

WELL NAME:	Herd #1
COMPANY:	Thoroughbred Associates.
LOCATION:	15-32s-19w Comanche co KS
DATE:	4/25/00

TRILOBITE TESTING L.L.C.

OPERATOR : Ythoroughbred Associates
WELL NAME: Herd #1
LOCATION : 15-32s-19w Comanche co KS
INTERVAL : 4925.00 To 4999.00 ft

DATE 04-16-000
KB 2017.00 ft TICKET NO: 12785 DST #1
GR 2012.00 ft FORMATION: Altamont
TD 4999.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0910 to 0940 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0940 to 1040 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 1040 to 1125 hr
FS 90 Depth(ft)	4996.0	4996.0	4935.0	0.0	0.0	FS Fr. 1125 to 1255 hr

	Field	1	2	3	4	
A. Init Hydro	2426.0	2423.0	2416.0	0.0	0.0	T STARTED 0700 hr
B. First Flow	182.0	179.0	222.0	0.0	0.0	T ON BOTM 0901 hr
B1. Final Flow	218.0	203.0	190.0	0.0	0.0	T OPEN 0910 hr
C. In Shut-in	1771.0	1788.0	1782.0	0.0	0.0	T PULLED 1256 hr
D. Init Flow	216.0	217.0	210.0	0.0	0.0	T OUT 1450 hr
E. Final Flow	241.0	239.0	221.0	0.0	0.0	
F. Fl Shut-in	1780.0	1785.0	1783.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2349.0	2395.0	2376.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 86000.00 lbs
						Initial Str Wt 74000.00 lbs
						Unseated Str Wt 74000.00 lbs

RECOVERY

Tot Fluid 358.00 ft of 236.00 ft in DC and 122.00 ft in DP
0.00 ft of Gas in all fluid free pipe.
62.00 ft of Oil cut mud
0.00 ft of 8% oil 92% mud (Oil in form of clear
0.00 ft of condensate)
296.00 ft of Gas cut mud
0.00 ft of 10% gas 90% mud
0.00 ft of
0.00 ft of

MUD DATA-----

Mud Type Chemical
Weight 9.30 lb/cf
Vis. 48.00 S/L
W.L. 8.00 in3
F.C. 0.20 in
Mud Drop N

BLOW DESCRIPTION

Initial Flow:
Strong blow. Gas to surface in 4
minutes. (See gas volume report.)
Initial Shut-In:
No blow.
Final Flow:
Strong blow. (See gas volume report.)
Final Shut-In:
Very weak blow.

Amt. of fill 2.00 ft
Btm. H. Temp. 119.00 F
Hole Condition good
% Porosity 14.00
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. Paul Gunzelmann
Contr. Pickrell Drlg.
Rig # 1
Unit #
Pump T. LCM 0 #/bl

SAMPLES: Gas sample
SENT TO:Caraway/Liberal

Test Successful: Y

GAS RECOVERY

COMPANY: Ythoroughbred Associates

DATE: 04-16-000

WELL NAME: Herd #1

KB Elev: 2017.00 ft TICKET #12785 DST #1

WELL LOCATION: 15-32s-19w Comanche co KS

GR Elev: 2012.00 ft FORMATION: Altament

INTERVAL Fr.: 4925.00 To 4999.00 T.D.: 4999.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	32	0	677600.0
20	0.75	40	0	793900.0
30	0.75	44	0	852000.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	42	0	823000.0
20	0.75	46	0	878700.0
30	0.75	46	0	878700.0
40	0.75	46	0	878700.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #1

LOCATION : 15-32s-19w Comanche co KS

TICKET No. 12785 D.S.T. No. 1 DATE 04-16-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 12

TOTAL TOOL 39

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 62

TOTAL ASSEMBLY 80

D.C. ABOVE TOOLS.Stands4 Single Total 236

D.P. ABOVE TOOLS.Stands75 Single 1 Total 4667

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5004

TOTAL DEPTH 4999

TOTAL DRILL PIPE ABOVE K.B. 5

REMARKS:

Established 8 feet of pay.

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	4898
S.I. TOOL Sterling	4904
HMV Sterling	4909
JARS bowen	4914
SAFETY JOINT bowen	4916
PACKER Top	4920
PACKER Btm.	4925
DEPTH 1 ft.	4926
ANCHOR	
5'perfs & sub to	4931
Alpine rec. @ 4935	
1 std pippe & sub to	4994
AK-1 rec. @ 4996	
BULLNOSE 5 ft. perforated T.D.	4999

NATURAL GAS ANALYSIS REPORT

Sampled by:

Trilobite Testing, L. L. C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:

Caraway Analytical, Inc
P. O. Box 213/
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 20002290

Sample From: Herd #1 DST 1

Producer: Thoroughbred Assoc.

Date:

Time:

Sampler:

Source:

Analyzed: 04/23/00

Pressure:

Temperature:

Location: 15-32-19

County: Comanche

State: Kansas

Formation: Altmont

	Mole %	GPM
Helium	He: 0.142	0.000
Hydrogen	H2: 0.009	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 5.637	0.000
Carbon Dioxide	CO2: 0.034	0.000
Methane	C1: 81.579	0.000
Ethane	C2: 5.088	1.361
Propane	C3: 4.200	1.157
Iso Butane	iC4: 0.503	0.165
Normal Butane	nC4: 1.402	0.442
Iso Pentane	iC5: 0.313	0.115
Normal Pentane	nC5: 0.366	0.133
hexanes Plus	C6+: 0.727	0.317

TOTAL: 100.000 3.689

Z Fact: 0.9971

SP.GR.: 0.7048

BTU (SAT): 1132.2 @ 14.73 psia

BTU (DRY): 1152.2 @ 14.73 psia

OCTANE RATING: 117.7

COMMENTS: 0.000

TEST HISTORY

12785 DST#1 HERD #1 THOROUGHbred ASSOCIATES

Flag Points
t(Min.) P(PSig)

A: 0.00 2416.44
B: 0.00 221.98
C: 29.50 190.26
D: 60.00 1781.78
E: 0.00 210.06
F: 42.00 220.55
G: 91.00 1783.37
Q: 0.00 2376.41

