

Well Name: Torline "A-1"
Company: Pickrell Drilling Co.
Location: 13-31s-41w
Morton co KS
Date: 12-31-99

TRILOBITE TESTING L.L.C.

OPERATOR : Pickrell Drilling Co.

DATE 12-28-99

WELL NAME: Torline "A-1"

KB 3352.00 ft

TICKET NO: 12501 DST #1

LOCATION : 13-31S-41W Morton co KS

GR 3347.00 ft

FORMATION: Morrow Sand

INTERVAL : 5134.00 To 5154.00 ft

TD 5154.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10242	10242	Alpine			PF Fr. 0510 to 0540 hr
SI 60	Range(Psi)	4175.0	4175.0	5000.0	0.0	0.0	IS Fr. 0540 to 0640 hr
SF 45	Clock(hrs)	12 HR	12 HR	Elect			SF Fr. 0640 to 0725 hr
FS 60	Depth(ft)	5151.0	5151.0	5136.0	0.0	0.0	FS Fr. 0725 to 0825 hr

	Field	1	2	3	4	
A. Init Hydro	2496.0	2525.0	2438.0	0.0	0.0	T STARTED 0250 hr
B. First Flow	30.0	52.0	11.0	0.0	0.0	T ON BOTM 0507 hr
B1. Final Flow	30.0	41.0	18.0	0.0	0.0	T OPEN 0510 hr
C. In Shut-in	301.0	305.0	333.0	0.0	0.0	T PULLED 0825 hr
D. Init Flow	30.0	46.0	14.0	0.0	0.0	T OUT 1100 hr
E. Final Flow	30.0	41.0	22.0	0.0	0.0	
F. Fl Shut-in	198.0	204.0	219.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2475.0	2509.0	2424.0	0.0	0.0	Tool Wt. 1800.00 lbs
Inside/Outside	I	I	I			Wt Set On Packer 28000.00 lbs
						Wt Pulled Loose 7000.00 lbs
						Initial Str Wt 78000.00 lbs
						Unseated Str Wt 79000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.78 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 237.00 ft
						D.P. Length 4894.00 ft

RECOVERY

Tot Fluid 5.00 ft of 5.00 ft in DC and 0.00 ft in DP

5.00 ft of Mud

0.00 ft of 100% 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 2300.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:

Weak 1", built to 3" in 23 minutes.

Stabilized.

Intial Shut-In:

No Blow back.

Final Flow:

Surface blow built to 3/4" in 20 minutes. Decreased slightly in 45 minutes.

Final Shut-In:

No blow back.

SAMPLES: None

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	8.90 lb/c
Vis.	59.00 S/L
W.L.	9.20 in3
F.C.	0.00 in
Mud Drop Y	20.0 ft

Amt. of fill	0.00 ft
Btm. H. Temp.	127.00 F
Hole Condition	Good
% Porosity	10.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out N	
Tool Chased N	
Tester	Lanny Saloga
Co. Rep.	Bill Klaver
Contr.	Pickrell
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

P.O. SUB 1' Above 120' DC	5228
C.O. SUB 1'	5348
S.I. TOOL 5'	5354
HMV 5'	5359
JARS 5'	5364
SAFETY JOINT 2'	5366
PACKER 4'	5370
PACKER 7'	5377
DEPTH 1'	5378
ANCHOR	
ALP Rec. @	5380
13' Perf	5391
Ak-1 Rec. @	5391
BULLNOSE 5'	5396
T.D.	5396

