

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

API NO. 15- 179-21,091-00-00

**ORIGINAL**

County Sheridan

SW - NW - NE - SE Sec. 27 Twp. 9 Rge. 29 <sup>E</sup>W

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

2310 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 Lawrence Manhart Well # 1

Field Name \_\_\_\_\_

Producing Formation N/A

Elevation: Ground 2877 KB 2887

Total Depth 4260 PBDT \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at 285 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 D&A JW 1-2-98  
(Data must be collected from the Reserve Pit)

Chloride content 500 ppm Fluid volume 980 bbls

Dewatering method used evaporation

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name KCC

Lease Name \_\_\_\_\_ License No. \_\_\_\_\_

Quarter JUN 2 Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Rng. \_\_\_\_\_ E/W

County CONFIDENTIAL Docket No. \_\_\_\_\_

Operator: License # 4767

Name: Ritchie Exploration, Inc.

Address P.O. Box 783188

City/State/Zip Wichita, KS 67278

Purchaser: N/A

Operator Contact Person: Lisa Thimmesch

Phone (316) 691-9500

Contractor: Name: White & Ellis Drlg

License: 5420

Wellsite Geologist: J. Christian

Designate Type of Completion  
 New Well  Re-Entry  Workover

Oil  SWD  SLOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Exptl, Cathodic, etc)

If Workover:

Operator: SEP 28 1999

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. \_\_\_\_\_

4-2-97 4-9-97 4-9-97  
Spud Date Date Reached TD Completion Date

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, 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 [Signature]

Title President Date 5/29/97

Subscribed and sworn to before me this 29th day of MAY, 19 97

Notary Public Lisa Thimmesch

Date Commission Expires \_\_\_\_\_



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 CORP COM  
1997 JUN -4  
06-04-1997

Operator Name Ritchie Exploration, Inc. Lease Name Lawrence Manhart Well # 1

Sec. 27 Twp. 9 Rge. 29W  East  West  
 County Sheridan

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  Yes  No  
 (Attach Additional Sheets.)  
 Samples Sent to Geological Survey  Yes  No  
 Cores Taken  Yes  No  
 Electric Log Run  Yes  No  
 (Submit Copy.)  
 List All E.Logs Run:

Log Formation (Top), Depth and Datum  Sample  
 Name Top Datum

see attached sheet

CASING RECORD <input checked="" 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		285	60/40 poz	180	2% gel 4% CC

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

TUBING RECORD		Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj.		Producing Method <input type="checkbox"/> Flowing <input 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	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 \_\_\_\_\_

**RITCHIE EXPLORATION, INC.**

125 N. Market - Suite 1000  
Wichita, Kansas 67202-1775  
316-267-4375 FAX 316-267-3026

**ORIGINAL**

#1 Lawrence Manhart  
SW NW NE  
Section 27-9S-29W  
Sheridan County, Kansas  
API# 15-179-21,091  
Elevation: 2877' GL 2887' KB

15-179-21091-00-00

RELEASED

SEP 28 1999

FROM CONFIDENTIAL

Log Tops	Well	
Anhydrite	2489'(+ 398)	flat
B/Anhy	2525'(+ 362)	-2
Topeka	3744'(- 857)	-1
Heebner	3966'(-1079)	-2
Toronto	3989'(-1102)	-4
Lansing	4006'(-1119)	-2
B/KC	4253'(-1366)	-2
RTD	4260'(-1373)	

DST #1 from 3962' to 4000' (Toronto). Recovered 20' of slight oil cut mud (3% oil, 97% mud).  
IFP:33-22#/30"; ISIP:973#/30";  
FFP:33-22#/30"; FSIP:950#/30".

DST #2 from 4060' to 4090' (L/KC "E" and "F" zones). Recovered 120' watery mud (30% water, 70% mud).  
IFP:33-44#/30"; ISIP:1466#/30";  
FFP:56-77#/30"; FSIP:1264#/30".

DST #3 from 4119' to 4260' (L/KC "H" to "L" zones). Recovered 25' of mud with a trace of oil.  
IFP:33-22#/15"; ISIP:928#/15".

KCC

JUN 2

CONFIDENTIAL

RECEIVED  
KANSAS CORP COMM  
1997 JUN -11 A 12:47

15-179-21091-00-00

# ALLIED CEMENTING CO., INC.

# ORIGINAL

5521

RELEASED

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SEP 28 1999

SERVICE POINT:

Dakley

DATE <u>4-9-97</u>	SEC. <u>27</u>	TWP. <u>9<sup>3</sup></u>	RANGE FROM CO. <u>29<sup>0</sup></u>	CALLED OUT	ON LOCATION <u>2:15 PM</u>	JOB START <u>3:45 PM</u>	JOB FINISH <u>7:00 PM</u>
LEASE <u>Manhart</u>	WELL # <u>1</u>	LOCATION: <u>Grinnell N to RL. 4E-1N-3E-SS.</u>			COUNTY <u>Shedden</u>	STATE <u>Kan</u>	

