

15-023-20366

TRILOBITE TESTING L.L.C.

32-2s-4lw

OPERATOR : Murfin Drilling Co.

DATE 3-29-00

WELL NAME: Bertha Unit 3-32

KB 3694.00 ft

TICKET NO: 11197

DST #1

LOCATION : 32-2n-4lw Cheyenne co KS

GR 3689.00 ft

FORMATION: Las A-D

INTERVAL : 4514.00 To 4623.00 ft

TD 4623.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 0 Rec.	2023		2346			PF Fr. 0625 to 0630 hr
SI 0 Range(Psi)	4000.0	0.0	4995.0	0.0	0.0	IS Fr. to hr
SF 0 Clock(hrs)	12		alpin			SF Fr. to hr
FS 0 Depth(ft)	4620.0	0.0	4624.0	0.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	0.0	0.0	0.0	0.0	0.0	T STARTED 0410 hr
B. First Flow	0.0	0.0	0.0	0.0	0.0	T ON BOTM 0622 hr
B1. Final Flow	0.0	0.0	0.0	0.0	0.0	T OPEN 0625 hr
C. In Shut-in	0.0	0.0	0.0	0.0	0.0	T PULLED 0630 hr
D. Init Flow	0.0	0.0	0.0	0.0	0.0	T OUT 0900 hr
E. Final Flow	0.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	
G. Final Hydro	0.0	0.0	0.0	0.0	0.0	
Inside/Outside	i		o			

RECOVERY

Tot Fluid 1285.00 ft of 527.00 ft in DC and 758.00 ft in DP

1285.00 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

TOOL DATA-----	
Tool Wt.	5000.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	90000.00 lbs
Initial Str Wt	58000.00 lbs
Unseated Str Wt	62000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.50 in
D.C. Length	527.00 ft
D.P. Length	0.00 ft

BLOW DESCRIPTION

Initial Flow:

Bottom of bucket in 1 1/2 minutes.

Lost packer seat @ 4 minues. Pulled tool.

MUD DATA-----	
Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	55.00 S/L
W.L.	6.00 in3
F.C.	0.00 in
Mud Drop Y	1285.0 ft

Amt. of fill	0.00 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 Y	
Tool Chased N	
Tester	Shane McBride
Co. Rep.	Curtis Covey
Contr.	Murfin
Rig #	3
Unit #	
Pump T.	

SAMPLES:

SENT TO:

Test Successful: N

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Bertha Unit 3-32

LOCATION : 32-2n-41w Cheyenne co KS

TICKET No. 11197 D.S.T. No. 1 DATE 3-29-00

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 16

TOTAL TOOL 46

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 139

D.C. ABOVE TOOLS.Stands9 Single Total 527

D.P. ABOVE TOOLS.Stands64 Single Total

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4646

TOTAL DEPTH 4623

TOTAL DRILL PIPE ABOVE K.B. 23

REMARKS:

Gas:

Oil:

Water:

Mud: 4,000 ml.

Total: 4,000 ml.

Pressure: 0

P.O. SUB	
C.O. SUB 1'	4483
S.I. TOOL 5'	4489
sampler 3'	4492
HMV 5'	4497
JARS 5'	4502
SAFETY JOINT 2'	4504
PACKER top	4509
PACKER bottom	4514
DEPTH 4514	
1'	4515
ANCHOR 8' perf	4523
1' c.o	4524
alpine recorder	4524
93' drillpipe	4617
1' c.o.	4618
ak-1 recorder	4620
BULLNOSE 5'bullplug perf	4623
T.D.	4623

