

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 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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**GEOLOGIST'S REPORT**  
**DRILLING TIME AND SAMPLE LOG**

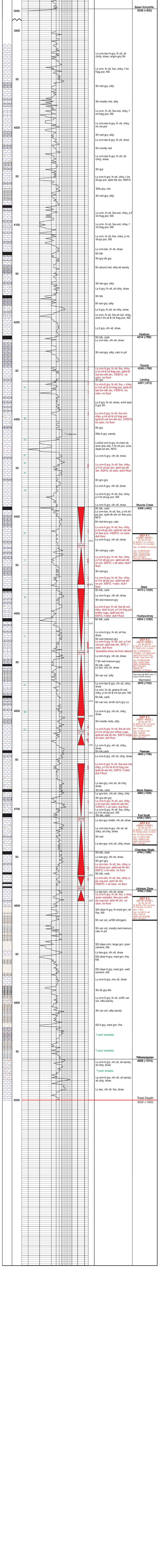
COMPANY **CHIZUM OIL, LLC** ELEVATIONS  
 LEASE **LAZY HEART L-26** KG 3448'  
 FIELD **Wildcat** DF \_\_\_\_\_  
 LOCATION **440' NMS, 560' FEL** GL 3440'  
 SEC **26** TMS **7S** RGE **37W**  
 COUNTY **Sherman** STATE **Kansas** Measurements Are All From **KB**  
 CONTRACTOR **WW Drilling, Rig #2**  
 SPUD **4-23-18** COMP **5-4-18**  
 RTD **4930'** LTD **4946'** CASING  
 MUD UP **3600'** TYPE MUD **Chemical** CONDUCTION **N/A**  
 SAMPLES SAVED FROM **3900'** to RTD SURFACE **8-5/8" @ 347'**  
 DRILLING TIME KEPT FROM **3900'** to RTD PRODUCTION  
 SAMPLES EXAMINED FROM **3900'** to RTD **ELECTRICAL**  
 GEOLOGICAL SUPERVISION FROM **4100'** to RTD **CND/D/SP/P.E.**  
 GEOLOGIST ON WELL **Tim Priest** **Mico**

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anyvrite	3008 (+440)	3012 (+436)
Heebner Shale	4208 (+760)	4214 (+766)
Austin	4254 (+806)	4261 (+813)
Stark	4470 (+1022)	4474 (+1026)
Marmaton	4568 (+1120)	4570 (+1122)
Fort Scott	4712 (+1264)	4709 (+1261)
Cherokee Shale	4746 (+1298)	4744 (+1296)
Mississippian	4960 (+1512)	4958 (+1510)

REMARKS Due to lack of shows and negative DSTs, it was decided to plug and abandon the well.

Respectfully Submitted,  
 Tim Priest  
 Petroleum Geologist

API #15-181-20613-00-00



DEPTH  
 LITHOLOGY

DRILLING TIME IN MINUTES PER FOOT  
 Rate of Penetration Decreases →

SAMPLE DESCRIPTION

REMARKS

Total Depth 5000' (-1552)



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

10486  
10374

TICKET NUMBER 55121

LOCATION Oakley, KS

FOREMAN Miles Shaw

FIELD TICKET & TREATMENT REPORT

CEMENT

Invoice #812939 OK

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
4-20-18	C88	Geokoude 2-36	36	7S	37W	Sherman	
CUSTOMER Chizum oil			Brewster's Wire CRS				
MAILING ADDRESS P.O. Box 75615			1 1/2 W N+W into				
CITY Wichita		STATE KS	ZIP CODE 67275				
TRUCK #		DRIVER		TRUCK #		DRIVER	
753		Tina Scl		70		Paul W	

JOB TYPE Long String HOLE SIZE 7 7/8" HOLE DEPTH 5010' CASING SIZE & WEIGHT 15.5"  
 CASING DEPTH 4945 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER SJ 21.30  
 SLURRY WEIGHT 14.2 SLURRY VOL 1.4 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT 115 DISPLACEMENT PSK/1000 \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting and Rig up on wire drilling Rig #12 Run in 115 joints casing  
 Centralizers on sets # 1, 3, 5, 7, 9, 11, 13, 15 Baskets on top of set #2 Circulate casing  
 thr Pump mud flush mix 130-xx Thixoblend III cwc cement with 5# K/seal down  
 Casing shutdown clear pump lines release plug displace 115 bbls water with 1200PSI  
 lift plug d/d 1. land @ 1800 psi plug float held

Mix 305x RH

Thanks Miles & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0453	1	PUMP CHARGE	2800.00	2800.00
CE0002	40	MILEAGE	7.15	286.00
CE0711	7.57 Ton	Ton mileage delivery	660.00	660.00
CC5862	100 Sx	Thixoblend III	26.00	4160.00
CC6077	800 #	K/seal	1.50	1200.00
CC6125	520 gal	Mud flush	1.65	325.00
CP8254	1	5/8" Latch down plug assembly	400.00	400.00
CP8485	1	5/8" Float shoe AFW	585.00	585.00
CP8554	7	5/8" Centralizers	81.00	567.00
			Subtotal	10193.00
			LESS 30% discount	3054.90
			Subtotal	7128.10
			SALES TAX	394.26
			ESTIMATED TOTAL	7522.36

Revin 3737

AUTHORIZATION Rick Smith

TITLE \_\_\_\_\_

DATE 4-20-18

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.



PRESSURE PUMPING LLC  
 PO Box 884, Chanute, KS 66720  
 620-431-9210 or 800-467-8576

10411  
 10298

TICKET NUMBER 55116  
 LOCATION Ogden, KS  
 FOREMAN Miles Shaw

FIELD TICKET & TREATMENT REPORT  
 CEMENT

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
4-9-18	C88	Gertrude 2-36	36	7 S	37 W	Thomas	
CUSTOMER		Drester W R Nicks 1W W+win		TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS				753	Travis W		
CITY		STATE		530/T-129	Keith C		
		ZIP CODE					

JOB TYPE Surface HOLE SIZE 17" HOLE DEPTH 373' CASING SIZE & WEIGHT 13 3/4" 78"  
 CASING DEPTH 370' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.8 SLURRY VOL 1.36 WATER gal/sk \_\_\_\_\_ CEMENT LEFT In CASING 20'  
 DISPLACEMENT 55bbls DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety Meeting and Review on Well Abandoning Rig #12. Circulate cement  
Mix 340 Surface blend II Class A cement w/ 3% calcium 2% gel displace  
bls water Shut in Cement did circulate latter only

Thanks Miles Shaw

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1150. <sup>00</sup>	1150. <sup>00</sup>
CE0002	45	MILEAGE	7.15	321.75
CE0710	15.98 Tons	Ton mileage delivery	1.75	12.5842
CE5871	340 SX	Surface blend II	24. <sup>00</sup>	8160. <sup>00</sup>
			Subtotal	10890.17
			less 300 discount	3247.05
			Subtotal	7623.12
			SALES TAX	456.90
			ESTIMATED TOTAL	8080.04

