15-097-21442 29-28s-19w

Well Name: Unruh A #1
Company: Ritchie Exploration Inc.
Location: 29-28s-19w
Kiowa County Kansas
Date: 8-6-99

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Expl.Inc. DATE 07-31-99
WELL NAME: Unruh A #1 KB 2322.00 ft TICKET NO: 12361 DST #1
LOCATION : 29-28s-19w Kiowa co KS GR 2317.00 ft FORMATION: Lans. F
INTERVAL : 4412.00 To 4440.00 ft TD 4440.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	10248	10248	2342		
SI 45	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF 30	Clock(hrs)	12 hr	12 hr	batt.		
FS 45	Depth(ft)	4437.0	4437.0	4418.0	0.0	0.0

TIME DATA----------
PF Fr. 2101 to 2131 hr
IS Fr. 2131 to 2216 hr
SF Fr. 2216 to 2246 hr
FS Fr. 2246 to 2331 hr

	Field	1	2	3	4
A. Init Hydro	2186.0	2174.0	2208.0	0.0	0.0
B. First Flow	89.0	125.0	66.0	0.0	0.0
B1. Final Flow	428.0	416.0	414.0	0.0	0.0
C. In Shut-in	1445.0	1442.0	1438.0	0.0	0.0
D. Init Flow	451.0	464.0	453.0	0.0	0.0
E. Final Flow	705.0	691.0	695.0	0.0	0.0
F. Fl Shut-in	1436.0	1438.0	1432.0	0.0	0.0
G. Final Hydro	2118.0	2130.0	2105.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 1829 hr
T ON BOTM 2055 hr
T OPEN 2101 hr
T PULLED 2335 hr
T OUT 0310 hr

RECOVERY
Tot Fluid 1380.00 ft of 30.00 ft in DC and 1350.00 ft in DP
0.00 ft of Trace of gas in pipe.
180.00 ft of Muddy water 25% mud 75% water
1200.00 ft of Slight gas cut salt water. 3% gas 97% water
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw .056 ohms @ 89 degrees F.
0.00 ft of EST.FT. of PAY----------7
SALINITY 118000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA----------

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	55000.00 lbs
Initial Str Wt	42000.00 lbs
Unseated Str Wt	48000.00 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	30.00 ft
D.P. Length	4395.00 ft

BLOW DESCRIPTION
Initial Flow:
Strong blow bottom of bucket in 4.5 mins.
Initial Shut-in:
Weak blow. (1/2" - 1 1/2")
Final Flow:
Strong blow bottom of bucket in 4.5 mins.
Final Shut-in:
Weak blow (1/2")

MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	48.00 S/L
W.L.	11.00 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	121.00 F
Hole Condition	Good
% Porosity	24.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	N
Tester	Gary Pevoteaux
Co. Rep.	Jeff Christian
Contr.	Vonfeldt Drlg.
Rig #	1
Unit #	
Pump T.	LCM 1#/bl

SAMPLES: none
SENT TO:Caraway/Liberal

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

ELL NAME: Unruh A #1

OCATION : 29-28s-19w Kiowa co KS

CKET No. 12361 D.S.T. No. 1 DATE 07-31-99

OTAL TOOL TO BOTTOM OF TOP PACKERS 20

NTERVAL TOOL .....

OTTOM PACKERS AND ANCHOR 28

OTAL TOOL 48

RILL COLLAR ANCHOR IN INTERVAL .....

.C. ANCHOR STND.Stands Single Total

.P. ANCHOR STND.Stands Single Total

OTAL ASSEMBLY 48

.C. ABOVE TOOLS.Stands Single 1 Total 30

.P. ABOVE TOOLS.Stands70 Single 1 Total 4395

OTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4473

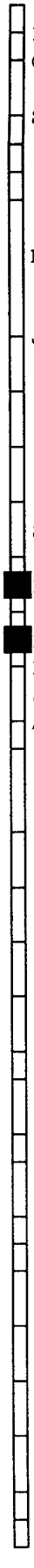
OTAL DEPTH 4440

OTAL DRILL PIPE ABOVE K.B. 33

EMARKS:
omments:

FLUID SAMPLER DATA (not run)

AS---------- cubic ft
IL---------- ML.
UD---------- ML.
ATER---------- ML.
THER----------
RESSURE---------- PSI
w ---------- ohms @ deg. F.
HLORIDES---------- ppm.
RAVITY---------- deg.API



P.O. SUB
C.O. SUB @ top of tool 4392
S.I. TOOL Sterling 4398
HMV Sterling 4403
JARS none
SAFETY JOINT none
PACKER Top 4407
PACKER Btm. 4412
DEPTH 4412
STUBB 1 ft. 4413
ANCHOR
perfs
Alpine rec. @ 4418
T.C.
DEPTH
22' perfs to 4435
AK-1 rec. @ 4437
BULLNOSE 5 ft. perforated 4440
T.D.

TEST HISTORY

12361 DST#1 UNRUH A #1 RITCHIE EXPL.INC.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2207.88
B:	0.00	65.79
C:	29.00	413.92
D:	45.00	1437.93
E:	0.00	453.29
F:	29.50	695.00
G:	57.50	1431.72
Q:	0.00	2105.32