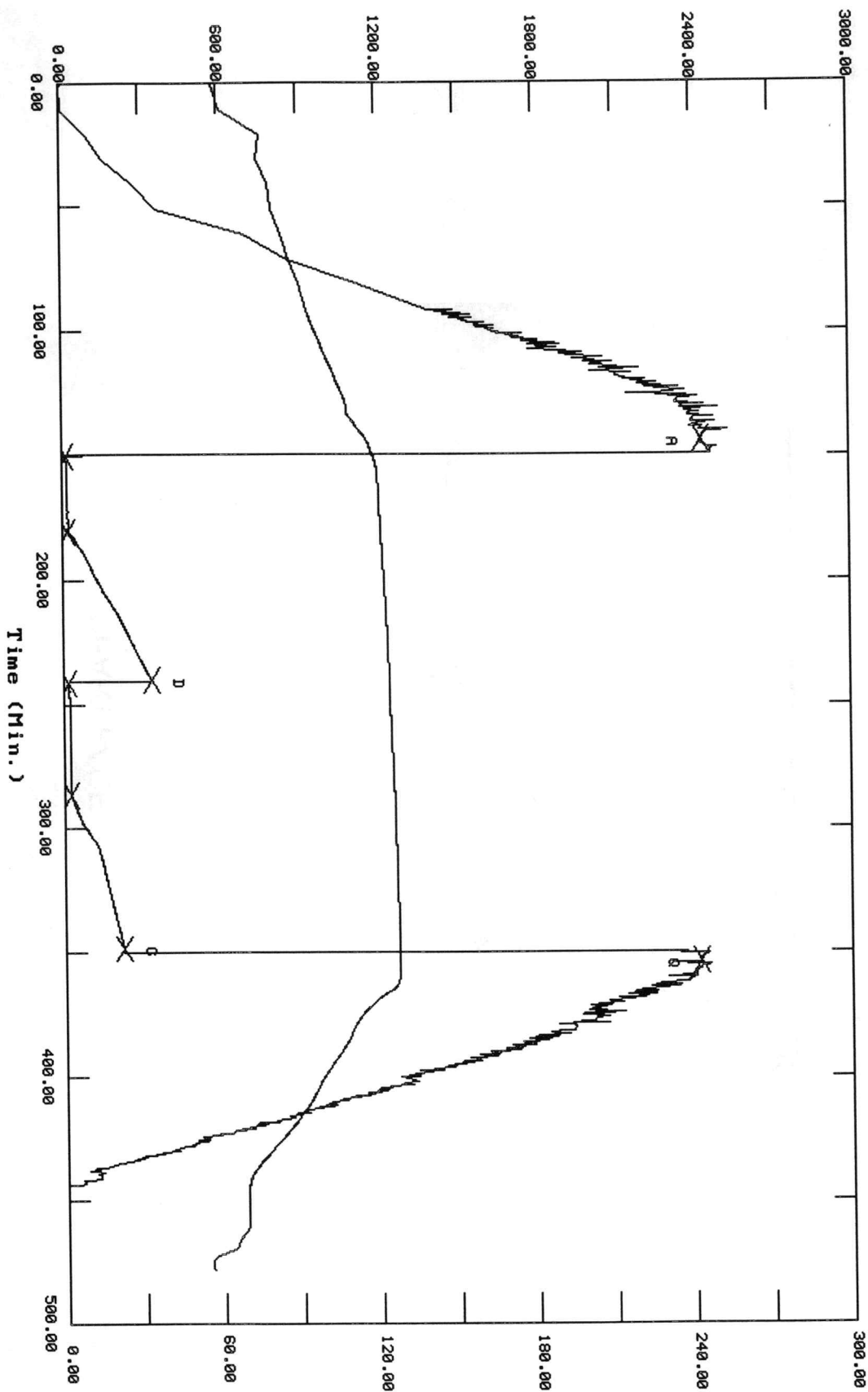
REMARKS:

TEST HISTORY

12501 D.S.T.#1 Torline "A-1" Pickrell Drilling

Flag Points
t(Min.) P(PSIg)

A:	0.00	2438.92
B:	0.00	11.32
C:	30.33	18.35
D:	60.00	333.52
E:	0.00	14.70
F:	45.33	22.21
G:	61.67	219.58
Q:	0.00	2424.76

