

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Recompletion Date _____ Date Reached TD _____ Completion Date or Recompletion Date _____

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	H-M UNIT 1-11
Doc ID	1361286

All Electric Logs Run

Microlog
Annular Hole Volume Log
Spectral Density Dual Spaced Neutron
Array Compensated True Resistivity

Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	H-M UNIT 1-11
Doc ID	1361286

Tops

Name	Top	Datum
Anhydrite	2504	+687
B/Anhydrite	2522	+669
Heebner	4010	-819
Toronto	4024	-833
Lansing	4056	-856
Stark	4320	-1129
BKC	4413	-1222
Marmaton	4464	-1273



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston,TX 77210-4346

MAIN OFFICE
 P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice # 810481

Invoice Date: 06/14/17 Terms: Net 30 Page 1

HARTMAN OIL CO, INC
 3545 W. Jones Avenue
 Garden City KS 67846
 USA
 6202772511

HM UNIT 1-11
 81704

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	1,150.0000	30.000	805.00
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	30.000	200.20
CE0710	Cement Delivery Charge	1.000	789.6000	30.000	552.72
CC5871	Surface Blend II, 2% Gel/3% CaCl	240.000	23.0000	30.000	3,864.00
Subtotal					7,745.60
Discounted Amount					2,323.68
SubTotal After Discount					5,421.92
Amount Due 8,214.80 If paid after 07/14/17					

Tax: 328.44
 Total: 5,750.36

NEW WELL
 DRILLED

[Signature]
 6-19-17

SCANNED
[Signature]
 6-19-17



8214
8237

TICKET NUMBER 51827
 LOCATION Oakley Ks
 FOREMAN Jerry Y
Walt Dinkel
 INVOICE # 810481 KS

PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
 CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-12-17	3613	Hm Unit 1-11	11	Ks	35w	Wichita
CUSTOMER <u>Hartman Oil</u>			TRUCK # DRIVER TRUCK # DRIVER			
MAILING ADDRESS <u>3545 W. JONES AVENUE</u>			<u>731 / Cory D</u>			
CITY <u>Garden City</u>			<u>460 / Walt D</u>			
STATE <u>KS</u>			<u>assist / Seth O</u>			
ZIP CODE <u>67846</u>			<u>639</u>			

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 350 CASING SIZE & WEIGHT 8 7/8 23#
 CASING DEPTH 348 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 152 SLURRY VOL 124 WATER gal/sk _____ CEMENT LEFT in CASING 20'
 DISPLACEMENT 20 1/2 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Soft meeting & rig upon Southwind 8 break circulation with dry
free mix 240 sks from 3 bbl 2% gel wash up & displace with 20'
bbl fresh water a stat. in. circulate & prep pad x 3 bbl top of

Cement did
circulate
 Thank you
 Jerry Y

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1150.00	1150.00
CE0062	40	MILEAGE	7.15	286.00
CE0710	11.28	don mileage delivery	1.75	789.60
CC5871	240 sks	surface bleed II	23.00	5520.00
			sub total	7745.60
			-30%	2323.68
			sub total	5421.92
			SALES TAX	328.44
			ESTIMATED TOTAL	5750.36

AUTHORIZATION Jerry Bean TITLE TOO/ Purcher DATE 6-13-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston,TX 77210-4346

MAIN OFFICE
 P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice#

810553

Invoice Date: 06/23/17

Terms: Net 30

Page 1

HARTMAN OIL CO, INC
 3545 W. Jones Avenue
 Garden City KS 67846
 USA
 6202772511

HM UNIT 1-11

81704

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0451	Cement Pump Charge 1501' - 3000'	1.000	1,900.0000	30.000	1,330.00
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	7.1500	30.000	200.20
CE0710	Cement Delivery Charge	1.000	903.0000	30.000	632.10
CC5829	Lite-Weight Blend V (60:40:4)	300.000	16.0000	30.000	3,360.00
CC6075	Celloflake	75.000	3.0000	30.000	157.50

Subtotal 8,114.00

Discounted Amount 2,434.20

SubTotal After Discount 5,679.80

Amount Due 8,541.13 If paid after 07/23/17

Tax: 298.99

Total: 5,978.79

NEW WELL
 DRILLED
 A

SCANNED
 6-27-17



87110
8311

TICKET NUMBER 51833
LOCATION Oakley KS
FOREMAN Jerry Y

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

INVOICE # 810553 KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-21-17	3613	Hm unit 1-11	11	16s	35w	Osage
CUSTOMER Hartman Oil			TRUCK # DRIVER TRUCK # DRIVER			
MAILING ADDRESS 3545 W. Jakes Avenue			731- Cory D			
CITY Gardencity			772-712 Seth O			
STATE KS			985/4 Steve O			
ZIP CODE 67846			639			

JOB TYPE Plug HOLE SIZE 7 7/8 HOLE DEPTH 4825 CASING SIZE & WEIGHT _____
 CASING DEPTH _____ DRILL PIPE 4 1/2 TUBING _____ OTHER _____
 SLURRY WEIGHT 13.8 SLURRY VOL 1.42 WATER gal/sk _____ CEMENT LEFT In CASING _____
 DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting & rig up on South Wind 8 plug as ordered with
300 sks litchfield 1/2" O.D. & 1/4" I.D. sks
50 sks @ 2520'
80 sks @ 1590'
50 sks @ 780'
50 sks @ 390'
20 sks @ 60'
20 sks misc hole
30 sks Rat hole

Thank you
Jerry & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0451	1	PUMP CHARGE	1900.00	1900.00
CE0002	40	MILEAGE	7.15	286.00
CE0710	12.9	fun mileage delivery	1.75	903.00
CC5829	300 sks	litchfield V (60/40 4% gal 1/4" #8)	16.00	4800.00
CC6075	75 #	flto seal	3.00	225.00
			subtotal	8114.00
			-30%	2434.20
			subtotal	5679.80
			SALES TAX	298.99
			ESTIMATED TOTAL	5978.79

AUTHORIZATION Ray Brown TITLE Doc User DATE 6-22-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co**

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

ATTN: Chris Peters

H-M Unit #1-11

11-16-35 Wichita,KS

Start Date: 2017.06.17 @ 06:04:37

End Date: 2017.06.17 @ 12:05:37

Job Ticket #: 63816 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.22 @ 10:05:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
 10500 E Berkeley Sq Pkwy Ste 100
 Wichita, KS 67206
 ATTN: Chris Peters

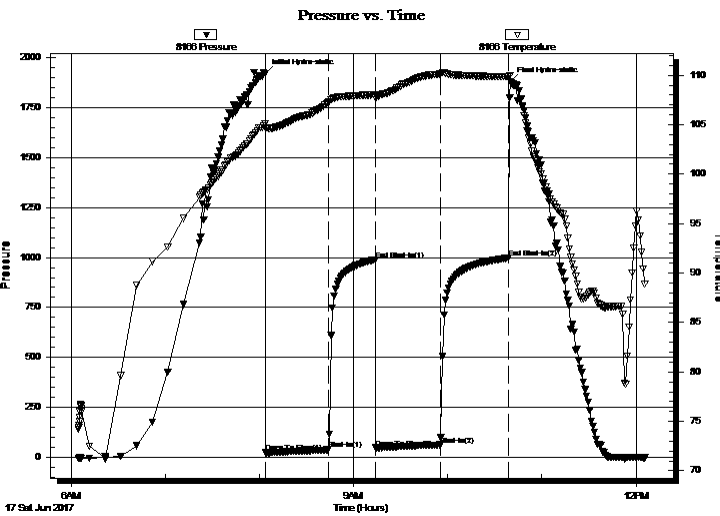
11-16-35 Wichita, KS
H-M Unit #1-11
 Job Ticket: 63816 **DST#: 1**
 Test Start: 2017.06.17 @ 06:04:37

GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:04:07
 Time Test Ended: 12:05:37
 Interval: **4010.00 ft (KB) To 4030.00 ft (KB) (TVD)**
 Total Depth: 4030.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 3191.00 ft (KB)
 3181.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 63.44 psig @ 4011.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.06.17 End Date: 2017.06.17 Last Calib.: 2017.06.17
 Start Time: 06:04:42 End Time: 12:05:36 Time On Btm: 2017.06.17 @ 08:03:37
 Time Off Btm: 2017.06.17 @ 10:40:07

TEST COMMENT: IF: Surface blow built to 1 1/2"
 IS: No return.
 FF: Surface blow built to 1 1/2"
 FS: No return.