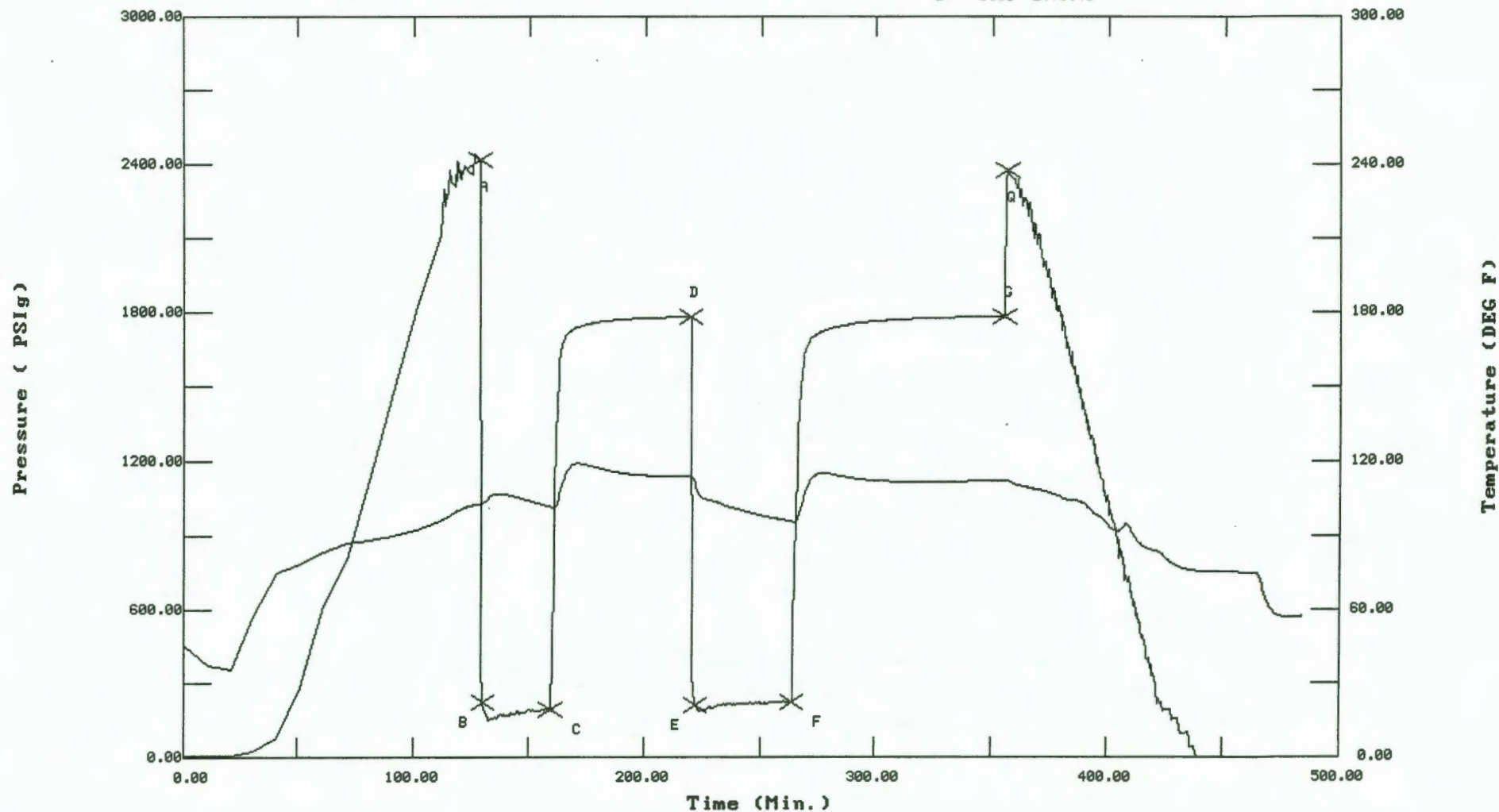
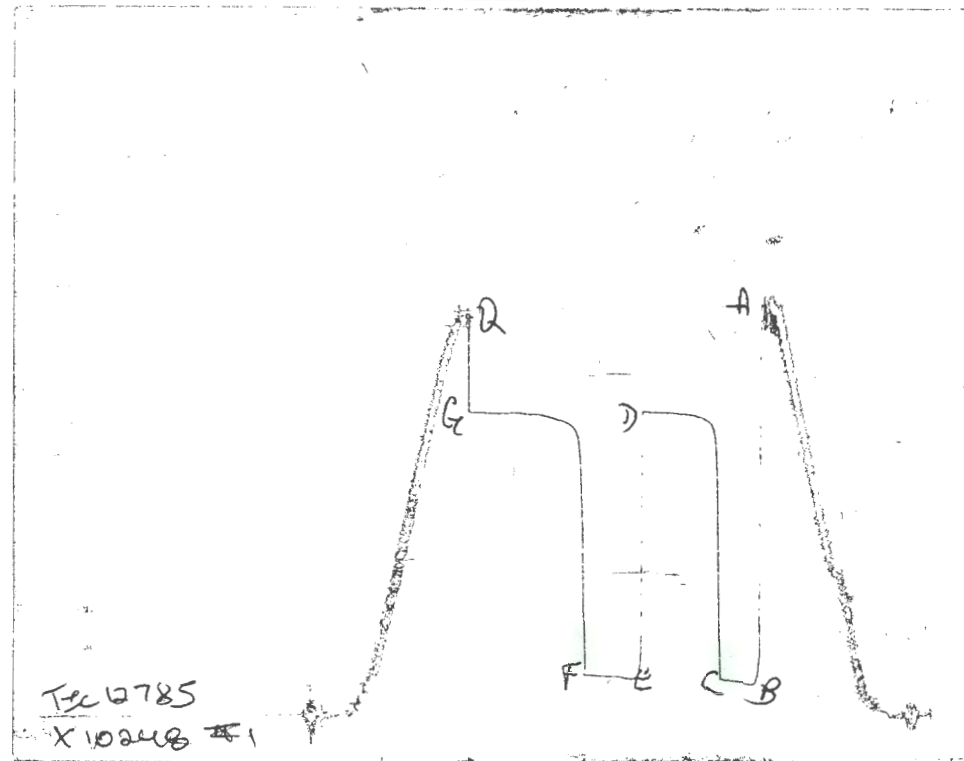


CHART PAGE



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



30 60 48 90

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Thoroughbred Assoc.
OPERATOR

Herd #

WELL NAME AND NO.