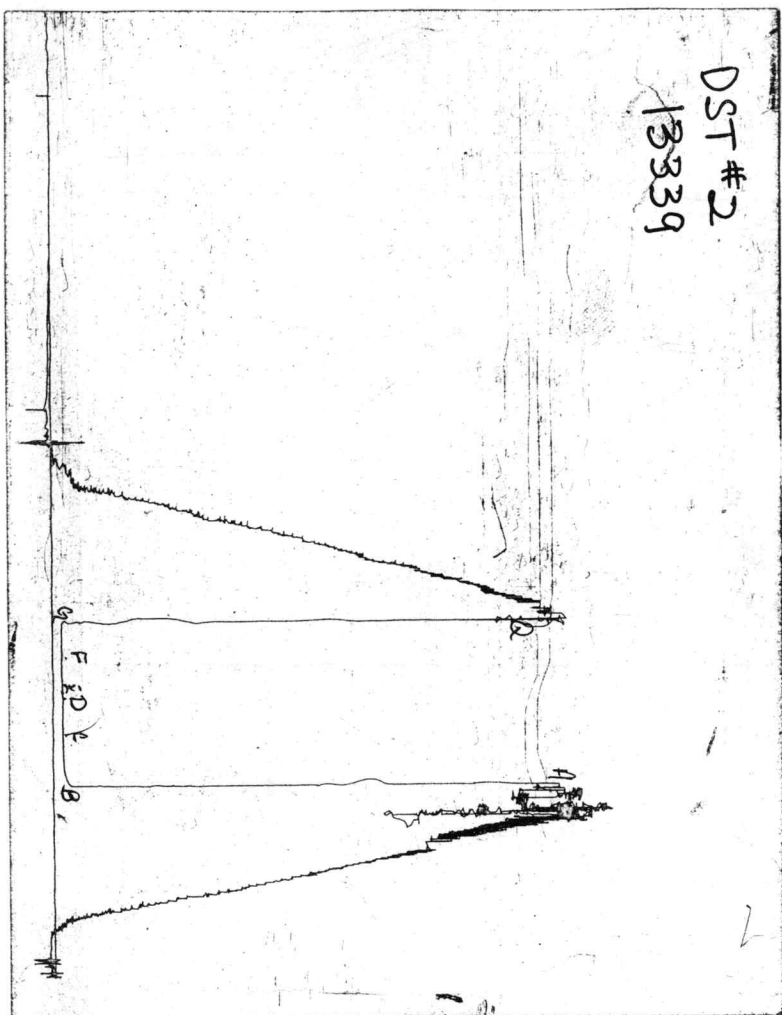


Pressure (PSIg)

Temperature (DEG F)

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

Nº 12501

Well Name & No. Terline "A-1" Test No. 1 Date 12-28-99
 Company Pickrell Drilling Co. Zone Tested Mallow Sand
 Address 110 N. Market, Suite 205 Wichita KS. 67202 Elevation 2352 KB 3347 GL
 Co. Rep / Geo. Bill Klauer Cont. Pickrell Rig 1 Est. Ft. of Pay 6 Por. 10 %
 Location: Sec. 13 Twp. 31S Rge. 41W Co. Madison State KS
 No. of Copies Reg. Distribution Sheet (Y, N) N Turnkey (Y, N) N Evaluation (Y, N)

Interval Tested 5134-5154
 Anchor Length 20' Tool = 27'
 SHALE Top Packer Depth 5129
 SHALE Bottom Packer Depth 5134
 Total Depth 5154
 Mud Wt. 8.9 LCM 9# Vis. 59 WL 9.2

Initial Str Wt./Lbs. 78,000 Unseated Str Wt./Lbs. 79,000
 Wt. Set Lbs. 28,000 Wt. Pulled Loose/Lbs. 7,000
 Tool Weight 1,800
 Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Wt. Pipe Run — Drill Collar Run 237
 Drill Pipe Size 4 1/2 XH Ft. Run 4894 24' up

Blow Description Work 1", built to 3" in 23 min. Stabilized I.S.I.P.
No blow-backs I.S.I.P.
Surface blow, built to 3 1/4" in 20 min. Decreased slightly in 45 min. F.F.P.
No blow-backs F.S.I.P.