AUTHORIZATION [Signature] TITLE Tool producer DATE \_\_\_\_\_

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: **Chizum Oil, LLC**

PO Box 123  
Andover, KS 67002

ATTN: Tim Priest

### **Gertrude #2-36**

### **36-7s-37w Sherman KS**

Start Date: 2018.04.16 @ 22:08:00

End Date: 2018.04.17 @ 11:41:30

Job Ticket #: 63262                      DST #: 1

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

Printed: 2018.04.19 @ 14:10:02



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Chizum Oil, LLC  
 PO Box 123  
 Andover, KS 67002  
 ATTN: Tim Priest

**36-7s-37w Sherman KS**  
**Gertrude #2-36**  
 Job Ticket: 63262 **DST#: 1**  
 Test Start: 2018.04.16 @ 22:08:00

## GENERAL INFORMATION:

Formation: **Marmaton "A - C"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:51:15 Tester: James Winder  
 Time Test Ended: 11:41:30 Unit No: 83  
 Interval: **4541.00 ft (KB) To 4625.00 ft (KB) (TVD)** Reference Elevations: 3349.00 ft (KB)  
 Total Depth: 4625.00 ft (KB) (TVD) 3341.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

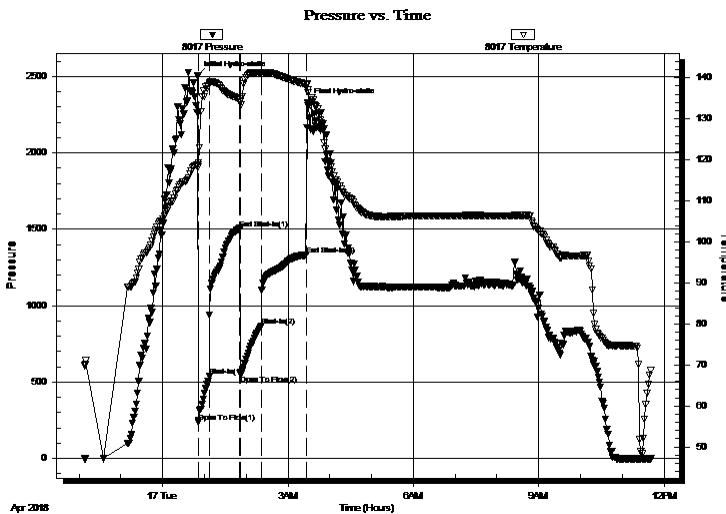
## Serial #: 8017

## Outside

Press@RunDepth: 866.59 psig @ 4542.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.04.16 End Date: 2018.04.17 Last Calib.: 2018.04.17  
 Start Time: 22:08:05 End Time: 11:41:30 Time On Btm: 2018.04.17 @ 00:50:45  
 Time Off Btm: 2018.04.17 @ 03:28:30

**TEST COMMENT:** 15 - IF: Blow built to BOB (11") in 1 min.  
 45 - IS: Blow back built to BOB in 7 1/2 min.  
 30 - FF: Blow built to BOB in 1 1/2 min.  
 60 - FS: Blow back built to BOB in 3 1/2 min.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2507.06	118.83	Initial Hydro-static
1	237.44	118.39	Open To Flow (1)
17	536.93	138.57	Shut-In(1)
60	1505.53	134.89	End Shut-In(1)
62	548.04	134.28	Open To Flow (2)
91	866.59	141.23	Shut-In(2)
156	1331.37	138.36	End Shut-In(2)
158	2330.06	137.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	SW/GMO 54%g, 22%o, 20%m, 4%w	0.59
2150.00	REV Out samples every 5 min.	29.62
0.00	5 - 10 min SW/MCGO 57%o, 24%m, 15%w	0.00
0.00	15-20 min CGO 86%o, 14%g	0.00
0.00	25-50 min SM/GO 74%o, 20%g, 6%m	0.00
0.00	GIP = 1200'	0.00

## Gas Rates

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





# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Chizum Oil, LLC  
PO Box 123  
Andover, KS 67002  
ATTN: Tim Priest

36-7s-37w Sherman KS

Gertrude #2-36

Job Ticket: 63262      DST#: 1

Test Start: 2018.04.16 @ 22:08:00

### GENERAL INFORMATION:

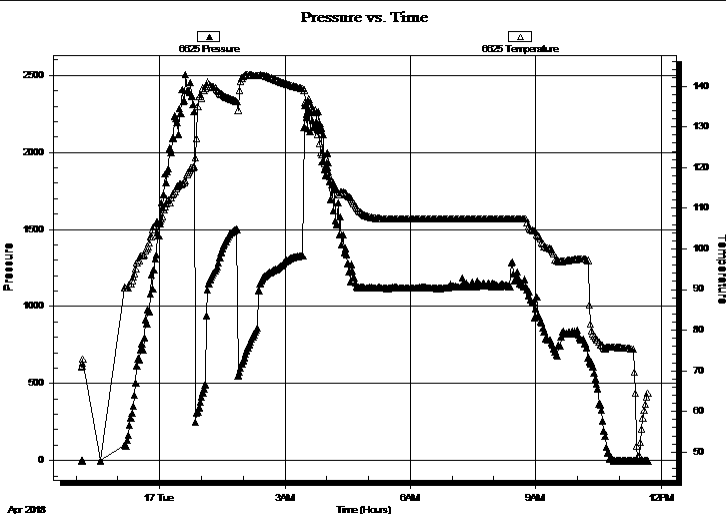
Formation: **Marmaton "A - C"**  
Deviated: No      Whipstock:      ft (KB)      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 00:51:15      Tester: James Winder  
Time Test Ended: 11:41:30      Unit No: 83  
**Interval: 4541.00 ft (KB) To 4625.00 ft (KB) (TVD)**      Reference Elevations: 3349.00 ft (KB)  
Total Depth: 4625.00 ft (KB) (TVD)      3341.00 ft (CF)  
Hole Diameter: 7.88 inches      Hole Condition: Fair      KB to GR/CF: 8.00 ft

### Serial #: 6625

Inside

Press@RunDepth:      psig @      4542.00 ft (KB)      Capacity:      8000.00 psig  
Start Date:      2018.04.16      End Date:      2018.04.17      Last Calib.:      2018.04.17  
Start Time:      22:08:05      End Time:      11:41:45      Time On Btm:  
Time Off Btm:

TEST COMMENT: 15 - IF: Blow built to BOB (11") in 1 min.  
45 - IS: Blow back built to BOB in 7 1/2 min.  
30 - FF: Blow built to BOB in 1 1/2 min.  
60 - FS: Blow back built to BOB in 3 1/2 min.