TEST HISTORY

11197 DST #1 Bertha Unit 3-32 Murfin Drilling Co.

Flag Points
 t(Min.) P(PSig)
 R: 0.00 2196.33
 Q: 0.00 2120.31

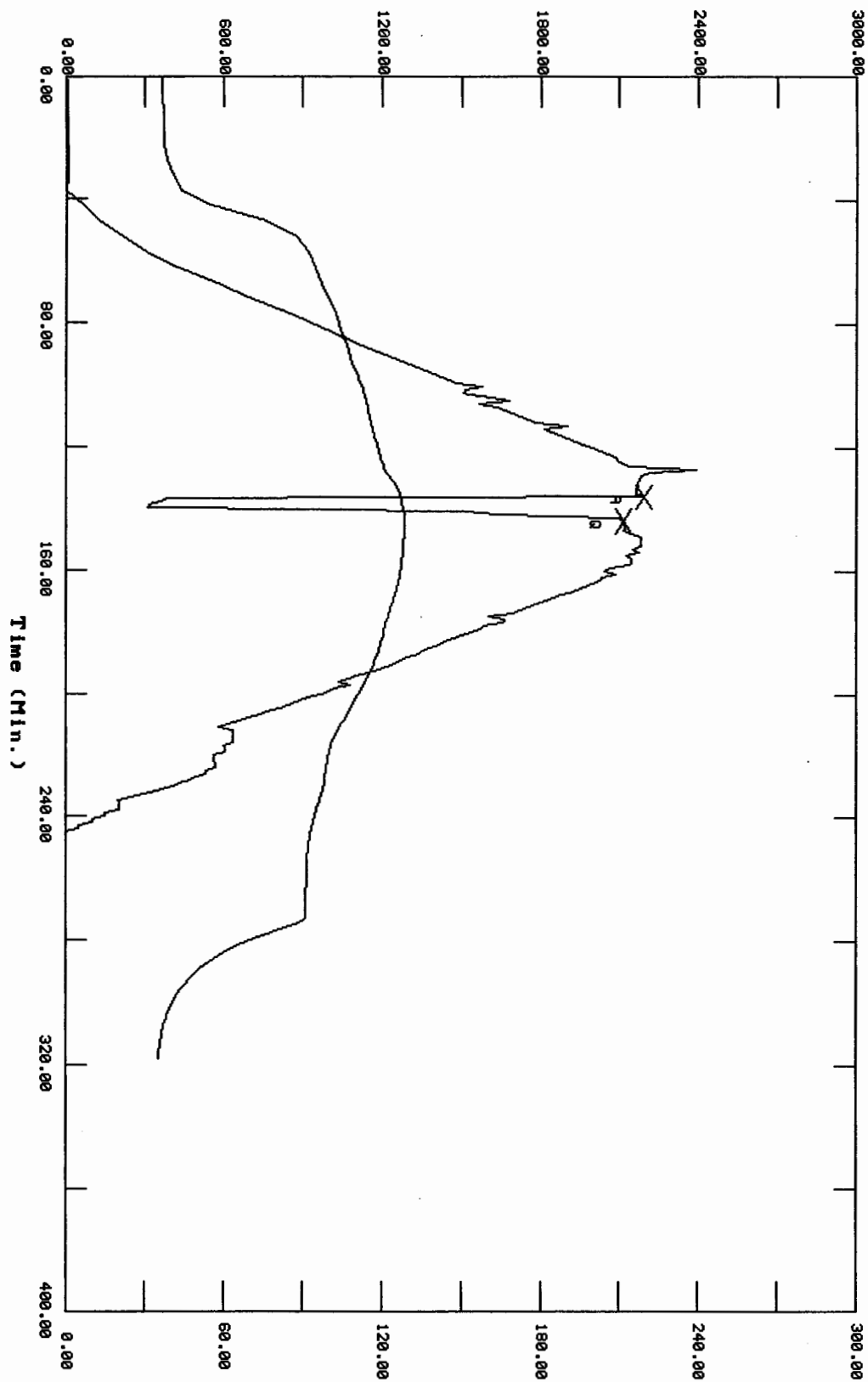
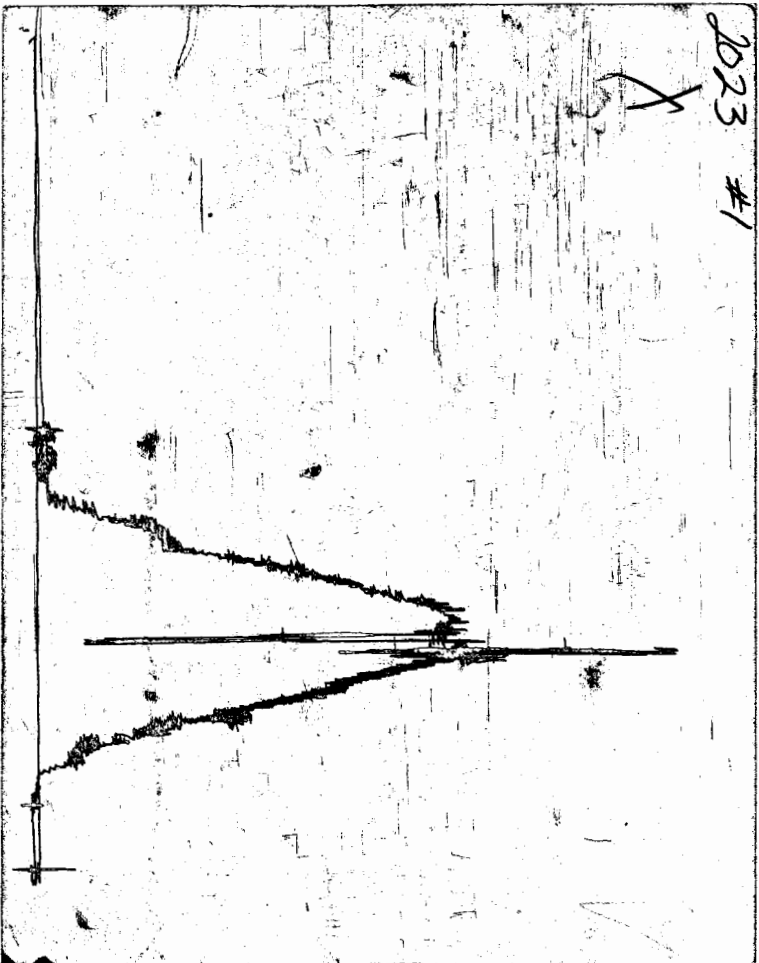


CHART PAGE



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. 11197 Date 3-29-00
Company Name Marlow Drilling Co Inc.
Lease Bertha 3-32 Test No. 1
County Cheyenne KS Sec. 32 Twp. 2N Rng. 41W

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 4000 ML
Water _____ ML
Other _____ ML
Pressure — PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 600 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 55
Mud Weight 9.0
Filtrate 6.0
Other LCM - 0 -

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides 600 ppm.
Gravity — 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

Test Ticket

No 11197

Well Name & No.	Bertha Unit 3-32	Test No.	1	Date	3-29-00
Company	Martini Drilling Co. Inc	Zone Tested	LANS - A-D		
Address	250 N. Water, Suite 300, Wichita Ks 67202				
Elevation	3694'	KB	3689'	GL	
Co. Rep / Geo.	Cartie Carey	Cont.	Martini #3	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	2N	Rge.	4W
Co.	Cherokee	State	Ks		
No. of Copies	Norm.	Distribution Sheet (Y, N)		Turnkey (Y, N)	
Evaluation (Y, N)					

