TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: ROEHL #1 | Test No.: 1 | Date: 4/24/92

Company: WHITE & ELLIS DRILLING | Zone: PLEASONTON

Address: BOX 48848 WICHITA KS 67202 | Elevation: 2823 K.B.

Co. Rep./Geo.: TOM FUNK | Cont.: WHITE & ELLIS RIG #9 | Est. Ft. of Pay: 4

Location: Sec.: 6 | Twp.: 20S | Rge.: 28W | Co.: LANE | State: KS

Interval Tested: 4395-4420 | Drill Pipe Size: 4.5 XH

Anchor Length: 25 | Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 4390 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 4395 | Mud Wt.: 9.3 lb/Gal.

Total Depth: 4420 | Viscosity: 45 | Filtrate: 12

Tool Open @: 8:04 PM | Initial Blow: SURFACE BLOW TO 2 3/4" IN 30 MINUTES

Final Blow: NO BLOW 8 MINUTES-WEAK SURFACE BLOW TO 2.5" IN 52 MINUTES

Recovery - Total Feet: 60 | Flush Tool?: NO

Rec. 65 | Feet of: GAS IN PIPE

Rec. 60 | Feet of: WATERY OIL CUT MUD-30%OIL/10%WTR/60%MUD

Rec. | Feet of:

Rec. | Feet of:

Rec. | Feet of:

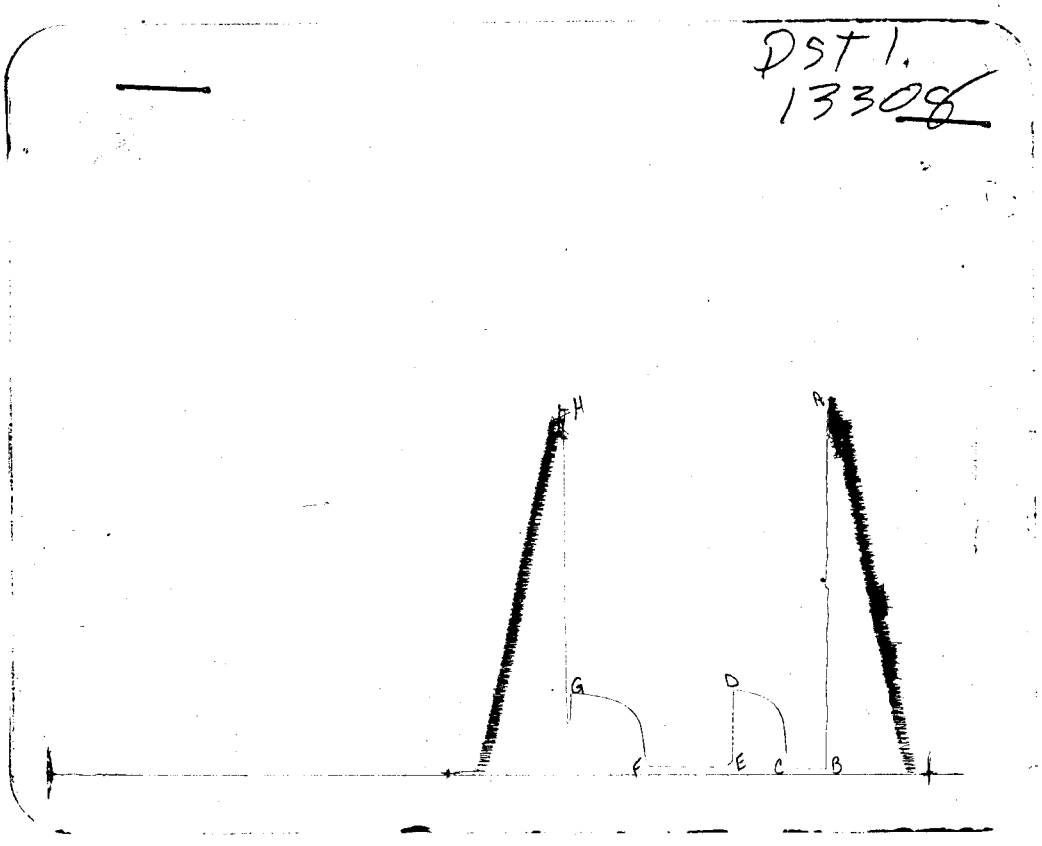
BHT: 112 °F | Gravity: °API | @ °F | Corrected Gravity: °API

