

06/22/13

CONFIDENTIAL

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM ORIGINAL
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

OPERATOR: License # 4767
Name: Ritchie Exploration, Inc.
Address 1: P.O. Box 783188
Address 2: _____
City: Wichita State: KS Zip: 67278 + 3188
Contact Person: John Niemberger
Phone: (316) 691-9500
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Max Lovely
Purchaser: NCRA

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Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 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 ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____
3/7/11 3/17/11 3/17/11
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 063-21894-00-00
Spot Description: 105' S & 80' W
NE SW _____ Sec. 15 Twp. 13 S. R. 31 East West
1,875 Feet from North / South Line of Section
1,900 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Gove
Lease Name: Weber 15C Well #: 1
Field Name: _____
Producing Formation: Johnson
Elevation: Ground: 2935 Kelly Bushing: 2945
Total Depth: 4765 Plug Back Total Depth: 4720
Amount of Surface Pipe Set and Cemented at: 222 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2411 Feet
If Alternate II completion, cement circulated from: 2411
feet depth to: surface w/ 300 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 19000 ppm Fluid volume: 1100 bbbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.
Signature: _____
Title: Production Manager Date: 6/21/11

KCC Office Use ONLY
 Letter of Confidentiality Received
Date: 6/22/11 - 6/22/13
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: MS Date: 6-27-11

Operator Name: Ritchie Exploration, Inc. Lease Name: Weber 15C Well #: 1
 Sec. 15 Twp. 13 S. R. 31 East West County: Gove

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual Induction Log Compensated Density/Neutron Log	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum <p style="text-align: center;">SEE ATTACHED</p>
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CASING RECORD <input checked="" 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
Surface	12-1/4	8-5/8	23	222	common	175	3%cc, 2% gel
Production	7-7/8	5-1/2	15.5	4751	ASC	200	10% soft, 2% gel, 5#/bx gilsonite

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				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4573.5' - 4575.5', 4560.5' - 4565.5' (4/5/11)		
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TUBING RECORD: Size: <u>2-7/8"</u> Set At: <u>4711</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>4/12/11</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. <u>69.93</u>	Gas Mcf <u>0</u>	Water Bbls. <u>0</u> Gas-Oil Ratio <u>29.3</u> Gravity <u>29.3</u>

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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <div style="text-align: center; font-weight: bold; font-size: 1.2em;">CONFIDENTIAL</div> JUN 22 2013
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#1 Weber 15C
1875' FSL & 1900' FWL
105' S & 80' W of NE SW Section 15-13S-31W
Gove County, Kansas
API# 15-063-21894-0000
Elevation: GL: 2935', KB: 2945'

<u>Sample Tops</u>			<u>Ref.</u> <u>Well</u>
Anhydrite	2427'	+518	+28
B/Anhydrite	2452'	+493	+25
Heebner	3963'	-1018	+8
Lansing	4006'	-1061	+7
Muncie Shale	4155'	-1210	+5
Stark Shale	4239'	-1294	+6
BKC	4316'	-1371	+7
Marmaton	4343'	-1398	+9
Altamont	4368'	-1423	+11
Pawnee	4442'	-1497	+16
Myrick	4475'	-1530	+17
Cherokee Shale	4523'	-1578	+14
Johnson	4567'	-1622	+15
Mississippian	4615'	-1670	+39
RTD	4765'	-1820	

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P.O. Box 783188
Wichita, Kansas 67278-3188

(316) 691-9500
Fax (316) 691-9550
rei@ritchie-exp.com

8100 E. 22nd St. N., Bldg. 700
Wichita, Kansas 67226-2328

ALLIED CEMENTING CO., LLC. 039826

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

(Wichita SC-1)

SERVICE POINT:
OAKLEY

DATE <u>3-17-11</u>	SEC. <u>15</u>	TWP. <u>13S</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION <u>11:00 PM</u>	JOB START <u>6:00 AM</u>	JOB FINISH <u>6:30 AM</u>
LEASE <u>Wesber ISC</u>	WELL # <u>1</u>	LOCATION <u>OAKLEY 115-SE-26S-E 2nd</u>			COUNTY <u>COOKE</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR MURFEN DRILL RIG #14
 TYPE OF JOB Production strings
 HOLE SIZE 7 7/8" TD. 4765'
 CASING SIZE 5 1/2" DEPTH 4751'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL PORT COLLAR DEPTH 2412'
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT 21.43
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT 112 1/2 bbls

OWNER SAME
 CEMENT
 AMOUNT ORDERED 250 SKS ASC 1085ALT
220 GEL 5" GELSONITE 340F12 CO-31
500 GALS WFR-2
 COMMON @ _____
 POZMIX @ _____
 GEL 5 SKS @ 20.80 104.00
 CHLORIDE @ _____
 ASC 250 SKS @ 18.60 4650.00
GELSONITE 1250# @ 1.89 1112.50
SALT 28 SKS @ 23.80 667.60
CO-31 176# @ 9.35 1645.60
WFR-2 500 GAL @ 1.27 635.00
 HANDLING 311 SKS @ 2.40 746.40
 MILEAGE 10.4 RTA SK/MI 6.22
 TOTAL 16183.30

EQUIPMENT

PUMP TRUCK CEMENTER TERRY
 # 431 HELPER DARREN
 BULK TRUCK
 # 396 DRIVER MIKE
 BULK TRUCK
 # DRIVER

REMARKS:

MIX 500 GALS WFR-2 MIX 20SKS
CEMENT Mouse Hole. MIX 30SKS CEMENT
NAT Hole. MIX 200SKS ASC 1085ALT
220 GEL 5" GELSONITE 340F12 CO-31 DOWN
5 1/2" CASING. FINAL LEFT PRESSURE
1100 PSI. Landed 1149 AT 1200
PSI. FLOAT Held.

SERVICE

DEPTH OF JOB 4751'
 PUMP TRUCK CHARGE 2185.00
 EXTRA FOOTAGE @ _____
 MILEAGE 20 ME @ 7.00 140.00
 MANIFOLD @ _____
 TOTAL 2325.00

THANK YOU

CHARGE TO: Wichita Exploration
 STREET _____
 CITY _____ STATE RECEIVED

PLUG & FLOAT EQUIPMENT

1- Guide shoe 101.00
1- AFU INSERT @ 112.00
7- Turbodrills @ 42.00 294.00
4- BASKETS @ 186.00 744.00
1- PORT COLLAR @ 175.00
1- Rubber Plug @ 67.00
 TOTAL 3068.00

To Allied Cementing Co., LLC. **KCC WICHITA**
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Debra Florini
 SIGNATURE [Signature]

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

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KCC

[Handwritten mark]

JUN 22 2011

JUN 22 2013

ALLIED CEMENTING CO., LLC. 041016

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Oakley

Webster (SO)

DATE <u>3-7-11</u>	SEC <u>15</u>	TWP <u>13S</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION	JOB START <u>11:00am</u>	JOB FINISH <u>11:20am</u>
LEASE <u>Webster</u>	WELL # <u>1</u>	LOCATION <u>Oakley 11S 5E</u>			COUNTY <u>Gove</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)				<u>212S EINTO</u>			

CONTRACTOR Murfin Drilling Rig 14 OWNER same

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 222'
 CASING SIZE 8 5/8 DEPTH 222'
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 15'
 PERFS. _____
 DISPLACEMENT 13.18 BBL

CEMENT
 AMOUNT ORDERED 175 sks com
3%cc 20 gel

COMMON	<u>175 sks</u>	@	<u>15.45</u>	<u>2703.75</u>
POZMIX		@		
GEL	<u>3 sks</u>	@	<u>20.80</u>	<u>62.40</u>
CHLORIDE	<u>6 sks</u>	@	<u>58.20</u>	<u>349.20</u>
ASC		@		

HANDLING 184 sks @ 2.40 441.60
 MILEAGE 10⁸ sk/mile 368.00
 TOTAL 3924.95

EQUIPMENT

PUMP TRUCK CEMENTER Andrew Danny
 # 431 HELPER Darrin
 BULK TRUCK
 # 396 DRIVER mike
 BULK TRUCK
 # _____ DRIVER _____

REMARKS:

Cement in cellar

Thank you

CHARGE TO: Ritchie Exploration
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB 222'
 PUMP TRUCK CHARGE _____ 1078.00
 EXTRA FOOTAGE @ _____
 MILEAGE 20 miles @ 7.00 140.00
 MANIFOLD @ _____
 TOTAL 1158.00