OLD OR NEW (Circle one)

CONTRACTOR White + Ellis #9

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 4260'

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG: \_\_\_\_\_

PERFS. \_\_\_\_\_

OWNER Same

CEMENT

AMOUNT ORDERED 205 SKs @ 4000

3% CC - 6% Cal

COMMON	<u>123</u>	SKs @ <u>7<sup>20</sup></u>	<u>885<sup>60</sup></u>
POZMIX	<u>82</u>	SKs @ <u>3<sup>15</sup></u>	<u>258<sup>30</sup></u>
GEL	<u>10</u>	SKs @ <u>9<sup>50</sup></u>	<u>95<sup>00</sup></u>
CHLORIDE	<u>7</u>	SKs @ <u>28<sup>00</sup></u>	<u>196<sup>00</sup></u>
		@ _____	_____
		@ _____	_____
		@ _____	_____
		@ _____	_____
		@ _____	_____
HANDLING	<u>205</u>	SKs @ <u>1<sup>05</sup></u>	<u>215<sup>25</sup></u>
MILEAGE	<u>44</u>	<u>28 SK/mile</u>	<u>213<sup>20</sup></u>

TOTAL 1,863<sup>35</sup>

### EQUIPMENT

PUMP TRUCK CEMENTER Walt

# 102 HELPER Walt

BULK TRUCK

# 218 DRIVER Jeff

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

### REMARKS:

25 SKs @ 2575'

100 SKs @ 1575'

40 SKs @ 325'

10 SKs @ 40'

15 SKs in R.H.

15 SKs in W.W.

Thud Ya

CONFIDENTIAL

SERVICE

DEPTH OF JOB 2575'

PUMP TRUCK CHARGE \_\_\_\_\_ 550<sup>00</sup>

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 26-miles @ 2<sup>85</sup> 74<sup>10</sup>

PLUG 8 5/8 D.H. @ \_\_\_\_\_ 123<sup>00</sup>

@ \_\_\_\_\_

@ \_\_\_\_\_

TOTAL 647<sup>10</sup>

CHARGE TO: Ritchie Exploration Inc

STREET P.O. Box 783188

CITY Wichita STATE Kan ZIP 67278-3188

### FLOAT EQUIPMENT

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

TOTAL \_\_\_\_\_

RECEIVED  
KANSAS COMP  
1997 JUN 11 4 12 17

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX \_\_\_\_\_

TOTAL CHARGE \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE Don Burles

Post-Fax Note 7672

To: Jim Hemmen  
Company: KCC  
Location:  
Fax #: 337-6211 Telephone #

No. of Pages: 1  
Today's Date: 1-2-98 Time: 2:20  
From: Julie Stout  
Company: Ritchie Expl.  
Location:  
Fax #:  
Telephone #:

Comments: Jim -  
This is the only information I can find.  
Hopefully this will suffice.  
15-179-21091-00-00

TELEPHONE  
AREA CODE 913 483-8177  
AREA CODE 913 483-3187

ALLIED CEMENTING COMPANY, INC.

P. O. BOX 31  
RUSSELL, KANSAS 67665 Federal Tax I.D.# 48-0727880

2003

TO: Ritchie Exploration, Inc.  
P. O. Box 793088  
Wichita, KS 67278-3188

INVOICE NO. 74860  
PURCHASE ORDER NO. W-31100  
LEASE NAME Lawrence Manha  
DATE 4-3-97

SERVICE AND MATERIALS AS FOLLOWS:

	APR 97	1017161	
Common 100 sks @ \$7.20		\$777.60	
Pozmix 72 sks @ \$3.15		226.80	
GUL J- sks @ \$9.50		28.50	
Chloride 8 sks @ \$26.00		224.00	\$1,256.90
Handling 100 sks @ \$1.05		105.00	
Mileage (26) @ \$5.04* per sk per mi		131.04	
Surface		445.00	
M1 @ \$0.35 @ 2000 chg		74.10	
1 plug		45.00	240.38
			\$3,197.20

RELEASED

SEP 28 1999

Total 6100.270  
/ 3800/76  
2329.51  
1361.62

If Account CURRENT a  
Discount of \$ 329.53  
will be Allowed ONLY if  
Paid Within 30 Days from  
Date of Invoice.

FROM CONFIDENTIAL

Thank You!

All Prices Are Net, Payable 30 Days Following Date of Invoice. 1% Charged Thereafter.

