

CONFIDENTIAL

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

ORIGINAL

12/29/13

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 Niernberger
Phone: (316) 691-9500
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Max Lovely
Purchaser: _____

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 #: _____

9/7/11	9/15/11	9/15/11
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 057-20746-00-00
Spot Description: 140' N & 95' E
NW SE SW Sec. 35 Twp. 27 S. R. 22 East West
1,130 Feet from North / South Line of Section
1,745 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Ford
Lease Name: Brown Family Well #: 1
Field Name: _____
Producing Formation: _____
Elevation: Ground: 2343 Kelly Bushing: 2357
Total Depth: 5140 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 450 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: 9800 ppm Fluid volume: 1000 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ S. R. _____
County: _____ Permit #: _____

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DEC 29 2013

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DEC 30 2011

KCC

KCC WICHITA

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: 12/29/11

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: 12-29-11 - 12-29-13
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: NJ Date: 1-12-12

Operator Name: Ritchie Exploration, Inc. Lease Name: Brown Family Well #: 1
 Sec. 35 Twp. 27 S. R. 22 East West County: Ford

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 checked="" type="checkbox"/> Yes <input 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 SEE ATTACHED
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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	450	class "A"	325	3% cc, 2% gel
Conductor	32	20	64	40	6-sack grout	5 yards	

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 <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:		Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	CONFIDENTIAL
Date of First, Resumed Production, SWD or ENHR.			Producing Method:			DEC 29 2013
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	KCC

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> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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#1 Brown Family
1130' FSL & 1745' FWL
140°N & 95°E of NW SE SW
Section 35-27S-22W
Ford County, Kansas
API# 15-057-20746-0000
Elevation: 2343' GL: 2357' KB

Sample Tops			Ref. Well
Heebner	4148'	-1791	-8
Lansing	4284'	-1927	-7
Muncie Shale	4481'	-2124	-9
Stark Shale	4595'	-2238	flat
Hush. Shale	4634'	-2277	flat
Marmaton	4730'	-2373	+2
Pawnee	4809'	-2452	+1
Cherokee Shale	4857'	-2500	-3
Atoka Shale	4945'	-2588	-3
Mississippian	4972'	-2615	-3
RTD	5140'	-2783	

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KCC

ALLIED CEMENTING CO., LLC. 036620

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

Brown Family

SERVICE POINT: Liberal K.S.

DATE <u>9-08-11</u>	SEC. <u>33</u>	TWP. <u>27s</u>	RANGE <u>22w</u>	CALLED OUT	ON LOCATION	JOB START <u>5:30 Am</u>	JOB FINISH <u>6:00 Am</u>
Brown Family LEASE		WELL # <u>1</u>	LOCATION <u>Vcc Ford K.S.</u>		COUNTY <u>Ford</u>	STATE <u>K.S.</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Murfin #21
 TYPE OF JOB Surface
 HOLE SIZE 17 1/4 T.D. 450
 CASING SIZE 8518 DEPTH 448
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT 44 44
 CEMENT LEFT IN CSG. _____
 PERFS. _____
 DISPLACEMENT 25.7

OWNER _____
 CEMENT AMOUNT ORDERED 325 SK Class
3-16 2% gel
 COMMON 325 @ 16.25 5281.25
 POZMIX @ _____
 GEL 6 @ 21.25 127.50
 CHLORIDE 12 @ 58.20 698.40
 ASC @ _____
 @ _____
 @ _____
 @ _____
 @ _____
 @ _____
 @ _____
 @ _____
 @ _____
 HANDLING 343 @ 2.25 771.75
 MILEAGE _____ 3018.40
 TOTAL 9897.30

EQUIPMENT _____
 PUMP TRUCK CEMENTER Kenney
 # 352 HELPER Jose & Mark
 BULK TRUCK _____
 # 457-251 DRIVER Kenney
 BULK TRUCK _____
 # _____ DRIVER _____

