

TRILOBITE TESTING L.L.C.

OPERATOR : Samuel Gary Jr.&  
 WELL NAME: Herd #34-13  
 LOCATION : 39-32s-19w Comanche KS  
 INTERVAL : 4704.00 To 4726.00 ft

DATE 05/29/98  
 KB 1935.00 ft TICKET NO: 10790 DST #1  
 GR 1922.00 ft FORMATION: Swope  
 TD 4726.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	10332	10332	2350			PF Fr. 0108 to 0123 hr
SI 90 Range(Psi )	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. 0123 to 0253 hr
SF 45 Clock(hrs)	12hr.	12hr.	elec.			SF Fr. 0253 to 0338 hr
FS 90 Depth(ft )	4723.0	4723.0	4710.0	0.0	0.0	FS Fr. 0338 to 0508 hr

	Field	1	2	3	4	
A. Init Hydro	2258.0	2253.0	2263.0	0.0	0.0	T STARTED 2239 hr
B. First Flow	304.0	300.0	248.0	0.0	0.0	T ON BOTM 0105 hr
B1. Final Flow	344.0	348.0	326.0	0.0	0.0	T OPEN 0108 hr
C. In Shut-in	1763.0	1775.0	1788.0	0.0	0.0	T PULLED 0508 hr
D. Init Flow	364.0	360.0	290.0	0.0	0.0	T OUT 0800 hr
E. Final Flow	476.0	480.0	470.0	0.0	0.0	
F. Fl Shut-in	1753.0	1763.0	1787.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2248.0	2232.0	2246.0	0.0	0.0	Tool Wt. 2100.00 lb
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lb
						Wt Pulled Loose 98000.00 lb
						Initial Str Wt 72000.00 lb
						Unseated Str Wt 77000.00 lb
						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 4468.00 ft

RECOVERY

Tot Fluid 672.00 ft of 236.00 ft in DC and 436.00 ft in DP  
 30.00 ft of Mud cut water 42% water 58% mud  
 642.00 ft of 100%water  
 4032.00 ft of Gas in pipe  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of

SALINITY 80000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:  
 Strong blow bottom of bucket in  
 15 secs. Gas to surface  
 Initial Shut-in:  
 Bled down for 20 mins. blow back to  
 1.4"  
 Final Flow:  
 Strong blow bottom of bucket in  
 10-15 secs. Guage gas  
 Final Shut-in:  
 Bled down for 30 mins blow back to  
 1/2" in H2O bucket.

SAMPLES: Caraway Analytical, Liberal ks,  
 SENT TO:

Test Successful: Y

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.00 lb  
 Vis. 44.00 S/  
 W.L. 12.40 in  
 F.C. 0.32 in  
 Mud Drop N  
 Amt. of fill 0.00 ft  
 Btm. H. Temp. 119.00 F  
 Hole Condition good  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00 n  
 Cushion Type none  
 Reversed Out N  
 Tool Chased N  
 Tester Darren Amerine  
 Co. Rep. Bill Padget  
 Contr. Duke  
 Rig # 7  
 Unit # none  
 Pump T. no

## GAS RECOVERY

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MPANY: Samuel Gary Jr.&amp;

DATE: 05/29/98

LL NAME: Herd #34-13

KB Elev: 1935.00 ft TICKET #10790 DST #1

LL LOCATION: 39-32s-19w Comanche KS

GR Elev: 1922.00 ft FORMATION: Swope

TERVAL Fr.: 4704.00 To 4726.00 T.D.: 4726.00 ft TEST TYPE: CONVENTIONAL

S RECOVERY MEASURED WITH Adj.Choke

## \*\*\* GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	13	0	303000.0
10	0.75	30	0	522000.0
12	0.75	45	0	697000.0

## \*\*\* GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	45	0	697000.0
10	0.75	55	0	814000.0
15	0.75	60	0	872000.0
20	0.75	60	0	872000.0
25	0.75	60	0	872000.0
30	0.75	60	0	872000.0
35	0.75	60	0	872000.0
40	0.75	60	0	872000.0
45	0.75	60	0	872000.0

