

CONFIDENTIAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

RECEIVED ORIGINAL

SEP 02 2010

Form ACO-1  
June 2009

Form Must Be Typed  
Form must be Signed  
Blank must be Filled

KCC WICHITA

9/1/12

OPERATOR: License # 30606  
Name: Murfin Drilling Company, Inc.  
Address 1: 250 N. Water, Suite 300  
Address 2: \_\_\_\_\_  
City: Wichita State: KS Zip: 67202  
Contact Person: Leon Rodak  
Phone: ( 316 ) 267-3241  
CONTRACTOR: License # 30606  
Name: Murfin Drilling Company, Inc.  
Wellsite Geologist: Bob Stolze  
Purchaser: MV Purchasing

Designate Type of Completion:

- New Well     Re-Entry     Workover
- Oil     WSW     SWD     SLOW
- 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 #: \_\_\_\_\_

05/05/10	05/11/10	06/18/10
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 163-23866-0000  
Spot Description: \_\_\_\_\_  
NE SE NW Sec. 22 Twp. 09 S. R. 17  East  West  
1650 Feet from  North /  South Line of Section  
2310 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: Rooks  
Lease Name: Carmichael Well #: 1-22  
Field Name: Wildcat  
Producing Formation: LKC  
Elevation: Ground: 2108 Kelly Bushing: 2113  
Total Depth: 3670 Plug Back Total Depth: 3568  
Amount of Surface Pipe Set and Cemented at: 220 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: 1398 Feet  
If Alternate II completion, cement circulated from: 1398  
feet depth to: surface w/ 120 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls  
Dewatering method used: \_\_\_\_\_  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**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: VP Production Date: 09/01/10

KCC Office Use ONLY

Letter of Confidentiality Received  
Date: 9/1/10 - 9/1/12  
Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: NJ Date: 9-9-10

Operator Name: Murfin Drilling Company, Inc. Lease Name: Carmichael Well #: 1-22  
 Sec. 22 Twp. 09 S. R. 17  East  West County: Rooks

**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 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 Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: Dual Induction, Compensated Porosity, Microresistivity	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum  See Attached List  SEP 01 2010 CONFIDENTIAL  RECEIVED SEP 02 2010 KCC WICHITA
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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		8 5/8	23#	220	Common	150	3% cc, 2% gel
Production		5 1/2	15.5#	3588	EA-2	150	

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	3270-3280 LKC "A"	250 gal 15% MCA, 750 gal 15% NEFE	
4	3309-3316 LKC "B"	250 gal 15% MCA	
4	3363-3367 LKC "F"	250 gal 15% MCA	
4	3434-3440 LKC "I" & 3454-3460 LKC "J"	400 gal 15% MCA, 750 gal 15% NEFE	

TUBING RECORD: Size: <u>2-3/8</u> Set At: <u>3546</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>07/01/10</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>28</u>	Gas Mcf _____ Water Bbls. <u>5</u> Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>3270-3460</u>
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MDCI  
 Carmichael #1-22  
 1650 FNL 2310 FWL  
 Sec. 22-T9S-R17W  
 2113' KB

MDCI  
 Westhusin #1-22  
 NE SW NE  
 Sec. 22-T9S-R17W  
 2118' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	1387	+726	+10	1386	+727	+11	1402	+716
B/Anhydrite	1425	+688	+4	1422	+691	+7	1434	+684
Topeka	3014	-901	+1	3013	-900	+2	3020	-902
Heebner	3229	-1116	+1	3228	-1115	+2	3235	-1117
Toronto				3252	-1139	Flat	3257	-1139
Lansing	3270	-1157	+3	3270	-1157	+3	3278	-1160
BKC	3505	-1392	Flat	3507	-1394	-2	3510	-1392
Arbuckle	3601	-1488	+5	3598	-1485	+8	3611	-1493
RTD	3670						3650	
LTD				3670			3648	

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SEP 09 2010  
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PO BOX 31 Russell, KS 67665

# INVOICE

*cust. Liz*

PROD COPY

Invoice Number: 122600

Invoice Date: < May 5, 2010 >

Page: 1

Voice: (785) 483-3887

Fax: (785) 483-5566

**Bill To:**

Murfin Drig. Co., Inc.  
250 N. Water  
STE #300  
Wichita, KS 67202

*operator pay  
mcc  
/ B M*

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Murfin	Carmichael #1-22	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-01	Russell	May 5, 2010	6/4/10

Quantity	Item	Description	Unit Price	Amount
150.00	MAT	Class A Common	13.50	2,025.00
3.00	MAT	Gel	20.25	60.75
5.00	MAT	Chloride	51.50	257.50
75.00	SER	Handling	2.25	168.75
1.00	SER	Handling Mileage Charge	300.00	300.00
1.00	SER	Surface	991.00	991.00
30.00	SER	Pump Truck Mileage	7.00	210.00

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*OKM*

Account	Unit	W	No.	Amount	Description
05600	016	W	3635	4137.19	Comm S. Psg.
				(1404.55)	

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 1404.55 35%

ONLY IF PAID ON OR BEFORE

**May 30, 2010**

Subtotal	4,013.00
Sales Tax	124.19
Total Invoice Amount	4,137.19
Payment/Credit Applied	
<b>TOTAL</b>	<b>4,137.19</b>

*1404.55  
273268*

# ALLIED CEMENTING CO., LLC. 041678

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

SERVICE POINT:  
Russell

DATE <u>5-25-10</u>	SEC. <u>22</u>	TWP <u>9</u>	RANGE <u>12</u>	CALLED OUT	ON LOCATION	JOB START <u>6:30pm</u>	JOB FINISH <u>7:09pm</u>
LEASE <u>Carmichael</u>	WELL # <u>1-22</u>	LOCATION <u>Plainville 4 1/2 mi 2nd 1/2 E Sinto</u>		COUNTY <u>Butts</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one)							

CONTRACTOR Murphy LG

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 220

CASING SIZE 8 5/8 DEPTH 220

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 13BL

EQUIPMENT

PUMP TRUCK CEMENTER Craig

# 398 HELPER Bob

BULK TRUCK

# 378 DRIVER Bob

BULK TRUCK

# DRIVER

REMARKS:

8 5/8 OR 10 1/2 IN MAX 150 SK X

Displace Plug

Cement Circulated

CHARGE TO: Martin

STREET

CITY STATE ZIP

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 AFD

SIGNATURE Aleg All

OWNER

CEMENT

AMOUNT ORDERED 1800cm 3% GEL

2% GEL

COMMON	<u>150</u>	@	<u>13.50</u>	<u>2025.00</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>20.25</u>	<u>60.75</u>
CHLORIDE	<u>5</u>	@	<u>51.50</u>	<u>257.50</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>75</u>	@	<u>2.25</u>	<u>168.75</u>
MILEAGE	<u>119.5/1hr</u>			<u>300.00</u>
TOTAL				<u>2812.00</u>

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 991.00

EXTRA FOOTAGE @

MILEAGE 30 @ 7.00 210.00

MANIFOLD @

TOTAL 1201.00

PLUG & FLOAT EQUIPMENT

@

@

@

@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES [scribble]

DISCOUNT [scribble] IF PAID IN 30 DAYS

2000  
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SEP 02 2010  
KCC WICHITA



P. O. Box 466  
Ness City, KS 67560  
Off: 785-798-2300



cc: Lisa  
cc: Lane p.1

# Invoice

DATE	INVOICE #
6/4/2010	17621

<b>BILL TO</b>
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130

USED FOR

APPROVED

*New Well  
Company*  
*JTB*

- Acidizing
- Cement
- Tool Rental

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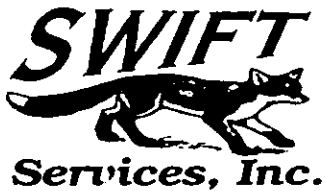
TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-22	CarMichael	Rooks	Company Tools	Oil	Development	Port Collar	Nick