RW: | @ °F | Chlorides: ppm Recovery | Chlorides: 2500 ppm System

(A) Initial Hydrostatic Mud: 2227 PSI	AK1 Recorder No.: 2023	Range: 4000	
(B) First Initial Flow Pressure: 12.3 PSI	@ (depth): 4397	w / Clock No.: 7452	
(C) First Final Flow Pressure: 25.8 PSI	AK1 Recorder No.: 13308	Range: 4700	
(D) Initial Shut-in Pressure: 521.4 PSI	@ (depth): 4415	w / Clock No.: 8698	
(E) Second Initial Flow Pressure: 25.8 PSI	AK1 Recorder No.:	Range:	
(F) Second Final Flow Pressure: 37.2 PSI	@ (depth):	w / Clock No.:	
(G) Final Shut-in Pressure: 501.8 PSI	Initial Opening: 30	Final Flow: 60	
(H) Final Hydrostatic Mud: 2189 PSI	Initial Shut-in: 45	Final Shut-in: 60	

Our Representative: MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2220	2226.9
(B) FIRST INITIAL FLOW PRESSURE	11	12.3
(C) FIRST FINAL FLOW PRESSURE	22	25.8
(D) INITIAL CLOSED-IN PRESSURE	518	521.4
(E) SECOND INITIAL FLOW PRESSURE	22	25.8
(F) SECOND FINAL FLOW PRESSURE	33	37.2
(G) FINAL CLOSED-IN PRESSURE	498	501.8
(H) FINAL HYDROSTATIC MUD	2180	2188.7

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 4569

Well Name & No. Roehl 1st Test No. 1 Date 4-24-92

Company White & Ellis Drilling Zone Tested Pleasonton

Address Box 48848 Wichita Ks Elevation 2823 KB

Co. Rep./Geo. Tom Funk Cont. W&E Rig 9 Est. Ft. of Pay [redacted] 4

Location: Sec. 6 Twp. 20s Rge. 28w Co. Lane State Ks

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

Interval Tested 4395 & 4420 Drill Pipe Size 4½ XH

Anchor Length 25 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 4390 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 4395 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 4420 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.3 LCM TR lb/gal. Viscosity 45 Filtrate 12.0

Tool Open @ 8:04 PM Initial Blow Surto 2¾ IN 30 MIN

Final Blow No Blow 8 MIN WEAK SUR TO 2½ IN 52 MIN

Recovery — Total Feet 60 Feet of Gas in Pipe 65 Flush Tool? ____

Rec. 60 Feet Of WO Mud %gas 30 %oil 10 %water 60 %mud

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

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

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

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

BHT 112 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 2500 ppm System

(A) Initial Hydrostatic Mud	2220 PSI	AK1 Recorder No.	2023	Range	4000
(B) First Initial Flow Pressure	11 PSI	@ (depth)	4397	w/Clock No.	7452
(C) First Final Flow Pressure	22 PSI	AK1 Recorder No.	13308	Range	4700
(D) Initial Shut-In Pressure	518 PSI	@ (depth)	4415	w/Clock No.	8698
(E) Second Initial Flow Pressure	22 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	33 PSI	@ (depth)	____	w/Clock No.	____
(G) Final Shut-In Pressure	498 PSI	Initial Opening	30	Test	✓
(H) Final Hydrostatic Mud	2180 PSI	Initial Shut-In	45	Jars	____
		Final Flow	60	Safety Joint	____
		Final Shut-In	60	Straddle	✓
				Circ. Sub	NC
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	[illegible]

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 Thomas Funk

Our Representative Mark Hershey

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: ROEHL #1 | Test No.: 2 | Date: 4/25/92

Company: WHITE & ELLIS DRILLING | Zone: MARMATON

Address: BOX 48848 WICHITA KS 67202 | Elevation: 2823 K.B.

Co. Rep./Geo.: TOM FUNK | Cont.: WHITE & ELLIS RIG #9 | Est. Ft. of Pay:

Location: Sec.: 6 | Twp.: 20S | Rge.: 28W | Co.: LANE | State: KS

Interval Tested: 4417-4440 | Drill Pipe Size: 4.5 XH

Anchor Length: 23 | Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 4412 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 4417 | Mud Wt.: 9.4 lb/Gal.