PRESSURE SUMMARY

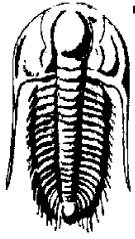
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1920.15	105.12	Initial Hydro-static
1	23.76	104.65	Open To Flow (1)
41	39.96	107.29	Shut-In(1)
70	988.76	108.03	End Shut-In(1)
71	48.02	107.77	Open To Flow (2)
112	63.44	110.12	Shut-In(2)
155	997.24	109.84	End Shut-In(2)
157	1880.49	109.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	mcw 80%w 20%m	0.88
57.00	w cm oil spots 10%w 90%m	0.80

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
 10500 E Berkeley Sq Pkwy Ste 100
 Wichita, KS 67206
 ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
 Job Ticket: 63816 **DST#: 1**
 Test Start: 2017.06.17 @ 06:04:37

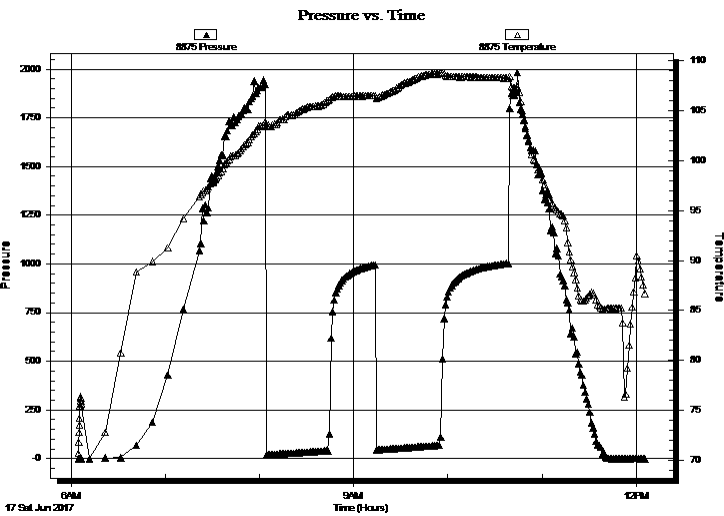
GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:04:07
 Time Test Ended: 12:05:37
 Interval: **4010.00 ft (KB) To 4030.00 ft (KB) (TVD)**
 Total Depth: 4030.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 3191.00 ft (KB)
 3181.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: psig @ 4011.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.06.17 End Date: 2017.06.17 Last Calib.: 2017.06.17
 Start Time: 06:04:35 End Time: 12:05:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Surface blow built to 1 1/2"
 IS: No return.
 FF: Surface blow built to 1 1/2"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
63.00	mcw 80%w 20%m	0.88
57.00	w cm oil spots 10%w 90%m	0.80

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63816 **DST#: 1**
Test Start: 2017.06.17 @ 06:04:37

Tool Information

Drill Pipe:	Length: 3994.00 ft	Diameter: 3.80 inches	Volume: 56.03 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 56.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4010.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 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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Stubb	1.00			3984.00	
Shut In Tool	5.00			3989.00	
Hydraulic tool	5.00			3994.00	
Jars	5.00			3999.00	
Safety Joint	2.00			4001.00	
Packer	5.00			4006.00	27.00 Bottom Of Top Packer
Packer	4.00			4010.00	
Stubb	1.00			4011.00	
Recorder	0.00	8875	Inside	4011.00	
Recorder	0.00	8166	Outside	4011.00	
Perforations	24.00			4035.00	
Bullnose	5.00			4040.00	30.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita,KS
H-M Unit #1-11
Job Ticket: 63816 **DST#: 1**
Test Start: 2017.06.17 @ 06:04:37

Mud and Cushion Information

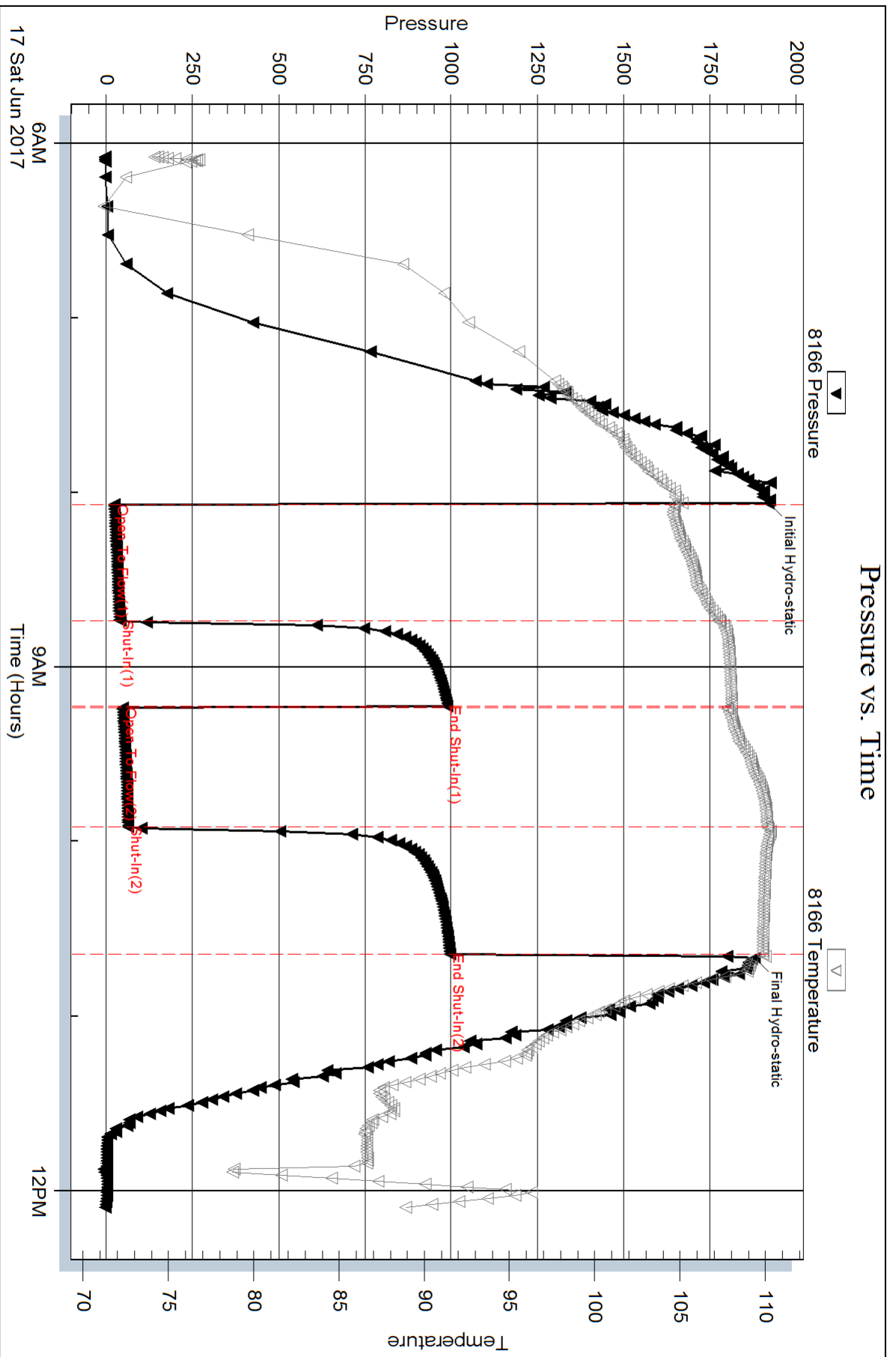
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 25000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2500.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	mcw 80%w 20%m	0.884
57.00	wcm oil spots 10%w 90%m	0.800

Total Length: 120.00 ft Total Volume: bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .21@91=25000



