

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
June 2009

Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

4/28/13

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

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Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____
 Well Name: _____
 Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

1/21/11	2/4/11	2/5/11
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 063-21883-00-00
 Spot Description: 30' S & 170' E
N/2 N/2 NW Sec. 19 Twp. 13 S. R. 31 East West
360 Feet from North / South Line of Section
14,909 Feet from East / West Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
 County: Gove
 Lease Name: Campbell 19ABC Well #: 2
 Field Name: _____
 Producing Formation: _____
 Elevation: Ground: 2940 Kelly Bushing: 2950
 Total Depth: 4720 Plug Back Total Depth: _____
 Amount of Surface Pipe Set and Cemented at: 223 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: 9000 ppm Fluid volume: 790 bbls
 Dewatering method used: evaporation
 Location of fluid disposal if hauled offsite: _____
 Operator Name: _____
 Lease Name: _____ License #: _____
 Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
 County: _____ Permit #: _____

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: 4/28/11

KCC Office Use ONLY

Letter of Confidentiality Received
 Date: 4/28/11 - 4/28/13
 Confidential Release Date: APR 29 2011
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
 ALT I II III Approved by: MS KCC WICHITA
 Date: 5-11-11

Operator Name: Ritchie Exploration, Inc. Lease Name: Campbell 19ABC Well #: 2

Sec. 19 Twp. 13 S. R. 31 East West County: Gove

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

Drill Stem Tests Taken Yes No
(Attach Additional Sheets)

Samples Sent to Geological Survey Yes No

Cores Taken Yes No

Electric Log Run Yes No

Electric Log Submitted Electronically Yes No
(If no, Submit Copy)

List All E. Logs Run:

Dual Induction Log
Compensated Density/Neutron Log

Log Formation (Top), Depth and Datum 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#	223'	common	175	3% cc, 2% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing				
___ Plug Back TD				
___ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

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TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, Submit ACO-18.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled (Submit ACO-5) <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
--	---	--



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#2 Campbell 19ABC
360' FNL & 1490' FWL
30' S & 170' E of N/2 N/2 NW Section 19-13S-31W
Gove County, Kansas
API# 15-063-21883-0000
Elevation: 2940' GL: 2950' KB

<u>Sample Tops</u>			<u>Ref.</u> <u>Well</u>
Anhydrite	2453'	+497	-10
B/Anhydrite	2475'	+475	-7
Heebner	3950'	-1000	-10
Lansing	3995'	-1045	-9
Muncie Shale	4146'	-1196	-10
Stark Shale	4232'	-1282	-9
Hush	4265'	-1315	-8
BKC	4302'	-1352	-9
Marmaton	4322'	-1372	-9
Pawnee	4432'	-1482	-10
Myrick	4469'	-1519	-11
Fort Scott	4485'	-1535	-10
Cherokee Shale	4509'	-1559	-4
Johnson	4553'	-1603	-3
Morrow Sand	4582'	-1632	-6
Mississippian	4615'	-1665	+5
RTD	4720'	-1770	

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ALLIED CEMENTING CO., LLC. 035559

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

SERVICE POINT:

Oakley, KS

DATE <i>2/5/11</i>	SEC <i>9</i>	TWP <i>13</i>	RANGE <i>31</i>	CALLED OUT	ON LOCATION	JOB START <i>10:00a</i>	JOB FINISH <i>11:00a</i>
LEASER <i>Campbell #2</i>	WELL # <i>19 ABC</i>	LOCATION <i>Oakley 11 S 3 E 35</i>			COUNTY <i>Goose</i>	STATE <i>Ks</i>	
OLD OR NEW (Circle one) <input checked="" type="radio"/> <i>NEW</i>							

CONTRACTOR *Martin 14*

TYPE OF JOB *OTA*

HOLE SIZE *7 7/8* T.D.

CASING SIZE *8 5/8* DEPTH *223*

TUBING SIZE DEPTH

DRILL PIPE *4 1/2* DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT

OWNER *Same*

CEMENT

AMOUNT ORDERED *220 SK 60/40 490*

gel 1/4 Flo Seal

EQUIPMENT

PUMP TRUCK CEMENTER *Alan*

472 HELPER *Wayne*

BULK TRUCK

404 DRIVER *Jerry*

BULK TRUCK

DRIVER

COMMON <i>132</i>	@ <i>15.45</i>	<i>2039.40</i>
POZMIX <i>82</i>	@ <i>8.00</i>	<i>2040</i>
GEL <i>8</i>	@ <i>20.90</i>	<i>166.80</i>
CHLORIDE	@	
ASC	@	
<i>Flo Seal 5516</i>	@ <i>2.20</i>	<i>137.20</i>
	@	
	@	
	@	
	@	
	@	
HANDLING <i>230 SK</i>	@ <i>2.40</i>	<i>552.00</i>
MILEAGE <i>109 SK / mile</i>		<i>460.00</i>
TOTAL		<i>4059.30</i>

REMARKS:

- 25 SK @ 24.65*
- 100 SK @ 15.15*
- 100 SK @ 2.25*
- 40 SK @ 4.0*
- 30 SK @ 24.65*
- 15 SK @ 24.65*

SERVICE

DEPTH OF JOB		<i>2465</i>
PUMP TRUCK CHARGE		<i>1185.00</i>
EXTRA FOOTAGE	@	
MILEAGE <i>20</i>	@ <i>7.00</i>	<i>140.00</i>
MANIFOLD	@	
	@	
	@	
TOTAL		<i>1325.00</i>

CHARGE TO: *Ritchie Exploration*

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<i>518 wood Plug</i>	@	<i>40.00</i>
	@	
	@	
	@	
TOTAL		<i>40.00</i>

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

PRINTED NAME *Greg Urwick*

SIGNATURE *Greg Urwick*

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

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ALLIED CEMENTING CO., LLC. 040818

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

SERVICE POINT:

Oakley KS
1-22-11

DATE <u>1-21-11</u>	SEC. <u>19</u>	TWP. <u>13N</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION <u>5:30pm</u>	JOB START <u>12:00am</u>	JOB FINISH <u>12:30am</u>
LEASE <u>#2 Campbell</u>	WELL# <u>19-NK</u>	LOCATION <u>Oakley - 5 - Grove Rd</u>			COUNTY <u>Gove</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>			<u>36-35-12W 3 1/2</u>				

CONTRACTOR Munroe #14
TYPE OF JOB Surface
HOLE SIZE 12 1/4 I.D. 223'
CASING SIZE 8 5/8 DEPTH 223'
TUBING SIZE _____ DEPTH _____
DRILL PIPE _____ DEPTH _____
TOOL _____ DEPTH _____
PRES. MAX _____ MINIMUM _____
MEAS. LINE _____ SHOE JOINT _____
CEMENT LEFT IN CSG. 15
PERFS. _____
DISPLACEMENT 13.2

EQUIPMENT

PUMP TRUCK CEMENTER Fuzzy
431 HELPER Darrow
BULK TRUCK
394 DRIVER Jerry
BULK TRUCK
_____ DRIVER _____

REMARKS:

cement did circulate

Job completed @ 12:30am

Thanks Fuzzy & crew

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

OWNER _____

CEMENT
AMOUNT ORDERED 175 cwn 39cc
29cc

COMMON	<u>175</u>	@ <u>15.45</u>	<u>2703.75</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>20.00</u>	<u>62.00</u>
CHLORIDE	<u>6</u>	@ <u>58.20</u>	<u>349.20</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>184</u>	@ <u>2.40</u>	<u>441.60</u>
MILEAGE	<u>107.54</u>	@	<u>368.00</u>
TOTAL			<u>3924.95</u>

SERVICE

DEPTH OF JOB	<u>223'</u>	
PUMP TRUCK CHARGE		<u>1018.00</u>
EXTRA FOOTAGE	@	
MILEAGE	<u>20</u>	@ <u>7.00</u> <u>140.00</u>
MANIFOLD	@	
	@	
	@	
TOTAL <u>1158.00</u>		

PLUG & FLOAT EQUIPMENT

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

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

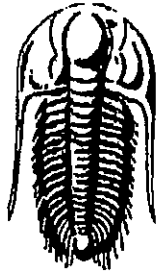
To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS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

PRINTED NAME Craig Smith
SIGNATURE Craig Smith

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(Handwritten initials)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.25 @ 01:41:00

End Date: 2011.01.25 @ 08:27:50

Job Ticket #: 040636 DST #: 1

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

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

19-13s-31w Gove,KS

DST # 1

LKC 'C'

2011.01.25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
 FOB 783188
 Wichita, KS 67278-3188
 ATTN: Ted Jochems

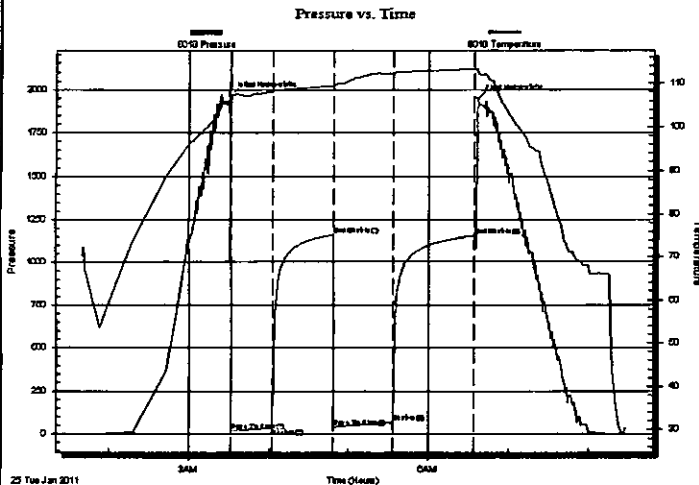
#2 Campbell 19 ABC
19-13s-31w Gove,KS
 Job Ticket: 040636 DST#: 1
 Test Start: 2011.01.25 @ 01:41:00

GENERAL INFORMATION:

Formation: **LKC 'C'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:31:30
 Time Test Ended: 08:27:50
 Interval: **4009.00 ft (KB) To 4040.00 ft (KB) (TVD)**
 Total Depth: **4040.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**
 Test Type: **Conventional Bottom Hole**
 Tester: **Chuck Smith**
 Unit No: **37**
 Reference Elevations: **2950.00 ft (KB)**
2940.00 ft (CF)
KB to GRVCF: 10.00 ft

Serial #: 8018 **Inside**
 Press@RunDepth: **68.30 psig @ 4012.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.01.25** End Date: **2011.01.25** Last Calib.: **2011.01.25**
 Start Time: **01:41:05** End Time: **08:27:50** Time On Btm: **2011.01.25 @ 03:31:00**
 Time Off Btm: **2011.01.25 @ 06:36:30**

TEST COMMENT: IF: 2 1/2" Blow.
 IST No return.
 FF: 2" Blow.
 FSt No return.