ORIGINAL

15-179-21091-00-00

RELEASED

SEP 20 1999

**WELL NAME:**

**COMPANY:**

**LOCATION:**

**DATE:**

Lawrence Manhart

Ritchie Exploration

27-9S-29W

Sheridan County Kansas

04/10/97

PLEASE KEEP THIS  
INFORMATION  
CONFIDENTIAL

15-179-21091

JUN 8  
CONFIDENTIAL

**CONFIDENTIAL**

15-179-21091-00-00

**ORIGINAL**

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Exploration

DATE 4/7/97

WELL NAME: Lawrence Manhart

KB 2892.00 ft

TICKET NO: 9955

DST #1

LOCATION : 27-9-29- Sheridan KS

GR 2882.00 ft

FORMATION: Toronto

INTERVAL : 3962.00 To 4000.00 ft

TD 4000.00 ft

TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	11057	11057	11058			PF Fr. 1112 to 1142 hr
SI 30 Range(Psi )	4500.0	4500.0	4475.0	0.0	0.0	IS Fr. 1142 to 1212 hr
SF 30 Clock(hrs)	12 HR	12 HR	12 HR			SF Fr. 1212 to 1242 hr
FS 30 Depth(ft )	3968.0	3968.0	3997.0	0.0	0.0	FS Fr. 1242 to 1312 hr

	Field	1	2	3	4
A. Init Hydro	1970.0	1925.0	0.0	0.0	0.0
B. First Flow	33.0	43.0	0.0	0.0	0.0
B1. Final Flow	22.0	21.0	0.0	0.0	0.0
C. In Shut-in	973.0	962.0	0.0	0.0	0.0
D. Init Flow	33.0	40.0	0.0	0.0	0.0
E. Final Flow	22.0	36.0	0.0	0.0	0.0
F. Fl Shut-in	950.0	930.0	0.0	0.0	0.0
G. Final Hydro	1959.0	1866.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 0920 hr  
T ON BOTM 1100 hr  
T OPEN 1112 hr  
T PULLED 1312 hr  
T OUT 1600 hr

TOOL DATA-----

Tool Wt. 4000.00 lbs  
Wt Set On Packer 26000.00 lbs  
Wt Pulled Loose 0.00 lbs  
Initial Str Wt 6000.00 lbs  
Unseated Str Wt 60000.00 lbs  
Bot Choke 0.75 in  
Hole Size 7.88 in  
D Col. ID 2.25 in  
D. Pipe ID 3.80 in  
D.C. Length 0.00 ft  
D.P. Length 3973.00 ft

RECOVERY

Tot Fluid 20.00 ft of 0.00 ft in DC and 20.00 ft in DP  
20.00 ft of Slight Oil Cut Mud  
0.00 ft of 3%oil 97%mud  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type Chmical  
Weight 9.20 lb/cf  
Vis. 45.00 S/L  
W.L. 9.60 in3  
F.C. 0.00 in  
Mud Drop

BLOW DESCRIPTION

Initial Flow:  
Weak surface blow

Initial Shut In:  
No return

Final Flow:  
Bubble to open tool, no blow

Final Shut In:  
No return

SAMPLES:  
SENT TO:

RELEASED

SEP 03 1999

FROM O. J. J. J.

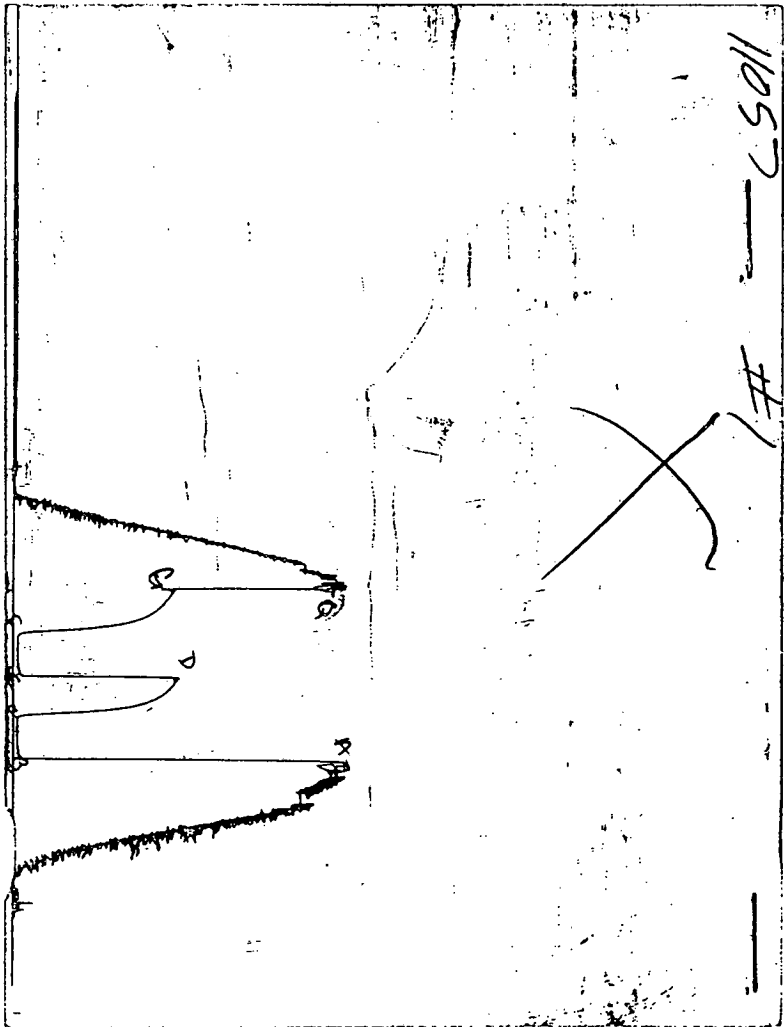
Amt. of fill 0.00 ft  
Btm. H. Temp. 111.00 F  
Hole Condition  
% Porosity 0.00  
Packer Size 6.75 in  
No. of Packers 2  
Cushion Amt. 0.00