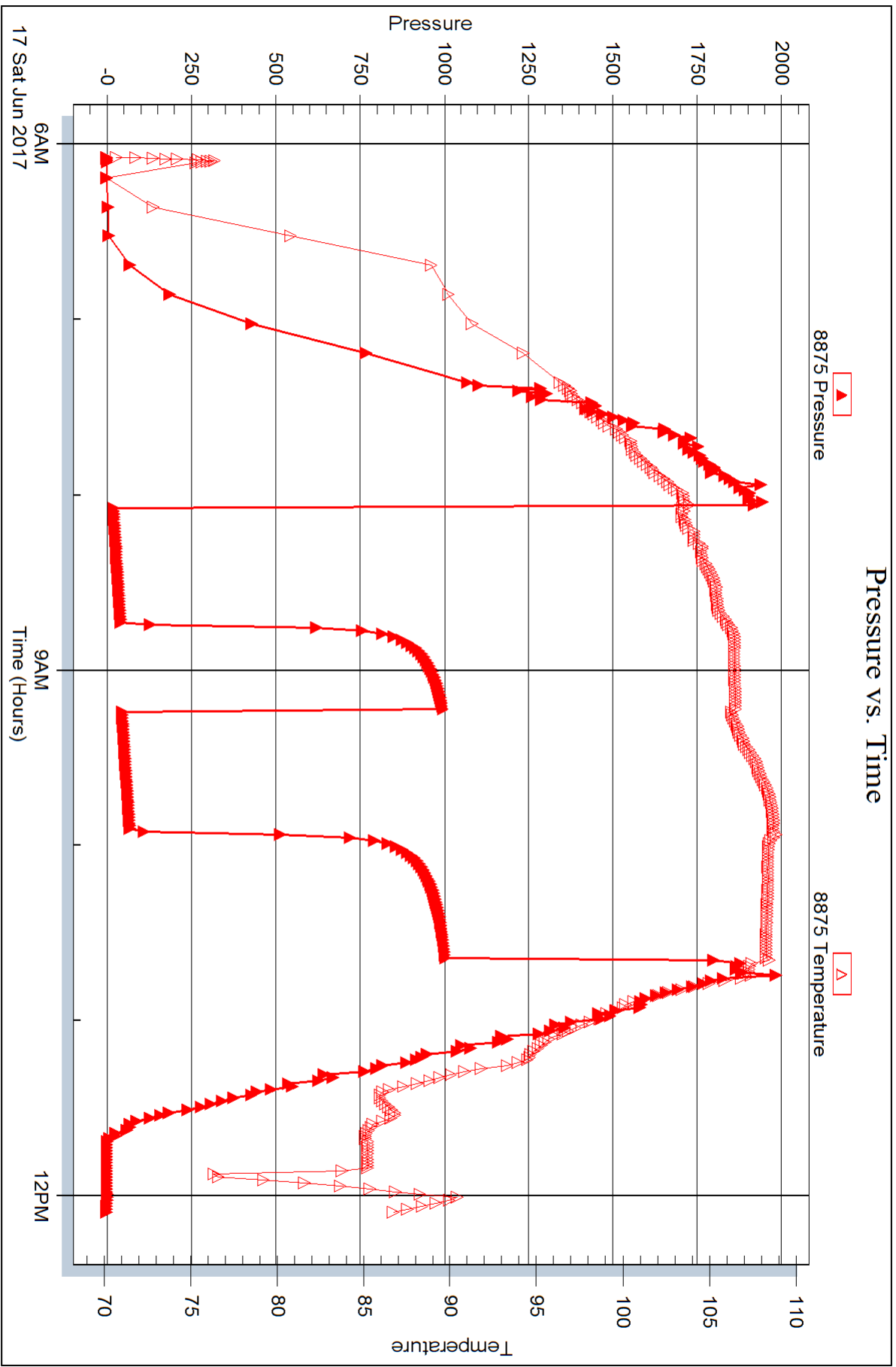
Serial #: 8875

Inside

Hartman Oil Co

H-M Unit #1-11

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co**

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

ATTN: Chris Peters

H-M Unit #1-11

11-16-35 Wichita,KS

Start Date: 2017.06.17 @ 21:55:40

End Date: 2017.06.18 @ 05:08:40

Job Ticket #: 63817 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.22 @ 10:05:07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

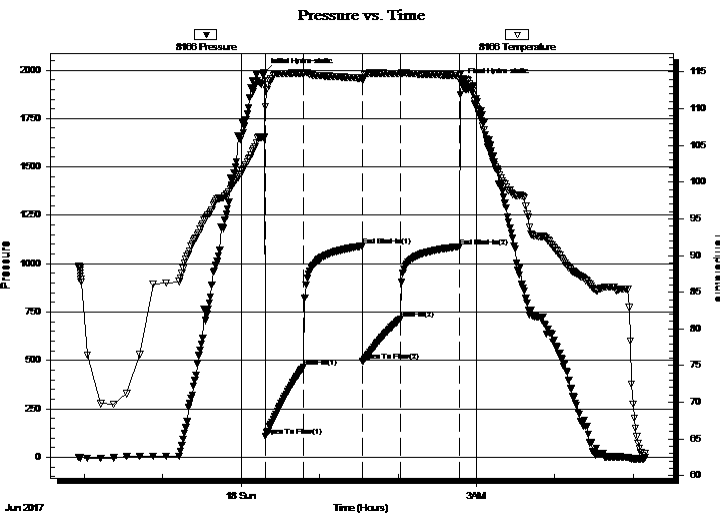
11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63817 **DST#: 2**
Test Start: 2017.06.17 @ 21:55:40

GENERAL INFORMATION:

Formation: **LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:18:40
Time Test Ended: 05:08:40
Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79
Interval: **4086.00 ft (KB) To 4106.00 ft (KB) (TVD)**
Reference Elevations: 3191.00 ft (KB)
Total Depth: 4106.00 ft (KB) (TVD) 3181.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
Press@RunDepth: 714.00 psig @ 4091.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.06.17 End Date: 2017.06.18 Last Calib.: 2017.06.18
Start Time: 21:55:45 End Time: 05:08:39 Time On Btm: 2017.06.18 @ 00:17:40
Time Off Btm: 2017.06.18 @ 02:48:10

TEST COMMENT: IF: BOB in 2 min.
IS: No return.
FF: BOB in 3 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1988.18	106.13	Initial Hydro-static
1	106.78	110.25	Open To Flow (1)
30	466.95	114.82	Shut-In(1)
75	1090.92	114.13	End Shut-In(1)
76	497.19	113.90	Open To Flow (2)
104	714.00	114.79	Shut-In(2)
150	1088.21	114.50	End Shut-In(2)
151	1934.60	114.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1260.00	water 100%w	17.67
272.00	mcw 70%w 30%m	3.82

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63817 **DST#: 2**
Test Start: 2017.06.17 @ 21:55:40

GENERAL INFORMATION:

Formation: **LKC C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:18:40
Time Test Ended: 05:08:40

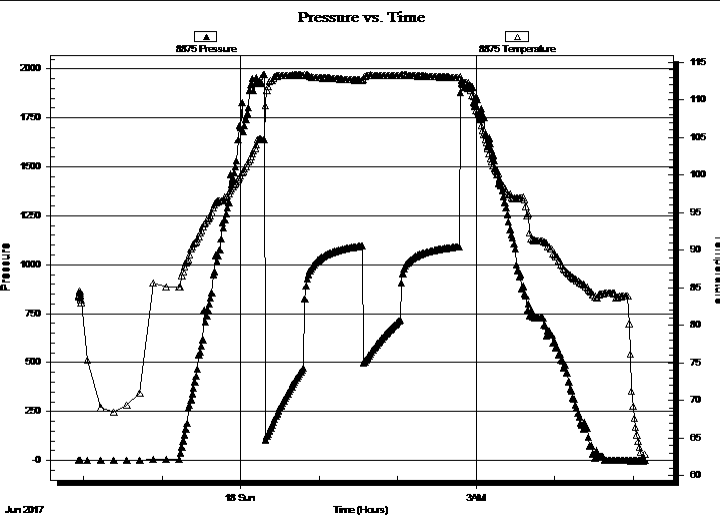
Interval: **4086.00 ft (KB) To 4106.00 ft (KB) (TVD)**
Total Depth: 4106.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Reference Elevations: 3191.00 ft (KB)
3181.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8875 **Inside**
Press@RunDepth: psig @ 4091.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.06.17 End Date: 2017.06.18 Last Calib.: 2017.06.18
Start Time: 21:55:58 End Time: 05:08:52 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB in 2 min.
IS: No return.
FF: BOB in 3 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
1260.00	water 100%w	17.67
272.00	mcw 70%w 30%m	3.82

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63817 **DST#: 2**
Test Start: 2017.06.17 @ 21:55:40

Tool Information

Drill Pipe:	Length: 4090.00 ft	Diameter: 3.80 inches	Volume: 57.37 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 57.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4086.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4064.00	
Shut In Tool	5.00			4069.00	
Hydraulic tool	5.00			4074.00	
Jars	5.00			4079.00	
Safety Joint	2.00			4081.00	
Packer	5.00			4086.00	23.00 Bottom Of Top Packer
Packer - Shale	4.00			4090.00	
Stubb	1.00			4091.00	
Recorder	0.00	8875	Inside	4091.00	
Recorder	0.00	8166	Outside	4091.00	
Perforations	14.00			4105.00	
Bullnose	5.00			4110.00	24.00 Anchor Tool

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita,KS
H-M Unit #1-11
Job Ticket: 63817 **DST#: 2**
Test Start: 2017.06.17 @ 21:55:40

Mud and Cushion Information

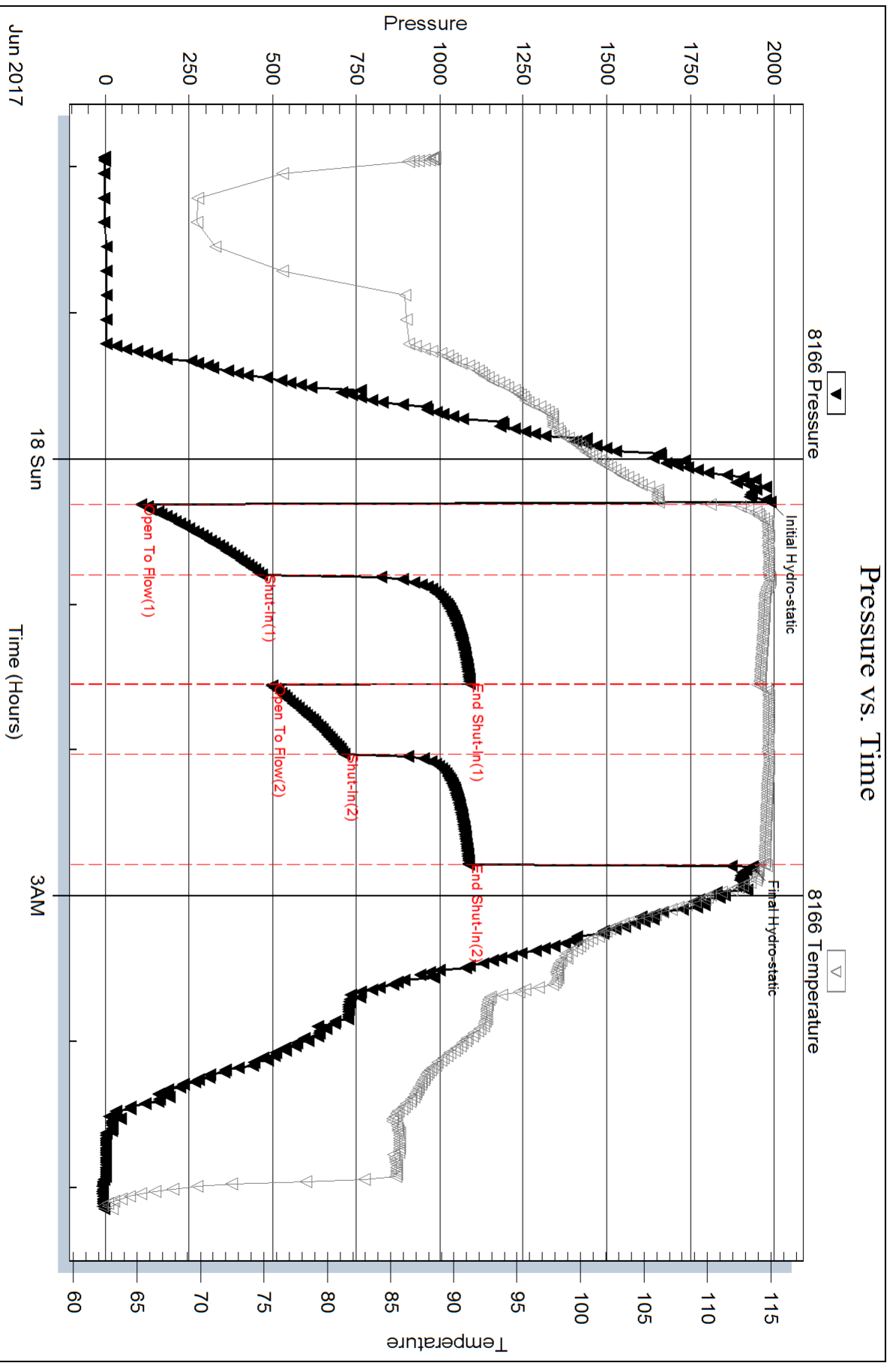
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 23000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1260.00	water 100%w	17.674
272.00	mcw 70%w 30%m	3.815