Recovery — Total Feet 5 GIP 0 Ft. in DC 5 Ft. in DP 0
 Rec. 5 Feet Of mud %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
 Rec. Feet Of %gas %oil %water %mud
 BHT 127 °F Gravity — °API D@ — °F Corrected Gravity — °API
 RW 2.9 @ 62 °F Chlorides 2,300 ppm Recovery Chlorides 2,200 ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>2496</u>	<u>2438</u>		<u>3017 "02:39"</u>	<u>12:15 AM</u>
(B) First Initial Flow Pressure	<u>30</u>	<u>11</u>		(depth) <u>5136</u>	T-Started <u>2:50 AM</u>
(C) First Final Flow Pressure	<u>30</u>	<u>18</u>		Recorder No. <u>10242</u>	T-Open <u>5:10 AM</u>
(D) Initial Shut-In Pressure	<u>301</u>	<u>333</u>		(depth) <u>5151</u>	T-Pulled <u>8:25 AM</u>
(E) Second Initial Flow Pressure	<u>30</u>	<u>14</u>		Recorder No. —	T-Out <u>11:00 AM</u>
(F) Second Final Flow Pressure	<u>30</u>	<u>22</u>		(depth) —	T-Off Location —
(G) Final Shut-in Pressure	<u>198</u>	<u>219</u>		PSI Initial Opening <u>30</u>	Test <u>800</u> ✓
(Q) Final Hydrostatic Mud	<u>2475</u>	<u>2424</u>		PSI Initial Shut-in <u>60</u>	Jars <u>200</u> ✓
				Final Flow <u>45</u>	Safety Joint <u>150</u> ✓
				Final Shut-in <u>60</u>	Straddle —
					Circ. Sub —
					Sampler —
					2 SHALE Extra Packer <u>1300</u> ✓
					Elec. Rec. <u>150</u> ✓
					Mileage —
					Other —

C2890239.017
 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 Bill Klauer

Our Representative Gregory D. Salas

TOTAL PRICE \$ 1,500.00

TRILOBITE TESTING L.L.C.

OPERATOR : Pickrell Drilling Co.

DATE 12-29-99

WELL NAME: Torline "A" #1

KB 3352.00 ft

TICKET NO: 11610 DST #2

LOCATION : 13-31S-41W Morton co KS

GR 3347.00 ft

FORMATION: Morrow

INTERVAL : 5377.00 To 5396.00 ft

TD 5396.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13339	13339	3024			PF Fr. 1513 to 1543 hr
SI 30 Range(Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 1543 to 1613 hr
SF 30 Clock(hrs)	12 HR	12 HR	Elec			SF Fr. 1613 to 1643 hr
FS 30 Depth(ft)	5391.0	5391.0	5380.0	0.0	0.0	FS Fr. 1643 to 1713 hr

	Field	1	2	3	4	
A. Init Hydro	2622.0	2652.0	2658.0	0.0	0.0	T STARTED 1320 hr
B. First Flow	31.0	58.0	38.0	0.0	0.0	T ON BOTM 1511 hr
B1. Final Flow	31.0	52.0	39.0	0.0	0.0	T OPEN 1513 hr
C. In Shut-in	31.0	52.0	41.0	0.0	0.0	T PULLED 1713 hr
D. Init Flow	31.0	52.0	39.0	0.0	0.0	T OUT 1930 hr
E. Final Flow	31.0	52.0	39.0	0.0	0.0	
F. Fl Shut-in	31.0	60.0	40.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2602.0	2554.0	2638.0	0.0	0.0	Tool Wt. 1800.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 120000.00 lbs
						Initial Str Wt 82000.00 lbs
						Unseated Str Wt 82000.00 lbs
						Bot Choke 0.75 in
						Hole Size 8.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 237.00 ft
						D.P. Length 5141.00 ft

RECOVERY

Tot Fluid 5.00 ft of 5.00 ft in DC and 0.00 ft in DP

5.00 ft of Drilling Mud

0.00 ft of 100% 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

BLOW DESCRIPTION

Initial Flow:

Weak 1/4" blow died in 25 minutes.

