

SCANNED

**Well Name:** UPR Garret #1-23  
**Company:** Mull Drilling Company Inc.  
**Location:** 23-13s-47w  
Cheyenne County Kansas  
**Date:** 4-20-99

MAY 24 1999

**CONFIDENTIAL**



# TRILOBITE TESTING L.L.C.

OPERATOR : Mull Drlg.Co.Inc.

DATE 4-14-99

WELL NAME: UPR Garret #1-23

KB 4378.00 ft

TICKET NO: 11911 DST #1

LOCATION : 23-13S-47W Cheyenne CO.

GR 4367.00 ft

FORMATION: Marmaton

INTERVAL : 4789.00 To 4870.00 ft

TD 4870.00 ft

TEST TYPE: CONVENTIONAL

## RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13339	13339	3024			PF Fr. 0912 to 0942 hr
SI 45 Range(Psi )	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. 0942 to 1028 hr
SF 60 Clock(hrs)	12 HR	12	ALP			SF Fr. 1028 to 1128 hr
FS 60 Depth(ft )	4865.0	4865.0	4792.0	0.0	0.0	FS Fr. 1128 to 1228 hr

	Field	1	2	3	4	
A. Init Hydro	2303.0	2299.0	2267.0	0.0	0.0	T STARTED 0455 hr
B. First Flow	176.0	192.0	91.0	0.0	0.0	T ON BOTM 0910 hr
B1. Final Flow	291.0	293.0	306.0	0.0	0.0	T OPEN 0912 hr
C. In Shut-in	1120.0	1024.0	1102.0	0.0	0.0	T PULLED 1228 hr
D. Init Flow	415.0	428.0	350.0	0.0	0.0	T OUT 1630 hr
E. Final Flow	519.0	527.0	508.0	0.0	0.0	
F. Fl Shut-in	1100.0	1106.0	1083.0	0.0	0.0	
G. Final Hydro	2243.0	2267.0	2221.0	0.0	0.0	
Inside/Outside	O	O	I			

## RECOVERY

Tot Fluid 1272.00 ft of 698.00 ft in DC and 574.00 ft in DP

140.00 ft of Gas cut mud 25%gas 75%mu

124.00 ft of Muddy water cut gassy oil

0.00 ft of 30% gas 40% oil 20% water 10% mud

62.00 ft of Gas

248.00 ft of Gassy oil cut muddy water

0.00 ft of 35% gas 20% oil 40% water 5% mud

698.00 ft of Heavy gassy mud oil cut water

0.00 ft of 47% has 11% oil 29% water 13% mud

SALINITY 52000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA-----

Tool Wt. 2000.00 lbs

Wt Set On Packer 30000.00 lbs

Wt Pulled Loose 92000.00 lbs

Initial Str Wt 85000.00 lbs

Unseated Str Wt 90000.00 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 698.00 ft

D.P. Length 4076.00 ft

## BLOW DESCRIPTION

### Initial Flow:

Strong blow off bottom in  
1 min. 45 secs.

### Initial Shut-in:

Gas to surface at 8 mins. while  
bleeding off blow

### Final Flow:

Strong return off bottom in 2 mins.  
gauged 25"/water on 3/8"=17.7 mcf/day

### Final Shut-in:

Let blow bleed off

MUD DATA-----

Mud Type Chemical

Weight 9.00 lb/cf

Vis. 52.00 S/L

W.L. 7.20 in3

F.C. 0.00 in

Mud Drop Y 15.0 ft

Amt. of fill 0.00 ft

Btm. H. Temp. 145.00 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. Roger Martin

Contr. Cheyenne

Rig # 5

Unit #

Pump T.

SAMPLES:

SENT TO:

Test Successful: Y

# GAS RECOVERY

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COMPANY: Mull Drlg.Co.Inc.

DATE: 4-14-99

WELL NAME: UPR Garret #1-23

KB Elev: 4378.00 ft TICKET #11911 DST #1

WELL LOCATION: 23-13S-47W Cheyenne CO.

GR Elev: 4367.00 ft FORMATION: Marmaton

INTERVAL Fr.: 4789.00 To 4870.00 T.D.: 4870.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH 2" Merla Gauge

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

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
15	0.62	0	15	13900.0
30	0.62	0	20	15900.0
45	0.62	0	25	17700.0
60	0.62	0	25	17700.0

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

WELL NAME: UPR Garret #1-23

LOCATION : 23-13S-47W Cheyenne CO.