REMARKS:
THANK YOU!!
Circulated Cement to Surface
Landed Plug & Shut in
500 PST

CHARGE TO: Ritchie Exploration
 STREET _____
 CITY _____ **CONFIDENTIAL** ZIP _____

DEC 29 2013
KCC
 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 Juan Tinoco
 SIGNATURE Juan Tinoco

SERVICE
 DEPTH OF JOB _____
 PUMP TRUCK CHARGE _____ 1125.00
 EXTRA FOOTAGE 150 @ .95 142.50
 MILEAGE 160 @ 7.00 1120.00
 MANIFOLD 1 @ 200.00 200.00
 Light + V.M. mileage 160 @ 4.00 640.00
 @ _____

TOTAL 3227 RECEIVED
 PLUG & FLOAT EQUIPMENT DEC 30 2011

Basket 1 @ 478.00 478.00
Baffle Plat 1 @ 112.00 112.00
Cement Admixers 2 @ 64.00 128.00
Rubber Plug 1 @ 112.00 112.00
 @ _____
 TOTAL 830.00

SALES TAX (If Any) _____
 TOTAL CHARGES \$13954.80
 DISCOUNT 2790.96 IF PAID IN 30 DAYS
11,163.84

RT

ALLIED CEMENTING CO., LLC. 036476

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

SERVICE POINT:
Liberal KS.

DATE <u>9-15-11</u>	SEC <u>35</u>	TWP. <u>27s</u>	RANGE <u>22w</u>	CALLED OUT	ON LOCATION	JOB START <u>11:30pm</u>	JOB FINISH <u>12:30am</u>
Brown Family LEASE		WELL # <u>#1</u>	LOCATION <u>Vee Ford KS.</u>			COUNTY <u>Ford</u>	STATE <u>KS.</u>
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Muclin #2

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D.

CASING SIZE DEPTH

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH 1400

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT

EQUIPMENT

PUMP TRUCK CEMENTER Kennan

372 HELPER Lenny

BULK TRUCK

470-467 DRIVER Jose

BULK TRUCK

DRIVER

REMARKS:

THANK YOU!!!

CHARGE TO: Ritchie Exp.

STREET

CITY STATE ZIP

OWNER

CEMENT

AMOUNT ORDERED 200SK 60/40

4 1/2 gel 1/4 # Floseal

COMMON	@		
POZMIX	@		
GEL	@		
CHLORIDE	@		
ASC	@		
<u>Light Weight</u>	@	<u>200</u>	<u>14.50 2900.00</u>
<u>Floesal</u>	@	<u>50</u>	<u>2.70 135.00</u>
	@		
	@		
	@		
	@		
HANDLING	@	<u>202</u>	<u>2.25 454.50</u>
MILEAGE			<u>1777.60</u>
			TOTAL <u>5267.10</u>

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SERVE DEC 30 2011

DEPTH OF JOB KCC WICHITA 1400.00

PUMP TRUCK CHARGE 1017.00

EXTRA FOOTAGE @

MILEAGE 160 @ 7.00 1120.00

MANIFOLD @

Light VMileage 160 @ 4.00 640.00

TOTAL 2777.00

PLUG & FLOAT EQUIPMENT

NA

@

@

@

@

@

TOTAL 0

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 Sven Twoco

SIGNATURE Juan Torres

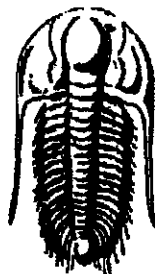
SALES TAX (If Any)

TOTAL CHARGES \$ 8044.10

DISCOUNT 20% IF PAID IN 30 DAYS

\$ 6435.28

DT



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278

ATTN: Justin Clegg/Max Lov

Brown Family #1

35-27s-22w Ford,KS

Start Date: 2011.09.13 @ 00:00:00

End Date: 2011.09.13 @ 00:00:00

Job Ticket #: 44057 DST #: 1

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KCC WICHITA

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

CONFIDENTIAL

DEC 29 2013

KCC

Printed: 2011.09.28 @ 16:41:03

Ritchie Exploration Inc

35-27s-22w Ford,KS

Brown Family #1

DST # 1

Mississippi

2011.09.13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E22nd ST N#700
Wchita KS 67278