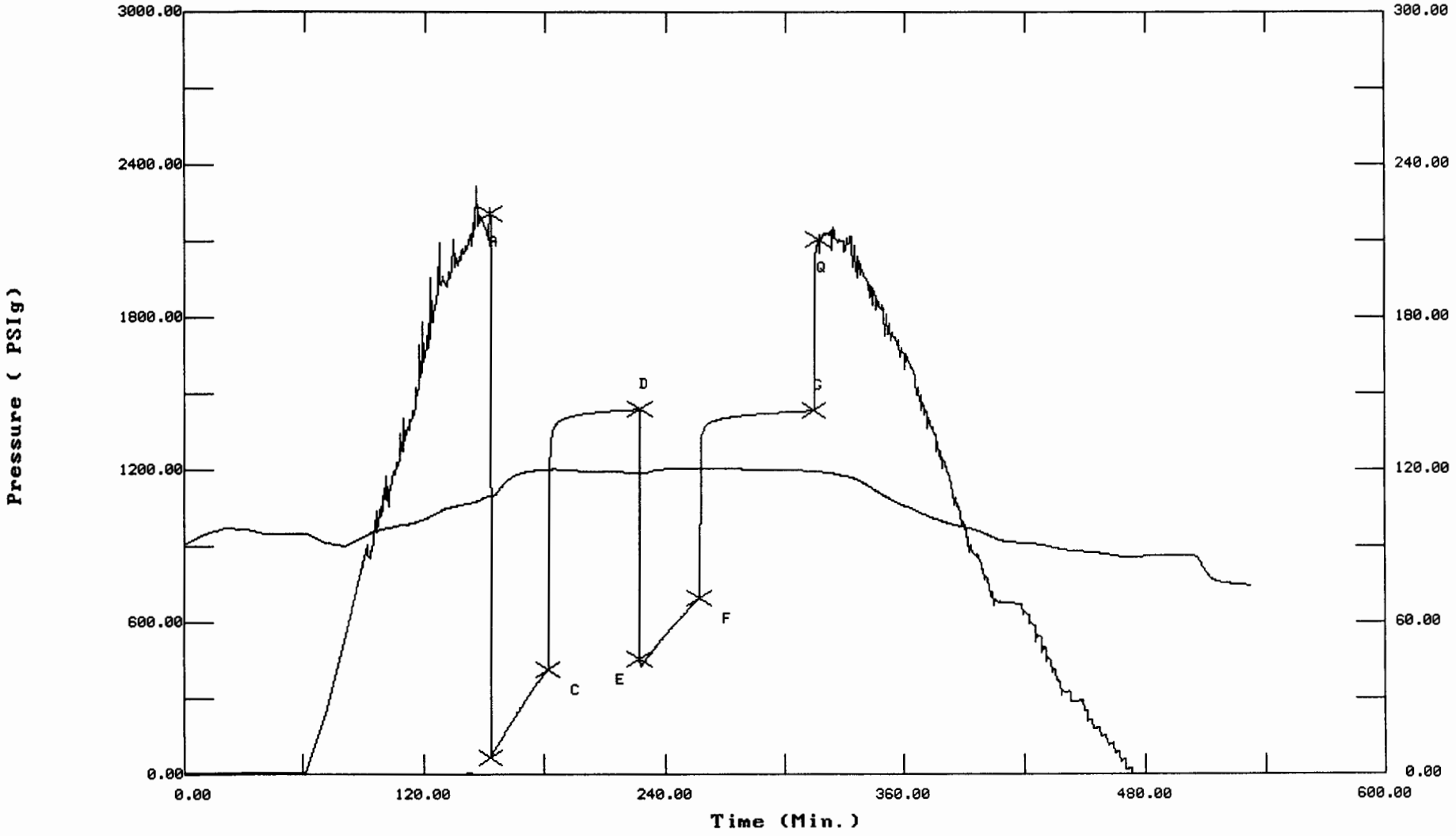
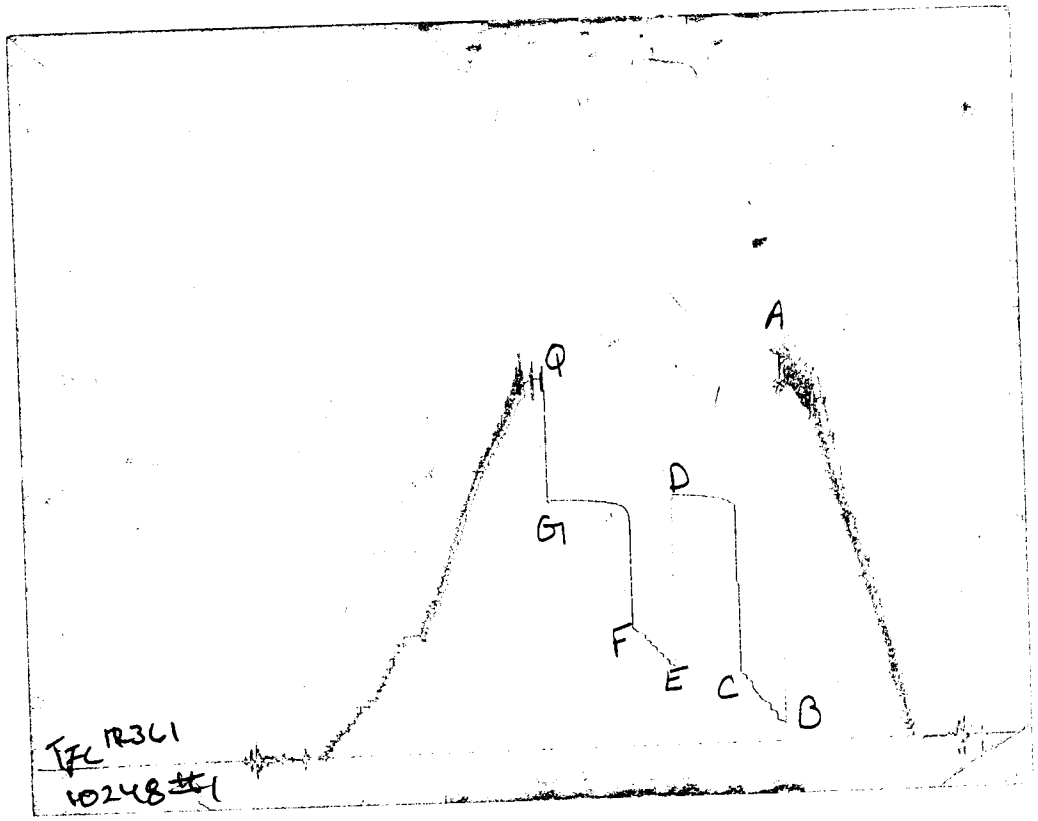