Total Length: 1532.00 ft Total Volume: 21.489 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .31@68=23000



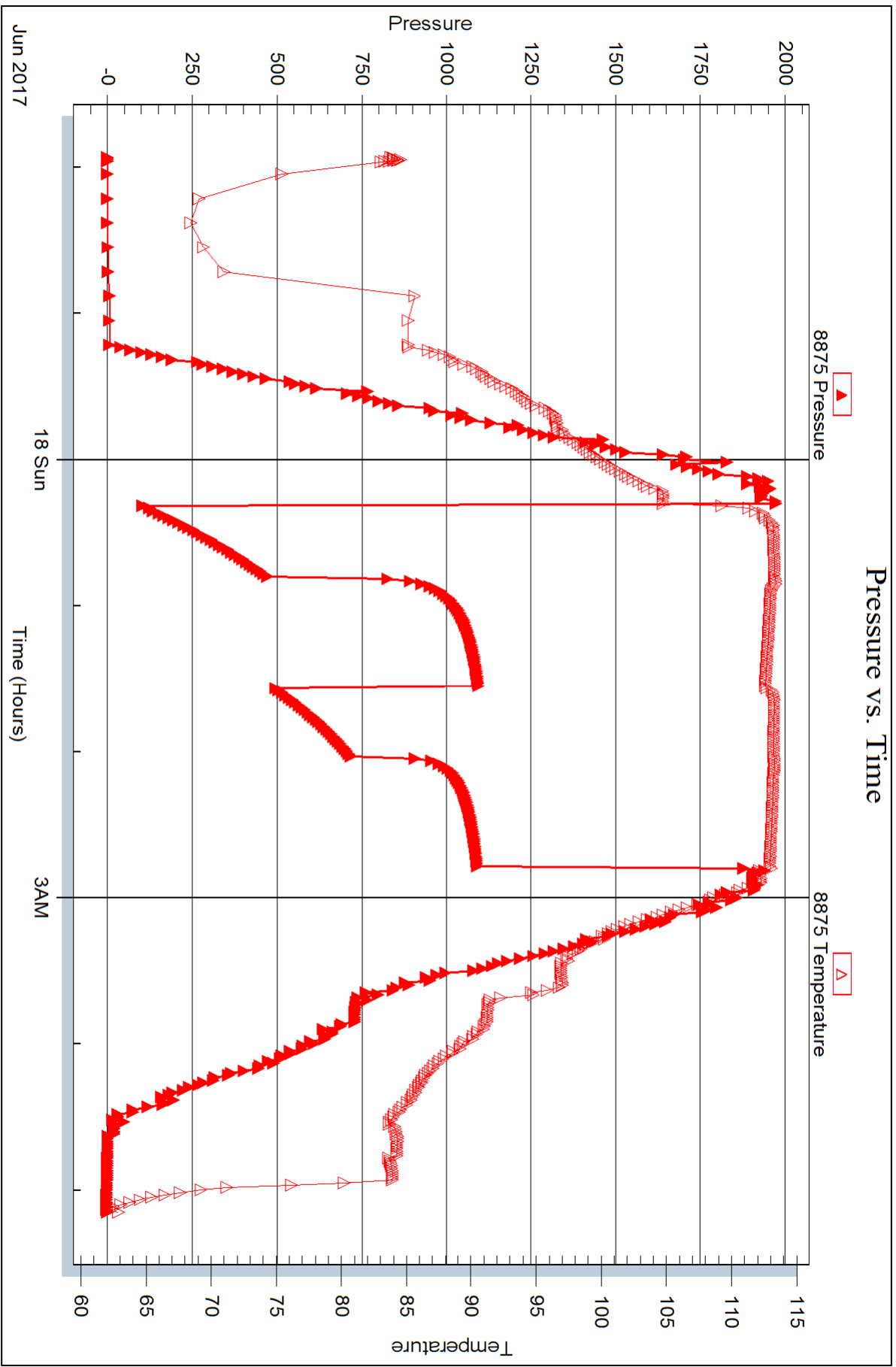
Serial #: 8875

Inside

Hartman Oil Co

H-M Unit #1-11

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63817

Printed: 2017.06.22 @ 10:05:08



DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co**

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

ATTN: Chris Peters

H-M Unit #1-11

11-16-35 Wichita,KS

Start Date: 2017.06.18 @ 21:27:46

End Date: 2017.06.19 @ 04:00:46

Job Ticket #: 63818 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.22 @ 10:04:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
 10500 E Berkeley Sq Pkwy Ste 100
 Wichita, KS 67206
 ATTN: Chris Peters

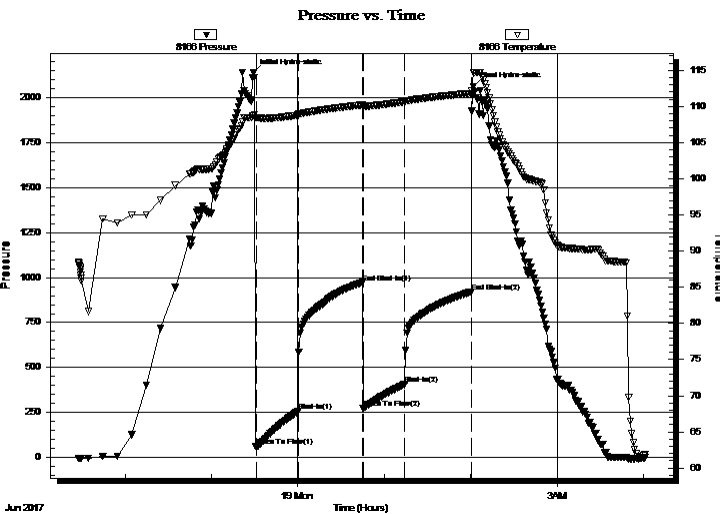
11-16-35 Wichita, KS
H-M Unit #1-11
 Job Ticket: 63818 **DST#: 3**
 Test Start: 2017.06.18 @ 21:27:46

GENERAL INFORMATION:

Formation: **LKC H**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 23:31:16 Tester: Brandon Turley
 Time Test Ended: 04:00:46 Unit No: 79
 Interval: **4236.00 ft (KB) To 4278.00 ft (KB) (TVD)** Reference Elevations: 3191.00 ft (KB)
 Total Depth: 4278.00 ft (KB) (TVD) 3181.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 406.38 psig @ 4241.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.06.18 End Date: 2017.06.19 Last Calib.: 2017.06.19
 Start Time: 21:27:51 End Time: 04:00:45 Time On Btm: 2017.06.18 @ 23:29:16
 Time Off Btm: 2017.06.19 @ 02:01:46

TEST COMMENT: IF: BOB in 4 min.
 IS: No return.
 FF: BOB in 6 min.
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2136.86	108.73	Initial Hydro-static
2	60.29	108.45	Open To Flow (1)
31	256.37	108.81	Shut-In(1)
76	973.06	110.20	End Shut-In(1)
76	271.98	110.02	Open To Flow (2)
105	406.38	110.65	Shut-In(2)
151	921.21	111.82	End Shut-In(2)
153	2060.75	114.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
693.00	water 100%w	9.72
189.00	mcw 80%w 20%m	2.65

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co

11-16-35 Wichita, KS

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

H-M Unit #1-11

ATTN: Chris Peters

Job Ticket: 63818

DST#: 3

Test Start: 2017.06.18 @ 21:27:46

GENERAL INFORMATION:

Formation: **LKC H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:31:16

Time Test Ended: 04:00:46

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: **4236.00 ft (KB) To 4278.00 ft (KB) (TVD)**

Total Depth: 4278.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3191.00 ft (KB)

3181.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875

Inside

Press@RunDepth: psig @ 4241.00 ft (KB)