Interval Tested	454'	4623'	Initial Str Wt./Lbs.	78,000	Unseated Str Wt./Lbs.	62,000	
Anchor Length	109'		Wt. Set Lbs.	30,000	Wt. Pulled Loose/Lbs.	90,000	
Top Packer Depth	4509'		Tool Weight	5,000			
Bottom Packer Depth	4514'		Hole Size — 7 7/8"	✓	Rubber Size — 6 3/4"	✓	
Total Depth	4623'		Wt. Pipe Run	—	Drill Collar Run	527'	
Mud Wt.	9.0	LCM	0	Vis.	55	WL	6.0
Drill Pipe Size	4 1/2 X 11		Ft. Run	4073' X 11			
Blow Description	Bob in 1 1/2 min. Lost Packer Seat, Pull Tool (4 min)						

Recovery — Total Feet	1285'	GIP	—	Ft. in DC	527	Ft. in DP	758'
Rec.	1285'	Feet Of	Drilling MWD (mudstone)	%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	118°	°F Gravity	—	°API D@	—	°F Corrected Gravity	—	°API	
RW	—	@	—	°F Chlorides	—	ppm Recovery	Chlorides	600	ppm System

(A) Initial Hydrostatic Mud	2200	PSI	Recorder No.	2946	T-Started	04:10 A.M.
(B) First Initial Flow Pressure	—	PSI	(depth)	4524'	T-Open	06:25 A.M.
(C) First Final Flow Pressure	—	PSI	Recorder No.	2023	T-Pulled	06:30 A.M.
(D) Initial Shut-in Pressure	—	PSI	(depth)	4620'	T-Out	09:00 A.M.
(E) Second Initial Flow Pressure	—	PSI	Recorder No.		ON LK	02:45 A.M.
(F) Second Final Flow Pressure	—	PSI	(depth)		OFF LK	10:00 A.M.
(G) Final Shut-in Pressure	—	PSI	Initial Opening	—	Test	500
(H) Final Hydrostatic Mud	2190	PSI	Initial Shut-in	—	Jars	200

Final Flow	—	Safety Joint	50
Final Shut-in	—	Straddle	

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Approved By

Our Representative

Circ. Subj	35
Sampler	200
Extra Packer	
Elect. Rec.	150
Other	755 miles et 1 hr. 30
TOTAL PRICE \$	1165

TRILOBITE TESTING L.L.C.

OPERATOR : Murfin Drilling Co.

DATE 3-30-00

WELL NAME: Bertha 3-32

KB 3694.00 ft

TICKET NO: 11198

DST #2

LOCATION : 32-2n-41w Cheyenne co KS

GR 3689.00 ft

FORMATION: A-G

INTERVAL : 4489.00 To 4693.00 ft

TD 4693.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	2023	2023	2346			PF Fr. 0040 to 0110 hr
SI 45 Range(Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 0110 to 0155 hr
SF 60 Clock(hrs)	12	12	alpin			SF Fr. 0155 to 0255 hr
FS 90 Depth(ft)	4690.0	4690.0	4501.0	0.0	0.0	FS Fr. 0255 to 0425 hr

	Field	1	2	3	4	
A. Init Hydro	2301.0	2308.0	2224.0	0.0	0.0	T STARTED 2230 hr
B. First Flow	173.0	188.0	35.0	0.0	0.0	T ON BOTM 0037 hr
Bl. Final Flow	204.0	197.0	106.0	0.0	0.0	T OPEN 0040 hr
C. In Shut-in	1313.0	1322.0	1269.0	0.0	0.0	T PULLED 0425 hr
D. Init Flow	246.0	260.0	113.0	0.0	0.0	T OUT 0715 hr
E. Final Flow	287.0	293.0	196.0	0.0	0.0	
F. Fl Shut-in	1293.0	1289.0	1231.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2290.0	2275.0	2191.0	0.0	0.0	Tool Wt. 5000.00 lbs
Inside/Outside	i	i	o			Wt Set On Packer 26000.00 lbs
						Wt Pulled Loose 85000.00 lbs
						Initial Str Wt 59000.00 lbs
						Unseated Str Wt 60000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.50 in
						D.C. Length 527.00 ft
						D.P. Length 0.00 ft

RECOVERY

Tot Fluid 400.00 ft of 400.00 ft in DC and 0.00 ft in DP

80.00 ft of Gas in pipe.

40.00 ft of Glean gassy oil

0.00 ft of 15% gas 85% oil

120.00 ft of Slightly gas & mud cut oil

0.00 ft of 5% gas 60% oil 35% mud

120.00 ft of Oil cut mud trace gas 45% oil 55% mud

120.00 ft of Slightly oil cut mud

0.00 ft of trace gas 20% oil 80% mud

SALINITY 600.00 P.P.M. A.P.I. Gravity 27.00

BLOW DESCRIPTION

Initial Flow:

Surface blow built to 4".

Initial Shut-In:

Bled off for 2 minutes. Weak surface return in 5 minutes. Died in 25 minutes.

Final Flow:

Surface blow built to 2 1/2".