PLUG & FLOAT EQUIPMENT

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KCC WICHITA

TOTAL _____

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

To Allied Cementing Co., LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Greg AnruH

SIGNATURE Greg AnruH

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JUN 22 2013

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ALLIED CEMENTING CO., LLC. 043276

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

Oakley

DATE <u>3-23-11</u>	SEC <u>15</u>	TWP <u>13S</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION	JOB START <u>11:30 am</u>	JOB FINISH <u>12:00 pm</u>
LEASE <u>Wesber 15c</u>	WELL # <u>1</u>	LOCATION <u>Oakley 11s SE 2 1/2 S</u>		COUNTY <u>Gove</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>				E into			

CONTRACTOR Express well service

OWNER same

TYPE OF JOB Port collar

HOLE SIZE _____ T.D. _____

CASING SIZE 5 1/2 DEPTH _____

TUBING SIZE 2 7/8 DEPTH 2412'

DRILL PIPE _____ DEPTH _____

TOOL Port collar DEPTH 2412'

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 13 GBL

EQUIPMENT

PUMP TRUCK # 423-281 CEMENTER Andrew Danny
HELPER Larene

BULK TRUCK # 396 DRIVER Jerry

BULK TRUCK # _____ DRIVER _____

CEMENT
AMOUNT ORDERED 450 sks 6 3/4" 6 bag
1/4 flo-seal 500 hulls on site
used 300 sks cement 200 hulls

COMMON 180 sks @ 15.45 2781.00

POZMIX 120 sks @ 8.00 960.00

GEL 15 sks @ 20.80 312.00

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

hulls 4 sks @ 31.85 127.40

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING 487 sks @ 2.40 1168.80

MILEAGE 104 sk/mile @ _____ 974.00

TOTAL 6323.20

REMARKS:

Pressure to 1200' held open port collar mix cement to surface with 300 sks cement 200 hulls close port collar. Pressure to 1200' held. Run 4 joints. Reverts clear.

SERVICE

DEPTH OF JOB 2412'

PUMP TRUCK CHARGE _____ 1185.00

EXTRA FOOTAGE _____ @ _____

MILEAGE 20 miles @ 7.00 140.00

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL 1325.00

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

RECEIVED _____ @ _____

JUN 22 2011 _____ @ _____

KCC WICHITA _____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

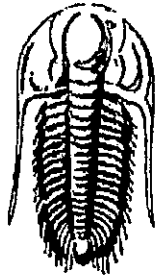
PRINTED NAME _____

SIGNATURE Thomas A. Acl

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JUN 22 2013

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PR



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

Weber #1-15c

Start Date: 2011.03.11 @ 07:00:38

End Date: 2011.03.11 @ 13:55:53

Job Ticket #: 040717 DST #: 1

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KCC WICHITA

Trilobite Testing, Inc

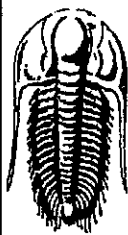
PO Box 1733 Hays, KS 67601

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040717

DST#: 1

ATTN: Max Lovely

Test Start: 2011.03.11 @ 07:00:38

GENERAL INFORMATION:

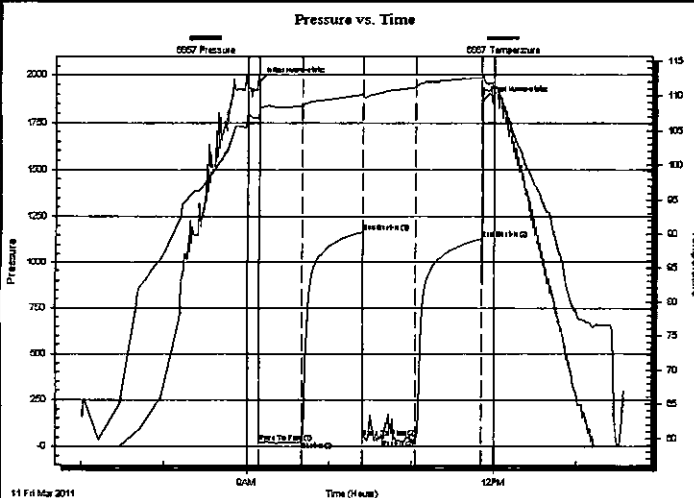
Formation: C
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:08:53
 Time Test Ended: 13:55:53
 Interval: 4024.00 ft (KB) To 4047.00 ft (KB) (TVD)
 Total Depth: 4047.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 2945.00 ft (KB)
 2935.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6667

Inside

Press@RunDepth: 37.78 psig @ 4025.00 ft (KB)
 Start Date: 2011.03.11 End Date: 2011.03.11
 Start Time: 07:00:38 End Time: 13:34:53
 Capacity: 8000.00 psig
 Last Calib.: 2011.03.11
 Time On Btm: 2011.03.11 @ 09:08:23
 Time Off Btm: 2011.03.11 @ 11:51:38

TEST COMMENT: Weak surface blow
 No return
 No blow
 No return



PRESSURE SUMMARY

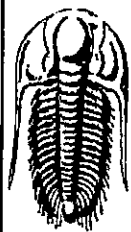
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1963.70	107.75	Initial Hydro-static
1	20.95	108.09	Open To Flow (1)
32	24.63	108.57	Shut-In(1)
76	1165.56	110.18	End Shut-In(1)
77	48.95	109.83	Open To Flow (2)
115	37.78	111.45	Shut-In(2)
163	1129.19	112.64	End Shut-In(2)
164	1867.36	113.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	oil cut mud 15%o 85%m	0.05

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040717

DST#: 1

ATTN: Max Lovely

Test Start: 2011.03.11 @ 07:00:38

Tool Information

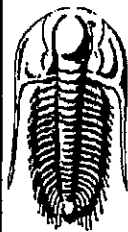
Drill Pipe:	Length: 3516.00 ft	Diameter: 3.80 inches	Volume: 49.32 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 90000.00 lb
			Total Volume: 51.82 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4024.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	50.00 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			3998.00	
Shut In Tool	5.00			4003.00	
Hydraulic tool	5.00			4008.00	
Jars	5.00			4013.00	
Safety Joint	2.00			4015.00	
Packer	5.00			4020.00	27.00 Bottom Of Top Packer
Packer	4.00			4024.00	
Stubb	1.00			4025.00	
Recorder	0.00	6771	Outside	4025.00	
Recorder	0.00	6667	Inside	4025.00	
Perforations	17.00			4042.00	
Bullnose	5.00			4047.00	23.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040717

DST#: 1

ATTN: Max Lovely

Test Start: 2011.03.11 @ 07:00:38

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 7.35 in³
Resistivity: 0.00 ohm.m
Salinity: 3100.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