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	SW/GMO 54%g, 22%o, 20%m, 4%w	0.59
2150.00	REV Out samples every 5 min.	29.62
0.00	5 - 10 min SW/MCGO 57%o, 24%m, 15%w	0.00
0.00	15-20 min CGO 86%o, 14%g	0.00
0.00	25-50 min SM/GO 74%o, 20%g, 6%m	0.00
0.00	GIP = 1200'	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chizum Oil, LLC

**36-7s-37w Sherman KS**

PO Box 123  
Andover, KS 67002

**Gertrude #2-36**

Job Ticket: 63262

**DST#: 1**

ATTN: Tim Priest

Test Start: 2018.04.16 @ 22:08:00

## Tool Information

Drill Pipe:	Length: 4360.00 ft	Diameter: 3.80 inches	Volume: 61.16 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 62.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4541.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4521.00	
Shut In Tool	5.00			4526.00	
Hydraulic tool	5.00			4531.00	
Packer	5.00			4536.00	21.00 Bottom Of Top Packer
Packer	5.00			4541.00	
Packer - Shale	0.00			4541.00	
Stubb	1.00			4542.00	
Recorder	0.00	6625	Inside	4542.00	
Recorder	0.00	8017	Outside	4542.00	
Perforations	15.00			4557.00	
Blank Spacing	64.00			4621.00	
Perforations	1.00			4622.00	
Bullnose	3.00			4625.00	84.00 Bottom Packers & Anchor

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Chizum Oil, LLC

**36-7s-37w Sherman KS**

PO Box 123  
Andover, KS 67002

**Gertrude #2-36**

Job Ticket: 63262

**DST#: 1**

ATTN: Tim Priest

Test Start: 2018.04.16 @ 22:08:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	SW/GMO 54%g, 22%o, 20%m, 4%w	0.590
2150.00	REV Out samples every 5 min.	29.621
0.00	5 - 10 min SW/MCGO 57%o, 24%m, 15%g, 4%	0.000
0.00	15-20 min CGO 86%o, 14%g	0.000
0.00	25-50 min SM/GO 74%o, 20%g, 6%m	0.000
0.00	GIP = 1200'	0.000

Total Length: 2270.00 ft      Total Volume: 30.211 bbl

Num Fluid Samples: 0

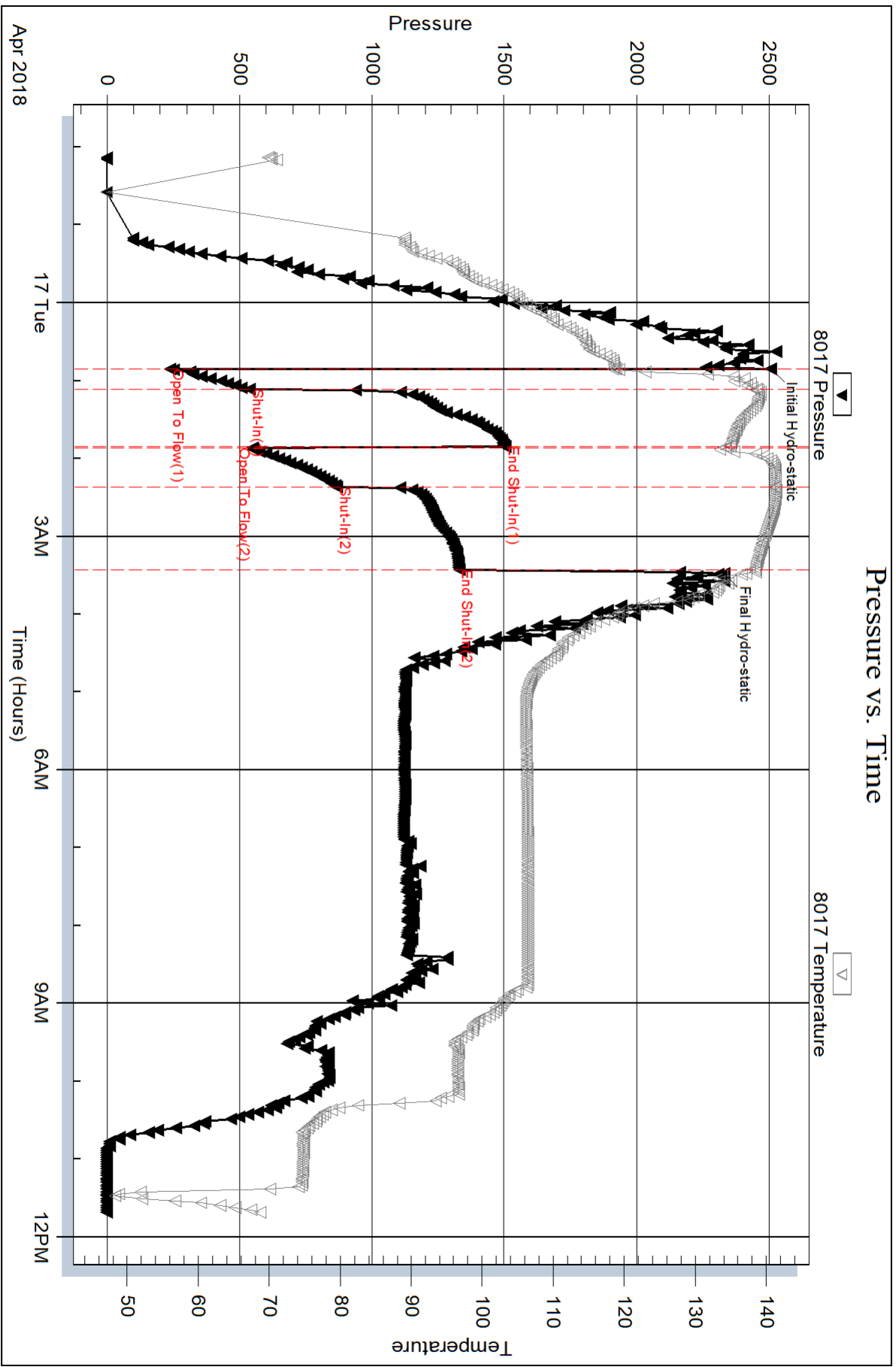
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 33 api @ 64 deg F Corrected Gravity = 32.6 api