TICKET No. 11911 D.S.T. No. 1 DATE 4-14-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 27

INTERVAL TOOL ..... 19

BOTTOM PACKERS AND ANCHOR .....

TOTAL TOOL ..... 46

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY ..... 108

D.C. ABOVE TOOLS.Stands12 Single Total 698

D.P. ABOVE TOOLS.Stands65 Single 1 Total 4076

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4882

TOTAL DEPTH ..... 4870

TOTAL DRILL PIPE ABOVE K.B. .... 12

REMARKS:

P.O. SUB 1' Above 120' DC	4642
C.O. SUB 1'	4762
S.I. TOOL 5'	4768
HMV 5'	4773
JARS 5'	4778
SAFETY JOINT 2'	4780
PACKER 4'	4784
PACKER 5'	4789
DEPTH	
STUBB 1'	4790
ANCHOR	
Alp Rec. @	4792
11' Perf	4801
1' c/o sub	4802
62' DP	4864
1' c/o sub	4865
T.C.	
DEPTH	
AK-1 Rec. @	4865
BULLNOSE 5'	
T.D.	4870



# TEST HISTORY

11911 DST #1 UPR-Garret #1-23 Mull Drlg.Co.

Flag Points  
t(Min.) P( PSig)

A:	0.00	2267.75
B:	0.00	91.21
C:	30.00	306.46
D:	46.00	1102.24
E:	0.00	350.00
F:	59.00	508.05
G:	61.00	1083.22
Q:	0.00	2221.67