Final Flow:

No return blow.

MUD DATA-----

Mud Type Chemical

Weight 9.10 lb/c

Vis. 64.00 S/L

W.L. 6.80 in3

F.C. 0.00 in

Mud Drop N

Amt. of fill 1.00 ft

Btm. H. Temp. 128.00 F

Hole Condition Good

% Porosity 0.00

Packer Size 6.75 in

No. of Packers 2

Cushion Amt. 0.00

Cushion Type

Reversed Out N

Tool Chased Y 1.00 ft

Tester Rod Steinbrink

Co. Rep. Bill Klaver

Contr. Pickrell

Rig # 1

Unit #

Pump T.

SAMPLES:

SENT TO:

Test Successful: Y

8

P.O. SUB Cir. sub	5047
C.O. SUB Top of tool	5107
Double pin	5108
S.I. TOOL H&T	5113

S.I. TOOL H&T	5113
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HMV Sterling	5118
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JARS Bowen	5123
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5135

PACKER Shale	5130
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PACKER Shale	5134
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1 ft.	5135
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Alpine	5136
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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Pu. sub	5141
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AK-1	5151
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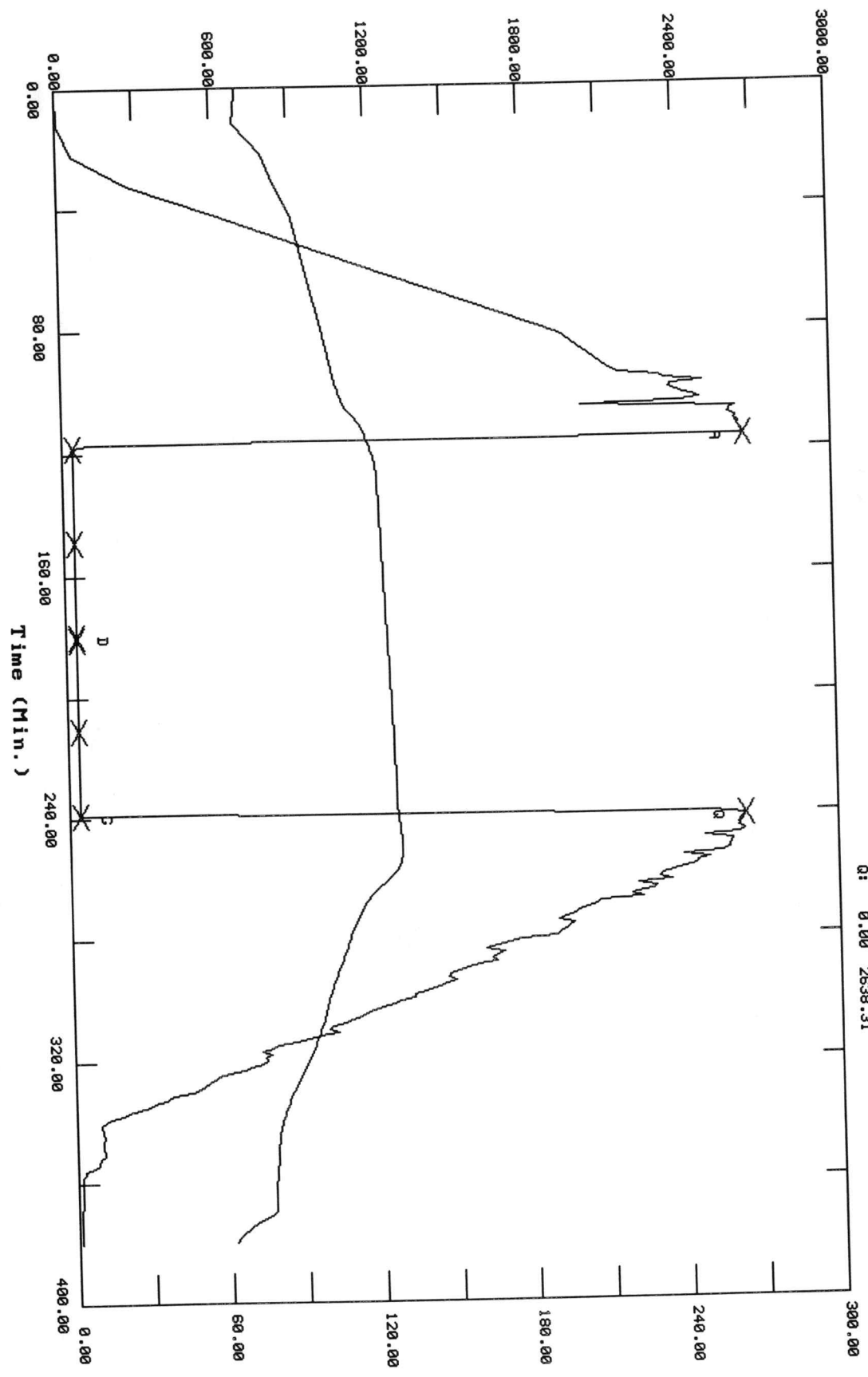
H	11 ft. perfs	5152
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BULLNOSE 2 ft. perf