CHART PAGE



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

Well Name Unruh A-1		
Recorder #	10848	DST # 1
A	1.972	2174
B	.110	125
C	.367	416
D	1.304	1442
E	.412	464
F	.618	691
H	1.300	1438
Q	1.936	2130

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 № 12361

Test Ticket

Well Name & No. Unruh A #1 Test No. 1 Date 7-31-99

Company Ritchie Expl. Inc. Zone Tested Lans. "F"

Address P.O. Box 783188, Wichita Ks. 67278 Elevation 2322 KB 2317 GL

Co. Rep / Geo. Jeff Christian Cont. Vonfeldt Drlg. #1 Est. Ft. of Pay 7 Por. ____ %

Location: Sec. 29 Twp. 28 S Rge. 19 W Co. Kiowa State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) — Evaluation (Y, N) —

Interval Tested 4412 - 4440' Initial Str Wt./Lbs. 42,000 Unseated Str Wt./Lbs. 48,000

Anchor Length 28' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 55,000

Top Packer Depth 4407' Tool Weight 2100 II

Bottom Packer Depth 4412' Hole Size — 7 7/8" L Rubber Size — 6 3/4" L

Total Depth 4440' Wt. Pipe Run NONE Drill Collar Run 30'

Mud Wt. 9.3 LCM 1# Vis. 48 WL 11.0cc. Drill Pipe Size 4½" X.H. Ft. Run 4395'

Blow Description IF: Strong blow. Btm of bucket in 4.5 mins.
ISI: Weak blow. Died (½ - 1½")
FF: Strong blow. Btm. of bucket in 4.5 mins.
FSI: Weak blow. (½")

Recovery — Total Feet 1,380' GIP Trace Ft. in DC 30 Ft. in DP 1350'

Rec. 180	Feet Of M.W.	%gas	%oil	75	%water	25	%mud
Rec. 1200	Feet Of S.G.C. Salt Water	3 %gas	%oil	97	%water		%mud
Rec.	Feet Of	%gas	%oil		%water		%mud
Rec.	Feet Of	%gas	%oil		%water		%mud
Rec.	Feet Of	%gas	%oil		%water		%mud

BHT 121 °F Gravity N/A °API D@ — °F Corrected Gravity N/A °API

RW .056 @ 84 °F Chlorides 118,000 ppm Recovery Chlorides 6,000 ppm System

	AK-1	Alpine				
(A) Initial Hydrostatic Mud	2186	2208	PSI	Recorder No. 2342	T-On Location	1140
(B) First Initial Flow Pressure	84	66	PSI	(depth) 4418'	T-Started	1827
(C) First Final Flow Pressure	426	414	PSI	Recorder No. 10248	T-Open	2101
(D) Initial Shut-In Pressure	1445	1438	PSI	(depth) 4437'	T-Pulled	2335
(E) Second Initial Flow Pressure	451	453	PSI	Recorder No. —	T-Out	0310
(F) Second Final Flow Pressure	705	695	PSI	(depth) —	T-Off Location	0355
(G) Final Shut-in Pressure	1436	1432	PSI	Initial Opening 30	Test	L 700
(Q) Final Hydrostatic Mud	2116	2105	PSI	Initial Shut-in 45	Jars	
				Final Flow 30	Safety Joint	
				Final Shut-in 45	Straddle	
					Circ. Sub	
					Sampler	
					Extra Packer	
					Elec. Rec.	L 150
					Mileage	
					Other	
					TOTAL PRICE $	L 850

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 Tony Pawelek

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Expl.Inc. DATE 08-03-99
WELL NAME: Unruh A #1 KB 2322.00 ft TICKET NO: 12362 DST #2
LOCATION : 29-28s-19w Kiowa co Ks GR 2317.00 ft FORMATION: Miss.
INTERVAL : 4940.00 To 4962.00 ft TD 4962.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 35	Rec.	10248	10248	2342		
SI 30	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF 30	Clock(hrs)	12 hr	12 hr	batt.		
FS 45	Depth(ft)	4959.0	4959.0	4946.0	0.0	0.0

TIME DATA----------
PF Fr. 0345 to 0420 hr
IS Fr. 0420 to 0450 hr
SF Fr. 0450 to 0520 hr
FS Fr. 0520 to 0605 hr

	Field	1	2	3	4
A. Init Hydro	2459.0	2453.0	2440.0	0.0	0.0
B. First Flow	28.0	44.0	19.0	0.0	0.0
B1. Final Flow	41.0	51.0	38.0	0.0	0.0
C. In Shut-in	1104.0	1096.0	1097.0	0.0	0.0
D. Init Flow	41.0	53.0	32.0	0.0	0.0
E. Final Flow	48.0	53.0	44.0	0.0	0.0
F. Fl Shut-in	1327.0	1310.0	1314.0	0.0	0.0
G. Final Hydro	2426.0	2448.0	2431.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 0018 hr
T ON BOTM 0341 hr
T OPEN 0345 hr
T PULLED 0607 hr
T OUT 0859 hr

RECOVERY
Tot Fluid 65.00 ft of 65.00 ft in DC and 0.00 ft in DP
235.00 ft of Gas in pipe.
65.00 ft of Gassy oil cut mud 10% gas 8% oil 82% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw ohms @ degrees F.
0.00 ft of EST.FT. of PAY----------11
SALINITY 5000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA----------

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	55000.00 lbs
Initial Str Wt	44000.00 lbs
Unseated Str Wt	44000.00 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	30.00 ft
D.P. Length	4923.00 ft

MUD DATA----------

Mud Type	Chemical
Weight	9.40 lb/cf
Vis.	48.00 S/L
W.L.	11.20 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	121.00 F
Hole Condition	Good
% Porosity	12.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	N
Tester	Gary Pevoteaux
Co. Rep.	Jeff Christian
Contr.	Vonfeldt Drlg.
Rig #	1
Unit #	
Pump T.	LCM 2#/bl

BLOW DESCRIPTION
Initial Flow:
Weak blow 1/2" - 1"
Initial Shut-in:
No blow
Final Flow:
Weak to fair blow slow increase to 5"
Final Shut-in:
No blow

SAMPLES: none
SENT TO:Caraway/Liberal

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

LL NAME: Unruh A #1

CATION : 29-28s-19w Kiowa co Ks

CKET No. 12362 D.S.T. No. 2 DATE 08-03-99

TAL TOOL TO BOTTOM OF TOP PACKERS 20

TERVAL TOOL .....