DST NO.

Initial Open

Final Open

Min.	Inch. of Water PSIG	Orifice Size	MCF/D
4	—	3/4"	(GTS)
10	32 PSI	3/4"	677.6
20	40 PSI	3/4"	793.9
30	44 PSI	3/4"	852

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12785

Well Name & No.	<u>Herd #1</u>	Test No.	<u>1</u>	Date	<u>4-18-2000</u>
Company	<u>Thoroughbred Assoc.</u>	Zone Tested	<u>Altamont</u>		
Address	<u>8100 E. 22nd St. No. Bldg. McF. Wichita Ks. 67226</u>	Elevation	<u>2012</u>	KB	<u>2012</u> GL
Co. Rep / Geo.	<u>Paul Cunningham</u>	Cont.	<u>Pickball Drilling #1</u>	Est. Ft. of Pay	<u>8</u> Por. <u> </u> %
Location: Sec.	<u>15</u>	Twp.	<u>32S</u>	Rge.	<u>19W</u> Co. <u>Comanche</u> State <u>Ks.</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u> </u> Evaluation (Y, N) <u> </u>

Interval Tested	<u>4925 - 4999'</u>	Initial Str Wt./Lbs.	<u>74,000</u>	Unseated Str Wt./Lbs.	<u>74,000</u>
Anchor Length	<u>74'</u>	Wt. Set Lbs.	<u>20,000</u>	Wt. Pulled Loose/Lbs.	<u>86,000</u>
Top Packer Depth	<u>4920'</u>	Tool Weight	<u>2100 #</u>		
Bottom Packer Depth	<u>4925'</u>	Hole Size — 7 7/8" ☒		Rubber Size — 6 3/4" ☒	
Total Depth	<u>4999'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>236</u>
Mud Wt.	<u>9.3</u> LCM <u>~</u> Vis. <u>48</u> WL <u>8.0 cc.</u>	Drill Pipe Size	<u>4 1/2" X H.</u>	Ft. Run	<u>4667</u>
Blow Description	<u>IF: Strong blow. GTS in 4 mins. (see gas volume report) ISI: No blow.</u>				
	<u>FF: Strong blow. (see gas volume report) FSI: Very weak blow.</u>				

Recovery — Total Feet	<u>358</u>	Fluid	<u>GIP</u>	GIP	<u>yes</u>	Ft. in DC	<u>236</u>	Ft. in DP	<u>122</u>
Rec.	<u>62</u>	Feet Of	<u>OCM. (oil in form of)</u>	%gas	<u>8</u>	%oil		%water	<u>92</u> %mud
Rec.	<u>296</u>	Feet Of	<u>GCM clear condensate</u>	%gas		%oil		%water	<u>90</u> %mud
Rec.		Feet Of		%gas		%oil		%water	%mud
Rec.		Feet Of		%gas		%oil		%water	%mud
Rec.		Feet Of		%gas		%oil		%water	%mud
BHT	<u>119</u>	°F Gravity	<u>N/A</u>	°API D@	<u>~</u>	°F Corrected Gravity	<u>N/A</u>	°API	
RW	<u>N.C.</u>	@	<u>~</u>	°F Chlorides	<u>6,000</u>	ppm Recovery		Chlorides	<u>6,000</u> ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	<u>2426</u>	<u>2416</u>	PSI	Recorder No.	<u>2342</u>	T-On Location	<u>0600</u>
(B) First Initial Flow Pressure	<u>182</u>	<u>222</u>	PSI	(depth)	<u>4935'</u>	T-Started	<u>0700</u>
(C) First Final Flow Pressure	<u>218</u>	<u>190</u>	PSI	Recorder No.	<u>10248</u>	T-Open	<u>0910</u>
(D) Initial Shut-In Pressure	<u>1771</u>	<u>1782</u>	PSI	(depth)	<u>4996'</u>	T-Pulled	<u>1256</u>
(E) Second Initial Flow Pressure	<u>216</u>	<u>210</u>	PSI	Recorder No.	<u>~</u>	T-Out	<u>1450</u>
(F) Second Final Flow Pressure	<u>241</u>	<u>221</u>	PSI	(depth)	<u>~</u>	T-Off Location	<u>1555</u>
(G) Final Shut-in Pressure	<u>1780</u>	<u>1783</u>	PSI	Initial Opening	<u>30</u>	Test	<u>✓ 700⁰⁰</u>
(Q) Final Hydrostatic Mud	<u>2349</u>	<u>2376</u>	PSI	Initial Shut-in	<u>60</u>	Jars	<u>✓ 200⁰⁰</u>
				Final Flow	<u>45</u>	Safety Joint	<u>✓ 50⁰⁰</u>
				Final Shut-in	<u>90</u>	Straddle	
					<u>✓</u>	Circ. Sub	
						Sampler	

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 Paul Cunningham
Our Representative Paul Cunningham

Extra Packer
Elec. Rec. ✓ 150⁰⁰
Mileage
Other
TOTAL PRICE \$ ✓ 1100⁰⁰

TRILOBITE TESTING L.L.C.