Final Shut-In:

Bled off for 2 minutes. Return in 5 minutes. 1/4" blow died in 35 minutes

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	54.00 S/L
W.L.	6.00 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	131.00 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	Shane McBride
Co. Rep.	Curtis Covey
Contr.	Murfin
Rig #	3
Unit #	
Pump T.	

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Bertha 3-32

LOCATION : 32-2n-41w Cheyenne co KS

TICKET No. 11198 D.S.T. No. 2 DATE 3-30-00

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 3 Single Total 186

TOTAL ASSEMBLY 234

D.C. ABOVE TOOLS.Stands9 Single Total 527

D.P. ABOVE TOOLS.Stands62 Single 1 Total 3950

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4711

TOTAL DEPTH 4693

TOTAL DRILL PIPE ABOVE K.B. 18

REMARKS:

Gas:

Oil: 2,700 ml.

Water:

Mud: 1,300 ml.

Total: 4,000 ml.

Pressure: 160 psi.

P.O. SUB	
C.O. SUB 1'	4458
S.I. TOOL 5'	4464
sampler 3'	4467
HMV 5'	4472
JARS 5'	4477
SAFETY JOINT 2'	4479
PACKER top	4484
PACKER bottom	4489
DEPTH 4489	
1'	4490
ANCHOR 10'perf	4500
1' c.o.	4501
alpine recorder	4501
186' drillpipe	4687
1' c.o.	4688
ak-1 recorder	4690
BULLNOSE 5'bullplug perf	4693
T.D.	4693

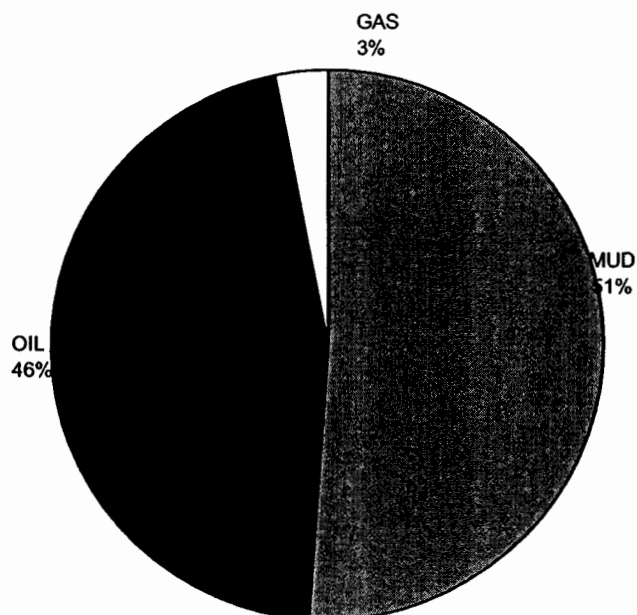
CALCULATED RECOVERY ANALYSIS

DST 2

TICKET 11198

SAMPLE #		TOTAL		GAS		OIL		WATER		MUD	
		FEET	%	FEET	%	FEET	%	FEET	%	FEET	%
DRILL PIPE	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0
WEIGHT PIPE	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0
DRILL COLLARS	1	40	15	6	85	34	0	0	0	0	0
	2	120	5	6	60	72	0	0	35	42	
	3	120	0	0	45	54	0	0	55	66	
	4	120	0	0	20	24	0	0	80	96	
	5	0	0	0	0	0	0	0	0	0	
TOTAL		400	0	12	0	184	0	0	0	204	

BBL OIL= 0.89976 * HRS OPEN 1.5 = BBL/DAY 14.39616
 BBL WATER= 0 * = 0
 BBL MUD= 0.99756
 BBL GAS = 0.05868



11198 DST #2 Bertha 3-32 Murfin Drilling Co.

TEST HISTORY

Flag Points
t(Min.) P(PSig)

R:	0.00	2224.43
B:	0.00	35.31
C:	30.00	106.05
D:	43.00	1269.23
E:	0.00	113.46
F:	60.00	196.77
G:	90.00	1231.34
H:	0.00	2191.20