TTOM PACKERS AND ANCHOR 22

TAL TOOL 42

ILL COLLAR ANCHOR IN INTERVAL .....

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single Total

TAL ASSEMBLY 42

C. ABOVE TOOLS.Stands Single 1 Total 30

P. ABOVE TOOLS.Stands79 Single Total 4923

TAL DRILL COLLARS DRILL PIPE & TOOLS .. 4995

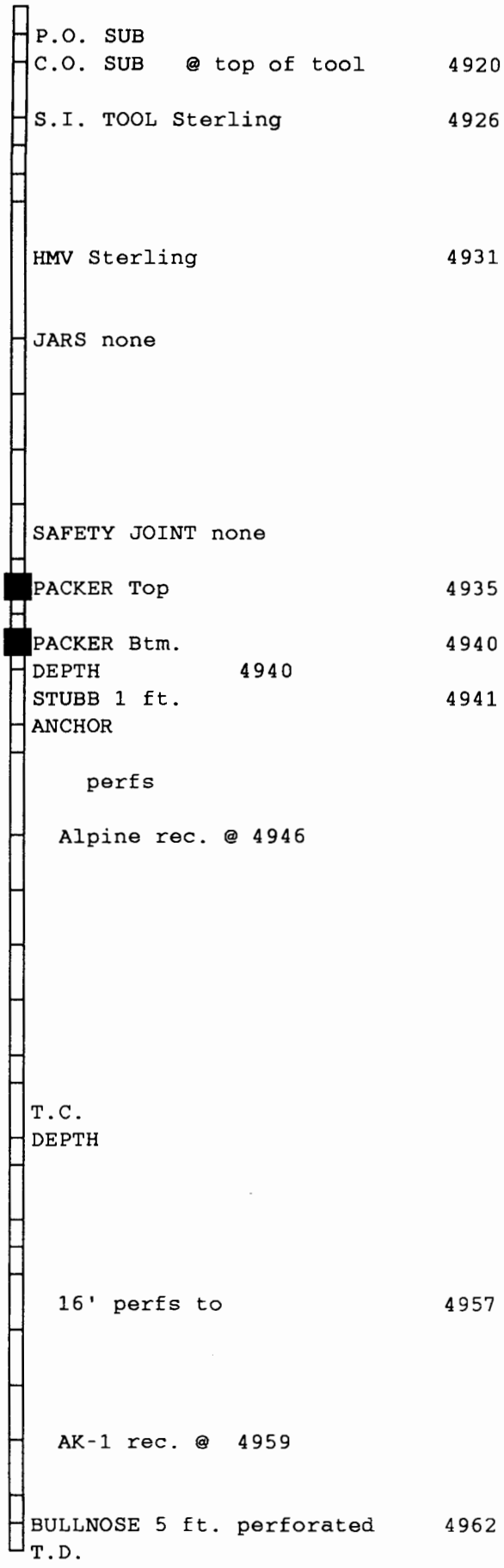
TAL DEPTH 4962

TAL DRILL PIPE ABOVE K.B. 33

MARKS:
mments:

FLUID SAMPLER DATA (not run)

S---------- cubic ft
L---------- ML.
D---------- ML.
TER---------- ML.
HER----------
ESSURE---------- PSI
---------- ohms @ deg. F.
LORIDES---------- ppm.
AVITY---------- deg.API



TEST HISTORY

12362 DST#2 UNRUH A #1 RITCHIE EXPL.INC.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2439.86
B:	0.00	18.96
C:	35.50	38.43
D:	30.50	1096.84
E:	0.00	31.97
F:	28.50	44.39
G:	45.50	1314.22
Q:	0.00	2431.46