OPERATOR : Ythoroughbred Associates
WELL NAME: Herd #1
LOCATION : 15-32s-19w Comanche co KS
INTERVAL : 5005.00 To 5064.00 ft

DATE 04-17-000
KB 2017.00 ft TICKET NO: 12786 DST #2
GR 2012.00 ft FORMATION: Pgwnee/Ft.Scott
TD 5064.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0420 to 0450 hr
SI 45 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0450 to 0535 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0535 to 0620 hr
FS 60 Depth(ft)	5061.0	5061.0	5016.0	0.0	0.0	FS Fr. 0620 to 0720 hr

	Field	1	2	3	4	
A. Init Hydro	2459.0	2492.0	2452.0	0.0	0.0	T STARTED 0104 hr
B. First Flow	46.0	57.0	30.0	0.0	0.0	T ON BOTM 0414 hr
B1. Final Flow	50.0	52.0	42.0	0.0	0.0	T OPEN 0420 hr
C. In Shut-in	1441.0	1447.0	1445.0	0.0	0.0	T PULLED 0720 hr
D. Init Flow	69.0	75.0	47.0	0.0	0.0	T OUT 0910 hr
E. Final Flow	82.0	81.0	77.0	0.0	0.0	
F. Fl Shut-in	1515.0	1511.0	1505.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2428.0	2463.0	2419.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 86000.00 lbs
						Initial Str Wt 74000.00 lbs
						Unseated Str Wt 74000.00 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 236.00 ft
						D.P. Length 4759.00 ft

RECOVERY

Tot Fluid 70.00 ft of 70.00 ft in DC and 0.00 ft in DP
230.00 ft of Gas in pipe.
70.00 ft of Heavy 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 6000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
Weak to fair blow. Slow increase to 7".

Initial Shut-In:
No blow.

Final Flow:
Weak to fair blow. Slow increase to 8 or 9".

Final Shut-In:
No blow.

SAMPLES: None
SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	8.90 lb/c
Vis.	49.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 F
Hole Condition	good
% Porosity	10.00
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. Paul Gunzelmann
Contr. Pickrell Drlg.
Rig # 1
Unit #
Pump T. LCM 0 #/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #1

LOCATION : 15-32s-19w Comanche co KS

TICKET No. 12786 D.S.T. No. 2 DATE 04-17-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 28

TOTAL TOOL 55

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 86

D.C. ABOVE TOOLS.Stands4 Single Total 236

D.P. ABOVE TOOLS.Stands77 Single Total 4759

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5081

TOTAL DEPTH 5064

TOTAL DRILL PIPE ABOVE K.B. 17

REMARKS:

Established 6 feet of pay.

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	4978
S.I. TOOL Sterling	4984
HMV Sterling	4989
JARS bowen	4994
SAFETY JOINT bowen	4996
PACKER Top	5000
PACKER Btm.	5005
DEPTH 1 ft.	5006
ANCHOR	
6'perfs & sub to	5012
Alpine rec. @ 5016	
1 jt. pipe to	5043
16'perfs & sub to	5059
AK-1 rec. @ 5061	
BULLNOSE 5 ft. perforated T.D.	5064

TEST HISTORY

12786 DST#2 HERD #1 THOROUGHbred ASSOCIATES

Flag Points
t(Min.) P(PSIg)

A:	0.00	2451.69
B:	0.00	29.70
C:	27.50	41.96
D:	46.50	1444.56
E:	0.00	47.24
F:	43.50	71.58
G:	61.00	1505.32
Q:	0.00	2418.88

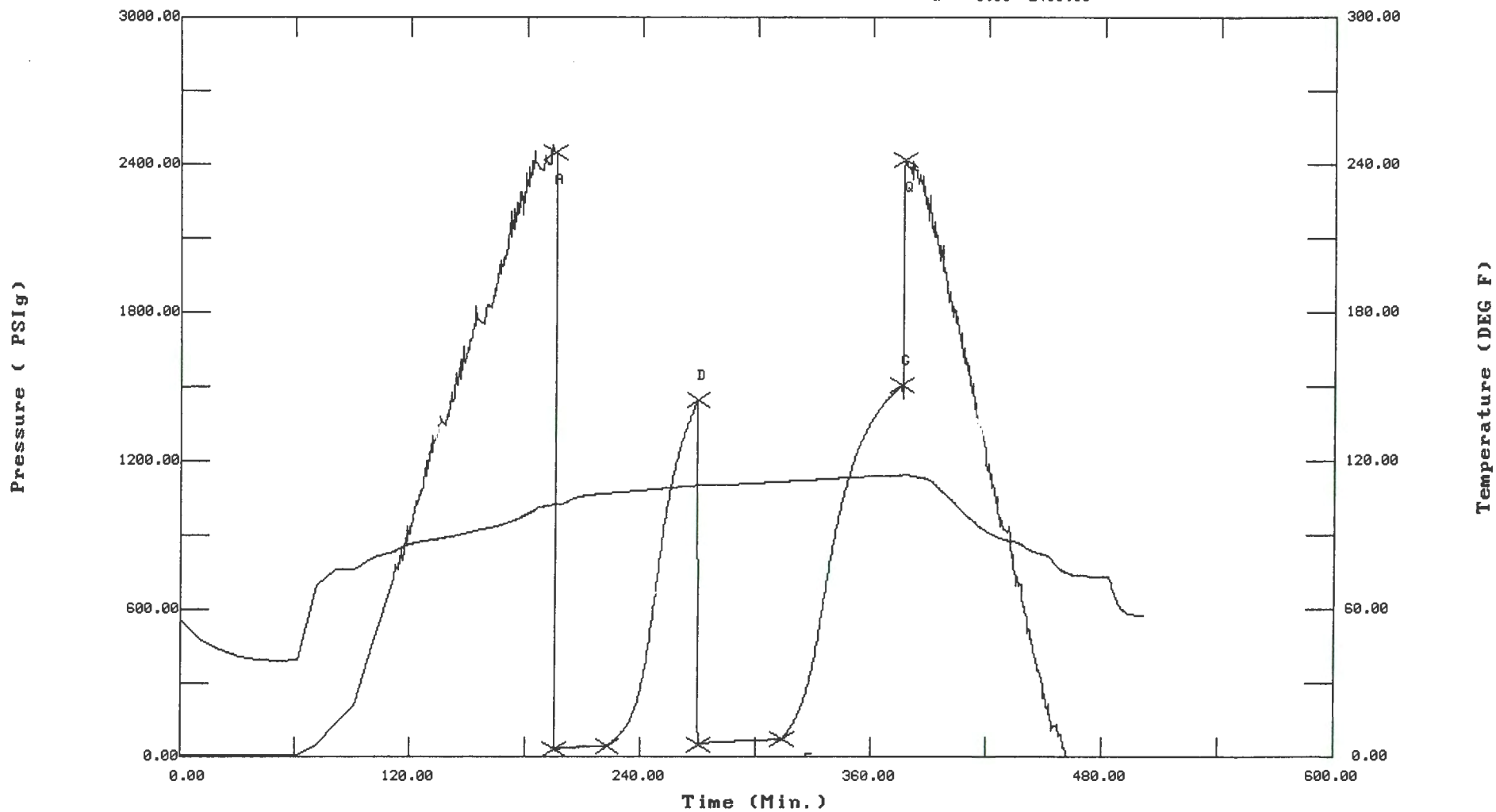
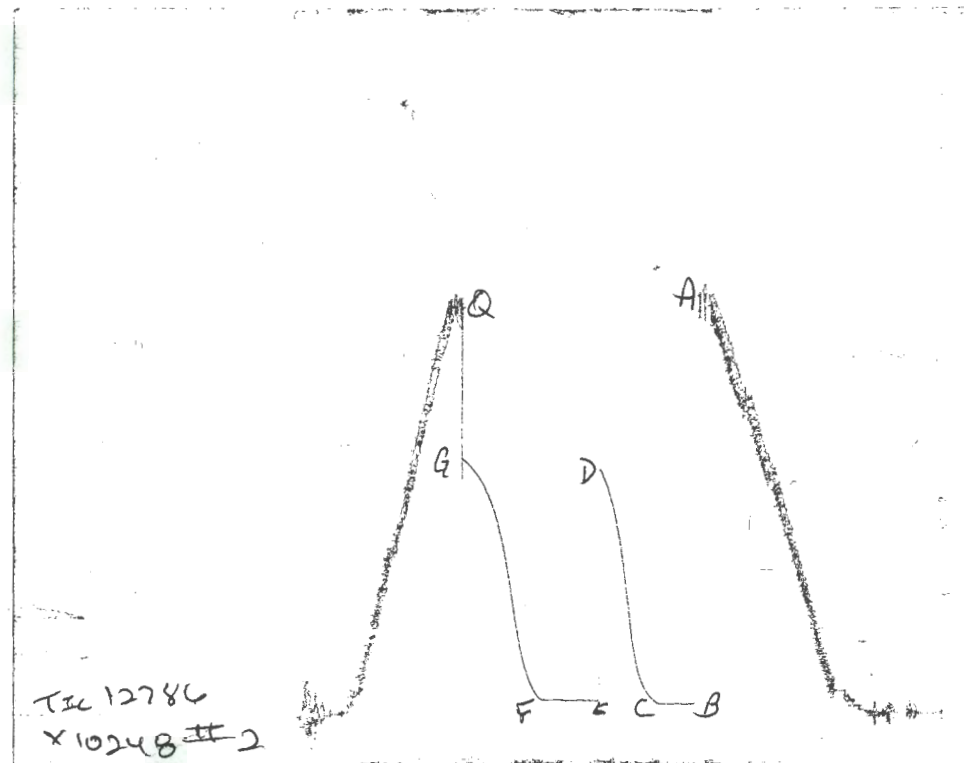