Brown Family #1

ATTN: Justin Clegg/Max Lov

Job Ticket: 44057

DST#: 1

Test Start: 2011.09.13 @ 00:00:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Staats

Unit No: 34

Interval: 4935.00 ft (KB) To 5012.00 ft (KB) (TVD)

Total Depth: 5012.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2357.00 ft (KB)

2346.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8166

Outside

Press@RunDepth: 2224.74 psig @ 4942.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.09.13

End Date:

2011.09.13

Last Calib.:

2011.09.13

Start Time: 06:40:30

End Time:

13:01:09

Time On Btm:

2011.09.13 @ 08:55:25

Time Off Btm:

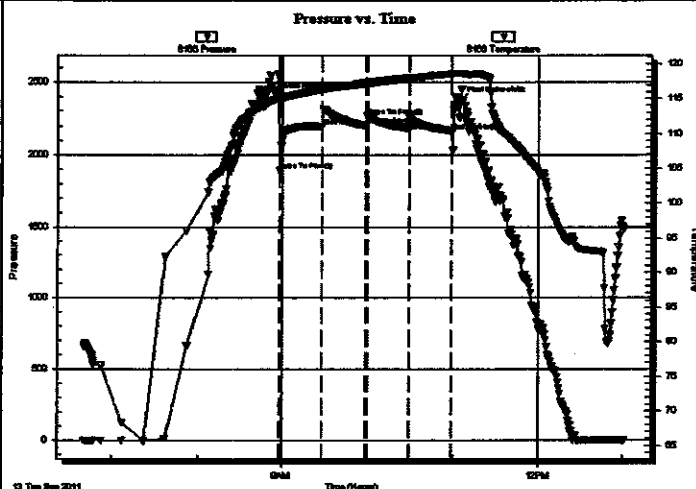
2011.09.13 @ 11:05:10

TEST COMMENT: IF: Weak blow

IS: No blow

FF: No blow

FS: No blow **PLUGGED TOOL**



PRESSURE SUMMARY

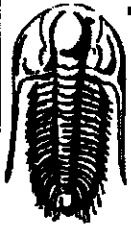
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2400.63	114.92	Initial Hydro-static
3	1890.61	114.83	Open To Flow (1)
33	2197.18	116.33	Shut-In(1)
64	2201.84	117.18	End Shut-In(1)
65	2265.36	117.23	Open To Flow (2)
95	2224.74	117.90	Shut-In(2)
124	2165.99	118.50	End Shut-In(2)
130	2373.98	118.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc
8100 E22nd ST N#700
Wichita KS 67278

35-27s-22w Ford,KS

Brown Family #1

Job Ticket: 44057

DST#: 1

ATTN: Justin Clegg/Max Lov

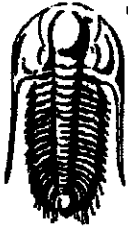
Test Start: 2011.09.13 @ 00:00:00

Tool Information

Drill Pipe:	Length: 4675.00 ft	Diameter: 3.80 inches	Volume: 65.58 bbl	Tool Weight: 2200.00 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: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 75000.00 lb
			Total Volume: 66.75 bbl	Tool Chased 3.00 ft
Drill Pipe Above KB:	ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4941.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	107.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4913.00	
Shut In Tool	5.00			4918.00	
Hydraulic tool	5.00			4923.00	
Jars	5.00			4928.00	
Safety Joint	3.00			4931.00	
Packer	5.00			4936.00	29.00 Bottom Of Top Packer
Packer	5.00			4941.00	
Stubb	1.00			4942.00	
Recorder	0.00	6773	Outside	4942.00	
Recorder	0.00	8166	Outside	4942.00	
Drill Pipe	63.00			5005.00	
Change Over Sub	1.00			5006.00	
Perforations	10.00			5016.00	
Bullnose	3.00			5019.00	78.00 Bottom Packers & Anchor