Total Depth: 4440 | Viscosity: 44 | Filtrate: 12

Tool Open @: 9:10 AM | Initial Blow: WEAK SURFACE TO 2" IN 30 MINUTES

Final Blow: WEAK SURFACE TO 5 1/4" IN 60 MINUTES

Recovery - Total Feet: 40 | Flush Tool?: NO

Rec. 150 Feet of GAS IN PIPE

Rec. 40 Feet of OIL CUT MUD-35%OIL/65%MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

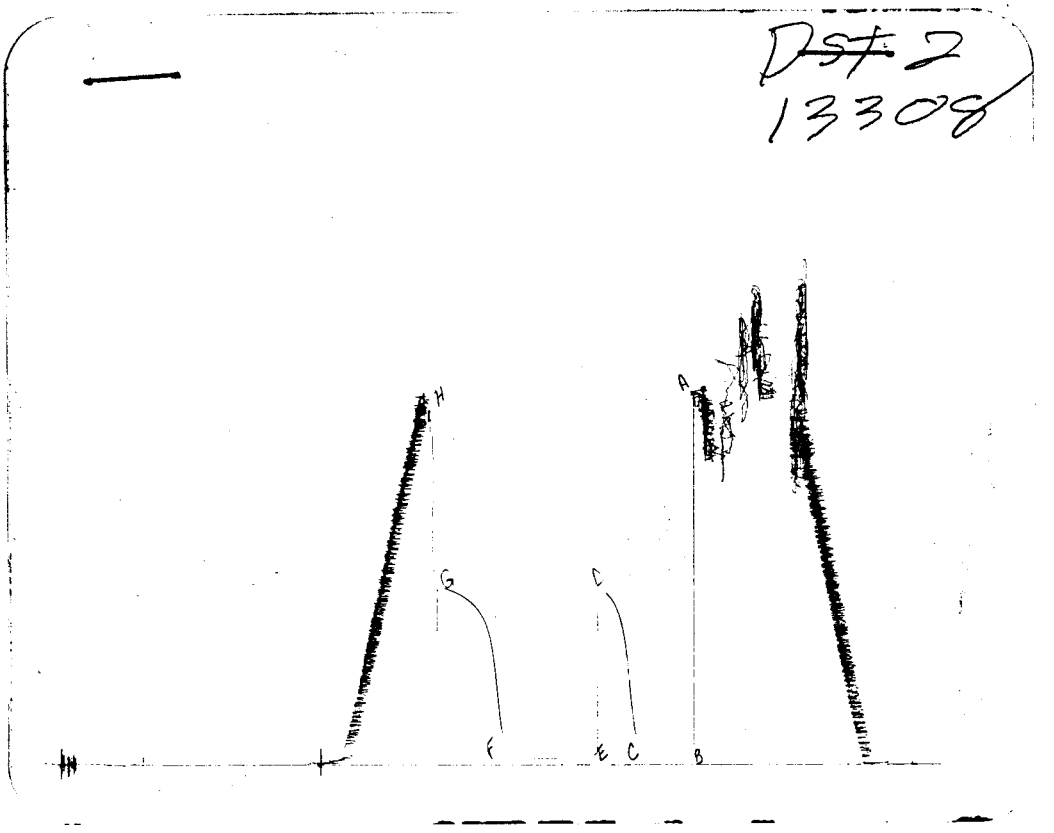
BHT: 113 °F | Gravity: °API | @ °F | Corrected Gravity: °API

RW: @ °F | Chlorides: ppm Recovery | Chlorides: 2500 ppm System

(A) Initial Hydrostatic Mud	2264 PSI	AK1 Recorder No.	2023	Range	4000
(B) First Initial Flow Pressure	12.3 PSI	@ (depth)	4419	w / Clock No.	7452
(C) First Final Flow Pressure	12.3 PSI	AK1 Recorder No.	13308	Range	4700
(D) Initial Shut-in Pressure	1075 PSI	@ (depth)	4435	w / Clock No.	8698
(E) Second Initial Flow Pressure	12.3 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	12.3 PSI	@ (depth)		w / Clock No.	
(G) Final Shut-in Pressure	1075 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	2236 PSI	Initial Shut-in	45	Final Shut-in	60

Our Representative: MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2260	2263.9
(B) FIRST INITIAL FLOW PRESSURE	11	12.3
(C) FIRST FINAL FLOW PRESSURE	11	12.3
(D) INITIAL CLOSED-IN PRESSURE	1070	1074.8
(E) SECOND INITIAL FLOW PRESSURE	11	12.3
(F) SECOND FINAL FLOW PRESSURE	11	12.3
(G) FINAL CLOSED-IN PRESSURE	1070	1074.8
(H) FINAL HYDROSTATIC MUD	2230	2235.7