PRESSURE SUMMARY

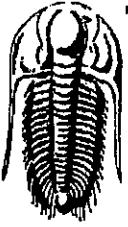
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.22	107.09	Initial Hydro-static
1	16.01	106.89	Open To Flow (1)
32	36.71	108.18	Shut-in(1)
77	1162.43	109.54	End Shut-in(1)
78	40.18	108.80	Open To Flow (2)
123	68.30	112.23	Shut-in(2)
183	1155.62	113.39	End Shut-in(2)
186	1946.80	112.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	OSM 100m	0.22
90.00	MW 50m 50w	0.44

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove, KS
Job Ticket: 040636 DST#: 1
Test Start: 2011.01.25 @ 01:41:00

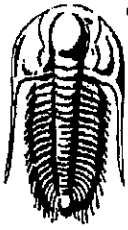
Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 90000.00 lb
			Total Volume: 51.12 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.50 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4009.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	58.50 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			3982.50	
Shut In Tool	5.00			3987.50	
Hydraulic tool	5.00			3992.50	
Jars	5.00			3997.50	
Safety Joint	2.50			4000.00	
Packer	5.00			4005.00	27.50 Bottom Of Top Packer
Packer	4.00			4009.00	
Stubb	1.00			4010.00	
Perforations	2.00			4012.00	
Recorder	0.00	8018	Inside	4012.00	
Recorder	0.00	6751	Outside	4012.00	
Perforations	25.00			4037.00	
Bullnose	3.00			4040.00	31.00 Bottom Packers & Anchor

Total Tool Length: 58.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040636 DST#: 1

ATTN: Ted Jochems

Test Start: 2011.01.25 @ 01:41:00

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: 19000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.16 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2400.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

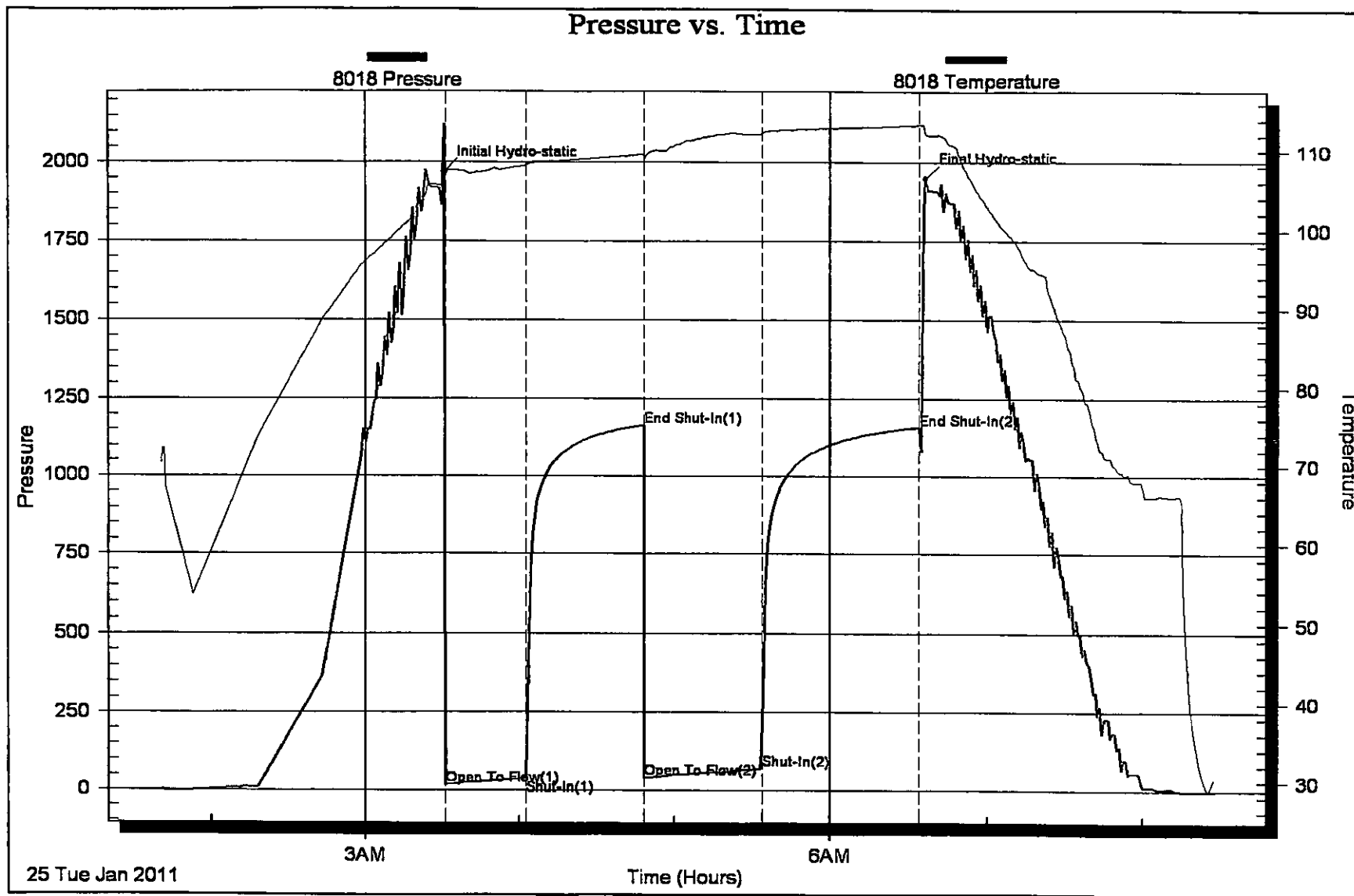
Length ft	Description	Volume bbl
45.00	OSM 100m	0.221
90.00	MW 50m 50w	0.443

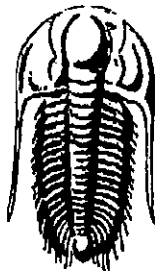
Total Length: 135.00 ft Total Volume: 0.664 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: 445 @ 56 Degrees F = 19000





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.25 @ 21:03:00

End Date: 2011.01.26 @ 02:22:39

Job Ticket #: 040637 DST #: 2

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

Richie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040637 DST#: 2
Test Start: 2011.01.25 @ 21:03:00

Tool Information

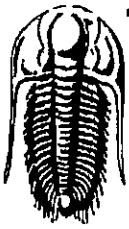
Drill Pipe:	Length: 3511.00 ft	Diameter: 3.80 inches	Volume: 49.25 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 95000.00 lb
			Total Volume: 51.89 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.50 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4069.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.50 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			4042.50	
Shut In Tool	5.00			4047.50	
Hydraulic tool	5.00			4052.50	
Jars	5.00			4057.50	
Safety Joint	2.50			4060.00	
Packer	5.00			4065.00	27.50 Bottom Of Top Packer
Packer	4.00			4069.00	
Stubb	1.00			4070.00	
Perforations	1.00			4071.00	
Recorder	0.00	8018	Inside	4071.00	
Recorder	0.00	6751	Outside	4071.00	
Perforations	20.00			4091.00	
Bullnose	3.00			4094.00	25.00 Bottom Packers & Anchor

Total Tool Length: 52.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040637 DST#: 2

ATTN: Ted Jochems

Test Start: 2011.01.25 @ 21:03:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil APt:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	23000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.56 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

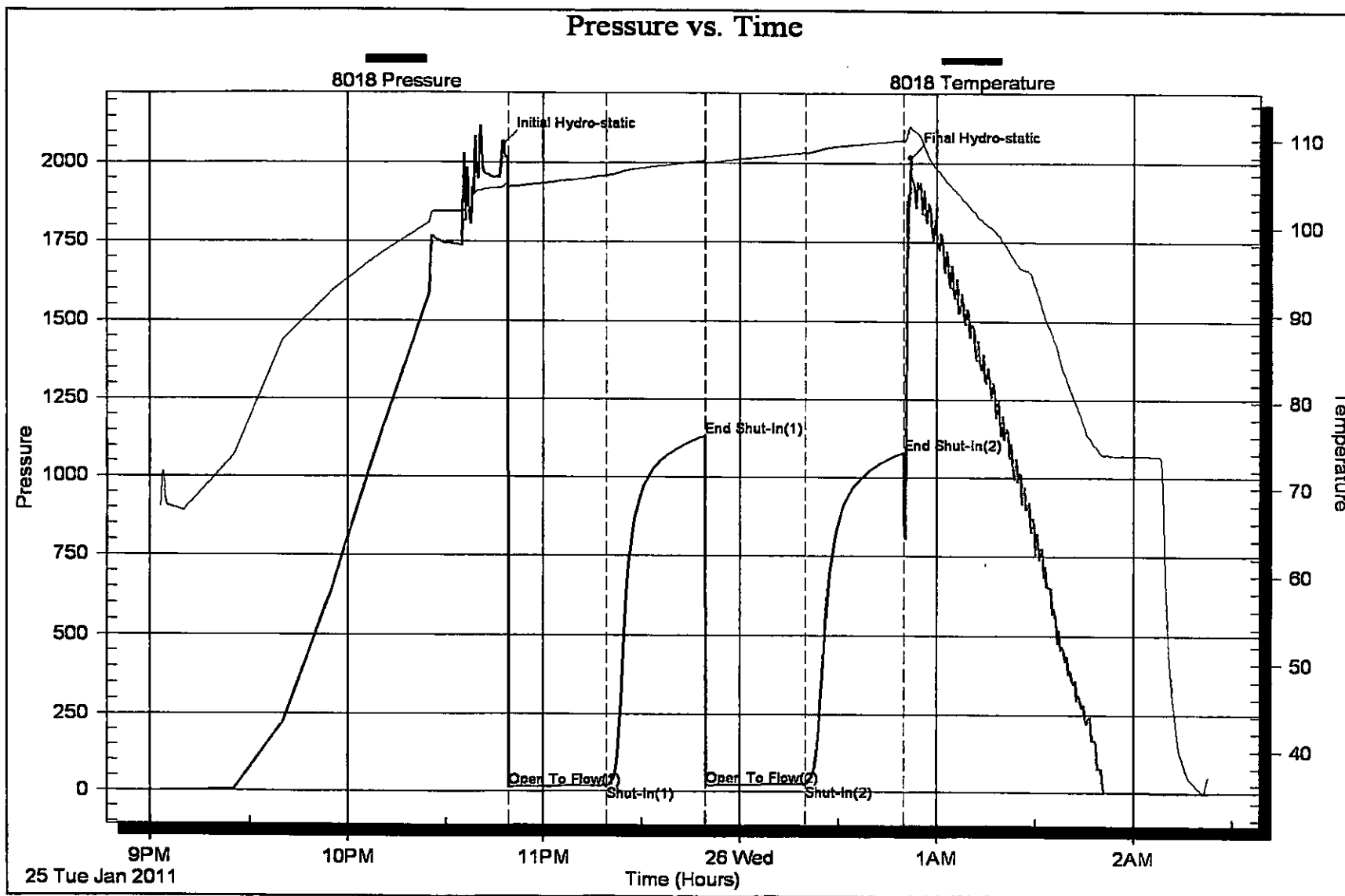
Length ft	Description	Volume bbl
30.00	OSW 50m 50w	0.148