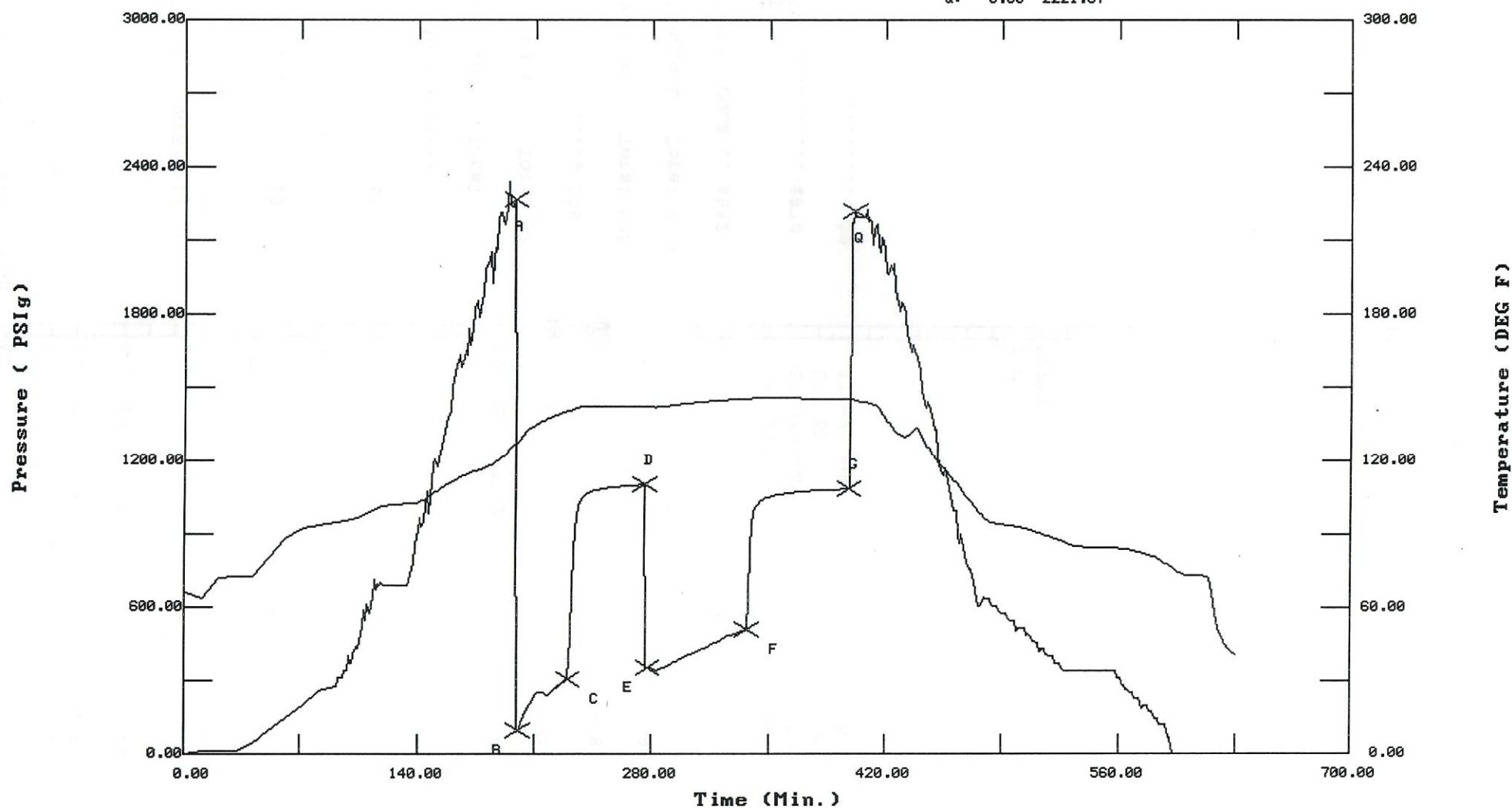
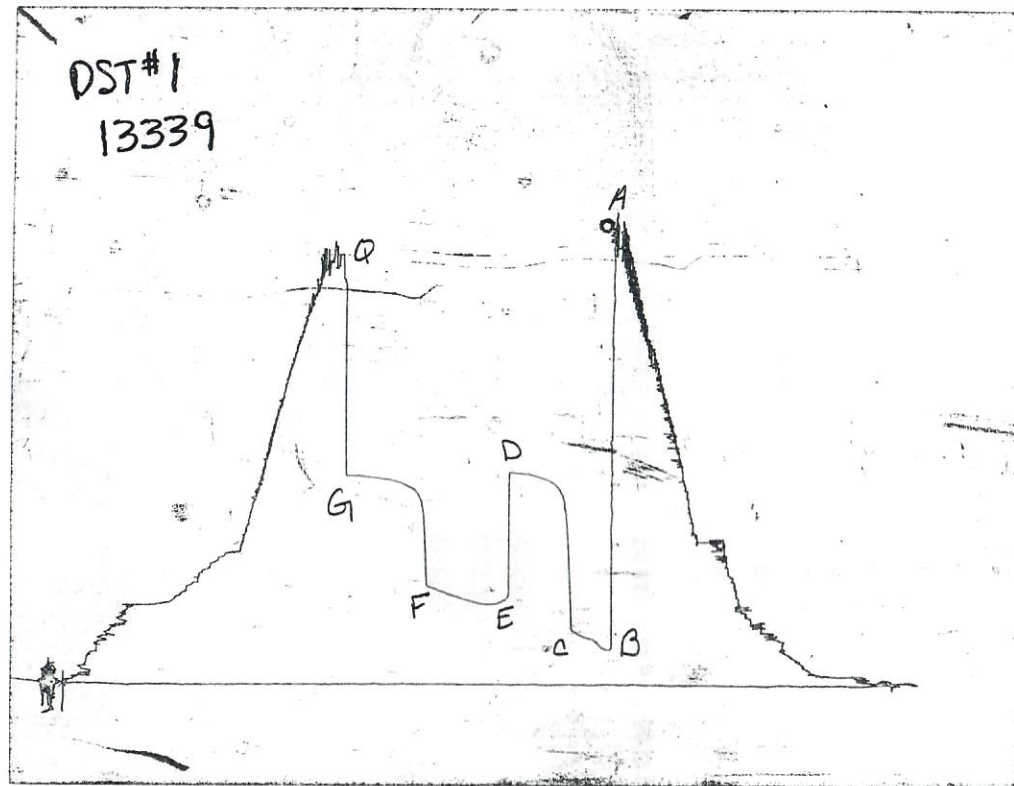