\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Herd #34-13

LOCATION : 39-32s-19w Comanche KS

TICKET No. 10790 D.S.T. No. 1 DATE 05/29/98

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 22

TOTAL TOOL ..... 52

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.	Stands	Single	Total
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D.P. ANCHOR STND.	Stands	Single	Total
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TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.	Stands	4	Single	Total	236
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D.P. ABOVE TOOLS.	Stands	71	Single	1	Total	4468
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TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4756

TOTAL DEPTH ..... 4726

TOTAL DRILL PIPE ABOVE K.B. .... 29

REMARKS:

FLUID SAMPLER DATA

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pit mud analysis  
 Chlorides--7200-----ppm.  
 Res..8--ohms@--80--F.  
 Vis--44-----  
 Mud weight--9.0-----  
 Filtrate--12.4-----  
 Other-----

Sampler recovery  
 Gas---3.5 cu.ft  
 oil-----ML.  
 mud-----ML:  
 water-----ML.  
 other-----ML.  
 pressure--500---Psi.  
 total.---4000---ML.

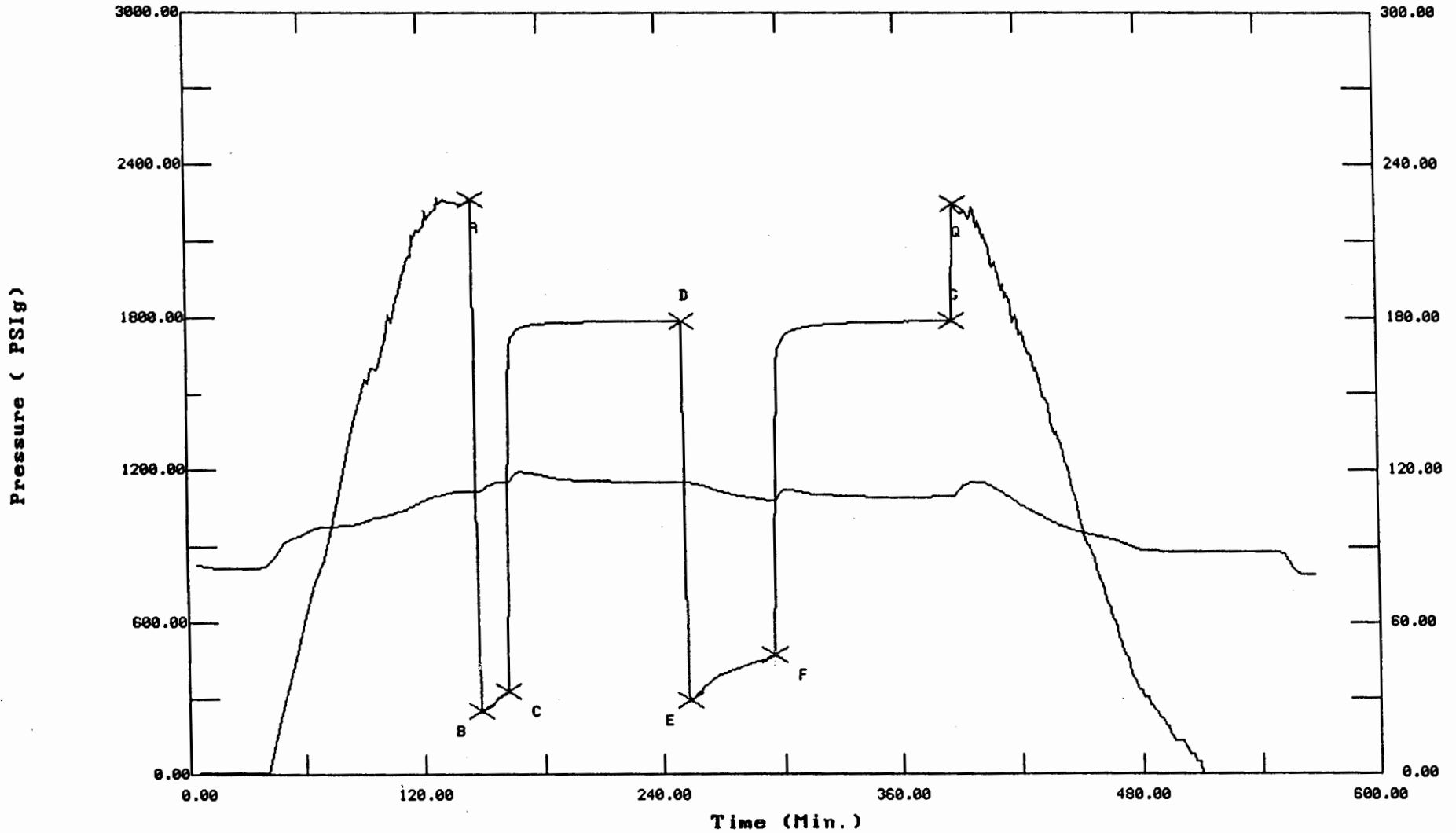
P.O. SUB	4674
C.O. SUB Top of tool @	4675
S.I. TOOL	4680
SAMPLER	4683
HMV	4688
JARS	4693
SAFETY JOINT	4695
PACKER	4699
PACKER	4704
DEPTH 4704	
STUBB 1'stubb to	4705
ANCHOR 5'perfs to	4710
Alpine rec.@	4710
T.C. DEPTH	
11'ofperfs.to	4710
Ak-1 rec.@4723	4721
BULLNOSE 5'Bullnose to	4726
T.D.	