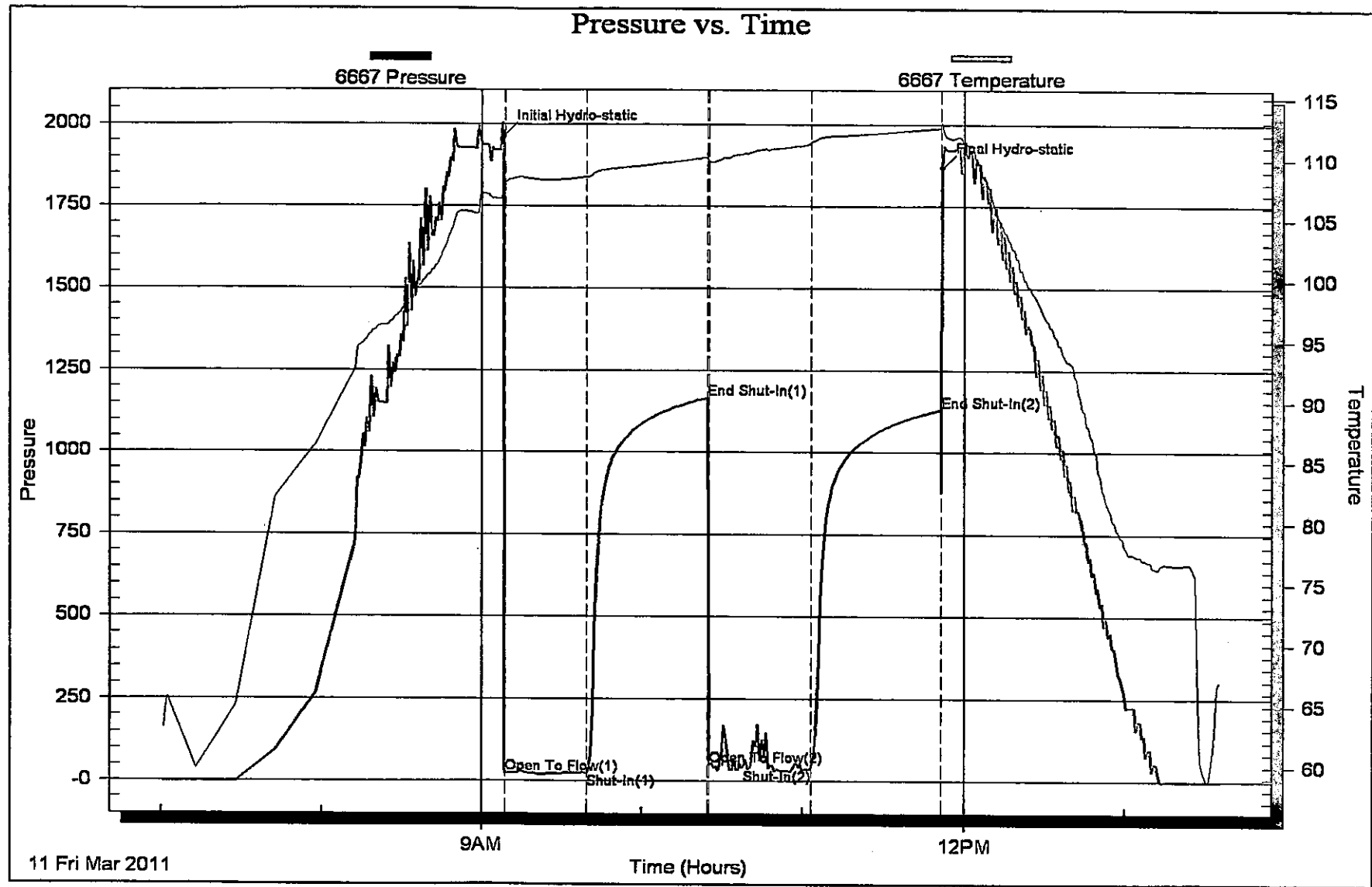
Length ft	Description	Volume bbl
10.00	oil cut mud 15%o 85%m	0.049

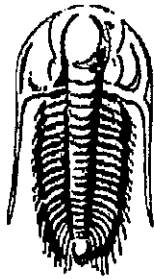
Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

Weber #1-15c

Start Date: 2011.03.12 @ 00:45:48

End Date: 2011.03.12 @ 08:10:33

Job Ticket #: 040718 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration

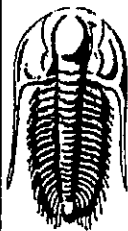
Weber #1-15c

15-13s-31w Gove, Ks

DST # 2

E-F

2011.03.12



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040718

DST#: 2

ATTN: Max Lovely

Test Start: 2011.03.12 @ 00:45:48

GENERAL INFORMATION:

Formation: E-F

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:41:33

Time Test Ended: 08:10:33

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 55

Interval: 4076.00 ft (KB) To 4095.00 ft (KB) (TVD)

Total Depth: 4095.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2945.00 ft (KB)

2935.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6667

Inside

Press@RunDepth: 134.17 psig @ 4077.00 ft (KB)

Start Date: 2011.03.12

End Date:

2011.03.12

Capacity: 8000.00 psig

Last Calib.: 2011.03.12

Start Time: 00:45:48

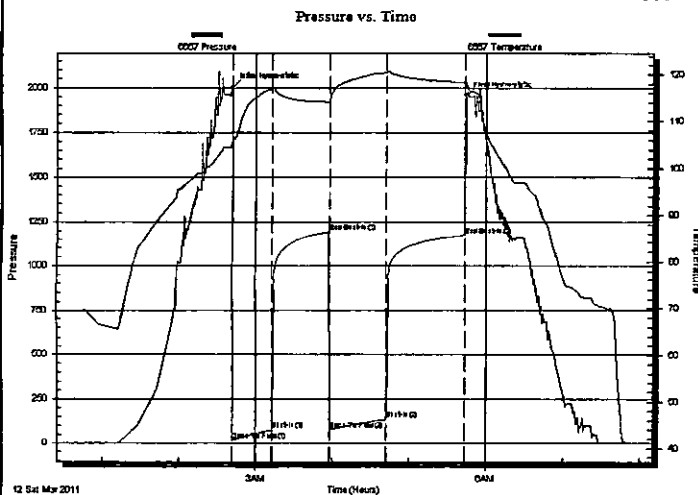
End Time:

07:49:33

Time On Btm: 2011.03.12 @ 02:41:18

Time Off Btm: 2011.03.12 @ 05:44:03

TEST COMMENT: 4" in blow
No return
3" in blow
No return



PRESSURE SUMMARY

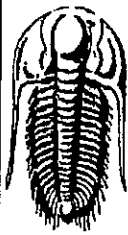
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.62	105.68	Initial Hydro-static
1	17.00	105.61	Open To Flow (1)
32	75.54	116.82	Shut-In (1)
77	1192.83	114.09	End Shut-In (1)
77	77.97	114.20	Open To Flow (2)
121	134.17	120.48	Shut-In (2)
183	1172.36	118.30	End Shut-In (2)
183	1956.98	118.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	m c w w / heavy oil scum 12% m 88% v	0.98

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040718

DST#: 2

ATTN: Max Lovely

Test Start: 2011.03.12 @ 00:45:48

Tool Information

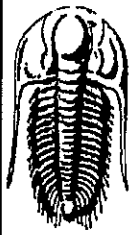
Drill Pipe:	Length: 3555.00 ft	Diameter: 3.80 inches	Volume: 49.87 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 52.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4076.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	41.00 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			4055.00	
Shut In Tool	5.00			4060.00	
Hydraulic tool	5.00			4065.00	
Safety Joint	2.00			4067.00	
Packer	5.00			4072.00	22.00 Bottom Of Top Packer
Packer	4.00			4076.00	
Stubb	1.00			4077.00	
Recorder	0.00	6771	Outside	4077.00	
Recorder	0.00	6667	Inside	4077.00	
Perforations	13.00			4090.00	
Bullnose	5.00			4095.00	19.00 Bottom Packers & Anchor

Total Tool Length: 41.00



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278
ATTN: Max Lovely

Weber #1-15c
15-13s-31w Gove, Ks
Job Ticket: 040718 DST#: 2
Test Start: 2011.03.12 @ 00:45:48

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:	28000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.34 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3100.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

