

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
October 2008
Form Must Be Typed

8/3/10

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4767
Name: Ritchie Exploration, Inc.
Address 1: P.O. Box 783188
Address 2: _____
City: Wichita State: KS Zip: 67278 + 3118
Contact Person: John Niernberger
Phone: (316) 691-9500
CONTRACTOR: License # 30606
Name: Murfin Drilling, Co., Inc.
Wellsite Geologist: Terry McLeod
Purchaser: NCRA

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Designate Type of Completion:
 New Well _____ Re-Entry _____ Workover _____
 Oil _____ SWD _____ SIOW _____
_____ Gas _____ ENHR _____ SIGW _____
_____ CM (Coal Bed Methane) _____ Temp. Abd. _____
_____ Dry _____ Other _____
(Core, WSW, Expl., Cathodic, 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 _____
_____ Plug Back: _____ Plug Back Total Depth _____
_____ Commingled _____ Docket No.: _____
_____ Dual Completion _____ Docket No.: _____
_____ Other (SWD or Enhr.?) _____ Docket No.: _____
4/12/10 4/23/10 4/23/10
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 063-21836-0000
Spot Description: 140' S & 40' E of
E/2 _SE _SW _ Sec. 30 Twp. 13 S. R. 31 East West
520 Feet from North / South Line of Section
2350 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Gove
Lease Name: Joseph 30CD Well #: 1
Field Name: _____
Producing Formation: LKC & Johnson
Elevation: Ground: 2916 Kelly Bushing: 2926
Total Depth: 4625 Plug Back Total Depth: 4573
Amount of Surface Pipe Set and Cemented at: 214 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2391 Feet
If Alternate II completion, cement circulated from: surface
feet depth to: 2391 w/ 285 sx cmt.

Drilling Fluid Management Plan AT&W 813-10
(Data must be collected from the Reserve Pit)
Chloride content: 10000 ppm Fluid volume: 550 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License No.: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Docket No.: _____

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.

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: 8/3/10
Subscribed and sworn to before me this 3rd day of August,
20 10
Notary Public: Debra K Phillips
Date Commission Expires: 5-4-11

KCC Office Use ONLY
 Letter of Confidentiality Received 8/3/10 - 8/3/10
If Denied, Yes Date: _____
 Wireline Log Received
 Geologist Report Received
_____ UIC Distribution

DEBRA K. PHILLIPS
Notary Public - State of Kansas
My Appt. Expires

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Operator Name: Ritchie Exploration, Inc. Lease Name: Joseph 30CD Well #: 1
 Sec. 30 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 copy of all Electric Wireline 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 <i>(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 <div style="text-align: right; font-weight: bold; font-size: 1.2em;"> KCC AUG 04 2010 CONFIDENTIAL </div>
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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	214	common	175	3%cc, 2%gel
Production	7-7/8	5-1/2	15.5	4620	ASC	200	10% salt, 2% gel & 3/4% CD-31

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
4	4521'-4524' (5/6/10)	500 gals 15% NE	
4	4121' - 4124' (5/6/10)	500 gals 15% NE	

TUBING RECORD:	Size: <u>2-7/8</u>	Set At: <u>4566</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Enhr. <u>6/1/10</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>200</u>	Gas Mcf	Water Bbls. <u>18</u>	Gas-Oil Ratio <u>39</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 type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

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KCC WICHITA



RITCHIE

EXPLORATION, INC.
Wichita, Kansas

#1 Joseph 30CD

520' FSL & 2350' FWL

140' S & 40' E of E/2 SE SW Section 30-13S-31W

Gove County, Kansas

API# 15-063-21836-0000

Elevation: GL: 2916', KB: 2926'

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Sample Tops			Ref. Well
Anhydrite	2399'	+527	flat
B/Anhydrite	2421'	+505	flat
Heebner	3902'	-976	+6
Toronto	3923'	-997	+7
Lansing	3944'	-1018	+8
Lansing "C"	3975'	-1041	+11
Lansing "E"	4022'	-1096	+7
Muncie Shale	4098'	-1172	-1
Lansing "H"	4116'	-1190	-1
Lansing "I"	4148'	-1222	-1
Lansing "J"	4166'	-1240	-1
Stark Shale	4190'	-1264	-1
Lansing "K"	4204'	-1278	-5
Hush.	4226'	-1300	-3
Lansing "L"	4238'	-1312	-5
BKC	4268'	-1339	-6
Marmaton	4286'	-1360	-5
Myric	4425'	-1499	-5
Fort Scott	4444'	-1518	-6
Cherokee Shale	4474'	-1548	-5
Johnson	4518'	-1592	-5
Morrow Sand	4560'	-1634	-21
Mississippian	4585'	-1659	-32
RTD	4625'	-1699	

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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. 038828

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

SERVICE POINT: Oakley, KS

DATE <u>4/23/10</u>	SEC <u>30</u>	TWP <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>10:30 AM</u>	JOB START <u>5:24 PM</u>	JOB FINISH <u>6:30 AM</u>
LEASE <u>Joseph 30 CD</u>	WELL # <u>#1</u>	LOCATION <u>Oakley 2052 E N 70 DEED</u>		COUNTY <u>Gove</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>				End, <u>1/4 E N 10</u>			

CONTRACTOR Murphy 14

TYPE OF JOB Production - Port Collar

HOLE SIZE 7 7/8 T.D.

CASING SIZE 5 1/2 15" DEPTH 4620

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL Port Collar #54 DEPTH 2394

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 20'

PERFS.

DISPLACEMENT 109 1/2 BBL H₂O

EQUIPMENT

PUMP TRUCK CEMENTER Alan

422 HELPER Wayne

BULK TRUCK

377 DRIVER Wil

BULK TRUCK

DRIVER

OWNER Same

CEMENT

AMOUNT ORDERED 250 SK, ASC 1070 SALT
200 gal 5" GIBONITE 3/4 1190 CD31

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC 250 SK @ 18.60 4650.00

Gibonite - 1250 lb @ .89 1112.50

CD 31 - 176 lb @ 9.25 1645.00

WFR II 500 @ 1.27 635.00

HANDLING 278 SK @ 2.40 667.20

MILEAGE 109 SK/mile 556.00

TOTAL 9266.70

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REMARKS:

Mix 500 gal WFR II Mix 30 SKs Port Hole
Mix 20 SKs Mando Hole Mix 200 SKs
ASC 1070 SALT 200 gal 5" Gibonite, 3/4 1190
CD31 down 5 1/2" Displace Plug to
Insert w/ 1200 PSI Lift Band
Plug @ 2200 PSI, Float Held,
Thank You
Alan, Wayne, Wil

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 1185.00

EXTRA FOOTAGE @

MILEAGE 20 @ 7.00 140.00

MANIFOLD @

TOTAL 1325.00

CHARGE TO: RITCHIE EXP

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

Port Collar - 1 1750.00 1750.00

TurboLizers - 7 @ 42.00 294.00

Guide shoe - 1 @ 101.00 101.00

Insert - 1 @ 112.00 112.00

Rubber Plug - 1 @ 26.00 26.00

Baskets - 4 @ 161.00 644.00

TOTAL 2977.00

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.

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME

SIGNATURE Thomas A. [Signature]

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ALLIED CEMENTING CO., LLC. 038835

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

SERVICE POINT: Dakley KS

DATE <u>4/28/10</u>	SEC <u>30</u>	TWP <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>12:50 PM</u>	JOB START <u>1:00 PM</u>	JOB FINISH <u>2:00 PM</u>
LEASE # <u>Joseph 3000</u>	WELL # <u>#1</u>	LOCATION <u>Dakley 205 2E N 10 Seal Cove</u>			COUNTY	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				End <u>14E N 10</u>			

CONTRACTOR <u>Express Well Service</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Port collar</u>	
HOLE SIZE _____ T.D. _____	CEMENT
CASING SIZE <u>5 1/2</u> DEPTH _____	AMOUNT ORDERED <u>450 SKs 60/40 60 2 gal</u>
TUBING SIZE <u>2 7/8</u> DEPTH _____	<u>14 16 P/A Seal</u>
DRILL PIPE _____ DEPTH _____	<u>500 lb Hulls on side</u>
TOOL <u>Port collar</u> DEPTH <u>2391</u>	<u>used 285 SKs 300 lb Hulls</u>
PRES. MAX _____ MINIMUM _____	COMMON <u>170</u> @ <u>15.45</u> <u>2626.50</u>
MEAS. LINE _____ SHOE JOINT _____	POZMIX <u>115</u> @ <u>8.00</u> <u>920.00</u>
CEMENT LEFT IN CSG. _____	GEL <u>15</u> @ <u>20.00</u> <u>300.00</u>
PERFS. _____	CHLORIDE _____ @ _____
DISPLACEMENT <u>13 BBL Hard</u>	ASC _____ @ _____
EQUIPMENT _____	<u>Fla Seal 71 lb</u> @ <u>2.50</u> <u>177.50</u>
PUMP TRUCK CEMENTER <u>Alan</u>	<u>Hulls 300 lb - 6 SKs</u> @ <u>31.25</u> <u>191.25</u>
# <u>422</u> HELPER <u>Wayne</u>	_____ @ _____
BULK TRUCK _____	_____ @ _____
# <u>394</u> DRIVER <u>Jerry</u>	_____ @ _____
BULK TRUCK _____	_____ @ _____
# _____ DRIVER _____	_____ @ _____
	HANDLING <u>480</u> @ <u>2.40</u> <u>1171.20</u>
	MILEAGE <u>12.2 SK/mile</u> @ _____ <u>976.00</u>
	TOTAL <u>6374.30</u>

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REMARKS:

Pressure Tool to 1200, Held, Take Rate 4 BBL M @ 600 PSI
Mix 285 SKs 60/40 60 gal 14 16 P/A
w/ 300 lb Hulls. Circulate Cement to
Surf Face, Displace Cement, Close & Test
Tool, Held, Run 5 JTS Reverse Clean
Thank You
Alan, Wayne, Jerry

SERVICE

DEPTH OF JOB _____	<u>2391'</u>
PUMP TRUCK CHARGE _____	<u>1185.00</u>
EXTRA FOOTAGE _____ @ _____	
MILEAGE <u>2.2 miles</u> @ _____	<u>140.00</u>
MANIFOLD _____ @ _____	
_____ @ _____	
_____ @ _____	
TOTAL	<u>1325.00</u>

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

_____ @ _____	
_____ @ _____	
_____ @ _____	
_____ @ _____	
_____ @ _____	
TOTAL	_____

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 _____

SIGNATURE Thomas A. Aard

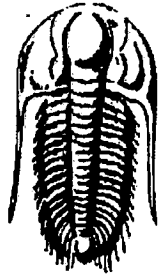
SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

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AUG 04 2010
KCC WICHITA

Handwritten initials



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.16 @ 03:10:50

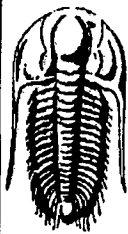
End Date: 2010.04.16 @ 11:00:29

Job Ticket #: 37792 DST #: 1

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AUG 04 2010
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AUG 04 2010
KCC WICHITA**

