

15-101-21783

TRILOBITE TESTING L.L.C.

15-19s-29w

OPERATOR : Larson Engineering Inc.
WELL NAME: Clark #1-15
LOCATION : 15-19S-29W Lane co KS
INTERVAL : 4450.00 To 4464.00 ft

DATE 11-14-00

KB 2833.00 ft TICKET NO: 12732 DST #1
GR 2828.00 ft FORMATION: Altamont
TD 4649.00 ft TEST TYPE: CONV STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec. 3246		13339			PF Fr. 2016 to 2046 hr
SI 45	Range(Psi) 4995.0	0.0	4025.0	0.0	0.0	IS Fr. 2046 to 2131 hr
SF 45	Clock(hrs) ALP		12 HR			SF Fr. 2131 to 2216 hr
FS 60	Depth(ft) 4452.0	0.0	4470.0	0.0	0.0	FS Fr. 2216 to 2316 hr

	Field	1	2	3	4	
A. Init Hydro	2254.0	0.0	2243.0	0.0	0.0	T STARTED 1830 hr
B. First Flow	14.0	0.0	0.0	0.0	0.0	T ON BOTM 2014 hr
B1. Final Flow	63.0	0.0	0.0	0.0	0.0	T OPEN 2016 hr
C. In Shut-in	599.0	0.0	0.0	0.0	0.0	T PULLED 2316 hr
D. Init Flow	87.0	0.0	0.0	0.0	0.0	T OUT 0215 hr
E. Final Flow	113.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	579.0	0.0	0.0	0.0	0.0	
G. Final Hydro	2238.0	0.0	2238.0	0.0	0.0	
Inside/Outside	I		S			

TOOL DATA-----

Tool Wt.	3000.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	60000.00 lbs
Initial Str Wt	50000.00 lbs
Unseated Str Wt	50000.00 lbs
Bot Choke	0.75 in
Hole Size	8.88 in
D Col. ID	0.00 in
D. Pipe ID	3.80 in
D.C. Length	0.00 ft
D.P. Length	4177.00 ft
H.W. I.D	2.80 in
H.W. Length	284.00 ft

RECOVERY

Tot Fluid 215.00 ft of 0.00 ft in DC and 215.00 ft in DP
5.00 ft of Free Oil
60.00 ft of Muddy water
0.00 ft of 60% water 40% mud
150.00 ft of Water
0.00 ft of 100% water
0.00 ft of
0.00 ft of
0.00 ft of RW .18 @ 60 deg =
SALINITY 50000.00 P.P.M. A.P.I. Gravity 34.00

MUD DATA-----

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

BLOW DESCRIPTION

Initial Flow:
Weak surface blow built to 1"
Initial shut-In:
No blow
Final flow:
Weak surface blow built to 1"
Final Shut-In:
No blow.

Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	3
Cushion Amt.	0.00
Cushion Type	
Reversed Out N	
Tool Chased N	
Tester	Rod Steinbrink
Co. Rep.	Steve Davis
Contr.	Shields
Rig #	1
Unit #	
Pump T.	

SAMPLES:
SENT TO:

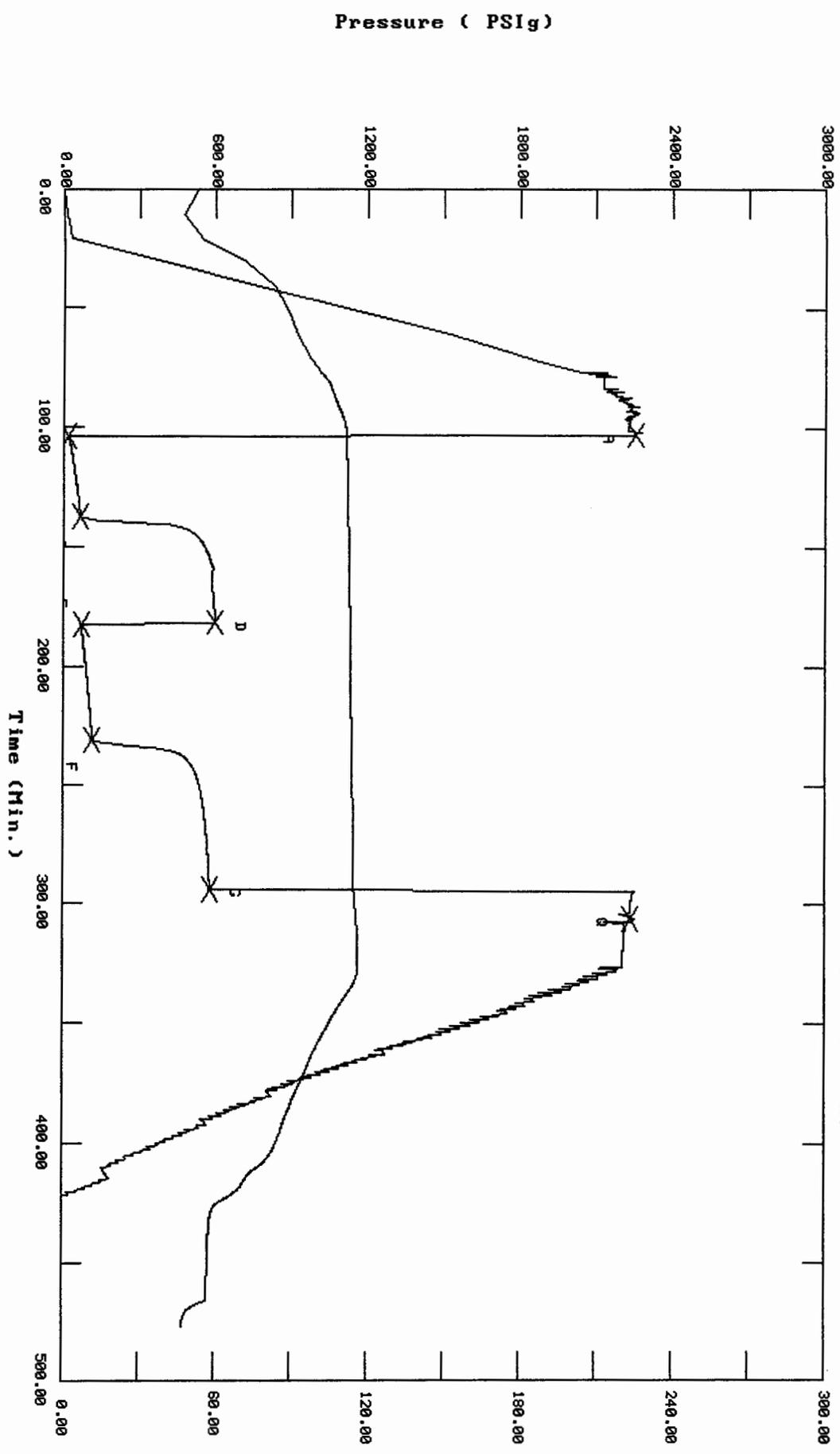
Test Successful: Y

12732 DST #1 Clark #1-15 Larson Engineering Inc.

TEST HISTORY

Flag Points

	t(Min.)	Pk PSig)
A:	0.00	2254.37
B:	0.00	14.18
C:	33.75	63.69
D:	44.25	599.44
E:	0.00	67.18
F:	48.75	113.60
G:	62.75	579.21
Q:	0.00	2238.79