Cushion Type  
Reversed Out  
Tool Chased  
Tester Shane McBride  
Co. Rep. Jeff Christian  
Contr. White & Ellis  
Rig #  
Unit #  
Pump T.

Test Successful: Y

15-179-21091-00-00

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart



# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

15-179-21091-00-00

## Test Ticket

No 9955

Well Name & No. <u>#/Lawrence Manhart</u>	Test No. <u>#/</u>	Date <u>4-7-97</u>
Company <u>Ritchie Exploration</u>	Zone Tested <u>Toronto</u>	
Address <u>25 N. Market Suite 100, Wichita, KS 67602</u>	Elevation <u>2892'</u> KB <u>282'</u> GL	
Co. Rep / Geor <u>Jeff Christian</u>	Cont. <u>White, S. H. S.</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>27</u> Twp. <u>9</u> Rge. <u>29</u>	Co. <u>Shenandoah</u> State <u>Ks</u>	
No. of Copies <u>from</u> Distribution Sheet (Y, N) _____	Turnkey (Y, N) <u>N</u>	Evaluation (Y, N) _____

Interval Tested <u>3962'</u>	<u>4000'</u>	Initial Str Wt./Lbs. <u>60,000</u>	Unseated Str Wt./Lbs. <u>10,000</u>
Anchor Length _____	<u>32'</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. _____
Top Packer Depth _____	<u>3957'</u>	Tool Weight <u>4,000</u>	
Bottom Packer Depth _____	<u>3962'</u>	Hole Size — 7 7/8" <input checked="" type="checkbox"/>	Rubber Size — 6 3/4" <input checked="" type="checkbox"/>
Total Depth _____	<u>4000'</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9.2</u> LCM _____	Vis. <u>4.5</u> WL <u>9.6</u>	Drill Pipe Size <u>4 1/2 X 4</u>	Ft. Run <u>3973'</u>
Blow Description <u>Leak Surface blow</u>			

F.S.I: No return  
 F.F: Bubble to open tool — No Blow  
 F.S.I: No return

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
<u>20'</u>	_____	_____	<u>20'</u>
Rec. <u>20'</u> Feet Of <u>Slightly oil cut mud</u>	%gas <u>5</u>	%oil _____	%water <u>97</u> %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 111° °F Gravity \_\_\_\_\_ °API D@ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 500 ppm System

(A) Initial Hydrostatic Mud	<u>1970</u> PSI	Recorder No. <u>11057</u>	T-Started <u>09:20 A.M.</u>
(B) First Initial Flow Pressure	<u>33</u> PSI	(depth) <u>3968'</u>	T-Open <u>11:12 A.M.</u>
(C) First Final Flow Pressure	<u>22</u> PSI	Recorder No. <u>11058</u>	T-Pulled <u>13:12 P.M.</u>
(D) Initial Shut-in Pressure	<u>973</u> PSI	(depth) <u>3977'</u>	T-Out _____
(E) Second Initial Flow Pressure	<u>33</u> PSI	Recorder No. _____	
(F) Second Final Flow Pressure	<u>22</u> PSI	(depth) _____	
(G) Final Shut-in Pressure	<u>950</u> PSI	Initial Opening <u>30</u>	Test <u>X</u>
(H) Final Hydrostatic Mud	<u>1959</u> PSI	Initial Shut-in <u>30</u>	Jars _____
		Final Flow <u>30</u>	Safety Joint _____
		Final Shut-in <u>30</u>	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 Jeff Christian  
 Our Representative St. and McR. D.