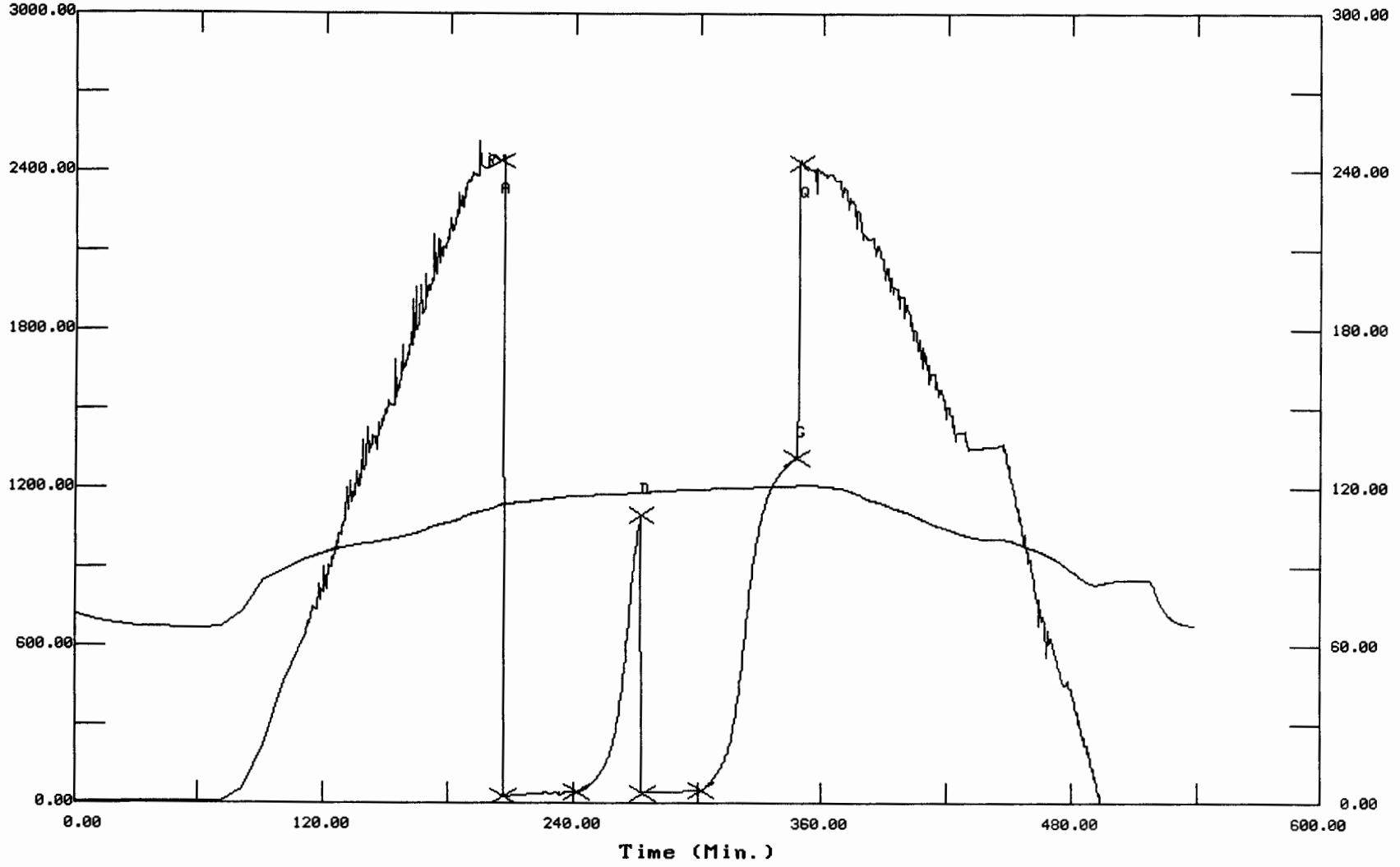
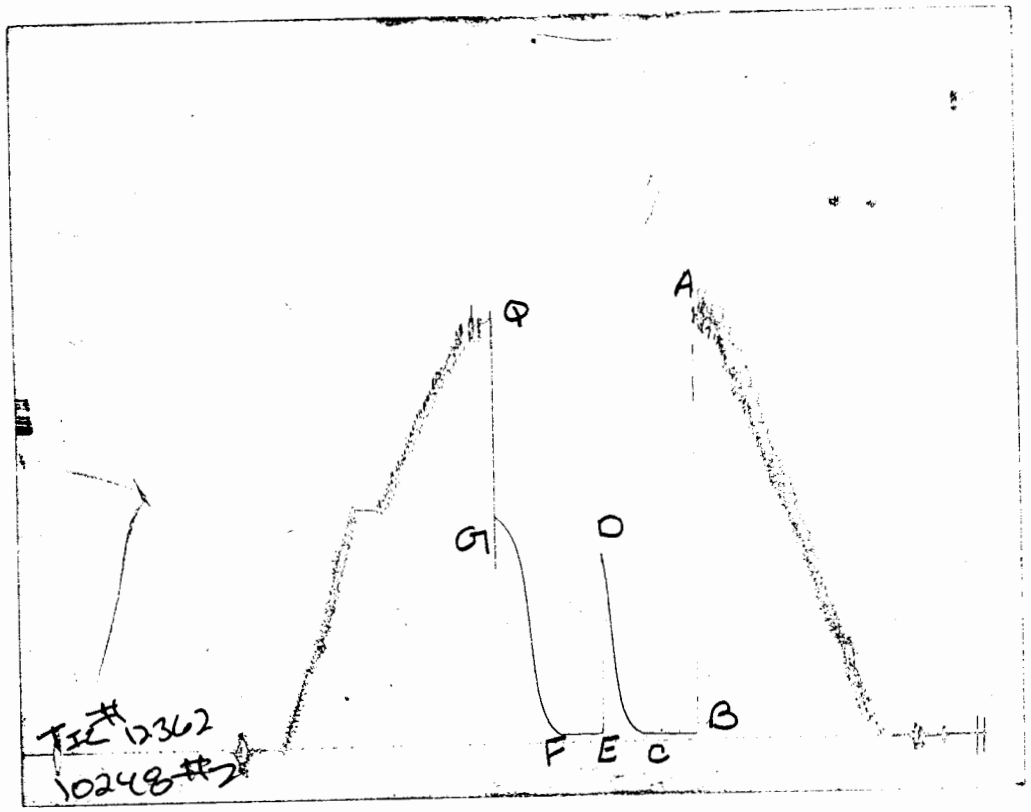


CHART PAGE



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

Well Name Unruh A-1		
Recorder #	10248	DST # 2
A	2225	2453
B	.039	44
C	.045	51
D	.987	1096
E	.047	53
F	.047	53
H	1.183	1310
Q	2.200	2448

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 No. 12362

Test Ticket

Well Name & No. Unruh A #1 Test No. 2 Date 8-3-99

Company Ritchie Exploration Inc. Zone Tested Miss.

