TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: HANKEN #4 — Test No. 1 — Date 3/14/93

Company: AINSWORTH OPERATING — Zone ARBUCKLE

Address: P.O. BOX 1269 COLORADO SPRINGS CO 80901 — Elevation 1928

Co. Rep./Geo.: KENT ROBERTS — Cont. ABERCROMBIE RIG #8 — Est. Ft. of Pay

Location: Sec. 6 — Twp. 17S — Rge. 10W — Co. ELLSWORTH — State KS

Interval Tested: 3356-3401 — Drill Pipe Size: 4.5 XH

Anchor Length: 45 — Wt. Pipe I.D. - 2.7 Ft. Run: 373

Top Packer Depth: 3351 — Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 3356 — Mud Wt.: 9.1 lb/Gal.

Total Depth: 3401 — Viscosity: 49 — Filtrate: 10.4

Tool Open @: 10:55 PM — Initial Blow: WEAK-BUILDING TO 2.5"

Final Blow: WEAK SURFACE BLOW - DIED IN 30 MINUTES

Recovery - Total Feet: 20 — Flush Tool?: NO

Rec. 20 — Feet of DRILLING MUD

Rec. — Feet of

Rec. — Feet of

Rec. — Feet of

Rec. — Feet of

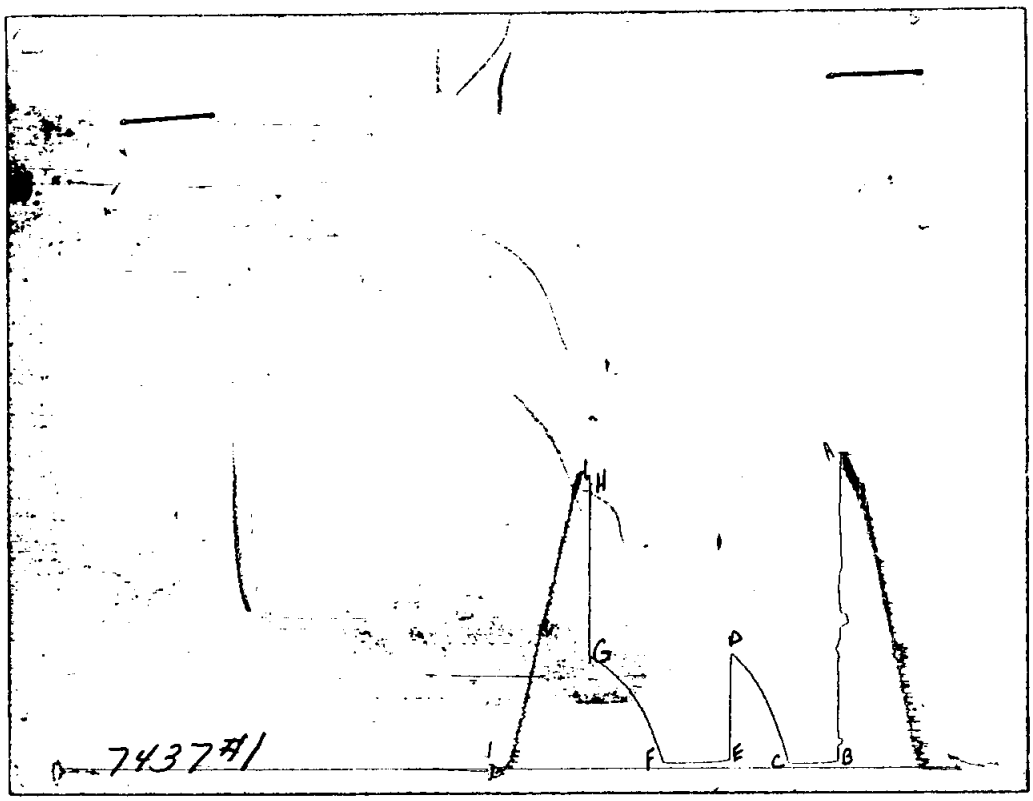
BHT: 104 °F — Gravity: °API — @ °F — Corrected Gravity: °API

RW: @ °F — Chlorides: ppm Recovery — Chlorides: 10000 ppm System

(A) Initial Hydrostatic Mud	1783.2 PSI	AK1 Recorder No.	13754	Range	4000
(B) First Initial Flow Pressure	63.4 PSI	@ (depth)	3360	w / Clock No.	8179
(C) First Final Flow Pressure	63.4 PSI	AK1 Recorder No.	7437	Range	4200
(D) Initial Shut-in Pressure	700.3 PSI	@ (depth)	3396	w / Clock No.	8376
(E) Second Initial Flow Pressure	70.5 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	70.5 PSI	@ (depth)		w / Clock No.	
(G) Final Shut-in Pressure	675.9 PSI	Initial Opening	30	Final Flow	45
(H) Final Hydrostatic Mud	1660.3 PSI	Initial Shut-in	45	Final Shut-in	60