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

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37792

DST#: 1

67278

Test Start: 2010.04.16 @ 03:10:50

ATTN: Terry McClead

GENERAL INFORMATION:

Formation: **C**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 05:50:00
 Time Test Ended: 11:00:29
 Interval: **3960.00 ft (KB) To 3987.00 ft (KB) (TVD)**
 Total Depth: **3987.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Shane McBride**
 Unit No: **40**
 Reference Elevations: **2927.00 ft (KB)**
2917.00 ft (CF)
KB to GR/CF: 10.00 ft

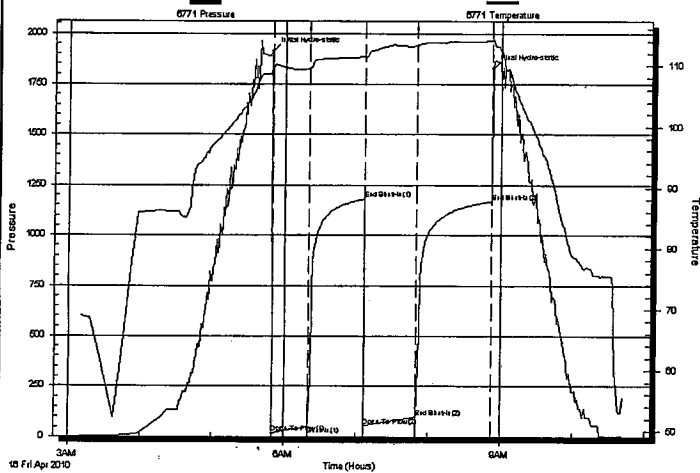
Serial #: 6771

Inside

Press@RunDepth: **50.64 psig @ 3961.00 ft (KB)**
 Start Date: **2010.04.16** End Date: **2010.04.16**
 Start Time: **03:10:50** End Time: **10:41:29**
 Capacity: **8000.00 psig**
 Last Calib.: **2010.04.16**
 Time On Btm: **2010.04.16 @ 05:49:30**
 Time Off Btm: **2010.04.16 @ 08:53:00**

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

Pressure vs. Time



PRESSURE SUMMARY

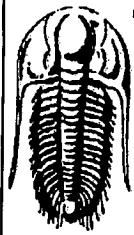
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1911.83	110.07	Initial Hydro-static
1	17.19	109.66	Open To Flow (1)
31	50.64	109.55	Shut-In(1)
77	1179.00	111.50	End Shut-In(1)
77	53.83	111.10	Open To Flow (2)
120	97.71	113.23	End Shut-In(2)
183	1167.69	114.05	End Shut-In(3)
184	1826.93	114.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil 100%	0.01
178.00	m c w 20% m 80% w w/oil spots	0.88

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37792

DST#: 1

67278

ATTN: Terry McClead

Test Start: 2010.04.16 @ 03:10:50

Tool Information

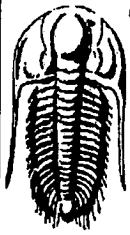
Drill Pipe:	Length: 3420.00 ft	Diameter: 3.80 inches	Volume: 47.97 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 50.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3960.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	49.00 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			3939.00	
Shut In Tool	5.00			3944.00	
Hydraulic tool	5.00			3949.00	
Safety Joint	2.00			3951.00	
Packer	5.00			3956.00	22.00 Bottom Of Top Packer
Packer	4.00			3960.00	
Stubb	1.00			3961.00	
Recorder	0.00	6771	Inside	3961.00	
Recorder	0.00	8368	Outside	3961.00	
Perforations	21.00			3982.00	
Bullnose	5.00			3987.00	27.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wchita, Ks

Job Ticket: 37792

DST#: 1

67278

Test Start: 2010.04.16 @ 03:10:50

ATTN: Terry McCleod

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:

38000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.12 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
2.00	free oil 100%	0.010
178.00	m c w 20% m 80% w w/oil spots	0.875

Total Length: 180.00 ft Total Volume: 0.885 bbl

Num Fluid Samples: 0

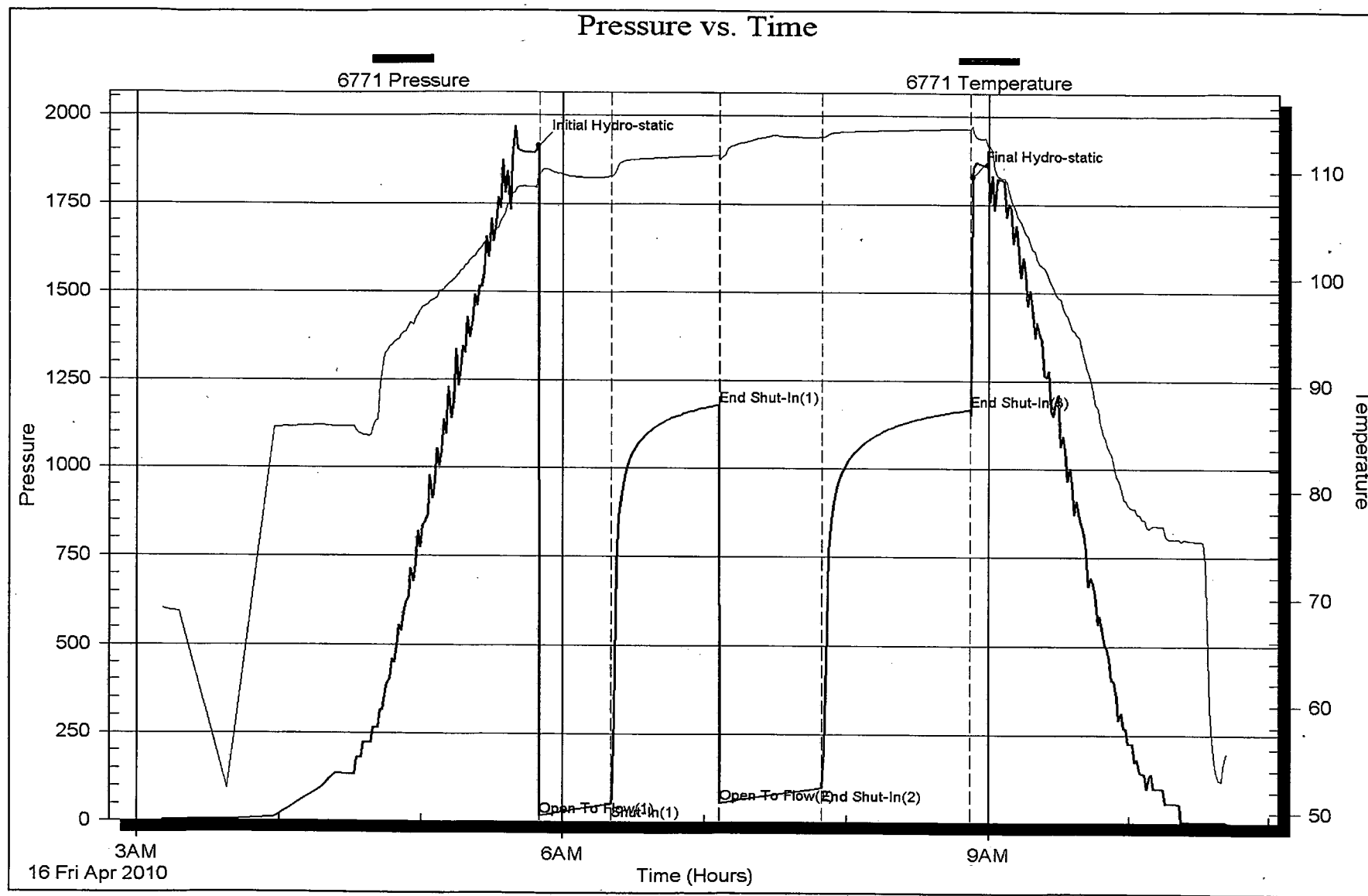
Num Gas Bombs: 0

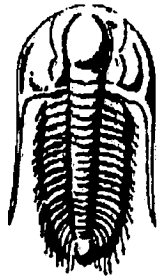
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .223 @ 60*f = 38,000





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.16 @ 16:05:20

End Date: 2010.04.16 @ 20:10:20

Job Ticket #: 37793 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration

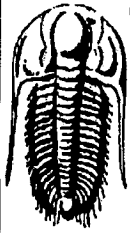
Joseph 30CD

30-13s-31w Gove KS

DST # 2

D

2010.04.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37793

DST#: 2

67278

Test Start: 2010.04.16 @ 16:05:20

ATTN: Terry McCleod

GENERAL INFORMATION:

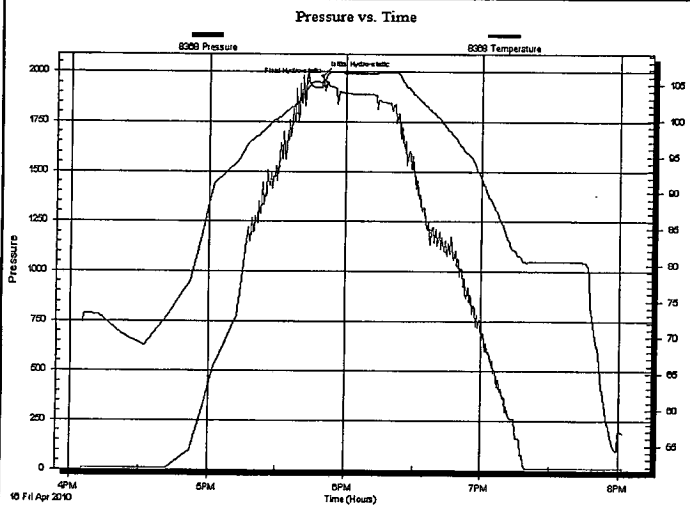
Formation: **D**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 17:50:00
 Time Test Ended: 20:10:20
 Interval: **3983.00 ft (KB) To 4010.00 ft (KB) (TVD)**
 Total Depth: **4010.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Shane McBride**
 Unit No: **40**
 Reference Elevations: **2927.00 ft (KB)**
2917.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8368

Outside

Press@RunDepth: **psig @ 3984.00 ft (KB)**
 Start Date: **2010.04.16** End Date: **2010.04.16**
 Start Time: **16:05:20** End Time: **20:02:20**
 Capacity: **8000.00 psig**
 Last Calib.: **2010.04.16**
 Time On Btrm: **2010.04.16 @ 17:49:50**
 Time Off Btrm: **2010.04.16 @ 17:51:50**

TEST COMMENT: Packers failed @ open reset failed again pull tool



PRESSURE SUMMARY

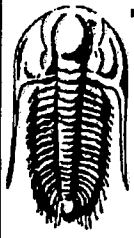
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1981.75	105.34	Initial Hydro-static
2	1946.57	106.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
210.00	mud 100% m	1.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37793