Address P.O. Box 783188, Wichita Ks. 67278 Elevation 2322 KB 2317 GL

Co. Rep / Geo. Jeff Christian Cont. Vonfeldt Drlg. #1 Est. Ft. of Pay 11 Por. ____ %

Location: Sec. 29 Twp. 28S Rge. 19W Co. Kiowa State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) — Evaluation (Y, N) —

Interval Tested 4940 - 4962' Initial Str Wt./Lbs. 44,000 Unseated Str Wt./Lbs. 44,000

Anchor Length 22' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 55,000

Top Packer Depth 4935' Tool Weight 1,100 #

Bottom Packer Depth 4940' Hole Size — 7 7/8" C Rubber Size — 6 3/4" C

Total Depth 4962' Wt. Pipe Run NONE Drill Collar Run 30'

Mud Wt. 9.4 LCM 2# Vis. 48 WL 11.2 cc. Drill Pipe Size 4½" X.H. Ft. Run 4923'

Blow Description I.F: Weak blow. 1/2 - 1" I.S.I: No blow.
F.F: Weak to fair blow. Blow increase to 5".
F.S.I: No blow.

Recovery — Total Feet 65 GIP 235 Ft. in DC 30 Ft. in DP 35

Rec. 65 Feet Of S.O. & G.C.M. 10 %gas 8 %oil 82 %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 121 °F Gravity N/A °API D@ — °F Corrected Gravity N/A °API

RW N.C @ — °F Chlorides 5,000 ppm Recovery Chlorides 5,000 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	2459	2440	PSI	Recorder No.	2342	T-On Location	2315
(B) First Initial Flow Pressure	28	19	PSI	(depth)	4946'	T-Started	0018
(C) First Final Flow Pressure	41	36	PSI	Recorder No.	10248	T-Open	0345
(D) Initial Shut-In Pressure	1104	1097	PSI	(depth)	4959'	T-Pulled	0607
(E) Second Initial Flow Pressure	41	32	PSI	Recorder No.	—	T-Out	0859
(F) Second Final Flow Pressure	48	44	PSI	(depth)	—	T-Off Location	0940
(G) Final Shut-in Pressure	1327	1314	PSI	Initial Opening	35	Test	✓ 700
(Q) Final Hydrostatic Mud	2426	2431	PSI	Initial Shut-in	30	Jars	
				Final Flow	30	Safety Joint	
				Final Shut-in	45	Straddle	
						Circ. Sub	
						Sampler	
						Extra Packer	
						Elec. Rec.	✓ 150
						Mileage	
						Other	
						TOTAL PRICE $	✓ 850.00

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 Jeff Christian

Our Representative Tony Mourning

TRILOBITE TESTING L.L.C.

OPERATOR : Ritchie Expl.Inc. DATE 08-03-99
WELL NAME: Unruh A #1 KB 2322.00 ft TICKET NO: 12363 DST #3
LOCATION : 29-28s-19w Kiowa co KS GR 2317.00 ft FORMATION: Miss.
INTERVAL : 4962.00 To 4975.00 ft TD 4975.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins			Field	1	2	3	4
PF	30	Rec.	10248	10248	2342		
SI	45	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF	30	Clock(hrs)	12 hr	12 hr	batt.		
FS	45	Depth(ft)	4972.0	4972.0	4968.0	0.0	0.0

TIME DATA----------
PF Fr. 2105 to 2135 hr
IS Fr. 2135 to 2220 hr
SF Fr. 2220 to 2250 hr
FS Fr. 2250 to 2335 hr

	Field	1	2	3	4
A. Init Hydro	2464.0	2439.0	2488.0	0.0	0.0
B. First Flow	373.0	392.0	330.0	0.0	0.0
B1. Final Flow	892.0	863.0	890.0	0.0	0.0
C. In Shut-in	1519.0	1520.0	1521.0	0.0	0.0
D. Init Flow	1030.0	1029.0	1030.0	0.0	0.0
E. Final Flow	1436.0	1407.0	1423.0	0.0	0.0
F. Fl Shut-in	1524.0	1533.0	1534.0	0.0	0.0
G. Final Hydro	2400.0	2426.0	2411.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 1849 hr
T ON BOTM 2100 hr
T OPEN 2105 hr
T PULLED 2337 hr
T OUT 0355 hr

RECOVERY
Tot Fluid 3030.00 ft of 30.00 ft in DC and 3000.00 ft in DP
250.00 ft of Gas in pipe.
120.00 ft of Gas & oil cut muddy water
0.00 ft of 8% gas 8% oil 44% water 40% mud
180.00 ft of Gas & oil cut muddy water
0.00 ft of 8% gas 2% oil 70% water 20% mud
2730.00 ft of Gassy salt water a few oil specs.
0.00 ft of Rw .066 ohms @ 84 degrees F.
0.00 ft of EST.FT. of PAY----------13
SALINITY 97000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA----------

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	85000.00 lbs
Initial Str Wt	46000.00 lbs
Unseated Str Wt	62000.00 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	30.00 ft
D.P. Length	4923.00 ft

BLOW DESCRIPTION
IF:Strong blow. Btm. of bucket in 1.5 mins.

ISI:Strong blow. Btm. of bucket in 7 mins.

FF:Strong blow. Btm. of bucket in 1.5 mins.

FSI:Weak blow. (1/2 - 2")

SAMPLES: none
SENT TO:Caraway/Liberal

MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	49.00 S/L
W.L.	11.20 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	3.00 ft
Btm. H. Temp.	130.00 F
Hole Condition	Good
% Porosity	25.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	Y 3.00 ft
Tester	Gary Pevoteaux
Co. Rep.	Jeff Christian
Contr.	Vonfeldt Drlg.
Rig #	1
Unit #	
Pump T.	LCM 1#/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

ELL NAME: Unruh A #1

OCATION : 29-28s-19w Kiowa co KS

CKET No. 12363 D.S.T. No. 3 DATE 08-03-99

OTAL TOOL TO BOTTOM OF TOP PACKERS 20

JTERVAL TOOL .....

OTTOM PACKERS AND ANCHOR 13

OTAL TOOL 33

ILL COLLAR ANCHOR IN INTERVAL .....