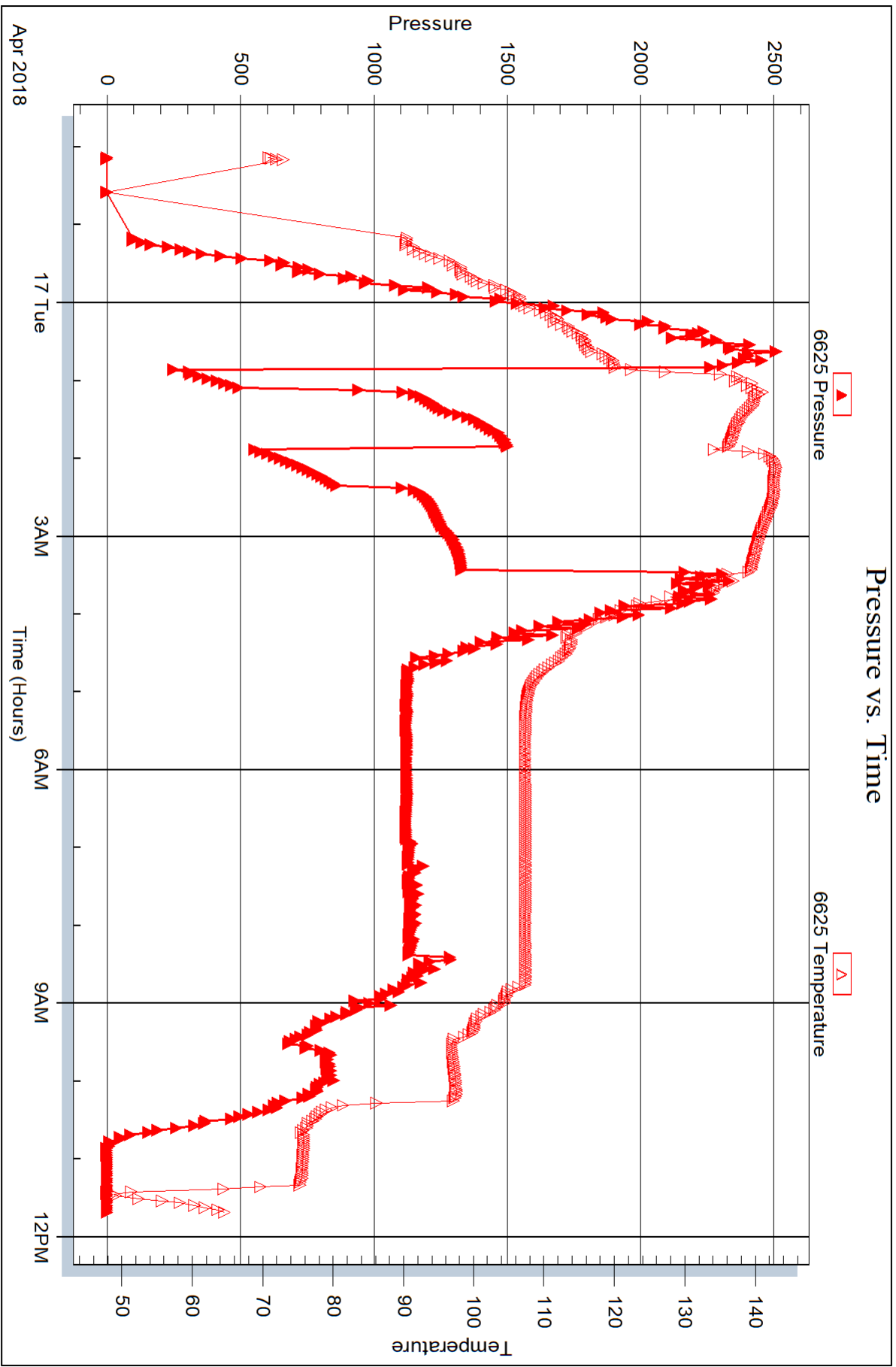
Serial #: 6625

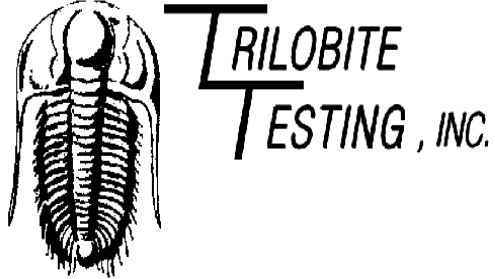
Inside

Chizum Oil, LLC

Gertrude #2-36

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Chizum Oil, LLC**

PO Box 123  
Andover, KS 67002

ATTN: Tim Priest

### **Gertrude #2-36**

#### **36-7s-37w Sherman KS**

Start Date: 2018.04.18 @ 04:08:00

End Date: 2018.04.18 @ 10:49:00

Job Ticket #: 63263                      DST #: 2

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

Printed: 2018.04.19 @ 14:09:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Chizum Oil, LLC  
 PO Box 123  
 Andover, KS 67002  
 ATTN: Tim Priest

**36-7s-37w Sherman KS**  
**Gertrude #2-36**  
 Job Ticket: 63263 **DST#: 2**  
 Test Start: 2018.04.18 @ 04:08:00

## GENERAL INFORMATION:

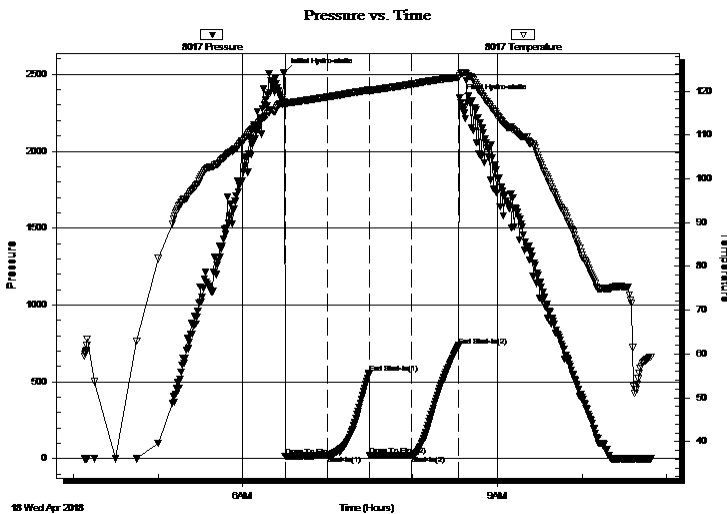
Formation: **Pawnee, Myric Statio**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 06:29:45 Tester: James Winder  
 Time Test Ended: 10:49:00 Unit No: 83  
 Interval: **4628.00 ft (KB) To 4726.00 ft (KB) (TVD)** Reference Elevations: 3349.00 ft (KB)  
 Total Depth: 4726.00 ft (KB) (TVD) 3341.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

**Serial #: 8017 Outside**  
 Press@RunDepth: 21.96 psig @ 4629.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.04.18 End Date: 2018.04.18 Last Calib.: 2018.04.18  
 Start Time: 04:08:05 End Time: 10:48:59 Time On Btm: 2018.04.18 @ 06:29:30  
 Time Off Btm: 2018.04.18 @ 08:33:15

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1/2"  
 30 - IS: No blow back  
 30 - FF: No blow  
 30 - FS: No blow

## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2512.77	117.56	Initial Hydro-static
1	14.77	116.69	Open To Flow (1)
31	19.65	118.65	Shut-In(1)
60	553.09	120.27	End Shut-In(1)
61	20.64	120.03	Open To Flow (2)
90	21.96	121.58	Shut-In(2)
124	734.80	123.18	End Shut-In(2)
124	2344.67	123.57	Final Hydro-static



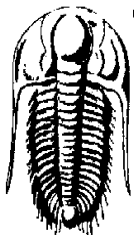
## Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOWCM 90% m, 8% w, 2% o	0.15

## Gas Rates

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

\* Recovery from multiple tests



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Chizum Oil, LLC  
 PO Box 123  
 Andover, KS 67002  
 ATTN: Tim Priest

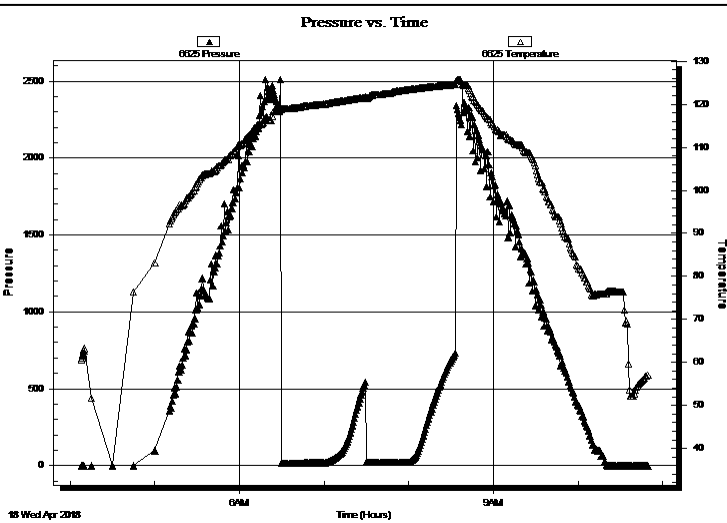
**36-7s-37w Sherman KS**  
**Gertrude #2-36**  
 Job Ticket: 63263      **DST#: 2**  
 Test Start: 2018.04.18 @ 04:08:00