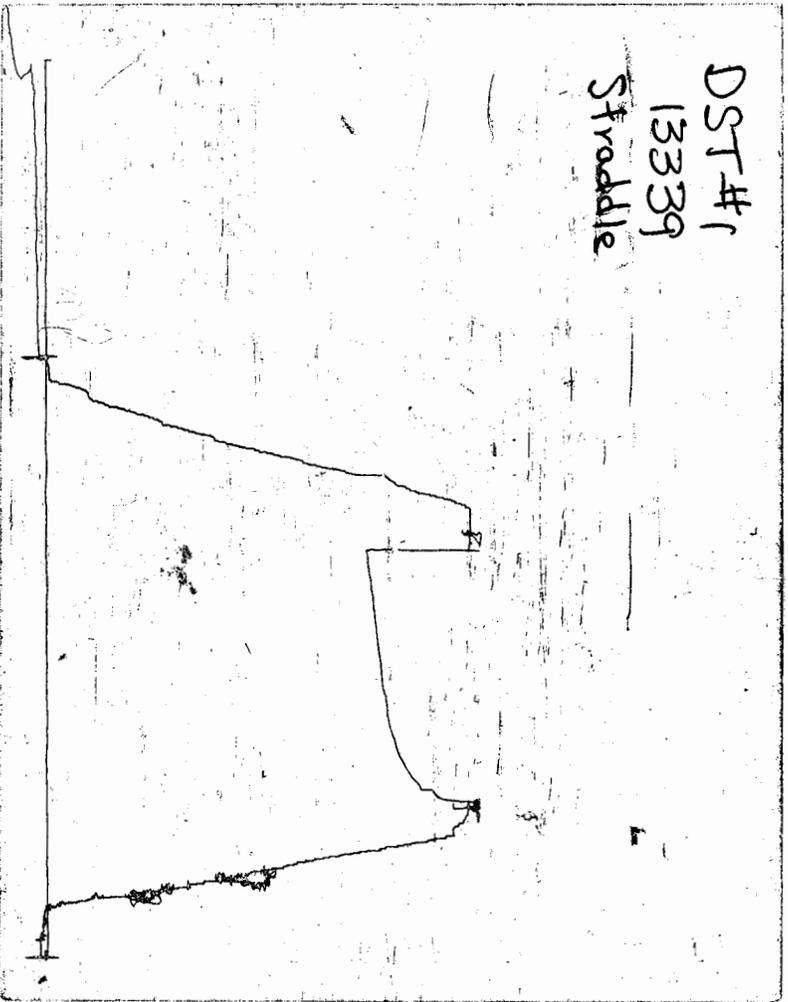


Temperature (DEG F)

Pressure (PSig)

Time (Min.)

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

Test Ticket

N^o 12732

Well Name & No. <u>Clark #1-15</u>	Test No. <u>1</u>	Date <u>11-14-00</u>
Company <u>Larson Engineering Inc.</u>	Zone Tested <u>Altamont</u>	
Address <u>562 W Hwy 4 Olmitz, KS. 67654-8561</u>	Elevation <u>2833</u> KB <u>2828</u> GL	
Co. Rep / Geo. <u>Steve Davis</u>	Cont. <u>Shields</u>	Est. Ft. of Pay <u> </u> Por. <u> </u> %
Location: Sec. <u>15</u> Twp. <u>19^s</u>	Rge. <u>29^w</u>	Co. <u>Lane</u> State <u>KS.</u>
No. of Copies <u> </u>	Distribution Sheet (Y, N) <u> </u>	Turnkey (Y, N) <u> </u> Evaluation (Y, N) <u> </u>

Interval Tested <u>4450 - 4464</u>	Initial Str Wt./Lbs. <u>50,000</u>	Unseated Str Wt./Lbs. <u>50,000</u>
Anchor Length <u>14'</u>	Wt. Set Lbs. <u>30,000</u>	Wt. Pulled Loose/Lbs. <u>60,000</u>
Top Packer Depth <u>4445 - 4450</u>	Tool Weight <u>3,000</u>	
Bottom Packer Depth <u>4464</u>	Hole Size — 7 7/8" <u> </u>	Rubber Size — 6 3/4" <u> </u>
Total Depth <u>(LTD) 4649</u>	Wt. Pipe Run <u>284' (4.1)</u>	Drill Collar Run <u> </u>
Mud Wt. <u> </u> LCM <u> </u> Vis. <u> </u> WL <u> </u>	Drill Pipe Size <u>4 1/2" FH</u>	Ft. Run <u>4177' (61)</u>
Blow Description <u>IF: Weak surface blow built to 1"</u>		
<u>ISI: No blow</u>		
<u>FF: Weak surface blow built to 1"</u>		
<u>FSI: No blow.</u>		

Recovery — Total Feet <u>215'</u>	GIP <u> </u>	Ft. in DC <u> </u>	Ft. in ^{WP} <u>215'</u>
Rec. <u>5'</u> Feet Of <u>FO</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>60'</u> Feet Of <u>MW</u>	%gas <u>trc</u>	%oil <u>60%</u>	%water <u>40%</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>150'</u> Feet Of <u>Wtr.</u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
BHT <u>114°</u> °F Gravity <u> </u>	°API D@ <u> </u>	°F Corrected Gravity <u>34 est.</u>	°API <u> </u>
RW <u>-18</u> @ <u>60°</u> °F	Chlorides <u>50,000</u> ppm	Recovery Chlorides <u> </u> ppm	System <u> </u>