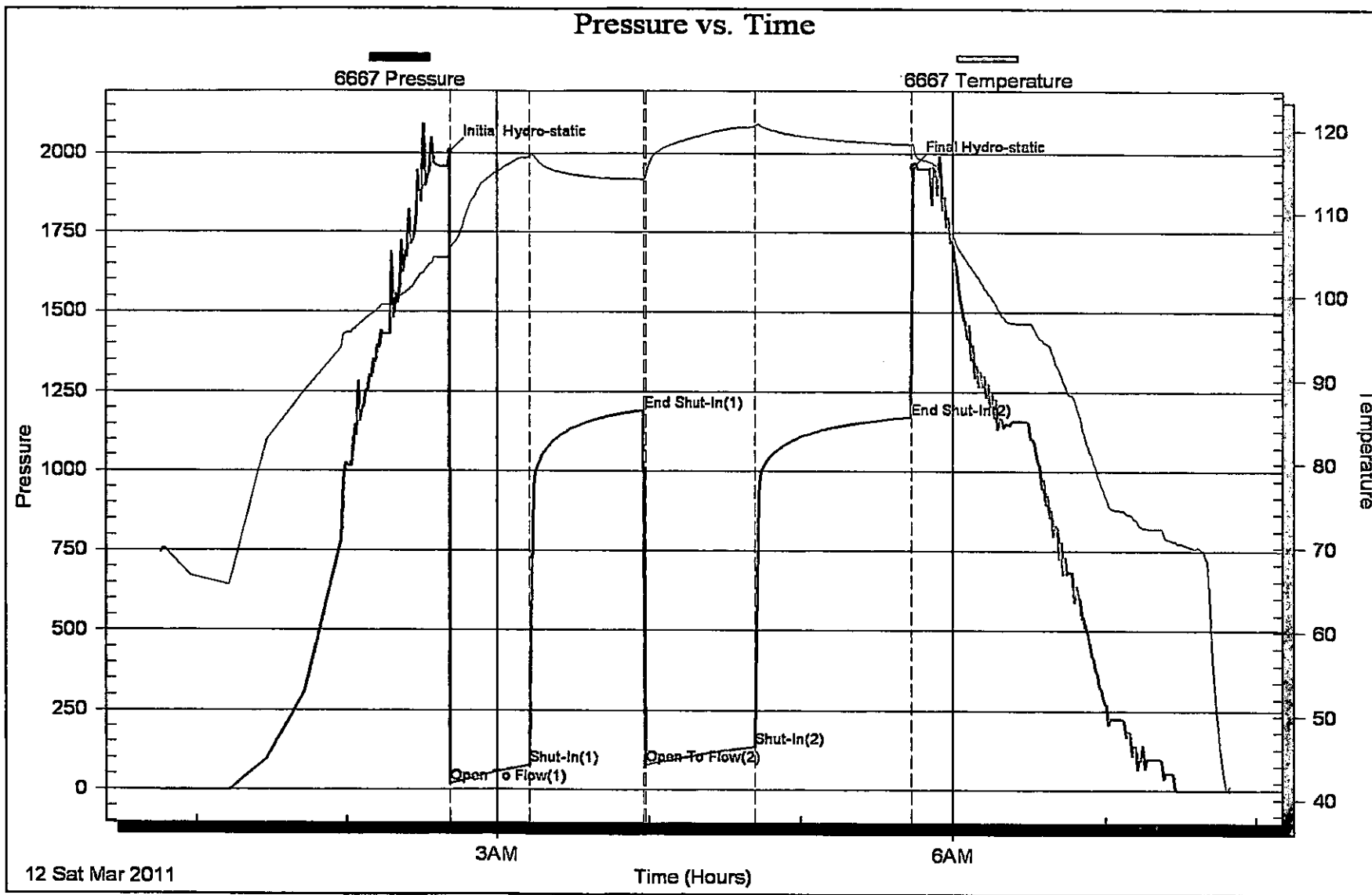
Length ft	Description	Volume bbl
200.00	m c w w / heavy oil scum 12% m 88% w	0.984

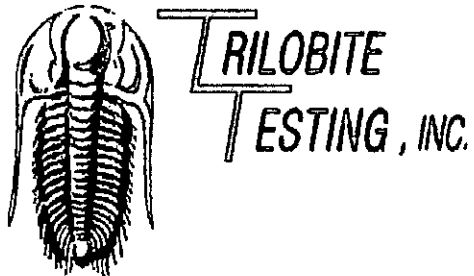
Total Length: 200.00 ft Total Volume: 0.984 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial#:

Laboratory Name: Laboratory Location:

Recovery Comments: rw .362 @ 45*f = 28,000 chlor





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

Weber #1-15c

Start Date: 2011.03.12 @ 19:55:35

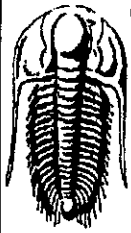
End Date: 2011.03.13 @ 01:50:50

Job Ticket #: 040719 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040719

DST#: 3

ATTN: Max Lovely

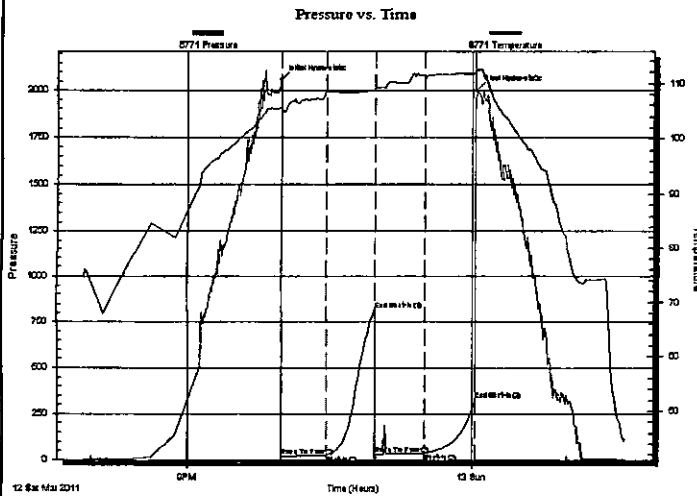
Test Start: 2011.03.12 @ 19:55:35

GENERAL INFORMATION:

Formation: H
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:00:05
 Time Test Ended: 01:50:50
 Interval: 4130.00 ft (KB) To 4186.00 ft (KB) (TVD)
 Total Depth: 4186.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 2945.00 ft (KB)
 2935.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6771 Outside
 Press@RunDepth: 35.57 psig @ 4131.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.03.12 End Date: 2011.03.13 Last Calib.: 2011.03.13
 Start Time: 19:55:35 End Time: 01:37:50 Time On Btm: 2011.03.12 @ 21:59:50
 Time Off Btm: 2011.03.13 @ 00:02:50

TEST COMMENT: 1/4" in blow died in 17 min
 No return
 No blow, flush tool after 5 min, good surge, died in 9 min
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.92	105.68	Initial Hydro-static
1	19.61	104.72	Open To Flow (1)
30	25.69	108.46	Shut-In(1)
60	817.19	108.74	End Shut-In(1)
60	28.98	108.97	Open To Flow (2)
91	35.57	111.24	Shut-In(2)
122	328.16	111.64	End Shut-In(2)
123	2006.36	112.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud w/oil spots 100% m	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040719

DST#: 3

ATTN: Max Lovely

Test Start: 2011.03.12 @ 19:55:35

Tool Information

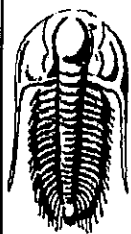
Drill Pipe:	Length: 3617.00 ft	Diameter: 3.80 inches	Volume: 50.74 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 98000.00 lb
			<u>Total Volume: 53.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4130.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	78.00 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			4109.00	
Shut In Tool	5.00			4114.00	
Hydraulic tool	5.00			4119.00	
Safety Joint	2.00			4121.00	
Packer	5.00			4126.00	22.00 Bottom Of Top Packer
Packer	4.00			4130.00	
Stubb	1.00			4131.00	
Recorder	0.00	6771	Outside	4131.00	
Recorder	0.00	6667	Inside	4131.00	
Perforations	17.00			4148.00	
Change Over Sub	1.00			4149.00	
Drill Pipe	31.00			4180.00	
Change Over Sub	1.00			4181.00	
Bullnose	5.00			4186.00	56.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040719

DST#: 3

ATTN: Max Lovely

Test Start: 2011.03.12 @ 19:55:35

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:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud w /oil spots 100%m	0.098