CHART PAGE



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 12786

Well Name & No.	<u>Herd #1</u>	Test No.	<u>2</u>	Date	<u>4-12-2000</u>
Company	<u>Thoroughbred Assoc.</u>	Zone Tested	<u>Pawnee / Ft. Scott</u>		
Address	<u>8100 E 22nd St. No. Bldg. Ste F. Wichita, Ks. 67226</u>	Elevation	<u>2017</u>	KB	<u>2017</u> GL
Co. Rep / Geo.	<u>Paul Gungelman</u>	Cont.	<u>Pickrell Drly. #1</u>	Est. Ft. of Pay	<u>6</u> Por. <u> </u> %
Location: Sec.	<u>15</u>	Twp.	<u>32S</u>	Rge.	<u>19W</u>
				Co.	<u>Comanche</u> State <u>Ks.</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u> </u>
				Evaluation (Y, N)	<u> </u>

Interval Tested	<u>5005 - 5064'</u>	Initial Str Wt./Lbs.	<u>74,000</u>	Unseated Str Wt./Lbs.	<u>74,000</u>
Anchor Length	<u>59'</u>	Wt. Set Lbs.	<u>20,000</u>	Wt. Pulled Loose/Lbs.	<u>86,000</u>
Top Packer Depth	<u>5000'</u>	Tool Weight	<u>2100 #</u>		
Bottom Packer Depth	<u>5005'</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5064'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>236'</u>
Mud Wt.	<u>8.9</u> LCM <u>~</u> Vis. <u>49</u> WL <u>8.0cc</u>	Drill Pipe Size	<u>4 1/2" X.H.</u>	Ft. Run	<u>4759'</u>
Blow Description	<u>IF: Weak to fair blow. Slow increase to 7".</u>				
	<u>ISI: No blow.</u>				
	<u>FF: Weak to fair blow. Slow increase to 8 or 9". FSI: No blow.</u>				

Recovery — Total Feet	<u>70</u> Fluid	GIP	<u>230</u>	Ft. in DC	<u>70</u>	Ft. in DP	<u>~</u>
Rec.	<u>70</u>	Feet Of	<u>Heavy Mud.</u>	%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	<u>114</u>	°F Gravity	<u>N/A</u>	°API D@	<u>~</u>	°F Corrected Gravity	<u>N/A</u>
RW	<u>N.C.</u>	@	<u>~</u>	°F Chlorides	<u>6,000</u> ppm Recovery	Chlorides	<u>6,000</u> ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	<u>2459</u>	<u>2452</u>	PSI	Recorder No. <u>2342</u>	T-On Location	<u>0034</u>	
(B) First Initial Flow Pressure	<u>46</u>	<u>30</u>	PSI	(depth) <u>5016'</u>	T-Started	<u>0104</u>	
(C) First Final Flow Pressure	<u>50</u>	<u>42</u>	PSI	Recorder No. <u>10248</u>	T-Open	<u>0420</u>	
(D) Initial Shut-In Pressure	<u>1441</u>	<u>1445</u>	PSI	(depth) <u>5061'</u>	T-Pulled	<u>0720</u>	
(E) Second Initial Flow Pressure	<u>69</u>	<u>47</u>	PSI	Recorder No. <u>~</u>	T-Out	<u>0910</u>	
(F) Second Final Flow Pressure	<u>82</u>	<u>72</u>	PSI	(depth) <u>~</u>	T-Off Location	<u>0950</u>	
(G) Final Shut-in Pressure	<u>1515</u>	<u>1505</u>	PSI	Initial Opening <u>30</u>	Test	<u>✓</u>	<u>800⁰⁰</u>
(Q) Final Hydrostatic Mud	<u>2428</u>	<u>2419</u>	PSI	Initial Shut-in <u>45</u>	Jars	<u>✓</u>	<u>200⁰⁰</u>
				Final Flow <u>45</u>	Safety Joint	<u>✓</u>	<u>50⁰⁰</u>
				Final Shut-in <u>60</u>	Straddle		
				<u>4</u>	Circ. Sub		
					Sampler		
					Extra Packer		
					Elec. Rec.	<u>✓</u>	<u>150⁰⁰</u>
					Mileage		
					Other		
					TOTAL PRICE \$	<u>✓</u>	<u>1200⁰⁰</u>