Circ. Sub X N/C  
 Sampler \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Elect. Rec. \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ \_\_\_\_\_

15-179-21091-00-00

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Exploration  
WELL NAME: Lawrence Manhart #1  
LOCATION : 27-9-29 Sheridan KS  
INTERVAL : 4060.00 To 4090.00 ft

DATE 4/8/97  
KB 2892.00 ft TICKET NO: 9956 DST #2  
GR 2882.00 ft FORMATION: Lansing KC "E-F"  
TD 4090.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	11057	11057	11058			PF Fr. 0655 to 0725 hr
SI 30	Range(Psi )	4500.0	4500.0	4475.0	0.0	0.0	IS Fr. 0725 to 0755 hr
SF 30	Clock(hrs)	12 Hr	12 HR	12 HR			SF Fr. 0755 to 0825 hr
FS 30	Depth(ft )	4065.0	4065.0	4087.0	0.0	0.0	FS Fr. 0825 to 0855 hr

	Field	1	2	3	4	
A. Init Hydro	1959.0	1952.0	0.0	0.0	0.0	T STARTED 0435 hr
B. First Flow	33.0	65.0	0.0	0.0	0.0	T ON BOTM 0645 hr
B1. Final Flow	44.0	65.0	0.0	0.0	0.0	T OPEN 0655 hr
C. In Shut-in	1466.0	1477.0	0.0	0.0	0.0	T PULLED 0855 hr
D. Init Flow	56.0	97.0	0.0	0.0	0.0	T OUT 1050 hr
E. Final Flow	67.0	84.0	0.0	0.0	0.0	
F. Fl Shut-in	1264.0	1262.0	0.0	0.0	0.0	
G. Final Hydro	1948.0	1940.0	0.0	0.0	0.0	
Inside/Outside	I	I	O			

TOOL DATA-----

Tool Wt. 4000.00 lbs  
Wt Set On Packer 26000.00 lbs  
Wt Pulled Loose 70000.00 lbs  
Initial Str Wt 61000.00 lbs  
Unseated Str Wt 61000.00 lbs  
Bot Choke 0.75 in  
Hole Size 7.88 in  
D Col. ID 2.25 in  
D. Pipe ID 3.80 in  
D.C. Length 0.00 ft  
D.P. Length 4071.00 ft

RECOVERY

Tot Fluid 120.00 ft of 0.00 ft in DC and 120.00 ft in DP  
120.00 ft of Water Cut Mud  
0.00 ft of 30%water 70%mud  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of RW .35 @ 65F

SALINITY 20000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type Chemical  
Weight 9.30 lb/cf  
Vis. 47.00 S/L  
W.L. 8.80 in3  
F.C. 0.00 in  
Mud Drop

Amt. of fill 0.00 ft  
Btm. H. Temp. 118.00 F  
Hole Condition  
% Porosity 0.00  
Packer Size 6.75 in  
No. of Packers 2  
Cushion Amt. 0.00

BLOW DESCRIPTION

Initial Flow:  
1/2" blow at open, built to 1.5"

Initial Shut In:  
No return

Final Flow:  
Weak surface blow in 10 min .25"

Final Shut In:  
No return

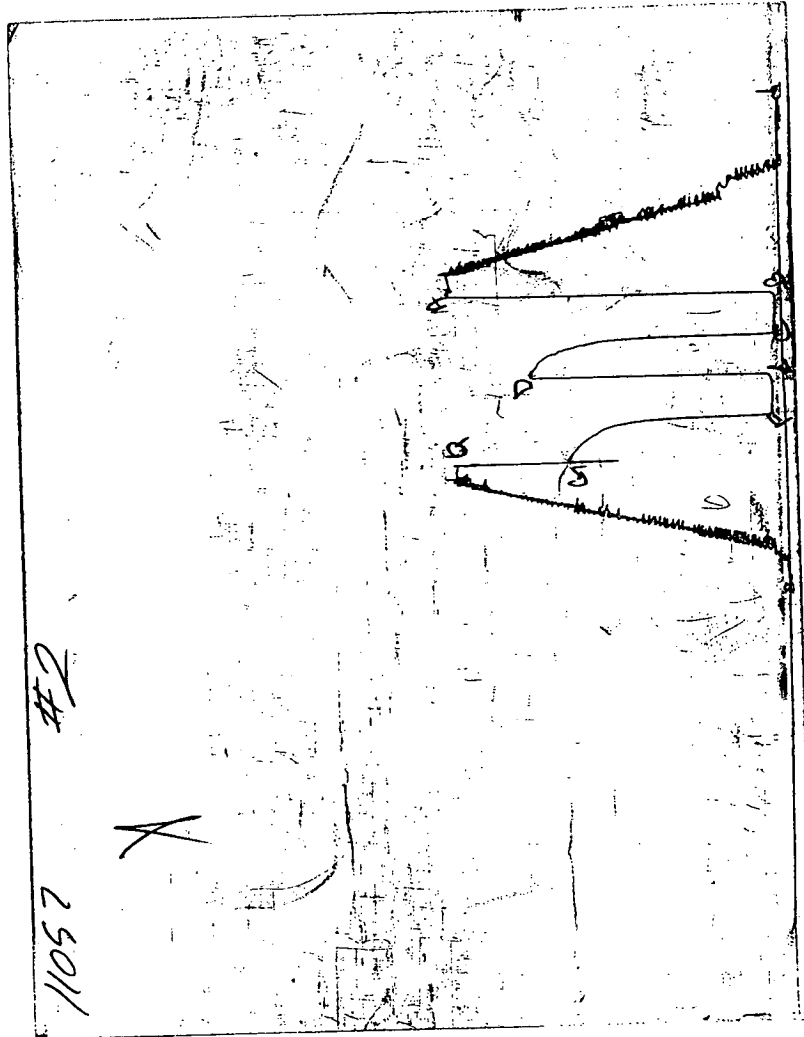
SAMPLES:  
SENT TO:

Tester shane McBride  
Co. Rep. Jeff Christian  
Contr. White & Ellis  
Rig #  
Unit #  
Pump T.

Test Successful: Y

15-179-21091-00-00

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

15-179-21091-00-00

## Test Ticket

No. 9956

Well Name & No. <u>#7 Lawrence Marhart</u>	Test No. <u>2</u>	Date <u>4-8-97</u>
Company <u>Ritchie Exploration</u>	Zone Tested <u>("E-F")</u>	
Address <u>125 N. Market Suite 1000 Wichita KS 67602</u>	Elevation <u>2892'</u>	KB <u>2882'</u> GL
Co. Rep / Geo. <u>Jeff Christian</u>	Cont. <u>White &amp; Ellis</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>27</u>	Twp. <u>9</u>	Rge. <u>29</u> Co. <u>Sheridan</u> State <u>KS</u>
No. of Copies <u>N/A</u>	Distribution Sheet (Y, N) <u>N</u>	Turnkey (Y, N) <u>N</u> Evaluation (Y, N) _____

Interval Tested <u>4060'</u>	<u>4090'</u>	Initial Str Wt./Lbs. <u>66,000</u>	Unseated Str Wt./Lbs. <u>66,000</u>
Anchor Length _____	<u>30'</u>	Wt. Set Lbs. <u>26,000</u>	Wt. Pulled Loose/Lbs. <u>70,000</u>
Top Packer Depth _____	<u>4055'</u>	Tool Weight <u>4,000</u>	
Bottom Packer Depth _____	<u>4060'</u>	Hole Size — 7 7/8" <input checked="" type="checkbox"/>	Rubber Size — 6 3/4" <input checked="" type="checkbox"/>
Total Depth _____	<u>4090'</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9.3</u> LCM _____	Vis. <u>47</u> WL <u>8.8</u>	Drill Pipe Size <u>4 1/2 XH</u>	Ft. Run <u>4071'</u>
Blow Description <u>1/2" @ open burst to 1 1/2" w.</u>			

I.S.I: No return  
F.F: weak surface flow in 10 min 1/4" w.  
I.S.I: No return

Recovery — Total Feet <u>120'</u>	GIP _____	Ft. in DC _____	Ft. in DP <u>120'</u>
Rec. <u>120'</u>	Feet Of <u>Water Cut Mud</u>	%gas _____	%oil _____
Rec. _____	Feet Of _____	%gas _____	%oil _____
Rec. _____	Feet Of _____	%gas _____	%oil _____
Rec. _____	Feet Of _____	%gas _____	%oil _____
Rec. _____	Feet Of _____	%gas _____	%oil _____

BHT 118° °F Gravity \_\_\_\_\_ °API D@ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW 35 @ 65° °F Chlorides 20,000 ppm Recovery Chlorides 500 ppm System

- (A) Initial Hydrostatic Mud 1959 PSI Recorder No. 11057 T-Started 04:35 AM.
- (B) First Initial Flow Pressure 33 PSI (depth) 4065' T-Open 06:55 AM
- (C) First Final Flow Pressure 44 PSI Recorder No. 11058 T-Pulled 08:55 AM
- (D) Initial Shut-in Pressure 1466 PSI (depth) 4087' T-Out 10:50 AM.
- (E) Second Initial Flow Pressure 56 PSI Recorder No. \_\_\_\_\_
- (F) Second Final Flow Pressure 67 PSI (depth) \_\_\_\_\_
- (G) Final Shut-in Pressure 1264 PSI Initial Opening 30 Test X \_\_\_\_\_
- (H) Final Hydrostatic Mud 1948 PSI Initial Shut-in 30 Jars \_\_\_\_\_

Final Flow 30 Safety Joint \_\_\_\_\_  
 Final Shut-in 30 Straddle \_\_\_\_\_  
 \_\_\_\_\_ Circ. Sub X N/C  
 \_\_\_\_\_ Sampler \_\_\_\_\_  
 \_\_\_\_\_ Extra Packer \_\_\_\_\_  
 \_\_\_\_\_ Elect. Rec. \_\_\_\_\_  
 \_\_\_\_\_ Other \_\_\_\_\_