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

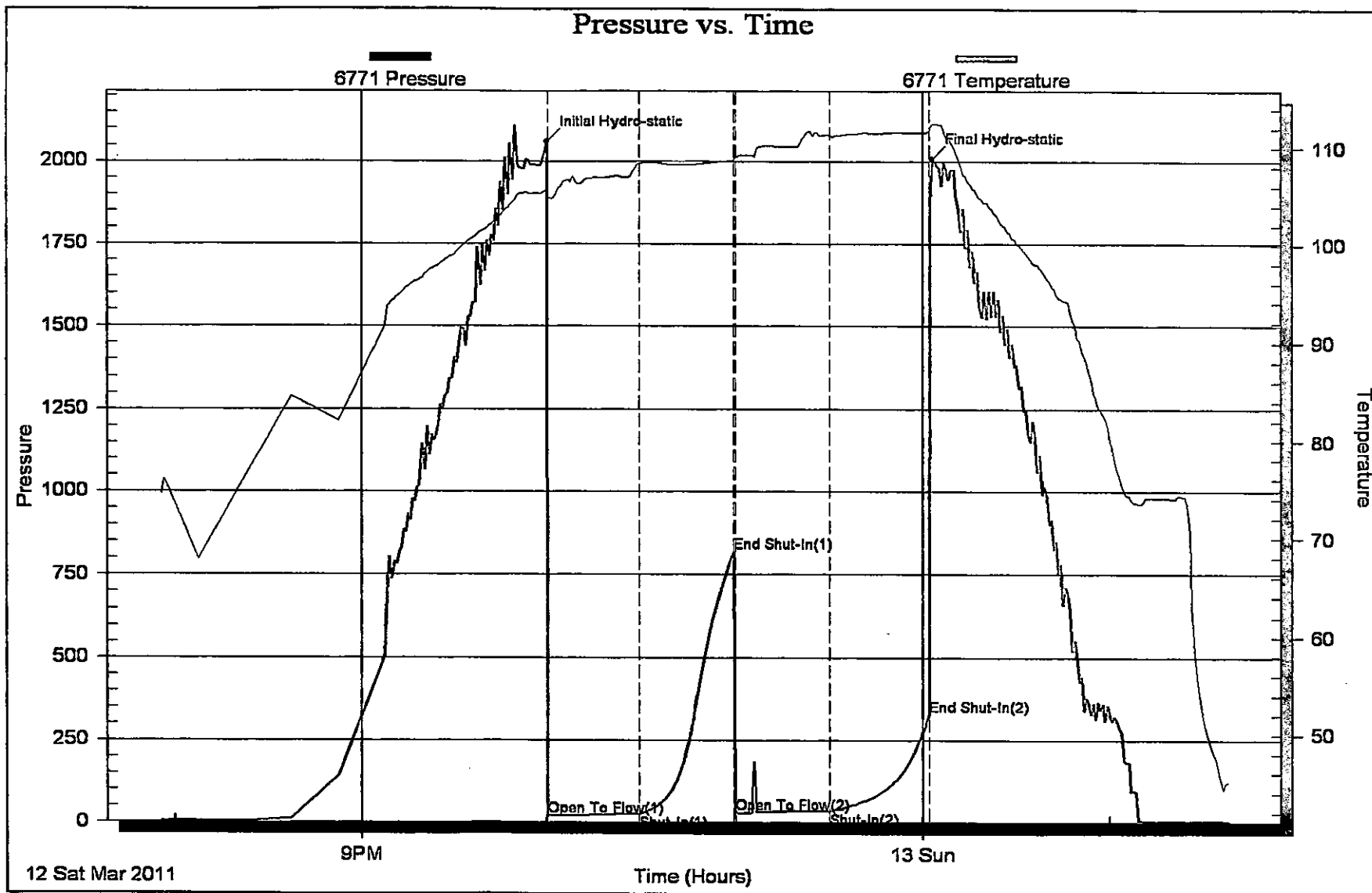
Num Gas Bombs: 0

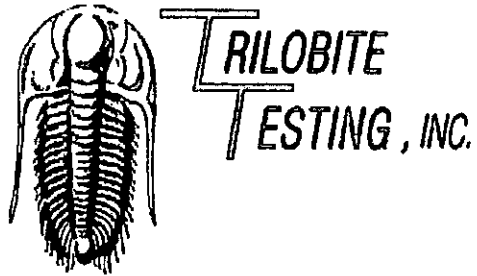
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

Weber #1-15c

Start Date: 2011.03.13 @ 13:30:48

End Date: 2011.03.13 @ 20:40:03

Job Ticket #: 040720 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration

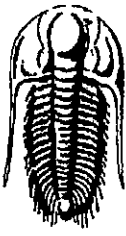
Weber #1-15c

15-13s-31w Gove, Ks

DST # 4

LJ

2011.03.13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040720

DST#: 4

ATTN: Max Lovely

Test Start: 2011.03.13 @ 13:30:48

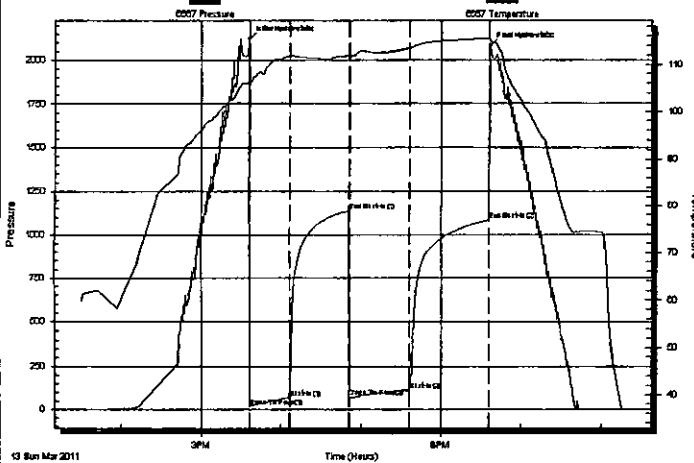
GENERAL INFORMATION:

Formation: I-J
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:36:03
 Time Test Ended: 20:40:03
 Interval: 4187.00 ft (KB) To 4236.00 ft (KB) (TVD)
 Total Depth: 4236.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 2945.00 ft (KB)
 2935.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6667 Inside
 Press@RunDepth: 113.21 psig @ 4188.00 ft (KB)
 Start Date: 2011.03.13 End Date: 2011.03.13
 Start Time: 13:30:48 End Time: 20:17:03
 Capacity: 8000.00 psig
 Last Calib.: 2011.03.13
 Time On Btm: 2011.03.13 @ 15:35:33
 Time Off Btm: 2011.03.13 @ 18:36:33

TEST COMMENT: 2 3/4" in blow
 No return
 2 1/2" in blow
 No return

Pressure vs. Time



PRESSURE SUMMARY

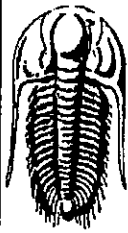
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2117.83	106.61	Initial Hydro-static
1	17.09	105.69	Open To Flow (1)
31	66.49	111.68	Shut-In(1)
76	1135.67	111.88	End Shut-In(1)
77	71.88	111.65	Open To Flow (2)
121	113.21	113.45	Shut-In(2)
181	1080.60	115.46	End Shut-In(2)
181	2078.06	115.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	w c m 35% w 65% m	0.89

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040720

DST#: 4

ATTN: Max Lovely

Test Start: 2011.03.13 @ 13:30:48

Tool Information

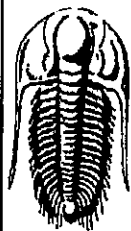
Drill Pipe:	Length: 3676.00 ft	Diameter: 3.80 inches	Volume: 51.56 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 98000.00 lb
			<u>Total Volume: 54.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4187.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	76.00 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			4161.00	
Shut In Tool	5.00			4166.00	
Hydraulic tool	5.00			4171.00	
Jars	5.00			4176.00	
Safety Joint	2.00			4178.00	
Packer	5.00			4183.00	27.00 Bottom Of Top Packer
Packer	4.00			4187.00	
Stubb	1.00			4188.00	
Recorder	0.00	6771	Outside	4188.00	
Recorder	0.00	6667	Inside	4188.00	
Perforations	9.00			4197.00	
Change Over Sub	1.00			4198.00	
Drill Pipe	32.00			4230.00	
Change Over Sub	1.00			4231.00	
Bullnose	5.00			4236.00	49.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040720

DST#: 4

ATTN: Max Lovely

Test Start: 2011.03.13 @ 13:30:48

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:

33500 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	w c m 35%w 65%m	0.885

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 0

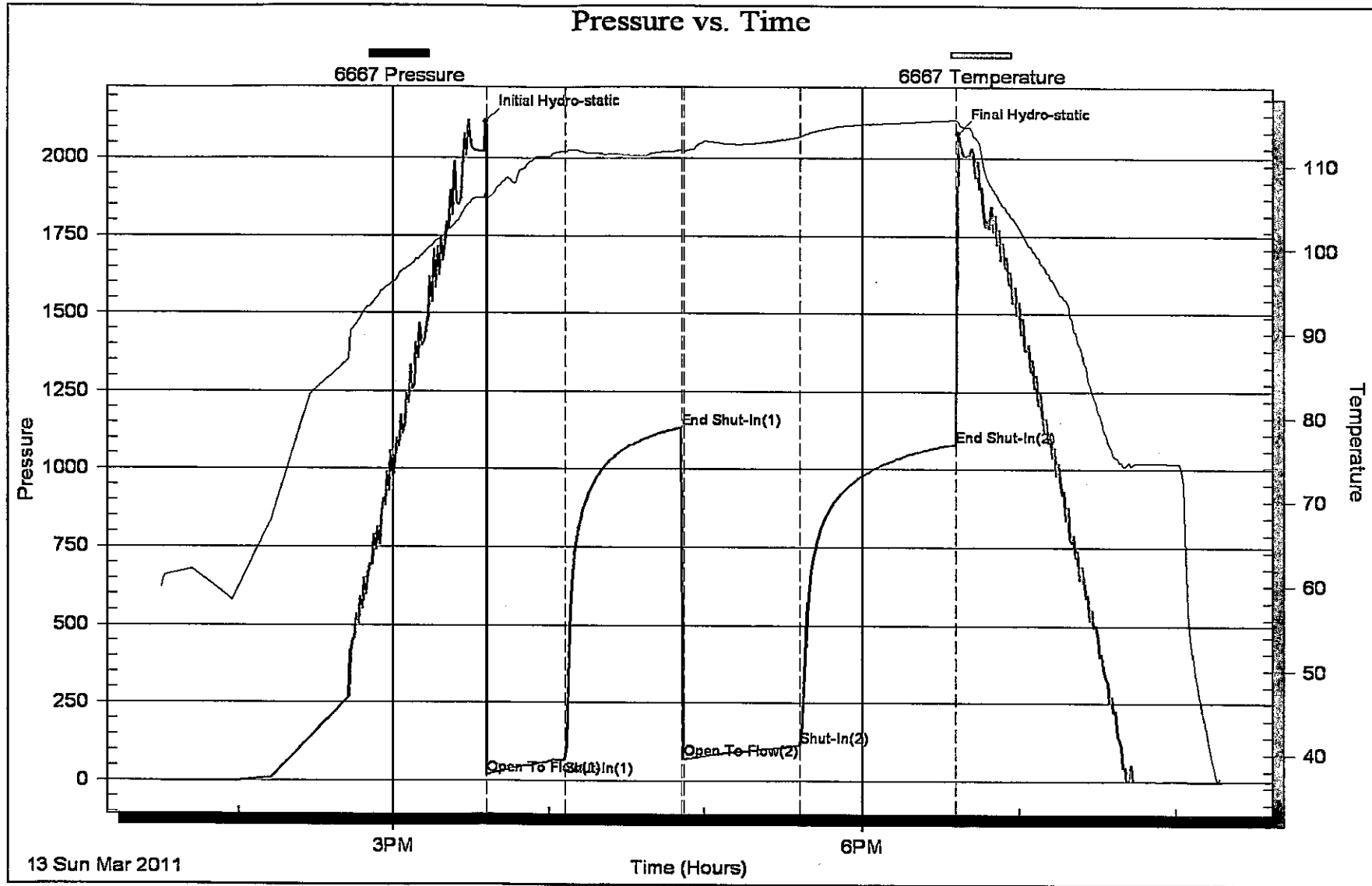
Num Gas Bombs: 0

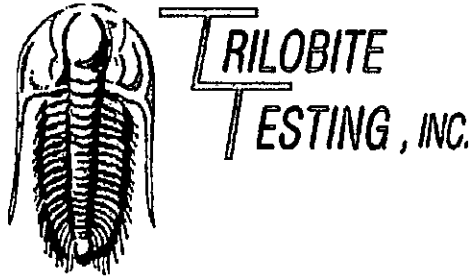
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .321 @ 46*f = 33,500 chlor





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

Weber #1-15c

Start Date: 2011.03.14 @ 03:11:11

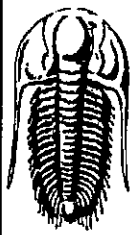
End Date: 2011.03.14 @ 11:25:56

Job Ticket #: 040721 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040721

DST#: 5

ATTN: Max Lovely

Test Start: 2011.03.14 @ 03:11:11

GENERAL INFORMATION:

Formation: K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:29:56

Time Test Ended: 11:25:56

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 55

Interval: 4226.00 ft (KB) To 4265.00 ft (KB) (TVD)

Reference Elevations: 2945.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2935.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6667 Inside

Press@RunDepth: 232.60 psig @ 4227.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.03.14

End Date: 2011.03.14

Last Calib.: 2011.03.14

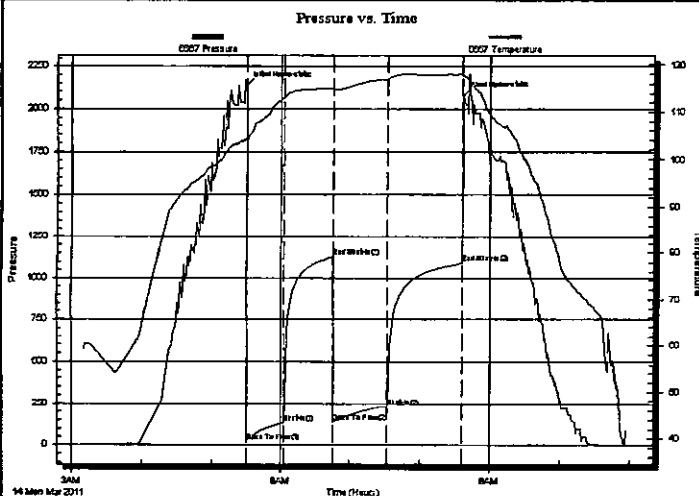
Start Time: 03:11:11

End Time: 10:56:56

Time On Btm: 2011.03.14 @ 05:29:26

Time Off Btm: 2011.03.14 @ 08:36:56

TEST COMMENT: B.O.B. in 20 min.
No return
B.O.B. in 27 min
1/2" in return blow



PRESSURE SUMMARY

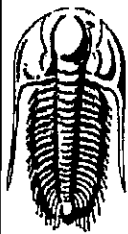
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.81	104.17	Initial Hydro-static
1	25.49	103.81	Open To Flow (1)
33	133.85	112.97	Shut-In(1)
76	1128.06	114.96	End Shut-In(1)
77	140.30	114.67	Open To Flow (2)
123	232.60	116.83	Shut-In(2)
187	1092.94	118.00	End Shut-In(2)
188	2078.29	117.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	s g w c m 5g 45w 50m	0.89
180.00	s g w & o c m 5g 20o 35w 40m	0.89
110.00	s g o c m 5g 40o 55m	0.54
40.00	c s g o 3g 97o	0.21
0.00	120' gas in pipe	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040721

DST#: 5

ATTN: Max Lovely

Test Start: 2011.03.14 @ 03:11:11

Tool Information

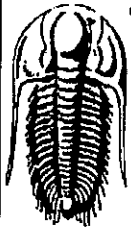
Drill Pipe:	Length: 3715.00 ft	Diameter: 3.80 inches	Volume: 52.11 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 98000.00 lb
			Total Volume: 54.61 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4226.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	61.00 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			4205.00	
Shut In Tool	5.00			4210.00	
Hydraulic tool	5.00			4215.00	
Safety Joint	2.00			4217.00	
Packer	5.00			4222.00	22.00 Bottom Of Top Packer
Packer	4.00			4226.00	
Stubb	1.00			4227.00	
Recorder	0.00	6771	Outside	4227.00	
Recorder	0.00	6667	inside	4227.00	
Perforations	33.00			4260.00	
Bullnose	5.00			4265.00	39.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040721

DST#: 5

ATTN: Max Lovely

Test Start: 2011.03.14 @ 03:11:11

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 7.77 in³
Resistivity: 0.00 ohm.m
Salinity: 4000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 34 deg API
Water Salinity: 28000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	s g w c m 5g 45w 50m	0.885
180.00	s g w & o c m 5g 20o 35w 40m	0.885
110.00	s g o c m 5g 40o 55m	0.541
40.00	c s g o 3g 97o	0.206
0.00	120' gas in pipe	0.000