Our Representative: DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1776	1783.2
(B) FIRST INITIAL FLOW PRESSURE	59	63.4
(C) FIRST FINAL FLOW PRESSURE	59	63.4
(D) INITIAL CLOSED-IN PRESSURE	689	700.3
(E) SECOND INITIAL FLOW PRESSURE	68	70.5
(F) SECOND FINAL FLOW PRESSURE	68	70.5
(G) FINAL CLOSED-IN PRESSURE	669	675.9
(H) FINAL HYDROSTATIC MUD	1666	1660.3

3. Cowcrcdo
2. Wichita

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 5874

Well Name & No. Hanken #4 Test No. 1 Date 3-14-93

Company Ainsworth Operating Co. Zone Tested Arbuckle

Address 1255 Lake Ave. Box 1269, Colo. Springs 80901 Elevation 1928 K.B.

Co. Rep./Geo. Kent Roberts Cont. Aber #8 Est. Ft. of Pay

Location: Sec. 6 Twp. 17 Rge. 10 Co. Ellsworth State Ks.

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

Interval Tested 3356-3401 Drill Pipe Size 4½ XH

Anchor Length 45 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 373'

Total Depth 3401 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.1 lb/gal. Viscosity 49 Filtrate 10.4

Tool Open @ 10:55 p.m. Initial Blow Weak - building To 2½"

Final Blow Weak surface blow - Died in 30 min.

Recovery — Total Feet 20 Feet of Gas in Pipe ____ Flush Tool? ____

Rec. 20	Feet Of D.M.	%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 104 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 10,000 ppm System

(A) Initial Hydrostatic Mud	1776 PSI	AK1 Recorder No.	13754	Range	4000
(B) First Initial Flow Pressure	59 PSI	@ (depth)	3360	w/Clock No.	8179
(C) First Final Flow Pressure	59 PSI	AK1 Recorder No.	7437	Range	4200
(D) Initial Shut-In Pressure	689 PSI	@ (depth)	3396	w/Clock No.	8376
(E) Second Initial Flow Pressure	68 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	68 PSI	@ (depth)	____	w/Clock No.	____
(G) Final Shut-In Pressure	669 PSI	Initial Opening	30	Test	____
(H) Final Hydrostatic Mud	1666 PSI	Initial Shut-In	45	Jars	____
		Final Flow	45	Safety Joint	____
		Final Shut-In	60	Straddle	____
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	600.00

Approved By Kent Roberts

Our Representative Dave Rangel

Printcraft Printers - Hays, KS

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Drill-Stem Test Data

Well Name HANKEN #4 Test No. 2 Date 3/15/93

Company AINSWORTH OPERATING Zone ARBUCKLE

Address P.O. BOX 1269 COLORADO SPRINGS CO 80901 Elevation 1928

Co. Rep./Geo. KENT ROBERTS Cont. ABERCROMBIE RIG #8 Est. Ft. of Pay

Location: Sec. 6 Twp. 17S Rge. 10W Co. ELLSWORTH State KS

Interval Tested 3402-3412 Drill Pipe Size 4.5 XH

Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run 404

Top Packer Depth 3398 Drill Collar – 2.25 Ft. Run

Bottom Packer Depth 3402 Mud Wt. 9.3 lb/Gal.

Total Depth 3412 Viscosity 50 Filtrate 10.4

Tool Open @ 1:00 PM Initial Blow WEAK-BUILDING TO 2"

Final Blow WEAK-BUILDING TO 1/2"

Recovery - Total Feet 65 Flush Tool? NO

Rec. 60 Feet of MUDDY WATER-90% WTR/ 10% MUD

Rec. 5 Feet of DRILLING MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

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

RW 0.4 @ 81 °F Chlorides 15000 ppm Recovery Chlorides 10000 ppm System

(A) Initial Hydrostatic Mud 1763.9 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 50.6 PSI @ (depth) 3406 w / Clock No. 8179