T.D. 5154

TEST HISTORY

11610 DST #2 Torline "A" #1 Pickrell Drilg. Co.

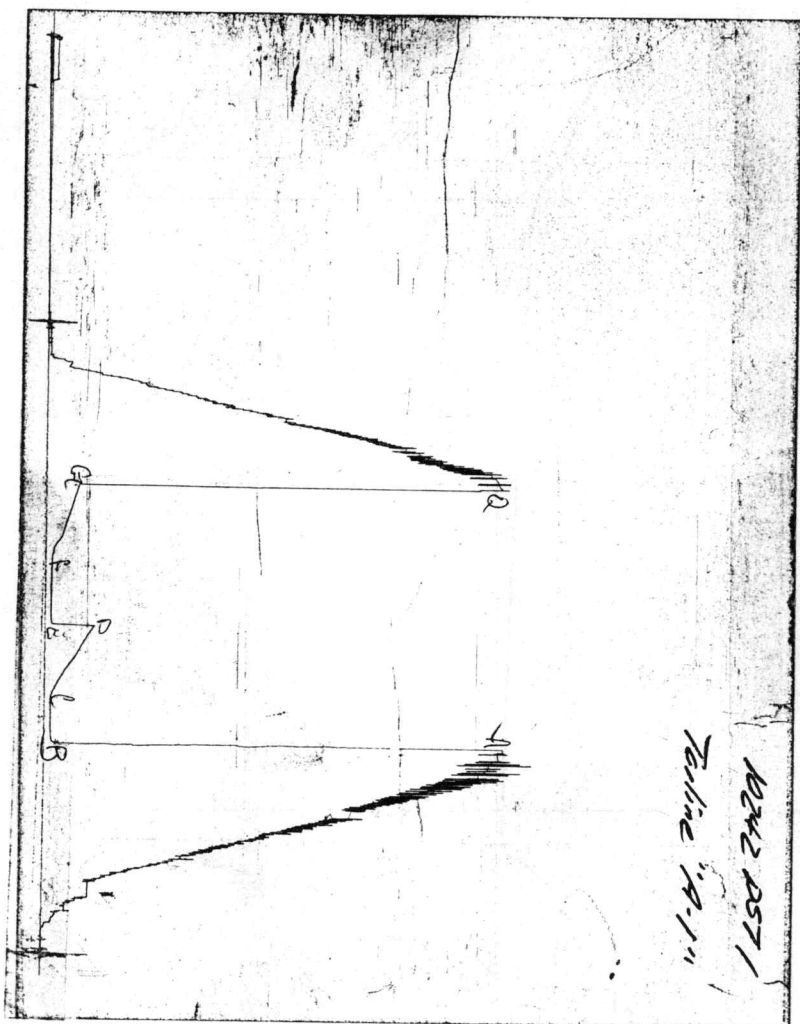


Flag Points

t (Min.)	P (PSig)
R: 0.00	2658.06
B: 0.00	38.50
C: 31.00	39.30
D: 31.00	41.28
E: 0.00	39.76
F: 30.00	39.92
G: 28.00	40.24
G: 0.00	2638.31