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 4570

Well Name & No. Roehl 1# Test No. 2 Date 4-25-92

Company White & Ellis Drilling Zone Tested Marmaton

Address Box 48848 Wichita Ks Elevation 2823 KB

Co. Rep./Geo. Tom Funk Cont. W&E Rig 9 Est. Ft. of Pay

Location: Sec. 6 Twp. 20s Rge. 28w Co. Lane State KS

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

Interval Tested 4417 - 4440 Drill Pipe Size 4½ XH

Anchor Length 23 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 4412 Hole Size — 7⁷/₈" ____ Rubber Size — 6³/₄" ____

Bottom Packer Depth 4417 Wt. Pipe I.D. — 2.7 Ft. Run —

Total Depth 4440 Drill Collar — 2.25 Ft. Run —

Mud Wt. 9.4 LCM TR lb/gal. Viscosity 44 Filtrate 12.0

Tool Open @ 9:10 AM Initial Blow WEAK SUR to 2 IN 30 MIN

Final Blow WEAK SUR to 5¼ IN 60 MIN

Recovery — Total Feet 40 Feet of Gas in Pipe 150 Flush Tool? —

Rec.	Feet Of	%gas	%oil	%water	%mud
40	Oil Mud		35		65

BHT 113 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 2500 ppm System

(A) Initial Hydrostatic Mud 2260 PSI Ak1 Recorder No. 2023 Range 4000

(B) First Initial Flow Pressure 11 PSI @ (depth) 4419 w/Clock No. 7452

(C) First Final Flow Pressure 11 PSI AK1 Recorder No. 13308 Range 4700

(D) Initial Shut-In Pressure 1070 PSI @ (depth) 4435 w/Clock No. 8698

(E) Second Initial Flow Pressure 11 PSI AK1 Recorder No. ____ Range ____

(F) Second Final Flow Pressure 11 PSI @ (depth) ____ w/Clock No. ____

(G) Final Shut-In Pressure 1070 PSI Initial Opening 30 Test ✓

(H) Final Hydrostatic Mud 2230 PSI Initial Shut-In 45 Jars

Final Flow 60 Safety Joint

Final Shut-In 60 Straddle

Circ. Sub ✓ NC

Sampler

Extra Packer

Other

TOTAL PRICE $ 550.00

Approved By [signature]

Our Representative [signature]

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: ROEHL #1 — Test No. 3 — Date 4/27/92

Company: WHITE & ELLIS DRILLING — Zone MIDDLE CREEK

Address: BOX 48848 WICHITA KS 67202 — Elevation 2823 K.B.

Co. Rep./Geo.: TOM FUNK — Cont. WHITE & ELLIS RIG #9 — Est. Ft. of Pay

Location: Sec. 6 — Twp. 20S — Rge. 28W — Co. LANE — State KS

Interval Tested: 4360-4375 — Drill Pipe Size: 4.5 XH

Anchor Length: 15 — Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 4360 — Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 4375 — Mud Wt.: 9.3 lb/Gal.

Total Depth: 4706 — Viscosity: 46 — Filtrate: 12

Tool Open @: 2:55 AM — Initial Blow: WEAK-BUILDING TO 1 1/2"

Final Blow: WEAK - BUILDING TO 1/4"

Recovery - Total Feet: 120 — Flush Tool?: NO

Rec. 120 — Feet of: WATER

Rec. — Feet of:

Rec. — Feet of:

Rec. — Feet of:

Rec. — Feet of:

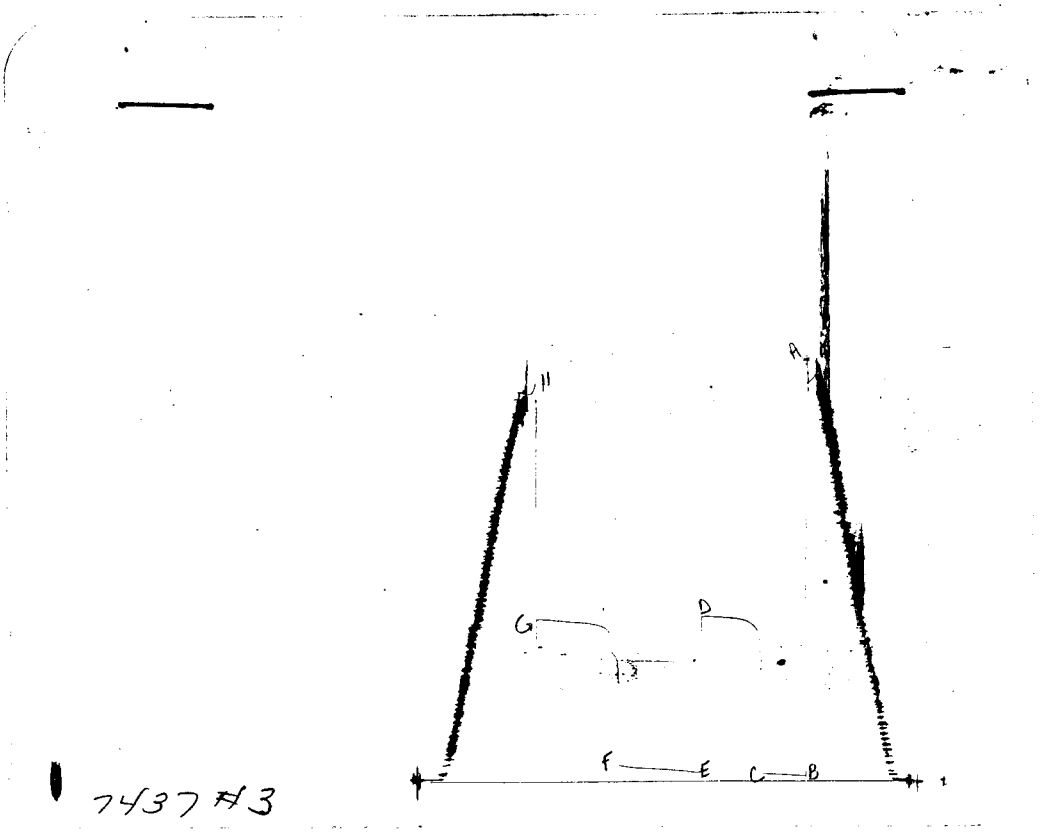
BHT: 124 °F — Gravity: °API — @ °F — Corrected Gravity: °API

RW: — @ °F — Chlorides: ppm Recovery — Chlorides: 2500 ppm System

(A) Initial Hydrostatic Mud	2316 PSI	AK1 Recorder No.	7437	Range	4200
(B) First Initial Flow Pressure	62.4 PSI	@ (depth)	4364	w / Clock No.	8179
(C) First Final Flow Pressure	80.9 PSI	AK1 Recorder No.	13849	Range	4375
(D) Initial Shut-in Pressure	923.5 PSI	@ (depth)	4371	w / Clock No.	31152
(E) Second Initial Flow Pressure	80.9 PSI	AK1 Recorder No.	13754	Range	4000
(F) Second Final Flow Pressure	104.7 PSI	@ (depth)	4702	w / Clock No.	26199
(G) Final Shut-in Pressure	906.3 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	2200 PSI	Initial Shut-in	45	Final Shut-in	60

