

32-31-13W

15-007-22825

Raymond Oil Company Inc.

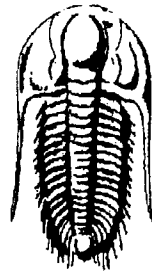
Dugan Trust D 1

32/31/13

DST # 1

Lecompton

2004.06.14



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Company Inc.**

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

32/31/13

Dugan Trust D 1

Start Date: 2004.06.14 @ 16:17:41

End Date: 2004.06.15 @ 01:14:41

Job Ticket #: 19687

DST #: 1

15-007-22825-00-00

W2 E2 E2

2640 FSL 910 FEL

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Raymond Oil Company Inc.

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

Dugan Trust D 1

32/31/13

Job Ticket: 19687

DST#: 1

Test Start: 2004.06.14 @ 16:17:41

GENERAL INFORMATION:

Formation: **Lecompton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:45:41

Time Test Ended: 01:14:41

Test Type: Conventional Bottom Hole

Tester: Chris Hagman

Unit No: 19

Interval: **3467.00 ft (KB) To 3490.00 ft (KB) (TVD)**

Total Depth: 3490.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Reference Elevations: 1552.00 ft (KB)

1540.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 6625

Inside

Press@RunDepth: 322.76 psig @ 3469.00 ft (KB)

Start Date: 2004.06.14

End Date:

2004.06.15

Start Time: 16:17:44

End Time:

01:14:41

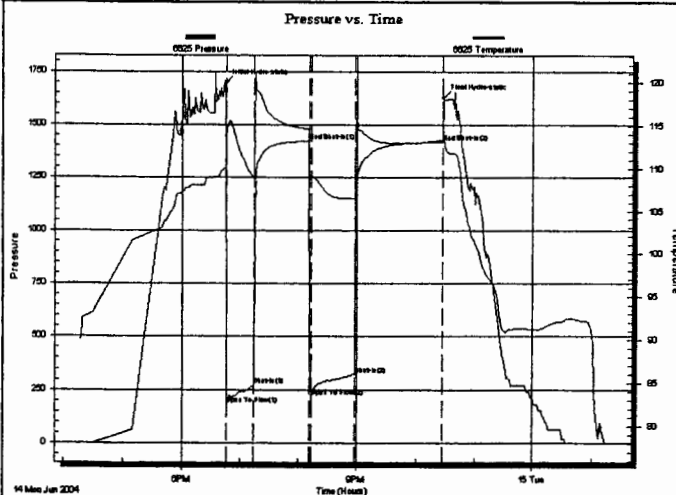
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2004.06.14 @ 18:44:11

Time Off Btm: 2004.06.14 @ 22:27:41

TEST COMMENT: IF: BOB immediately, GTS 5 min, strong blow
IS: No blow back
FF: BOB immediately, GTS immediately, strong blow
FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1692.04	110.10	Initial Hydro-static
2	180.14	113.89	Open To Flow (1)
30	272.38	108.75	Shut-In (1)
87	1422.62	114.63	End Shut-In (1)
90	215.54	109.11	Open To Flow (2)
134	322.76	106.53	Shut-In (2)
223	1419.36	113.35	End Shut-In (2)
224	1626.76	114.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	5%G, 95%W	1.45
434.00	30%G, 65%O, 5%M	8.54

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	7.00	334.26
Last Gas Rate	0.75	22.00	568.56
Max. Gas Rate	0.75	26.00	631.04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19687

DST#: 1

ATTN: Clark Sandberg

Test Start: 2004.06.14 @ 16:17:41

Tool Information

Drill Pipe:	Length: 3317.00 ft	Diameter: 4.50 inches	Volume: 65.25 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 150.00 ft	Diameter: 2.25 inches	Volume: 0.74 bbl	Weight to Pull Loose:	65000.00 lb
		Total Volume:	65.99 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3467.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3445.00	
Shut In Tool	5.00			3450.00	
Hydraulic tool	5.00			3455.00	
Safety Joint	3.00			3458.00	
Packer	5.00			3463.00	23.00 Bottom Of Top Packer
Packer	4.00			3467.00	
Stubb	1.00			3468.00	
Perforations	1.00			3469.00	
Recorder	0.00	6625	Inside	3469.00	
Perforations	18.00			3487.00	
Recorder	0.00	10991	Inside	3487.00	
Bullnose	3.00			3490.00	23.00 Bottom Packers & Anchor

Total Tool Length: 46.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19687

DST#: 1

ATTN: Clark Sandberg

Test Start: 2004.06.14 @ 16:17:41

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

15000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.34 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	5%G, 95%W	1.446
434.00	30%G, 65%O, 5%M	8.537

Total Length: 620.00 ft

Total Volume: 9.983 bbl

Num Fluid Samples: 1

Num Gas Bombs: 1

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments: Could not obtain api on oil, it was too thick and gassy

RW=.370@80F=15000 ppm



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19687

DST#: 1

ATTN: Clark Sandberg

Test Start: 2004.06.14 @ 16:17:41

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

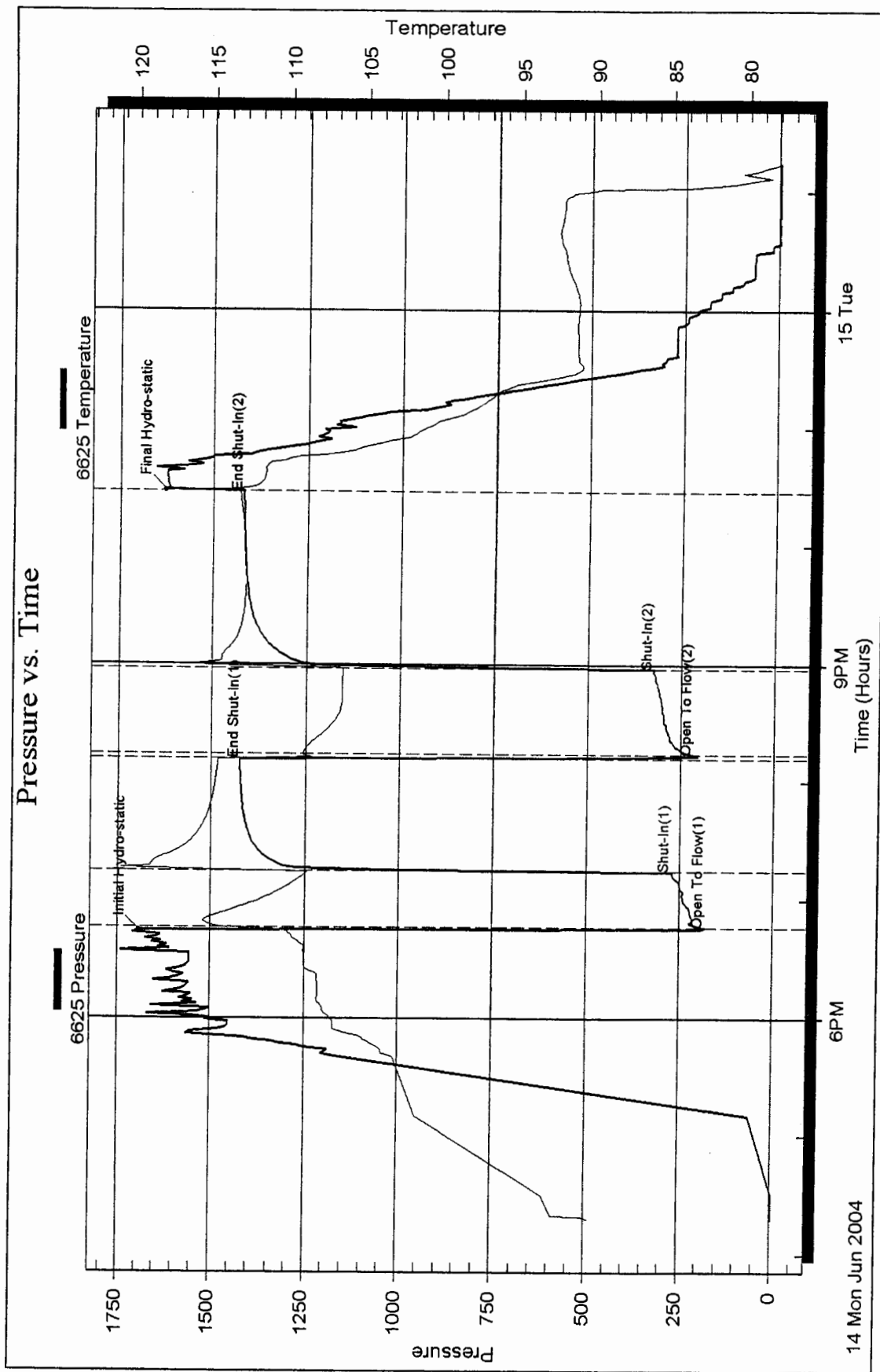
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	10	0.75	7.00	334.26
1	10	0.75	7.00	334.26
1	20	0.75	18.00	506.08
1	30	0.75	22.00	568.56
2	10	0.75	24.00	599.80
2	20	0.75	26.00	631.04
2	30	0.75	24.00	599.80
2	40	0.75	22.00	568.56

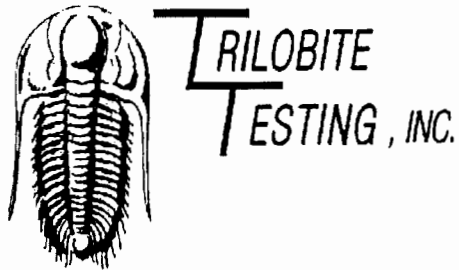
DST Test Number: 1

32/31/13

Serial #: 6625 Inside Raymond Oil Company Inc.

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Company Inc.**
P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

32/31/13

Dugan Trust D 1

Start Date: 2004.06.15 @ 17:02:01
End Date: 2004.06.16 @ 00:29:01
Job Ticket #: 19688 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Raymond Oil Company Inc.

Dugan Trust D 1

32/31/13

DST # 2

Upper Douglas sd.

2004.06.15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Raymond Oil Company Inc.

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

Dugan Trust D 1

32/31/13

Job Ticket: 19688

DST#: 2

Test Start: 2004.06.15 @ 17:02:01

GENERAL INFORMATION:

Formation: **Upper Douglas sd.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:44:01

Time Test Ended: 00:29:01

Test Type: Conventional Bottom Hole

Tester: Darren L. Amerine

Unit No: 19

Interval: **3719.00 ft (KB) To 3735.00 ft (KB) (TVD)**

Total Depth: 3735.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 1552.00 ft (KB)

1540.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 6625 Inside

Press@RunDepth: 84.54 psig @ 3721.00 ft (KB)

Start Date: 2004.06.15

End Date:

2004.06.16

Start Time: 17:02:04

End Time:

00:29:01

Capacity: 7000.00 psig

Last Calib.: 2004.06.16

Time On Btm: 2004.06.15 @ 18:42:46

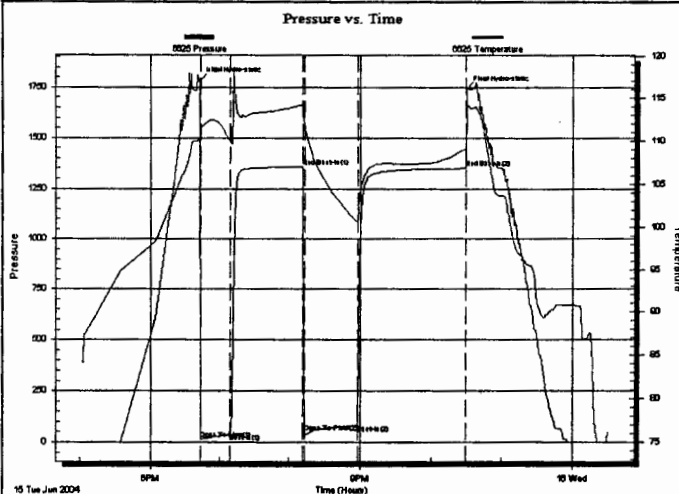
Time Off Btm: 2004.06.15 @ 22:30:31

TEST COMMENT: IF: Strong blow b.o.b in 30 sec. GTS in 20 mins. Gauge gas.

IS: Bled down for 10 mins. no blow back.

FF: Strong blow b.o.b in 10 sec. gauge gas.

FS: Bled down for 15 mins. no blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.81	110.06	Initial Hydro-static
2	14.14	111.47	Open To Flow (1)
28	41.39	110.00	Shut-In (1)
90	1357.05	114.25	End Shut-In (1)
92	49.30	111.30	Open To Flow (2)
135	84.54	100.55	Shut-In (2)
227	1349.63	109.13	End Shut-In (2)
228	1741.64	113.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3596' of gip	0.00
130.00	SGCM 10% gas 90% mud	0.64

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	2.50	61.91
Last Gas Rate		0.00	
Max. Gas Rate	0.38	53.00	246.90



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19688

DST#: 2

ATTN: Clark Sandberg

Test Start: 2004.06.15 @ 17:02:01

Tool Information

Drill Pipe: Length: 3572.61 ft Diameter: 3.80 inches Volume: 50.11 bbl
Heavy Wt. Pipe: Length: 0.00 ft Diameter: 0.00 inches Volume: 0.00 bbl
Drill Collar: Length: 153.39 ft Diameter: 2.25 inches Volume: 0.75 bbl
Total Volume: 50.86 bbl

Tool Weight: 2100.00 lb
Weight set on Packer: 20000.00 lb
Weight to Pull Loose: 65000.00 lb
Tool Chased 0.00 ft
String Weight: Initial 54000.00 lb
Final 56000.00 lb

Drill Pipe Above KB: 31.00 ft
Depth to Top Packer: 3719.00 ft
Depth to Bottom Packer: ft
Interval between Packers: 16.00 ft
Tool Length: 40.00 ft
Number of Packers: 2 Diameter: 6.75 inches

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3696.00	
Shut In Tool	5.00			3701.00	
Hydraulic tool	5.00			3706.00	
Safety Joint	3.00			3709.00	
Packer	5.00			3714.00	24.00 Bottom Of Top Packer
Packer	5.00			3719.00	
Stubb	2.00			3721.00	
Recorder	0.00	6625	Inside	3721.00	
Anchor	11.00			3732.00	
Recorder	0.00	10991	Outside	3732.00	
Bullnose	3.00			3735.00	16.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19688

DST#: 2

ATTN: Clark Sandberg

Test Start: 2004.06.15 @ 17:02:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.32 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3596' of gip	0.000
130.00	SGCM 10% gas 90% mud	0.639

Total Length: 130.00 ft

Total Volume: 0.639 bbl

Num Fluid Samples: 1

Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19688

DST#: 2

ATTN: Clark Sandberg

Test Start: 2004.06.15 @ 17:02:01

Gas Rates Information

Temperature: 59 deg C

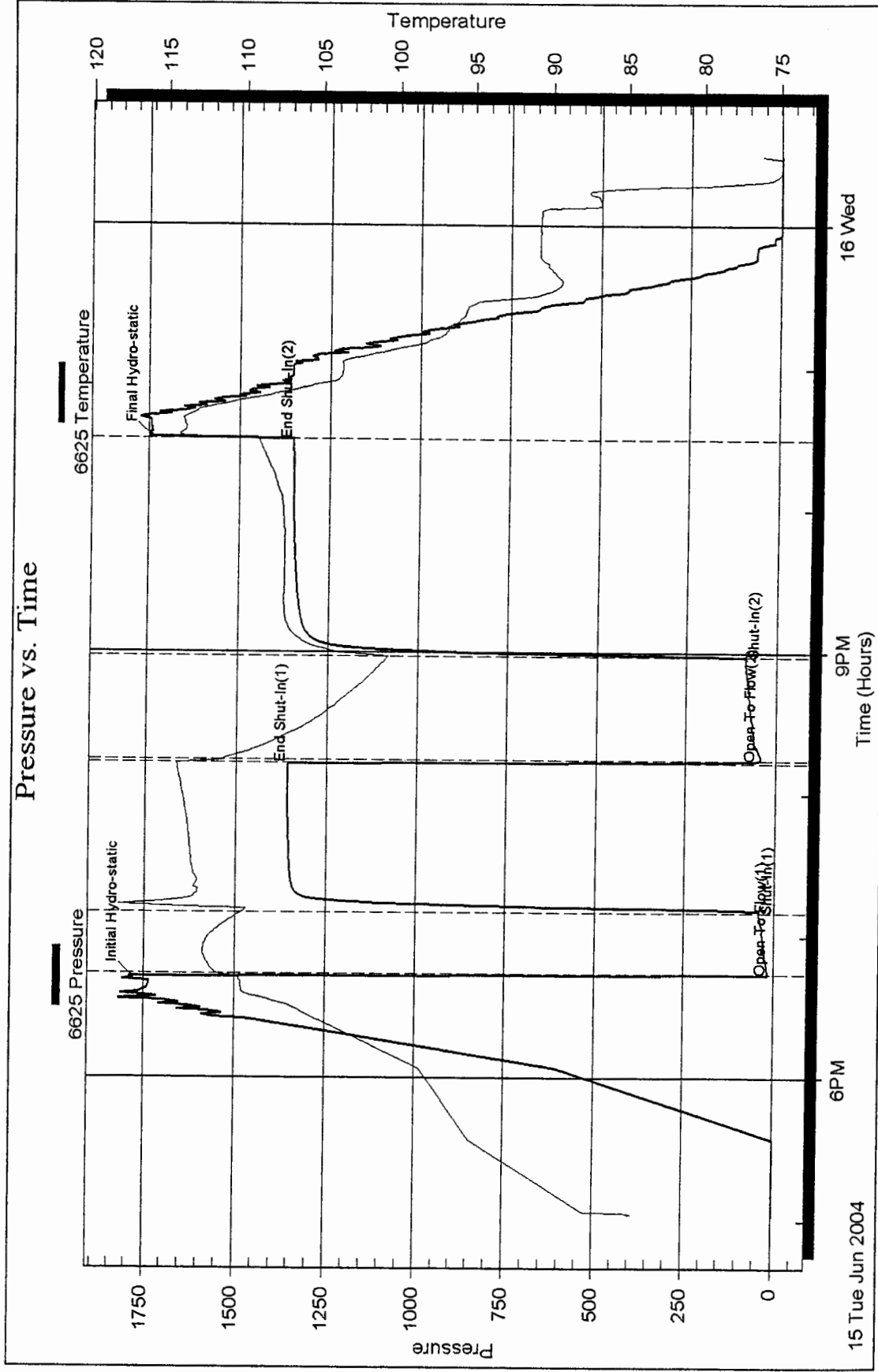
Relative Density: 0.65

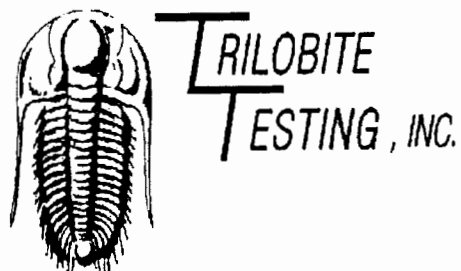
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	25	0.38	2.50	61.91
1	30	0.38	3.00	63.74
2	5	0.38	23.50	138.84
2	10	0.38	25.00	144.33
2	15	0.38	28.00	155.32
2	20	0.38	38.00	191.95
2	25	0.38	41.00	202.94
2	30	0.38	43.00	210.27
2	35	0.38	50.00	235.91
2	40	0.38	51.00	239.58
2	45	0.38	53.00	246.90
0	0	-999999.00	0.00	-999999.00

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Company Inc.**

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

32/31/13

Dugan Trust D 1

Start Date: 2004.06.16 @ 21:41:23

End Date: 2004.06.17 @ 06:07:38

Job Ticket #: 19689

DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Raymond Oil Company Inc.

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

Dugan Trust D 1

32/31/13

Job Ticket: 19689

DST#: 3

Test Start: 2004.06.16 @ 21:41:23

GENERAL INFORMATION:

Formation: **K.C. "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:06:53

Time Test Ended: 06:07:38

Test Type: Conventional Bottom Hole

Tester: Darren L. Amerine

Unit No: 19

Interval: **4069.00 ft (KB) To 4102.00 ft (KB) (TVD)**

Total Depth: 4102.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 1552.00 ft (KB)

1540.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 6625

Inside

Press@RunDepth: 165.88 psig @ 4071.00 ft (KB)

Start Date: 2004.06.16

End Date:

2004.06.17

Start Time: 21:41:26

End Time:

06:07:38

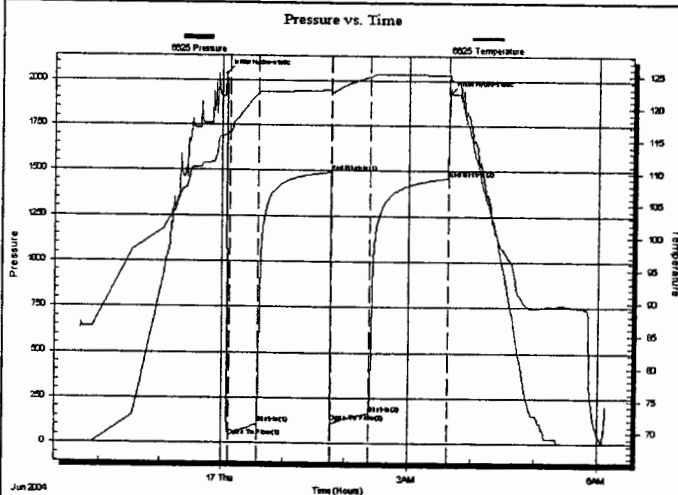
Capacity: 7000.00 psig

Last Calib.: 2004.06.17

Time On Btm: 2004.06.17 @ 00:03:38

Time Off Btm: 2004.06.17 @ 03:38:23

TEST COMMENT: IF: Strong blow b.o.b in 100 sec.
IS: Bled down n for 2-1/2 mins. built back to very weak surface blow.
FF: Strong blow b.o.b in 2-1/2 mins.
FS: Bled down n for 5 mins. built back to 1-1/2" in H2O bucket.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2034.47	115.90	Initial Hydro-static
4	34.30	116.14	Open To Flow (1)
31	104.05	122.16	Shut-In(1)
102	1491.16	122.76	End Shut-In(1)
103	115.50	122.27	Open To Flow (2)
139	165.88	124.84	Shut-In(2)
214	1461.00	125.21	End Shut-In(2)
215	1927.59	124.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	120' of gip	0.00
310.00	VSOCGW 6%gas 4%oil 90%w ater	2.95
120.00	HG&OCWM 20%gas 5%oil 30%w ater	45'1.68d

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19689

DST#: 3

ATTN: Clark Sandberg

Test Start: 2004.06.16 @ 21:41:23

Tool Information

Drill Pipe:	Length: 3922.61 ft	Diameter: 3.80 inches	Volume: 55.02 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 153.39 ft	Diameter: 2.25 inches	Volume: 0.75 bbl	Weight to Pull Loose:	65000.00 lb
		Total Volume:	55.77 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	4069.00 ft			Final	63000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.00 ft				
Tool Length:	57.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

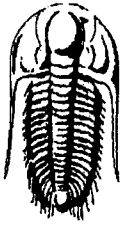
Tool Comments:

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00		4046.00	
Shut In Tool	5.00		4051.00	
Hydraulic tool	5.00		4056.00	
Safety Joint	3.00		4059.00	
Packer	5.00		4064.00	24.00 Bottom Of Top Packer
Packer	5.00		4069.00	
Stubb	2.00		4071.00	
Recorder	0.00	6625 Inside	4071.00	
Anchor	28.00		4099.00	
Recorder	0.00	10991 Outside	4099.00	
Bullnose	3.00		4102.00	33.00 Bottom Packers & Anchor

Total Tool Length: 57.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19689

DST#: 3

ATTN: Clark Sandberg

Test Start: 2004.06.16 @ 21:41:23

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

120000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.38 in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.32 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	120' of gip	0.000
310.00	VSOCGW 6%gas 4%oil 90%water	2.951
120.00	HG&OCWM 20%gas 5%oil 30%water 45%ml	1.683

Total Length: 430.00 ft

Total Volume:

4.634 bbl

Num Fluid Samples: 0

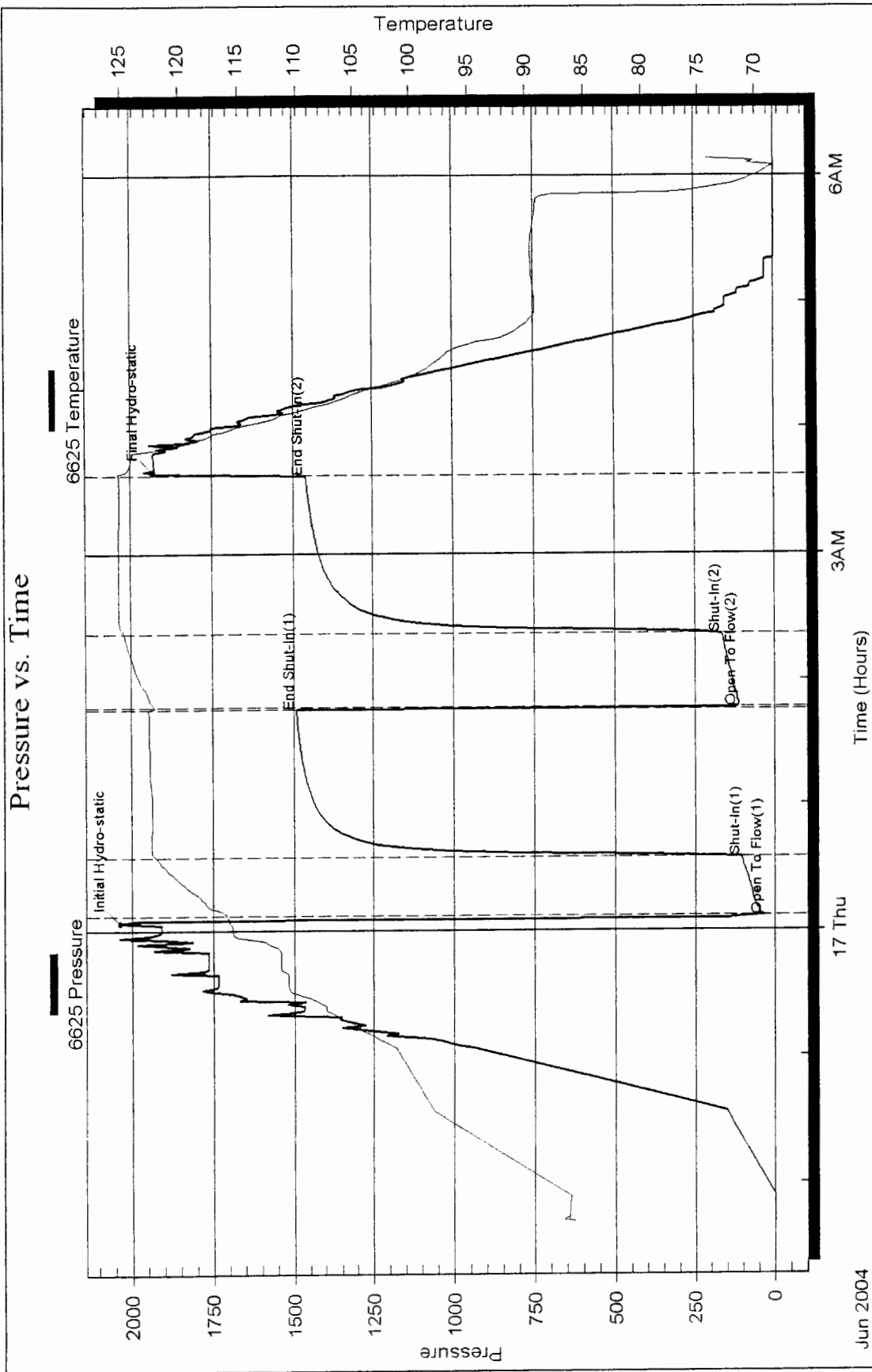
Num Gas Bombs: 0

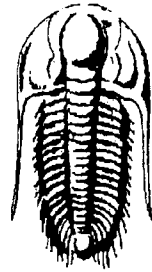
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .06@70'=120000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Company Inc.**

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

32/31/13

Dugan Trust D 1

Start Date: 2004.06.18 @ 03:13:52

End Date: 2004.06.18 @ 12:08:37

Job Ticket #: 19690 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Raymond Oil Company Inc.

Dugan Trust D 1

32/31/13

DST # 4

Mississippian

2004.06.18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Raymond Oil Company Inc.

P.O. Box 48788 Wichita KS 67201

ATTN: Clark Sandberg

Dugan Trust D 1

32/31/13

Job Ticket: 19690

DST#: 4

Test Start: 2004.06.18 @ 03:13:52

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:20:07

Time Test Ended: 12:08:37

Test Type: Conventional Bottom Hole

Tester: Darren L. Amerine

Unit No: 19

Interval: **4336.00 ft (KB) To 4385.00 ft (KB) (TVD)**

Total Depth: 4385.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 1552.00 ft (KB)

1540.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 6625 Inside

Press@RunDepth: 96.21 psig @ 4338.00 ft (KB)

Start Date: 2004.06.18

End Date: 2004.06.18

Start Time: 03:13:55

End Time: 12:08:37

Capacity: 7000.00 psig

Last Calib.: 2004.06.18

Time On Btm: 2004.06.18 @ 05:18:37

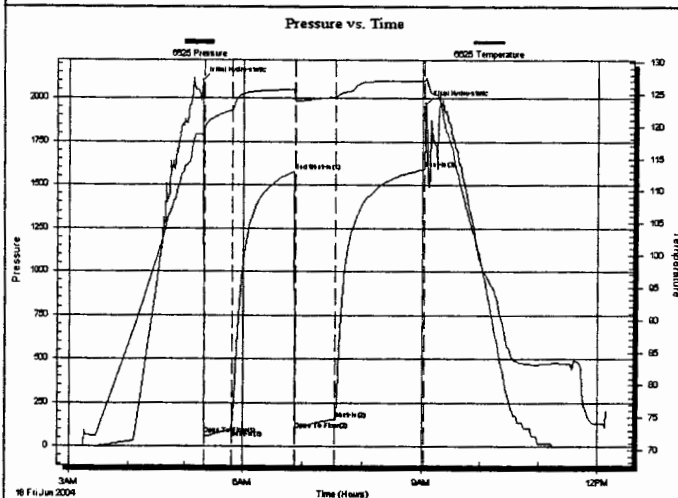
Time Off Btm: 2004.06.18 @ 09:04:07

TEST COMMENT: IF: Strong blow b.o.b in 10 sec. GTS in 20 mins. gauge gas.

IS: Bled down for 5 mins. built back to 10" in H2O bucket.

FF: Strong blow b.o.b in 10 sec. gauge gas.

FS: Bled down for 10 mins. built back to 1



PRESSURE SUMMARY

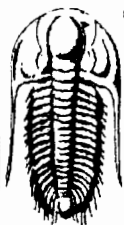
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2103.27	118.39	Initial Hydro-static
2	67.85	119.93	Open To Flow (1)
30	96.21	122.48	Shut-In (1)
93	1579.14	125.71	End Shut-In (1)
95	96.06	123.87	Open To Flow (2)
134	154.79	124.58	Shut-In (2)
224	1592.74	127.11	Shut-In (3)
226	1969.55	127.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3982' of gip	0.00
120.00	SO&GCW 2% gas 4% oil 94% water	0.59
223.00	HG&WCMO 40% gas 40% oil 6% water	142.82 d

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	1.80	25.70
Last Gas Rate		0.00	
Max. Gas Rate	0.25	4.20	29.51



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19690

DST#: 4

ATTN: Clark Sandberg

Test Start: 2004.06.18 @ 03:13:52

Tool Information

Drill Pipe: Length: 4172.61 ft Diameter: 3.80 inches Volume: 58.53 bbl
Heavy Wt. Pipe: Length: 0.00 ft Diameter: 0.00 inches Volume: 0.00 bbl
Drill Collar: Length: 153.39 ft Diameter: 2.25 inches Volume: 0.75 bbl
Total Volume: 59.28 bbl
Drill Pipe Above KB: 14.00 ft
Depth to Top Packer: 4336.00 ft
Depth to Bottom Packer: ft
Interval between Packers: 49.00 ft
Tool Length: 73.00 ft
Number of Packers: 2 Diameter: 6.75 inches

Tool Weight: 2100.00 lb
Weight set on Packer: 20000.00 lb
Weight to Pull Loose: 106000.0 lb
Tool Chased 10.50 ft
String Weight: Initial 64000.00 lb
Final 66000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4313.00	
Shut In Tool	5.00			4318.00	
Hydraulic tool	5.00			4323.00	
Safety Joint	3.00			4326.00	
Packer	5.00			4331.00	24.00 Bottom Of Top Packer
Packer	5.00			4336.00	
Stubb	2.00			4338.00	
Recorder	0.00	6625	Inside	4338.00	
Anchor	13.00			4351.00	
Blank Spacing	31.00			4382.00	
Recorder	0.00	10991	Outside	4382.00	
Bullnose	3.00			4385.00	49.00 Bottom Packers & Anchor

Total Tool Length: 73.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19690

DST#: 4

ATTN: Clark Sandberg

Test Start: 2004.06.18 @ 03:13:52

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

160000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: 0.09 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 0.32 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3982' of gip	0.000
120.00	SO&GCW 2%gas 4%oil 94%water	0.590
223.00	HG&WCMO 40%gas 40%oil 6%water 14%ml	2.824

Total Length: 343.00 ft

Total Volume: 3.414 bbl

Num Fluid Samples: 1

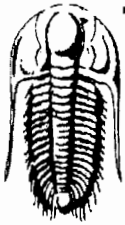
Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments: .o5@78'degrees=160000



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Raymond Oil Company Inc.

Dugan Trust D 1

P.O. Box 48788 Wichita KS 67201

32/31/13

Job Ticket: 19690

DST#: 4

ATTN: Clark Sandberg

Test Start: 2004.06.18 @ 03:13:52

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	30	0.25	1.80	25.70
2	10	0.38	1.50	58.24
2	20	0.25	2.50	26.81
2	30	0.25	3.60	28.55
2	40	0.25	4.10	29.35
2	45	0.25	4.20	29.51
0	0	-999999.00	0.00	-999999.00

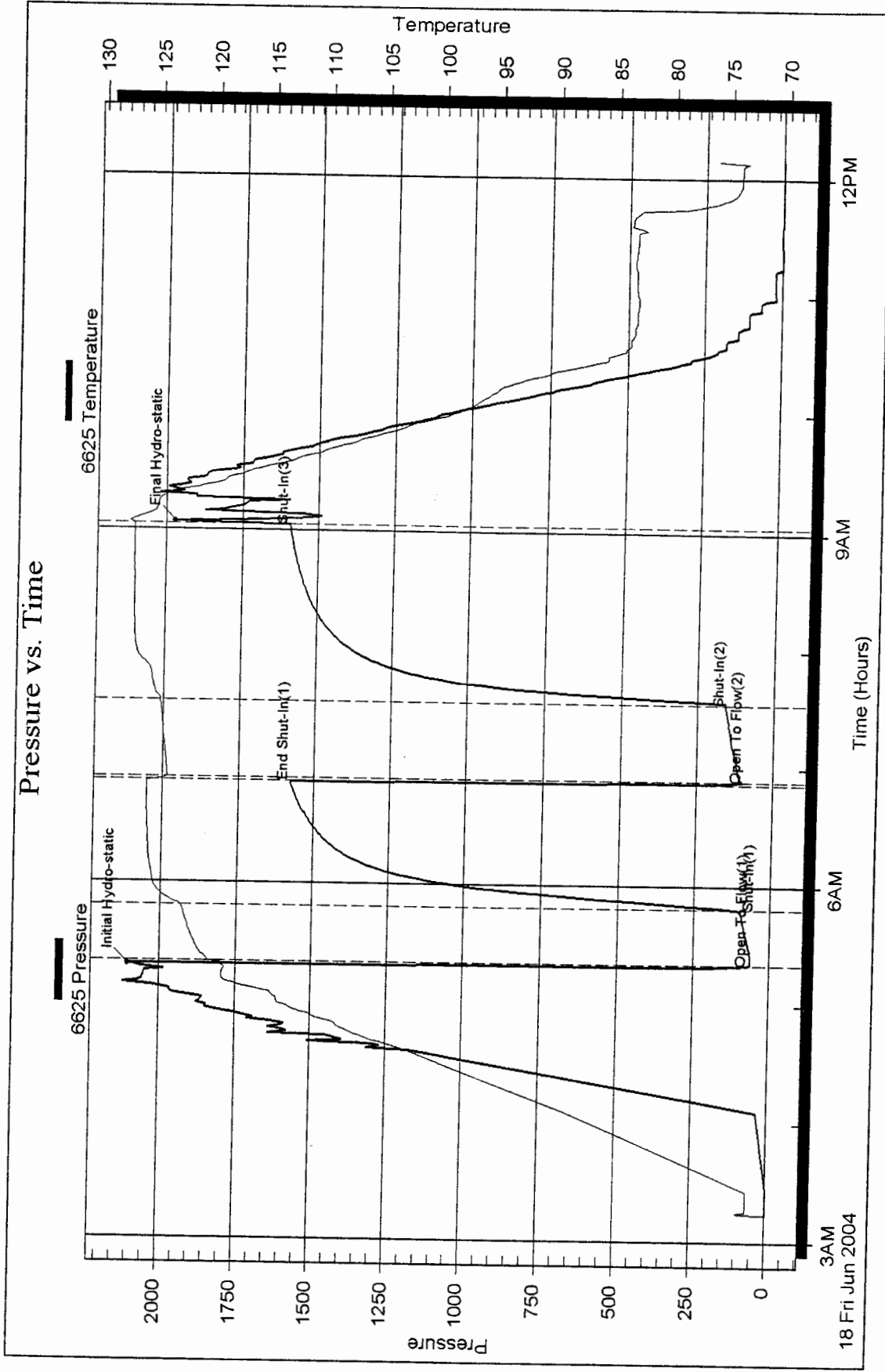
Serial #: 6625

Inside

Raymond Oil Company Inc.

32/31/13

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 19690

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