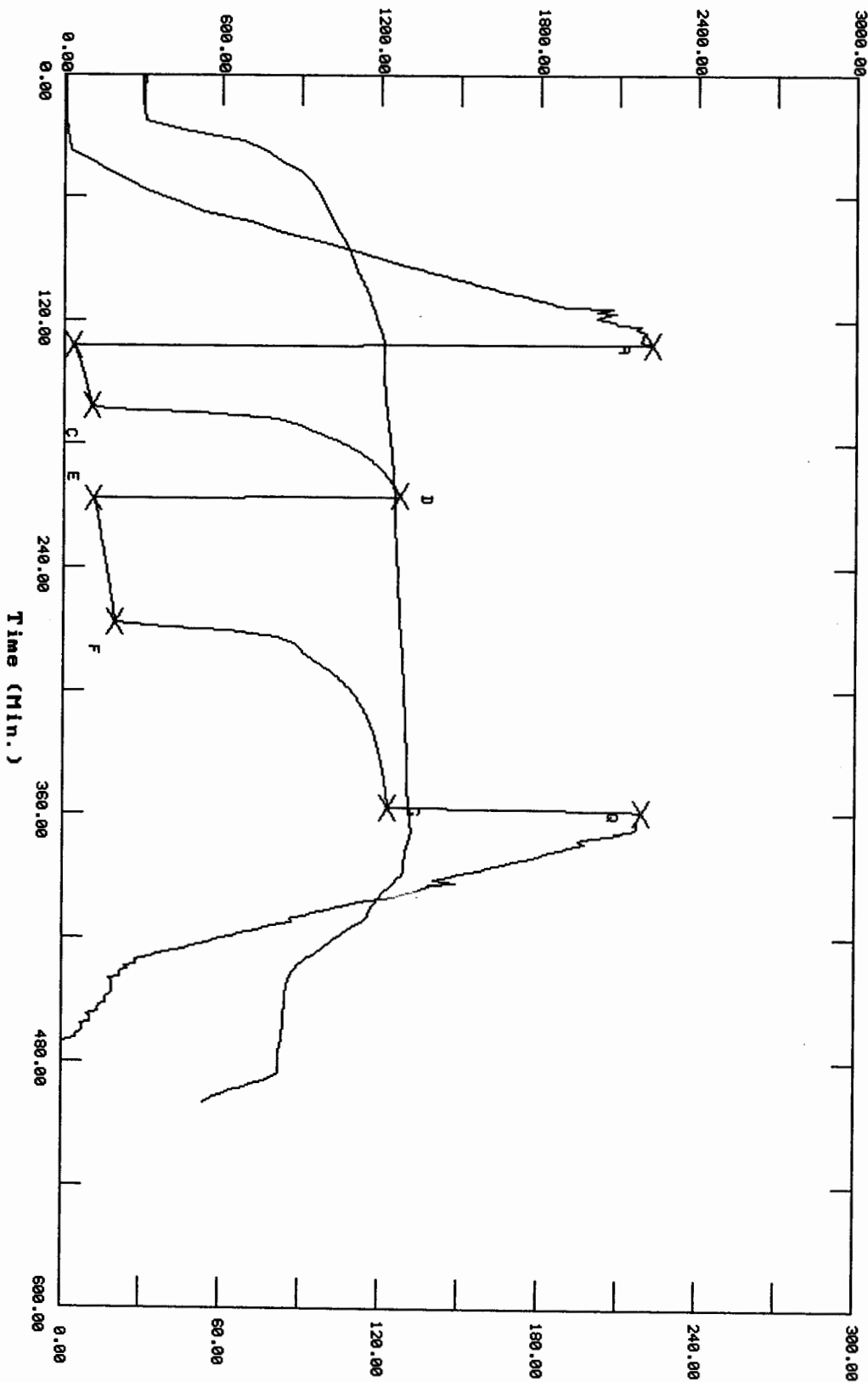
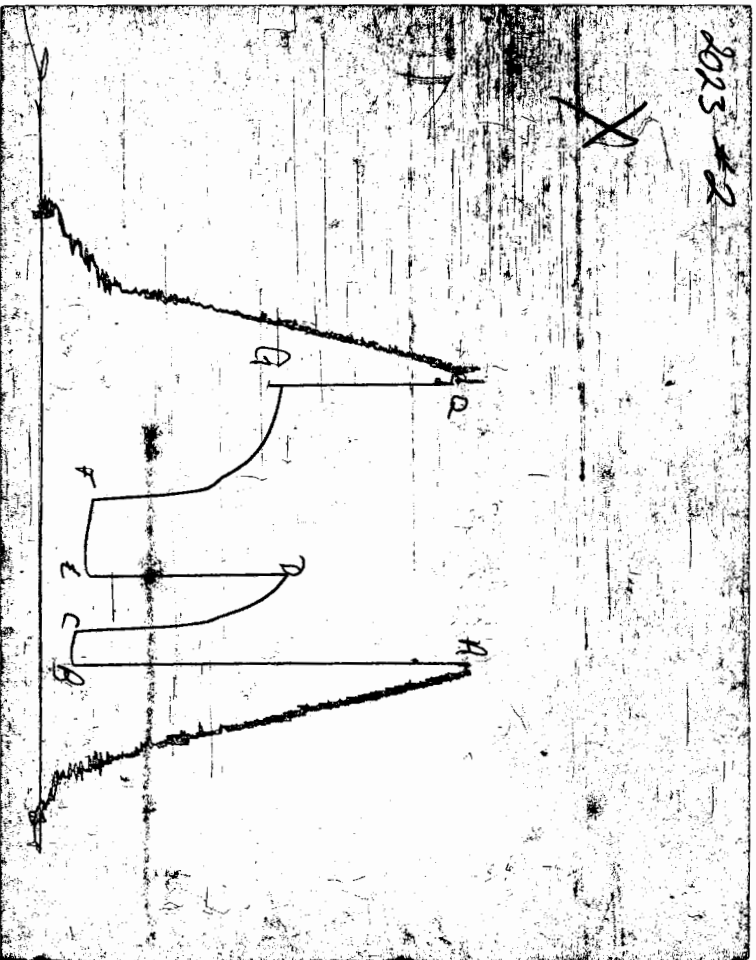


CHART PAGE



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. 11198 Date 3-30-00
Company Name Murphy Drilling Co Inc.
Lease Bertha Test No. 2
County Cheyenne, KS Sec. 32 Twp. 2 Rng. 41

SAMPLER RECOVERY

Gas _____ ML
Oil 2700 ML
Mud 1300 ML
Water _____ ML
Other _____ ML
Pressure 160 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 600 ppm.
Resistivity 9.1 ohms @ 65° F
Viscosity 54
Mud Weight 9.0
Filtrate 6.0
Other LCM -0-