CHART PAGE



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

# CALCULATED RECOVERY ANALYSIS

DST # 1 TICKET 11911

Drill Pipe	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	140	25	35		0		0	75	105
2	124	30	37.2	40	49.6	20	24.8	10	12.4
3	62	100	62		0		0		0
4	248	35	86.8	20	49.6	40	99.2	5	12.4
5			0		0		0		0
6			0		0		0		0
Drill Collars									
1	698	47	328.06	11	76.78	29	202.42	13	90.74
2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1272	43.17	549.06	13.83	175.98	25.66	326.42	17.34	220.54

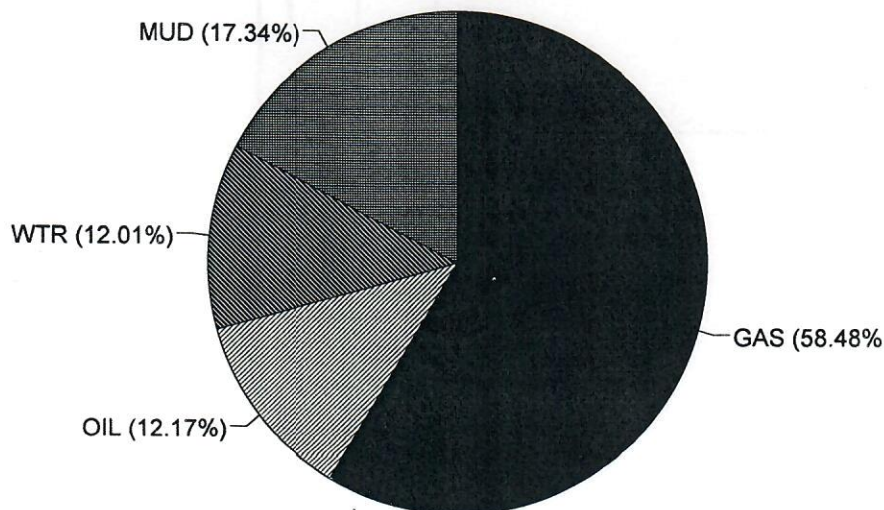
HRS OP BBL/DAY

BBL OIL= 1.7860782 \* 1.5 28.5773

BBL WATER= 1.76328 \* 28.2125

BBL MUD= 2.5450914

BBL GAS 8.5842126





## GAS VOLUME REPORT

UPR Garret #1-23

WELL NAME AND NO.

DST NO.

Remarks:

Gas is flammable



# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

N<sup>o</sup> 11911

## Test Ticket

Well Name & No.	UPR-Garret #1-23	Test No.	1	Date	4-14-99
Company	Mull Drlg Company Inc.	Zone Tested	Marmaton		
Address	221 N. Main #300 Wichita, KS. 67202	Elevation	4378	KB	4367 GL
Co. Rep / Geo.	Roger Martin	Cont.	Cheyenne #5	Est. Ft. of Pay	Por. %
Location: Sec.	23	Twp.	13 <sup>S</sup>	Rge.	47 <sup>W</sup>
				Co.	Cheyenne
				State	CO.
No. of Copies	9	Distribution Sheet (Y, N)	Y	Turnkey (Y, N)	Evaluation (Y, N)

Interval Tested 4789-4870 Initial Str Wt./Lbs. 85,000 Unseated Str Wt./Lbs. 90,000  
Anchor Length 81' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 92,000  
Top Packer Depth 4784 Tool Weight 2,000  
Bottom Packer Depth 4789 Hole Size — 7 7/8" Rubber Size — 6 3/4"  
Total Depth 4870 Wt. Pipe Run — Drill Collar Run (4" H 90) 698'  
Mud Wt. 9.0 LCM 2# Vis. 52 WL 7.2 Drill Pipe Size 4 1/2" XH Ft. Run (65.1) 4076'  
Blow Description IF: Strong blow off bttm in 1 min 45 sec.  
ISI: GTS @ 8 mins. while bleeding off  
FF: Strong return off bttm in 2 mins. gauged 25"/wtr on 3/8" = 17.7 mcf/day  
FSI: Let blow bled off