Start Date: 2017.06.18

End Date: 2017.06.19

Start Time: 21:27:48

End Time: 04:00:42

Capacity: 8000.00 psig

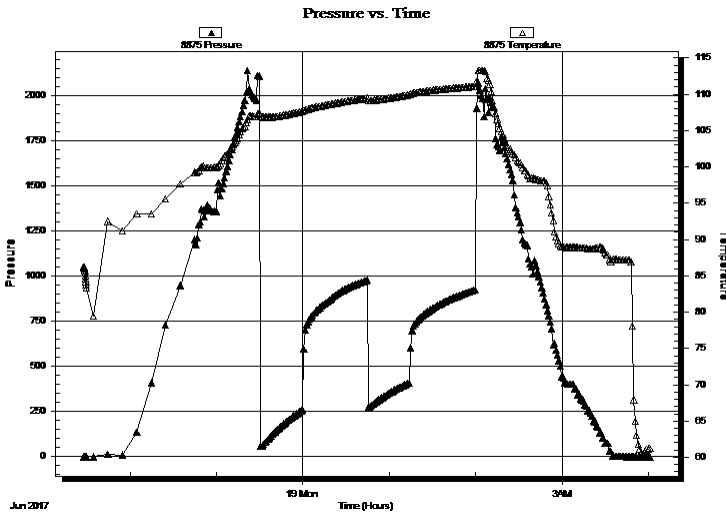
Last Calib.: 2017.06.19

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 4 min.
IS: No return.
FF: BOB in 6 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
693.00	water 100%w	9.72
189.00	mcw 80%w 20%m	2.65

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co

11-16-35 Wichita, KS

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

H-M Unit #1-11

Job Ticket: 63818

DST#: 3

ATTN: Chris Peters

Test Start: 2017.06.18 @ 21:27:46

Tool Information

Drill Pipe:	Length: 4216.00 ft	Diameter: 3.80 inches	Volume: 59.14 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 59.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4236.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4214.00	
Shut In Tool	5.00			4219.00	
Hydraulic tool	5.00			4224.00	
Jars	5.00			4229.00	
Safety Joint	2.00			4231.00	
Packer	5.00			4236.00	23.00 Bottom Of Top Packer
Packer - Shale	4.00			4240.00	
Stubb	1.00			4241.00	
Recorder	0.00	8875	Inside	4241.00	
Recorder	0.00	8166	Outside	4241.00	
Perforations	3.00			4244.00	
Change Over Sub	1.00			4245.00	
Drill Pipe	31.00			4276.00	
Change Over Sub	1.00			4277.00	
Bullnose	5.00			4282.00	46.00 Anchor Tool

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita,KS
H-M Unit #1-11
Job Ticket: 63818 **DST#: 3**
Test Start: 2017.06.18 @ 21:27:46

Mud and Cushion Information

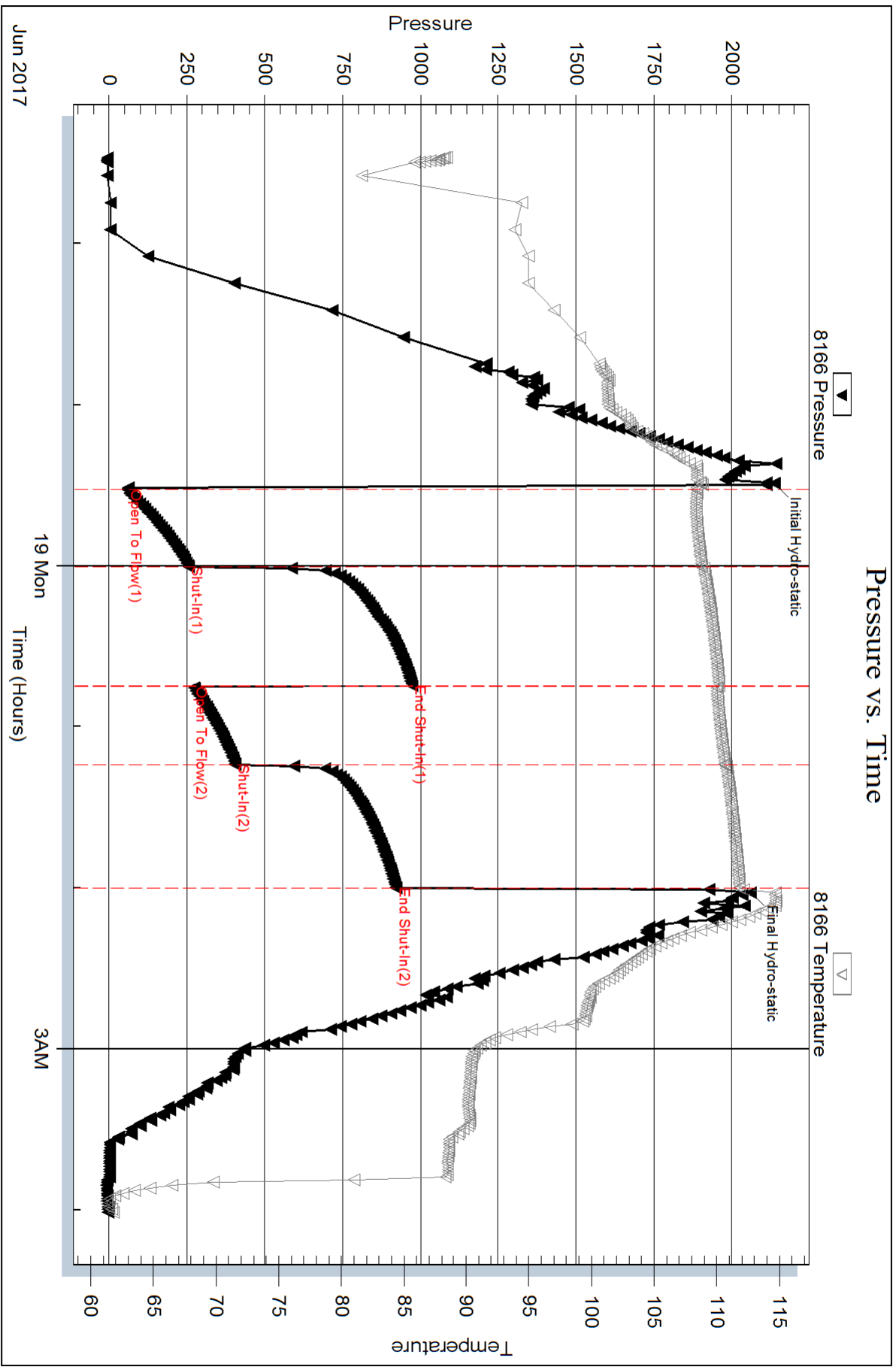
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 26000 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.59 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 4500.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
693.00	water 100%w	9.721
189.00	mcw 80%w 20%m	2.651

Total Length: 882.00 ft Total Volume: 12.372 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .28@65=26000