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Approved By Paul Gungelman

Our Representative Gary R. Rotenberry

TRILOBITE TESTING L.L.C.

OPERATOR : Thoroughbred Associates
WELL NAME: Herd #1
LOCATION : 15-32s-19w Comanche co KS
INTERVAL : 5090.00 To 5205.00 ft

DATE 04-18-000
KB 2017.00 ft TICKET NO: 12787 DST #3
GR 2012.00 ft FORMATION: Mississippi
TD 5205.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10248	10248	2342			PF Fr. 0233 to 0303 hr
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0303 to 0403 hr
SF 45	Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0403 to 0448 hr
FS 90	Depth(ft)	5202.0	5202.0	5100.0	0.0	0.0	FS Fr. 0448 to 0618 hr

	Field	1	2	3	4	
A. Init Hydro	2536.0	2559.0	2503.0	0.0	0.0	T STARTED 2341 hr
B. First Flow	188.0	178.0	184.0	0.0	0.0	T ON BOTM 0225 hr
B1. Final Flow	158.0	167.0	121.0	0.0	0.0	T OPEN 0233 hr
C. In Shut-in	1821.0	1826.0	1798.0	0.0	0.0	T PULLED 0620 hr
D. Init Flow	188.0	167.0	206.0	0.0	0.0	T OUT 0955 hr
E. Final Flow	148.0	158.0	124.0	0.0	0.0	
F. Fl Shut-in	1791.0	1794.0	1771.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2439.0	2512.0	2407.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 110000.00 lbs
						Initial Str Wt 76000.00 lbs
						Unseated Str Wt 80000.00 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 236.00 ft
						D.P. Length 4854.00 ft

RECOVERY

Tot Fluid 325.00 ft of 236.00 ft in DC and 89.00 ft in DP
0.00 ft of Gas in all fluid free pipe.
325.00 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 Rw .84 ohms @ 70 degrees F.
0.00 ft of EST.FT. of PAY-----16
SALINITY 7700.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
Strong blow. Gas to surface in 5 1/2 minutes. (See gas volume report).
Initial Shut-In:
No blow.

Final Flow:
Strong blow. (see gas volume report)

Final Shut-In:
No blow.

SAMPLES: Gas sample
SENT TO:Caraway/Liberal

Test Successful: Y

MUD DATA-----
Mud Type Chemical
Weight 9.00 lb/cf
Vis. 49.00 S/L
W.L. 8.00 in3
F.C. 0.20 in
Mud Drop N
Amt. of fill 0.00 ft
Btm. H. Temp. 131.00 F
Hole Condition good
% Porosity 16.00
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. Paul Gunzelman
Contr. Pickrell Drlg.
Rig # 1
Unit #
Pump T. LCM 0 #/bl

GAS RECOVERY

COMPANY: Thoroughbred Associates

DATE: 04-18-000

WELL NAME: Herd #1

KB Elev: 2017.00 ft TICKET #12787 DST #3

WELL LOCATION: 15-32s-19w Comanche co KS

GR Elev: 2012.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5090.00 To 5205.00 T.D.: 5205.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	6	0	299500.0
20	0.75	7	0	314100.0
30	0.75	7	0	314100.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	12	0	386800.0
20	0.75	9	0	343100.0
30	0.75	8	0	328600.0
40	0.75	8	0	328600.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #1

LOCATION : 15-32s-19w Comanche co KS

TICKET No. 12787 D.S.T. No. 3 DATE 04-18-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 22

TOTAL TOOL 49

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single 1 Total 93

TOTAL ASSEMBLY 142

D.C. ABOVE TOOLS.Stands4 Single Total 236

D.P. ABOVE TOOLS.Stands78 Single 1 Total 4854

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5232

TOTAL DEPTH 5205

TOTAL DRILL PIPE ABOVE K.B. 27

REMARKS:

Established 16 feet of pay.

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- .84 ohms @ 70 deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	5063
S.I. TOOL Sterling	5069
HMV Sterling	5074
JARS bowen	5079
SAFETY JOINT bowen	5081
PACKER Top	5085
PACKER Btm.	5090
DEPTH 5090	
1 ft.	5091
ANCHOR	
5'perfs & sub to	5096
Alpine rec. @ 5100	
3 jts. pipe to	5189
11'perfs & sub to	5200
AK-1 rec. @ 5202	
BULLNOSE 5 ft. perforated	5205
T.D.	

TEST HISTORY

12787 DST#3 HERD #1 THOROUGHbred ASSOCIATES

Flag Points

t(Min.) P(PSig)

A:	0.00	2502.00
B:	0.00	184.21
C:	28.00	120.60
D:	61.00	1797.73
E:	0.00	206.29
F:	43.50	123.92
G:	91.00	1771.37
Q:	0.00	2406.87

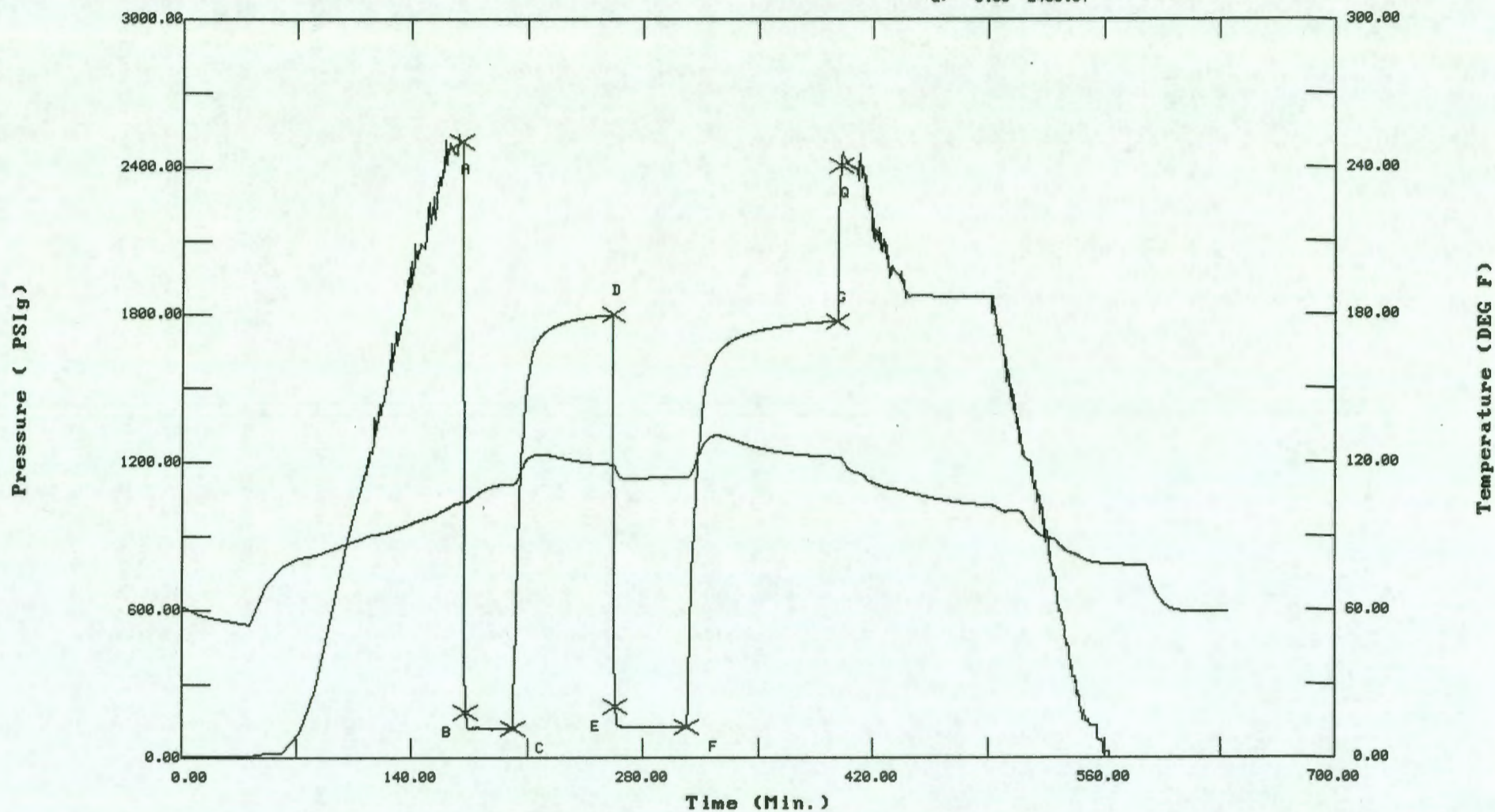
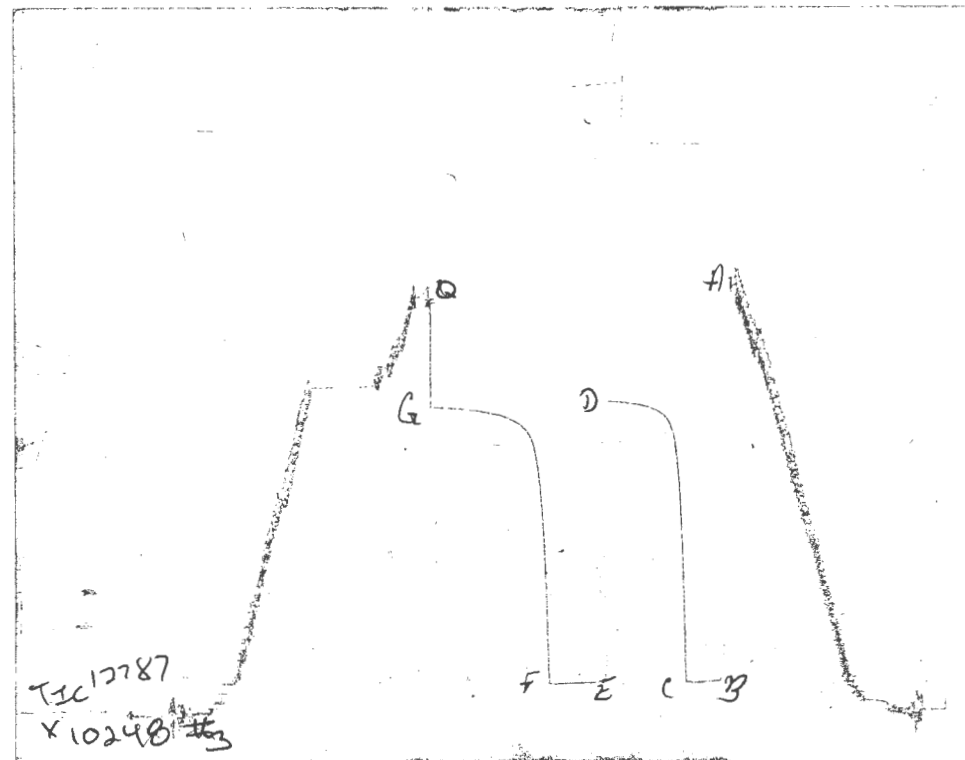


CHART PAGE



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



GAS VOLUME REPORT

Thoroughbred Assoc.
OPERATOR

OPERATOR

Herd #1

WELL NAME AND NO.