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 Neil Christian

15-179-21091-00-00

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Exploration  
WELL NAME: Lawrence Manhart #1  
LOCATION : 27-9-29  
INTERVAL : 4119.00 To 4260.00 ft

DATE 4-9-97  
KB 2892.00 ft TICKET NO: 9957 DST #3  
GR 2882.00 ft FORMATION: Lansing KS "H-L"  
TD 4260.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15	Rec.	11057	11057	11058		PF Fr. 0808 to 0823 hr
SI 0	Range(Psi )	4500.0	4500.0	4257.0	0.0	IS Fr. to hr
SF 0	Clock(hrs)	12 HR	12 HR	12 HR		SF Fr. to hr
FS 15	Depth(ft )	4125.0	4125.0	4257.0	0.0	FS Fr. 0823 to 0838 hr

	Field	1	2	3	4	
A. Init Hydro	2038.0	2059.0	0.0	0.0	0.0	T STARTED 0615 hr
B. First Flow	33.0	43.0	0.0	0.0	0.0	T ON BOTM 0800 hr
B1. Final Flow	22.0	27.0	0.0	0.0	0.0	T OPEN 0808 hr
C. In Shut-in	0.0	0.0	0.0	0.0	0.0	T PULLED 0838 hr
D. Init Flow	0.0	0.0	0.0	0.0	0.0	T OUT 1045 hr
E. Final Flow	0.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	928.0	905.0	0.0	0.0	0.0	
G. Final Hydro	2027.0	2038.0	0.0	0.0	0.0	
Inside/Outside	I	I	O			

TOOL DATA-----

Tool Wt.	6000.00 lbs
Wt Set On Packer	26000.00 lbs
Wt Pulled Loose	90000.00 lbs
Initial Str Wt	63000.00 lbs
Unseated Str Wt	63000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	0.00 ft
D.P. Length	4255.00 ft

RECOVERY

Tot Fluid 25.00 ft of 0.00 ft in DC and 25.00 ft in DP  
25.00 ft of Drilling Mud Trace Oil  
0.00 ft of 2%oil 98%mud  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	48.00 S/L
W.L.	8.90 in3
F.C.	0.00 in
Mud Drop	

BLOW DESCRIPTION

Initial Flow:  
1/2" blow

Initial Shut In:

Final Flow:

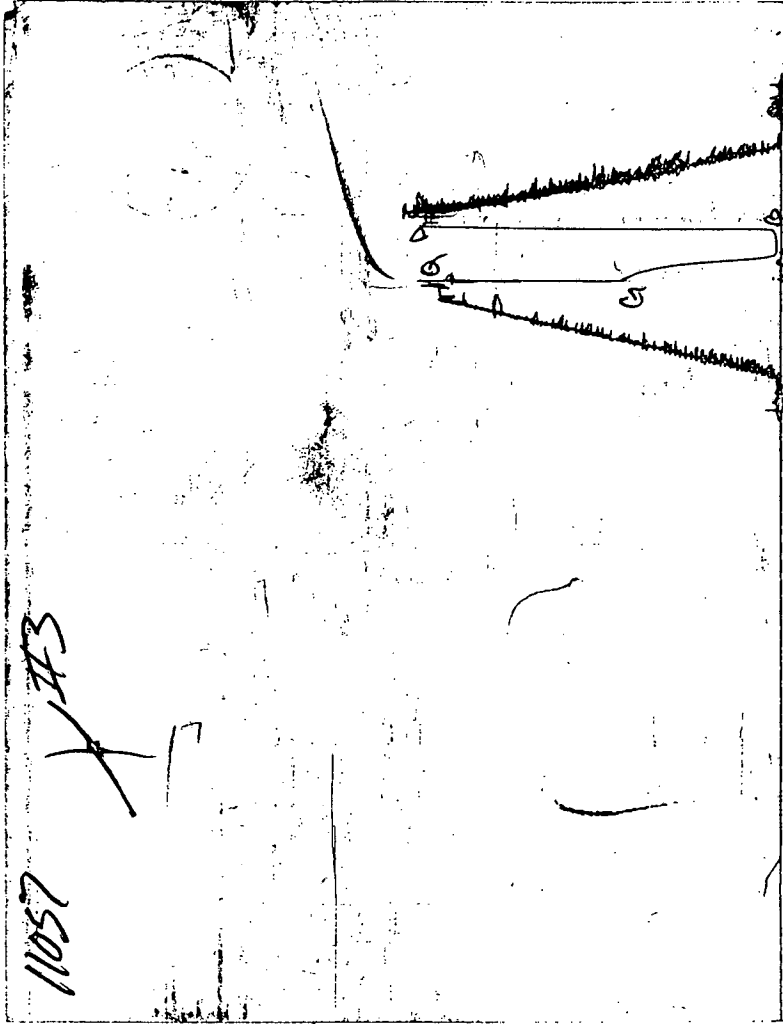
Final Shut In:  
No return

SAMPLES:  
SENT TO:

Amt. of fill	0.00 ft
Btm. H. Temp.	112.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Shane McBride
Co. Rep.	Jeff Christian
Contr.	White & Ellis
Rig #	
Unit #	
Pump T.	