DST#: 2

ATTN: Terry McClead

Test Start: 2010.04.16 @ 16:05:20

Tool Information

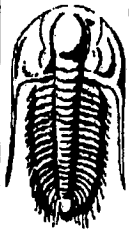
Drill Pipe:	Length: 3452.00 ft	Diameter: 3.80 inches	Volume: 48.42 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 51.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3983.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	49.00 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			3962.00	
Shut In Tool	5.00			3967.00	
Hydraulic tool	5.00			3972.00	
Safety Joint	2.00			3974.00	
Packer	5.00			3979.00	22.00 Bottom Of Top Packer
Packer	4.00			3983.00	
Stubb	1.00			3984.00	
Recorder	0.00	6771	Inside	3984.00	
Recorder	0.00	8368	Outside	3984.00	
Perforations	21.00			4005.00	
Bullnose	5.00			4010.00	27.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37793

DST#: 2

67278

ATTN: Terry McClead

Test Start: 2010.04.16 @ 16:05:20

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: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.11 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
210.00	mud 100%m	1.033

Total Length: 210.00 ft Total Volume: 1.033 bbl

Num Fluid Samples: 0

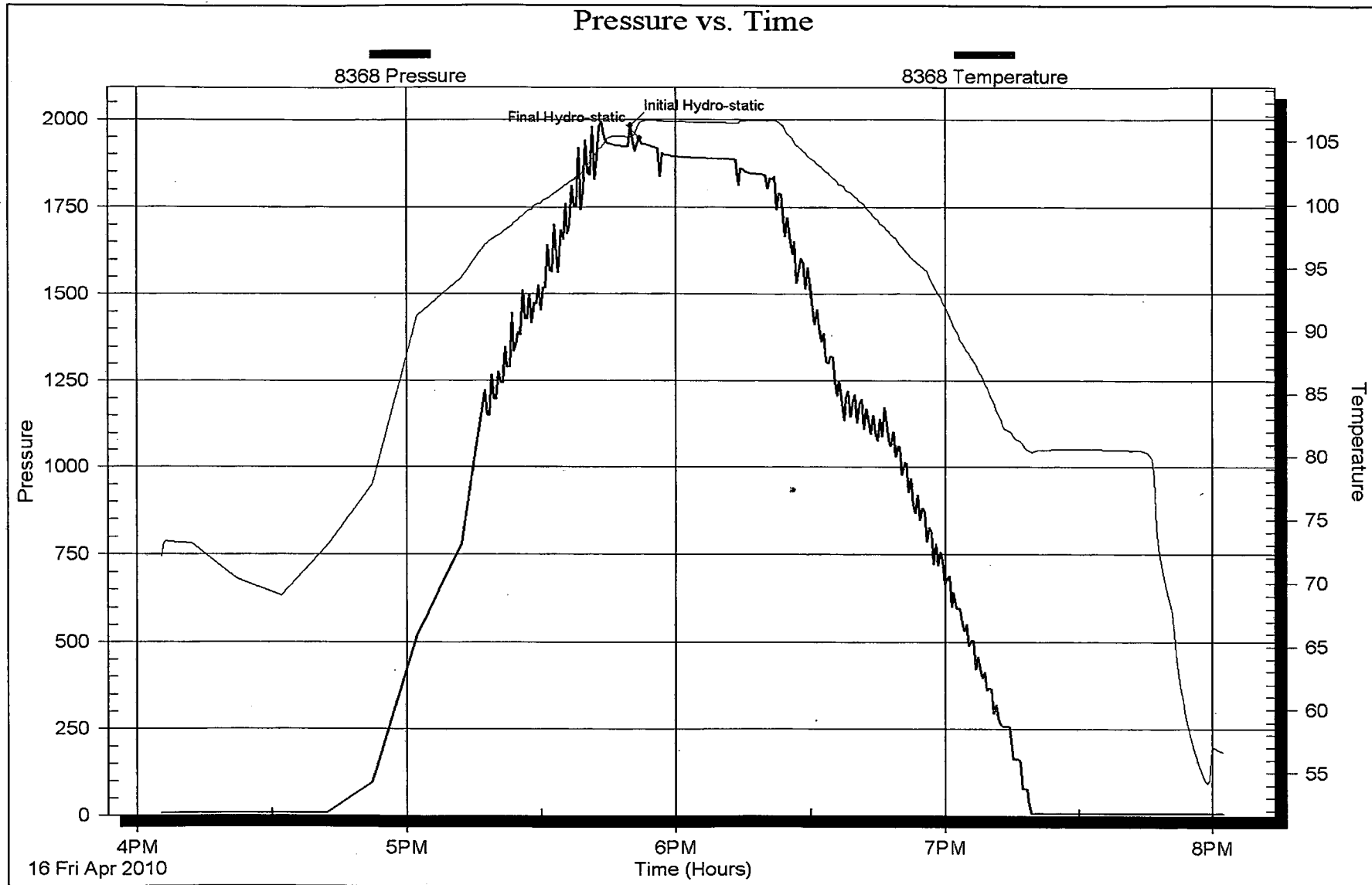
Num Gas Bombs: 0

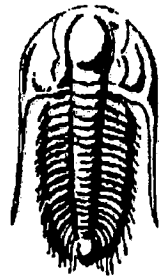
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.17 @ 00:00:47

End Date: 2010.04.17 @ 07:40:26

Job Ticket #: 37794 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

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37794

DST#: 3

67278

ATTN: Terry McClead

Test Start: 2010.04.17 @ 00:00:47

GENERAL INFORMATION:

Formation: **D**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 02:03:27
 Time Test Ended: 07:40:26

Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 40

Interval: **3998.00 ft (KB) To 4010.00 ft (KB) (TVD)**
 Total Depth: **4010.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

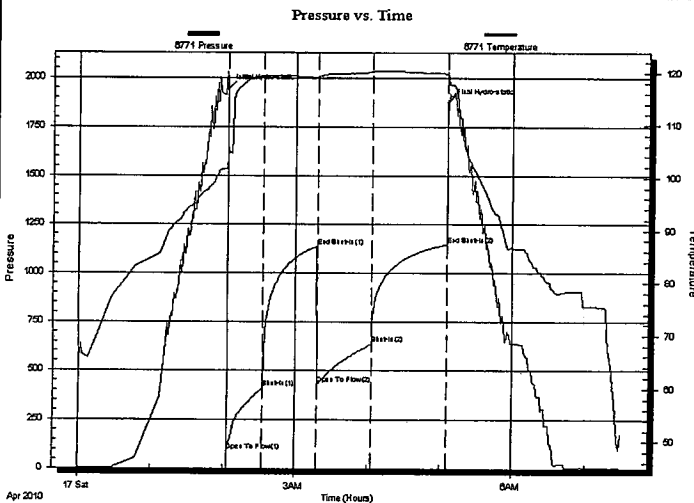
Reference Elevations: **2927.00 ft (KB)**
2917.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 6771 Inside

Press@RunDepth: **637.00 psig @ 3999.00 ft (KB)**
 Start Date: **2010.04.17** End Date: **2010.04.17**
 Start Time: **00:00:47** End Time: **07:29:26**

Capacity: **8000.00 psig**
 Last Calib.: **2010.04.17**
 Time On Btm: **2010.04.17 @ 02:03:12**
 Time Off Btm: **2010.04.17 @ 05:06:12**

TEST COMMENT: B.O.B. in 3 1/2 min.
 No return
 B.O.B. in 5 min.
 No return



PRESSURE SUMMARY

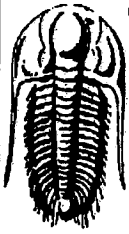
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1945.27	103.94	Initial Hydro-static
1	89.40	103.36	Open To Flow (1)
30	410.53	119.36	Shut-In(1)
75	1138.50	119.01	End Shut-In(1)
75	432.48	118.72	Open To Flow (2)
120	637.00	120.16	Shut-In(2)
183	1147.61	119.79	End Shut-In(2)
183	1874.65	120.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
231.00	m c w 15% m 85%	1.14
1099.00	water 100% w	12.59

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37794

DST#: 3

ATTN: Terry McClead

Test Start: 2010.04.17 @ 00:00:47

Tool Information

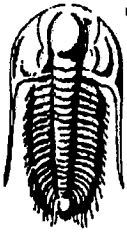
Drill Pipe:	Length: 3450.00 ft	Diameter: 3.80 inches	Volume: 48.39 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 51.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3998.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	34.00 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			3977.00	
Shut In Tool	5.00			3982.00	
Hydraulic tool	5.00			3987.00	
Safety Joint	2.00			3989.00	
Packer	5.00			3994.00	22.00 Bottom Of Top Packer
Packer	4.00			3998.00	
Stubb	1.00			3999.00	
Recorder	0.00	6771	Inside	3999.00	
Recorder	0.00	8368	Outside	3999.00	
Perforations	6.00			4005.00	
Bullnose	5.00			4010.00	12.00 Bottom Packers & Anchor

Total Tool Length: 34.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37794

DST#: 3

ATTN: Terry McCleod

Test Start: 2010.04.17 @ 00:00:47

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 53.00 sec/qt
Water Loss: 7.12 in³
Resistivity: 0.00 ohm.m
Salinity: 3000.00 ppm
Filter Cake: 2.00 inches

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

Oil API: 0 deg API
Water Salinity: 36500 ppm

Recovery Information

Recovery Table

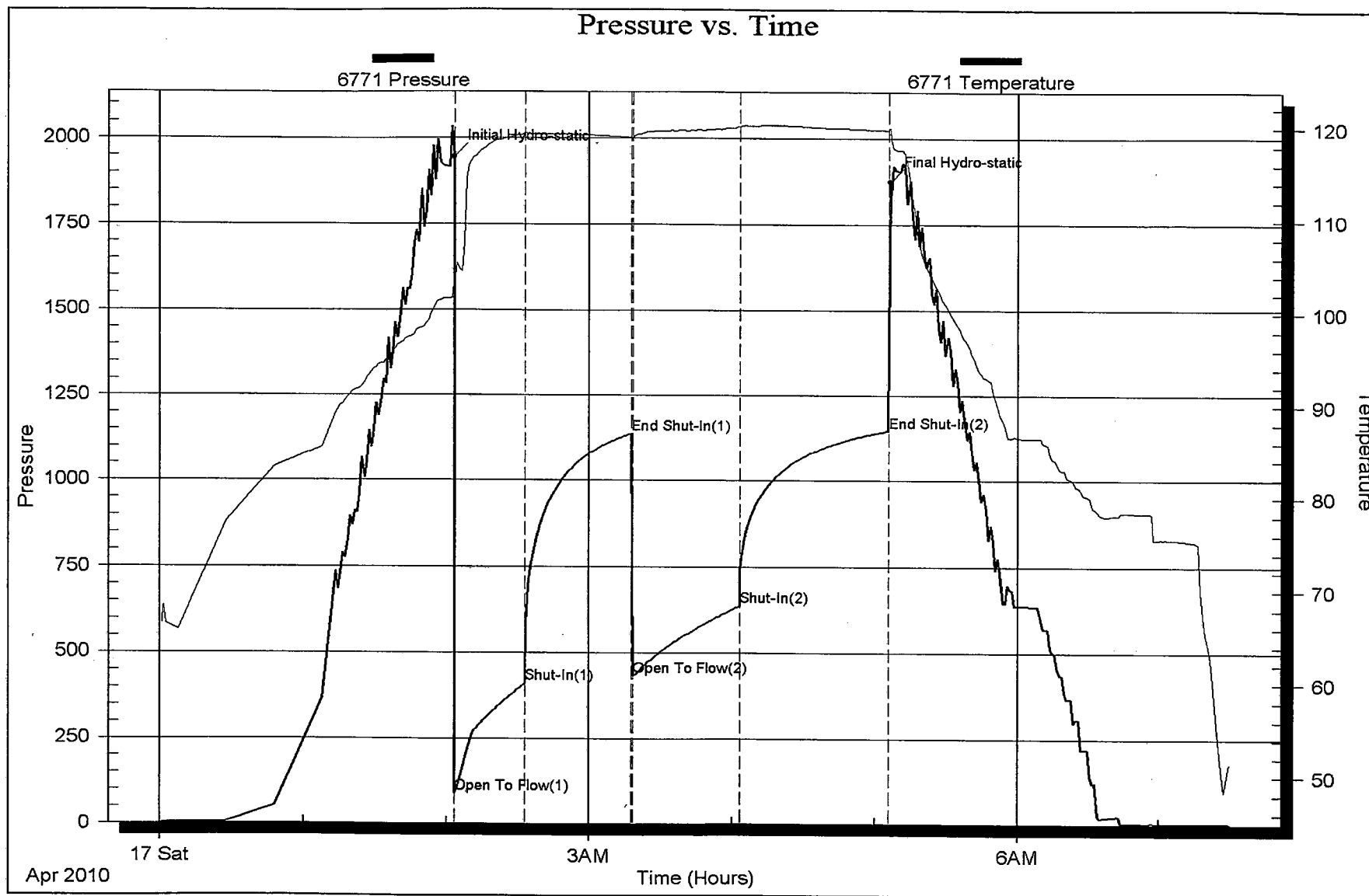
Length ft	Description	Volume bbl
231.00	m c w 15% m 85%	1.136
1099.00	water 100%w	12.592

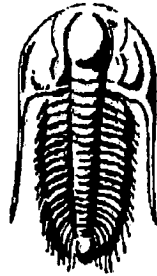
Total Length: 1330.00 ft Total Volume: 13.728 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: rw .263 @ 50*f = 36500 chlor





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.17 @ 13:45:31

End Date: 2010.04.18 @ 15:12:01

Job Ticket #: 37795 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration

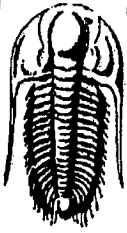
Joseph 30CD

30-13s-31w Gove KS

DST # 4

E

2010.04.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, Ks
67278
ATTN: Terry McClead

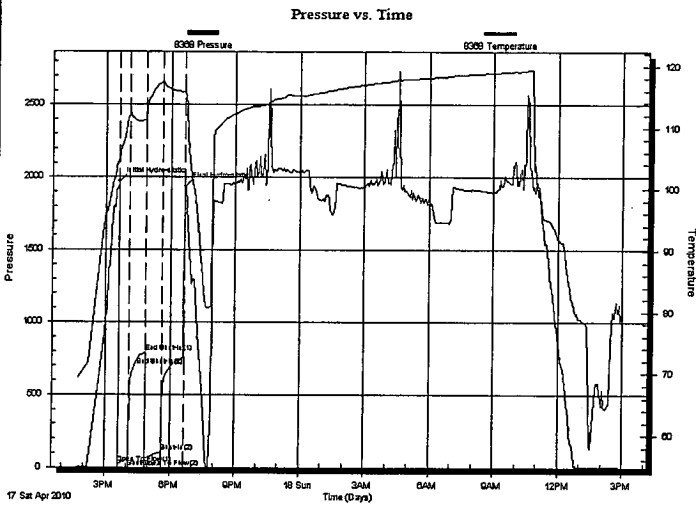
Joseph 30CD
30-13s-31w Gove KS
Job Ticket: 37795 **DST#: 4**
Test Start: 2010.04.17 @ 13:45:31

GENERAL INFORMATION:

Formation: **E**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 15:37:01
Time Test Ended: 15:12:01
Interval: **4009.00 ft (KB) To 4028.00 ft (KB) (TVD)**
Total Depth: **4028.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Test Type: **Conventional Bottom Hole**
Tester: **Shane McBride**
Unit No: **40**
Reference Elevations: **2927.00 ft (KB)**
2917.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8368 **Outside**
Press@RunDepth: **105.80 psig @ 4010.00 ft (KB)** Capacity: **8000.00 psig**
Start Date: **2010.04.17** End Date: **2010.04.18** Last Calib.: **2010.04.18**
Start Time: **13:45:31** End Time: **15:12:01** Time On Btm: **2010.04.17 @ 15:36:31**
Time Off Btm: **2010.04.17 @ 18:39:16**

TEST COMMENT: 2" in blow
No return
1" in blow
No return



PRESSURE SUMMARY

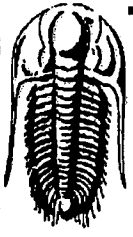
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1969.06	105.03	Initial Hydro-static
1	23.53	104.67	Open To Flow (1)
31	58.41	112.18	Shut-In (1)
74	791.37	111.19	End Shut-In (1)
75	60.66	110.88	Open To Flow (2)
120	105.80	117.51	Shut-In (2)
182	754.53	115.84	End Shut-In (2)
183	1935.69	115.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	m c w 15% m 85% w	0.89

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37795

DST#: 4

ATTN: Terry McClead

Test Start: 2010.04.17 @ 13:45:31

Tool Information

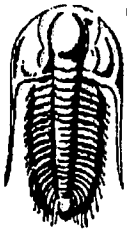
Drill Pipe:	Length: 3452.00 ft	Diameter: 3.80 inches	Volume: 48.42 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 51.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 73000.00 lb
Depth to Top Packer:	4009.00 ft			Final 74000.00 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			3988.00	
Shut In Tool	5.00			3993.00	
Hydraulic tool	5.00			3998.00	
Safety Joint	2.00			4000.00	
Packer	5.00			4005.00	22.00 Bottom Of Top Packer
Packer	4.00			4009.00	
Stubb	1.00			4010.00	
Recorder	0.00	6771	Inside	4010.00	
Recorder	0.00	8368	Outside	4010.00	
Perforations	13.00			4023.00	
Bullnose	5.00			4028.00	19.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wchita, Ks

Job Ticket: 37795

DST#: 4

67278

Test Start: 2010.04.17 @ 13:45:31

ATTN: Terry McClead

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:

29500 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.12 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	m c w 15% m 85% w	0.885

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 0

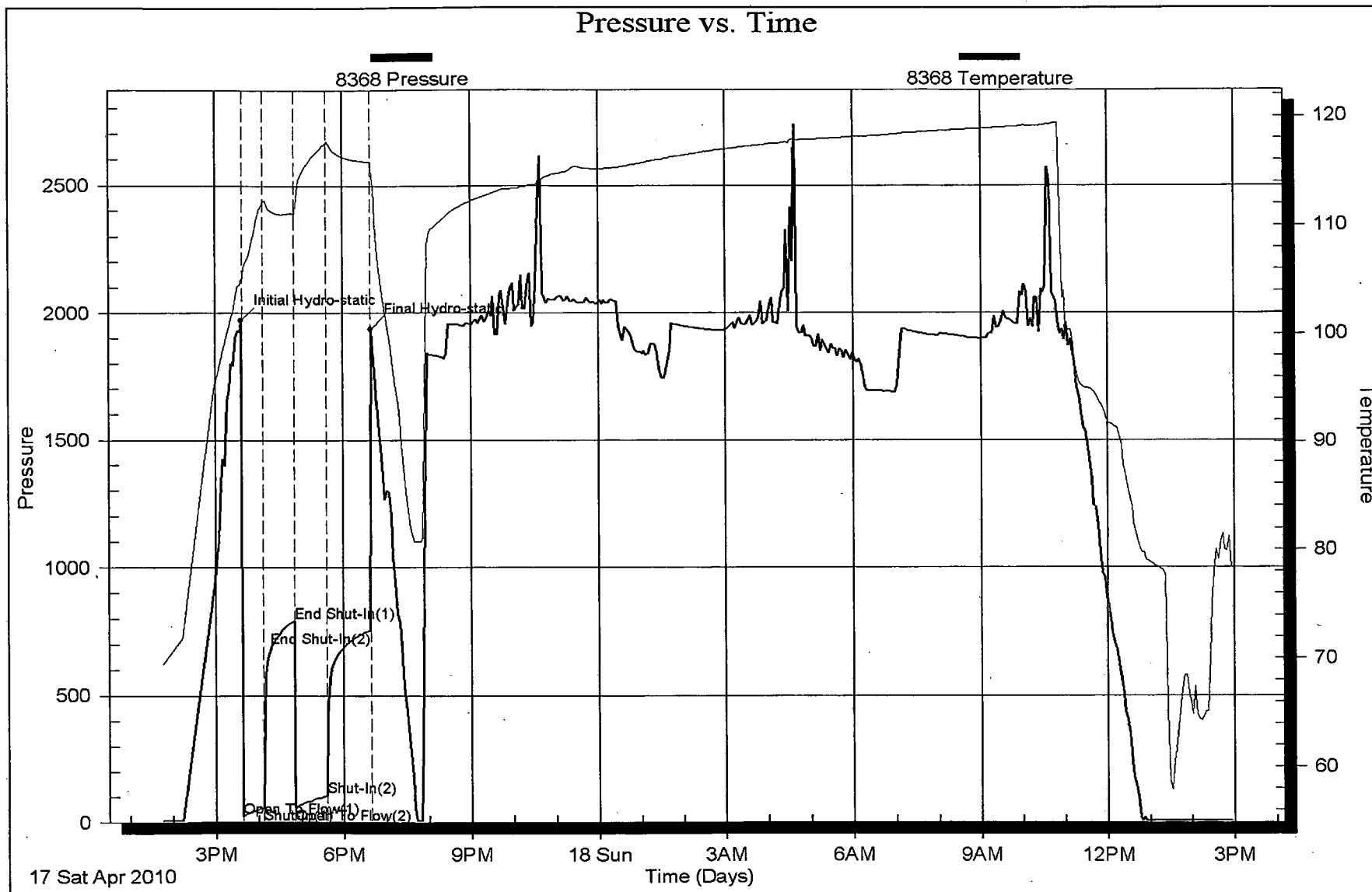
Num Gas Bombs: 0

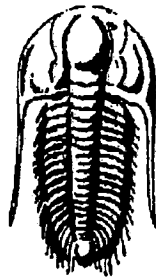
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .398 @ 50*f = 29,500 chlor





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.19 @ 01:30:52

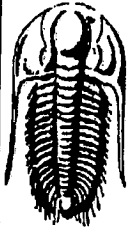
End Date: 2010.04.19 @ 09:34:16

Job Ticket #: 37837 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

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37837

DST#: 5

67278

ATTN: Terry McClead

Test Start: 2010.04.19 @ 01:30:52

Tool Information

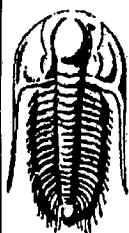
Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 52.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 71000.00 lb
Depth to Top Packer:	4087.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	60.00 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			4066.00	
Shut In Tool	5.00			4071.00	
Hydraulic tool	5.00			4076.00	
Safety Joint	2.00			4078.00	
Packer	5.00			4083.00	22.00 Bottom Of Top Packer
Packer	4.00			4087.00	
Stubb	1.00			4088.00	
Recorder	0.00	6772	Inside	4088.00	
Recorder	0.00	8373	Outside	4088.00	
Perforations	32.00			4120.00	
Bullnose	5.00			4125.00	38.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37837

DST#: 5

67278

ATTN: Terry McCleod

Test Start: 2010.04.19 @ 01:30:52

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.15 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	gocm 10%g 10%o 80%m	0.462
1002.00	go 30%g 70%o	9.983
0.00	2162	0.000

Total Length: 1096.00 ft

Total Volume: 10.445 bbl

Num Fluid Samples: 0

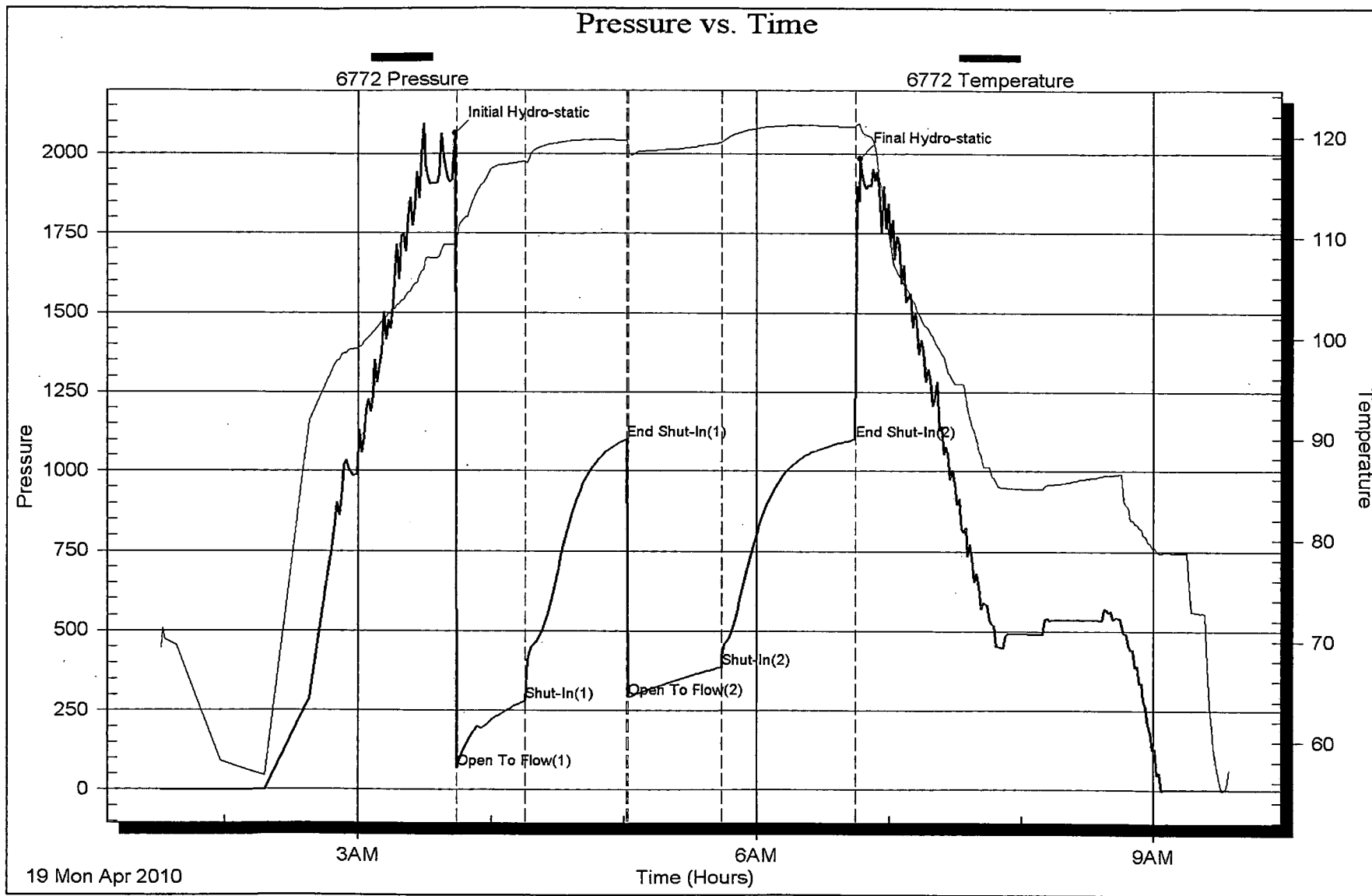
Num Gas Bombs: 0

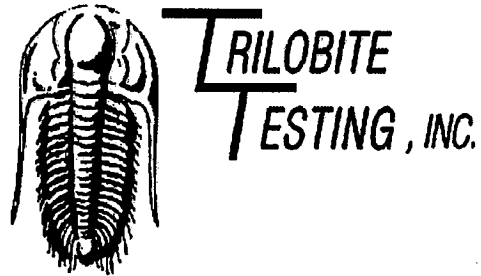
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 35@50=36





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.19 @ 16:08:21

End Date: 2010.04.19 @ 23:17:30

Job Ticket #: 37838 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

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37838

DST#: 6

67278

ATTN: Terry McClead

Test Start: 2010.04.19 @ 16:08:21

GENERAL INFORMATION:

Formation: **Lansing I**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 18:22:31

Time Test Ended: 23:17:30

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4133.00 ft (KB) To 4156.00 ft (KB) (TVD)**

Reference Elevations: **2927.00 ft (KB)**

Total Depth: **4156.00 ft (KB) (TVD)**

2917.00 ft (CF)

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

KB to GR/CF: **10.00 ft**

Serial #: 8373

Inside

Press@RunDepth: **340.86 psig @ 4134.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.04.19**

End Date: **2010.04.19**

Last Calib.: **2010.04.19**

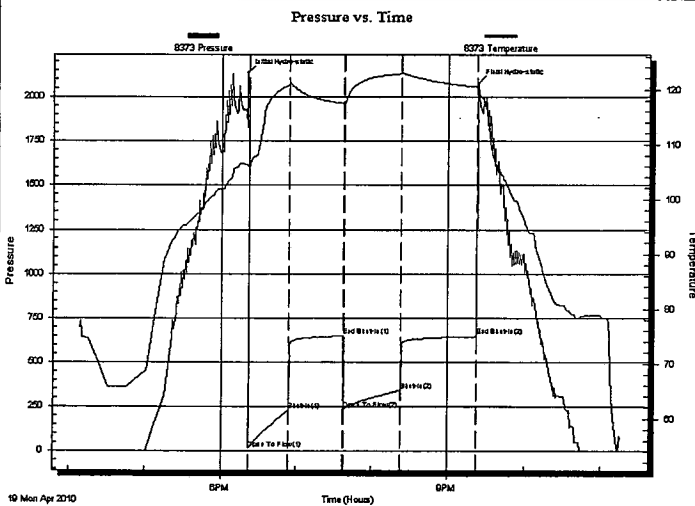
Start Time: **16:08:21**

End Time: **23:17:30**

Time On Btrr: **2010.04.19 @ 18:21:01**

Time Off Btrr: **2010.04.19 @ 21:23:15**

TEST COMMENT: IF: 1/4 blow BOB in 12 min.
IS: Weak surface blow died in 5 min.
FF: Surface blow BOB in 20 min.
FS: Surface blow built to 1 in 60 min.



PRESSURE SUMMARY

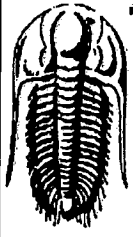
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2134.42	106.44	Initial Hydro-static
2	14.99	105.19	Open To Flow (1)
33	229.59	120.89	Shut-In(1)
77	648.21	117.48	End Shut-In(1)
77	232.23	117.30	Open To Flow (2)
122	340.86	122.90	Shut-In(2)
182	646.30	120.53	End Shut-In(2)
183	2077.67	120.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
564.00	mcw 95%w 5%rn	2.98
174.00	mcw 70%w 30%rn	2.44
4.00	free oil 100%o	0.06

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
 PO Box 783188
 Wichita, Ks
 67278
 ATTN: Terry McClead

Joseph 30CD
30-13s-31w Gove KS
 Job Ticket: 37838 **DST#: 6**
 Test Start: 2010.04.19 @ 16:08:21

Tool Information

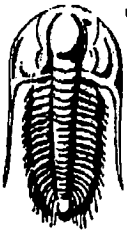
Drill Pipe:	Length: 3580.00 ft	Diameter: 3.80 inches	Volume: 50.22 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 52.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4133.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	45.00 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			4112.00	
Shut In Tool	5.00			4117.00	
Hydraulic tool	5.00			4122.00	
Safety Joint	2.00			4124.00	
Packer	5.00			4129.00	22.00 Bottom Of Top Packer
Packer	4.00			4133.00	
Stubb	1.00			4134.00	
Recorder	0.00	8373	Inside	4134.00	
Recorder	0.00	6772	Outside	4134.00	
Perforations	17.00			4151.00	
Bullnose	5.00			4156.00	23.00 Bottom Packers & Anchor

Total Tool Length: 45.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wchita, Ks

Job Ticket: 37838

DST#: 6

67278

ATTN: Terry McClead

Test Start: 2010.04.19 @ 16:08:21

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:

69000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 58000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
564.00	mcw 95%w 5%m	2.983
174.00	mcw 70%w 30%m	2.441
4.00	free oil 100%o	0.056

Total Length: 742.00 ft Total Volume: 5.480 bbl

Num Fluid Samples: 0

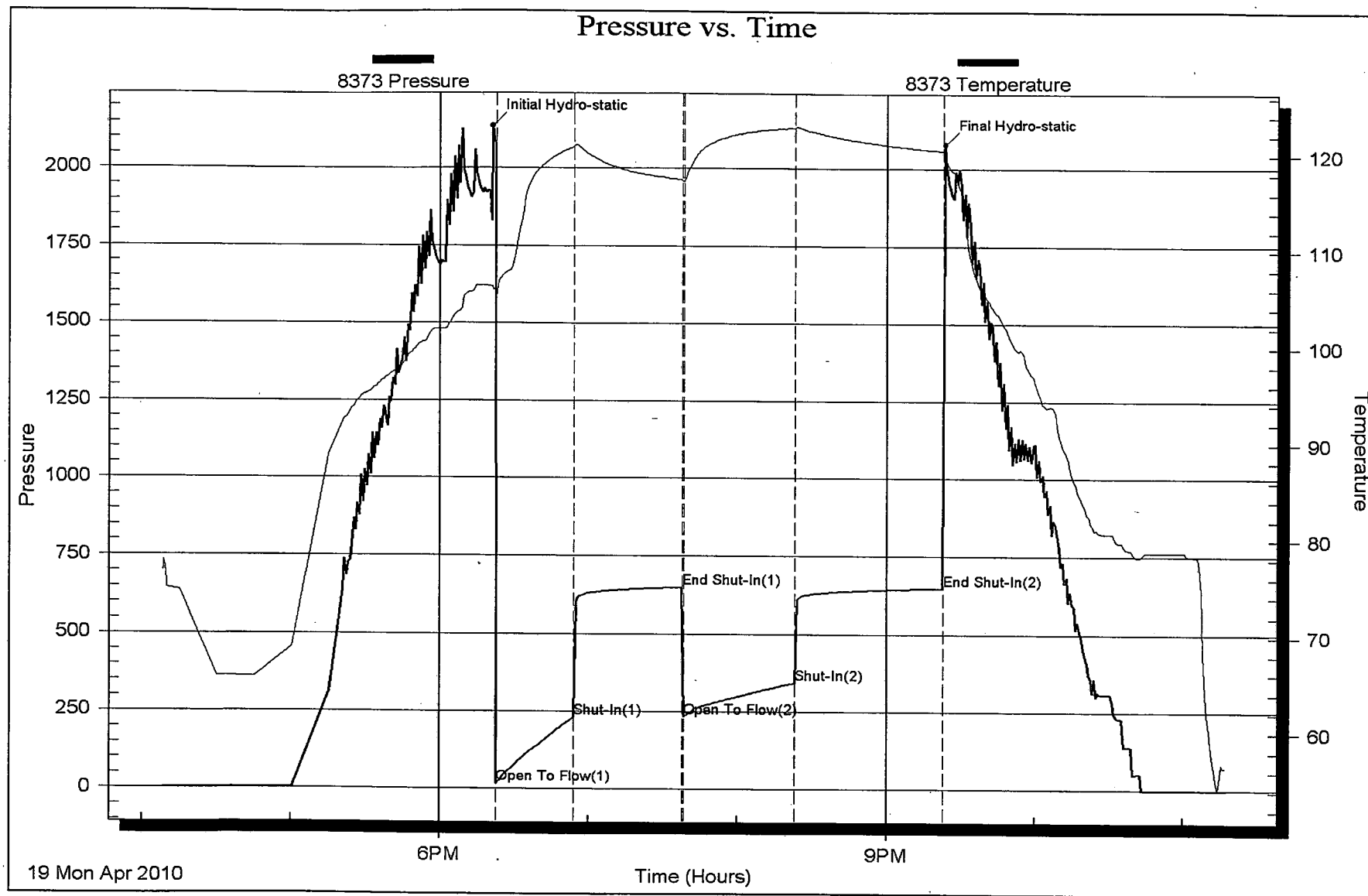
Num Gas Bombs: 0

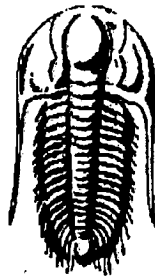
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .12@67=69000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.20 @ 06:48:09

End Date: 2010.04.20 @ 13:24:02

Job Ticket #: 37839 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: Terry McClead

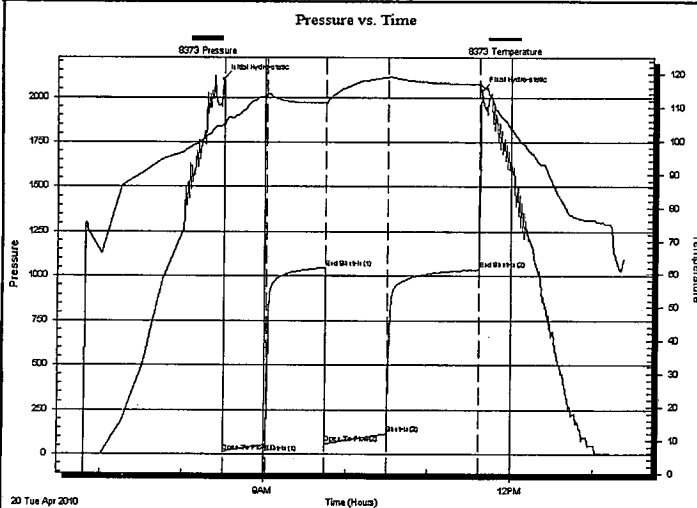
Joseph 30CD
30-13s-31w Gove KS
Job Ticket: 37839 DST#: 7
Test Start: 2010.04.20 @ 06:48:09

GENERAL INFORMATION:

Formation: **Lansing J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:30:02
Time Test Ended: 13:24:02
Interval: **4160.00 ft (KB) To 4190.00 ft (KB) (TVD)**
Total Depth: 4190.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Brandon Turley
Unit No: 35
Reference Elevations: 2927.00 ft (KB)
2917.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8373 Inside
Press@RunDepth: 114.22 psig @ 4161.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2010.04.20 End Date: 2010.04.20 Last Calib.: 2010.04.20
Start Time: 06:48:09 End Time: 13:24:02 Time On Btrm: 2010.04.20 @ 08:29:02
Time Off Btrm: 2010.04.20 @ 11:38:02

TEST COMMENT: IF: 1/4 blow built to 5 in 30 min.
IS: No return.
FF: Surface blow built to 4 1/2 in 45 min.
FS: No return.



PRESSURE SUMMARY

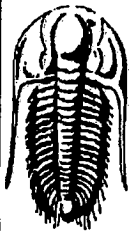
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2100.60	104.68	Initial Hydro-static
1	14.08	104.37	Open To Flow (1)
33	56.13	113.95	Shut-In(1)
76	1047.29	111.37	End Shut-In(1)
76	59.81	110.68	Open To Flow (2)
122	114.22	118.95	Shut-In(2)
188	1038.03	117.02	End Shut-In(2)
189	2038.09	116.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
94.00	mcw 80%w 20%m	0.46
124.00	w cm Oil spots 30%w 70%m	0.61

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37839

DST#:7

67278

ATTN: Terry McClead

Test Start: 2010.04.20 @ 06:48:09

Tool Information

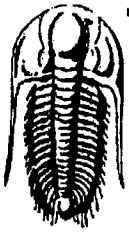
Drill Pipe:	Length: 3612.00 ft	Diameter: 3.80 inches	Volume: 50.67 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 53.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4160.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4139.00	
Shut In Tool	5.00			4144.00	
Hydraulic tool	5.00			4149.00	
Safety Joint	2.00			4151.00	
Packer	5.00			4156.00	22.00 Bottom Of Top Packer
Packer	4.00			4160.00	
Stubb	1.00			4161.00	
Recorder	0.00	8373	Inside	4161.00	
Recorder	0.00	6772	Outside	4161.00	
Perforations	24.00			4185.00	
Bullnose	5.00			4190.00	30.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wchita, Ks

Job Ticket: 37839

DST#: 7

67278

Test Start: 2010.04.20 @ 06:48:09

ATTN: Terry McCleod

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:

600000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
94.00	mcw 80%w 20%m	0.462
124.00	wcm Oil spots 30%w 70%m	0.610

Total Length: 218.00 ft

Total Volume: 1.072 bbl

Num Fluid Samples: 0

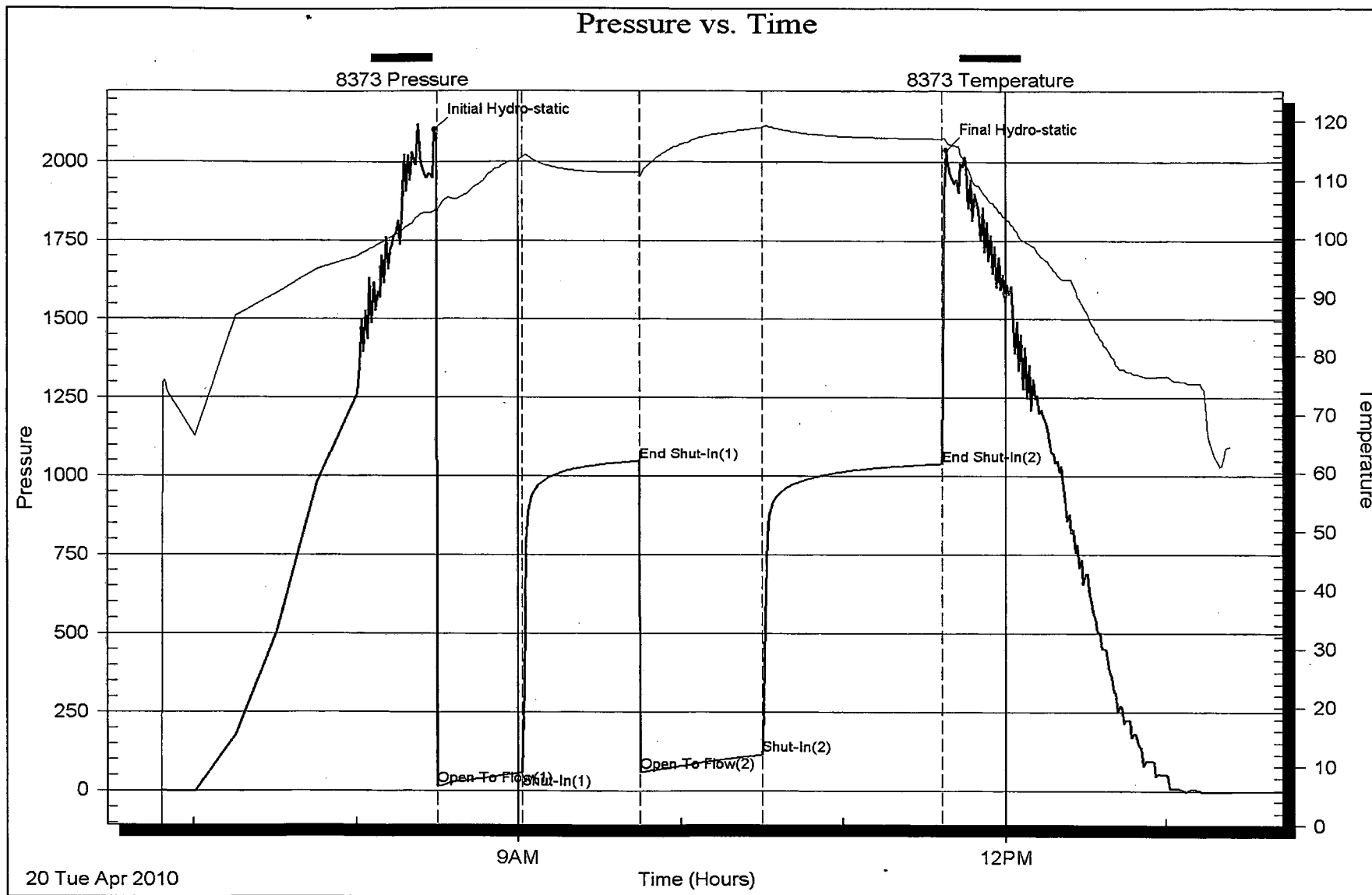
Num Gas Bombs: 0

Serial #:

Laboratory Name:

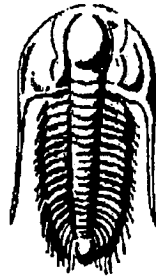
Laboratory Location:

Recovery Comments: .13@69=60000



20 Tue Apr 2010

Time (Hours)



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.20 @ 23:00:26

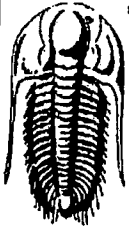
End Date: 2010.04.21 @ 05:19:20

Job Ticket #: 37840 DST #: 8

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: Terry McClead

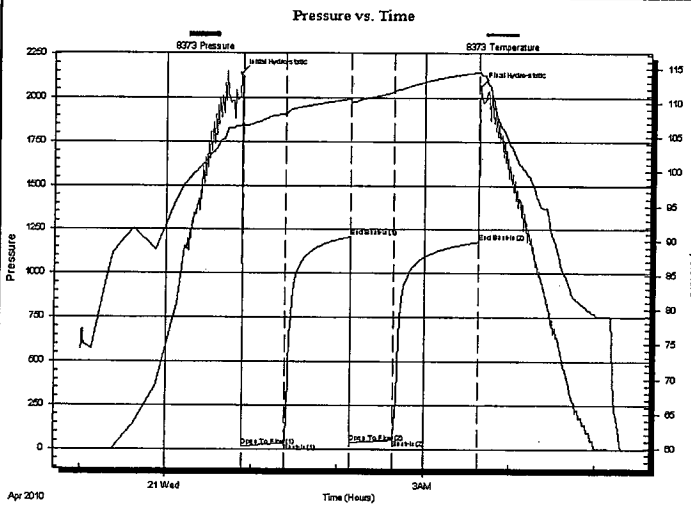
Joseph 30CD
30-13s-31w Gove KS
 Job Ticket: 37840 **DST#: 8**
 Test Start: 2010.04.20 @ 23:00:26

GENERAL INFORMATION:

Formation: **Lansing L**
 Deviated: **No** Whipstock: ft (KB)
 Time Tool Opened: 00:53:06
 Time Test Ended: 05:19:20
 Interval: **4223.00 ft (KB) To 4264.00 ft (KB) (TVD)**
 Total Depth: **4264.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Fair
 Test Type: **Conventional Bottom Hole**
 Tester: **Brandon Turley**
 Unit No: **35**
 Reference Elevations: **2927.00 ft (KB)**
 2917.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8373 **Inside**
 Press@RunDepth: **55.59 psig @ 4224.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.04.20** End Date: **2010.04.21** Last Calib.: **2010.04.21**
 Start Time: **23:00:26** End Time: **05:19:20** Time On Btm: **2010.04.21 @ 00:51:51**
 05:19:20 Time Off Btm: **2010.04.21 @ 03:38:50**

TEST COMMENT: IF: 1/4 blow built to 2 in 30 min.
 IS: No return.
 FF: Surface blow built to 1 in 30 min.
 FS: No return.



PRESSURE SUMMARY

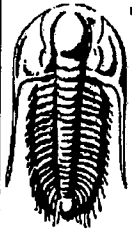
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2139.48	106.67	Initial Hydro-static
2	15.37	106.64	Open To Flow (1)
32	36.43	108.42	Shut-In(1)
77	1206.98	110.60	End Shut-In(1)
78	38.84	109.84	Open To Flow (2)
107	55.59	111.58	Shut-In(2)
166	1177.94	114.45	End Shut-In(2)
167	2067.41	114.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 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
 PO Box 783188
 Wichita, Ks
 67278
 ATTN: Terry McClead

Joseph 30CD
30-13s-31w Gove KS
 Job Ticket: 37840 **DST#: 8**
 Test Start: 2010.04.20 @ 23:00:26

Tool Information

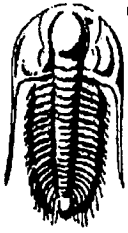
Drill Pipe:	Length: 3675.00 ft	Diameter: 3.80 inches	Volume: 51.55 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 54.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4223.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	63.00 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			4202.00	
Shut In Tool	5.00			4207.00	
Hydraulic tool	5.00			4212.00	
Safety Joint	2.00			4214.00	
Packer	5.00			4219.00	22.00 Bottom Of Top Packer
Packer	4.00			4223.00	
Stubb	1.00			4224.00	
Recorder	0.00	8373	Inside	4224.00	
Recorder	0.00	6772	Outside	4224.00	
Perforations	2.00			4226.00	
Change Over Sub	1.00			4227.00	
Drill Pipe	31.00			4258.00	
Change Over Sub	1.00			4259.00	
Bullnose	5.00			4264.00	41.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37840

DST#: 8

67278

ATTN: Terry McClead

Test Start: 2010.04.20 @ 23:00:26

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: 63.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.36 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100%m	0.098

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

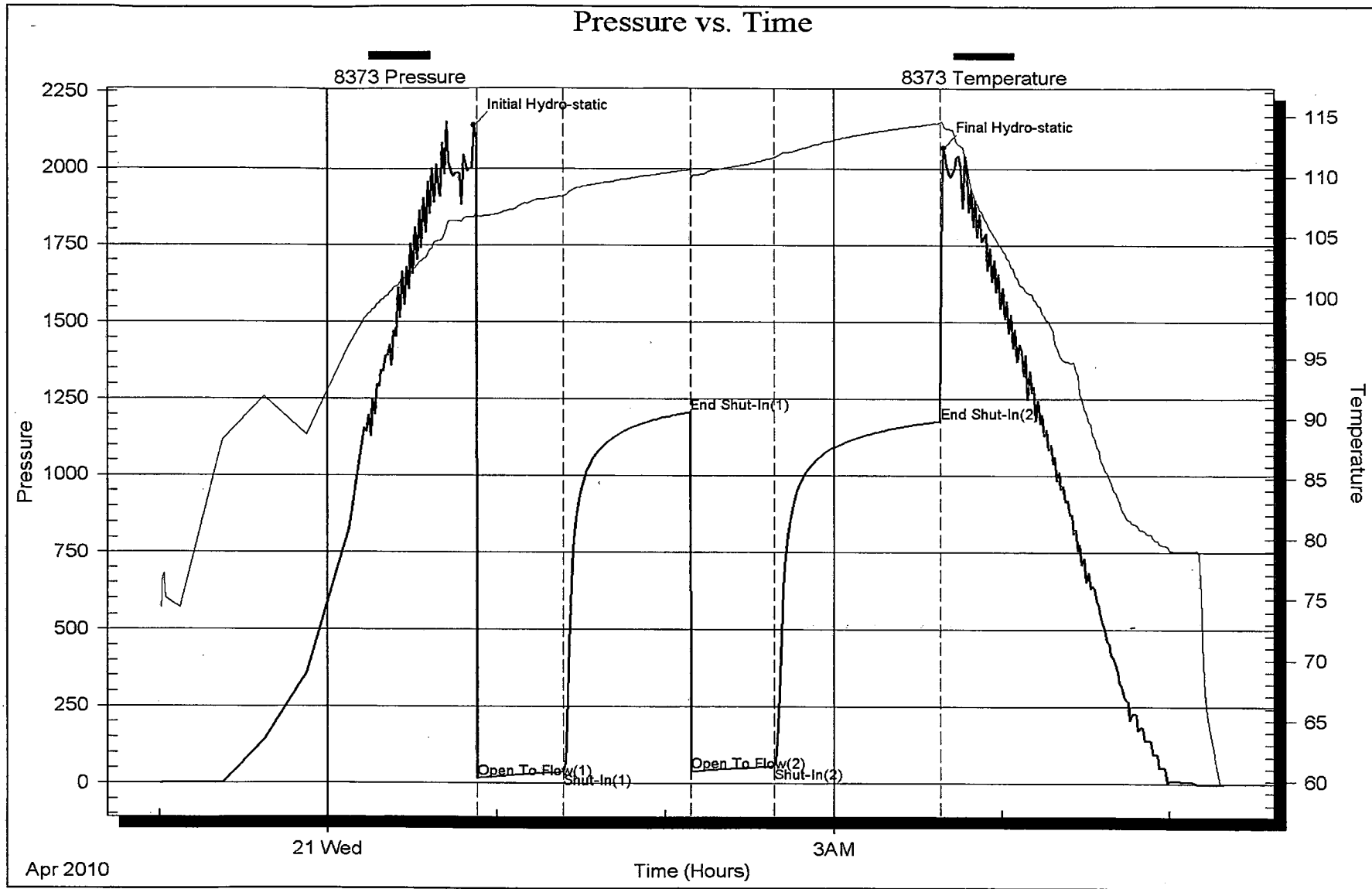
Num Gas Bombs: 0

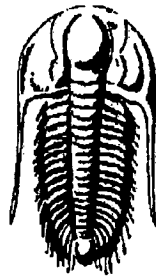
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.21 @ 19:25:25

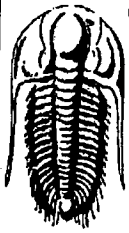
End Date: 2010.04.22 @ 02:42:37

Job Ticket #: 37841 DST #: 9

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: Terry McClead

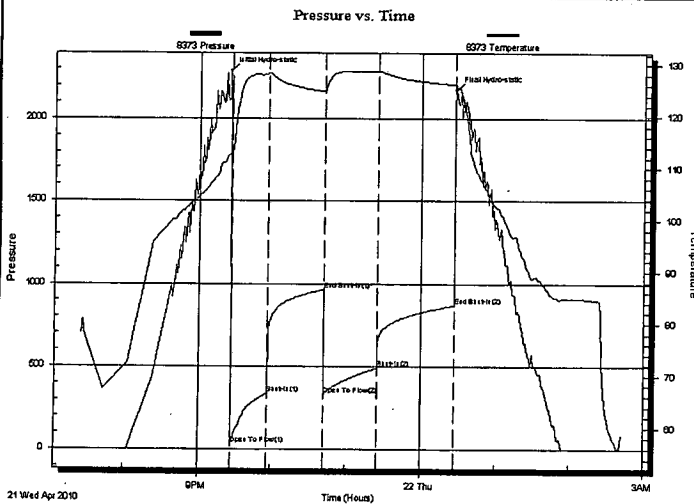
Joseph 30CD
30-13s-31w Gove KS
Job Ticket: 37841 **DST#: 9**
Test Start: 2010.04.21 @ 19:25:25

GENERAL INFORMATION:

Formation: **Myrick Station**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 21:27:08
Time Test Ended: 02:42:37
Interval: **4412.00 ft (KB) To 4435.00 ft (KB) (TVD)**
Total Depth: **4435.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: Fair
Test Type: **Conventional Bottom Hole**
Tester: **Brandon Turley**
Unit No: **35**
Reference Elevations: **2927.00 ft (KB)**
2917.00 ft (CF)
KB to GR/CF: **10.00 ft**

Serial #: 8373 **Inside**
Press@RunDepth: **489.06 psig @ 4413.00 ft (KB)** Capacity: **8000.00 psig**
Start Date: **2010.04.21** End Date: **2010.04.22** Last Calib.: **2010.04.22**
Start Time: **19:25:25** End Time: **02:42:38** Time On Btm: **2010.04.21 @ 21:25:53**
Time Off Btm: **2010.04.22 @ 00:27:37**

TEST COMMENT: IF: 1/4 blow BOB in 4 min.
IS: No return.
FF: Surface blow BOB in 8 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2284.75	112.72	Initial Hydro-static
2	31.80	112.25	Open To Flow (1)
31	335.48	128.27	Shut-In(1)
77	963.26	124.95	End Shut-In(1)
77	327.72	124.53	Open To Flow (2)
120	489.06	128.68	Shut-In(2)
181	867.97	126.27	End Shut-In(2)
182	2172.10	125.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
846.00	mcw 95%w 5% m	6.94
219.00	w cm 30%w 70% m	3.07

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37841

DST#: 9

ATTN: Terry McClead

Test Start: 2010.04.21 @ 19:25:25

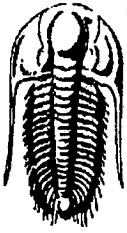
Tool Information

Drill Pipe:	Length: 3867.00 ft	Diameter: 3.80 inches	Volume: 54.24 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: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 56.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4412.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	45.00 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			4391.00	
Shut In Tool	5.00			4396.00	
Hydraulic tool	5.00			4401.00	
Safety Joint	2.00			4403.00	
Packer	5.00			4408.00	22.00 Bottom Of Top Packer
Packer	4.00			4412.00	
Stubb	1.00			4413.00	
Recorder	0.00	8373	Inside	4413.00	
Recorder	0.00	6772	Outside	4413.00	
Perforations	17.00			4430.00	
Bullnose	5.00			4435.00	23.00 Bottom Packers & Anchor

Total Tool Length: 45.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37841

DST#: 9

ATTN: Terry McCleod

Test Start: 2010.04.21 @ 19:25:25

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:

56000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
846.00	mcw 95%w 5%m	6.939
219.00	wcm 30%w 70%m	3.072

Total Length: 1065.00ft Total Volume: 10.011 bbl

Num Fluid Samples: 0

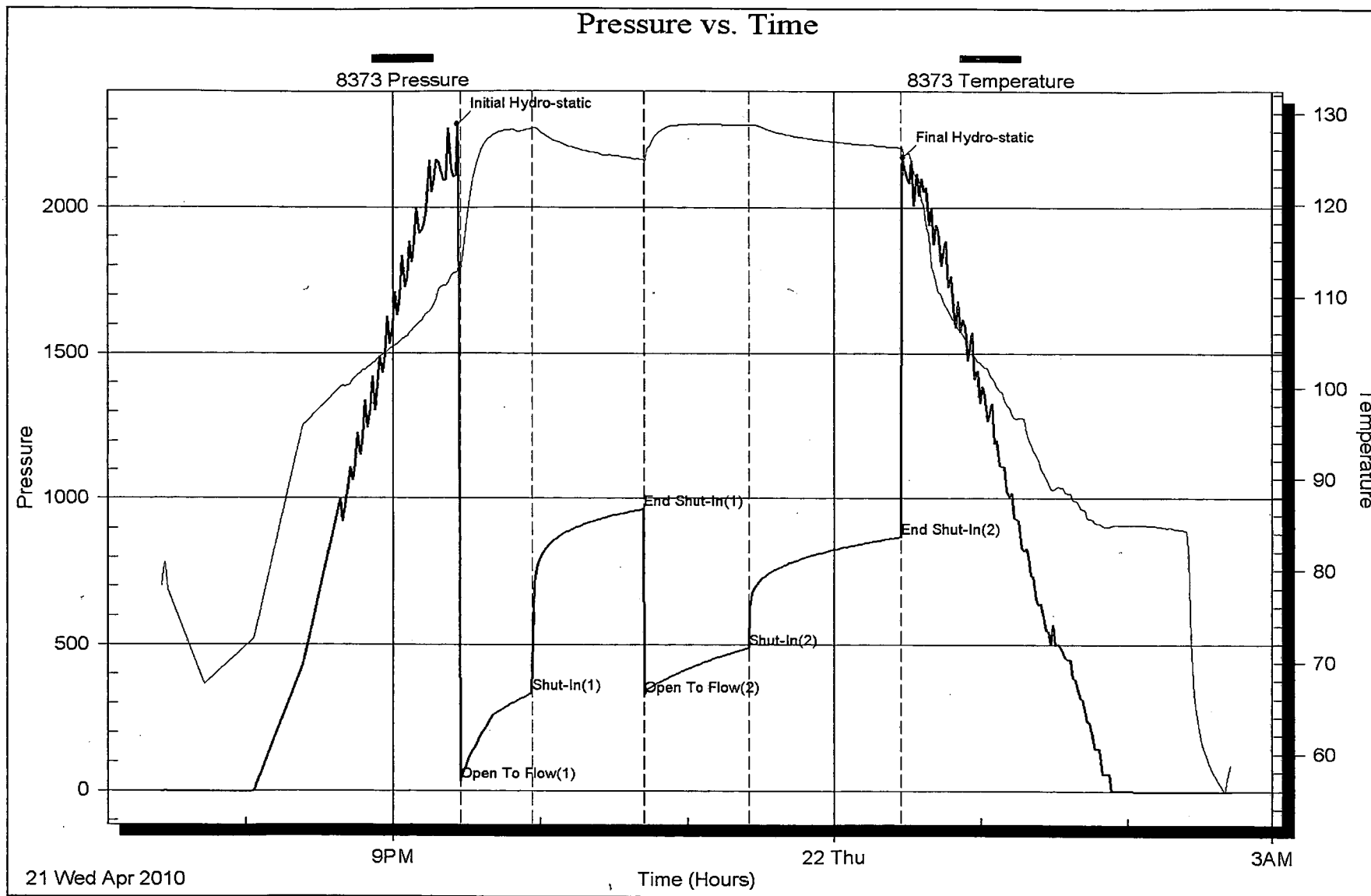
Num Gas Bombs: 0

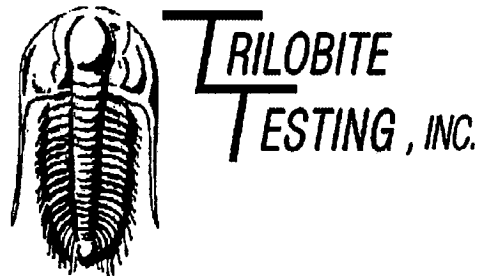
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .14@68= 56000





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, Ks
67278

ATTN: Terry McClead

30-13s-31w Gove KS

Joseph 30CD

Start Date: 2010.04.22 @ 15:16:45

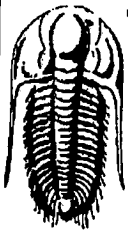
End Date: 2010.04.22 @ 23:45:39

Job Ticket #: 37842 DST #: 10

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

Joseph 30CD

PO Box 783188

30-13s-31w Gove KS

Wichita, Ks

Job Ticket: 37842

DST#: 10

67278

Test Start: 2010.04.22 @ 15:16:45

ATTN: Terry McCleod

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:23:25

Time Test Ended: 23:45:39

Test Type: Conventional Bottom Hole

Tester: Brandon Turley

Unit No: 35

Interval: **4493.00 ft (KB) To 4524.00 ft (KB) (TVD)**

Reference Elevations: 2927.00 ft (KB)

Total Depth: 4524.00 ft (KB) (TVD)

2917.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: 418.24 psig @ 4494.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.04.22

End Date: 2010.04.22

Last Calib.: 2010.04.22

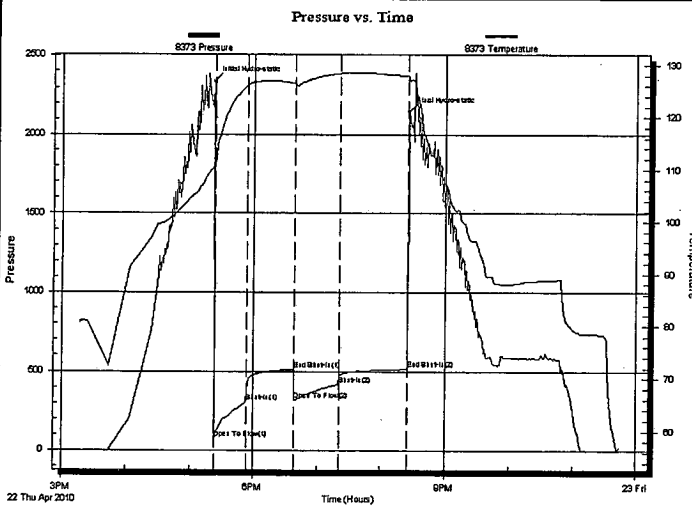
Start Time: 15:16:45

End Time: 23:45:39

Time On Btm: 2010.04.22 @ 17:22:25

Time Off Btm: 2010.04.22 @ 20:25:39

TEST COMMENT: IF: BOB in 3 min.
IS: Surface blow BOB in 22 min.
FF: BOB in 4 min.
FS: BOB in 32 min.



PRESSURE SUMMARY

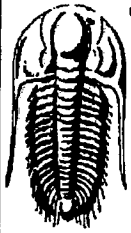
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2338.30	110.65	Initial Hydro-static
1	73.61	110.50	Open To Flow (1)
31	302.86	126.06	Shut-In(1)
76	511.50	126.58	End Shut-In(1)
77	315.33	126.48	Open To Flow(2)
119	418.24	128.39	Shut-In(2)
183	513.29	127.87	End Shut-In(2)
184	2147.78	127.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
94.00	gocm 10%g 20%o 70%m	0.46
1128.00	go 30%g 70%o	11.75
0.00	1034 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37842

DST#: 10

ATTN: Terry McClead

Test Start: 2010.04.22 @ 15:16:45

Tool Information

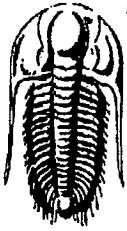
Drill Pipe:	Length: 3961.00 ft	Diameter: 3.80 inches	Volume: 55.56 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 541.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 58.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4493.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	53.00 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			4472.00	
Shut In Tool	5.00			4477.00	
Hydraulic tool	5.00			4482.00	
Safety Joint	2.00			4484.00	
Packer	5.00			4489.00	22.00 Bottom Of Top Packer
Packer	4.00			4493.00	
Stubb	1.00			4494.00	
Recorder	0.00	8373	Inside	4494.00	
Recorder	0.00	6772	Outside	4494.00	
Perforations	25.00			4519.00	
Bullnose	5.00			4524.00	31.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

Joseph 30CD

PO Box 783188
Wichita, Ks
67278

30-13s-31w Gove KS

Job Ticket: 37842

DST#: 10

ATTN: Terry McCleod

Test Start: 2010.04.22 @ 15:16:45

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 62.00 sec/qt
Water Loss: 7.98 in³
Resistivity: 0.00 ohm.m
Salinity: 2600.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 31 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	gocm 10%g 20%o 70%m	0.462
1128.00	go 30%g 70%o	11.751
0.00	1034 GIP	0.000

Total Length: 1222.00 ft Total Volume: 12.213 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 30@50=31