### GENERAL INFORMATION:

Formation: **Pawnee, Myric Statio**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 06:29:45  
 Time Test Ended: 10:49:00  
 Interval: **4628.00 ft (KB) To 4726.00 ft (KB) (TVD)**  
 Total Depth: 4726.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 83  
 Reference Elevations: 3349.00 ft (KB)  
 3341.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6625**      **Inside**  
 Press@RunDepth:      psig @      4629.00 ft (KB)      Capacity:      8000.00 psig  
 Start Date: 2018.04.18      End Date: 2018.04.18      Last Calib.: 2018.04.18  
 Start Time: 04:08:05      End Time: 10:49:14      Time On Btm:  
    Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1/2"  
 30 - IS: No blow back  
 30 - FF: No blow  
 30 - FS: No blow



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

Recovery		
Length (ft)	Description	Volume (bbl)
30.00	SOWCM 90% m, 8% w, 2% o	0.15

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Chizum Oil, LLC

**36-7s-37w Sherman KS**

PO Box 123  
Andover, KS 67002

**Gertrude #2-36**

Job Ticket: 63263

**DST#: 2**

ATTN: Tim Priest

Test Start: 2018.04.18 @ 04:08:00

## Tool Information

Drill Pipe:	Length: 4454.00 ft	Diameter: 3.80 inches	Volume: 62.48 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 63.36 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4628.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4608.00	
Shut In Tool	5.00			4613.00	
Hydraulic tool	5.00			4618.00	
Packer	5.00			4623.00	21.00 Bottom Of Top Packer
Packer	5.00			4628.00	
Packer - Shale	0.00			4628.00	
Stubb	1.00			4629.00	
Recorder	0.00	6625	Inside	4629.00	
Recorder	0.00	8017	Outside	4629.00	
Perforations	29.00			4658.00	
Blank Spacing	64.00			4722.00	
Perforations	1.00			4723.00	
Bullnose	3.00			4726.00	98.00 Bottom Packers & Anchor

**Total Tool Length: 119.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Chizum Oil, LLC

**36-7s-37w Sherman KS**

PO Box 123  
Andover, KS 67002

**Gertrude #2-36**

Job Ticket: 63263

**DST#: 2**

ATTN: Tim Priest

Test Start: 2018.04.18 @ 04:08:00

## 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:

20000 ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SOWCM 90% <sub>m</sub> , 8% <sub>w</sub> , 2% <sub>o</sub>	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

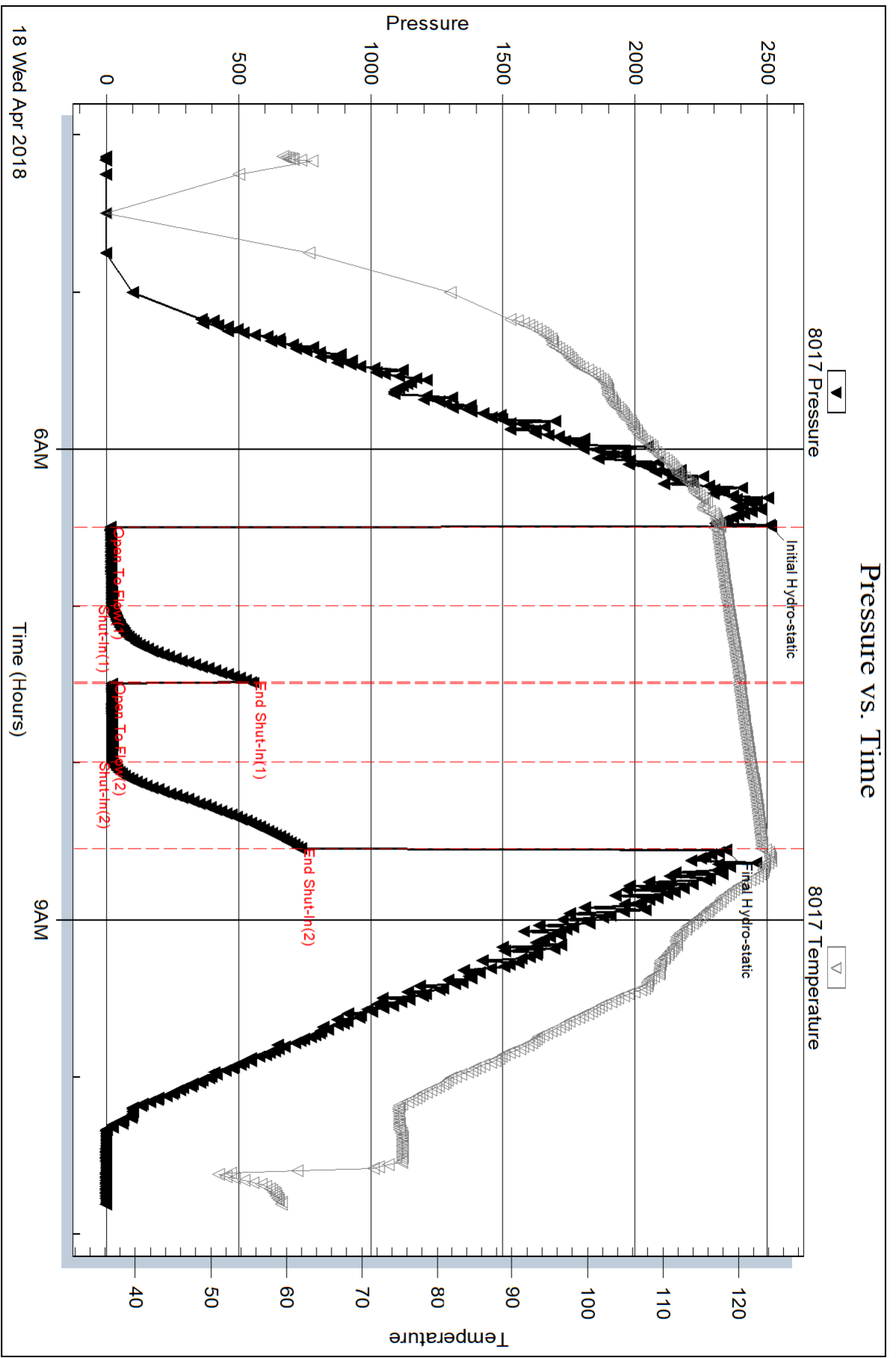
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .425 ohms @ 56.5 deg F Chlorides = 20,000 ppm