3
DST NO

Initial Open

Final Open

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12787

Well Name & No. <u>Herd # 1</u>	Test No. <u>3</u>	Date <u>4-18-2000</u>
Company <u>Thoroughbred Assoc.</u>	Zone Tested <u>Miss.</u>	
Address <u>Winters Co. 67226</u>	Elevation <u>2017</u> KB <u>2012</u> GL	
Co. Rep / Geo. <u>Paul Cunningham</u>	Cont. <u>Princeton Dlg. #1</u>	Est. Ft. of Pay <u>16</u> Por. <u> </u> %
Location: Sec. <u>15</u> Twp. <u>32S</u> Rge. <u>19W</u>	Co. <u>Comanche</u> State <u>Ks.</u>	
No. of Copies <u>5</u> Distribution Sheet (Y, N) <u>N</u>	Turnkey (Y, N) <u> </u>	Evaluation (Y, N) <u> </u>

Interval Tested <u>5090 - 5205'</u>	Initial Str Wt/Lbs. <u>76,000</u>	Unseated Str Wt/Lbs. <u>89,000</u>
Anchor Length <u>115</u>	Wt. Set Lbs. <u>2100</u>	Wt. Pulled Loose/Lbs. <u>110,000</u>
Top Packer Depth <u>5085'</u>	Tool Weight <u>2100#</u>	
Bottom Packer Depth <u>5090'</u>	Hole Size — 7 7/8" <u>✓</u>	Rubber Size — 6 3/4" <u>✓</u>
Total Depth <u>5205'</u>	Wt. Pipe Run <u>None</u>	Drill Collar Run <u>236'</u>
Mud Wt. <u>9.0</u> LCM <u> </u> Vis. <u>49</u> WL <u>8.0 cc.</u>	Drill Pipe Size <u>4 1/2" x .4</u>	Ft. Run <u>4854</u>
Blow Description <u>FF: Strong below. GTS in 5 1/2 mins. (see gas volume report) ISI: No below.</u>		
<u>FF: Strong below. (see gas volume report) FSI: No below.</u>		

Recovery — Total Feet <u>325</u>	Fluid GIP <u>yes</u>	Ft. in DC <u>236</u>	Ft. in DP <u>89</u>
Rec. <u>325</u>	Feet Of <u>Dry Mud.</u>	%gas <u> </u> %oil <u>11</u> %water <u>89</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> </u>	Feet Of <u> </u>	%gas <u> </u> %oil <u> </u> %water <u> </u> %mud <u> </u>	
BHT <u>131</u>	°F Gravity <u>N/A</u>	°API D@ <u> </u>	°F Corrected Gravity <u>N/A</u> °API <u> </u>
RW <u>.84</u> @ <u>70</u>	°F Chlorides <u>7700</u>	ppm Recovery	Chlorides <u>6,000</u> ppm System

(A) Initial Hydrostatic Mud	AK-1 <u>2536</u>	Alpine <u>2503</u>	PSI Recorder No. <u>2342</u>	T-On Location <u>2310</u>
(B) First Initial Flow Pressure	<u>188</u>	<u>184</u>	PSI (depth) <u>5108'</u>	T-Started <u>2341</u>
(C) First Final Flow Pressure	<u>158</u>	<u>121</u>	PSI Recorder No. <u>10246</u>	T-Open <u>0233</u>
(D) Initial Shut-In Pressure	<u>1821</u>	<u>1798</u>	PSI (depth) <u>5202'</u>	T-Pulled <u>0620</u>
(E) Second Initial Flow Pressure	<u>186</u>	<u>206</u>	PSI Recorder No. <u> </u>	T-Out <u>0955</u>
(F) Second Final Flow Pressure	<u>148</u>	<u>124</u>	PSI (depth) <u> </u>	T-Off Location <u>1100</u>
(G) Final Shut-in Pressure	<u>1791</u>	<u>1771</u>	PSI Initial Opening <u>30</u>	Test <u>✓</u> <u>800⁰⁰</u>
(Q) Final Hydrostatic Mud	<u>2439</u>	<u>2407</u>	PSI Initial Shut-in <u>60</u>	Jars <u>✓</u> <u>200⁰⁰</u>
			Final Flow <u>45</u>	Safety Joint <u>✓</u> <u>50</u>
			Final Shut-in <u>90</u>	Straddle <u> </u>
			<u>4</u>	Circ. Sub <u> </u>
			<u>1</u>	Sampler <u> </u>

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Approved By Paul Cunningham

Our Representative Paul Cunningham

Extra Packer 150⁰⁰
 Elec. Rec. ✓
 Mileage 38⁰⁰
 Other BY ✓
 TOTAL PRICE \$ 1230⁰⁰

Well Name Herd # 1
DST Number 1
Recorder Number 102418

A:	<u>2.198</u>	<u>2423</u>
B:	<u>.158</u>	<u>179</u>
C:	<u>.179</u>	<u>203</u>
D:	<u>1.620</u>	<u>1788</u>
E:	<u>.191</u>	<u>217</u>
F:	<u>.211</u>	<u>239</u>
G:	<u>1.617</u>	<u>1785</u>
Q:	<u>2.172</u>	<u>2395</u>

Well Name Herd
DST Number 2
Recorder Number 10248

A: 2.2100 2492

B: .050 57

C: .046 52

D: 1.308 1447

E: .066 75

F: .071 81

G: 1.367 1511

Q: 2.234 2463

Well Name Herd
DST Number 3
Recorder Number 10248

A:	<u>2.321</u>	<u>2559</u>
B:	<u>.157</u>	<u>178</u>
C:	<u>.147</u>	<u>167</u>
D:	<u>1.655</u>	<u>1826</u>
E:	<u>.147</u>	<u>167</u>
F:	<u>.139</u>	<u>158</u>
G:	<u>1.625</u>	<u>1794</u>
Q:	<u>2.278</u>	<u>2512</u>

Well Name Barnes
DST Number 1
Recorder Number 13805

A: 2453 2627

B: 181 195

C: 181 195

D: 1.729 1853

E: 201 216

F: 186 200

G: 1.740 1865

Q: 2.342 2529