gas _____ % oil _____ % water _____ % mud _____
Rec. <u>398'</u>	Feet Of <u>clean gassy oil</u>	% gas _____ % oil _____ % water _____ % mud _____
Rec. <u>15'</u>	Feet Of <u>Heavy oil w/ water</u>	% gas <u>30</u> % oil <u>70</u> % water _____ % mud _____
Rec. <u>720'</u>	Feet Of <u>water, show of oil</u>	% gas _____ % oil _____ % water _____ % mud _____
Rec. _____	Feet Of _____	% gas _____ % oil _____ % water _____ % mud _____

BHT 106 °F Gravity 31 °API @ 80 °F Corrected Gravity 29 °API
 RW 127 @ 86 °F Chlorides 20,000 ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1742 PSI AK1 Recorder No. 24174 Range 3050
 (B) First Initial Flow Pressure 82 PSI @ (depth) 3377 w/Clock No. 27501
 (C) First Final Flow Pressure 324 PSI AK1 Recorder No. _____ Range _____
 (D) Initial Shut-In Pressure 994 PSI @ (depth) _____ w/Clock No. _____
 (E) Second Initial Flow Pressure 354 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 468 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 994 PSI Initial Opening 30 Test _____
 (H) Final Hydrostatic Mud 1712 PSI Initial Shut-In 30 Jars _____

Final Flow 30 Safety Joint _____
 Final Shut-In 45 Straddle _____
 Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____

Approved By Jim Musgrave
 Our Representative Pat Simpson
 Printcraft Printers - Hays, KS

TOTAL PRICE \$ _____

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Drill-Stem Test Data

Well Name CARMICHAEL D #6 Test No. 3 Date 10/23/92
Company HALLWOOD PETROLEUM INC. Zone ARBUCKLE
Address P.O. BOX 378111 DENVER CO 80237-8111 Elevation 1830
Co. Rep./Geo. JIM MUSGROVE Cont. DUKE RIG #1 Est. Ft. of Pay _____
Location: Sec. 8 Twp. 11S Rge. 17W Co. ELLIS State KS

Interval Tested 3382-3392 Drill Pipe Size 4.5" FH
Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run 631
Top Packer Depth 3377 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3382 Mud Wt. 9.3 lb/Gal.
Total Depth 3392 Viscosity 48 Filtrate 10

Tool Open @ 9:42 PM Initial Blow VERY STRONG-BOTTOM OF BUCKET IN 20 SECONDS

Final Blow 1" BLOW BUILDING TO BOTTOM OF BUCKET IN 5 MINUTES-THEN DECREASED TO 2" BLOW AT END OF FLOW

Recovery - Total Feet 2650 Flush Tool? NO

Rec. 60 Feet of CLEAN GASSY OIL
Rec. 270 Feet of GSY HEAVY OIL CUT WATER-5%GAS/20%OIL/75%WTR
Rec. 800 Feet of SLTLY OIL CUT WATER-4%OIL/96%WTR
Rec. 1520 Feet of WATER WITH OIL SPECKS-REVERSED INTO PIT
Rec. _____ Feet of _____

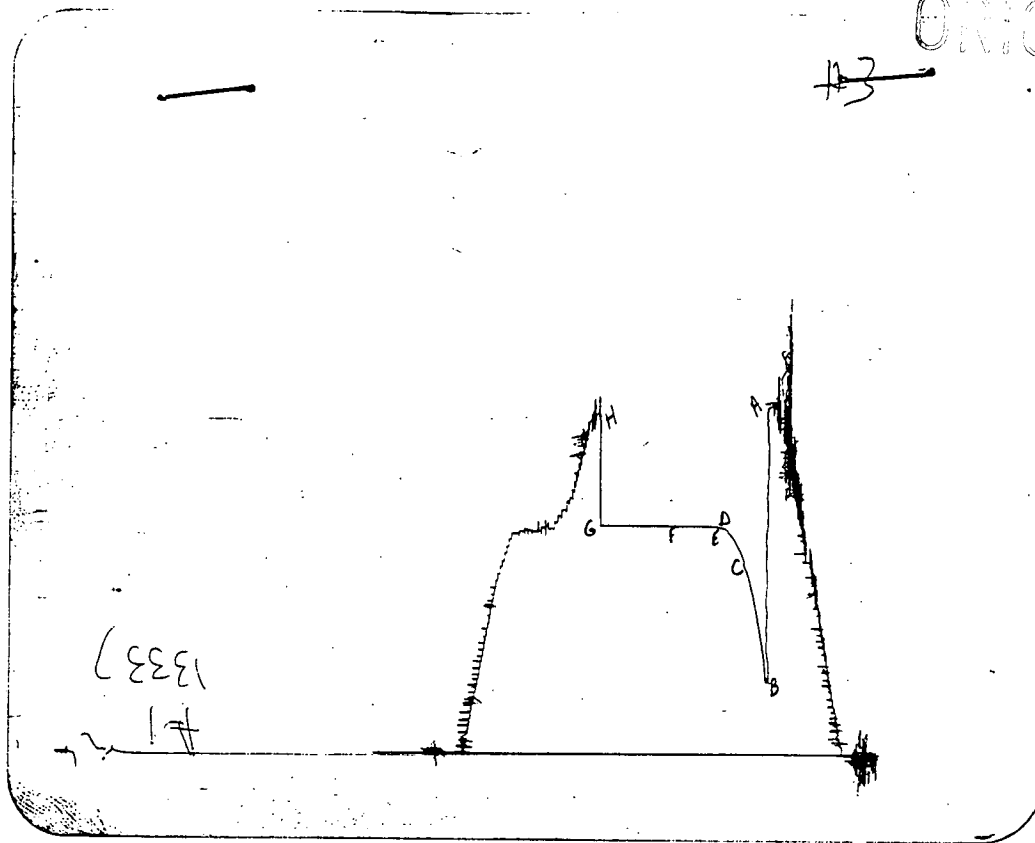
BHT 106 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.42 @ 68 °F Chlorides 17000 ppm Recovery Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud 1715.6 PSI AK1 Recorder No. 22150 Range 3925
(B) First Initial Flow Pressure 365.4 PSI @ (depth) 3384 w / Clock No. 30401
(C) First Final Flow Pressure 1105.3 PSI AK1 Recorder No. 24174 Range 3050
(D) Initial Shut-in Pressure 1134.2 PSI @ (depth) 3391 w / Clock No. 27501
(E) Second Initial Flow Pressure 1128.9 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 1134.2 PSI @ (depth) _____ w / Clock No. _____
(G) Final Shut-in Pressure 1133.1 PSI Initial Opening 30 Final Flow 30
(H) Final Hydrostatic Mud 1704.6 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative PAUL SIMPSON