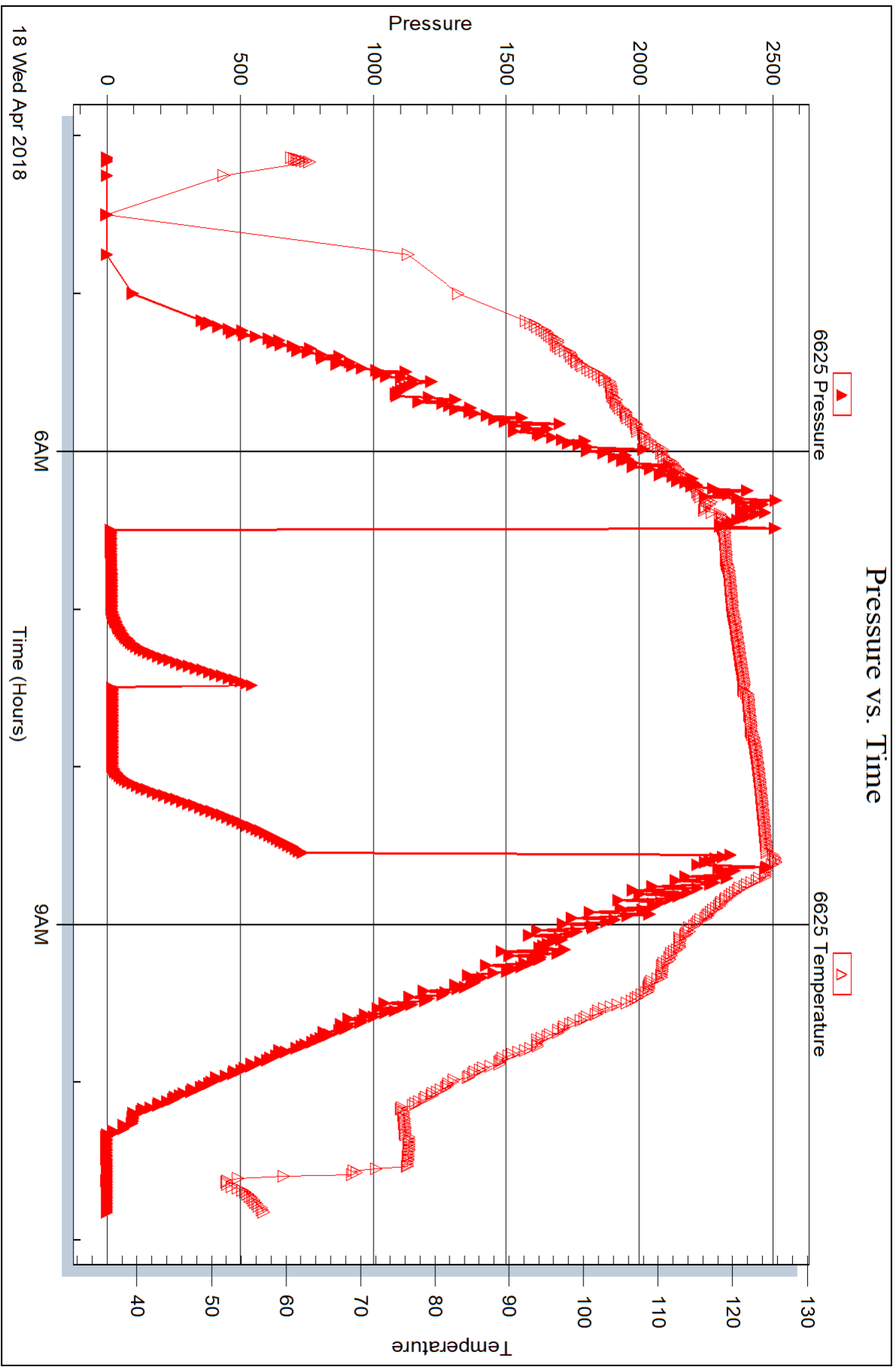
Serial #: 6625

Inside

Chizum Oil, LLC

Gertrude #2-36

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 63263

Printed: 2018.04.19 @ 14:09:39



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Chizum Oil, LLC  
PO Box 123  
Andover, KS 67002  
ATTN: Tim Priest

**36-7s-37w Sherman KS**  
**Gertrude #2-36**  
Job Ticket: 63264      **DST#: 3**  
Test Start: 2018.04.18 @ 21:16:00

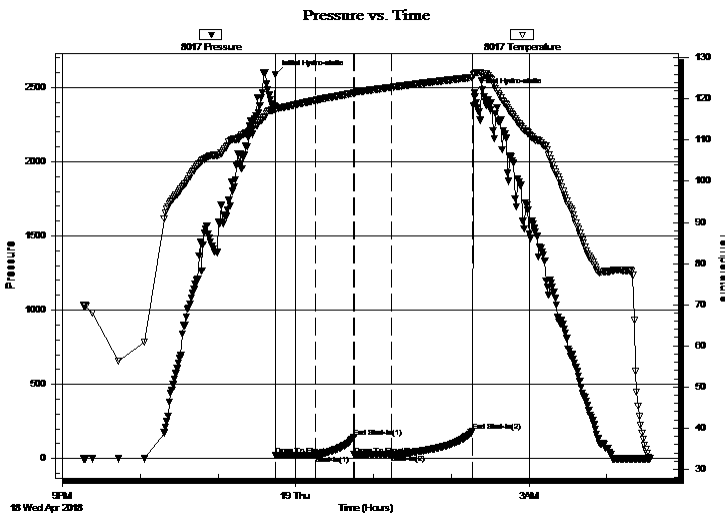
## GENERAL INFORMATION:

Formation: **Cherokee LS - Johnso**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 23:44:30  
Time Test Ended: 04:33:45  
Interval: **4722.00 ft (KB) To 4778.00 ft (KB) (TVD)**  
Total Depth: 4778.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: James Winder  
Unit No: 83  
Reference Elevations: 3349.00 ft (KB)  
3341.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8017      Outside**  
Press@RunDepth: 27.16 psig @ 4723.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2018.04.18      End Date: 2018.04.19      Last Calib.: 2018.04.19  
Start Time: 21:16:05      End Time: 04:33:44      Time On Btm: 2018.04.18 @ 23:44:15  
Time Off Btm: 2018.04.19 @ 02:17:45

**TEST COMMENT:** 30 - IF: Blow built to 1/4"  
30 - IS: No blow back  
30 - FF: No blow  
60 - FS: No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2587.52	118.05	Initial Hydro-static
1	20.26	117.46	Open To Flow (1)
31	23.91	119.64	Shut-In(1)
61	143.92	121.39	End Shut-In(1)
61	24.99	121.34	Open To Flow (2)
90	27.16	122.83	Shut-In(2)
153	183.73	125.23	End Shut-In(2)
154	2462.68	125.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	SOWCM 95% m, 4% w, 1% o	0.20

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Chizum Oil, LLC

**36-7s-37w Sherman KS**

PO Box 123  
Andover, KS 67002

**Gertrude #2-36**

Job Ticket: 63264

**DST#: 3**

ATTN: Tim Priest

Test Start: 2018.04.18 @ 21:16:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	SOWCM 95% <sub>m</sub> , 4% <sub>w</sub> , 1% <sub>o</sub>	0.197

Total Length: 40.00 ft      Total Volume: 0.197 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