Total Length: 510.00 ft Total Volume: 2.517 bbl

Num Fluid Samples: 0

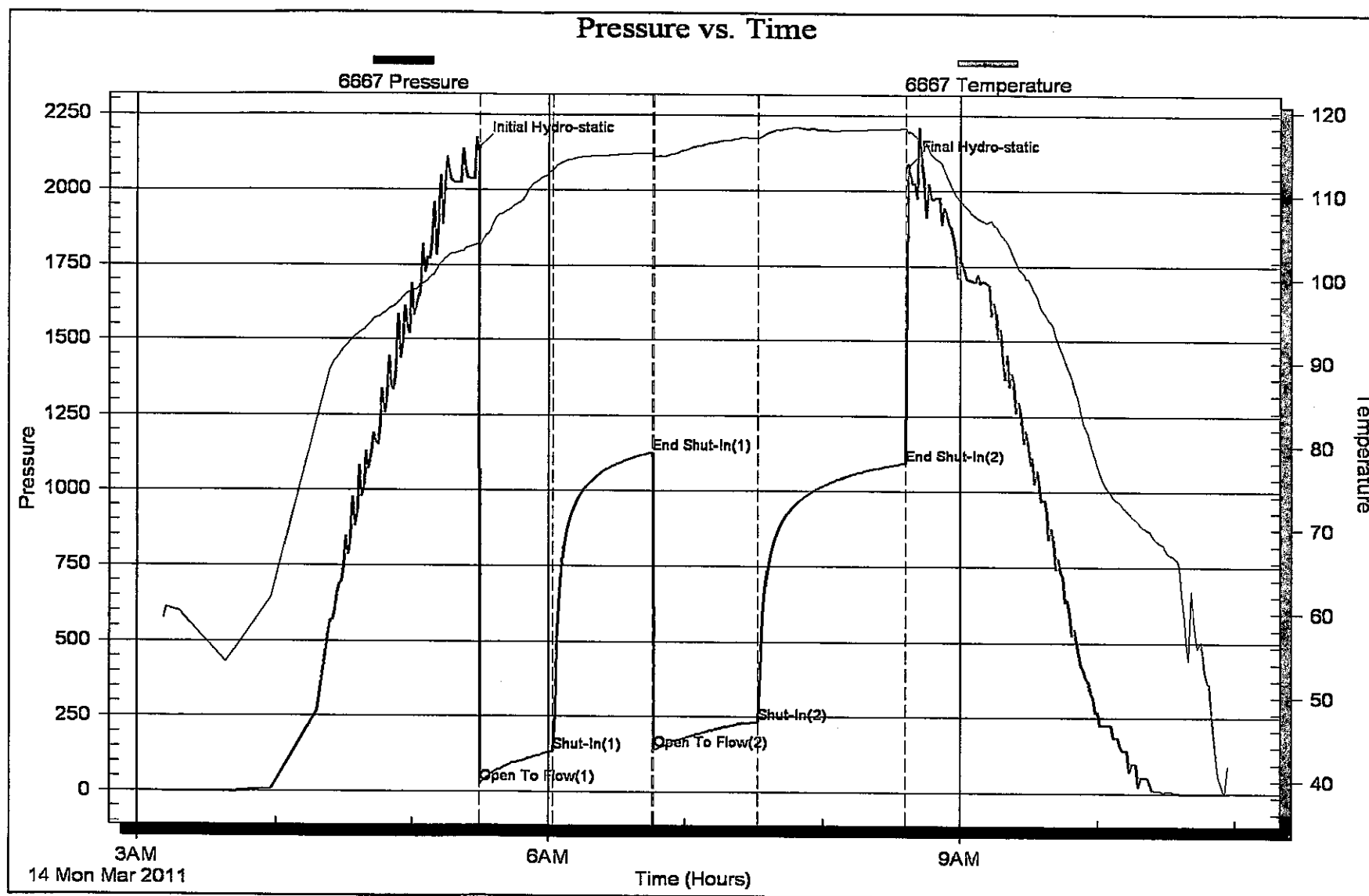
Num Gas Bombs: 0

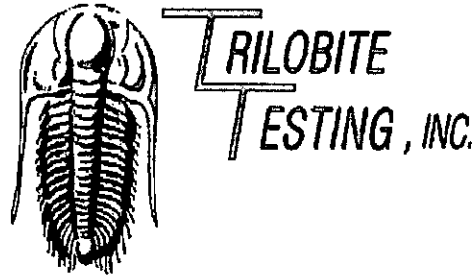
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .399 @ 40*f = 28,000 chlor





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

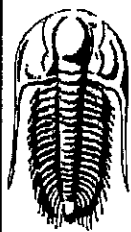
Weber #1-15c

Start Date: 2011.03.15 @ 09:30:53

End Date: 2011.03.15 @ 16:15:38

Job Ticket #: 040722 DST #: 6

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040722

DST#: 6

ATTN: Max Lovely

Test Start: 2011.03.15 @ 09:30:53

GENERAL INFORMATION:

Formation: Pawnee, Myrick Stat

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:44:53

Time Test Ended: 16:15:38

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 55

Interval: 4450.00 ft (KB) To 4490.00 ft (KB) (TVD)

Reference Elevations: 2945.00 ft (KB)

Total Depth: 4490.00 ft (KB) (TVD)

2935.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6771

Outside

Press@RunDepth: 62.21 psig @ 4451.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.03.15

End Date:

2011.03.15

Last Calib.: 2011.03.15

Start Time: 09:30:53

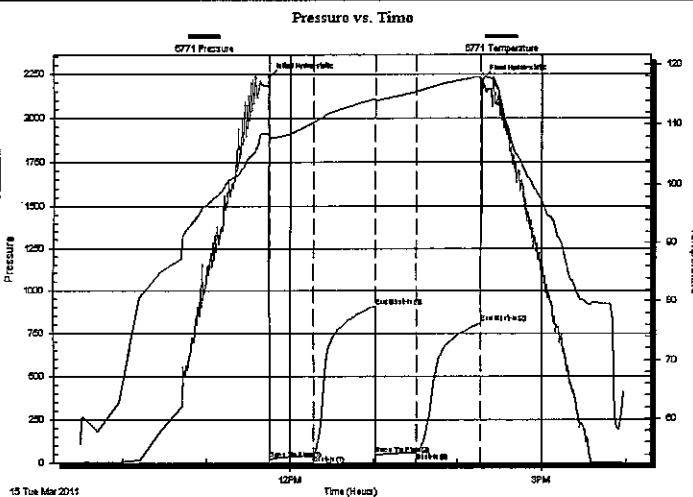
End Time:

15:58:38

Time On Btm: 2011.03.15 @ 11:44:38

Time Off Btm: 2011.03.15 @ 14:17:38

TEST COMMENT: Weak surface blow
No return
Weak surface blow
No return



PRESSURE SUMMARY

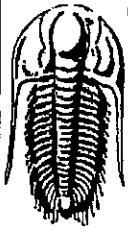
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2234.26	108.58	Initial Hydro-static
1	20.41	107.29	Open To Flow (1)
33	44.93	110.30	Shut-In(1)
77	908.73	114.20	End Shut-In(1)
77	50.90	113.88	Open To Flow (2)
106	62.21	115.49	Shut-In(2)
152	812.94	117.98	End Shut-In(2)
153	2221.35	118.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	heavy mud w/oil spots 100% m	0.44
0.00	3" in free oil on top	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040722

DST#: 6

ATTN: Max Lovely

Test Start: 2011.03.15 @ 09:30:53

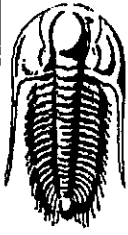
Tool Information

Drill Pipe:	Length: 3935.00 ft	Diameter: 3.80 inches	Volume: 55.20 bbl	Tool Weight: 1500.00 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: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 98000.00 lb
			<u>Total Volume: 57.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4450.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4429.00	
Shut In Tool	5.00			4434.00	
Hydraulic tool	5.00			4439.00	
Safety Joint	2.00			4441.00	
Packer	5.00			4446.00	22.00 Bottom Of Top Packer
Packer	4.00			4450.00	
Stubb	1.00			4451.00	
Recorder	0.00	6771	Outside	4451.00	
Recorder	0.00	6667	Inside	4451.00	
Perforations	34.00			4485.00	
Bullnose	5.00			4490.00	40.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040722 DST#: 6

ATTN: Max Lovely

Test Start: 2011.03.15 @ 09:30:53

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:	0 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