Our Representative: DAN BANGLE

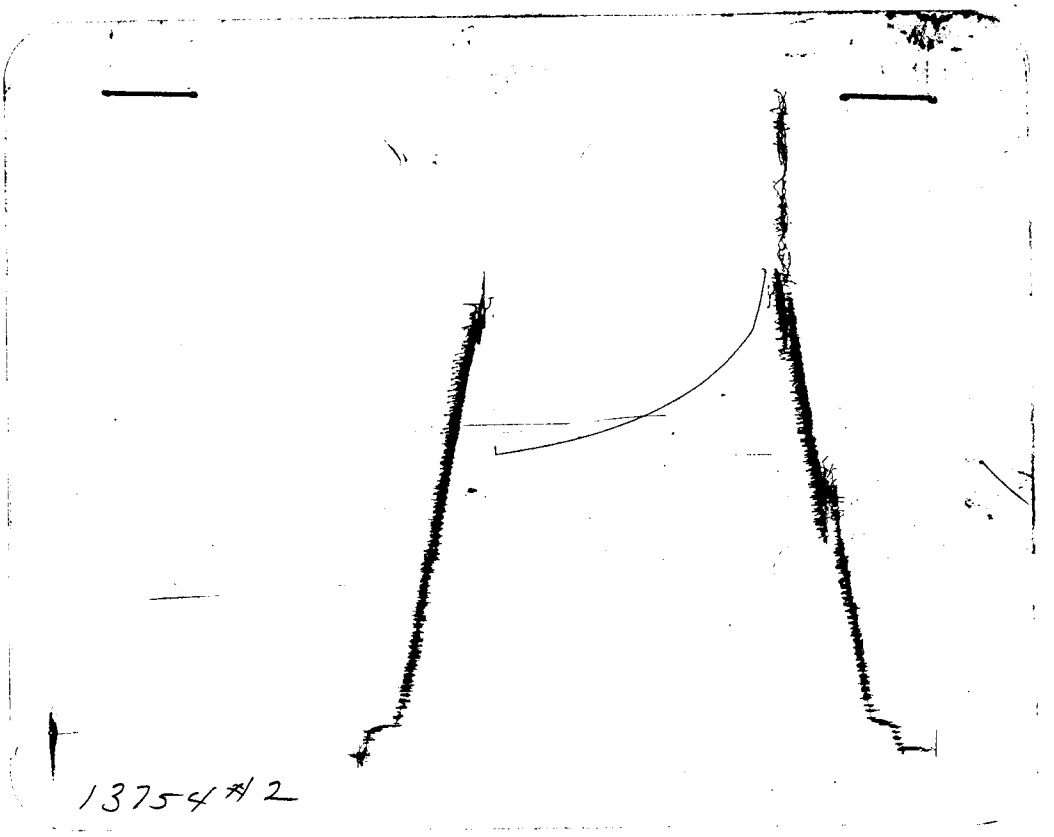
CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2312	2315.6
(B) FIRST INITIAL FLOW PRESSURE	55	62.4
(C) FIRST FINAL FLOW PRESSURE	77	80.9
(D) INITIAL CLOSED-IN PRESSURE	918	923.5
(E) SECOND INITIAL FLOW PRESSURE	77	80.9
(F) SECOND FINAL FLOW PRESSURE	100	104.7
(G) FINAL CLOSED-IN PRESSURE	896	906.3
(H) FINAL HYDROSTATIC MUD	2191	2199.7

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD		
(B) FIRST INITIAL FLOW PRESSURE		
(C) FIRST FINAL FLOW PRESSURE		
(D) INITIAL CLOSED-IN PRESSURE		
(E) SECOND INITIAL FLOW PRESSURE		
(F) SECOND FINAL FLOW PRESSURE		
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD		

TRILOBITE TESTING COMPANY L.L.C.
P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 4756

Well Name & No. Rochl #1-6 Test No. 3 Date 4-27-92
Company White + Ellis Drlg. Inc. Zone Tested Middle Creek
Address _____ Elevation 2823 K.B.
Co. Rep./Geo. Tom Funk Cont. White + Ellis #9 Est. Ft. of Pay _____
Location: Sec. 6 Twp. 20 Rge. 28 Co. Lane State Ks.
No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation

Interval Tested 4360 - 4375 Drill Pipe Size 4.5 XH
Anchor Length 15 Top Choke — 1" _____ Bottom Choke — ¾" _____
Top Packer Depth 4360 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____
Bottom Packer Depth 4375 Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth 4706 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.3 lb/gal. Viscosity 46 Filtrate 12
Tool Open @ 2:55 A.M. Initial Blow Weak- building TO 1½"

Final Blow Weak- building TO ¼"

Recovery — Total Feet 120 Feet of Gas in Pipe _____ Flush Tool? _____

Rec. 120 Feet Of WTR. %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 124 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 2500 ppm System

(A) Initial Hydrostatic Mud 2312 PSI AK1 Recorder No. 7437 Range 4200
(B) First Initial Flow Pressure 55 PSI @ (depth) 4364 w/Clock No. 8179
(C) First Final Flow Pressure 77 PSI AK1 Recorder No. 13849 Range 4375
(D) Initial Shut-In Pressure 918 PSI @ (depth) 4371 w/Clock No. 3115-2
(E) Second Initial Flow Pressure 77 PSI AK1 Recorder No. 13754 Range 4000
(F) Second Final Flow Pressure 100 PSI @ (depth) 4702 w/Clock No. 26199
(G) Final Shut-In Pressure 896 PSI Initial Opening 30 Test 550.00
(H) Final Hydrostatic Mud 2191 PSI Initial Shut-In 45 Jars _____
Final Flow 60 Safety Joint _____
Final Shut-In 60 Straddle X 250.00
Circ. Sub _____
Sampler _____
Extra Packer X 50.00
Other _____
TOTAL PRICE $ 1200.00

Approved By _____
Our Representative _____

Printcraft Printers - Hays, KS