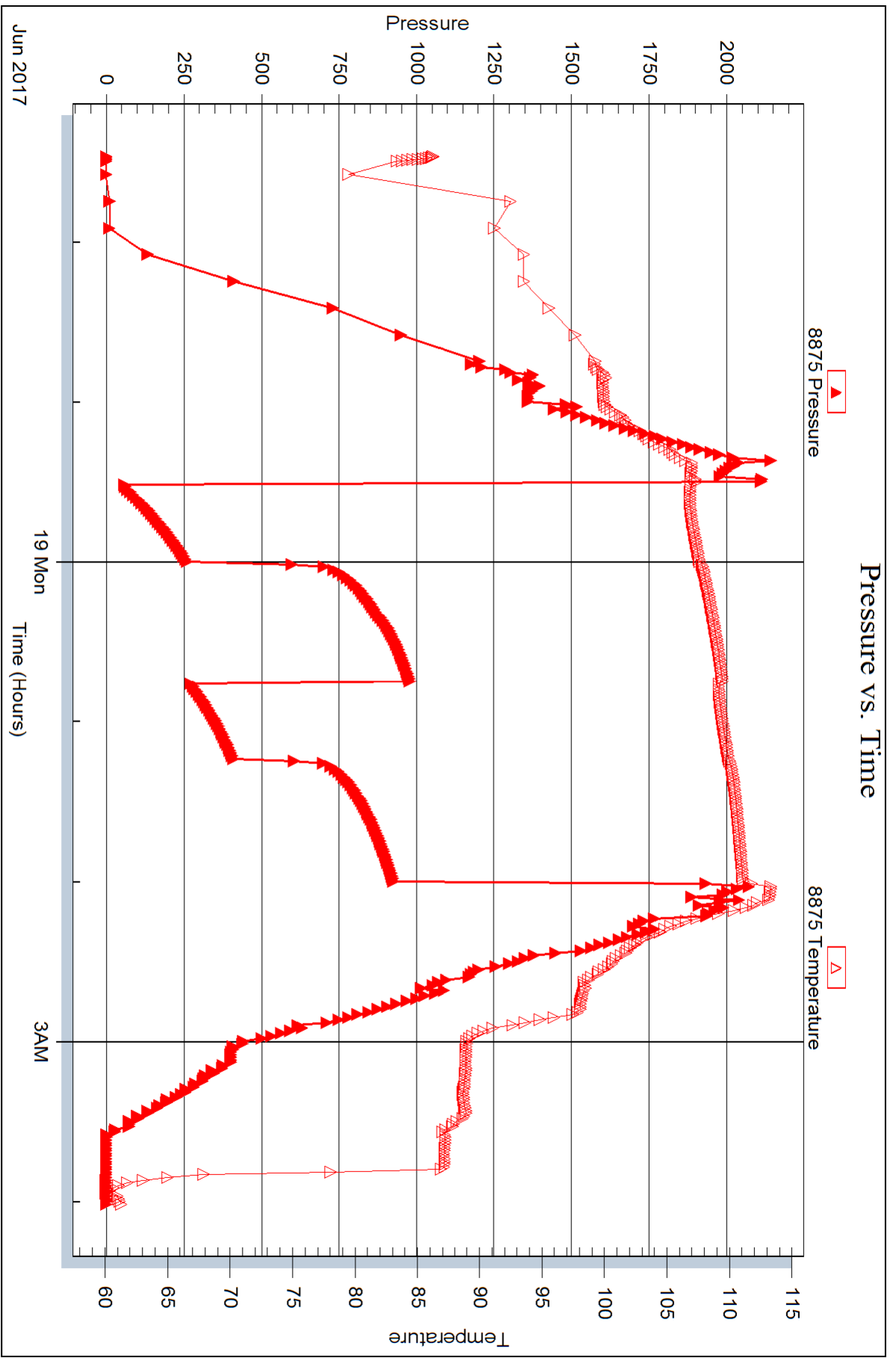
Serial #: 8875

Inside

Hartman Oil Co

H-M Unit #1-11

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63818

Printed: 2017.06.22 @ 10:04:43



DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co**

10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206

ATTN: Chris Peters

H-M Unit #1-11

11-16-35 Wichita,KS

Start Date: 2017.06.19 @ 11:55:08

End Date: 2017.06.19 @ 18:35:08

Job Ticket #: 63819 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.06.22 @ 10:04:09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
 10500 E Berkeley Sq Pkwy Ste 100
 Wichita, KS 67206
 ATTN: Chris Peters

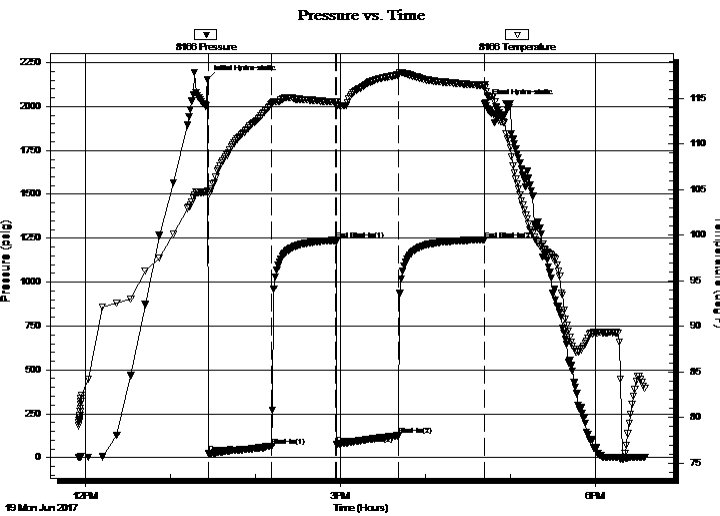
11-16-35 Wichita, KS
H-M Unit #1-11
 Job Ticket: 63819 **DST#: 4**
 Test Start: 2017.06.19 @ 11:55:08

GENERAL INFORMATION:

Formation: **LKC I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:27:08
 Time Test Ended: 18:35:08
 Interval: **4280.00 ft (KB) To 4300.00 ft (KB) (TVD)**
 Total Depth: 4300.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brandon Turley
 Unit No: 79
 Reference Elevations: 3191.00 ft (KB)
 3181.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8166 Outside
 Press@RunDepth: 125.23 psig @ 4285.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.06.19 End Date: 2017.06.19 Last Calib.: 2017.06.19
 Start Time: 11:55:13 End Time: 18:35:07 Time On Btm: 2017.06.19 @ 13:26:08
 Time Off Btm: 2017.06.19 @ 16:42:38

TEST COMMENT: IF: 1/4" blow built to 8"
 IS: No return.
 FF: Surface blow built to 7"
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.56	104.89	Initial Hydro-static
1	22.35	104.44	Open To Flow (1)
46	66.76	114.38	Shut-In(1)
91	1238.42	114.60	End Shut-In(1)
92	76.34	114.27	Open To Flow (2)
135	125.23	117.58	Shut-In(2)
196	1241.20	116.42	End Shut-In(2)
197	2018.97	116.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	mcw 80%w 20%m	1.77
126.00	w cm some oil spots 30%w 70%m	1.77

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63819 **DST#: 4**
Test Start: 2017.06.19 @ 11:55:08

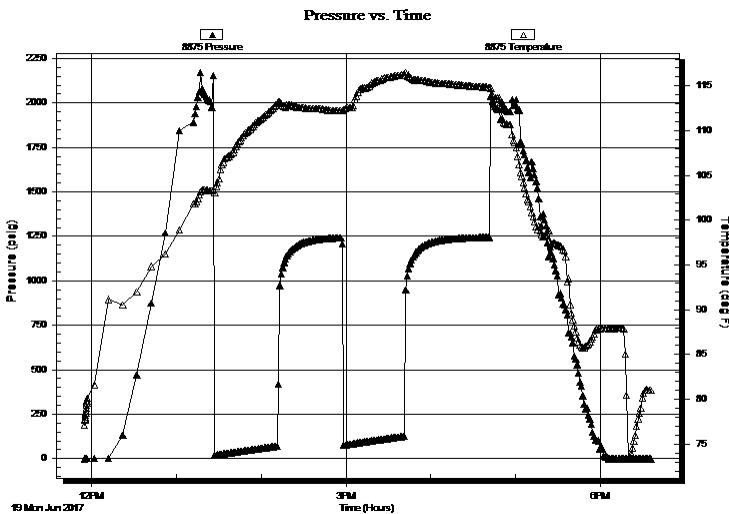
GENERAL INFORMATION:

Formation: **LKC I**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 13:27:08 Tester: Brandon Turley
Time Test Ended: 18:35:08 Unit No: 79
Interval: 4280.00 ft (KB) To 4300.00 ft (KB) (TVD) Reference Elevations: 3191.00 ft (KB)
Total Depth: 4300.00 ft (KB) (TVD) 3181.00 ft (CF)
Hole Diameter: 7.88 inchesHole Condition: Good KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: psig @ 4285.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.06.19 End Date: 2017.06.19 Last Calib.: 2017.06.19
Start Time: 11:55:22 End Time: 18:35:16 Time On Btm: Time Off Btm:

TEST COMMENT: IF: 1/4" blow built to 8"
IS: No return.
FF: Surface blow built to 7"
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
126.00	mcw 80%w 20%m	1.77
126.00	w cm some oil spots 30%w 70%m	1.77

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita, KS
H-M Unit #1-11
Job Ticket: 63819 **DST#: 4**
Test Start: 2017.06.19 @ 11:55:08

Tool Information

Drill Pipe:	Length: 4279.00 ft	Diameter: 3.80 inches	Volume: 60.02 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 60.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4280.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4258.00	
Shut In Tool	5.00			4263.00	
Hydraulic tool	5.00			4268.00	
Jars	5.00			4273.00	
Safety Joint	2.00			4275.00	
Packer	5.00			4280.00	23.00 Bottom Of Top Packer
Packer - Shale	4.00			4284.00	
Stubb	1.00			4285.00	
Recorder	0.00	8875	Inside	4285.00	
Recorder	0.00	8166	Outside	4285.00	
Perforations	14.00			4299.00	
Bullnose	5.00			4304.00	24.00 Anchor Tool

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Co
10500 E Berkeley Sq Pkwy Ste 100
Wichita, KS 67206
ATTN: Chris Peters

11-16-35 Wichita,KS
H-M Unit #1-11
Job Ticket: 63819 **DST#: 4**
Test Start: 2017.06.19 @ 11:55:08