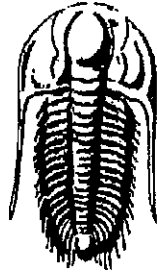
Total Length: 30.00 ft Total Volume: 0.148 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW:355 @ 60 Degrees F = 23000 PPM





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.26 @ 14:22:00

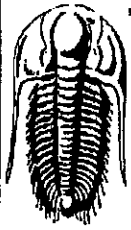
End Date: 2011.01.26 @ 20:41:30

Job Ticket #: 040638 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, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

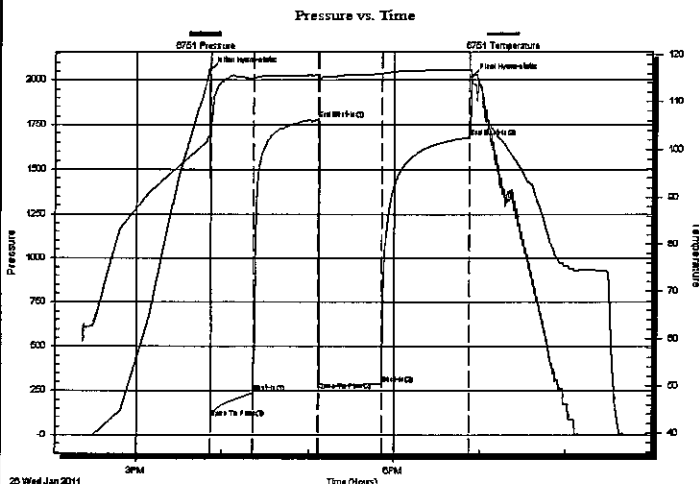
#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040638 DST#: 3
Test Start: 2011.01.26 @ 14:22:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
Deviated: No Whipstock ft (KB)
Time Tool Opened: 15:52:00
Time Test Ended: 20:41:30
Interval: **4142.00 ft (KB) To 4174.00 ft (KB) (TVD)**
Total Depth: **4174.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Chuck Smith
Unit No: 37
Reference Elevations: 2950.00 ft (KB)
2940.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6751 Outside
Press@RunDepth: 290.77 psig @ 4145.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.01.26 End Date: 2011.01.26 Last Calib.: 2011.01.26
Start Time: 14:22:05 End Time: 20:41:29 Time On Btm: 2011.01.26 @ 15:51:00
Time Off Btm: 2011.01.26 @ 18:54:00

TEST COMMENT: IF: B.O.B. @ 5 min. Tool slid 4 1/2 feet
IS: No return.
FF: 8" Blow.
FSI: No return.



PRESSURE SUMMARY

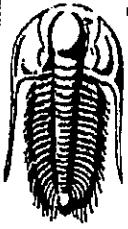
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.11	103.06	Initial Hydro-static
1	94.58	105.59	Open To Flow (1)
31	239.03	114.90	Shut-In(1)
76	1780.32	115.60	End Shut-In(1)
76	252.70	115.04	Open To Flow (2)
121	290.77	115.87	Shut-In(2)
182	1679.24	116.65	End Shut-In(2)
183	2014.35	116.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	WM 40w 60m Oil spots in tool.	1.33
330.00	M	2.20

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040638

DST#: 3

ATTN: Ted Jochems

Test Start: 2011.01.26 @ 14:22:00

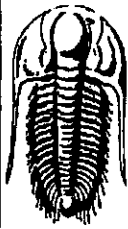
Tool Information

Drill Pipe:	Length: 3613.00 ft	Diameter: 3.80 inches	Volume: 50.68 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 53.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4142.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	52.00 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			4123.00	
Shut In Tool	5.00			4128.00	
Hydraulic tool	5.00			4133.00	
Packer	5.00			4138.00	20.00 Bottom Of Top Packer
Packer	4.00			4142.00	
Stubb	1.00			4143.00	
Perforations	2.00			4145.00	
Recorder	0.00	8018	Inside	4145.00	
Recorder	0.00	6751	Outside	4145.00	
Perforations	26.00			4171.00	
Bullnose	3.00			4174.00	32.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040638 DST#: 3

ATTN: Ted Jochems

Test Start: 2011.01.26 @ 14:22:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 53.00 sec/qt
Water Loss: 7.95 in³
Resistivity: 0.00 ohm.m
Salinity: 3200.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 20000 ppm

Recovery Information

Recovery Table

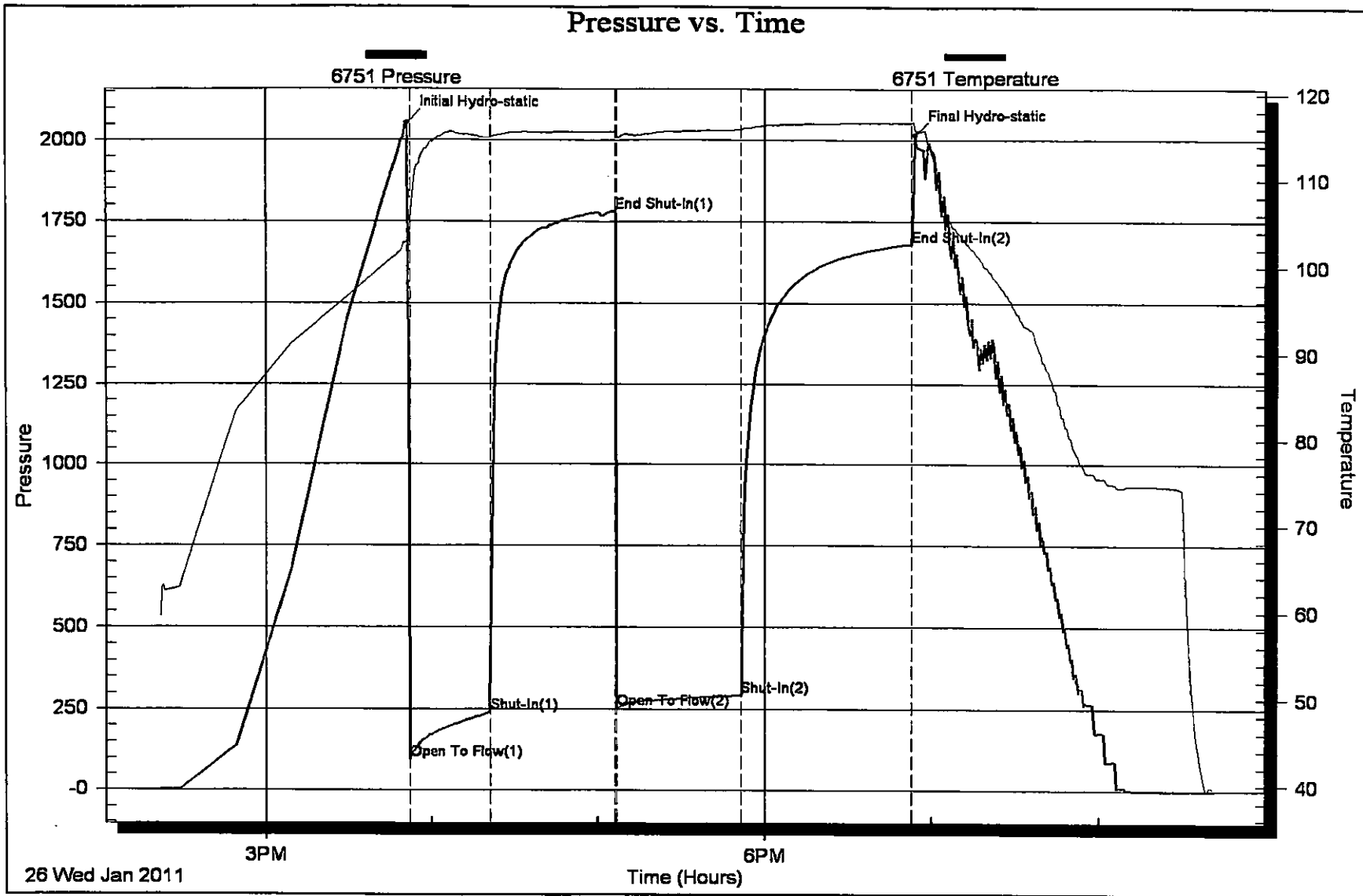
Length ft	Description	Volume bbl
270.00	WM 40w 60m Oil spots in tool.	1.328
330.00	M	2.197

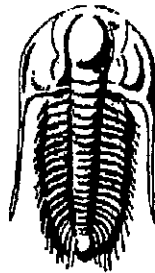
Total Length: 600.00 ft Total Volume: 3.525 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW:378 @ 60 Degrees F = 20000 PPM





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.27 @ 05:02:00

End Date: 2011.01.27 @ 12:29:09

Job Ticket #: 040639 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration, Inc.

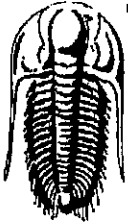
#2 Campbell 19 ABC

19-13s-31w Gove,KS

DST # 4

LKC jr

2011.01.27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

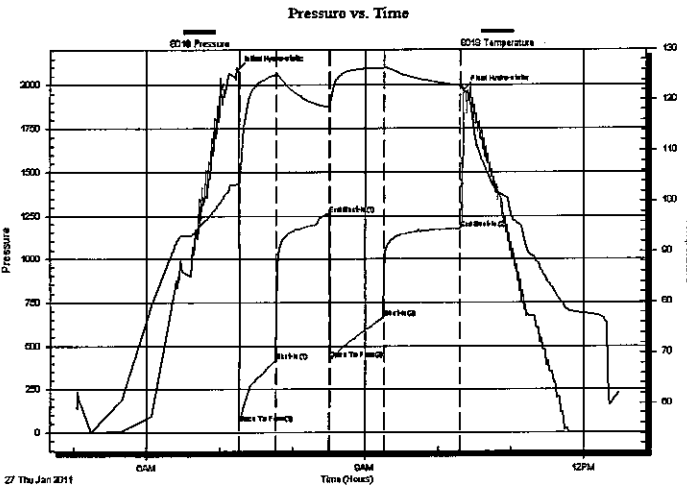
#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040639 DST#: 4
Test Start: 2011.01.27 @ 05:02:00

GENERAL INFORMATION:

Formation: **LKC 'I'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:15:40
Time Test Ended: 12:29:09
Interval: **4174.00 ft (KB) To 4208.00 ft (KB) (TVD)**
Total Depth: **4208.00 ft (KB) (TVD)**
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Chuck Smith
Unit No: 37
Reference Elevations: 2950.00 ft (KB)
2940.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8018 Inside
Press@RunDepth: 663.61 psig @ 4178.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.01.27 End Date: 2011.01.27 Last Calib.: 2011.01.27
Start Time: 05:02:05 End Time: 12:29:10 Time On Btm: 2011.01.27 @ 07:13:30
Time Off Btm: 2011.01.27 @ 10:20:50

TEST COMMENT: IF: B.O.B. @ 4 min.
IS: Weak surface return throughout.
FF: B.O.B. @ 7 min.
FSI: No return.



PRESSURE SUMMARY

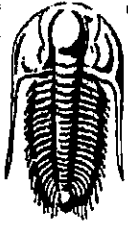
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2088.96	103.41	Initial Hydro-static
3	57.06	103.72	Open To Flow (1)
32	416.95	124.98	Shut-In(1)
77	1262.58	118.54	End Shut-In(1)
77	425.02	118.44	Open To Flow (2)
122	663.61	126.24	Shut-In(2)
185	1175.55	122.79	End Shut-In(2)
188	1975.53	121.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MW 50m 50w	0.44
732.00	MW 5m 95w Popping gas	6.20
570.00	MW 30m 70w	8.00
30.00	OSMW 40m 60w	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040639 DST#: 4
Test Start: 2011.01.27 @ 05:02:00

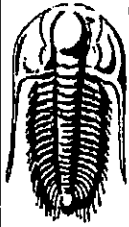
Tool Information

Drill Pipe:	Length: 3638.00 ft	Diameter: 3.80 inches	Volume: 51.03 bbl	Tool Weight: 2500.00 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: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 100000.0 lb
			Total Volume: 53.67 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4174.00 ft			Final 86000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	54.00 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			4155.00	
Shut In Tool	5.00			4160.00	
Hydraulic tool	5.00			4165.00	
Packer	5.00			4170.00	20.00 Bottom Of Top Packer
Packer	4.00			4174.00	
Stubb	1.00			4175.00	
Perforations	3.00			4178.00	
Recorder	0.00	8018	Inside	4178.00	
Recorder	0.00	6751	Outside	4178.00	
Perforations	27.00			4205.00	
Bullnose	3.00			4208.00	34.00 Bottom Packers & Anchor

Total Tool Length: 54.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040639 DST#: 4
Test Start: 2011.01.27 @ 05:02:00

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:	50000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3200.00 ppm			
Filter Cake: 1.00 inches			

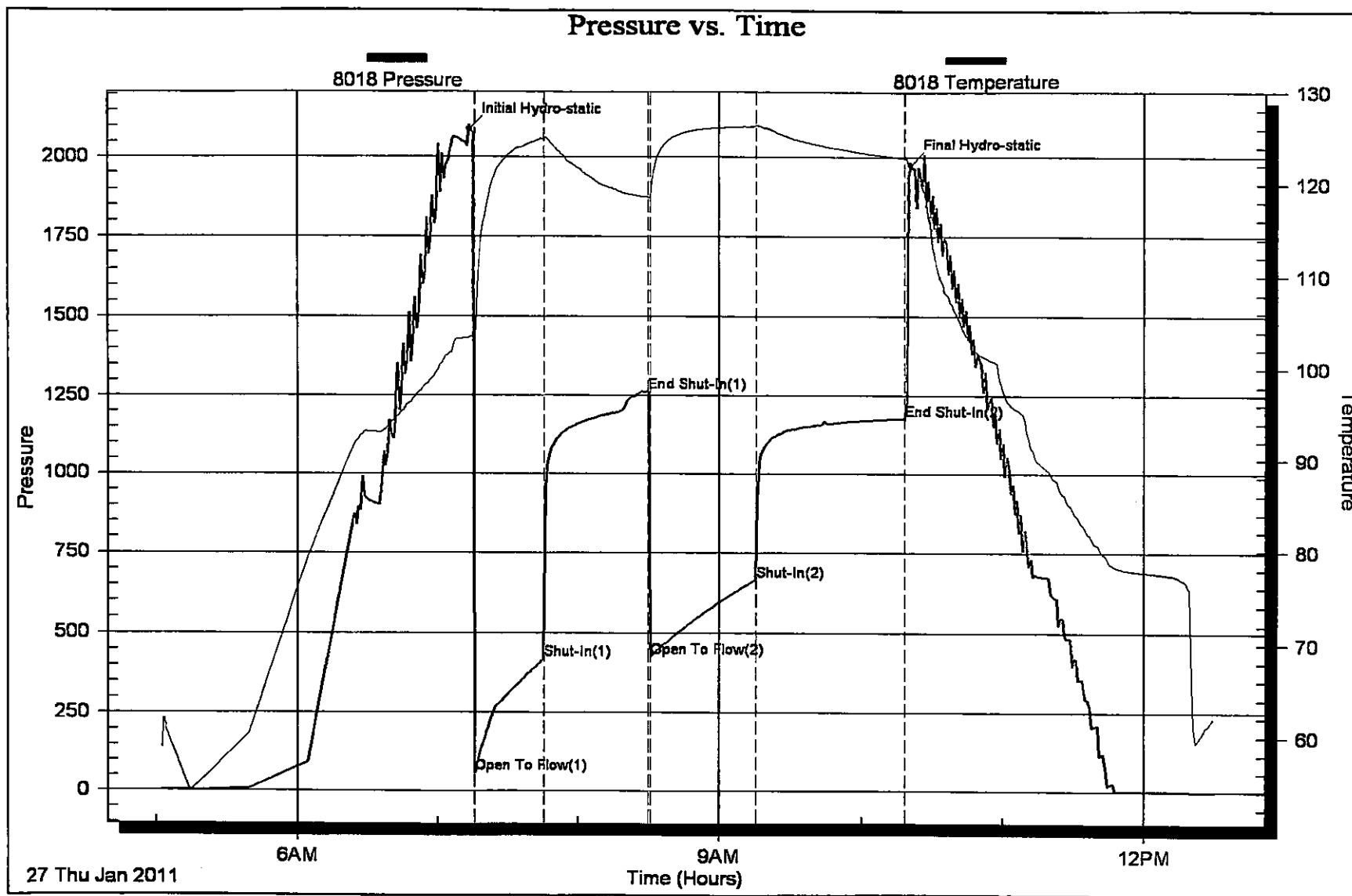
Recovery Information

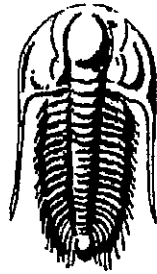
Recovery Table

Length ft	Description	Volume bbl
90.00	MW 50m 50w	0.443
732.00	MW 5m 95w Popping gas	6.196
570.00	MW 30m 70w	7.996
30.00	OSMW 40m 60w	0.421

Total Length: 1422.00 ft Total Volume: 15.056 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW: 175 @ 60 Degrees F = 50000 PPM





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.27 @ 21:02:00

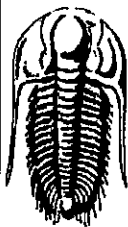
End Date: 2011.01.28 @ 04:07:50

Job Ticket #: 040640 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040640 DST#: 5

ATTN: Ted Jocherns

Test Start: 2011.01.27 @ 21:02:00

GENERAL INFORMATION:

Formation: LKC 'J'
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:04:40
 Time Test Ended: 04:07:50

Test Type: Conventional Bottom Hole
 Tester: Chuck Smith
 Unit No: 37

Interval: 4202.00 ft (KB) To 4230.00 ft (KB) (TVD)
 Total Depth: 4230.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2950.00 ft (KB)
 2940.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8018 Inside

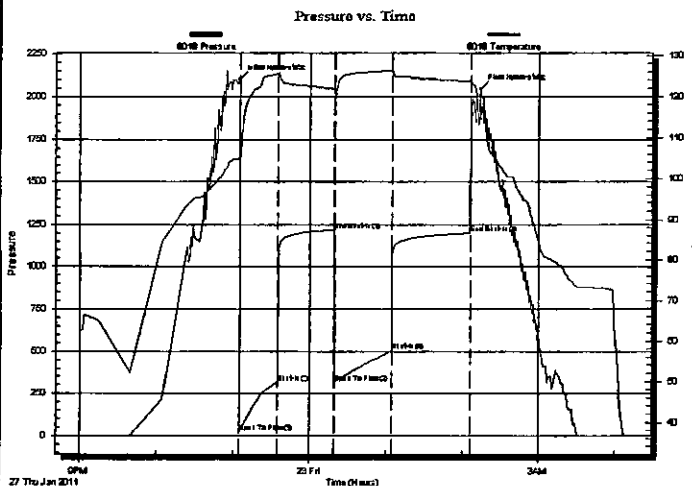
Press@RunDepth: 502.30 psig @ 4205.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2011.01.27 End Date: 2011.01.28 Last Calib.: 2011.01.28

Start Time: 21:02:05 End Time: 04:07:50 Time On Btm: 2011.01.27 @ 23:04:10

Time Off Btm: 2011.01.28 @ 02:13:50

TEST COMMENT: IF: B.O.B. @ 9 min.
 IS: Surface return.
 FF: B.O.B. @ 12 min.
 FS: Surface return.