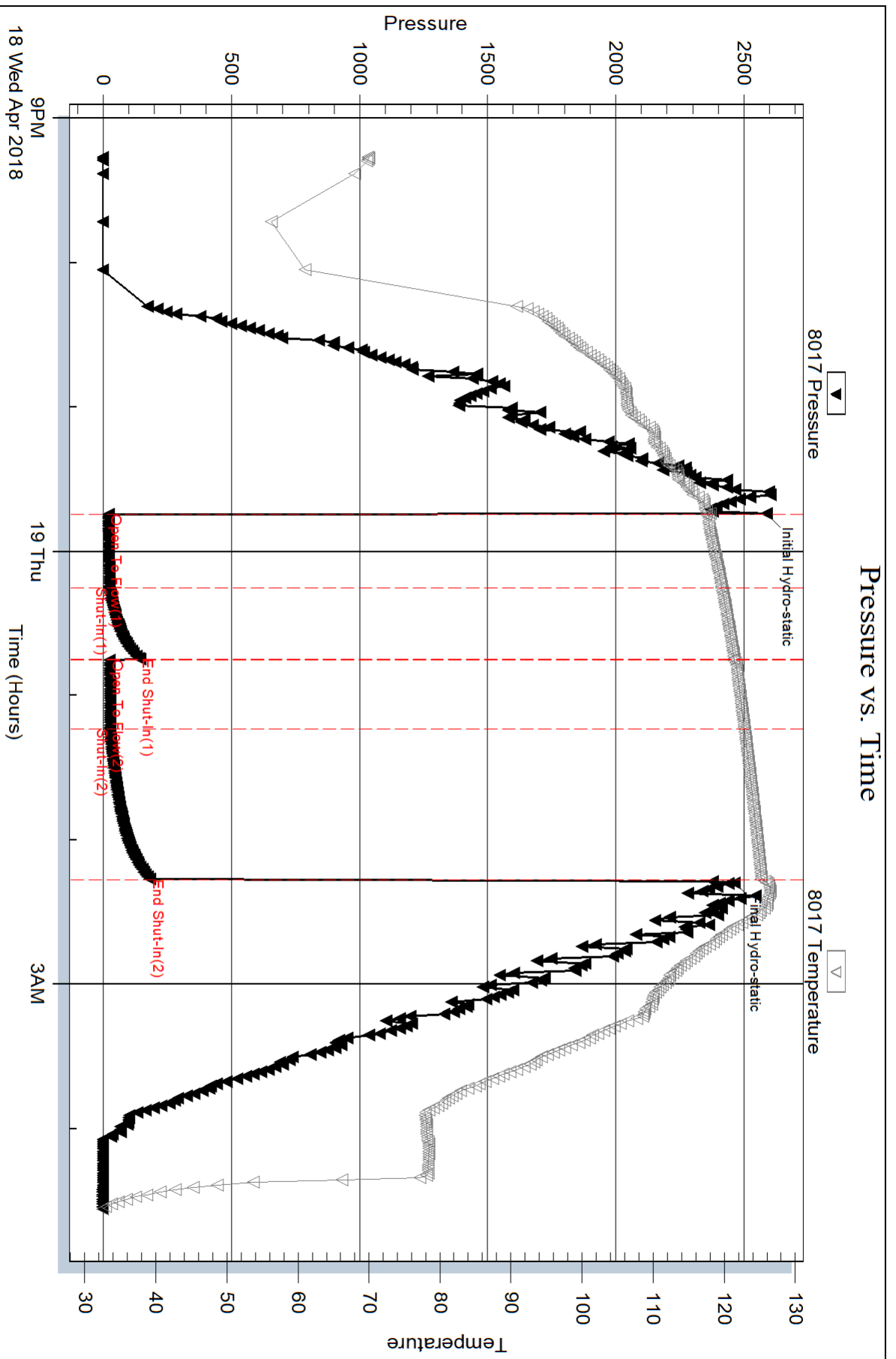
Recovery Comments: RW = .594 ohms @ 31.6 deg F Chlorides = 26,000 ppm

Serial #: 8017

Outside Chizum Oil, LLC

Gertrude #2-36

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 63264

Printed: 2018.04.19 @ 14:09:02



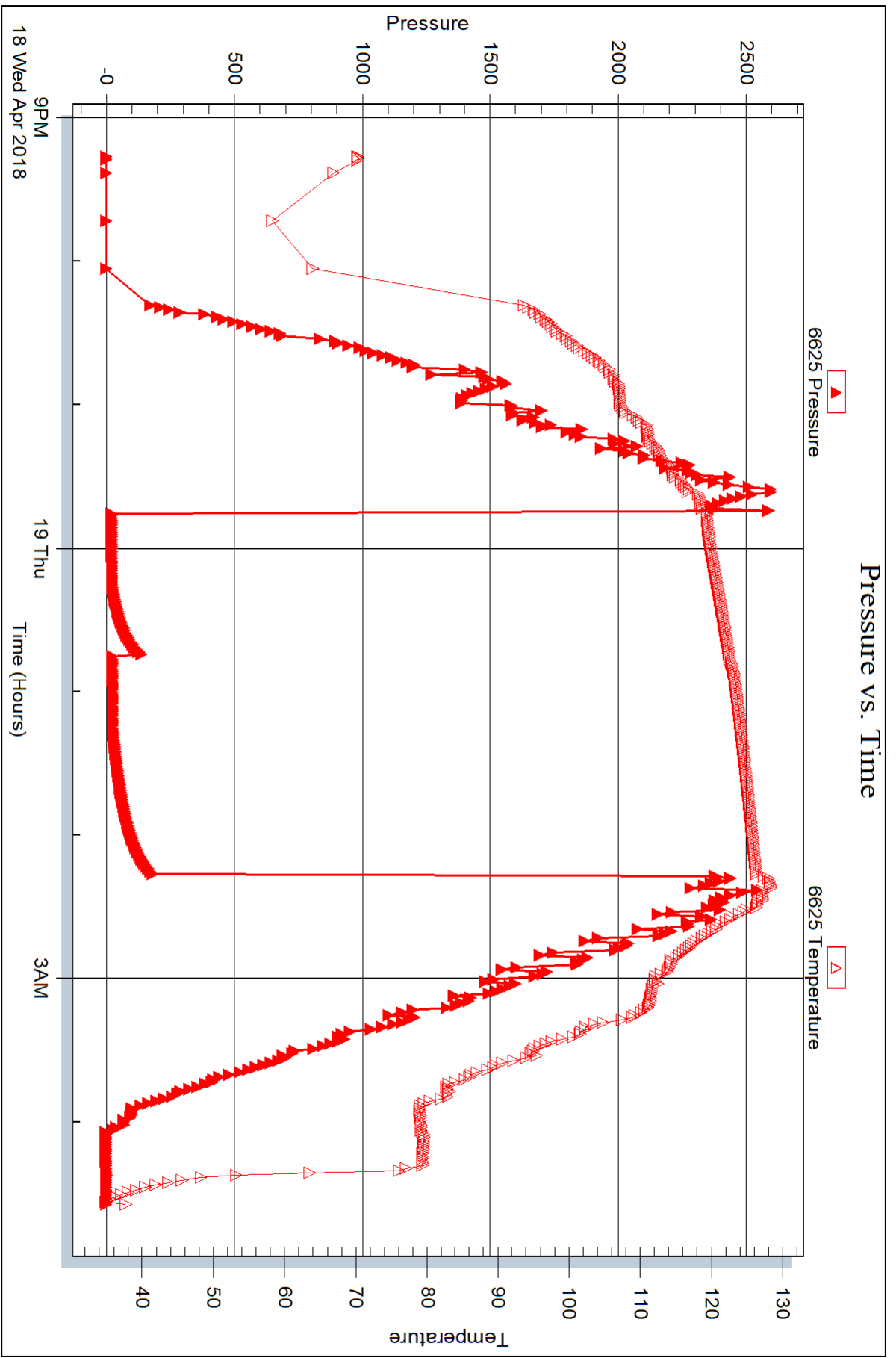
Serial #: 6625

Inside

Chizum Oil, LLC

Gertrude #2-36

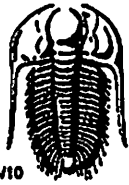
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63264