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

15-179-21091-00-00

## Test Ticket

N<sup>o</sup> 9957

Well Name & No. <u>#1 Lawrence Manhattan</u>	Test No. <u>3</u>	Date <u>4-9-97</u>
Company <u>Ritchie Exploration</u>	Zone Tested <u>(H-L)</u>	
Address <u>125 N Market Suite 1000, Wichita, KS 67602</u>	Elevation <u>2892'</u> KB <u>2882'</u> GL	
Co. Rep / Geo. <u>Jeff Christian</u>	Cont. <u>White &amp; Ellis</u>	Est. Ft. of Pay <u>    </u> Por. <u>    </u> %
Location: Sec. <u>27</u> Twp. <u>9</u> Rge. <u>29</u> Co. <u>Shedden</u> State <u>Ks</u>		
No. of Copies <u>Alom. Distribution Sheet (Y, N) N</u>	Turnkey (Y, N) <u>N</u>	Evaluation (Y, N) <u>    </u>

Interval Tested <u>4119' - 4260'</u>	Initial Str Wt./Lbs. <u>63,000</u>	Unseated Str Wt./Lbs. <u>63,000</u>
Anchor Length <u>141'</u>	Wt. Set Lbs. <u>26,000</u>	Wt. Pulled Loose/Lbs. <u>94,000</u>
Top Packer Depth <u>4114'</u>	Tool Weight <u>6,000</u>	
Bottom Packer Depth <u>4119'</u>	Hole Size — 7 7/8" <input checked="" type="checkbox"/>	Rubber Size — 6 3/4" <input checked="" type="checkbox"/>
Total Depth <u>4260'</u>	Wt. Pipe Run <u>    </u>	Drill Collar Run <u>    </u>
Mud Wt. <u>9.2</u> LCM <u>    </u> Vis. <u>48</u> WL <u>8.9</u>	Drill Pipe Size <u>4 1/2 XH</u>	Ft. Run <u>4255'</u>
Blow Description <u>1/2" in blow</u>		

ISI:       
FF:       
FSI: No return

Recovery — Total Feet <u>25'</u>	GIP <u>    </u>	Ft. in DC <u>    </u>	Ft. in DP <u>25'</u>
Rec. <u>25'</u> Feet Of <u>Drily Mud Trace</u>	%gas <u>2</u>	%oil <u>    </u>	%water <u>98</u> %mud <u>    </u>
Rec. <u>    </u> Feet Of <u>    </u>	%gas <u>    </u>	%oil <u>    </u>	%water <u>    </u> %mud <u>    </u>
Rec. <u>    </u> Feet Of <u>    </u>	%gas <u>    </u>	%oil <u>    </u>	%water <u>    </u> %mud <u>    </u>
Rec. <u>    </u> Feet Of <u>    </u>	%gas <u>    </u>	%oil <u>    </u>	%water <u>    </u> %mud <u>    </u>
Rec. <u>112'</u> Feet Of <u>    </u>	%gas <u>    </u>	%oil <u>    </u>	%water <u>    </u> %mud <u>    </u>

BHT      °F Gravity      °API D@      °F Corrected Gravity      °API  
RW      @      °F Chlorides      ppm Recovery Chlorides 500 ppm System

- (A) Initial Hydrostatic Mud 2038 PSI Recorder No. 11057 T-Started 06:15 AM
- (B) First Initial Flow Pressure 33 PSI (depth) 4125' T-Open 08:08 AM
- (C) First Final Flow Pressure 22 PSI Recorder No. 11058 T-Pulled 08:38 AM
- (D) Initial Shut-in Pressure      PSI (depth) 4257' T-Out 10:45 AM
- (E) Second Initial Flow Pressure      PSI Recorder No.
- (F) Second Final Flow Pressure      PSI (depth)
- (G) Final Shut-in Pressure 928 PSI Initial Opening 15 Test X
- (H) Final Hydrostatic Mud 2027 PSI Initial Shut-in      Jars

Final Flow      Safety Joint       
Final Shut-in 15 Straddle       
     Circ. Sub x N/C  
     Sampler       
     Extra Packer       
     Elect. Rec.       
     Other       
TOTAL PRICE \$     

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Approved By Jeff Christian  
Our Representative Shane McBride