Total Tool Length: 107.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E 22nd ST N#700
Wchita KS 67278

Brown Family #1

Job Ticket: 44057

DST#: 1

ATTN: Justin Clegg/Max Lov

Test Start: 2011.09.13 @ 00:00:00

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:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud	0.005

Total Length: 1.00 ft

Total Volume: 0.005 bbl

Num Fluid Samples: 0

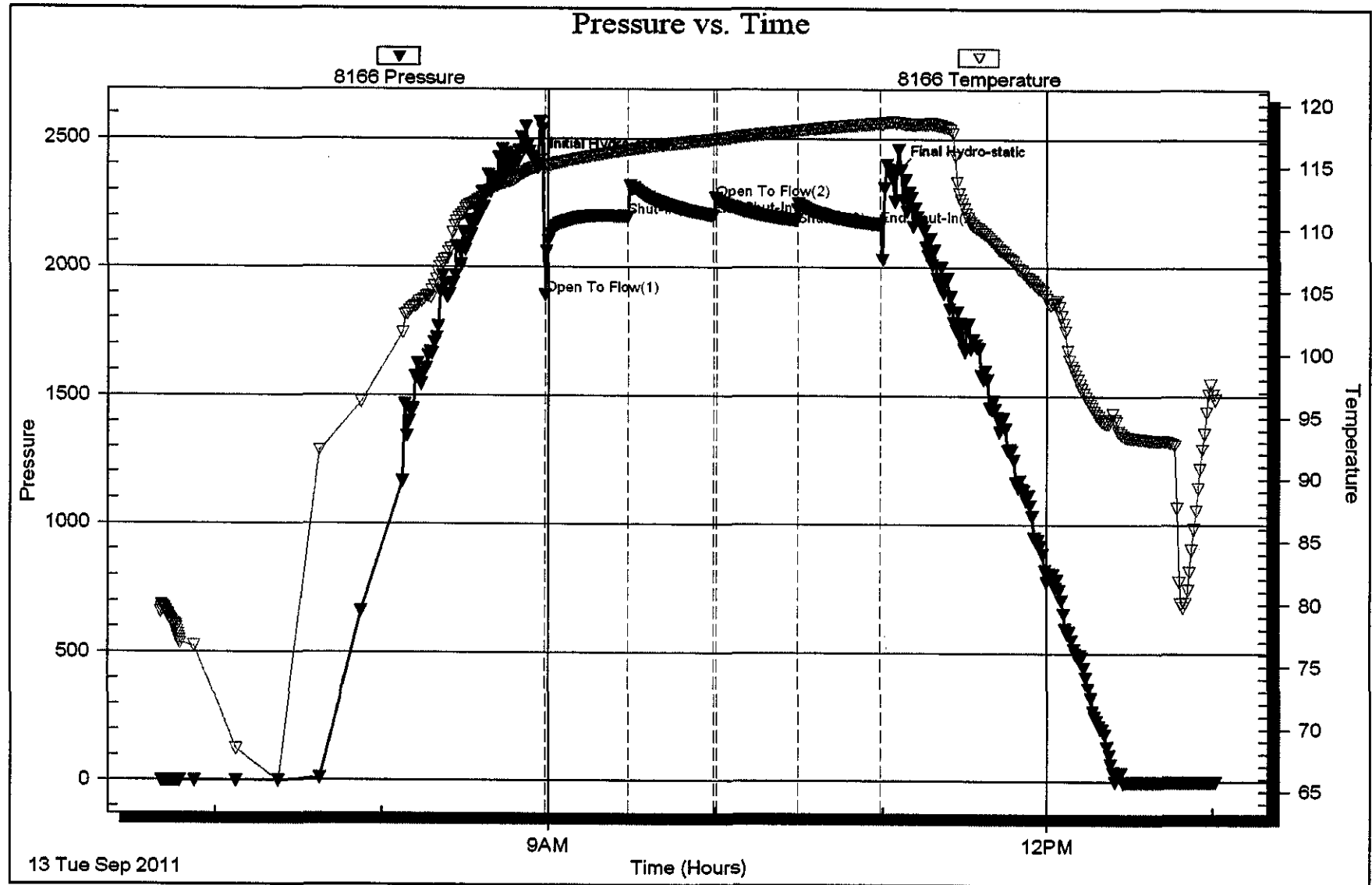
Num Gas Bombs: 0

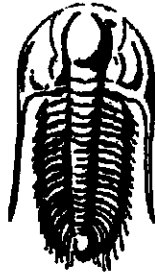
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278

ATTN: Justin Clegg/Max Lov

Brown Family #1

35-27s-22w Ford,KS

Start Date: 2011.09.13 @ 22:17:24

End Date: 2011.09.14 @ 06:57:39

Job Ticket #: 44058 DST #: 2

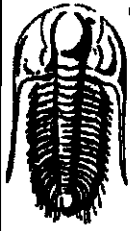
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 13:47:51

Ritchie Exploration Inc
35-27s-22w Ford,KS
Brown Family #1
DST # 2
Mississippi
2011.09.13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E22nd ST N#700
Wichita KS 67278

Brown Family #1

Job Ticket: 44058

DST#: 2

ATTN: Justin Clegg/Max Lov

Test Start: 2011.09.13 @ 22:17:24

Tool Information