(C) First Final Flow Pressure 50.6 PSI AK1 Recorder No. 7437 Range 4200

(D) Initial Shut-in Pressure 569.8 PSI @ (depth) 3408 w / Clock No. 8376

(E) Second Initial Flow Pressure 63.4 PSI AK1 Recorder No. Range

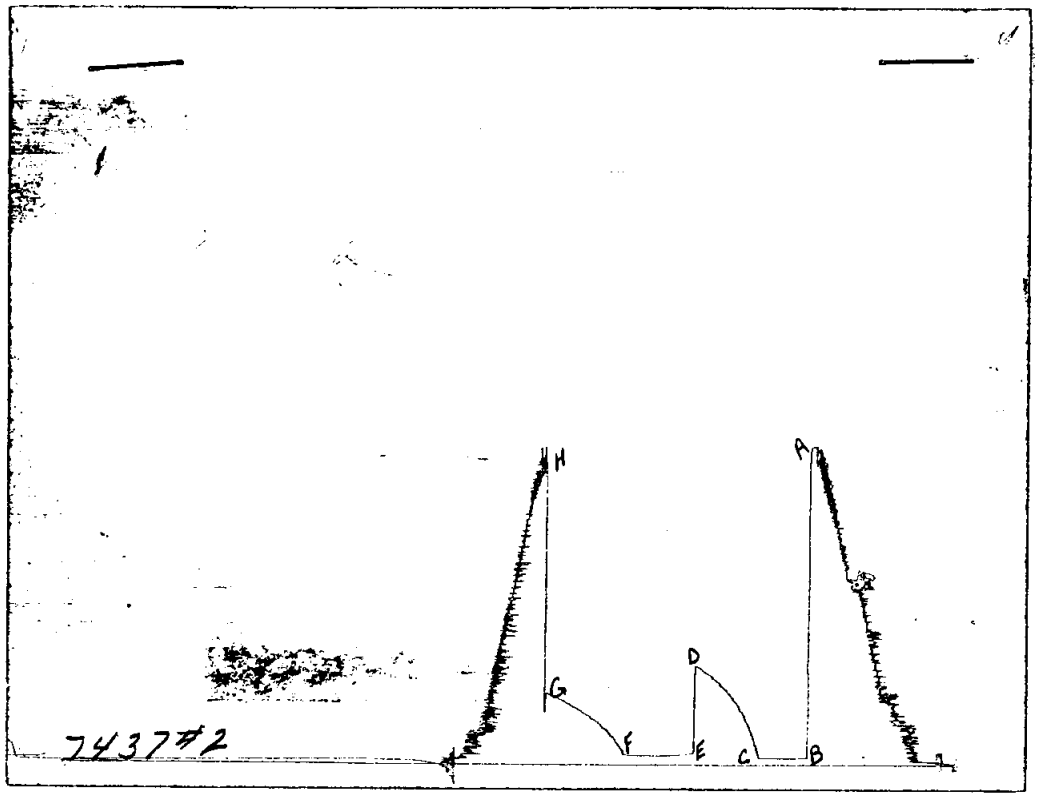
(F) Second Final Flow Pressure 63.4 PSI @ (depth) w / Clock No.

(G) Final Shut-in Pressure 402.5 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 1710.5 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1757	1763.9
(B) FIRST INITIAL FLOW PRESSURE	44	50.6
(C) FIRST FINAL FLOW PRESSURE	44	50.6
(D) INITIAL CLOSED-IN PRESSURE	558	569.8
(E) SECOND INITIAL FLOW PRESSURE	55	63.4
(F) SECOND FINAL FLOW PRESSURE	55	63.4
(G) FINAL CLOSED-IN PRESSURE	396	402.5
(H) FINAL HYDROSTATIC MUD	1704	1710.5

TRILOBITE TESTING L.L.C.

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Test Ticket

No. 5875

Well Name & No. Hanken #4 Test No. 2 Date 3-15-93

Company Ainsworth Operating Co. Zone Tested Arbuckle

Address _____ Elevation 1928 K.B.

Co. Rep./Geo. Kent Roberts Cont. Aber #8 Est. Ft. of Pay _____

Location: Sec. 6 Twp. 17 Rge. 10 Co. Ellsworth State Ks.

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

Interval Tested 3402 - 3412 Drill Pipe Size 4.5 XH

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

Top Packer Depth 3398 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 3402 Wt. Pipe I.D. — 2.7 Ft. Run 404

Total Depth 3412 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.3 lb / gal. Viscosity 50 Filtrate 10.4

Tool Open @ 1:00 p.m. Initial Blow weak - building to 2"

Final Blow weak - building to ½"

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

Rec. 60	Feet Of Mdy WTR.	%gas	%oil	90	%water	10	%mud
Rec. 5	Feet Of D.M	%gas	%oil		%water	100	%mud
Rec. _____	Feet Of _____	%gas	%oil		%water		%mud
Rec. _____	Feet Of _____	%gas	%oil		%water		%mud
Rec. _____	Feet Of _____	%gas	%oil		%water		%mud

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

RW .40 @ 81 °F Chlorides 15,000 ppm Recovery Chlorides 10,000 ppm System

(A) Initial Hydrostatic Mud	1757 PSI	AK1 Recorder No.	13754	Range	4000
(B) First Initial Flow Pressure	44 PSI	@ (depth)	3406	w/Clock No.	8179
(C) First Final Flow Pressure	44 PSI	AK1 Recorder No.	7437	Range	4200
(D) Initial Shut-In Pressure	558 PSI	@ (depth)	3408	w/Clock No.	8376
(E) Second Initial Flow Pressure	55 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	55 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	396 PSI	Initial Opening	30	Test	
(H) Final Hydrostatic Mud	1704 PSI	Initial Shut-In	45	Jars	
		Final Flow	45	Safety Joint	
		Final Shut-In	60	Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Other	
				TOTAL PRICE $	600.00

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 Kent Roberts

Our Representative Dan Banfe

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