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single Total

OTAL ASSEMBLY 33

C. ABOVE TOOLS.Stands Single 1 Total 30

P. ABOVE TOOLS.Stands79 Single Total 4923

OTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4986

OTAL DEPTH 4975

OTAL DRILL PIPE ABOVE K.B. 11

MARKS:
mments:Slid tool 3 ft. to btm.

FLUID SAMPLER DATA (not run)

S---------- cubic ft
L---------- ML.
D---------- ML.
TER---------- ML.
HER----------
ESSURE---------- PSI
 ---------- ohms @ deg. F.
LORIDES---------- ppm.
AVITY---------- deg.API

P.O. SUB
C.O. SUB @ top of tool 4942
S.I. TOOL Sterling 4948
HMV Sterling 4953
JARS none
SAFETY JOINT none
PACKER Top 4957
PACKER Btm. 4962
DEPTH 4962
STUBB 1 ft. 4963
ANCHOR
perfs
Alpine rec. @ 4968
T.C.
DEPTH
7' perfs to 4970
AK-1 rec. @ 4972
BULLNOSE 5 ft. perforated 4975
T.D.

TEST HISTORY

12363 DST#3 UNRUH A #1 RITCHIE EXPL.INC.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2487.61
B:	0.00	330.16
C:	29.50	890.38
D:	45.00	1521.27
E:	0.00	1029.95
F:	29.00	1422.90
G:	49.00	1533.86
Q:	0.00	2411.32

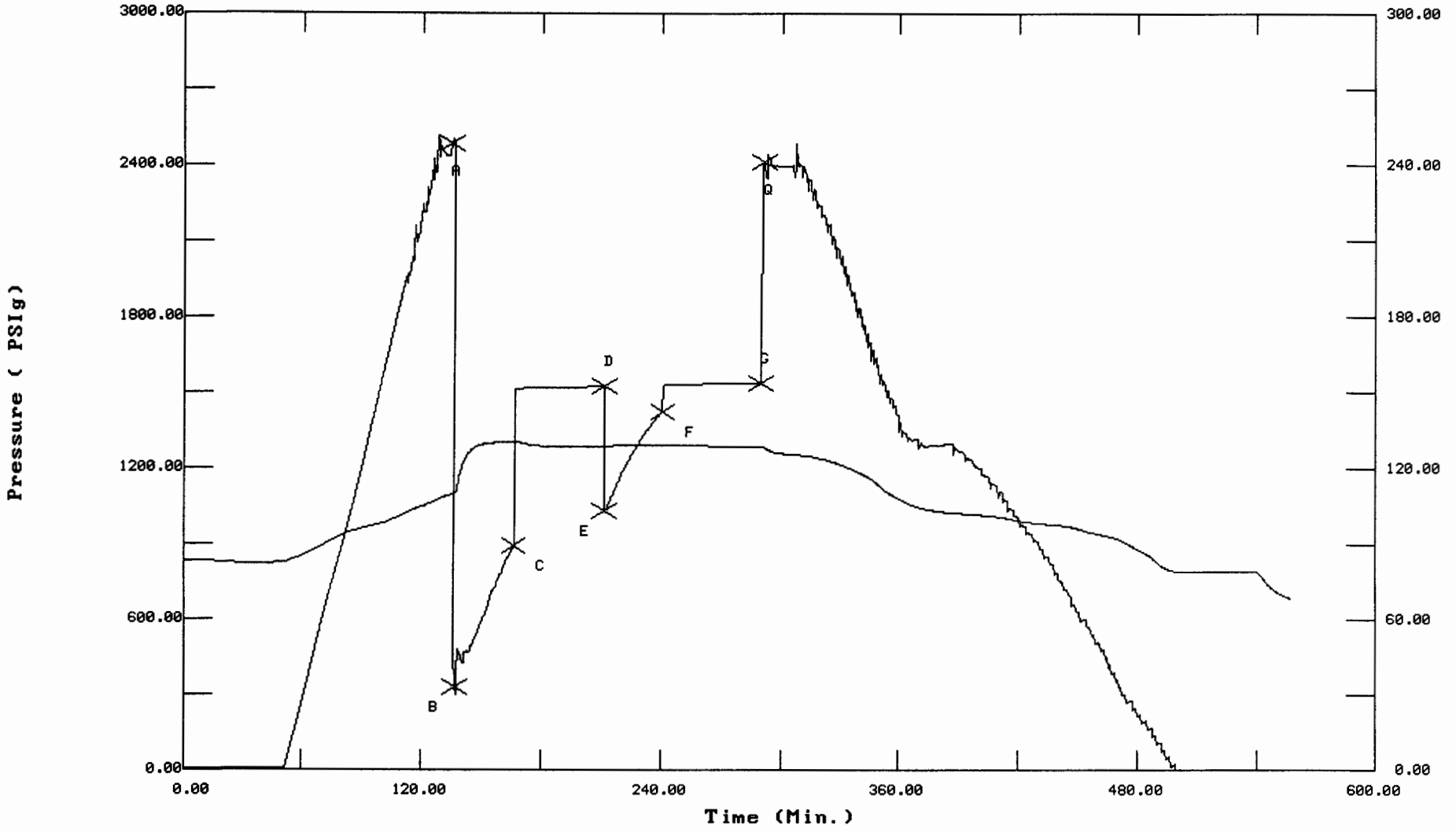
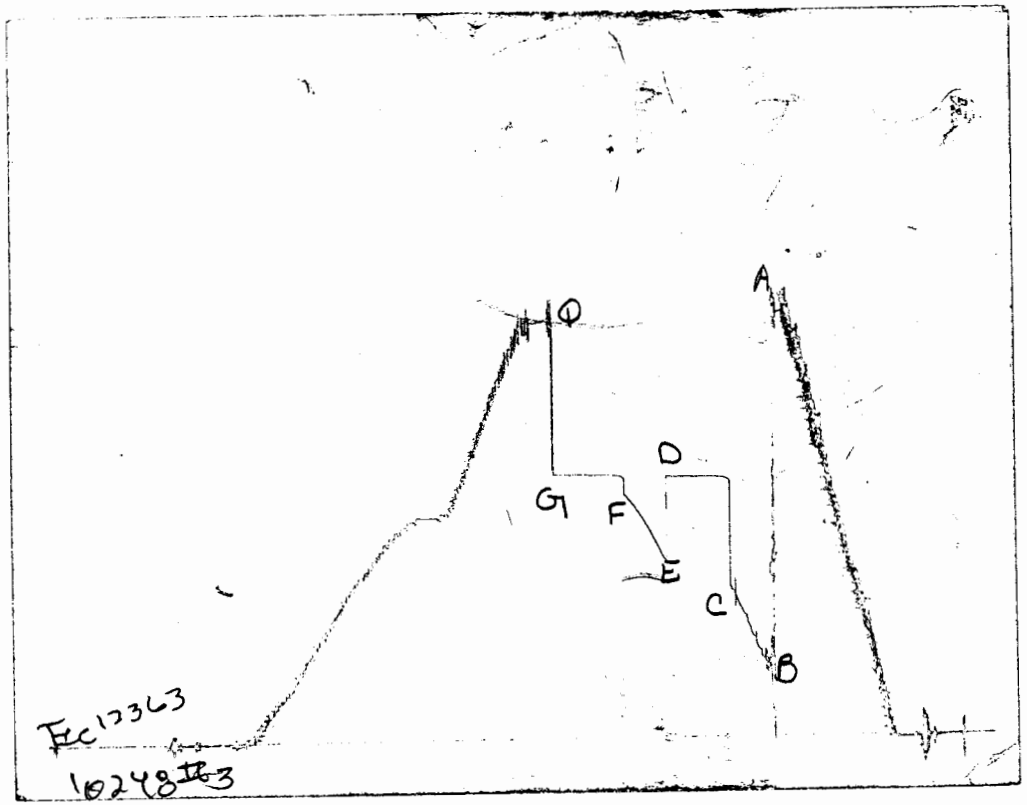


CHART PAGE



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

Well Name Unruh #1		
Recorder #	10248	DST # 3
A	2.212	2439
B	.348	392
C	.774	863
D	1.375	1520
E	.926	1029
F	1.272	1407
H	1.387	1533
Q	2.200	2426

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 Nº 12363

Test Ticket

Well Name & No. Unruh A #1 Test No. 3 Date 8-3-99

Company Ritchie Expl. Inc. Zone Tested Miss.

Address P.O. Box 783188, Wichita Ks. 67278 Elevation 2322 KB 2317 GL

Co. Rep / Geo. Jeff Christian Cont. Vonfeldt Drlg. #1 Est. Ft. of Pay 13 Por. ____ %

Location: Sec. 29 Twp. 28S Rge. 19W Co. Kiowa State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 4962 - 4975'

Anchor Length 13'

Top Packer Depth 4957'

Bottom Packer Depth 4962'

Total Depth 4975'

Mud Wt. 9.3 LCM 1# Vis. 49 WL 11.2cc

Initial Str Wt./Lbs. 46,000 Unseated Str Wt./Lbs. 62,000

Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 85,000

Tool Weight 2,100#

Hole Size — 7 7/8" L Rubber Size — 6 3/4" L

Wt. Pipe Run Non Drill Collar Run 30'

Drill Pipe Size 4½" X.H Ft. Run 4923'

Blow Description Strong blow. Btm of bucket in 1.5 mins.

ISI: Strong blow. Btm of bucket in 7 mins.

FF: Strong blow. Btm of bucket in 1.5 mins.

FSI: Weak blow. (½ - ¾") Comment: Dist tool 2-3' to btm

Recovery — Total Feet 3030' GIP 250' Ft. in DC 30 Ft. in DP 3000

Rec.	120	Feet Of	G&OC, MW	5 %gas	%oil	44 %water	40 %mud	
Rec.	180	Feet Of	G&OC, MW	8 %gas	2 %oil	70 %water	20 %mud	
Rec.	2730	Feet Of	Cassy salt water(s)	%gas	%oil	%water	%mud	
Rec.		Feet Of	a few oil specs.	5 %gas	%oil	95 %water	%mud	
Rec.		Feet Of		%gas	%oil	%water	%mud	

BHT 130 °F Gravity N/A °API D@ ~ °F Corrected Gravity N/A °API

RW .066 @ 84 °F Chlorides 97,000 ppm Recovery Chlorides 5,000 ppm System

	AK-1	Alpine				
(A) Initial Hydrostatic Mud	2464	2488	PSI	Recorder No.	3413	T-On Location 1615
(B) First Initial Flow Pressure	373	330	PSI	(depth)	4968'	T-Started 1849
(C) First Final Flow Pressure	892	890	PSI	Recorder No.	10248	T-Open 2105
(D) Initial Shut-In Pressure	1519	1521	PSI	(depth)	4972'	T-Pulled 2337
(E) Second Initial Flow Pressure	1030	1030	PSI	Recorder No.	~	T-Out 0355
(F) Second Final Flow Pressure	1436	1423	PSI	(depth)	~	T-Off Location 0455
(G) Final Shut-in Pressure	1524	1534	PSI	Initial Opening	30	Test L 700
(Q) Final Hydrostatic Mud	2400	2411	PSI	Initial Shut-in	45	Jars ____
				Final Flow	30	Safety Joint ____
				Final Shut-in	45	Straddle ____
						Circ. Sub ____
						Sampler ____
						Extra Packer ____
						Elec. Rec. L 150
						Mileage ____
						Other ____
						TOTAL PRICE $ L 850.00

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Approved By Jeff Christian

Our Representative Tony Montary