Recovery — Total Feet	<u>1272'</u>	GIP	<u>GTS</u>	Ft. in DC	<u>698'</u>	Ft. in DP	<u>574'</u>
Rec. <u>140'</u>	Feet Of <u>GCM</u>	<u>25</u> %gas	<u>—</u> %oil	<u>—</u> %water	<u>75</u> %mud		
Rec. <u>124'</u>	Feet Of <u>MWCGD</u>	<u>30</u> %gas	<u>40</u> %oil	<u>20</u> %water	<u>10</u> %mud		
Rec. <u>62'</u>	Feet Of <u>G</u>	<u>100</u> %gas	<u>—</u> %oil	<u>—</u> %water	<u>—</u> %mud		
Rec. <u>248'</u>	Feet Of <u>GDCMW</u>	<u>35</u> %gas	<u>20</u> %oil	<u>40</u> %water	<u>5</u> %mud		
Rec. <u>698'</u>	Feet Of <u>HGMDCW</u>	<u>47</u> %gas	<u>11</u> %oil	<u>29</u> %water	<u>13</u> %mud		
BHT <u>145°</u>	°F Gravity	°API D@	°F Corrected Gravity	°API			
RW <u>.15</u>	@ <u>70°</u>	°F Chlorides	<u>52,000</u> ppm Recovery	Chlorides	<u>200</u> ppm System		

(A) Initial Hydrostatic Mud	<u>2303</u>	AK-1	<u>2267</u>	Alpine	PSI	Recorder No.	<u>3024</u>	T-On Location	<u>0330</u>
(B) First Initial Flow Pressure	<u>176</u>		<u>91</u>		PSI	(depth)	<u>4792</u>	T-Started	<u>0455</u>
(C) First Final Flow Pressure	<u>291</u>		<u>306</u>		PSI	Recorder No.	<u>13339</u>	T-Open	<u>0912</u>
(D) Initial Shut-In Pressure	<u>1120</u>		<u>1102</u>		PSI	(depth)	<u>4865</u>	T-Pulled	<u>1228</u>
(E) Second Initial Flow Pressure	<u>415</u>		<u>350</u>		PSI	Recorder No.	<u>—</u>	T-Out	<u>1630</u>
(F) Second Final Flow Pressure	<u>519</u>		<u>508</u>		PSI	(depth)	<u>—</u>	T-Off Location	<u>1800</u>
(G) Final Shut-in Pressure	<u>1100</u>		<u>1083</u>		PSI	Initial Opening	<u>30</u>	Test	
(Q) Final Hydrostatic Mud	<u>2243</u>		<u>2221</u>		PSI	Initial Shut-in	<u>45</u>	Jars	<u>X</u>

Final Flow 60 Safety Joint X  
Final Shut-in 60 Straddle —  
gas 4.75 bbl Circ. Sub X N/C  
oil 1.8 bbl Sampler —  
wtr. 2.75 bbl Extra Packer —  
md 2.3 bbl Elec. Rec. X  
Total 11.6 bbl Rec. Mileage —  
Other —  
TOTAL PRICE \$ —

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

Roger L Martin

Our Representative

Rod Steinbrink

TRILOBITE TESTING L.L.C.

OPERATOR : Mull Drlg.Co.Inc.

DATE 4-16-99

WELL NAME: Garret #1-23

KB 4378.00 ft

TICKET NO: 11912 DST #2

LOCATION : 23-13S-47W Cheyenne CO.

GR 4367.00 ft

FORMATION: Spergen

INTERVAL : 5473.00 To 5530.00 ft

TD 5530.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13339	13339	3024			PF Fr. 1412 to 1442 hr
SI 45 Range(Psi )	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. 1442 to 1527 hr
SF 30 Clock(hrs)	12 HR	12	ALP			SF Fr. 1527 to 1557 hr
FS 45 Depth(ft )	5525.0	5525.0	5475.0	0.0	0.0	FS Fr. 1557 to 1632 hr

	Field	1	2	3	4	
A. Init Hydro	2701.0	2692.0	2619.0	0.0	0.0	T STARTED 1115 hr
B. First Flow	124.0	141.0	71.0	0.0	0.0	T ON BOTM 1410 hr
B1. Final Flow	124.0	141.0	79.0	0.0	0.0	T OPEN 1412 hr
C. In Shut-in	899.0	915.0	923.0	0.0	0.0	T PULLED 1632 hr
D. Init Flow	145.0	159.0	82.0	0.0	0.0	T OUT 1900 hr
E. Final Flow	145.0	159.0	85.0	0.0	0.0	
F. Fl Shut-in	609.0	624.0	633.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2563.0	2434.0	2600.0	0.0	0.0	Tool Wt. 2000.00 lbs
Inside/Outside	O	O	I			Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 110000.00 lbs
						Initial Str Wt 90000.00 lbs
						Unseated Str Wt 90000.00 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 698.00 ft
						D.P. Length 4762.00 ft

RECOVERY

Tot Fluid 140.00 ft of 140.00 ft in DC and 0.00 ft in DP  
 140.00 ft of Drilling 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  
 0.00 ft of

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

BLOW DESCRIPTION

Initial Flow:

Tool slid 5' - 3" surge blow  
 decreased to 1"

Final Flow:

Weak 1/2" blow died in 15 mins.

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/c
Vis.	56.00 S/L
W.L.	6.80 in3
F.C.	0.00 in

Mud Drop Y 15.0 ft

Amt. of fill	0.00 ft
Btm. H. Temp.	146.00 F
Hole Condition	Fair
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out N	
Tool Chased Y	5.00 ft
Tester	Rod Steinbrink
Co. Rep.	Mike P/Roger M
Contr.	Cheyenne
Rig #	5
Unit #	
Pump T.	

SAMPLES:

SENT TO:

Test Successful: Y



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

WELL NAME: Garret #1-23

LOCATION : 23-13S-47W Cheyenne CO.

TICKET No. 11912 D.S.T. No. 2 DATE 4-16-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 27

INTERVAL TOOL ..... 26

TOTAL PACKERS AND ANCHOR .....

TOTAL TOOL ..... 53

DRILL COLLAR ANCHOR IN INTERVAL .....

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY ..... 84

C. ABOVE TOOLS.Stands12 Single Total 698

P. ABOVE TOOLS.Stands76 Single 1 Total 4762

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5544

TOTAL DEPTH ..... 5530

TOTAL DRILL PIPE ABOVE K.B. .... 14

REMARKS:

P.O. SUB 1' Above 120' DC	5326
C.O. SUB 1'	5446
S.I. TOOL 5'	5452
HMV 5'	5457
JARS 5'	5462
SAFETY JOINT 2'	5464
PACKER 4'	5468
PACKER 5'	5473
DEPTH	
STUBB 1'	5474
ANCHOR	
ALP Rec. @	5475
18' Perf	5492
1' c/o sub	5493
31' DP	5524
1' c/o sub	5525
T.C.	
DEPTH	
AK-1 Rec. @	5525
BULLNOSE 5'	
T.D.	5530

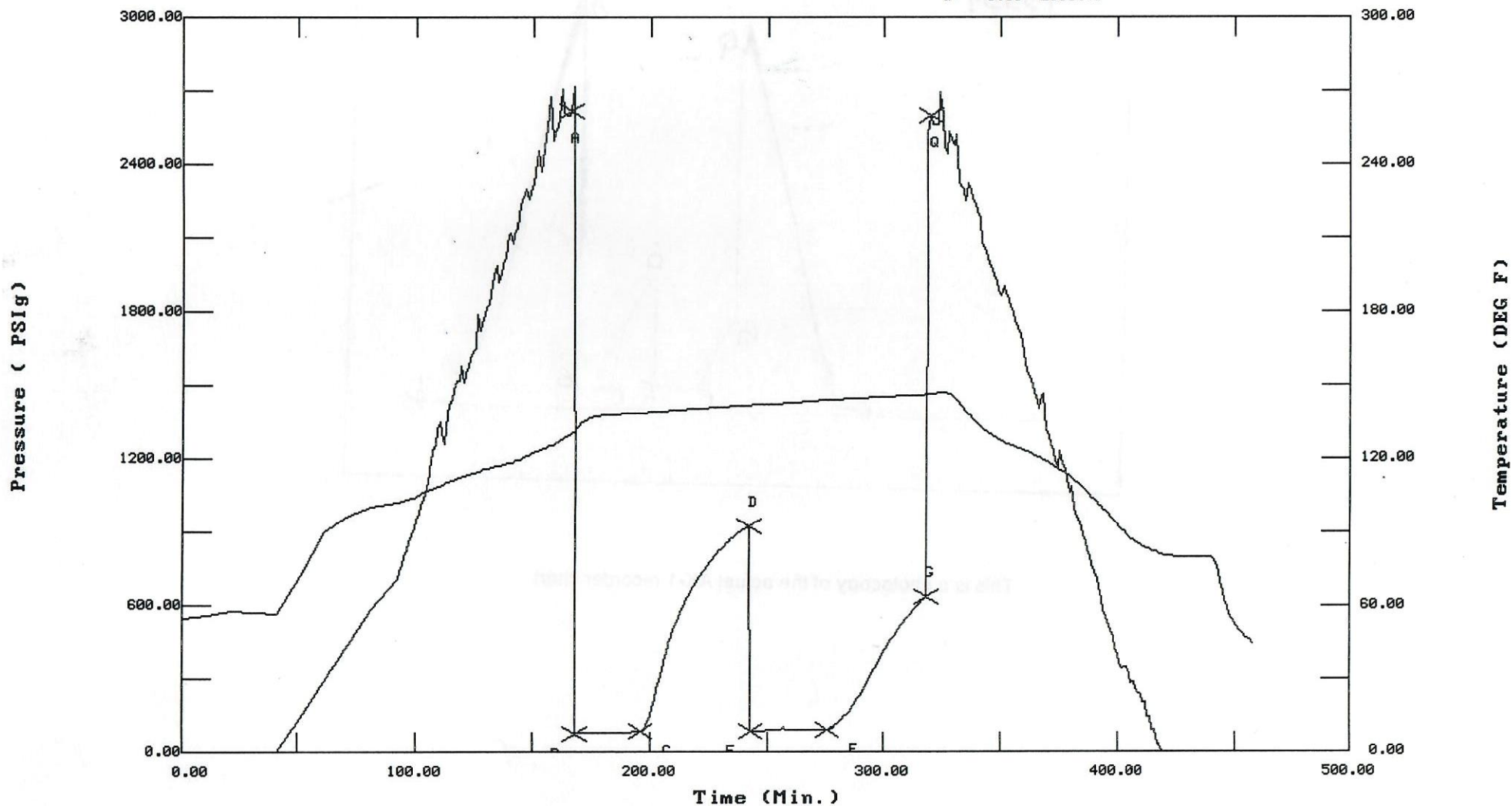
# TEST HISTORY

11912 DST #2 UPR-Garret #1-23 Mull Drlg.Co.

Flag Points

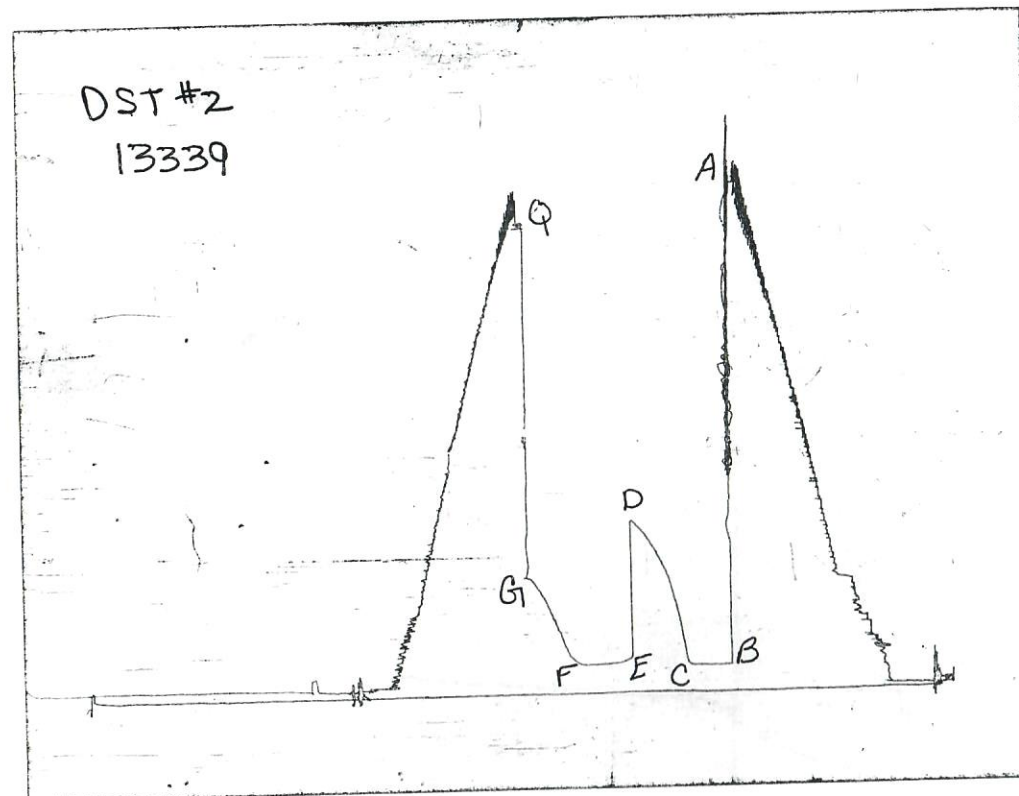
t(Min.) P(PSIg)

A:	0.00	2619.09
B:	0.00	71.76
C:	28.00	79.39
D:	46.00	923.70
E:	0.00	82.72
F:	33.00	85.54
G:	42.00	633.43
Q:	0.00	2600.40





# 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

N<sup>o</sup> 11912

## Test Ticket

Well Name & No.	UPR - Garret #1-23	Test No.	2	Date	4-16-99		
Company	Mull Drlg. Company, Inc.	Zone Tested	Spergen				
Address	221 N. Main #300 Wichita, KS. 67202	Elevation	4378	KB	4367 GL		
Co. Rep / Geo.	M. Polly / Roger M.	Cont.	Cheyenne #5	Est. Ft. of Pay	Por. %		
Location: Sec.	23	Twp.	13 <sup>s</sup>	Rge.	47 <sup>w</sup>		
			Co.	Cheyenne	State	CO	
No. of Copies	9	Distribution Sheet (Y, N)	Y	Turnkey (Y, N)	N	Evaluation (Y, N)	

Interval Tested	5473 - 5530	Initial Str Wt./Lbs.	90,000	Unseated Str Wt./Lbs.	90,000						
Anchor Length	57'	Wt. Set Lbs.	30,000	Wt. Pulled Loose/Lbs.	110,000						
Top Packer Depth	5468	Tool Weight	2,000								
Bottom Packer Depth	5473	Hole Size — 7 7/8"		Rubber Size — 6 3/4"							
Total Depth	5530	Wt. Pipe Run	—	Drill Collar Run (4" H-90)	698'						
Mud Wt.	9.1	LCM	8#	Vis.	56	WL	6.8	Drill Pipe Size	4 1/2" XH	Ft. Run (76.1)	4762'
Blow Description	IF: Tool slid 5' - 3" surge blow decreased to 1"										

~~IF~~ FF: Weak 1/2" blow died in 15 mins.

Recovery — Total Feet	140'	GIP	—	Ft. in DC	140'	Ft. in DP	—		
Rec.		Feet Of		%gas	%oil	%water	%mud		
Rec.		Feet Of		%gas	%oil	%water	%mud		
Rec.	140'	Feet Of	Drlg Mud	%gas	%oil	%water	%mud		
Rec.		Feet Of		%gas	%oil	%water	%mud		
Rec.		Feet Of		%gas	%oil	%water	%mud		
BHT	146°	°F Gravity		°API D@		°F Corrected Gravity		°API	
RW		@		°F Chlorides		ppm Recovery	Chlorides	300	ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	2701	2619	PSI	Recorder No.	3024	T-On Location	1015
(B) First Initial Flow Pressure	124	71	PSI	(depth)	5475	T-Started	1115
(C) First Final Flow Pressure	124	79	PSI	Recorder No.	13339	T-Open	1412
(D) Initial Shut-In Pressure	899	923	PSI	(depth)	5525	T-Pulled	1632
(E) Second Initial Flow Pressure	145	82	PSI	Recorder No.	—	T-Out	1900
(F) Second Final Flow Pressure	145	85	PSI	(depth)	—	T-Off Location	2030
(G) Final Shut-in Pressure	609	633	PSI	Initial Opening	30	Test	
(Q) Final Hydrostatic Mud	2563	2600	PSI	Initial Shut-in	45	Jars	X
				Final Flow	30	Safety Joint	X
				Final Shut-in	45	Straddle	

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Approved By Roger Martin

Our Representative Rod Steinbrink

Circ. Sub X N/C  
Sampler \_\_\_\_\_  
Extra Packer \_\_\_\_\_  
Elec. Rec. X  
Mileage \_\_\_\_\_  
Other \_\_\_\_\_  
TOTAL PRICE \$ \_\_\_\_\_