SAMPLER ANALYSIS

Resistivity 10.1 ohms @ 62° F
Chlorides 600 ppm.
Gravity 27 corrected @ 60 F

PIPE RECOVERY

~~TOP~~ No Water
~~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

Test Ticket

No 11198

Well Name & No.	Bertha 3-32	Test No.	2	Date	3-30-00
Company	Murfin Drilling Co. Inc.	Zone Tested	A-G Lows		
Address	250 N. Water, Suite 300, Wichita, KS	Elevation	3694' KB	3689' GL	
Co. Rep / Geo.	Curtis Covey	Cont.	Murfin #3	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	2N	Rge.	4W
		Co.	Cherokee	State	KS
No. of Copies	Norm	Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested 4489 4693 Initial Str Wt./Lbs. 59,000 Unseated Str Wt./Lbs. 60,000
 Anchor Length 204 Wt. Set Lbs. 26,000 Wt. Pulled Loose/Lbs. 85,000
 Top Packer Depth 4484 Tool Weight 5,000
 Bottom Packer Depth 4489 Hole Size — 7 7/8" ☒ Rubber Size — 6 3/4" ☒
 Total Depth 4693 Wt. Pipe Run — Drill Collar Run 527'
 Mud Wt. 9.0 LCM 0 Vis. 54 WL 6.0 Drill Pipe Size 4 1/2 XH Ft. Run —

Blow Description Surface blow built to 4" in
Bled off for 2 min — weak surface return in 5 min, died in 25 min
Surface blow built to 2 1/2" in
Bled off for 2 min — return in 5 min, 1 1/2" blow died in 35 min.

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>40'</u> Feet Of <u>Cgo</u>	<u>80'</u>	<u>400</u>	<u>—</u>
Rec. <u>120'</u> Feet Of <u>SG 3 MCO</u>		15 % gas 85 % oil	% water % mud
Rec. <u>120'</u> Feet Of <u>OCM</u>		5 % gas 60 % oil	% water 35 % mud
Rec. <u>120'</u> Feet Of <u>SOCM</u>		True % gas 45 % oil	% water 55 % mud
Rec. <u>120'</u> Feet Of <u>SOCM</u>		True % gas 20 % oil	% water 80 % mud
Rec. <u>—</u> Feet Of <u>—</u>		% gas % oil	% water % mud

BHT 131° °F Gravity 27 °API D@ 60 °F Corrected Gravity 27 °API
 RW — @ — °F Chlorides — ppm Recovery Chlorides 600 ppm System 130

(A) Initial Hydrostatic Mud	2301	2224	PSI	Recorder No.	2346	T-Started	22:30 p.m.
(B) First Initial Flow Pressure	173	35	PSI	(depth)	4501'	T-Open	02:40 a.m.
(C) First Final Flow Pressure	204	104	PSI	Recorder No.	2023	T-Pulled	04:25 a.m.
(D) Initial Shut-in Pressure	1313	1269	PSI	(depth)	4690'	T-Out	07:15 a.m.
(E) Second Initial Flow Pressure	246	113	PSI	Recorder No.		on loc	22:00 p.m.
(F) Second Final Flow Pressure	287	196	PSI	(depth)		off loc	23:20 p.m.
(G) Final Shut-in Pressure	1293	1231	PSI	Initial Opening	30	Test	X 700
(H) Final Hydrostatic Mud	2290	2191	PSI	Initial Shut-in	45	Jars	X 200
	AK-1	AK-Pine		Final Flow	60	Safety Joint	X 50
				Final Shut-in	90	Straddle	
						Circ. Sub	X N/C
						Sampler	X 200
						Extra Packer	
						Elect. Rec.	X 150
						Other	

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Approved By [Signature]

Our Representative [Signature]

TOTAL PRICE \$ 1300

TRILOBITE TESTING L.L.C.

OPERATOR : Murfin Drilling Co.

DATE 3-31-00

WELL NAME: Bertha 3-32

KB 3694.00 ft

TICKET NO: 11199

DST #3

LOCATION : 32-2n-41w Cheyenne co KS

GR 3689.00 ft

FORMATION: Marmaton

INTERVAL : 4848.00 To 4948.00 ft

TD 4948.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	2023	2023	2346			PF Fr. 1530 to 1600 hr
SI 60 Range(Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 1600 to 1700 hr
SF 60 Clock(hrs)	12	12	alpin			SF Fr. 1700 to 1800 hr
FS 90 Depth(ft)	4945.0	4945.0	4880.0	0.0	0.0	FS Fr. 1800 to 1930 hr

	Field	1	2	3	4	
A. Init Hydro	2522.0	2538.0	2482.0	0.0	0.0	T STARTED 1335 hr
B. First Flow	109.0	112.0	37.0	0.0	0.0	T ON BOTM 1527 hr
B1. Final Flow	109.0	99.0	50.0	0.0	0.0	T OPEN 1530 hr
C. In Shut-in	1480.0	1477.0	1473.0	0.0	0.0	T PULLED 1930 hr
D. Init Flow	109.0	115.0	51.0	0.0	0.0	T OUT hr
E. Final Flow	109.0	96.0	73.0	0.0	0.0	
F. Fl Shut-in	1421.0	1390.0	1415.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2512.0	2503.0	2445.0	0.0	0.0	Tool Wt. 5000.00 lbs
Inside/Outside	i	i	o			Wt Set On Packer 26000.00 lbs
						Wt Pulled Loose 85000.00 lbs
						Initial Str Wt 60000.00 lbs
						Unseated Str Wt 60000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.50 in
						D.C. Length 527.00 ft
						D.P. Length 4383.00 ft

RECOVERY

Tot Fluid 70.00 ft of 70.00 ft in DC and 0.00 ft in DP
 70.00 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 650.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Surface blow built to 1 1/2".
 Initial Shut-In:
 No return.
 Final Flow:
 Bubble to open tool. No blow.
 Final Shut-In:
 No return.

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	55.00 S/L
W.L.	6.80 in3
F.C.	0.00 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	0.00 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	Shane McBride
Co. Rep.	Curtis Covey
Contr.	Murfin
Rig #	3
Unit #	
Pump T.	

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Bertha 3-32

LOCATION : 32-2n-41w Cheyenne co KS

TICKET No. 11199 D.S.T. No. 3 DATE 3-31-00

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 37

TOTAL TOOL 67

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 129

D.C. ABOVE TOOLS.Stands9 Single Total 527

D.P. ABOVE TOOLS.Stands69 Single 1 Total 4321

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4977

TOTAL DEPTH 4948

TOTAL DRILL PIPE ABOVE K.B. 29

REMARKS:

Gas:

Oil:

Water:

Mud: 4,000 ml.

Total: 4,000 ml.

Pressure

P.O. SUB

C.O. SUB 1' 4817

S.I. TOOL 5' 4823

sampler 3' 4826

HMV 5' 4831

JARS 5' 4836

SAFETY JOINT 2' 4838

PACKER top 4843

PACKER bottom 4848

DEPTH 4848

1' 4849

ANCHOR 30' perf 4879

1' c.o. 4880

alpine recorder 4880

62' drillpipe 4942

1' c.o. 4943

ak-1 recorder 4945

BULLNOSE 5' bullplug perf 4948

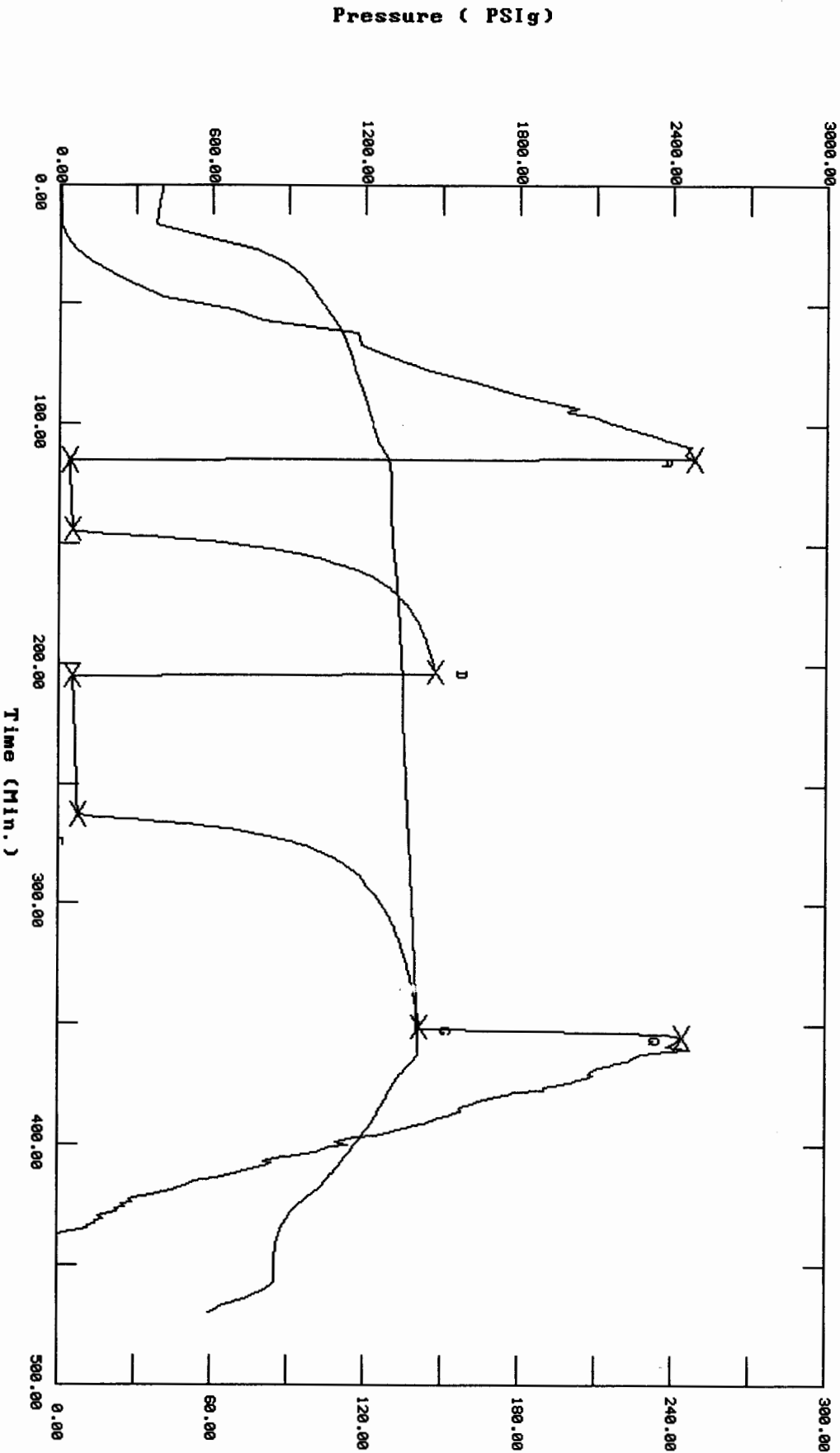
T.D. 4948

TEST HISTORY

11199 DST #3 Bertha Unit 3-32 Murfin Drilling Co.

Flag Points
t(Min.) P(PSig)

A:	0.00	2482.54
B:	0.00	37.01
C:	29.00	50.15
D:	59.00	1473.49
E:	0.00	51.91
F:	58.00	73.58
G:	88.00	1415.41
H:	0.00	2445.29



A hand-drawn sketch of a mechanical assembly, possibly a pump or engine component, with various parts labeled with letters. The drawing is oriented vertically on the page. At the top, there is a large, curved, bowl-like structure labeled 'A' at its base and 'B' at its rim. Below this, a vertical shaft or rod is labeled 'C' at its top and 'D' at its base. To the right of the shaft, there is a curved, hook-like structure labeled 'E' at its tip and 'F' at its base. Further down, there is a horizontal structure labeled 'G' at its left end and 'H' at its right end. Below this, there is a vertical structure labeled 'I' at its top and 'J' at its base. At the bottom, there is a horizontal structure labeled 'K' at its left end and 'L' at its right end. The drawing is a simple line sketch with some shading to indicate depth. The labels are handwritten in capital letters. The overall appearance is that of a technical drawing or a conceptual sketch for a mechanical design.

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. 11199 Date 3-31-00
Company Name Martin Drilling Co. Inc.
Lease Bertha 3-32 Test No. #3
County Cheyenne, Ks Sec. 32 Twp. 2N Rng. 41W

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 4,000 ML
Water _____ ML
Other _____ ML
Pressure 200 PSI
Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 650 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 55
Mud Weight 9.2
Filtrate 4.8
Other LCM -0-

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides 650 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

~~TOP~~ no water
~~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

Test Ticket

No 11199

Well Name & No.	Bertha 3-32	Test No.	3	Date	3-31-00
Company	Marlin Drilling Co. Inc.	Zone Tested	maxmaton		
Address	250 W. Water, Suite 300, Wichita, KS	Elevation	3694'	KB	3689' GL
Co. Rep / Geo.	Curtis Carey	Cont.	Marlin #3	Est. Ft. of Pay	Por. %
Location: Sec.	32	Twp.	2u	Rge.	41w
		Co.	Cherokee	State	KS
No. of Copies	Norm	Distribution Sheet (Y, N)	N	Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested 4848' 4948' Initial Str Wt./Lbs. 60,000 Unseated Str Wt./Lbs. 60,000
Anchor Length 100' Wt. Set Lbs. 26,000 Wt. Pulled Loose/Lbs. 85,000
Top Packer Depth 4843' Tool Weight 5,000
Bottom Packer Depth 4848' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
Total Depth 4948' Wt. Pipe Run — Drill Collar Run 527'
Mud Wt. 9.2 LCM-3 Vis. 55 WL 6.8 Drill Pipe Size 4 1/2 XH Ft. Run 4383'
Blow Description Surface blow built to 1 1/2" in

No return

Bubble to open tool - no blow

No return

Recovery — Total Feet	<u>70'</u>	GIP	<u>—</u>	Ft. in DC	<u>70'</u>	Ft. in DP	<u>—</u>
Rec.	<u>70'</u>	Feet Of	<u>Drilling Mud</u>	%gas	%oil	%water	<u>100</u> %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 140° °F Gravity — °API D@ — °F Corrected Gravity — °API

RW — @ — °F Chlorides — ppm Recovery Chlorides 650 ppm System

(A) Initial Hydrostatic Mud	<u>2522</u>	<u>2482</u>	PSI	Recorder No.	<u>2346</u>	T-Started	<u>13:35 p.m.</u>
(B) First Initial Flow Pressure	<u>109</u>	<u>37</u>	PSI	(depth)	<u>4880'</u>	T-Open	<u>15:30 p.m.</u>
(C) First Final Flow Pressure	<u>109</u>	<u>50</u>	PSI	Recorder No.	<u>2023</u>	T-Pulled	<u>19:30 p.m.</u>
(D) Initial Shut-in Pressure	<u>1480</u>	<u>1473</u>	PSI	(depth)	<u>4945'</u>	T-Out	<u>21:40 p.m.</u>
(E) Second Initial Flow Pressure	<u>109</u>	<u>51</u>	PSI	Recorder No.	<u>—</u>	on hoc	<u>13:00 p.m.</u>
(F) Second Final Flow Pressure	<u>109</u>	<u>73</u>	PSI	(depth)	<u>—</u>	off hoc	<u>22:45 p.m.</u>
(G) Final Shut-in Pressure	<u>1421</u>	<u>1415</u>	PSI	Initial Opening	<u>30</u>	Test	<u>700</u>
(H) Final Hydrostatic Mud	<u>2512</u>	<u>2445</u>	PSI	Initial Shut-in	<u>60</u>	Jars	<u>200</u>

AK-1

AKPWL

Final Flow 60 Safety Joint 50

Final Shut-in 90 Straddle —

Circ. Sub N/K

Sampler 200

Extra Packer —

Elect. Rec. 150

Other —

TOTAL PRICE \$ 1300

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Approved By Curtis G. Carey (Signature)

Our Representative Steve M. Reed (Signature)