Mud and Cushion Information

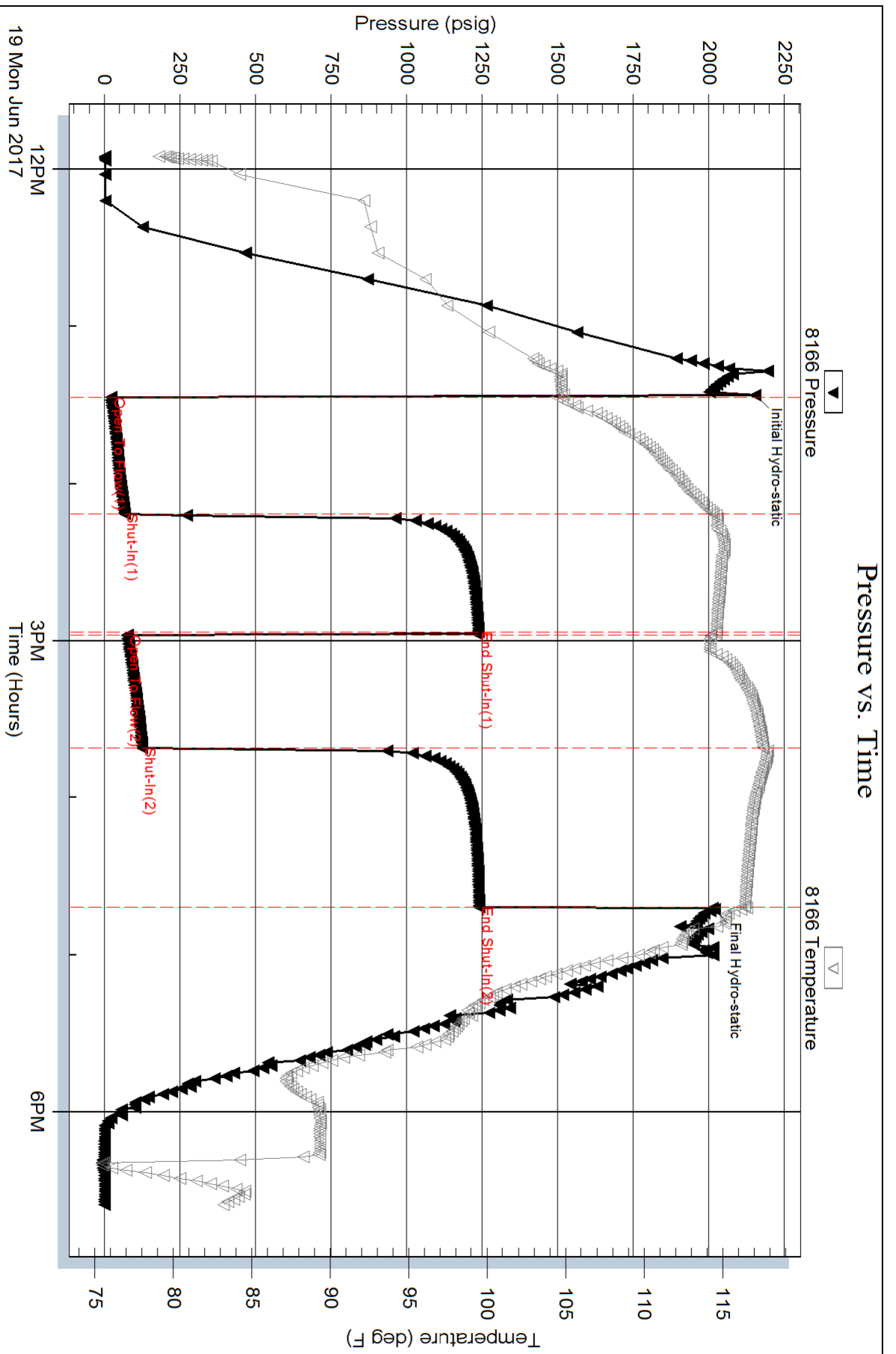
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 31000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.59 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	mcw 80%w 20%m	1.767
126.00	w cm some oil spots 30%w 70%m	1.767

Total Length: 252.00 ft Total Volume: 3.534 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .17@89=31000



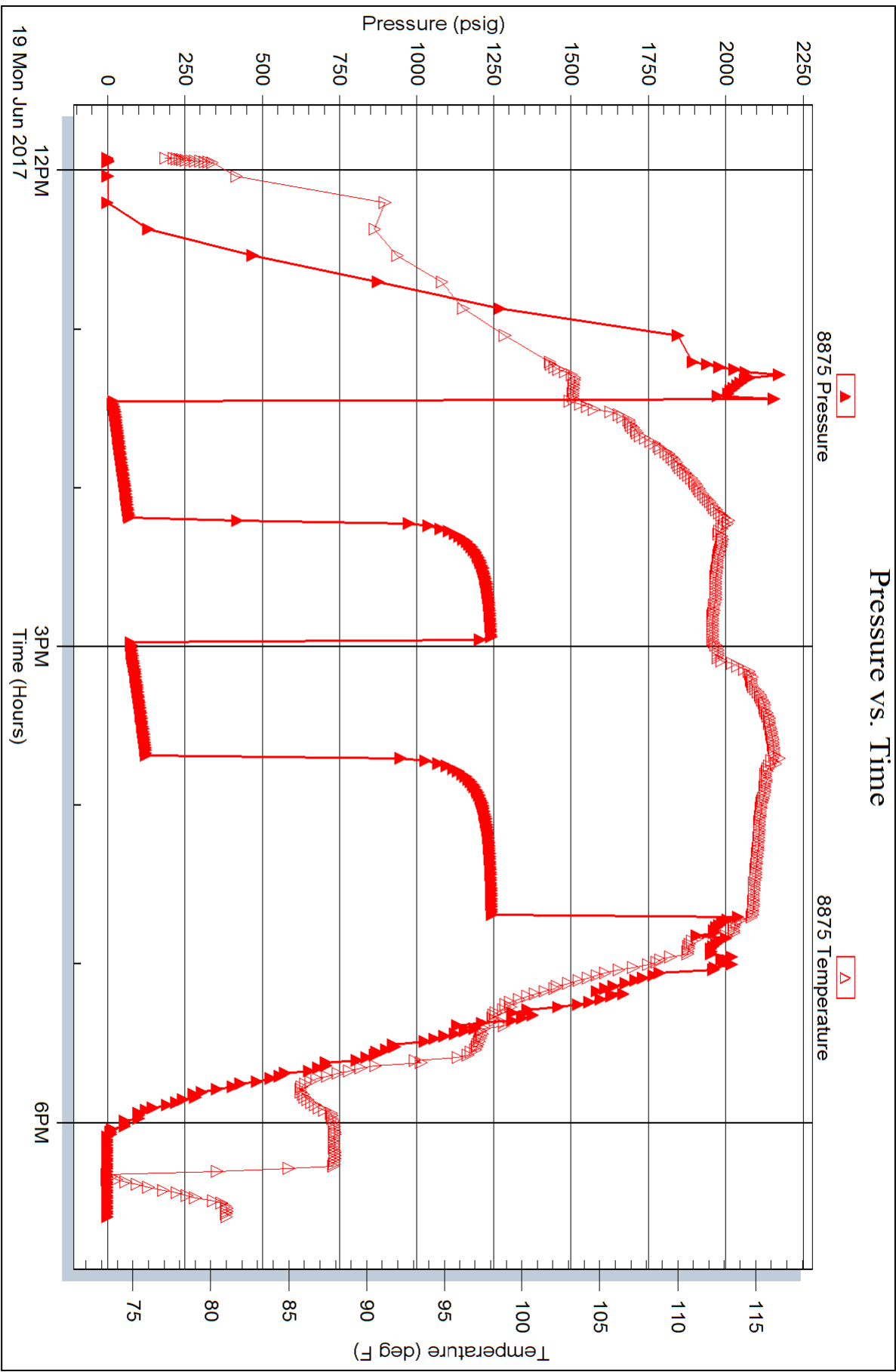
Serial #: 8875

Inside

Hartman Oil Co

H-M Unit #1-11

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63816**

Well Name & No. H-M Unit 1-11 Test No. 1 Date 6-17-17
 Company Hartman oil Co Elevation 3191 KB 3181 GL
 Address 10500 E. Berkeley sq Pkwy Ste 100 Wichita, KS 67206
 Co. Rep / Geo. Chris Peters Rig Southwind #1
 Location: Sec. 11 Twp. 16 Rge. 35 Co. Wichita State KS

Interval Tested 4010 4030 Zone Tested Toronto
 Anchor Length 30 Drill Pipe Run 3994 Mud Wt. 8.6
 Top Packer Depth 4005 Drill Collars Run — Vis 54
 Bottom Packer Depth 4010 Wt. Pipe Run — WL 7.2
 Total Depth 4030 Chlorides 2500 ppm System LCM 2

Blow Description ±FI Surface blow built to 1 1/2.
IS: NO return.
FF: Surface blow built to 1 1/2.
FS: NO return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>57</u>	<u>wcm oil spots</u>		<u>10</u>	<u>90</u>	
<u>63</u>	<u>mcw</u>		<u>80</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

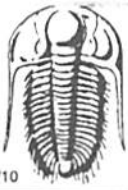
Rec Total 120 BHT 109 Gravity — API RW .21 @ 91 °F Chlorides 25,000 ppm

(A) Initial Hydrostatic 1920 Test 1150 T-On Location 4:20
 (B) First Initial Flow 23 Jars 250 T-Started 6:04
 (C) First Final Flow 39 Safety Joint 75 T-Open 8:03
 (D) Initial Shut-In 988 Circ Sub N/C T-Pulled 10:38
 (E) Second Initial Flow 48 Hourly Standby _____ T-Out 12:07
 (F) Second Final Flow 63 Mileage 65 - 48.75
 (G) Final Shut-In 997 Sampler _____
 (H) Final Hydrostatic 1880 Straddle _____

Initial Open 40 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Extra Packer _____ Ruined Packer _____
 Final Flow 40 Extra Recorder _____ Extra Copies _____
 Final Shut-In 45 Day Standby _____ Sub Total 0
 Sub Total 1523.75 Accessibility _____ Total 1523.75
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63817**

Well Name & No. H-M unit 1-11 Test No. 2 Date 6-17-17
 Company Hartman oil CG Elevation 3191 KB 3181 GL
 Address _____
 Co. Rep / Geo. Chris Peters Rig Southwind #1
 Location: Sec. 11 Twp. 16 Rge. 35 Co. Wichita State KJ

Interval Tested 4086 4106 Zone Tested Pansing - C
 Anchor Length 20 Drill Pipe Run 4090 Mud Wt. 8.9
 Top Packer Depth 4081 Drill Collars Run - Vis 54
 Bottom Packer Depth 4086 Wt. Pipe Run - WL 8.0
 Total Depth 4106 Chlorides 3000 ppm System LCM 2

Blow Description IF: BoB in 2 min.
IS: No return.
KF: BoB in 3 min.
KS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>272</u>	<u>MCW</u>		<u>70</u>	<u>30</u>	
<u>1260</u>	<u>Water</u>		<u>100</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1532 BHT 114 Gravity - API RW .31 @ 68 °F Chlorides 23,000 ppm

(A) Initial Hydrostatic <u>1988</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>20:00</u>
(B) First Initial Flow <u>106</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>21:55</u>
(C) First Final Flow <u>466</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>00:17</u>
(D) Initial Shut-In <u>1090</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>2:47</u>
(E) Second Initial Flow <u>497</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:10</u>
(F) Second Final Flow <u>714</u>	<input checked="" type="checkbox"/> Mileage <u>65-</u> 48.75	Comments _____
(G) Final Shut-In <u>1088</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>1934</u>	<input type="checkbox"/> Straddle	_____

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1773.75</u>
	Sub Total <u>1773.75</u>	MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63818**

Well Name & No. H-M unit 1-11 Test No. 3 Date 6-18-17
 Company Hartman oil Co Elevation 3191 KB 3181 GL
 Address _____
 Co. Rep / Geo. Chris Peters Rig Southwind #1
 Location: Sec. 11 Twp. 16 Rge. 35 Co. Wichita State KS

Interval Tested 4236 4278 Zone Tested H
 Anchor Length 42 Drill Pipe Run 4216 Mud Wt. 9.0
 Top Packer Depth 4331 Drill Collars Run — Vis 48
 Bottom Packer Depth 4236 Wt. Pipe Run — WL 9.6
 Total Depth 4278 Chlorides 4500 ppm System LCM 2
 Blow Description IF! BoB in 4 min.
IS: No return.
FF: BoB in 6 min.
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>189</u>	<u>mcw</u>		<u>80</u>	<u>20</u>	
<u>693</u>	<u>water</u>		<u>100</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 882 BHT 111 Gravity — API RW .28 @ 65° F Chlorides 26,000 ppm

(A) Initial Hydrostatic <u>2136</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>21:00</u>
(B) First Initial Flow <u>60</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>21:27</u>
(C) First Final Flow <u>256</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>23:29</u>
(D) Initial Shut-In <u>973</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>1:59</u>
(E) Second Initial Flow <u>221</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>4:00</u>
(F) Second Final Flow <u>406</u>	<input checked="" type="checkbox"/> Mileage <u>65</u> 48.75	Comments _____
(G) Final Shut-In <u>921</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2060</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1773.75</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1773.75</u>	

Approved By [Signature] Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63819**

Well Name & No. H-M unit 1-11 Test No. 4 Date 6-19-17
 Company Hartman oil CO Elevation 3191 KB 3181 GL
 Address _____
 Co. Rep / Geo. Chris Peters Rig Southwind #1
 Location: Sec. 11 Twp. 16 Rge. 35 Co. wichita State K.S

Interval Tested 4280 4300 Zone Tested I
 Anchor Length 20 Drill Pipe Run 4279 Mud Wt. 9.1
 Top Packer Depth 4275 Drill Collars Run — Vis 55
 Bottom Packer Depth 4280 Wt. Pipe Run — WL 9.6
 Total Depth 4300 Chlorides 5000 ppm System LCM 2
 Blow Description IF: 1/4 blow built to 8.
IS: No return.
FF: Surface blow built to 7.
F5: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>WCM some oil spots</u>		<u>30</u>	<u>70</u>	
<u>126</u>	<u>MCW</u>		<u>80</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 252 BHT 116 Gravity — API RW .49 @ 89 °F Chlorides 31,000 ppm

(A) Initial Hydrostatic <u>2154</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>11:50</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:55</u>
(C) First Final Flow <u>66</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:26</u>
(D) Initial Shut-In <u>1238</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>16:46</u>
(E) Second Initial Flow <u>76</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>18:37</u>
(F) Second Final Flow <u>125</u>	<input checked="" type="checkbox"/> Mileage <u>65-</u> 97.50	Comments <u>logged</u>
(G) Final Shut-In <u>1241</u>	<input type="checkbox"/> Sampler	<u>6-21-17 23:00</u>
(H) Final Hydrostatic <u>2018</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Open <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
Final Flow <u>45</u>	<input checked="" type="checkbox"/> Day Standby <u>1.5d 16.5h</u>	Total <u>2622.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1822.50</u>	

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Chris Peters

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **HARTMAN OIL CO INC**
LEASE **H-M UNIT #1-11**
LOCATION **2874 NNL & 1653' FWL**

SEC: **11** TWP: **16S** RNG: **35W**
COUNTY **Wichita** STATE **Kansas**
FIELD **Wildcat**
API **15-203-20317**

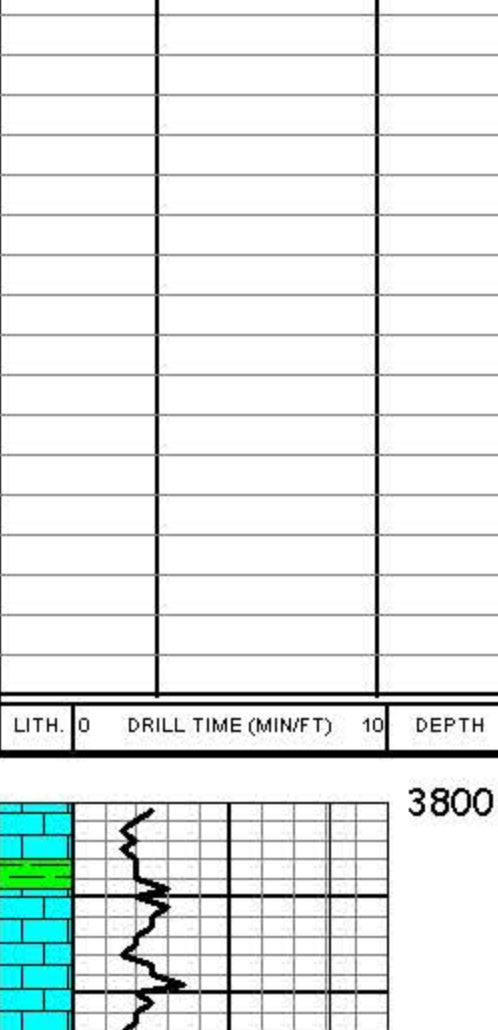
CONTRACTOR **Southwind** RIG NO. **1**
DRILLING COMMENCED **6/12/2017** COMPLETED **6/21/2017**
MUD UP **3900** MUD TYPE **Chemical**
DRILLING TIME KEPT FROM **3800** TO **RTD**
SAMPLES SAVED FROM **3800** TO **RTD**
SAMPLES EXAMINED FROM **3800** TO **RTD**
GEOLOGICAL SUPERVISION FROM **3800** TO **RTD**

FORMATION NAME	LOG TOP	LOG DATUM	SAMPLE TOP	SAMPLE DATUM
Anhydrite	2504	(+687)	2504	(+669)
B/Anhydrite	2522	(+669)	2522	(+669)
Heebner	4010	(-819)	4011	(-820)
Toronto	4024	(-833)	4026	(-835)
Lansing	4056	(-865)	4057	(-866)
Stark	4320	(-1129)	4320	(-1129)
B/C	4413	(-1222)	4409	(-1218)
Marmaton	4464	(-1273)	4458	(-1267)
Mississippian	Not on Log		4813	(-1622)
Total Depth	4825		4825	

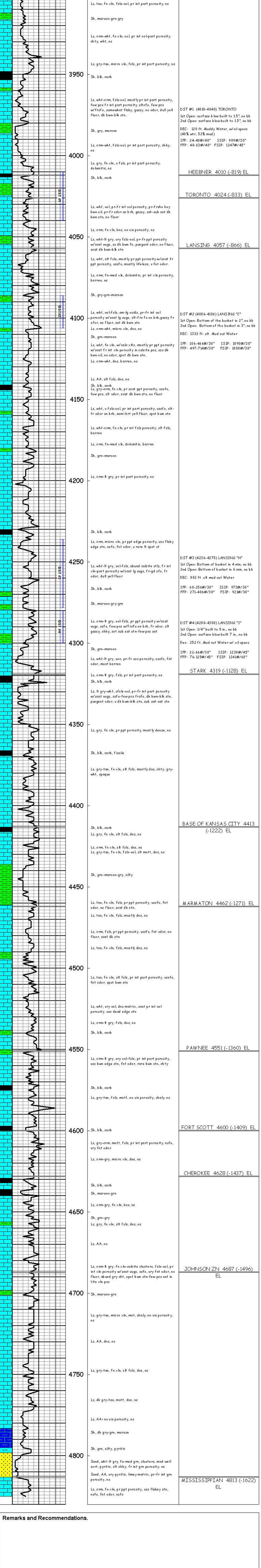
ELEVATIONS
KB **3191**
GL **3181**

MEASUREMENTS FROM K.B.
CASING RE COND
Conductor
Surface **8 F/8 @368'**
Production name
ELECTRICAL SURVEYS:
Halliburton
Comp Neutron/Density
Resistivity

Micro Log
Annular Hole Volume



DATE	7:00 AM DEPTH	REMARKS



Remarks and Recommendations.