Drill Pipe:	Length: 4676.00 ft	Diameter: 3.80 inches	Volume: 65.59 bbl	Tool Weight: 2200.00 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: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 92000.00 lb
		Total Volume:	66.76 bbl	Tool Chased 3.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4936.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.00 ft			
Tool Length:	118.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4908.00	
Shut In Tool	5.00			4913.00	
Hydraulic tool	5.00			4918.00	
Jars	5.00			4923.00	
Safety Joint	3.00			4926.00	
Packer	5.00			4931.00	29.00 Bottom Of Top Packer
Packer	5.00			4936.00	
Stubb	1.00			4937.00	
Recorder	0.00	6773	Outside	4937.00	
Recorder	0.00	8166	Outside	4937.00	
Perforations	4.00			4941.00	
Change Over Sub	0.50			4941.50	
Drill Pipe	63.00			5004.50	
Change Over Sub	0.50			5005.00	
Perforations	17.00			5022.00	
Bullnose	3.00			5025.00	89.00 Bottom Packers & Anchor
Total Tool Length:	118.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E22nd ST N#700
Wchita KS 67278

Brown Family #1

Job Ticket: 44058

DST#: 2

ATTN: Justin Clegg/Max Lov

Test Start: 2011.09.13 @ 22:17:24

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:

ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3845' GIP	0.000
30.00	Gassy Oil cut Mud 2% oil 10% gas 88%	0.148

Total Length: 30.00 ft

Total Volume: 0.148 bbl

Num Fluid Samples: 0

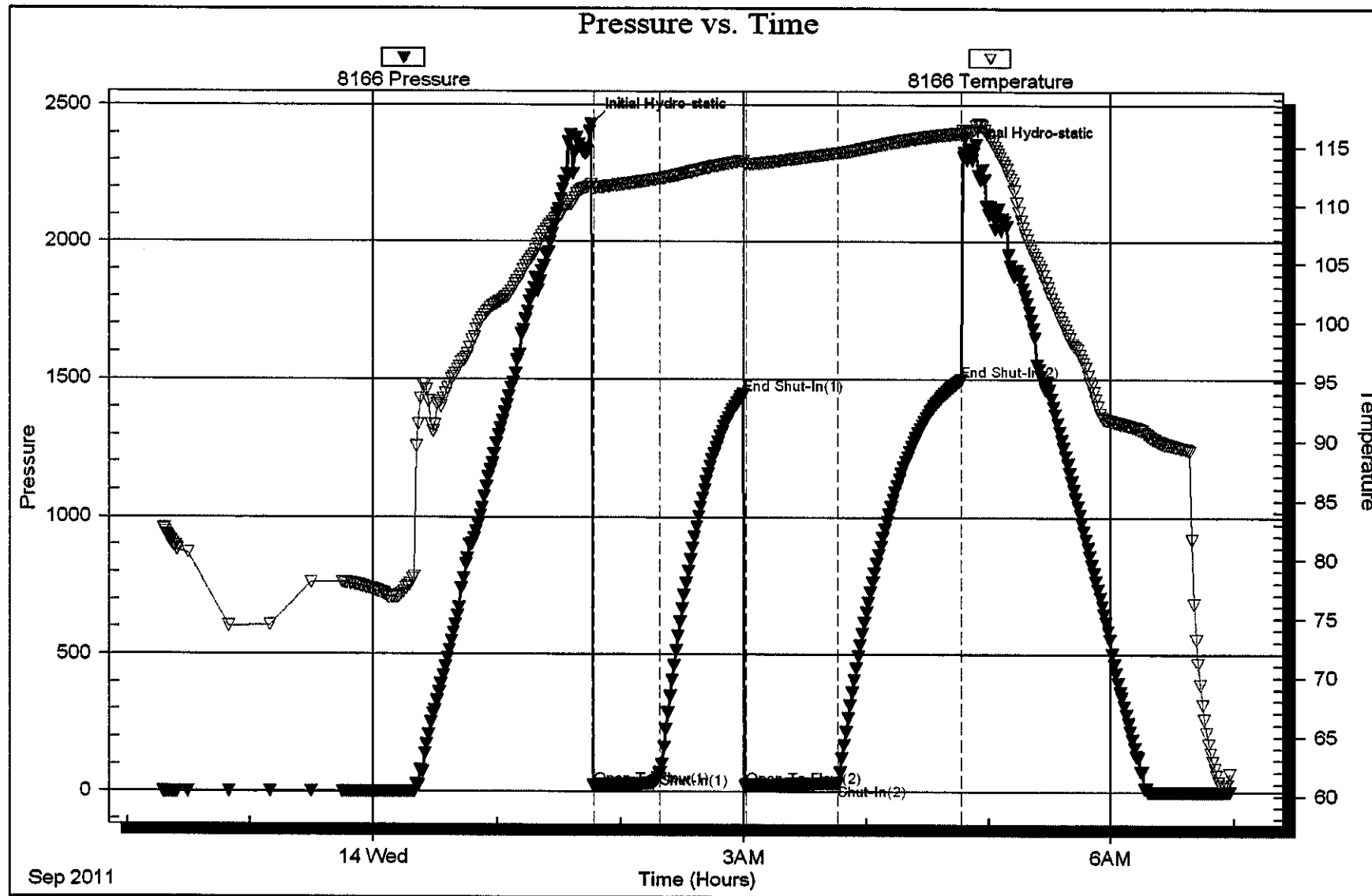
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd ST N #700
Wichita KS 67278

ATTN: Justin Clegg/Max Lov

Brown Family #1

35-27s-22w Ford,KS

Start Date: 2011.09.14 @ 17:22:09

End Date: 2011.09.14 @ 23:59:54

Job Ticket #: 44059 DST #: 3

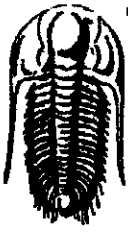
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.09.28 @ 13:48:11

Ritchie Exploration Inc
35-27s-22w Ford,KS
Brown Family #1
DST # 3
Mississippi
2011.09.14



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E 22nd ST N#700
Wchita KS 67278

Brown Family #1

ATTN: Justin Clegg/Max Lov

Job Ticket: 44059

DST#: 3

Test Start: 2011.09.14 @ 17:22:09

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:53:54

Time Test Ended: 23:59:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Chris Staats

Unit No: 34

Interval: **5022.00 ft (KB) To 5065.00 ft (KB) (TVD)**

Total Depth: 5065.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2357.00 ft (KB)

2346.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6773

Press@RunDepth: 35.53 psig @ ft (KB)

Start Date: 2011.09.14

End Date: 2011.09.14

Capacity: 8000.00 psig

Last Calib.: 2011.09.15

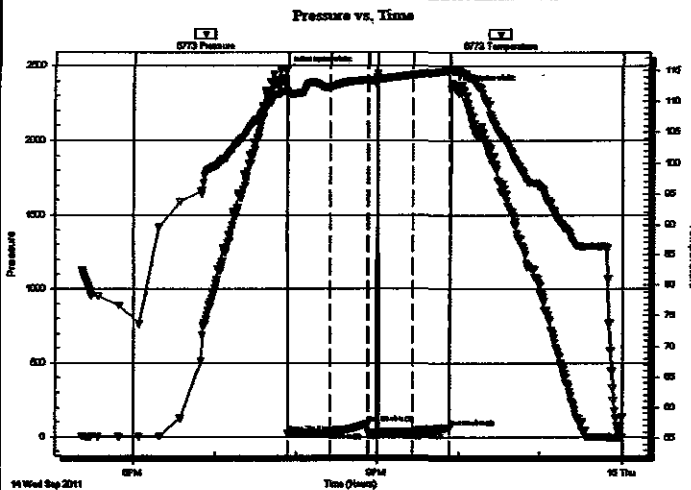
Start Time: 17:22:14

End Time: 23:59:53

Time On Btrm 2011.09.14 @ 19:52:09

Time Off Btrm 2011.09.14 @ 21:54:24

TEST COMMENT: IF: Weak blow 1/4" blow died
IS: No blow back
FF: No blow Flush Tool
FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2466.89	111.56	Initial Hydro-static
2	25.78	111.32	Open To Flow (1)
33	29.13	112.36	Shut-In(1)
61	85.49	113.46	End Shut-In(1)
62	28.55	113.45	Open To Flow (2)
94	35.53	114.27	Shut-In(2)
122	63.87	114.99	End Shut-In(2)
123	2346.33	115.03	Final Hydro-static

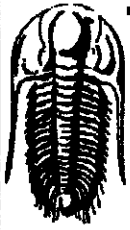
Recovery

Length (ft)	Description	Volume (bbl)
20.00	MUD	0.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E 22nd ST N #700
Wichita KS 67278

Brown Family #1

Job Ticket: 44059

DST#: 3

ATTN: Justin Clegg/Max Lov

Test Start: 2011.09.14 @ 17:22:09

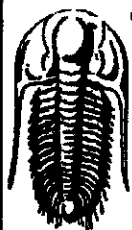
Tool Information

Drill Pipe:	Length: 4771.00 ft	Diameter: 3.80 inches	Volume: 66.92 bbl	Tool Weight: 2200.00 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: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume:	68.09 bbl	Tool Chased 3.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	5022.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4994.00	
Shut In Tool	5.00			4999.00	
Hydraulic tool	5.00			5004.00	
Jars	5.00			5009.00	
Safety Joint	3.00			5012.00	
Packer	5.00			5017.00	29.00 Bottom Of Top Packer
Packer	5.00			5022.00	
Stubb	1.00			5023.00	
Recorder	0.00	8676	Outside	5023.00	
Recorder	0.00	8166	Outside	5023.00	
Perforations	39.00			5062.00	
Bullnose	3.00			5065.00	43.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

35-27s-22w Ford,KS

8100 E 22nd ST N #700
Wichita KS 67278

Brown Family #1

Job Ticket: 44059

DST#: 3

ATTN: Justin Clegg/Max Lov

Test Start: 2011.09.14 @ 17:22:09

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:

ppm

Viscosity: 81.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 23.57 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 11.60 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	MUD	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:

