

RECEIVED JUL 17 2002



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

RECEIVED

AUG 23 2002

KCC WICHITA

ATTN: Jon Christensen

5-34s-8w Harper Ks.

Zimmerman C#2

Start Date: 2002.07.11 @ 15:16:39

End Date: 2002.07.11 @ 21:16:09

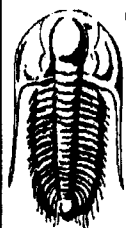
Job Ticket #: 15694

DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hartman Oil Company Inc.

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

ATTN: Jon Christensen

Zimmerman C#2

5-34s-8w Harper Ks.

Job Ticket: 15694

DST#: 1

Test Start: 2002.07.11 @ 15:16:39

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:23:39

Time Test Ended: 21:16:09

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 23

Interval: **4391.00 ft (KB) To 4421.00 ft (KB) (TVD)**

Total Depth: 4421.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1311.00 ft (KB)

1302.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 2342

Inside

Press@RunDepth: 34.65 psig @ 4392.00 ft (KB)

Start Date: 2002.07.11

End Date:

2002.07.11

Capacity: 7000.00 psig

Last Calib.: 2002.07.11

Start Time: 15:16:40

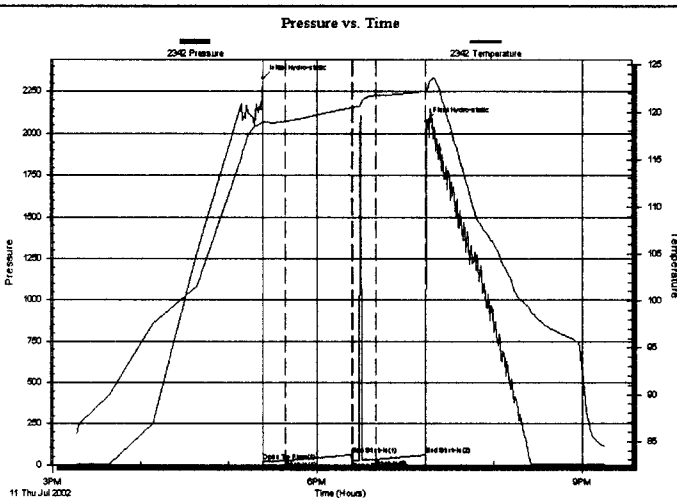
End Time:

21:16:09

Time On Btm: 2002.07.11 @ 17:23:09

Time Off Btm: 2002.07.11 @ 19:14:09

TEST COMMENT: IF:Weak decreasing blow . (1/4")
IS:No blow .
FF:No blow . Flushed tool 4 mins. in to FFP.
FS:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2329.16	118.97	Initial Hydro-static
1	21.64	118.97	Open To Flow (1)
16	25.25	119.02	Shut-In(1)
61	63.27	120.47	End Shut-In(1)
61	24.08	120.49	Open To Flow (2)
77	34.65	121.76	Shut-In(2)
111	61.93	122.25	End Shut-In(2)
111	2073.09	122.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud with a few oil specs.	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Company Inc.

Zimmerman C#2

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

5-34s-8w Harper Ks.

Job Ticket: 15694

DST#: 1

ATTN: Jon Christensen

Test Start: 2002.07.11 @ 15:16:39

Tool Information

Drill Pipe:	Length: 4152.00 ft	Diameter: 3.80 inches	Volume: 58.24 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: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 92000.00 lb
		Total Volume: 59.46 bbl		Tool Chased 3.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4391.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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KCC WICHITA

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			4370.00		
S.I. Tool	5.00			4375.00		
HMV	5.00			4380.00		
Safety Joint	2.00			4382.00		
Packer	4.00			4386.00	22.00	Bottom Of Top Packer
Packer	5.00			4391.00		
Stubb	1.00			4392.00		
Recorder	0.00	2342	Inside	4392.00		
Perforations	24.00			4416.00		
Recorder	0.00	13222	Outside	4416.00		
Bullnose	5.00			4421.00	30.00	Bottom Packers & Anchor

Total Tool Length: 52.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Company Inc.

Zimmerman C#2

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

5-34s-8w Harper Ks.

Job Ticket: 15694

DST#: 1

ATTN: Jon Christensen

Test Start: 2002.07.11 @ 15:16:39

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:

4000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud with a few oil specs.	0.074

Total Length: 15.00 ft

Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

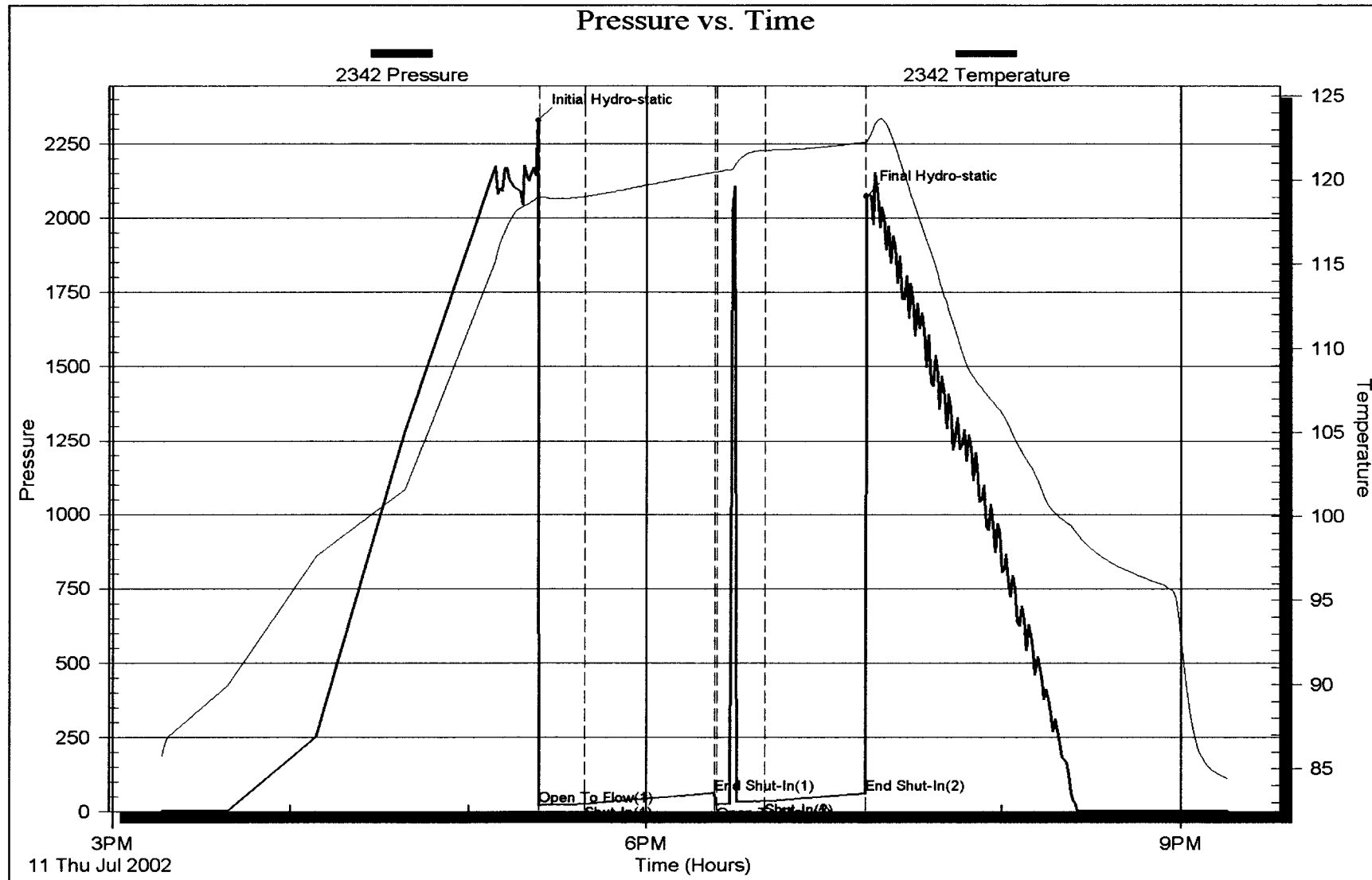
Serial #: 2342

Inside

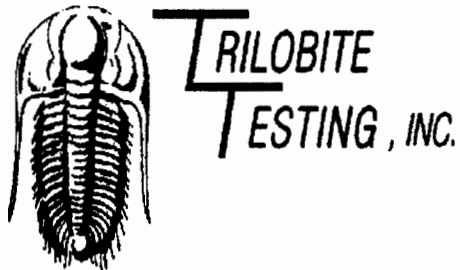
Hartman Oil Company Inc.

5-34s-8w Harper Ks.

DST Test Number: 1



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KCC WICHITA



DRILL STEM TEST REPORT

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

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

ATTN: Jon Christensen

5-34s-8w Harper Ks.

Zimmerman C#2

Start Date: 2002.07.12 @ 21:02:12

End Date: 2002.07.13 @ 04:44:12

Job Ticket #: 15695 DST #: 2

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

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KCC WICHITA



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hartman Oil Company Inc.

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

ATTN: Jon Christensen

Zimmerman C#2

5-34s-8w Harper Ks.

Job Ticket: 15695

DST#: 2

Test Start: 2002.07.12 @ 21:02:12

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:19:27

Time Test Ended: 04:44:12

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 23

Interval: **4556.00 ft (KB) To 4575.00 ft (KB) (TVD)**

Total Depth: 4575.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1311.00 ft (KB)

1302.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 2342

Inside

Press@RunDepth: 106.72 psig @ 4557.00 ft (KB)

Start Date: 2002.07.12

End Date:

2002.07.13

Start Time: 21:02:13

End Time:

04:44:12

Capacity: 7000.00 psig

Last Calib.: 2002.07.13

Time On Btm: 2002.07.12 @ 23:19:12

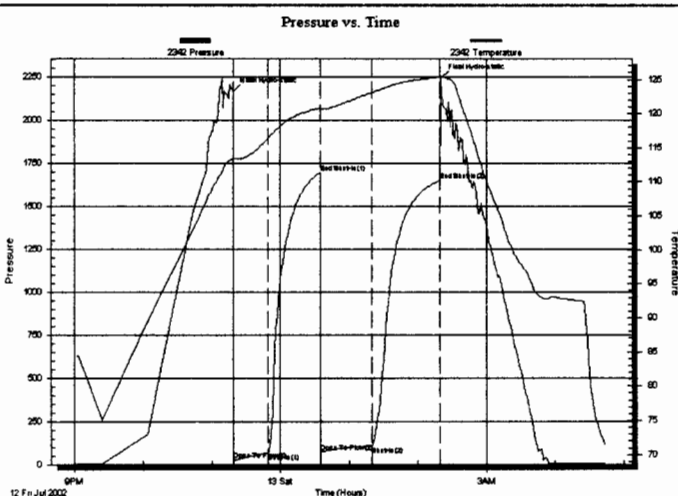
Time Off Btm: 2002.07.13 @ 02:20:42

TEST COMMENT: IF:Weak blow . 1 - 3".

IS:No blow .

FF:Weak to fair blow . Slow increase to 8".

FS:No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.85	113.45	Initial Hydro-static
1	24.08	113.44	Open To Flow (1)
30	64.87	116.35	Shut-In(1)
76	1693.57	120.81	End Shut-In(1)
76	72.57	120.81	Open To Flow (2)
121	106.72	123.09	Shut-In(2)
181	1650.10	125.32	End Shut-In(2)
182	2245.48	125.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	MW w/ oil specs. R _w .32 ohms	0.32
0.00	@ 66 deg. F.	0.00
150.00	OCWM 5%g 5%o 22%w 68% _m	0.74
0.00	270 ft. of gas in pipe	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Company Inc.

Zimmerman C#2

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

5-34s-8w Harper Ks.

Job Ticket: 15695

DST#: 2

ATTN: Jon Christensen

Test Start: 2002.07.12 @ 21:02:12

Tool Information

Drill Pipe:	Length: 4308.00 ft	Diameter: 3.80 inches	Volume: 60.43 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: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 76000.00 lb
			Total Volume: 61.65 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4556.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			4530.00	
S.I. Tool	5.00			4535.00	
HMV	5.00			4540.00	
Jars	5.00			4545.00	
Safety Joint	2.00			4547.00	
Packer	4.00			4551.00	27.00 Bottom Of Top Packer
Packer	5.00			4556.00	
Stubb	1.00			4557.00	
Recorder	0.00	2342	Inside	4557.00	
Perforations	13.00			4570.00	
Recorder	0.00	13222	Outside	4570.00	
Bullnose	5.00			4575.00	19.00 Bottom Packers & Anchor

Total Tool Length: 46.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Company Inc.

Zimmerman C#2

1223 N Rock Rd BldgA ste200
Wichita KS 67206-1270

5-34s-8w Harper Ks.

Job Ticket: 15695

DST#: 2

ATTN: Jon Christensen

Test Start: 2002.07.12 @ 21:02:12

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:

23000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 31.94 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 15000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	MW with oil specs. Rw .32 ohms	0.320
0.00	@ 66 deg. F.	0.000
150.00	OCWM 5%g 5%o 22%w 68%m	0.738
0.00	270 ft. of gas in pipe	0.000

Total Length: 215.00 ft

Total Volume: 1.058 bbl

Num Fluid Samples: 1

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

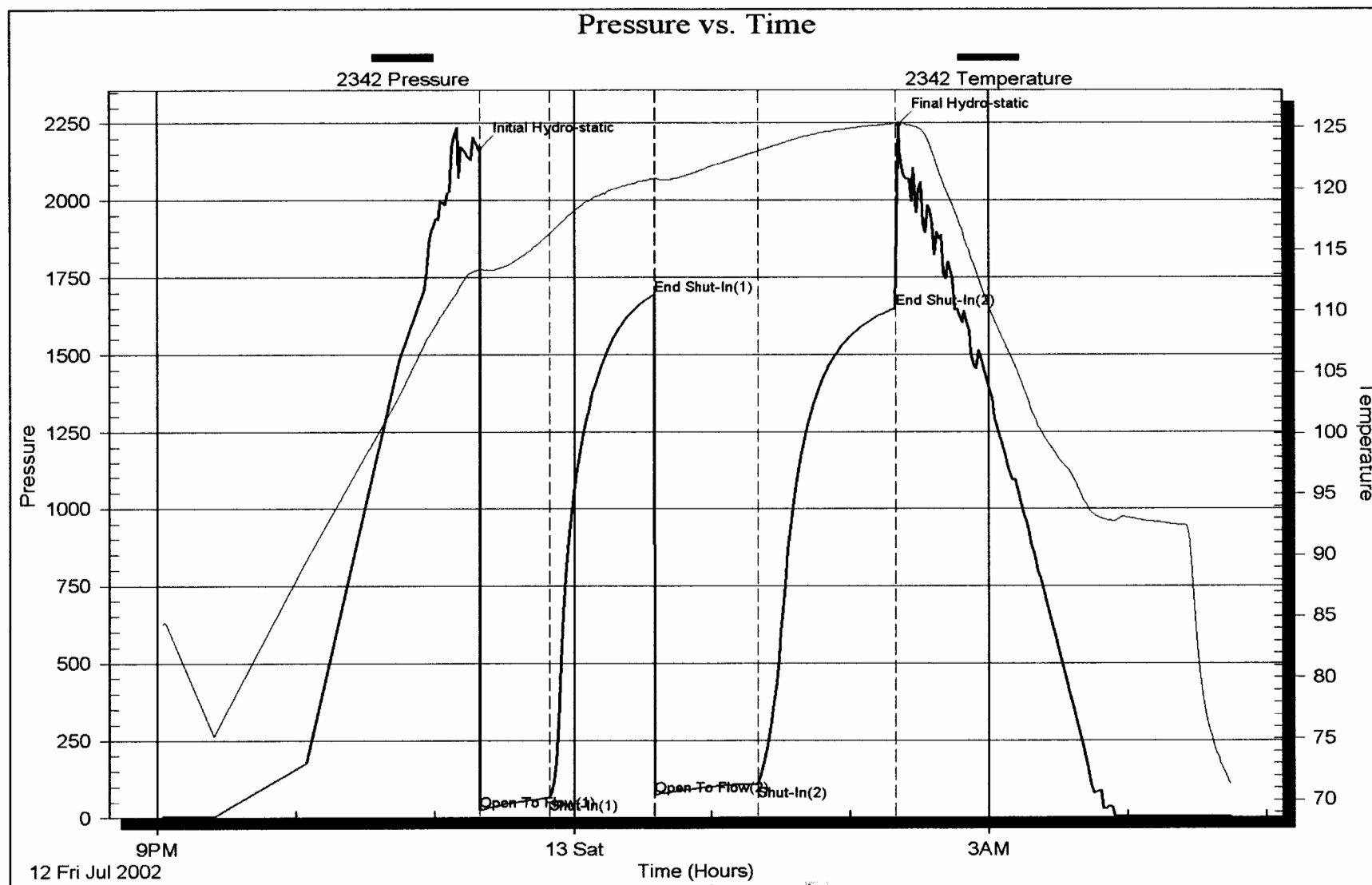
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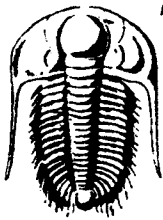
Serial #: 2342

Inside Hartman Oil Company Inc.

5-34s-8w Harper Ks.

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 15694

Test Ticket

Well Name & No. Zimmerman C #2 Test No. 1 Date 7-11-2002
 Company Hartman Oil Co. Inc. Zone Tested Ft. Scott
 Address 1223 N. Rock Rd. Bldg. A/200, Wichita, KS. Elevation 1311 KB 1302 GL
 Co. Rep / Geo. Jon Christensen Cont. Starting Dlg. #4 Est. Ft. of Pay Por. %
 Location: Sec. S Twp. 34S Rge. R^W Co. Harper State Ks.
 No. of Copies S Distribution Sheet (Y, N) N Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 4391 - 4421' Initial Str Wt/Lbs. 65,000 Unseated Str Wt/Lbs. 66,000
 Anchor Length 30' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 92,000
 Top Packer Depth 4386' Tool Weight 2100#
 Bottom Packer Depth 4391' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Total Depth 4421' Wt. Pipe Run None Drill Collar Run 248'
 Mud Wt. 8.9 LCM 4# Vis. 49 WL 8.8 cc. Drill Pipe Size 4 1/2" x 4 Ft. Run 4152'
 Blow Description IF: weak decreasing blow. (1/4") ISI: No blow.
FF: No blow. Flushed total 4 mins. in to FFP.
FSI: No blow.

Comment: 8-10' of fill. slid tool 3 ft. to btm.

Recovery — Total Feet 15 GIP 0 Ft. in DC 15 Ft. in DP 0
 Rec. 15 Feet Of Mud @ a few oil %gas %oil %water %mud
 Rec. Feet Of Specs. %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 172 °F Gravity N/A °API D@ 2 °F Corrected Gravity N/A °API
 RW N.C @ 2 °F Chlorides 4,000 ppm Recovery Chlorides 4,000 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud		<u>2156</u>	PSI	Recorder No. <u>2342</u>	T-On Location	<u>1405</u>	
(B) First Initial Flow Pressure		<u>22</u>	PSI	(depth) <u>4392'</u>	T-Started	<u>1516</u>	
(C) First Final Flow Pressure		<u>25</u>	PSI	Recorder No. <u>13222</u>	T-Open	<u>1723</u>	
(D) Initial Shut-In Pressure		<u>63</u>	PSI	(depth) <u>4416'</u>	T-Pulled	<u>1907</u>	
(E) Second Initial Flow Pressure		<u>24</u>	PSI	Recorder No. <u> </u>	T-Out	<u>2116</u>	
(F) Second Final Flow Pressure		<u>35</u>	PSI	(depth) <u> </u>	T-Off Location	<u>2200</u>	
(G) Final Shut-in Pressure		<u>62</u>	PSI	Initial Opening <u>15</u>	Test	<u>✓</u>	<u>800</u>
(Q) Final Hydrostatic Mud		<u>2079</u>	PSI	Initial Shut-in <u>45</u>	Jars		

Final Flow 15 Safety Joint ✓ 50
 Final Shut-in 30 Straddle
 Circ. Sub
 Sampler

TRILOBITE TESTING INC. 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.

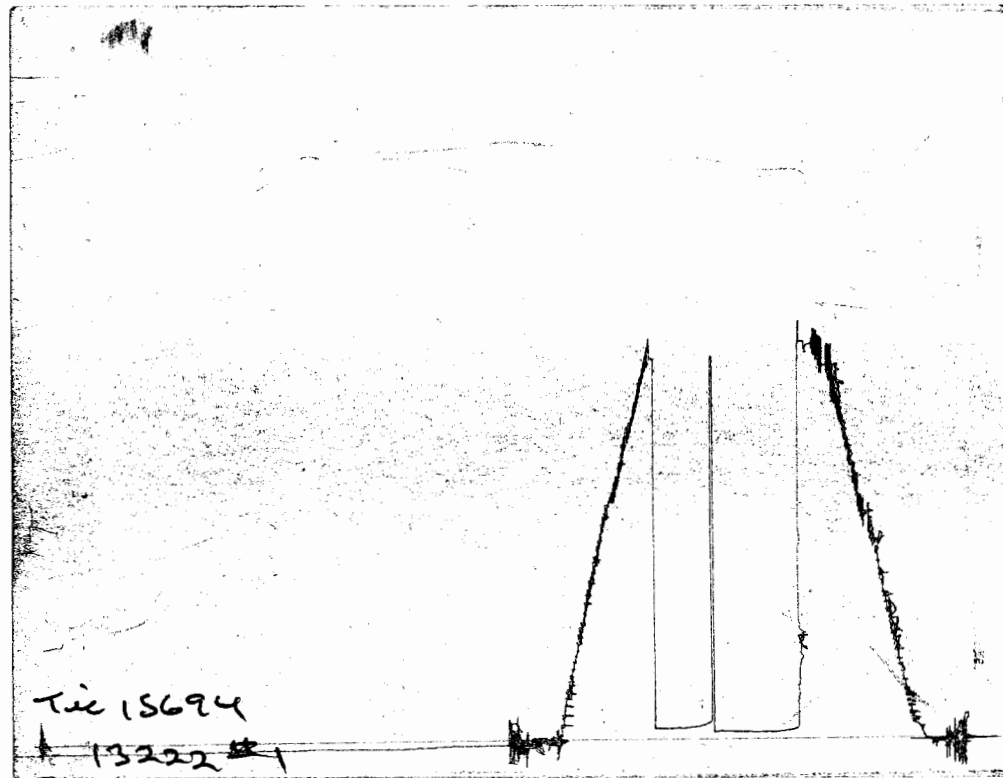
Approved By Jon Christensen

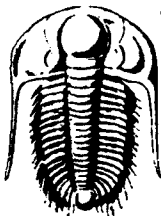
Our Representative Conny Christensen

Extra Packer
 Elec. Rec. ✓ 150
 Mileage ✓ 60
 Other
 TOTAL PRICE \$ ✓ 1060.00

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 15695

Test Ticket

Well Name & No. Zimmerman C#2 Test No. 2 Date 7-12-2002
 Company Hartman Oil Co. Inc. Zone Tested Miss.
 Address 1223 N. Rock Rd. Bldg. A/200, Wichita Ks. Elevation 1311 KB 1302 GL
 Co. Rep / Geo. Jon Christensen Cont. Stirling Dlg. #4 Est. Ft. of Pay Por. %
 Location: Sec. S Twp. 34S Rge. 8W Co. Harper State Ks.
 No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 4556 - 4575' Initial Str Wt./Lbs. 70,000 Unseated Str Wt./Lbs. 69,000
 Anchor Length 19' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 76,000
 Top Packer Depth 4551' Tool Weight 2100*
 Bottom Packer Depth 4556' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Total Depth 4575' Wt. Pipe Run None Drill Collar Run 248'
 Mud Wt. 8.8 LCM 4# Vis. 47 WL 32.000 Drill Pipe Size 4 1/2" XH Ft. Run 4308
 Blow Description IF: weak blow. 1-3" FSI: No blow.

FF: weak to fair blow. slow increase to 8". FSI: No blow.

Recovery — Total Feet 215 GIP 270 Ft. in DC 215 Ft. in DP 0
 Rec. 150 Feet Of OCWM S %gas 5 %oil 22 %water 68 %mud
 Rec. 65 Feet Of MW @ oil spec. %gas %oil 74 %water 26 %mud
 Rec. Feet Of %gas %oil %water %mud
 Rec. Feet Of %gas %oil %water %mud
 Rec. Feet Of %gas %oil %water %mud
 BHT 125 °F Gravity N/A °API D@ °F Corrected Gravity N/A °API
 RW .32 @ 66 °F Chlorides 23,000 ppm Recovery Chlorides 15,000 ppm System

	AK-1	Alpine	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	2206	PSI	2342	2040 8:04
(B) First Initial Flow Pressure	24	PSI (depth)	4557'	T-Started 2102
(C) First Final Flow Pressure	65	PSI	13222	T-Open 2319 10:12
(D) Initial Shut-In Pressure	1694	PSI (depth)	4570'	T-Pulled 0219
(E) Second Initial Flow Pressure	73	PSI		T-Out 0444
(F) Second Final Flow Pressure	107	PSI (depth)		T-Off Location 0705
(G) Final Shut-in Pressure	1650	PSI	Initial Opening 30	Test <u>✓</u> 800 ⁰⁰
(Q) Final Hydrostatic Mud	2155	PSI	Initial Shut-in 45	Jars <u>✓</u> 200 ⁰⁰
			Final Flow 45	Safety Joint <u>✓</u> 50 ⁰⁰
			Final Shut-in 60	Straddle <u> </u>
				Circ. Sub <u> </u>
				Sampler <u> </u>
				Extra Packer <u> </u>
				Elec. Rec. <u>✓</u> 150 ⁰⁰
				Mileage <u>✓</u> 60 ⁰⁰
				Other <u> </u>
				TOTAL PRICE \$ <u>✓</u> 1260 ⁰⁰

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Approved By Jon Christensen

Our Representative Cory Christensen

CHART PAGE

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