PRESSURE SUMMARY

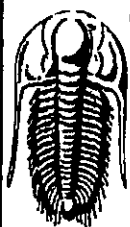
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2104.60	105.10	Initial Hydro-static
1	21.77	104.02	Open To Flow (1)
31	314.43	125.46	Shut-In(1)
75	1218.93	121.83	End Shut-In(1)
76	315.66	120.91	Open To Flow (2)
121	502.30	126.18	Shut-In(2)
182	1199.90	123.84	End Shut-In(2)
190	2048.54	119.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	MW	0.44
525.00	MW 5m 95w Popping gas	3.29
45.00	OSMW 40m 60w	0.63

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040640

DST#: 5

ATTN: Ted Jochems

Test Start: 2011.01.27 @ 21:02:00

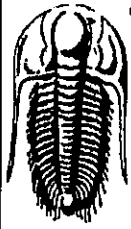
Tool Information

Drill Pipe:	Length: 3669.00 ft	Diameter: 3.80 inches	Volume: 51.47 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 54.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4202.00 ft			Final 88000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	48.00 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			4183.00	
Shut In Tool	5.00			4188.00	
Hydraulic tool	5.00			4193.00	
Packer	5.00			4198.00	20.00 Bottom Of Top Packer
Packer	4.00			4202.00	
Stubb	1.00			4203.00	
Perforations	2.00			4205.00	
Recorder	0.00	8018	Inside	4205.00	
Recorder	0.00	6751	Outside	4205.00	
Perforations	22.00			4227.00	
Bullnose	3.00			4230.00	28.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040640 DST#: 5
Test Start: 2011.01.27 @ 21:02:00

Mud and Cushion Information

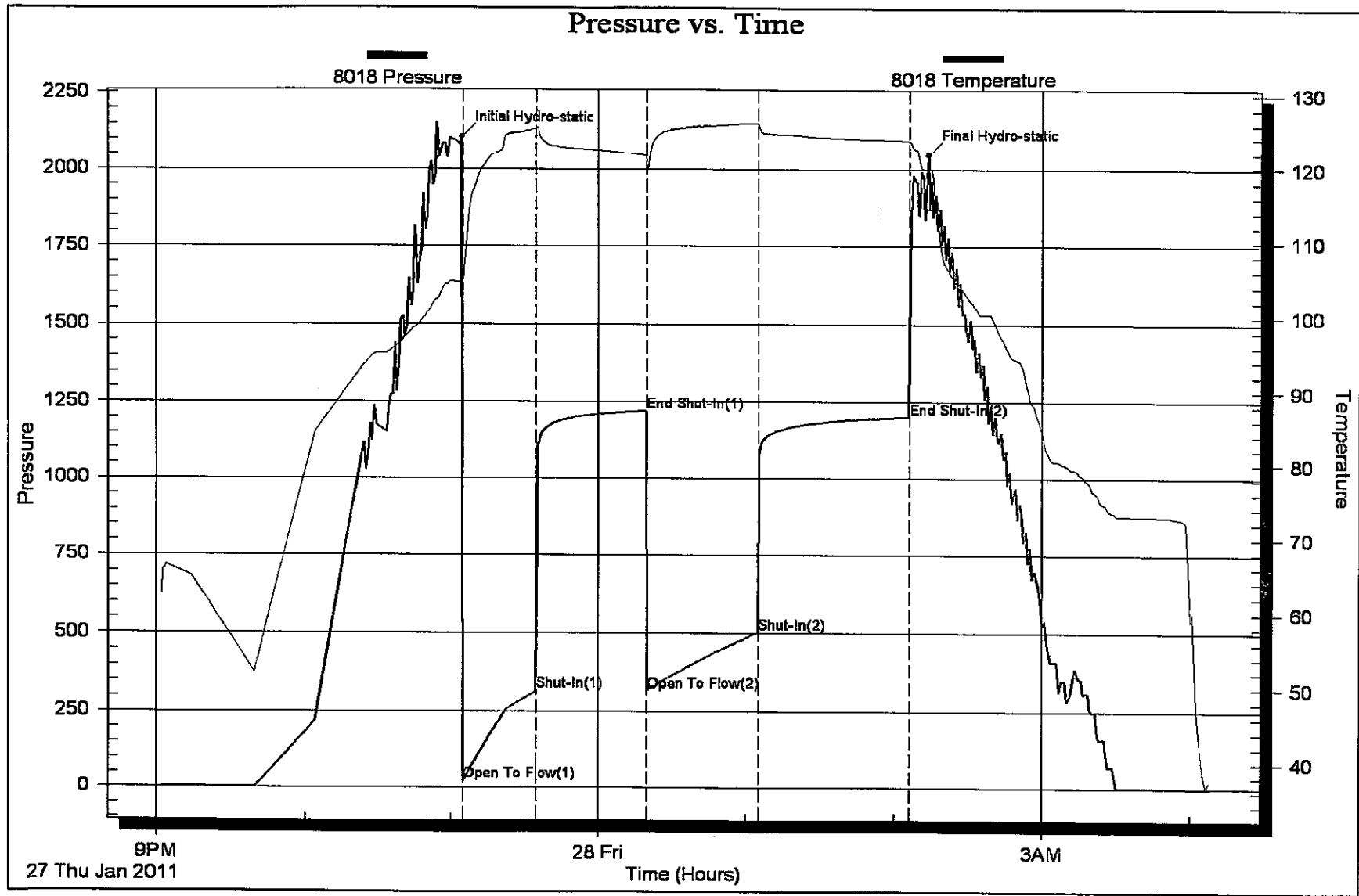
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	59000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.75 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 1.00 inches			

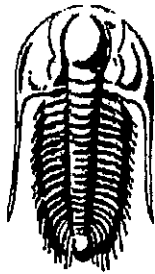
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	MW	0.443
525.00	MW 5m 95w Popping gas	3.292
45.00	OSMW 40m 60w	0.631

Total Length: 660.00 ft Total Volume: 4.366 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW:130 @ 68 Degrees F = 59000 PPM





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.28 @ 16:31:00

End Date: 2011.01.28 @ 23:23:00

Job Ticket #: 040641 DST #: 6

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration, Inc.

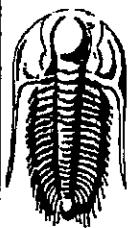
#2 Campbell 19 ABC

19-13s-31w Gove,KS

DST # 6

LKC 'K.L.'

2011.01.28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove, KS

Job Ticket: 040641 DST#: 6

ATTN: Ted Jochems

Test Start: 2011.01.28 @ 16:31:00

GENERAL INFORMATION:

Formation: LKC 'K,L'

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:19:20

Time Test Ended: 23:23:00

Test Type: Conventional Bottom Hole

Tester: Chuck Smith

Unit No: 37

Interval: 4228.00 ft (KB) To 4300.00 ft (KB) (TVD)

Total Depth: 4300.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2950.00 ft (KB)

2940.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8018

Inside

Press@RunDepth: 294.65 psig @ 4234.00 ft (KB)

Start Date: 2011.01.28

End Date: 2011.01.28

Start Time: 16:31:05

End Time: 23:22:59

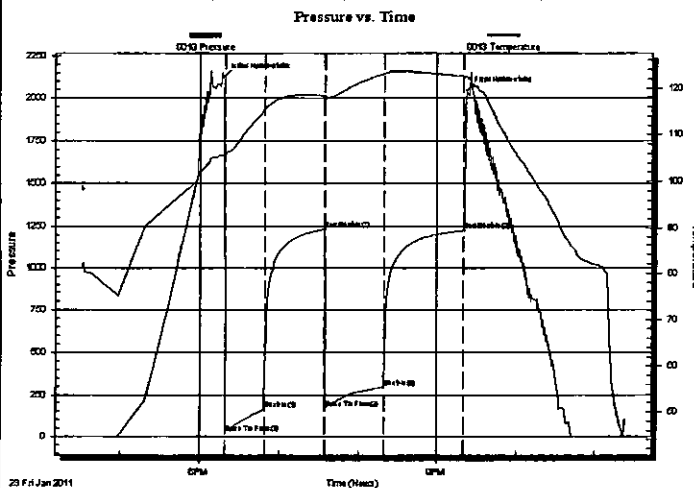
Capacity: 8000.00 psig

Last Calib.: 2011.01.28

Time On Btm: 2011.01.28 @ 18:17:40

Time Off Btm: 2011.01.28 @ 21:22:39

TEST COMMENT: IF: B.O.B. @ 23 min.
IS: No return.
FF: B.O.B. @ 34 min.
FS: No return.



PRESSURE SUMMARY

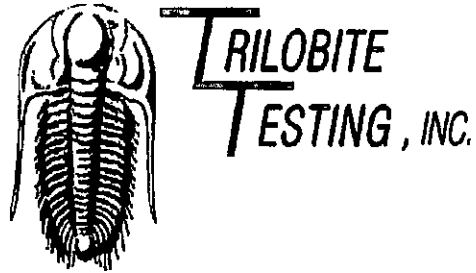
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2123.12	105.67	Initial Hydro-static
2	24.69	105.35	Open To Flow (1)
32	161.96	115.20	Shut-In(1)
77	1233.53	118.33	End Shut-In(1)
78	171.35	117.89	Open To Flow (2)
122	294.65	122.99	Shut-In(2)
183	1225.68	122.48	End Shut-In(2)
185	2043.67	122.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	MW 5m 95w Oil spots in tool.	1.33
340.00	MW 40m 60w	2.34
1.00	CO 100o	0.01

Gas Rates

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



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.30 @ 02:20:00

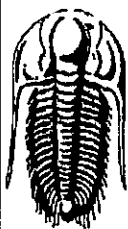
End Date: 2011.01.30 @ 09:32:50

Job Ticket #: 040642 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, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040642 DST#: 7

ATTN: Ted Jochems

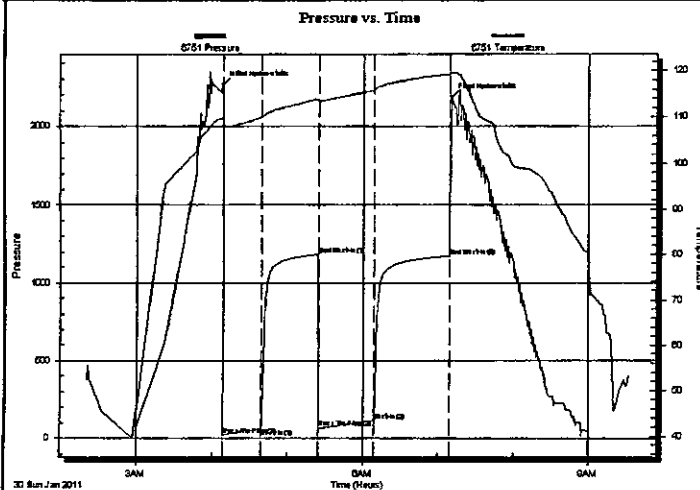
Test Start: 2011.01.30 @ 02:20:00

GENERAL INFORMATION:

Formation: **Myrick, Ft. Scott, C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:08:50
 Time Test Ended: 09:32:50
 Interval: **4455.00 ft (KB) To 4532.00 ft (KB) (TVD)**
 Total Depth: **4532.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**
 Test Type: **Conventional Bottom Hole**
 Tester: **Chuck Smith**
 Unit No: **37**
 Reference Elevations: **2950.00 ft (KB)**
 2940.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 6751 Outside
 Press@RunDepth: **108.93 psig @ 4457.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.01.30** End Date: **2011.01.30** Last Calib.: **2011.01.30**
 Start Time: **02:20:05** End Time: **09:32:50** Time On Btm: **2011.01.30 @ 04:07:50**
 09:32:50 Time Off Btm: **2011.01.30 @ 07:10:09**

TEST COMMENT: IF: 3 1/4" Blow .
 IS: No return.
 FF: 2 1/2" Blow .
 FS: No return.



PRESSURE SUMMARY

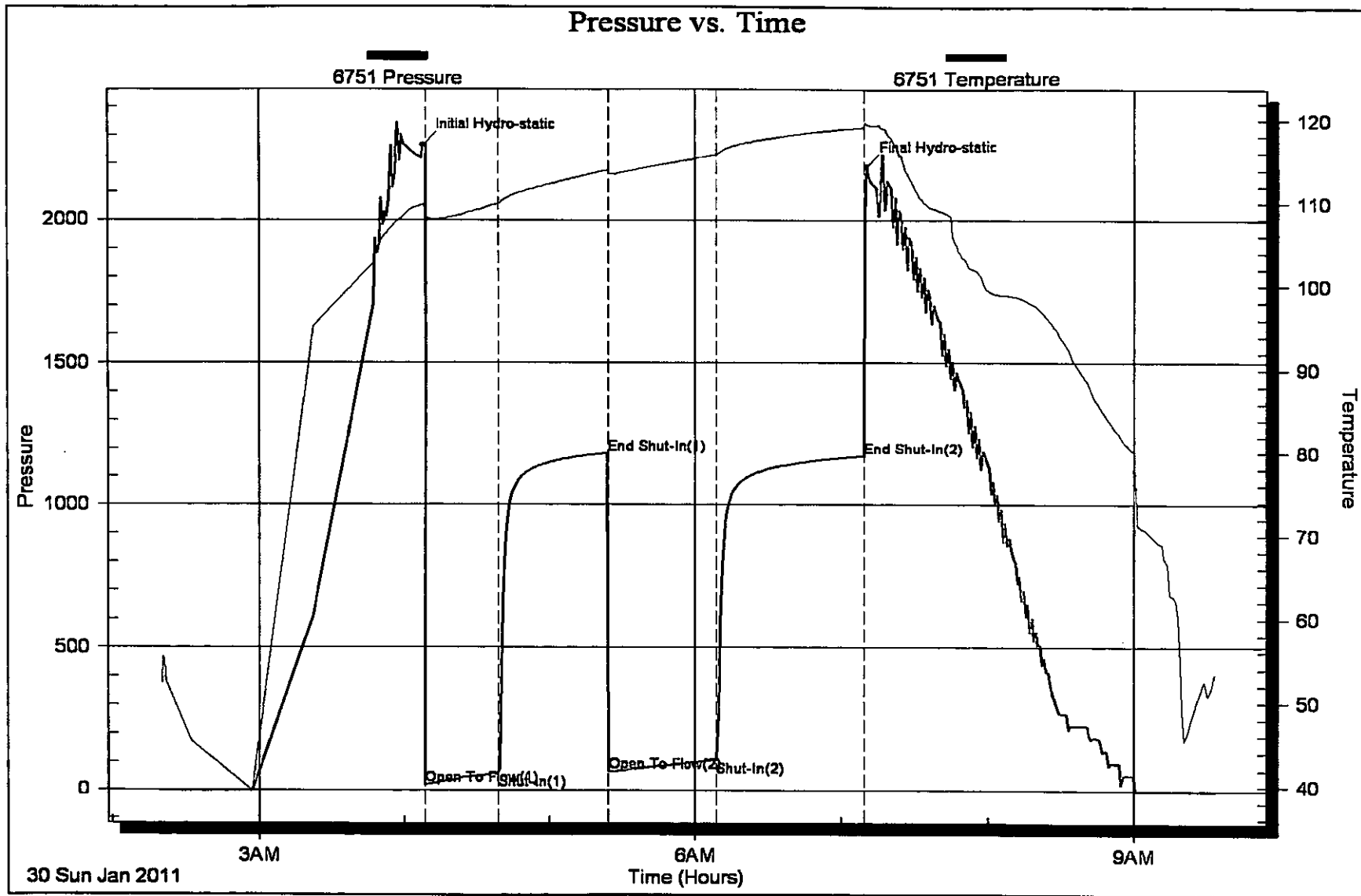
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2263.42	109.85	Initial Hydro-static
1	19.38	108.25	Open To Flow (1)
32	59.81	109.96	Shut-In(1)
76	1180.45	113.97	End Shut-In(1)
77	66.78	113.52	Open To Flow (2)
121	108.93	115.84	Shut-In(2)
182	1170.22	119.18	End Shut-In(2)
183	2186.70	119.56	Final Hydro-static

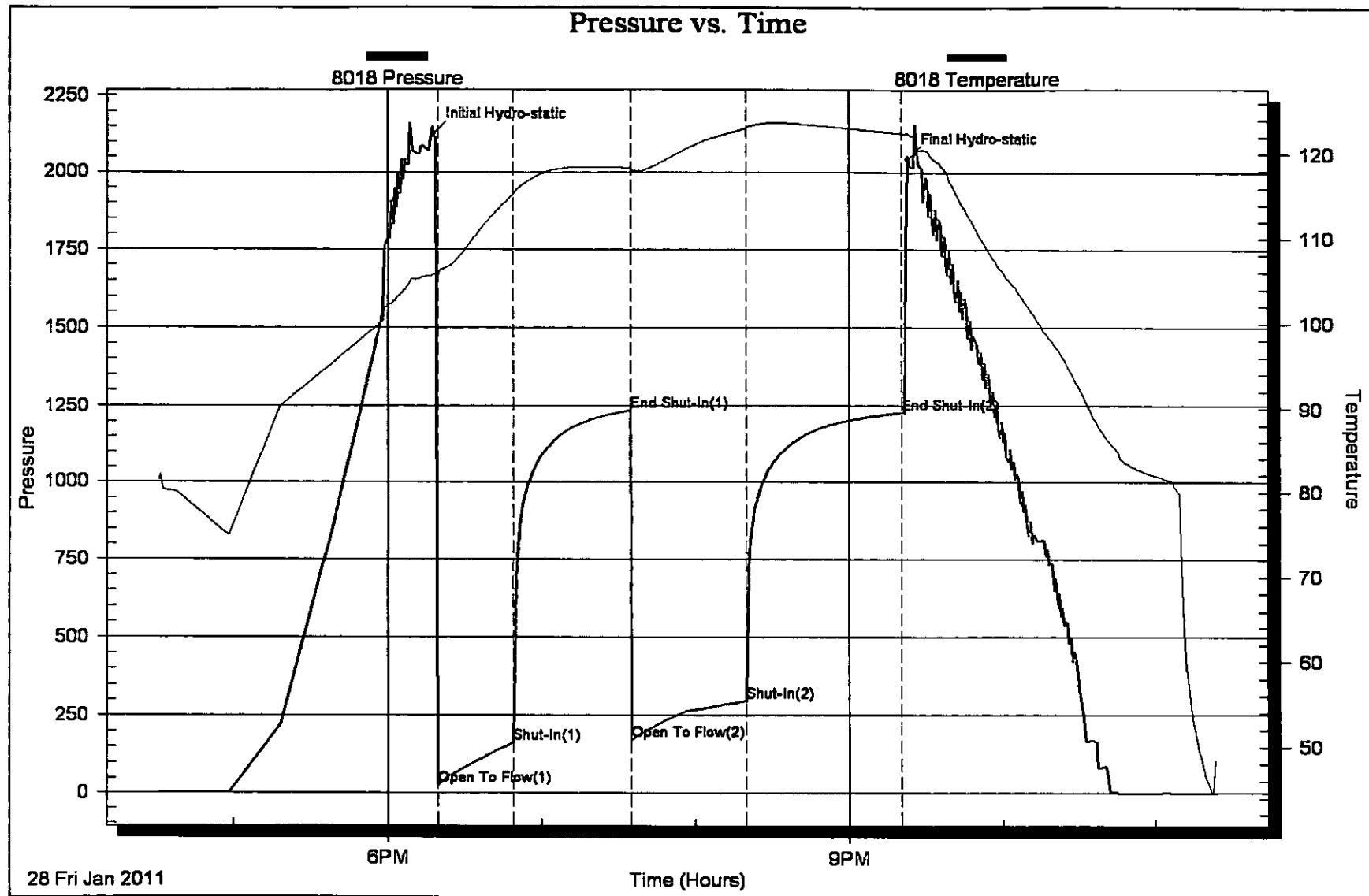
Recovery

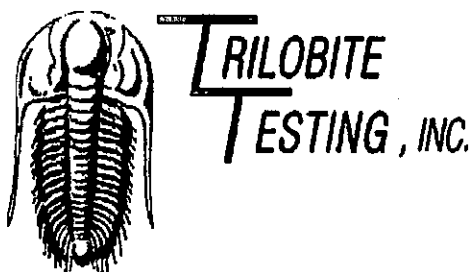
Length (ft)	Description	Volume (bbl)
180.00	MW 50m 50w	0.89
10.00	M 100m Oil spot in tool.	0.05

Gas Rates

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







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.30 @ 18:03:00

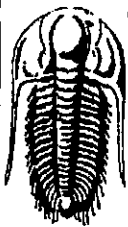
End Date: 2011.01.31 @ 00:45:00

Job Ticket #: 040643 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, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove, KS

Job Ticket: 040643 DST#: 8

ATTN: Ted Jochems

Test Start: 2011.01.30 @ 18:03:00

GENERAL INFORMATION:

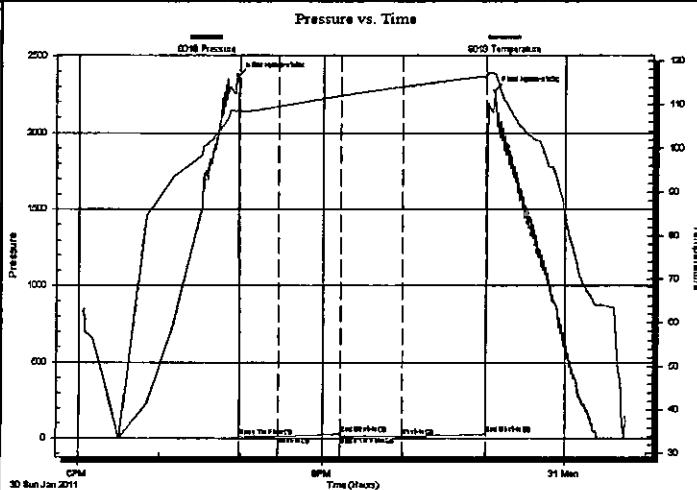
Formation: **Upper Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:58:20
 Time Test Ended: 00:45:00
 Interval: **4543.00 ft (KB) To 4564.00 ft (KB) (TVD)**
 Total Depth: **4564.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**

Test Type: **Conventional Bottom Hole**
 Tester: **Chuck Smith**
 Unit No: **37**

Reference Elevations: **2950.00 ft (KB)**
2940.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 8018 Inside
 Press@RunDepth: **14.87 psig @ 4546.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.01.30** End Date: **2011.01.31** Last Calib.: **2011.01.31**
 Start Time: **18:03:05** End Time: **00:44:59** Time On Btm: **2011.01.30 @ 19:57:00**
 Time Off Btm: **2011.01.30 @ 23:07:09**

TEST COMMENT: IF: 1" Blow.
 IST: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

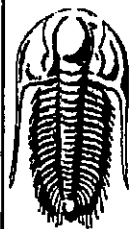
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2372.04	108.55	Initial Hydro-static
2	13.64	108.07	Open To Flow (1)
31	14.35	109.59	Shut-In(1)
77	31.66	112.01	End Shut-In(1)
77	13.01	112.01	Open To Flow (2)
123	14.87	114.10	Shut-In(2)
184	29.35	116.45	End Shut-In(2)
191	2276.07	117.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	M 100m	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040643

DST#: 8

ATTN: Ted Jochems

Test Start: 2011.01.30 @ 18:03:00

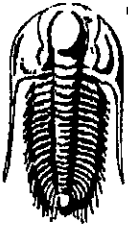
Tool Information

Drill Pipe:	Length: 3994.00 ft	Diameter: 3.80 inches	Volume: 56.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 58.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4543.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	41.00 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			4524.00	
Shut In Tool	5.00			4529.00	
Hydraulic tool	5.00			4534.00	
Packer	5.00			4539.00	20.00 Bottom Of Top Packer
Packer	4.00			4543.00	
Stubb	1.00			4544.00	
Perforations	2.00			4546.00	
Recorder	0.00	8018	Inside	4546.00	
Recorder	0.00	6751	Outside	4546.00	
Perforations	15.00			4561.00	
Bullnose	3.00			4564.00	21.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040643 DST#: 8
Test Start: 2011.01.30 @ 18:03:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil APt:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Safinity:	0 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.15 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2400.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	M 100m	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

FLUID SUMMARY

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040642 DST#: 7

ATTN: Ted Jochems

Test Start: 2011.01.30 @ 02:20:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 64.00 sec/qt
Water Loss: 7.18 in³
Resistivity: 0.00 ohm.m
Salinity: 3800.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 40000 ppm

Recovery Information

Recovery Table

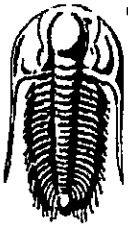
Length ft	Description	Volume bbl
180.00	MW 50m 50w	0.885
10.00	M 100m Oil spot in tool.	0.049

Total Length: 190.00 ft Total Volume: 0.934 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW:180 @ 70 Degrees F = 40000 PPM



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

#2 Campbell 19 ABC

POB 783188
Wichita, KS 67278-3188

19-13s-31w Gove,KS

Job Ticket: 040642

DST#: 7

ATTN: Ted Jochems

Test Start: 2011.01.30 @ 02:20:00

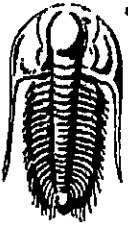
Tool Information

Drill Pipe:	Length: 3930.00 ft	Diameter: 3.80 inches	Volume: 55.13 bbl	Tool Weight: 2500.00 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: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 57.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4455.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	97.00 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			4436.00	
Shut In Tool	5.00			4441.00	
Hydraulic tool	5.00			4446.00	
Packer	5.00			4451.00	20.00 Bottom Of Top Packer
Packer	4.00			4455.00	
Stubb	1.00			4456.00	
Perforations	1.00			4457.00	
Recorder	0.00	8018	Inside	4457.00	
Recorder	0.00	6751	Outside	4457.00	
Perforations	7.00			4464.00	
Change Over Sub	1.00			4465.00	
Drill Pipe	63.00			4528.00	
Change Over Sub	1.00			4529.00	
Bullnose	3.00			4532.00	77.00 Bottom Packers & Anchor

Total Tool Length: 97.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove, KS
Job Ticket: 040641 DST#: 6
Test Start: 2011.01.28 @ 16:31:00

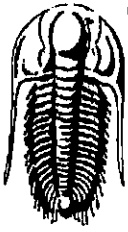
Tool Information

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.80 inches	Volume: 51.58 bbl	Tool Weight: 2500.00 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: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 54.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4228.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	92.00 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			4209.00	
Shut In Tool	5.00			4214.00	
Hydraulic tool	5.00			4219.00	
Packer	5.00			4224.00	20.00 Bottom Of Top Packer
Packer	4.00			4228.00	
Stubb	1.00			4229.00	
Perforations	5.00			4234.00	
Recorder	0.00	8018	Inside	4234.00	
Recorder	0.00	6751	Outside	4234.00	
Perforations	30.00			4264.00	
Change Over Sub	1.00			4265.00	
Drill Pipe	31.00			4296.00	
Change Over Sub	1.00			4297.00	
Bullnose	3.00			4300.00	72.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove, KS
Job Ticket: 040641 DST#: 6
Test Start: 2011.01.28 @ 16:31:00

Mud and Cushion Information

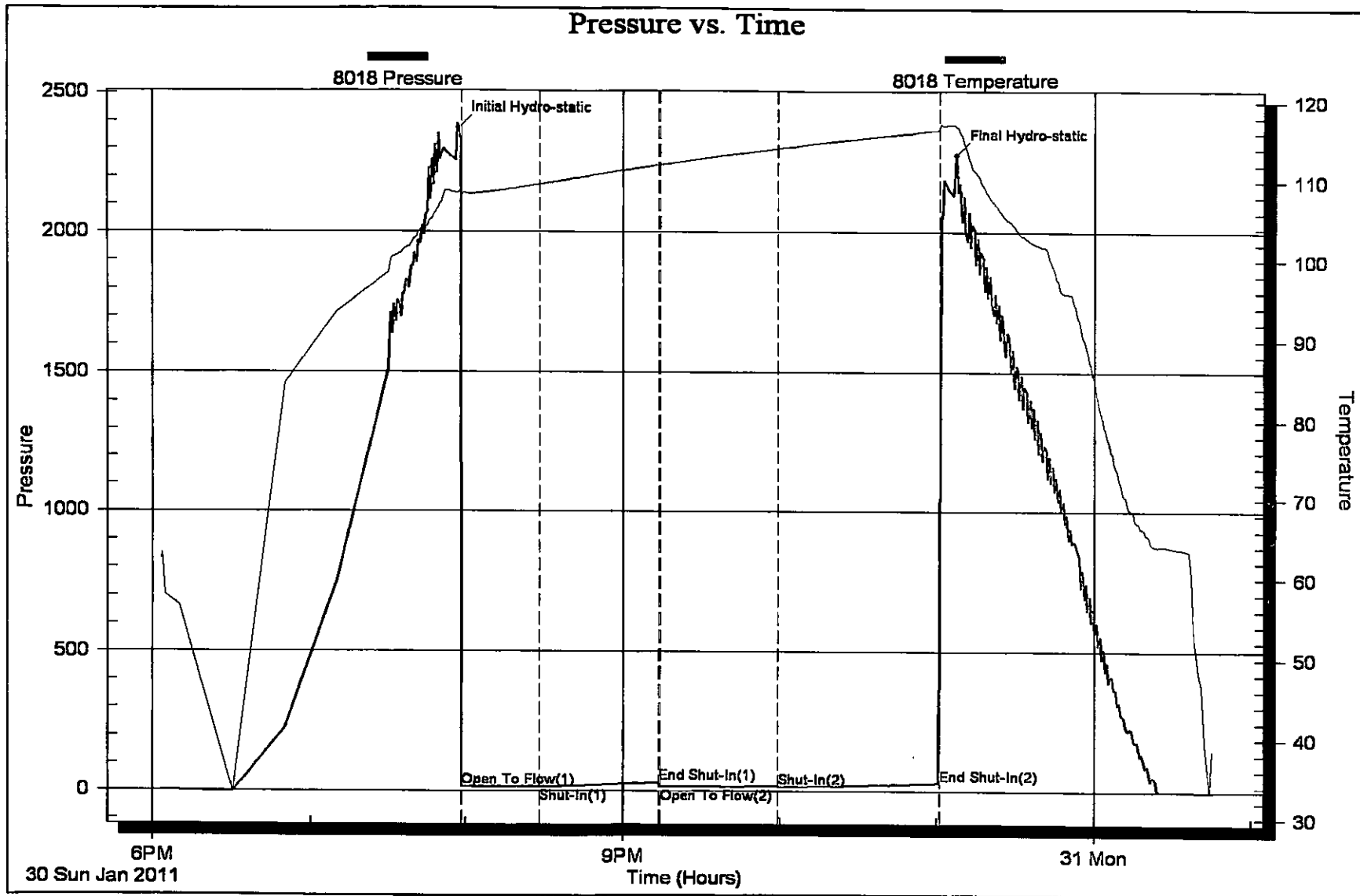
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	60000 ppm
Viscosity: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4400.00 ppm			
Filter Cake: 1.00 inches			

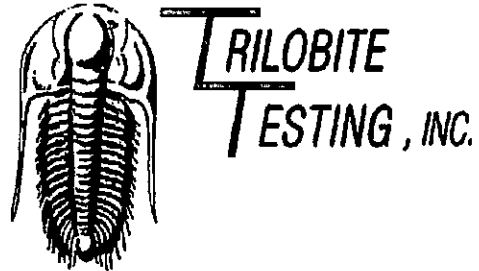
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	MW 5m 95w Oil spots in tool.	1.328
340.00	MW 40m 60w	2.337
1.00	CO 100o	0.014

Total Length: 611.00 ft Total Volume: 3.679 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW: .159 @ 55 Degrees F = 60000 PPM





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.01.31 @ 10:07:00

End Date: 2011.01.31 @ 16:46:50

Job Ticket #: 040644 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

TOOL DIAGRAM

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040644 DST#: 9
Test Start: 2011.01.31 @ 10:07:00

Tool Information

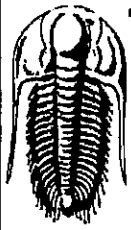
Drill Pipe:	Length: 3993.00 ft	Diameter: 3.80 inches	Volume: 56.01 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume:	58.65 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	4542.00 ft			Final 81000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 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			4523.00	
Shut In Tool	5.00			4528.00	
Hydraulic tool	5.00			4533.00	
Packer	5.00			4538.00	20.00 Bottom Of Top Packer
Packer	4.00			4542.00	
Stubb	1.00			4543.00	
Perforations	3.00			4546.00	
Recorder	0.00	8018	Inside	4546.00	
Recorder	0.00	6751	Outside	4546.00	
Change Over Sub	1.00			4547.00	
Drill Pipe	31.00			4578.00	
Change Over Sub	1.00			4579.00	
Bullnose	3.00			4582.00	40.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
POB 783188
Wichita, KS 67278-3188
ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
Job Ticket: 040644 DST#: 9
Test Start: 2011.01.31 @ 10:07:00

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: 7.98 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

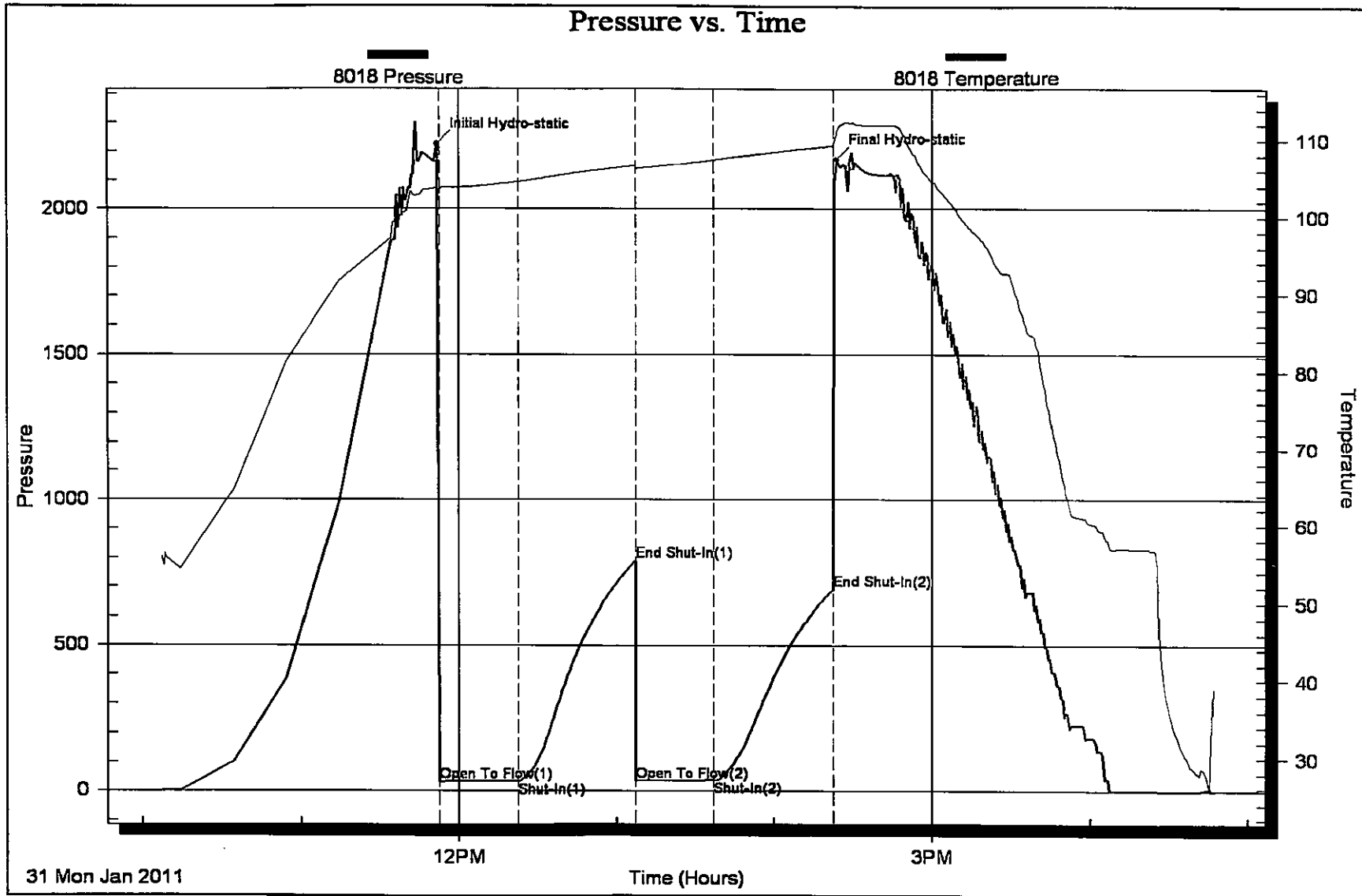
Length ft	Description	Volume bbl
45.00	M 100m	0.221

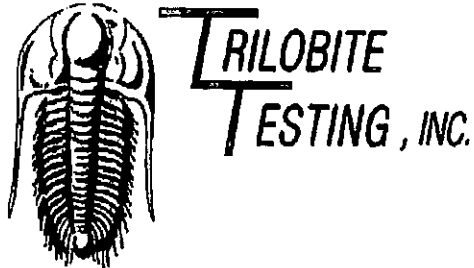
Total Length: 45.00 ft Total Volume: 0.221 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

POB 783188
Wichita, KS 67278-3188

ATTN: Ted Jochems

19-13s-31w Gove,KS

#2 Campbell 19 ABC

Start Date: 2011.02.03 @ 19:00:00

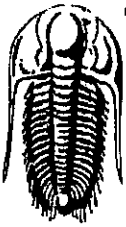
End Date: 2011.02.04 @ 01:25:20

Job Ticket #: 040645 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, Inc.
 POB 783188
 Wichita, KS 67278-3188
 ATTN: Ted Jochems

#2 Campbell 19 ABC
19-13s-31w Gove,KS
 Job Ticket: 040645 DST#: 10
 Test Start: 2011.02.03 @ 19:00:00

GENERAL INFORMATION:

Formation: **Morrow**
 Deviated: **No Whipstock** ft (KB)
 Time Tool Opened: **21:03:40**
 Time Test Ended: **01:25:20**

Test Type: **Conventional Bottom Hole**
 Tester: **Chuck Smith**
 Unit No: **37**

Interval: **4572.00 ft (KB) To 4600.00 ft (KB) (TVD)**
 Total Depth: **4600.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2950.00 ft (KB)**
2940.00 ft (CF)
 KB to GR/CF: **10.00 ft**

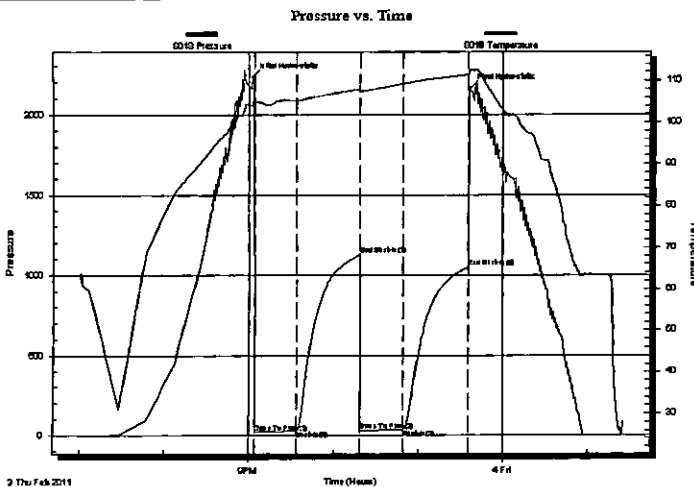
Serial #: 8018

Inside

Press@RunDepth: **34.63 psig @ 4577.00 ft (KB)**
 Start Date: **2011.02.03** End Date: **2011.02.04**
 Start Time: **19:00:05** End Time: **01:25:20**

Capacity: **8000.00 psig**
 Last Calib.: **2011.02.04**
 Time On Btm: **2011.02.03 @ 21:02:30**
 Time Off Btm: **2011.02.03 @ 23:36:39**

TEST COMMENT: IF: 1" Blow.
 IS: No return.
 FF: Weak surface blow.
 FS: No return.



PRESSURE SUMMARY

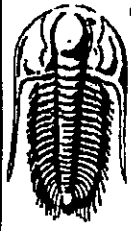
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2235.79	104.16	Initial Hydro-static
2	21.51	104.82	Open To Flow (1)
31	28.16	105.30	Shut-in(1)
76	1132.38	107.93	End Shut-in(1)
77	30.92	107.22	Open To Flow (2)
107	34.63	109.20	Shut-in(2)
153	1046.65	111.39	End Shut-in(2)
155	2168.20	112.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	M 100m Oil spot in tool.	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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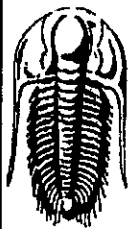
Tool Information

Drill Pipe:	Length: 4026.00 ft	Diameter: 3.80 inches	Volume: 56.47 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 537.00 ft	Diameter: 2.25 inches	Volume: 2.64 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 59.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4572.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	48.00 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			4553.00	
Shut In Tool	5.00			4558.00	
Hydraulic tool	5.00			4563.00	
Packer	5.00			4568.00	20.00 Bottom Of Top Packer
Packer	4.00			4572.00	
Stubb	1.00			4573.00	
Perforations	4.00			4577.00	
Recorder	0.00	8018	Inside	4577.00	
Recorder	0.00	6751	Outside	4577.00	
Perforations	20.00			4597.00	
Bullnose	3.00			4600.00	28.00 Bottom Packers & Anchor

Total Tool Length: 48.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

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Test Start: 2011.02.03 @ 19:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 9.58 in³
Resistivity: 0.00 ohm.m
Salinity: 5800.00 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: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M 100m Oil spot in tool.	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:

