TRILOBITE TESTING L.L.C.

OPERATOR : Helmerich & Payne Inc. DATE 11-17-99
WELL NAME: Bedford "B-2" KB 2968.00 ft TICKET NO: 12219 DST #1
LOCATION : 9-26S-34W Finney co KS GR 2958.00 ft FORMATION: Pawnee,Ft.Scott,Cher
INTERVAL : 4526.00 To 4590.00 ft TD 4590.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 15	Rec.	10242	10242	Alpine		
SI 60	Range(Psi)	4100.0	4100.0	5000.0	0.0	0.0
SF 60	Clock(hrs)	12 HR	12 HR	Elect		
FS 180	Depth(ft)	4587.0	4587.0	4528.0	0.0	0.0

TIME DATA----------
PF Fr. 2055 to 2110 hr
IS Fr. 2110 to 2210 hr
SF Fr. 2210 to 2310 hr
FS Fr. 2310 to 0210 hr

	Field	1	2	3	4
A. Init Hydro	2163.0	2183.0	2104.0	0.0	0.0
B. First Flow	221.0	245.0	161.0	0.0	0.0
B1. Final Flow	242.0	269.0	214.0	0.0	0.0
C. In Shut-in	1282.0	1301.0	1279.0	0.0	0.0
D. Init Flow	280.0	330.0	282.0	0.0	0.0
E. Final Flow	320.0	343.0	312.0	0.0	0.0
F. Fl Shut-in	1273.0	1293.0	1272.0	0.0	0.0
G. Final Hydro	2163.0	2183.0	2088.0	0.0	0.0
Inside/Outside	I	I	I		

T STARTED 1815 hr
T ON BOTM 2053 hr
T OPEN 2055 hr
T PULLED 0210 hr
T OUT 0700 hr

RECOVERY
Tot Fluid 930.00 ft of 591.00 ft in DC and 339.00 ft in DP
3574.00 ft of Gas in pipe
90.00 ft of Oil & Gas cut Mud 9% Gas 8% Oil 83% Mud
430.00 ft of Slight Mud cut Gassy Oil
0.00 ft of 40% gas 50% oil 10% mud
410.00 ft of Clean gassy oil 44% gas 56% oil
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 36.00

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

Tool Wt.	2300.00 lbs
Wt Set On Packer	23000.00 lbs
Wt Pulled Loose	12000.00 lbs
Initial Str Wt	83000.00 lbs
Unseated Str Wt	83000.00 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	591.00 ft
D.P. Length	3913.00 ft

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

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	52.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop Y	30.0 ft
Amt. of fill	0.00 ft
Btm. H. Temp.	118.00 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.	Brad Rine
Contr.	Cheyenne
Rig #	2
Unit #	
Pump T.	

BLOW DESCRIPTION
Initial Flow:
Weak 1", built to strong off bottom of bucket in 10 mins.
Initial Shut-in:
Strong off bottom of bucket blow-back
Final Flow:
Weak 1", built to strong off bottom of bucket in 9 mins.
Final Shut-in:
Strong off bottom of bucket blow back
Gas to surface
Remarks: Est. 15 ft. of pay.

SAMPLES: None
SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Bedford "B-2"

LOCATION : 9-26S-34W Finney co KS

TICKET No. 12219 D.S.T. No. 1 DATE 11-17-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 33

TOTAL TOOL 63

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 94

D.C. ABOVE TOOLS.Stands 10 Single Total 591

D.P. ABOVE TOOLS.Stands 63 Single Total 3913

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4598

TOTAL DEPTH 4590

TOTAL DRILL PIPE ABOVE K.B. 8

REMARKS:

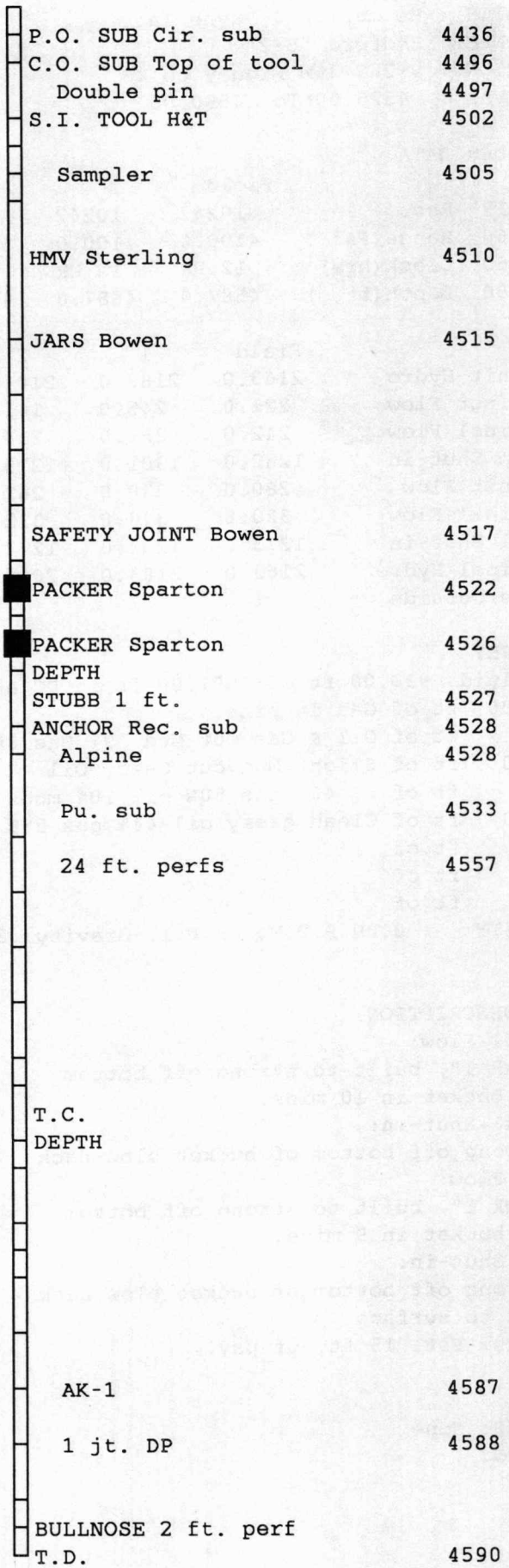
FLUID SAMPLER DATA

Total Vol.	5000 ML.
Total Vol. Rec.	2500 ML.
Oil	2500 ML.
Mud	0 ML.
Wtr.	0 ML.
Gas	10.3 CF.
Psi.	760
Bht.	118 F.

Pit RW. 5.6 Ohms at 67 F. 1,000 PPM.

Rec RW. --- Ohms at -- F. ----- PPM.

Gravity 36 at 60 F.

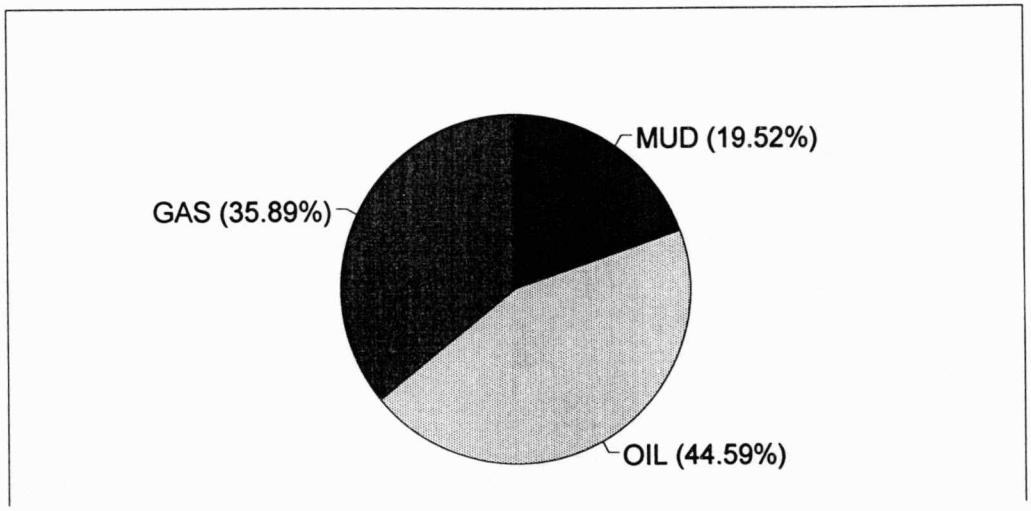


CALCULATED RECOVERY ANALYSIS

DST 1 TICKET 12219

SAMPLE		TOTAL	GAS		OIL		WATER		MUD	
#		FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL	1	90	9	8.1	8	7.2	0	0	83	74.7
PIPE	2	249	40	99.6	50	124.5	0	0	10	24.9
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL	1	181	40	72.4	50	90.5	0	0	10	18.1
COLLARS	2	410	44	180.4	56	229.6	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		930	0	360.5	0	451.8	0	0	0	117.7

			HRS OPEN		BBL/DAY
BBL OIL=	3.438063	*	1.25	=	66.01081
BBL WATER=	0	*		=	0
BBL MUD=	1.504821				
BBL GAS =	2.767686				



TEST HISTORY

12219 D.S.T.#1 Bedford "B-2" Helmerich & Payne Inc.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2104.89
B:	0.00	161.02
C:	15.67	214.76
D:	59.33	1279.62
E:	0.00	282.83
F:	59.33	312.83
G:	180.33	1272.51
Q:	0.00	2088.32