Printed: 2018.04.19 @ 14:09:02



# TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63262

Well Name & No. Gertrude #2-36 Test No. 1 Date 4-16-18  
 Company Chizum Oil LLC Elevation 3349 KB 3341 GL  
 Address PO Box 123 Andover, KS 67002  
 Co. Rep / Geo. Tim Priest Rig WW #12  
 Location: Sec. 36 Twp 7s Rge. 37w Co. Sherman State KS

Interval Tested 4541 - 4625 Zone Tested Marmaton "A-C"  
 Anchor Length 84 Drill Pipe Run 4360 Mud Wt. 9.4  
 Top Packer Depth 4536 Drill Collars Run 179 Vis 54  
 Bottom Packer Depth 4541 (shale) Wt. Pipe Run - WL 8.0  
 Total Depth 4625 Chlorides 4500 ppm System LCM 5

Blow Description ~~2500~~ IF: Blow built to BOB (11") in 1 min.  
ISI: Blowback built to BOB in 7 1/2 min.  
FF: Blow built to BOB in 1 1/2 min.  
FSI: Blowback built to BOB in 3 1/2 min.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>Rev Out 2150</u>	Feet of <u>sample every 5 min.</u>				
Rec <u>Sample 5-10 min</u>	Feet of <u>SW/MC60</u>	15	57	4	24
Rec <u>Smpl 15-20</u>	Feet of <u>C60</u>	14	86	-	-
Rec <u>Smpl 25-50</u>	Feet of <u>SM/G0</u>	20	74	-	6
Rec <u>Below Circ sub 120</u>	Feet of <u>SW/GMO</u>	54	22	4	20

Rec Total 2270 Fluid GIP: 1200' BHT 138 Gravity 32.6 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2507  Test 1150 T-On Location 18:15 4/16  
 (B) First Initial Flow 237  Jars \_\_\_\_\_ T-Started 22:08  
 (C) First Final Flow 537  Safety Joint \_\_\_\_\_ T-Open 00:51  
 (D) Initial Shut-In 1506  Circ Sub deep bar 50 T-Pulled 3:26  
 (E) Second Initial Flow 548  Hourly Standby 5.75h 460 T-Out 11:30 4/17  
 (F) Second Final Flow 867  Mileage 158 RT 158 Comments Told OB at 19:45-  
 (G) Final Shut-In 1331  Sampler \_\_\_\_\_ Rig having air problems  
 (H) Final Hydrostatic 2330  Straddle \_\_\_\_\_ wait for trucks 5:00-6:45  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 2068 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative James Winkler  
 Triobite Testing Inc. shall not be liable for damaged 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.



# TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63263

Well Name & No. Gertrude #2-36 Test No. 2 Date 4-18-18  
 Company Chizum Oil LLC Elevation 3349 KB 3341 GL  
 Address PO Box 123 Andover, KS 67002  
 Co. Rep / Geo. Tim Priest Rig WW #12  
 Location: Sec. 36 Twp 7s Rge. 37w Co. Sherman State KS

Interval Tested 4628-4726 Zone Tested Pawnee, Myric Station, Ft Scott  
 Anchor Length 98 Drill Pipe Run 4454 Mud Wt. 9.4  
 Top Packer Depth 4623 Drill Collars Run 179 Vis 67  
 Bottom Packer Depth 4628 (shale) Wt. Pipe Run - WL 9.6  
 Total Depth 4726 Chlorides 6000 ppm System LCM 5

Blow Description IF: 1/4" Blow at open, built to 1/2"  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>50wcm</u>	<u>-</u>	<u>2</u>	<u>8</u>	<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 123 Gravity \_\_\_\_\_ API RW 425 @ 56.5 °F Chlorides 20,000 ppm

(A) Initial Hydrostatic 2513  
 (B) First Initial Flow 15  
 (C) First Final Flow 20  
 (D) Initial Shut-In 553  
 (E) Second Initial Flow 21  
 (F) Second Final Flow 22  
 (G) Final Shut-In 735  
 (H) Final Hydrostatic 2345

Test 1150  
 Jars \_\_\_\_\_  
 Safety Joint \_\_\_\_\_  
 Circ Sub \_\_\_\_\_  
 Hourly Standby \_\_\_\_\_  
 Mileage 158 RT 158  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer 250  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1558

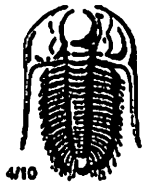
T-On Location 3:00  
 T-Started 4:08  
 T-Open 6:29  
 T-Pulled 8:32  
 T-Out 10:45

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1558  
 MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Approved By \_\_\_\_\_ Our Representative Janna Weider

Triobite Testing Inc. shall not be liable for damaged 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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63264

Well Name & No. Gertrude #2-36 Test No. 3 Date 4-18-18  
 Company Chizum Oil LLC Elevation 3349 KB 3341 GL  
 Address PO Box 123 Andover, KS 67002  
 Co. Rep / Geo. Tim Priest Rig WW #12  
 Location: Sec. 36 Twp 7s Rge. 37w Co. Sherman State KS

Interval Tested 4722 - 4778 Zone Tested Cherokee LS - Johnson  
 Anchor Length 56 Drill Pipe Run 4548 Mud Wt. 9.5  
 Top Packer Depth 4717 Drill Collars Run 179 Vis 59  
 Bottom Packer Depth 4722 (shale) Wt. Pipe Run - WL 9.6  
 Total Depth 4778 Chlorides 6000 ppm System LCM 4  
 Blow Description TF: Blow built to 1/4"  
ISI: No blowback  
FF: No blow  
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>50wcm</u>	<u>1</u>	<u>4</u>	<u>95</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 125 Gravity \_\_\_\_\_ API RW 594 @ 31.6 °F Chlorides 26,000 ppm  
 (A) Initial Hydrostatic 2588  Test 1150 T-On Location 20:15 4/18  
 (B) First Initial Flow 20  Jars \_\_\_\_\_ T-Started 21:16  
 (C) First Final Flow 24  Safety Joint \_\_\_\_\_ T-Open 23:44  
 (D) Initial Shut-In 144  Circ Sub \_\_\_\_\_ T-Pulled 2:16  
 (E) Second Initial Flow 25  Hourly Standby \_\_\_\_\_ T-Out 4:30 4/19  
 (F) Second Final Flow 27  Mileage 158 RT 158 Comments Hotel on all test  
 (G) Final Shut-In 184  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2463  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1558  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1558

Approved By \_\_\_\_\_ Our Representative James Winder  
 TriLOBITE TESTING INC. shall not be liable for damaged 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.