# TEST HISTORY

TK#10790 DST#1 Herd #34-13 Sam Gary Jr.

## Flag Points

t(Min.)	P( PSig)
A: 0.00	2262.77
B: 0.00	248.33
C: 14.00	326.39
D: 90.00	1788.16
E: 0.00	290.21
F: 42.00	470.32
G: 91.00	1787.23
Q: 0.00	2245.65



TRILOBITE TESTING L.L.C.

OPERATOR : Samuel Gary Jr.&  
 WELL NAME: Herd #34-13  
 LOCATION : 39-32s-19w Comanche KS  
 INTERVAL : 4994.00 To 5012.00 ft

DATE 05/31/98

KB 1935.00 ft TICKET NO: 10791 DST #2  
 GR 1922.00 ft FORMATION: Fort Scott  
 TD 501226.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 10	Rec.	10332	10332	2350			PF Fr. 1238 to 1248 hr
SI 90	Range (Psi )	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. 1248 to 1418 hr
SF 45	Clock (hrs)	12hr.	12hr.	elec.			SF Fr. 1418 to 1503 hr
FS 90	Depth(ft )	5009.0	5009.0	5000.0	0.0	0.0	FS Fr. 1503 to 1633 hr

	Field	1	2	3	4	
A. Init Hydro	2408.0	2393.0	2415.0	0.0	0.0	T STARTED 1031 hr
B. First Flow	111.0	99.0	96.0	0.0	0.0	T ON BOTM 1234 hr
B1. Final Flow	101.0	99.0	120.0	0.0	0.0	T OPEN 1238 hr
C. In Shut-in	1196.0	1190.0	1223.0	0.0	0.0	T PULLED 1633 hr
D. Init Flow	111.0	98.0	95.0	0.0	0.0	T OUT 1840 hr
E. Final Flow	101.0	90.0	97.0	0.0	0.0	
F. Fl Shut-in	1196.0	1183.0	1208.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2398.0	2345.0	2348.0	0.0	0.0	Tool Wt. 2100.00 lb
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lb
						Wt Pulled Loose 80000.00 lb
						Initial Str Wt 77000.00 lb
						Unseated Str Wt 77000.00 lb
						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 266.00 ft
						D.P. Length 4219.00 ft

RECOVERY

Tot Fluid 45.00 ft of 45.00 ft in DC and 0.00 ft in DP  
 45.00 ft of Very slight water cut mud 2%water 98%mud  
 4940.00 ft of Gas in pipe  
 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

IF:Strong blow.B.O.B in 10 sec.G.T.S in  
 2-1/2 mins.Gauge gas.

ISI:Bled down for 20 mins.No B.B.

FF:Strong blow.B.O.B in 10 sec.Gauge gas

FSI:Bled down for 20 mins.No B.B.

SAMPLES: Caraway Analytical, Liberal ks,  
 SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb
Vis.	49.00 S/
W.L.	9.80 in
F.C.	0.32 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	115.00 F
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren Amerine
Co. Rep.	Bill Padget
Contr.	Duke
Rig #	7
Unit #	none
Pump T.	no

Test Successful: Y

## GAS RECOVERY

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COMPANY: Samuel Gary Jr. &amp;

DATE: 05/31/98

WELL NAME: Herd #34-13

KB Elev: 1935.00 ft TICKET #10791 DST #2

WELL LOCATION: 39-32s-19w Comanche KS

GR Elev: 1922.00 ft FORMATION: Fort Scott

PERIOD Fr.: 4994.00 To 5012.00 T.D.: 501226.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adj. Choke

## \*\*\* GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	16	0	425000.0
6	0.75	22	0	502000.0

## \*\* GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	17	0	439000.0
10	0.75	22	0	509000.0
15	0.75	23	0	523000.0
20	0.75	23	0	523000.0
25	0.75	23	0	523000.0
30	0.75	22	0	516000.0
35	0.75	22	0	509000.0
40	0.75	22	0	502000.0
45	0.75	21	0	495000.0

\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Herd #34-13

LOCATION : 39-32s-19w Comanche KS

TICKET No. 10791 D.S.T. No: 2 DATE 05/31/98

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 18

TOTAL TOOL ..... 48

DRILL COLLAR ANCHOR, IN INTERVAL .....

D.C. ANCHOR STND.Stands      Single      Total

D.P. ANCHOR STND.Stands      Single      Total

TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.Stands4      Single 1      Total 266

D.P. ABOVE TOOLS.Stands75      Single 1      Total 4219

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5033

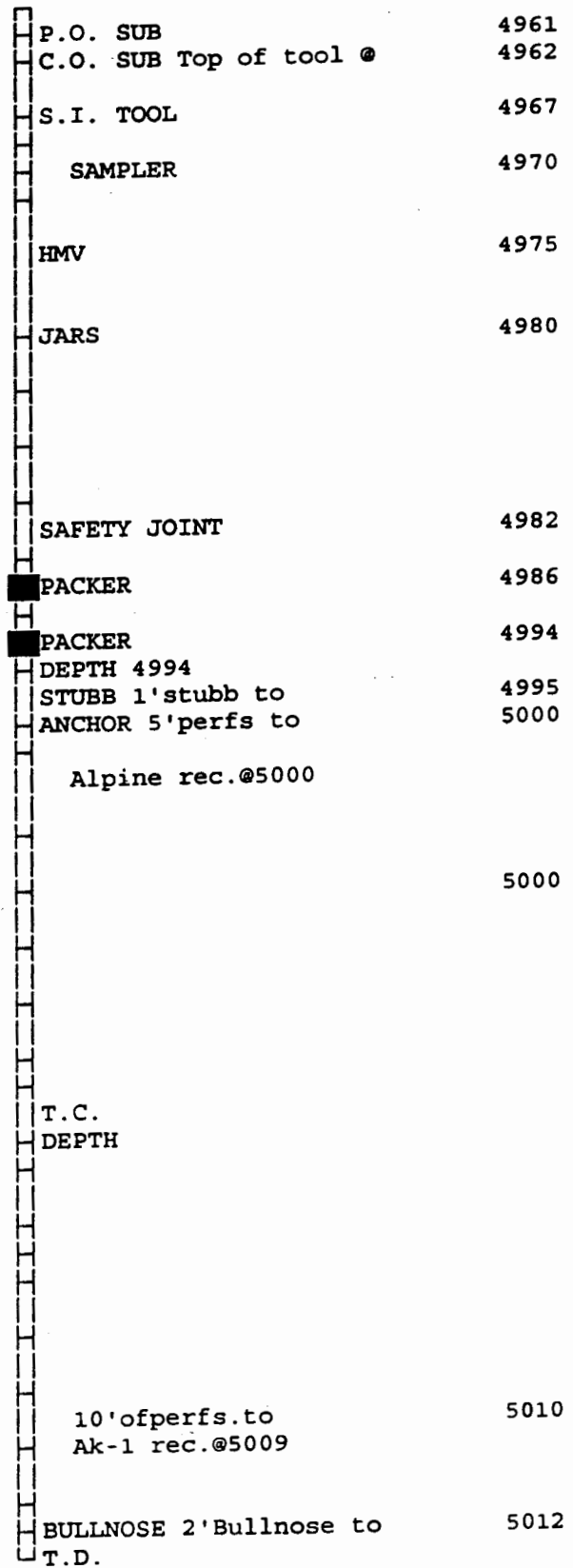
TOTAL DEPTH ..... 5012

TOTAL DRILL PIPE ABOVE K.B. .... 21

REMARKS:

FLUID SAMPLER DATA  
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pit mud analysis	Sampler recovery
Chlorides-10000-----ppm.	Gas---.5 cu.ft-ML.
Res.0.5-ohms@--85--F.	oil-----ML.
Vis-49--Weight--9.1+	mud-----ML.
Filtrate-9.8--no LCM	water-----ML.
Sampler analysis	other-----ML.
Res.-----Ohms.@----F.	pressure---85---Psi.
Chlorides-----PPM.	total.---4000---ML.



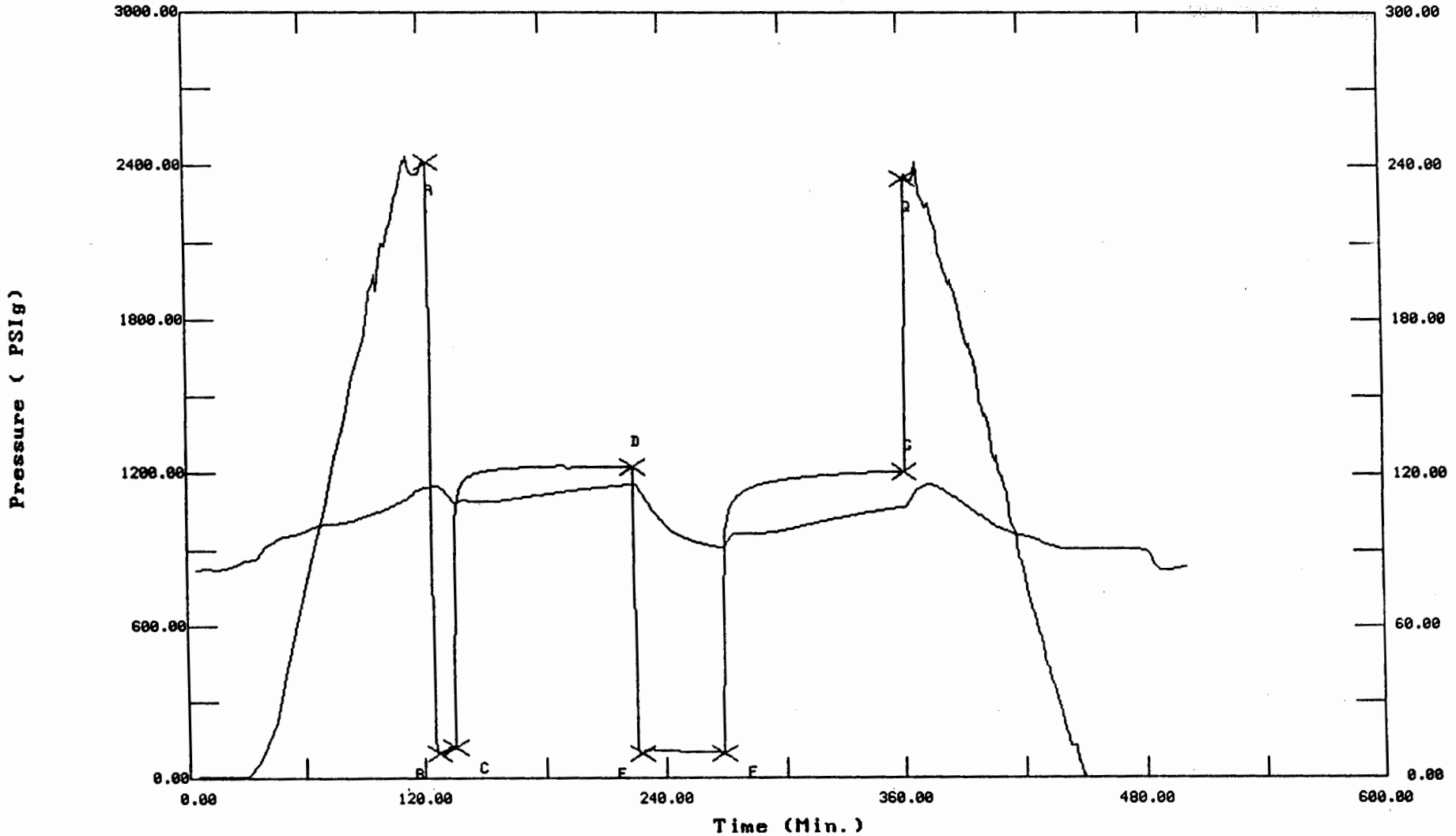
P.O. SUB 4961  
 C.O. SUB Top of tool @ 4962  
 S.I. TOOL 4967  
 SAMPLER 4970  
 HMV 4975  
 JARS 4980  
 SAFETY JOINT 4982  
 PACKER 4986  
 PACKER 4994  
 DEPTH 4994 4995  
 STUBB 1'stubb to ANCHOR 5'perfs to 5000  
 Alpine rec.@5000  
 T.C. DEPTH  
 10'ofperfs.to Ak-1 rec.@5009 5010  
 BULLNOSE 2'Bullnose to T.D. 5012

# TEST HISTORY

TK#10791 DST#2 Herd #34-13 Sam Gary Jr.

## Flag Points

	t(Min.)	P( PSig)
A:	0.00	2414.68
B:	0.00	96.34
C:	8.00	120.43
D:	90.00	1223.49
E:	0.00	94.91
F:	41.00	96.68
G:	92.00	1207.00
Q:	0.00	2347.70



TRILOBITE TESTING L.L.C.

OPERATOR : Samuel Gary Jr & Assoc.  
 WELL NAME: Herd #34-13  
 LOCATION : 39-32s-19w Comanche KS  
 INTERVAL : 5164.00 To 5190.00 ft

DATE 06/01/98

KB 1935.00 ft TICKET NO: 10792 DST #3  
 GR 1922.00 ft FORMATION: Miss.  
 TD 5190.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 10 Rec.	10332	10332	2350			PF Fr. 1757 to 1807 hr
SI 90 Range(Psi )	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. 1807 to 1937 hr
SF 45 Clock(hrs)	12hr.	12hr.	elec.			SF Fr. 1937 to 2037 hr
FS 90 Depth(ft )	5187.0	0.0	5170.0	0.0	0.0	FS Fr. 2037 to 2237 hr

	Field	1	2	3	4	
A. Init Hydro	2468.0	2465.0	2475.0	0.0	0.0	T STARTED 1555 hr
B. First Flow	111.0	119.0	94.0	0.0	0.0	T ON BOTM 1755 hr
B1. Final Flow	130.0	131.0	130.0	0.0	0.0	T OPEN 1757 hr
C. In Shut-in	1397.0	1391.0	1401.0	0.0	0.0	T PULLED 2237 hr
D. Init Flow	122.0	115.0	93.0	0.0	0.0	T OUT 0120 hr
E. Final Flow	162.0	161.0	168.0	0.0	0.0	
F. Fl Shut-in	1407.0	1393.0	1392.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2468.0	2462.0	2475.0	0.0	0.0	Tool Wt. 2100.00 lb
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lb
						Wt Pulled Loose 100000.00
						Initial Str Wt 77000.00 lb
						Unseated Str Wt 77000.00 lb
						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 266.00 ft
						D.P. Length 4873.00 ft

RECOVERY

Tot Fluid 30.00 ft of 30.00 ft in DC and 0.00 ft in DP  
 30.00 ft of Very slight gas cut mud 2%gas 98%mud  
 4873.00 ft of Gas in pipe  
 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:  
 Strong blow bottom of bucket in 10-15  
 secs. Gas to surface in 3 1/2 mins.  
 Initial Shut-in:  
 Bled down for 20 mins. No blow back  
 Final Flow:  
 Strong blow bottom of bucket in  
 10 secs. Gauge gas  
 Final Shut-in:  
 Bled down for 20 mins. no blow back

SAMPLES: Caraway Analytical, Liberal ks,  
 SENT TO:

Test Successful: Y

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.10 lb  
 Vis. 44.00 S  
 W.L. 8.00 in  
 F.C. 0.32 in  
 Mud Drop N  
 Amt. of fill 0.00 ft  
 Btm. H. Temp. 119.00 F  
 Hole Condition good  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00 n  
 Cushion Type none  
 Reversed Out N  
 Tool Chased N  
 Tester Darren Amerine  
 Co. Rep. Bill Padget  
 Contr. Duke  
 Rig # 7  
 Unit # none  
 Pump T. no

GAS RECOVERY  
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COMPANY: Samuel Gary Jr & Assoc.                      DATE: 06/01/98  
 WELL NAME: Herd #34-13                                      KB Elev: 1935.00 ft TICKET #10792      DST #3  
 WELL LOCATION: 39-32s-19w Comanche KS              GR Elev: 1922.00 ft FORMATION: Miss.  
 PERFORATION: 5164.00 To 5190.00 T.D.: 5190.00 ft TEST TYPE: CONVENTIONAL

3 RECOVERY MEASURED WITH Adj.Choke

\*\*\* GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	15	0	425000.0
6	0.75	21	0	495000.0

\*\* GAS RATES FOR FLOW #2

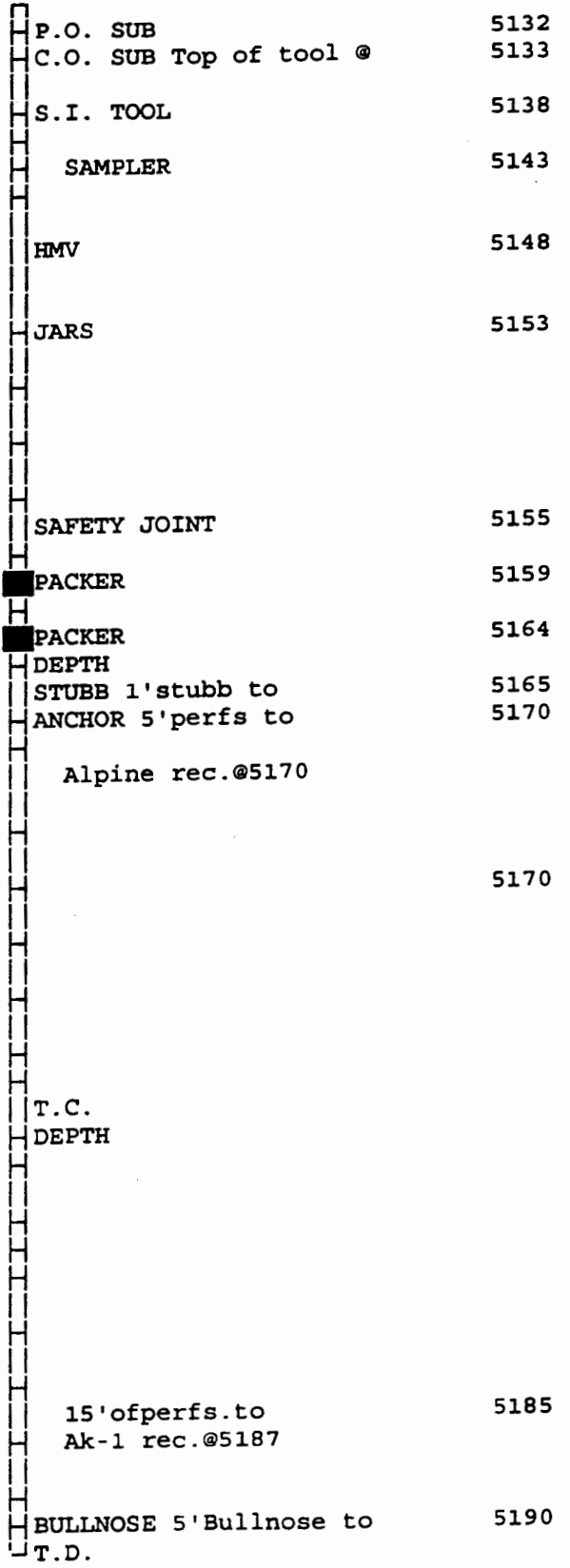
Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	25	0	551000.0
10	0.75	38	0	732000.0
15	0.75	41	0	744000.0
20	0.75	45	0	830000.0
25	0.75	46	0	844000.0
30	0.75	50	0	900000.0
35	0.75	50	0	900000.0
40	0.75	51	0	914000.0
45	0.75	54	0	956000.0
50	0.75	55	0	970000.0
55	0.75	55	0	970000.0
60	0.75	56	0	983000.0

\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: Herd #34-13  
 LOCATION : 39-32s-19w Comanche KS  
 TICKET No. 10792 D.S.T. No. 3 DATE 06/01/98  
 TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 30  
 INTERVAL TOOL .....  
 BOTTOM PACKERS AND ANCHOR ..... 26  
 TOTAL TOOL ..... 56  
 DRILL COLLAR ANCHOR IN INTERVAL .....  
 D.C. ANCHOR STND.Stands Single Total  
 D.P. ANCHOR STND.Stands Single Total  
 TOTAL ASSEMBLY .....  
 D.C. ABOVE TOOLS.Stands4 Single 1 Total 266  
 D.P. ABOVE TOOLS.Stands79 Single 1 Total 4873  
 TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5195  
 TOTAL DEPTH ..... 5190  
 TOTAL DRILL PIPE ABOVE K.B. .... 5  
 REMARKS:

FLUID SAMPLER DATA  
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pit mud analysis	Sampler recovery
Chlorides--9000----ppm.	~~~~~
Res.0.6-ohms@--82--F.	Gas---4000----ML.
Vis-44--Weight--9.1-	oil-----ML.
Filtrate-8.0--no LCM	mud-----ML.
Sampler analysis	water-----ML.
Res.-----Ohms.@----F.	other-----ML.
Chlorides-----PPM.	pressure--150---Psi.
	total.---4000---Ml.



P.O. SUB 5132  
 C.O. SUB Top of tool @ 5133  
 S.I. TOOL 5138  
 SAMPLER 5143  
 HMV 5148  
 JARS 5153  
 SAFETY JOINT 5155  
 PACKER 5159  
 PACKER 5164  
 DEPTH 5165  
 STUBB 1'stubb to ANCHOR 5'perfs to 5170  
 Alpine rec.@5170  
 T.C. DEPTH 5170  
 15'ofperfs.to Ak-1 rec.@5187 5185  
 BULLNOSE 5'Bullnose to T.D. 5190

# TEST HISTORY

Tk#10792 DST#3 Herd #34-13 Sam Gary Jr.

Flag Points

	t(Min.)	P( PSig)
A:	0.00	2474.69
B:	0.00	94.07
C:	9.00	130.33
D:	88.00	1400.79
E:	0.00	-93.40
F:	58.00	167.93
G:	122.00	1392.40
Q:	0.00	2475.27