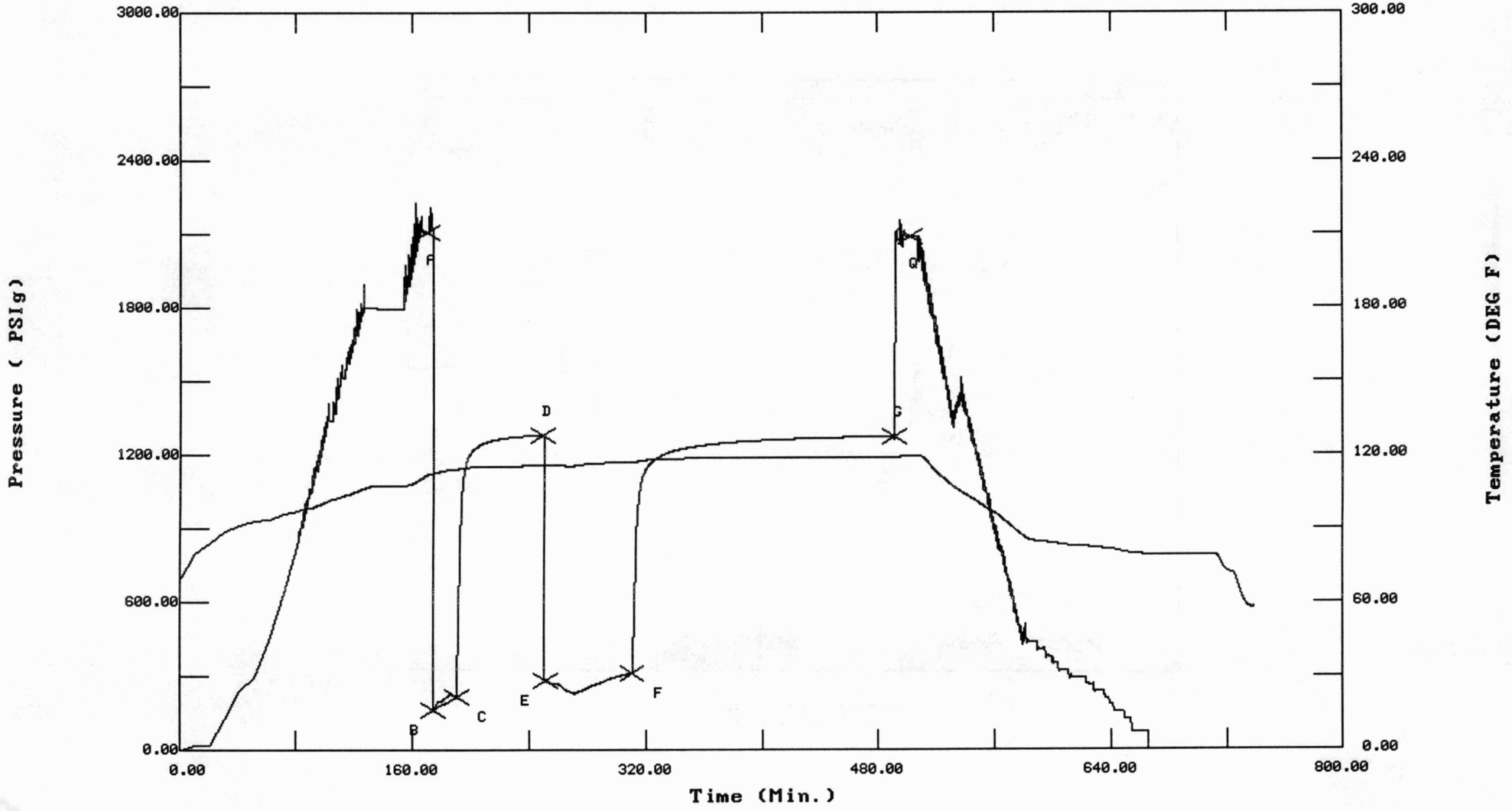
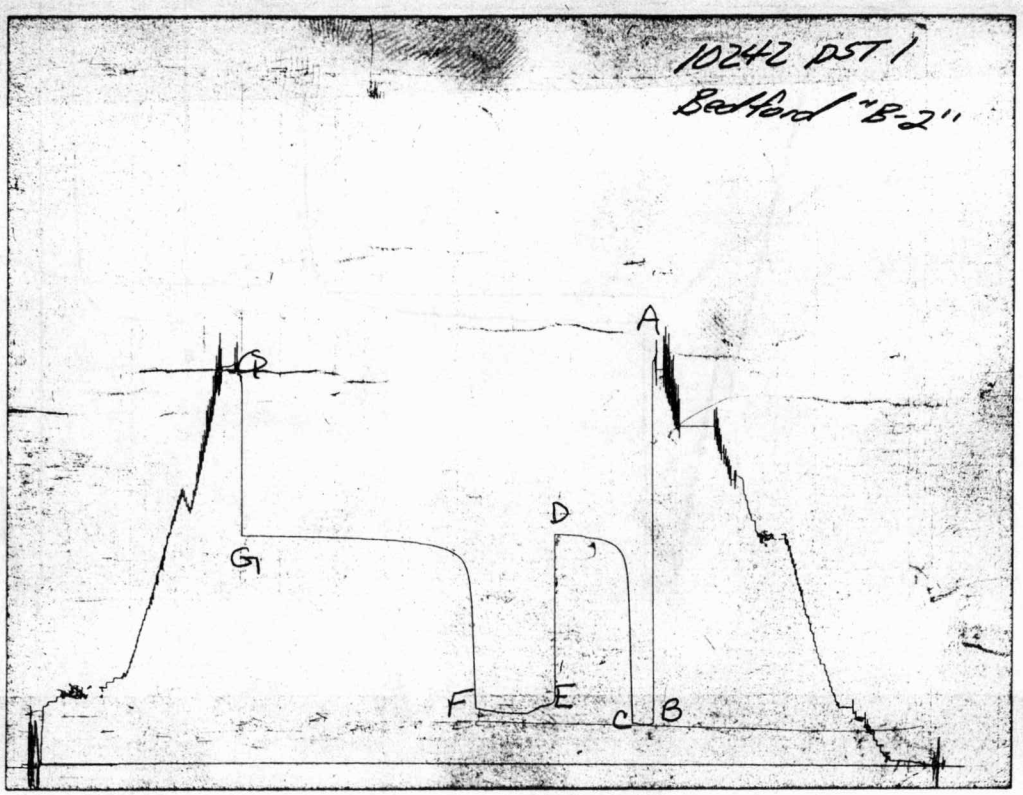


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 12219 Date 11-17-99

Company Name H & P Inc.

Lease Bedford "B-2" Test No. 1

County Finney Ks. Sec. 9 Twp. 26 S. Rng. 34 W

SAMPLER RECOVERY

Gas 10.3 C.F. ~~MCF~~

Oil 2500 ML

Mud 0 ML

Water 0 ML

Other 0 ML

Pressure 760 PSI

Total Vol. Rec. = 2500 ML

Total Vol. of chamber = 5000 ML

PIT MUD ANALYSIS

Chlorides 4000 ppm.

Resistivity 5.6 ohms @ 67 F

Viscosity 52

Mud Weight 9.0

Filtrate 9.6

Other Trace of L.C.M.

SAMPLER ANALYSIS

Resistivity — ohms @ — F

Chlorides — ppm.

Gravity 36 corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity ohms @ F

Chlorides ppm.

MIDDLE

Resistivity ohms @ F

Chlorides ppm.

BOTTOM

Resistivity ohms @ F

Chlorides ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 № 12219

Test Ticket

Well Name & No. Bedford "B-2" Test No. 1 Date 11-17-99

Company Helmerich & Payne Inc. Zone Tested Pawnee, Ft. Scott, Cherokee

Address Tulsa Ok. Elevation 2968 KB 2958 GL

Co. Rep / Geo. Brad Rine Cont. Cheyenne Rig 2 Est. Ft. of Pay 15 Por. 10 %

Location: Sec. 9 Twp. 26S Rge. 34W Co. Finney State Ks.

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

Interval Tested 4526 - 4590 Initial Str Wt./Lbs 83,000 Unseated Str Wt./Lbs. 83,000

Anchor Length 64' Tool = 30' Wt. Set Lbs. 23,000 Wt. Pulled Loose/Lbs. 62,000

Top Packer Depth 4521 Tool Weight 2,300

Bottom Packer Depth 4526 Hole Size — 7 7/8" ____ Rubber Size — 6 3/4" ____

Total Depth 4590 Wt. Pipe Run ____ Drill Collar Run 591

Mud Wt. 9.0 LCM Trace Vis. 52 WL 9.6 Drill Pipe Size 4½ F.H. Ft. Run 3913 8 jts

Blow Description Weak 1", built to strong OBB in 10 min. I.F.P.

Strong OBB blow-back. I.S.I.P.

Weak 1", built to strong OBB in 9 min. F.F.P.

Strong OBB blow-back. GTS F.S.I.P.

Recovery — Total Feet 930 GIP 3574 Ft. in DC 591 Ft. in DP 339

Rec. 90	Feet Of Oil & Gas cut Mud	9 %gas	8 %oil	%water 83	%mud
Rec. 430	Feet Of Sli. Mud cut Gassy Oil	40 %gas	50 %oil	%water 10	%mud
Rec. 410	Feet Of Cln Gassy Oil	44 %gas	56 %oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud

BHT 118 °F Gravity 35 °API D@ 50 °F Corrected Gravity 36 °API

RW — @ — °F Chlorides — ppm Recovery Chlorides 4000 ppm System

	AK-1	Alpine				
(A) Initital Hydrostatic Mud	2163	2104	PSI	Recorder No. 3017 "18:00"	T-On Location 4:15 P.M.
(B) First Initial Flow Pressure	221	161	PSI	(depth) 4528	T-Started 6:15 P.M.
(C) First Final Flow Pressure	242	214	PSI	Recorder No. 10242	T-Open 8:55 P.M.
(D) Initial Shut-In Pressure	1282	1279	PSI	(depth) 4587	T-Pulled 2:10 A.M.
(E) Second Initial Flow Pressure	280	282	PSI	Recorder No. —	T-Out 7:00 A.M.
(F) Second Final Flow Pressure	320	312	PSI	(depth) —	T-Off Location ____
(G) Final Shut-in Pressure	1273	1272	PSI	Initial Opening 15	Test 700 ✓
(Q) Final Hydrostatic Mud	2163	2088	PSI	Initial Shut-in 60	Jars 200 ✓
				Final Flow 60	Safety Joint 150 ✓
				Final Shut-in 180	Straddle ____
				____	Circ. Sub ____
				____	Sampler 200 ✓
					Extra Packer ____
					Elec. Rec 150 ✓
					Mileage ____
					Other ____
					TOTAL PRICE $ 4,300.00

B1791800.017

Approved By Brad Rine

Our Representative Tommy L. Gallegos

Well Name Bedford

DST Number 1

Recorder Number 10242

A:	2005	2183
B:	.210	245
C:	.231	269
D:	1.204	1301
E:	~~.324~~ .283	330
F:	.298	343
G:	1.197	1293
Q:	2.005	2183

TRILOBITE TESTING L.L.C.

OPERATOR : Helmerich & Payne Inc. DATE 11-19-99
WELL NAME: Bedford "B" #2 KB 2968.00 ft TICKET NO: 11997 DST #2
LOCATION : 9-26S-34W Finney co KS GR 2958.00 ft FORMATION: St Louis
INTERVAL : 5002.00 To 5060.00 ft TD 5060.00 ft TEST TYPE: CONVENTONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	15	Rec.	13309	13309	3024		
SI	60	Range(Psi)	4700.0	4700.0	4995.0	0.0	0.0
SF	60	Clock(hrs)	12 Hr	12	ALP		
FS	180	Depth(ft)	5025.0	5025.0	5005.0	0.0	0.0

TIME DATA----------
PF Fr. 2005 to 2020 hr
IS Fr. 2020 to 2120 hr
SF Fr. 2120 to 2220 hr
FS Fr. 2220 to 0120 hr

	Field	1	2	3	4
A. Init Hydro	2429.0	2454.0	2429.0	0.0	0.0
B. First Flow	23.0	36.0	52.0	0.0	0.0
B1. Final Flow	70.0	88.0	127.0	0.0	0.0
C. In Shut-in	1161.0	1157.0	1190.0	0.0	0.0
D. Init Flow	106.0	119.0	159.0	0.0	0.0
E. Final Flow	200.0	215.0	262.0	0.0	0.0
F. Fl Shut-in	1126.0	1136.0	1170.0	0.0	0.0
G. Final Hydro	2359.0	2353.0	2393.0	0.0	0.0
Inside/Outside	O	O	I		

T STARTED 1730 hr
T ON BOTM 2003 hr
T OPEN 2005 hr
T PULLED 0120 hr
T OUT 0900 hr

RECOVERY
Tot Fluid 838.00 ft of 590.00 ft in DC and 248.00 ft in DP
2790.00 ft of Gas in pie
538.00 ft of Clean gassy oil 40%gas 60%oil
300.00 ft of Heavy gassy mud cut oil 30%gas 50%oil 20%mud
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 36.00

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

Tool Wt.	1800.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	120000.00 lbs
Initial Str Wt	80000.00 lbs
Unseated Str Wt	84000.00 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	590.00 ft
D.P. Length	4411.00 ft

BLOW DESCRIPTION
Initial Flow:
Fair to strong blow off bottom in 5 mins.
Initial Shut-in:
Surface return built to bottom in 10 mins.
Final Flow:
Fair to strong blow off bottom in

Final Shut-in:
Surface return built to bottom in 10 mins.

SAMPLES:
SENT TO:

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

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	52.00 S/L
W.L.	8.40 in3
F.C.	0.00 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	127.00 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 N	
Tester	Rod Steinbrink
Co. Rep.	Brad Rine
Contr.	Cheyenne
Rig #	2
Unit #	
Pump T.	

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTONAL

WELL NAME: Bedford "B" #2

LOCATION : 9-26S-34W Finney co KS

TICKET No. 11997 D.S.T. No. 2 DATE 11-19-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL 27

BOTTOM PACKERS AND ANCHOR .....

TOTAL TOOL 57

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 88

D.C. ABOVE TOOLS.Stands10 Single Total 590

D.P. ABOVE TOOLS.Stands71 Single Total 4411

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5089

TOTAL DEPTH 5060

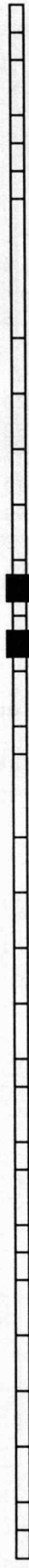
TOTAL DRILL PIPE ABOVE K.B. 29

REMARKS:
Sampler Data;

Gas; 1500 ml
Oil; 2000 ml
Wtr;
Mud; 500 ml

Total Volume; 4000 ml

Pressure; 1050# psi



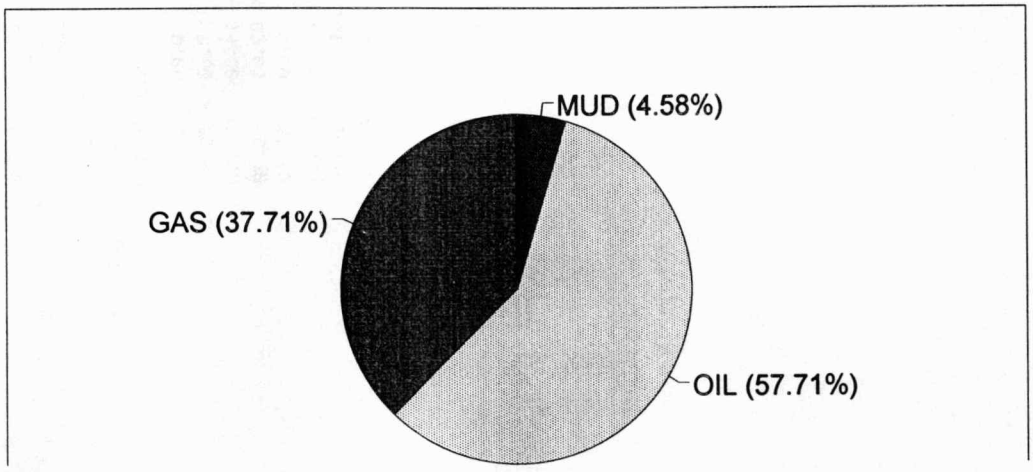
P.O. SUB 1' Above 120' DC	4852
C.O. SUB 1'	4972
S.I. TOOL 5'	4978
3' Sampler	4981
HMV 5'	4986
JARS 5'	4991
SAFETY JOINT 2'	4993
PACKER 4'	4997
PACKER 5'	5002
DEPTH STUBB 1'	5003
ANCHOR	
ALP Rec. @	5005
21' Perf	5024
AK-1 Rec. @	5025
31' 4 1/2" FH DP	5055
T.C. DEPTH	
BULLNOSE 5' T.D.	5060

CALCULATED RECOVERY ANALYSIS

DST 2 TICKET 11997

SAMPLE	#	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL	1	248	40	99.2	60	148.8	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL	1	290	40	116	60	174	0	0	0	0
COLLARS	2	300	30	90	50	150	0	0	20	60
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		838	0	305.2	0	472.8	0	0	0	60

			HRS OPEN		BBL/DAY
BBL OIL=	3.700296	*	4	=	22.20178
BBL WATER=	0	*		=	0
BBL MUD=	0.2934				
BBL GAS =	2.417964				



TEST HISTORY

11997 DST #2 Bedford "B" #2 Helmerich & Payne

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2429.09
B:	0.00	52.98
C:	14.00	127.90
D:	62.00	1190.78
E:	0.00	159.62
F:	58.00	262.82
G:	181.00	1170.78
Q:	0.00	2393.32

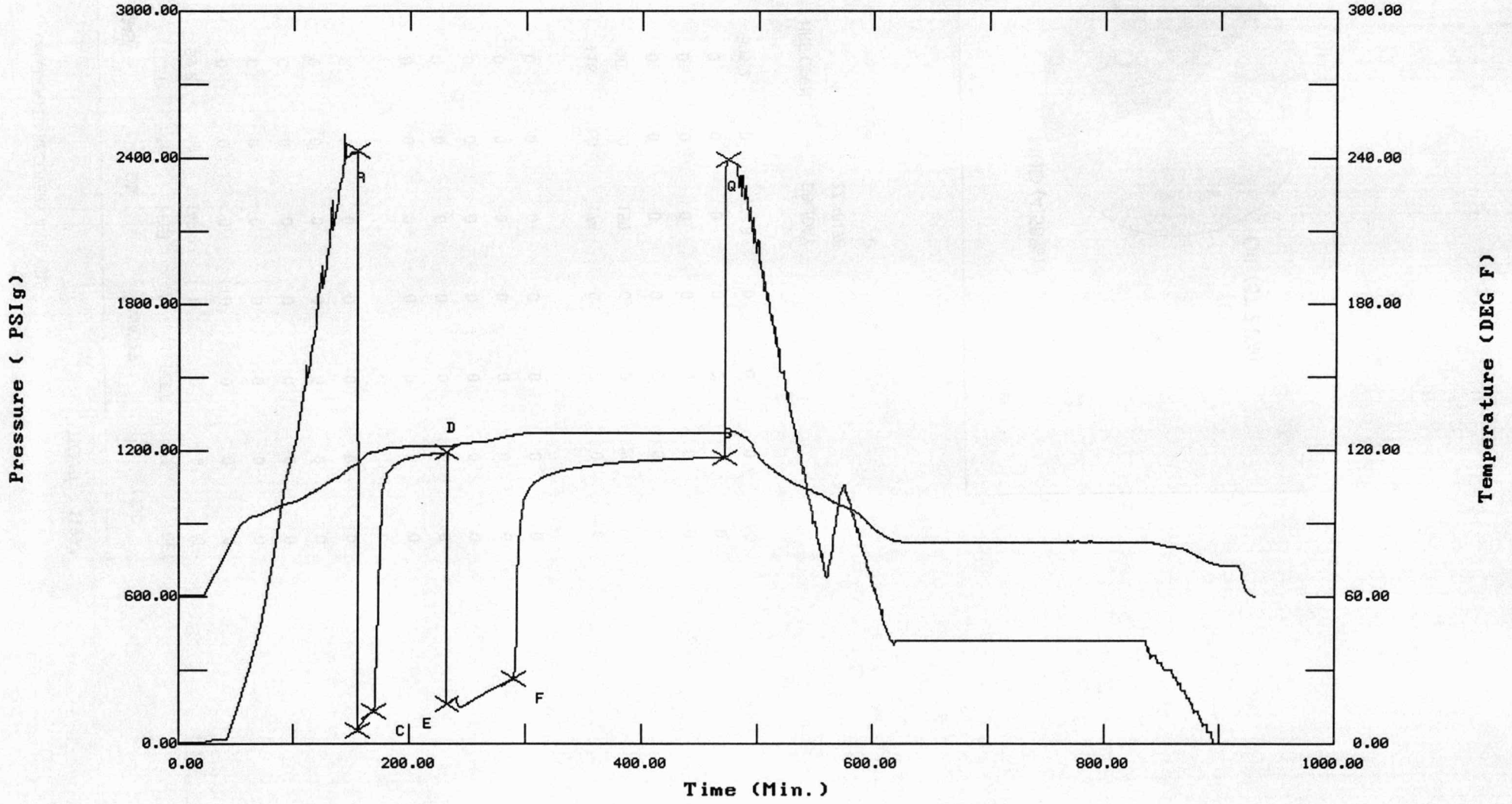
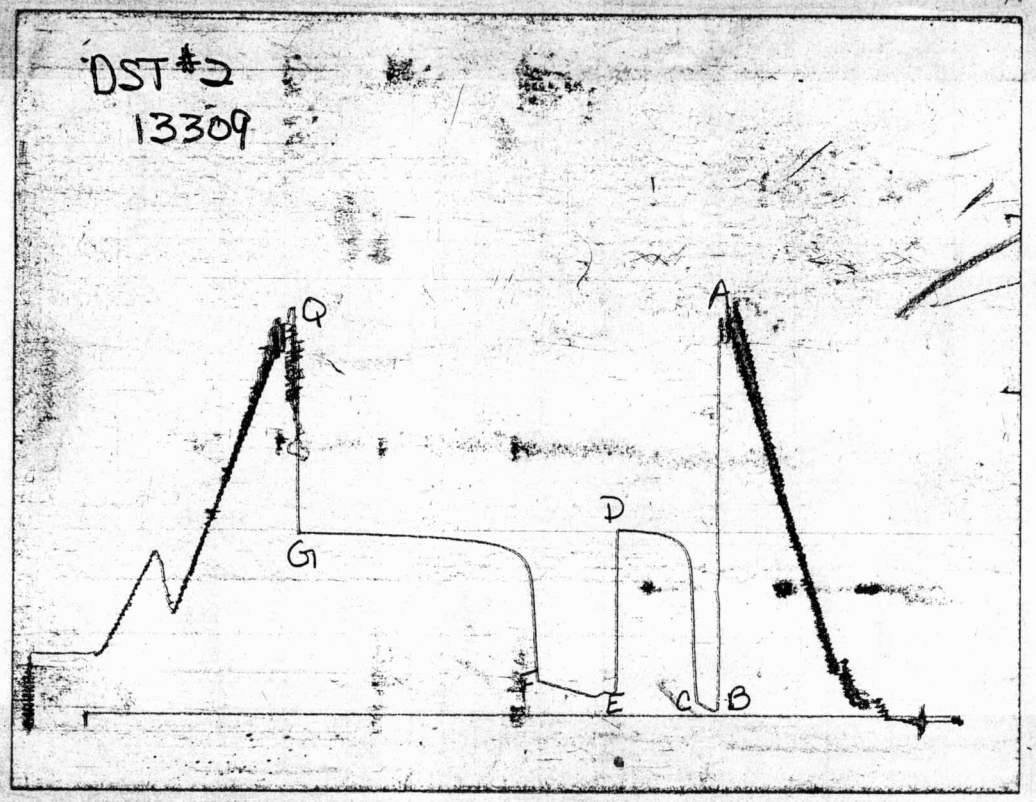


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 11997 Date 11-19-99

Company Name Helmrich & Payne Cont. Cheyenne #2

Lease Bedford 'B' #2 Test No. #2 St. Louis

County Finney KS. Sec. 9 Twp. 26S Rng. 34W

SAMPLER RECOVERY

Gas 1,500 ML

Oil 2,000 ML

Mud 500 ML

Water ____ ML

Other ____ ML

Pressure 1050 # PSI

Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 700 ppm.

Resistivity ____ ohms @ ____ F

Viscosity 52

Mud Weight 9.0

Filtrate 8.4

Other ____

SAMPLER ANALYSIS

Resistivity ____ ohms @ ____ F

Chlorides ____ ppm.

Gravity 36 corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity ____ ohms @ ____ F

Chlorides ____ ppm.

MIDDLE

Resistivity ____ ohms @ ____ F

Chlorides ____ ppm.

BOTTOM

Resistivity ____ ohms @ ____ F

Chlorides ____ ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 Nº 11997

Test Ticket

Well Name & No. Bedford 'B' #2 Test No. 2 Date 11-19-99

Company Helmrich & Payne Inc Zone Tested St. Louis

Address 1579 E. 21st Tulsa, OK 74114 Elevation 2968 KB 2956 GL

Co. Rep / Geo. Brad Rine Cont. Cheyenne #2 Est. Ft. of Pay ___ Por. ___ %

Location: Sec. 9 Twp. 26S Rge. 34W Co. Finney State KS.

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

Interval Tested 5002 - 5060 Initial Str Wt./Lbs. 80,000 Unseated Str Wt./Lbs. 84,000

Anchor Length 58' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 120,000

Top Packer Depth 4997 Tool Weight 1,800

Bottom Packer Depth 5002 Hole Size — 7 7/8" ___ Rubber Size — 6 3/4" ___

Total Depth 5060 Wt. Pipe Run ___ Drill Collar Run 590' (10

Mud Wt. 9.0 LCM ___ Vis. 52 WL 8.4 Drill Pipe Size 4½" FH Ft. Run 4411' (71

Blow Description IF! Fair to strong blow off bttm in 5 mins.
ISI! Surface return built to bttm in 10 mins.
FF: Fair to strong blow off bttm in 7 mins.
FSI: Surface return built to bttm in 15 mins.

Recovery — Total Feet 838' GIP 2790' Ft. in DC 590' Ft. in DP 248'

Rec. ___	Feet Of ___		%gas	%oil	%water	%mud
Rec. 538'	Feet Of CGO	40	%gas	60	%oil	%water	%mud
Rec. ___	Feet Of ___		%gas	%oil	%water	%mud
Rec. 300'	Feet Of HGMCO	30	%gas	50	%oil	%water	20	%mud
Rec. ___	Feet Of ___		%gas	%oil	%water	%mud

BHT 127° °F Gravity 38 °API D@ 40° °F Corrected Gravity 36 °API

RW ___ @ ___ °F Chlorides ___ ppm Recovery Chlorides 700 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	2429	2429	PSI	Recorder No.	3024	T-On Location	1645
(B) First Initial Flow Pressure	23	52	PSI	(depth)	5005	T-Started	1730
(C) First Final Flow Pressure	70	127	PSI	Recorder No.	13309	T-Open	2005
(D) Initial Shut-In Pressure	1161	1190	PSI	(depth)	5025	T-Pulled	0120
(E) Second Initial Flow Pressure	106	159	PSI	Recorder No.	—	T-Out	0900
(F) Second Final Flow Pressure	200	262	PSI	(depth)	—	T-Off Location	1030
(G) Final Shut-in Pressure	1126	1170	PSI	Initial Opening	15	Test	800
(Q) Final Hydrostatic Mud	2359	2393	PSI	Initial Shut-in	60	Jars	X 200
				Final Flow	60	Safety Joint	X 50
				Final Shut-in	180	Straddle	___
						Circ. Sub	X N/C
						Sampler	X 200
						Extra Packer	___
						Elec. Rec.	X 150
						Mileage	___
						Other	___
						TOTAL PRICE $	1400

Approved By Brad Rine

Our Representative Rod Steinbrink

Well Name Badford B #2
DST Number 2
Recorder Number 13309

A:	2.081	2454
B:	.031	36
C:	.075	88
D:	.977	1157
E:	.101	119
F:	.183	215
G:	.958	1136
Q:	1.995	2353