(A) Initial Hydrostatic Mud <u>2243</u>	<u>StraddleAK-1</u> <u>2254</u>	Alpine <u>2254</u>	PSI Recorder No. <u>3246</u>	T-On Location <u>1730</u>
(B) First Initial Flow Pressure <u> </u>	<u>14</u>	PSI (depth) <u>4452</u>	T-Started <u>1830</u>	
(C) First Final Flow Pressure <u> </u>	<u>63</u>	PSI Recorder No. <u>n/a</u>	T-Open <u>2016</u>	
(D) Initial Shut-In Pressure <u> </u>	<u>599</u>	PSI (depth) <u> </u>	T-Pulled <u>2316</u>	
(E) Second Initial Flow Pressure <u> </u>	<u>87</u>	PSI Recorder No. <u>13339</u>	T-Out <u>0215</u>	
(F) Second Final Flow Pressure <u> </u>	<u>113</u>	PSI (depth) <u>4470</u>	T-Off Location <u> </u>	
(G) Final Shut-in Pressure <u> </u>	<u>579</u>	PSI Initial Opening <u>30</u>	Test <u>750</u>	
(Q) Final Hydrostatic Mud <u>2203</u>	<u>2238</u>	PSI Initial Shut-in <u>45</u>	Jars <u>X 200</u>	
		Final Flow <u>45</u>	Safety Joint <u>X 50</u>	
		Final Shut-in <u>60</u>	Straddle <u>X 250</u>	
			Circ. Sub <u>X NIC</u>	
			Sampler <u> </u>	
			Extra Packer <u>X 150</u>	
			Elec. Rec. <u>X 150</u>	
			Mileage <u>35mi 35</u>	
			Other <u> </u>	

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 St Os

Our Representative Rod Steinbrink

TOTAL PRICE \$ 1585

TRILOBITE TESTING L.L.C.

OPERATOR : Larson Engineering Inc.
 WELL NAME: Clark #1-15
 LOCATION : 15-19S-29W Lane co KS
 INTERVAL : 4178.00 To 4220.00 ft

DATE 11-15-00

KB 2833.00 ft TICKET NO: 12733 DST #2
 GR 2828.00 ft FORMATION: L/KC "H"
 TD 4649.00 ft TEST TYPE: CONV STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	3246		13339			PF Fr. 0442 to 0512 hr
SI 30 Range(Psi)	4995.0	0.0	4025.0	0.0	0.0	IS Fr. 0512 to 0542 hr
SF 30 Clock(hrs)	ALP		12 HR			SF Fr. 0542 to 0612 hr
FS 30 Depth(ft)	4180.0	0.0	4250.0	0.0	0.0	FS Fr. 0612 to 0642 hr

	Field	1	2	3	4	
A. Init Hydro	2119.0	0.0	0.0	0.0	0.0	T STARTED 0300 hr
B. First Flow	17.0	0.0	0.0	0.0	0.0	T ON BOTM 0440 hr
B1. Final Flow	43.0	0.0	0.0	0.0	0.0	T OPEN 0442 hr
C. In Shut-in	1004.0	0.0	0.0	0.0	0.0	T PULLED 0642 hr
D. Init Flow	44.0	0.0	0.0	0.0	0.0	T OUT 0915 hr
E. Final Flow	58.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	985.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2107.0	0.0	0.0	0.0	0.0	Tool Wt. 18000.00 lbs
Inside/Outside	I		S			Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 55000.00 lbs
						Initial Str Wt 50000.00 lbs
						Unseated Str Wt 50000.00 lbs
						Bot Choke 0.75 in
						Hole Size 8.88 in
						D Col. ID 0.00 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 4146.00 ft
						H.W. I.D 2.80 in
						H.W. Length 31.00 ft

RECOVERY

Tot Fluid 90.00 ft of 0.00 ft in DC and 90.00 ft in DP
 90.00 ft of Drilling mud
 0.00 ft of 100% mud
 0.00 ft of
 0.00 ft of

TOOL DATA-----
 Tool Wt. 18000.00 lbs
 Wt Set On Packer 30000.00 lbs
 Wt Pulled Loose 55000.00 lbs
 Initial Str Wt 50000.00 lbs
 Unseated Str Wt 50000.00 lbs
 Bot Choke 0.75 in
 Hole Size 8.88 in
 D Col. ID 0.00 in
 D. Pipe ID 3.80 in
 D.C. Length 0.00 ft
 D.P. Length 4146.00 ft
 H.W. I.D 2.80 in
 H.W. Length 31.00 ft

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

MUD DATA-----

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

BLOW DESCRIPTION

Initial Flow:
 Weak steady surface blow throughout
 Final Flow:
 No return blow

Amt. of fill 0.00 ft
 Btm. H. Temp. 113.00 F
 Hole Condition Good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 3
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester Rod Steinbrink
 Co. Rep. Steve Davis
 Contr. Shields
 Rig # 1
 Unit #
 Pump T.

SAMPLES:
 SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONV STRADDLE

WELL NAME: Clark #1-15

LOCATION : 15-19S-29W Lane co KS

TICKET No. 12733 D.S.T. No. 2 DATE 11-15-00

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL 11

BOTTOM PACKERS AND ANCHOR 20

TOTAL TOOL 58

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 8 Single Total 440

TOTAL ASSEMBLY 498

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands 67 Single Total 4177

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4675

TOTAL DEPTH 4649

TOTAL DRILL PIPE ABOVE K.B. 26

REMARKS:

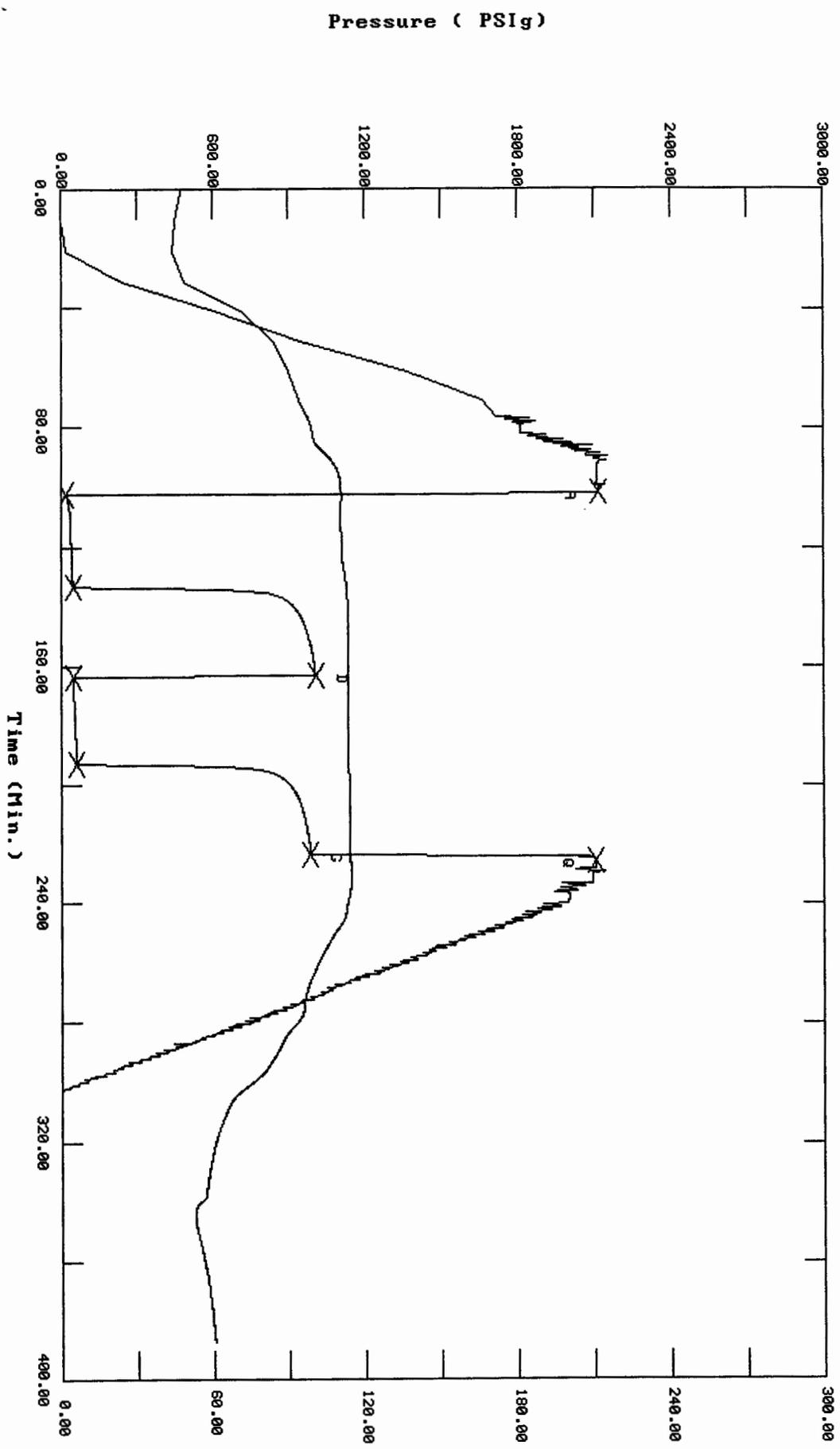
P.O. SUB 1' Above 90' DP	4051
C.O. SUB 1'	4141
S.I. TOOL 5'	4157
HMV 5'	4162
JARS 5'	4167
SAFETY JOINT 2'	4169
PACKER 4'	4173
PACKER 5'	4178
DEPTH 1'	4179
ANCHOR ALP Rec. @	4180
3' Perf	4182
31' DP	4182
2' Perf	4215
PACKER 5'	4220
1' Stubb	4221
12' Perf	4233
1' c/o sub	4234
AK-1 Rec. @	4250
409' WP	4235
1' c/o sub	4644
BULLNOSE 5'	
T.D.	4649

12733 DST #2 Clark #1-15 Larson Engineering Inc.

TEST HISTORY

Flag Points

	t (Min.)	Pk (PSig)
R:	0.00	2119.47
B:	0.00	17.53
C:	31.00	43.62
D:	29.75	1004.83
E:	0.00	44.18
F:	29.50	58.94
G:	30.75	985.76
Q:	0.00	2107.99



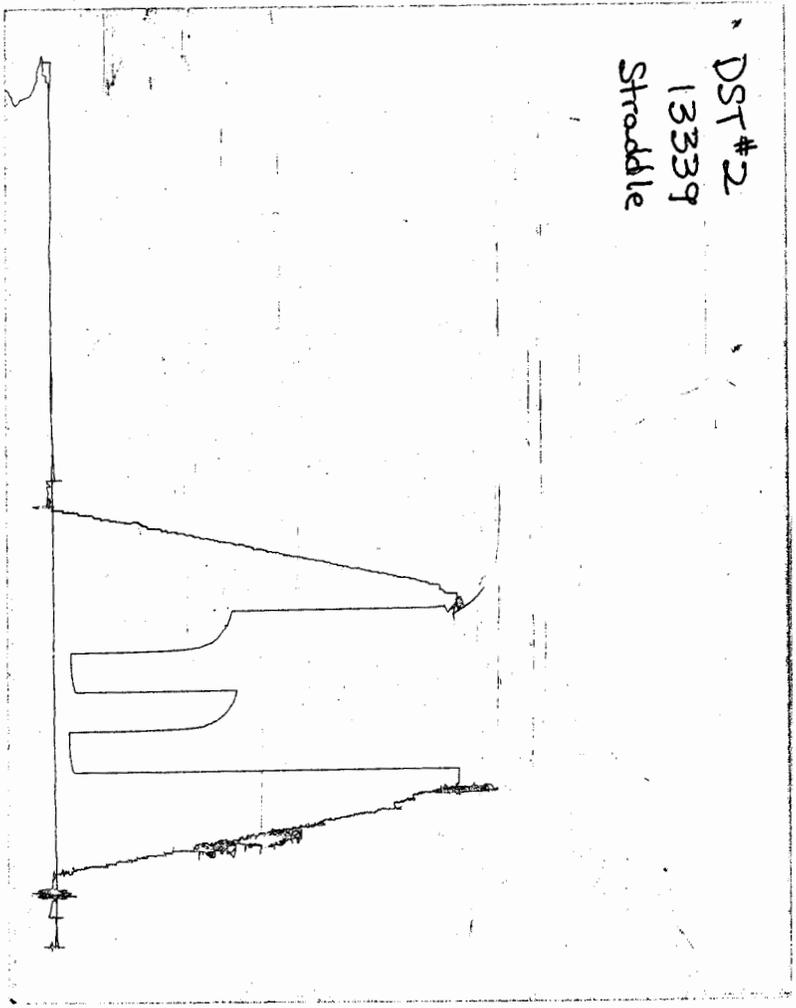
Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE

DST #2
13339
Straddle



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

N^o 12733

Well Name & No.	<u>Clark #1-15</u>	Test No.	<u>2</u>	Date	<u>11-15-00</u>
Company	<u>Larson Engineering Inc.</u>	Zone Tested	<u>L/KC 'H'</u>		
Address	<u>562 W Hwy 4 Olmitz, KS. 67564-8561</u>	Elevation	<u>2833</u>	<u>KB2828</u>	GL
Co. Rep / Geo.	<u>Steve Davis</u>	Cont.	<u>Shields *</u>	Est. Ft. of Pay	<u> </u> Por. <u> </u> %
Location: Sec.	<u>15</u>	Twp.	<u>19^s</u>	Rge.	<u>29^w</u> Co. <u>Lane</u> State <u>KS.</u>
No. of Copies	<u> </u>	Distribution Sheet (Y, N)	<u> </u>	Turnkey (Y, N)	<u> </u> Evaluation (Y, N) <u> </u>

Interval Tested	<u>4178 - 4220</u>	Initial Str Wt./Lbs.	<u>50,000</u>	Unseated Str Wt./Lbs.	<u>50,000</u>
Anchor Length	<u>42'</u>	Wt. Set Lbs.	<u>30,000</u>	Wt. Pulled Loose/Lbs.	<u>55,000</u>
Top Packer Depth	<u>4173 - 4178</u>	Tool Weight	<u>18,000</u>		
Bottom Packer Depth	<u>4220</u>	Hole Size — 7 7/8"	<u> </u>	Rubber Size — 6 3/4"	<u> </u>
Total Depth	<u>(LTD) 4649</u>	Wt. Pipe Run	<u>30'</u>	Drill Collar Run	<u> </u>
Mud Wt.	<u>LCM</u> Vis. <u> </u> <u>WL surface</u>	Drill Pipe Size	<u>4 1/2" FH</u>	Ft. Run	<u>4146' (t.b.l.)</u>
Blow Description	<u>1F' weak steady blow throughout</u>				

FF: No return blow

Recovery — Total Feet	<u>90'</u>	GIP	<u> </u>	Ft. in DC	<u> </u>	Ft. in DP	<u>90'</u>
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	<u>90'</u> Feet Of	<u>Drly Mud</u>		%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	Feet Of	%gas	%oil	%water	%mud		
BHT	<u>113°</u>	°F Gravity	<u> </u>	°API D@	<u> </u>	°F Corrected Gravity	<u> </u> °API
RW	<u> </u> @	°F Chlorides	<u> </u>	ppm Recovery	<u> </u>	Chlorides	<u> </u> ppm System

	<u>Straddle AK-1</u>	<u>Alpine</u>					
(A) Initial Hydrostatic Mud	<u>2119</u>	PSI	Recorder No.	<u>3246</u>	T-On Location	<u>0215</u>	<u>45</u>
(B) First Initial Flow Pressure	<u>17</u>	PSI	(depth)	<u>4180</u>	T-Started	<u>0300</u>	
(C) First Final Flow Pressure	<u>43</u>	PSI	Recorder No.	<u>N/A</u>	T-Open	<u>0442</u>	
(D) Initial Shut-In Pressure	<u>1004</u>	PSI	(depth)	<u> </u>	T-Pulled	<u>0642</u>	<u>6:15</u>
(E) Second Initial Flow Pressure	<u>44</u>	PSI	Recorder No.	<u>13339</u>	T-Out	<u>0915</u>	
(F) Second Final Flow Pressure	<u>58</u>	PSI	(depth)	<u>4250</u>	T-Off Location	<u>1015</u>	
(G) Final Shut-in Pressure	<u>985</u>	PSI	Initial Opening	<u>30</u>	Test	<u>750</u>	
(Q) Final Hydrostatic Mud	<u>2107</u>	PSI	Initial Shut-in	<u>30</u>	Jars	<u>X 200</u>	
			Final Flow	<u>30</u>	Safety Joint	<u>X 50</u>	
			Final Shut-in	<u>30</u>	Straddle	<u>X 250</u>	
					Circ. Sub	<u>X N/C</u>	
					Sampler	<u> </u>	
					Extra Packer	<u>X 150</u>	
					Elec. Rec.	<u>X 150</u>	
					Mileage	<u> </u>	
					Other	<u> </u>	

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 St Ds
Our Representative Rod Steinbrink

TOTAL PRICE \$ 1550