Temperature (DEG F)

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

No 11610

Well Name & No.	Torline 'A' #1	Test No.	2	Date	12-29-99
Company	Pickrell Drilling Company	Zone Tested	Morrow		
Address	110 N Market Ste 205 Wichita, KS 67202	Elevation	3352	KB	3347 GL
Co. Rep / Geo.	Bill Klaver	Cont.	Pickrell #1	Est. Ft. of Pay	Por. %
Location: Sec.	13	Twp.	31 ^S	Rge.	41 ^W
		Co.	Morton	State	KS
No. of Copies		Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested 5377 - 5396 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. 82,000
Anchor Length 19' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 120,000
Top Packer Depth 5370 Tool Weight 1,800
Bottom Packer Depth 5377 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Total Depth 5396 Wt. Pipe Run — Drill Collar Run 237' (4)
Mud Wt. 9.1 LCM 6# Vis. 64 WL 6.8 Drill Pipe Size 4 1/2" XH Ft. Run 5141' (83)
Blow Description IF: Weak 1/4" blow died in 25 mins

FF: No return blow

Recovery — Total Feet 5' GIP — Ft. in DC 5' Ft. in DP —
Rec. — Feet Of — %gas %oil %water %mud
Rec. — Feet Of — %gas %oil %water %mud
Rec. 5' Feet Of Drlg Mud %gas %oil %water %mud
Rec. — Feet Of — %gas %oil %water %mud
Rec. — Feet Of — %gas %oil %water %mud
BHT 128° °F Gravity — °API D@ — °F Corrected Gravity — °API
RW — @ — °F Chlorides — ppm Recovery Chlorides 1,600 ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>2622</u>	<u>2658</u>		<u>3024</u>	<u>1300</u>
(B) First Initial Flow Pressure	<u>31</u>	<u>38</u>	PSI (depth)	<u>5380</u>	T-Started <u>1320</u>
(C) First Final Flow Pressure	<u>31</u>	<u>39</u>	PSI Recorder No.	<u>13339</u>	T-Open <u>1513</u>
(D) Initial Shut-In Pressure	<u>31</u>	<u>41</u>	PSI (depth)	<u>5391</u>	T-Pulled <u>1713</u>
(E) Second Initial Flow Pressure	<u>31</u>	<u>39</u>	PSI Recorder No.	<u>—</u>	T-Out <u>1930</u>
(F) Second Final Flow Pressure	<u>31</u>	<u>39</u>	PSI (depth)	<u>—</u>	T-Off Location <u>2030</u>
(G) Final Shut-in Pressure	<u>31</u>	<u>40</u>	PSI Initial Opening	<u>30</u>	Test <u>800</u>
(Q) Final Hydrostatic Mud	<u>2602</u>	<u>2638</u>	PSI Initial Shut-in	<u>30</u>	Jars <u>X</u> <u>200</u>
			Final Flow	<u>30</u>	Safety Joint <u>X</u> <u>50</u>
			Final Shut-in	<u>30</u>	Straddle <u>—</u>

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Approved By Bill Klaver

Our Representative Rod Steinbrink

1 Hr Rig Time (WDT)
Shale
Circ. Sub X N/C
Sampler —
Extra Packer X 150
Elec. Rec. X 150
Mileage —
Other —
TOTAL PRICE \$ 1350

Well Name Torline A#1
DST Number 2
Recorder Number 13339

A: 2.630 2652

B: .056 58

C: .050 52

D: .050 50

E: .050 52

F: .050 52

G: .058 60

Q: 2.531 2554

Well Name Torline A-1

DST Number 1

Recorder Number 10242

A: 2.401 2525

B: .1045 52

C: .035 41

D: .261 305

E: .040 46

F: .035 41

G: .175 204

Q: 2.3860 2509