CHART PAGE

ORIGINAL



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1711	1715.6
(B) FIRST INITIAL FLOW PRESSURE	362	365.4
(C) FIRST FINAL FLOW PRESSURE	1100	1105.3
(D) INITIAL CLOSED-IN PRESSURE	1130	1134.2
(E) SECOND INITIAL FLOW PRESSURE	1122	1128.9
(F) SECOND FINAL FLOW PRESSURE	1130	1134.2
(G) FINAL CLOSED-IN PRESSURE	1130	1133.1
(H) FINAL HYDROSTATIC MUD	1699	1704.6

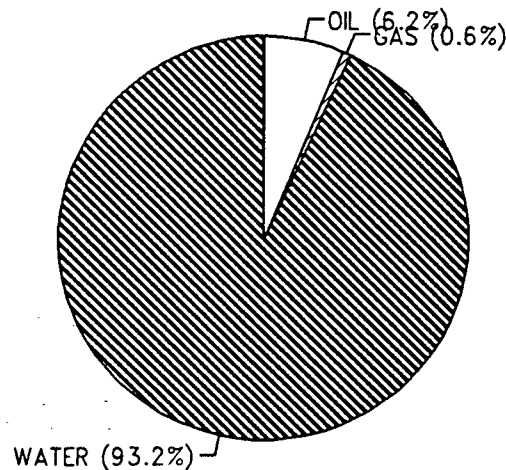
ORIGINAL

CALCULATED RECOVERY ANALYSIS

DST # 3 TICKET # 5532

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	60	1	0.6	99	59.4	0	0	0	0
PIPE 2	270	5	13.5	20	54	75	202.5	0	0
3	800	0	0	4	32	96	768	0	0
4	889	0	0	0	0	100	889	0	0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	631	0	0	0	0	100	631	0	0
PIPE 2			0		0		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
5			0		0		0		0
TOTAL	2650		14.1		145.4		2490.5		0

	BBL OIL=	BBL WATER=	BBL MUD=	BBL GAS =	HRS OPEN	BBL/DAY
	2.067588	30.85909	0	0.200502	1	49.622112
	*	*				740.61816



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

ORIGINAL

5532

Well Name & No. Carmichael D#6 Test No. 3 Date 10-23-92
 Company Hallwood Petroleum Inc Zone Tested A1b
 Address _____ Elevation 1830
 Co. Rep./Geo. Jim Musgrave cont. Duke #1 Est. Ft. of Pay _____
 Location: Sec. 8 Twp. 11s Rge. 17w Co. Ellis State Ks
 No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 3382-3392 Drill Pipe Size 4 1/2 FH
 Anchor Length 10 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3377 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3382 Wt. Pipe I.D. — 2.7 Ft. Run 631
 Total Depth 3392 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.3 lb/gal. Viscosity 48 Filtrate 10%
 Tool Open @ 9:42 PM Initial Blow Very strong - bottom bucket in 20 seconds

Final Blow 1" blow building to - bottom of bucket in 5 minutes - then decreased to 2" blow at end of flow

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. <u>60</u> Feet Of <u>classy oil</u>	% gas _____ % oil _____ % water _____ % mud _____	
Rec. <u>270</u> Feet Of <u>gsy Hocw</u>	<u>5</u> % gas <u>20</u> % oil <u>75</u> % water _____ % mud _____	
Rec. <u>800</u> Feet Of <u>slocw</u>	% gas <u>4</u> % oil <u>96</u> % water _____ % mud _____	
Rec. <u>1520</u> Feet Of <u>water w/ oil specks</u>	% gas _____ % oil _____ % water _____ % mud _____	
Rec. _____ Feet Of <u>(covered into pits)</u>	% gas _____ % oil _____ % water _____ % mud _____	

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

RW .42 @ 68 °F Chlorides 17,000 ppm Recovery Chlorides 8,000 ppm System

(A) Initial Hydrostatic Mud 1711 PSI AK1 Recorder No. 22150 Range 3925
 (B) First Initial Flow Pressure 362 PSI @ (depth) 3384 w/Clock No. 30401
 (C) First Final Flow Pressure 1100 PSI AK1 Recorder No. 24174 Range 3050
 (D) Initial Shut-In Pressure 1130 PSI @ (depth) 3391 w/Clock No. 27501
 (E) Second Initial Flow Pressure 1122 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 1130 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 1130 PSI Initial Opening 30 Test X
 (H) Final Hydrostatic Mud 1699 PSI Initial Shut-In 30 Jars _____

Final Flow 30 Safety Joint _____
 Final Shut-In 30 Straddle _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Jim Musgrave
 Our Representative Paul Simpson

Circ. Sub X
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 555.00