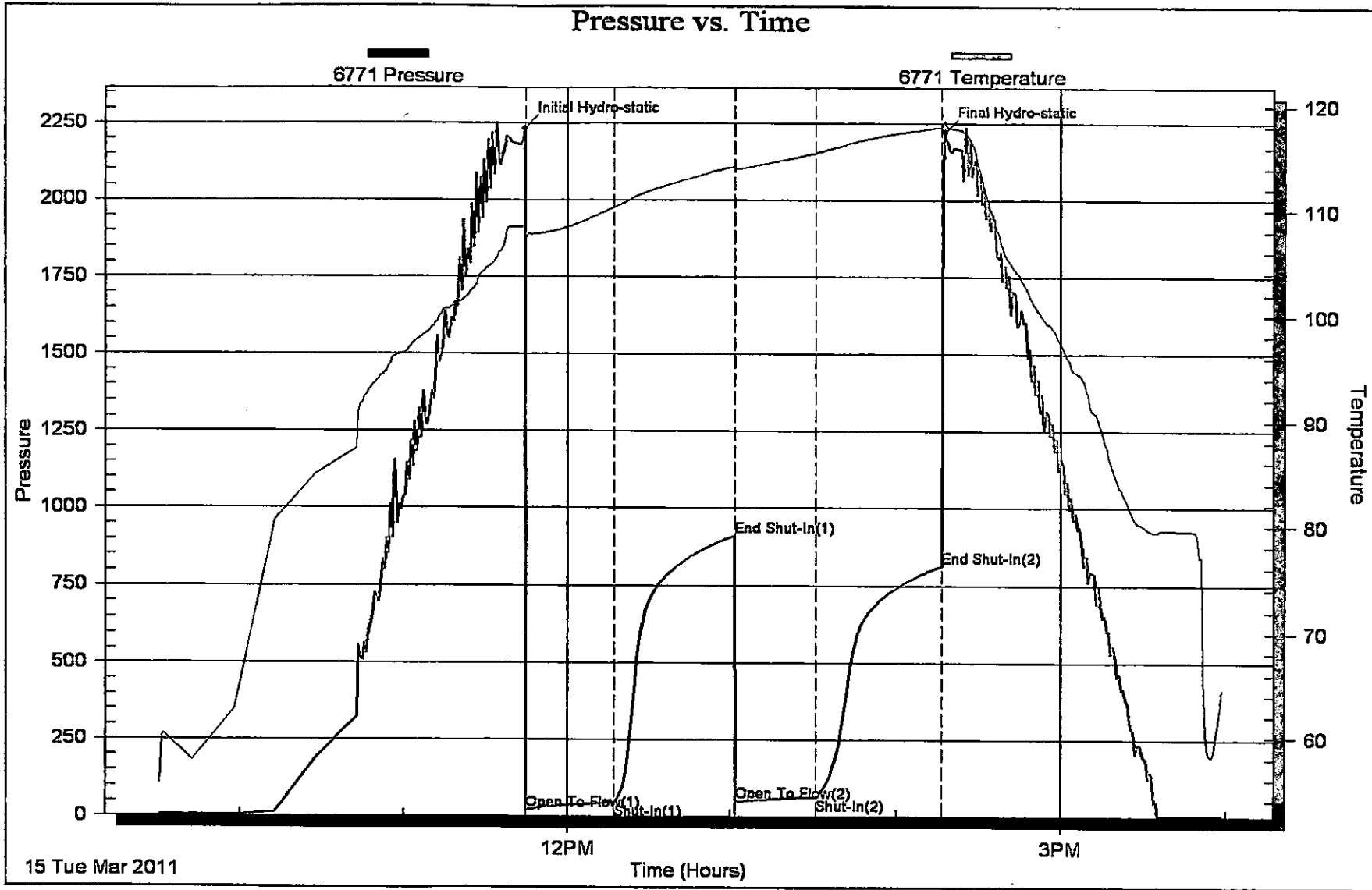
Length ft	Description	Volume bbl
90.00	heavy mud w /oil spots 100%m	0.443
0.00	3" in free oil on top	0.000

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278

ATTN: Max Lovely

15-13s-31w Gove, Ks

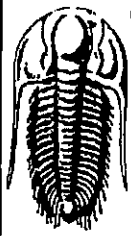
Weber #1-15c

Start Date: 2011.03.16 @ 05:50:52

End Date: 2011.03.16 @ 16:20:07

Job Ticket #: 040723 DST #: 7

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration
 PO Box 783188
 Wichita, KS 67278
 ATTN: Max Lovely

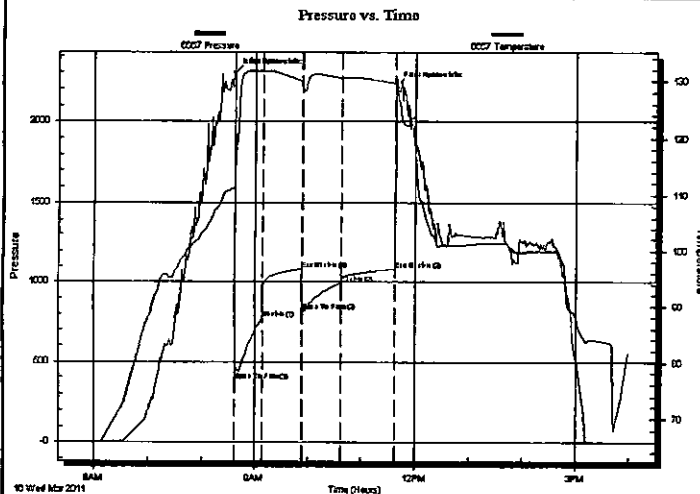
Weber #1-15c
 15-13s-31w Gove, Ks
 Job Ticket: 040723 DST#: 7
 Test Start: 2011.03.16 @ 05:50:52

GENERAL INFORMATION:

Formation: Cherokee
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:37:07
 Time Test Ended: 16:20:07
 Interval: 4517.00 ft (KB) To 4585.00 ft (KB) (TVD)
 Total Depth: 4585.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 2945.00 ft (KB)
 2935.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6667 Inside
 Press@RunDepth: 990.53 psig @ 4518.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.03.16 End Date: 2011.03.16 Last Calib.: 2011.03.16
 Start Time: 05:50:52 End Time: 15:59:07 Time On Btm: 2011.03.16 @ 08:36:37
 Time Off Btm: 2011.03.16 @ 11:38:37

TEST COMMENT: B.O.B. in 1 1/2 min.
 B.O.B. return in 3 1/2 min
 B.O.B. @ open G.T.S. 13 min into open to weak to gauge
 B.O.B. in 4 1/2 min



PRESSURE SUMMARY

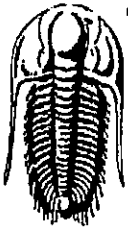
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2297.09	111.51	Initial Hydro-static
1	376.07	111.49	Open To Flow (1)
32	766.50	131.65	Shut-In(1)
76	1080.45	129.96	End Shut-In(1)
77	814.89	129.80	Open To Flow (2)
121	990.53	130.53	Shut-In(2)
182	1080.56	129.57	End Shut-In(2)
182	2220.35	129.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	under circ sub g o c m 40%g 20%o 40%r0.44	
2450.00	c g o reversed out 35%g 65%o	30.55
50.00	c g o 20%g80%o	0.70

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040723

DST#: 7

ATTN: Max Lovely

Test Start: 2011.03.16 @ 05:50:52

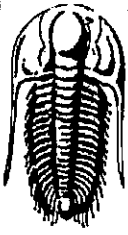
Tool Information

Drill Pipe:	Length: 3998.00 ft	Diameter: 3.80 inches	Volume: 56.08 bbl	Tool Weight: 1500.00 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: 509.00 ft	Diameter: 2.25 inches	Volume: 2.50 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 58.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4517.00 ft			Final 88000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4496.00	
Shut In Tool	5.00			4501.00	
Hydraulic tool	5.00			4506.00	
Safety Joint	2.00			4508.00	
Packer	5.00			4513.00	22.00 Bottom Of Top Packer
Packer	4.00			4517.00	
Stubb	1.00			4518.00	
Recorder	0.00	6771	Outside	4518.00	
Recorder	0.00	6667	Inside	4518.00	
Perforations	28.00			4546.00	
Change Over Sub	1.00			4547.00	
Drill Pipe	32.00			4579.00	
Change Over Sub	1.00			4580.00	
Bullnose	5.00			4585.00	68.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Weber #1-15c

PO Box 783188
Wichita, KS 67278

15-13s-31w Gove, Ks

Job Ticket: 040723

DST#: 7

ATTN: Max Lovely

Test Start: 2011.03.16 @ 05:50:52

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 53.00 sec/qt
Water Loss: 7.96 in³
Resistivity: 0.00 ohm.m
Salinity: 4700.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 30 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	under circ sub g o c m 40%g 20%o 40%m	0.443
2450.00	c g o reversed out 35%g 65%o	30.550
50.00	c g o 20%g 80%o	0.701

Total Length: 2590.00 ft Total Volume: 31.694 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