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	40	Miles	5.00	200.00
576D-D	Pump Charge - Port Collar	1	Job	1,100.00	1,100.00
290	D-Air	1	Gallon(s)	35.00	35.00T
279	Bentonite Gel	6	Sack(s)	25.00	150.00T
330	Swift Multi-Density Standard (MIDCON II)	120	Sacks	15.00	1,800.00T
276	Flocele	25	Lb(s)	1.50	37.50T
581D	Service Charge Cement	170	Sacks	1.50	255.00
583D	Drayage	332	Ton Miles	1.00	332.00
	Subtotal				3,909.50
	Sales Tax Rooks County			5.30%	107.19

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**Thank You For Your Business!**

**Total** \$4,016.69



CHARGE TO: *Murfin Drlg Co. Inc*  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

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 KCC WICHITA

TICKET  
 17621  
 PAGE 1 OF 1

SERVICE LOCATIONS  
 1. *Hays, Ks*  
 2. *Ness city, Ks*  
 3.  
 4.

WELL/PROJECT NO. *# 1-22*  
 LEASE *Carmichael*  
 COUNTY/PARISH *Reels*  
 STATE *Ks*  
 CITY  
 DATE *6-4-10*  
 OWNER *Same*

TICKET TYPE  
 SERVICE  
 SALES  
 CONTRACTOR *Co Tools*  
 RIG NAME/NO.  
 SHIPPED VIA *C/T*  
 DELIVERED TO *Location*  
 ORDER NO.

WELL TYPE *oil*  
 WELL CATEGORY *development*  
 JOB PURPOSE *Part Cellar*  
 WELL PERMIT NO.  
 WELL LOCATION

REFERRAL LOCATION  
 INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
<i>575</i>		<i>1</i>			<i>MILEAGE #111</i>	<i>40</i>	<i>mi</i>			<i>5<sup>00</sup></i>	<i>200<sup>00</sup></i>
<i>576D</i>		<i>1</i>			<i>Pump Charge (Part Cellar)</i>	<i>1</i>	<i>ea</i>			<i>1100<sup>00</sup></i>	<i>1100<sup>00</sup></i>
<i>290</i>		<i>1</i>			<i>D-Air</i>	<i>1</i>	<i>gal</i>			<i>35<sup>00</sup></i>	<i>35<sup>00</sup></i>
<i>279</i>		<i>1</i>			<i>Bentonite</i>	<i>6</i>	<i>sk</i>			<i>25<sup>00</sup></i>	<i>150<sup>00</sup></i>
<i>330</i>		<i>2</i>			<i>SMD Cement</i>	<i>120</i>	<i>sk</i>			<i>15<sup>00</sup></i>	<i>1800<sup>00</sup></i>
<i>276</i>		<i>2</i>			<i>Fluocel</i>	<i>25</i>	<i>#</i>			<i>1<sup>50</sup></i>	<i>37<sup>50</sup></i>
<i>581</i>		<i>2</i>			<i>Cement Service Charge</i>	<i>177</i>	<i>sk</i>			<i>1<sup>50</sup></i>	<i>255<sup>00</sup></i>
<i>583</i>		<i>2</i>			<i>Drayage</i>	<i>332</i>	<i>TM</i>			<i>1<sup>00</sup></i>	<i>332<sup>00</sup></i>

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X *John [Signature]*  
 DATE SIGNED *6-4-10* TIME SIGNED *0935*  A.M.  P.M.

REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				<i>3909<sup>50</sup></i>
WE UNDERSTOOD AND MET YOUR NEEDS?				
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				<i>Rooks TAX 5.3%</i>
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				<i>107<sup>19</sup></i>
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL <i>4016<sup>69</sup></i>

JOB LOG

SWIFT Services, Inc.

DATE 6-4-10 PAGE NO. 9

CUSTOMER *Martinez Drilling Co. Inc* WELL NO. # *1-22* LEASE *Carmichael* JOB TYPE *Part Collar* TICKET NO. *17621*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0800							on loc setup Trks
								2 3/4" x 5 1/2" P.C. 1398'
	0815					1000		Test Csg Open P.C.
	0820	3.5	3			50		Take inj. water check for blow
	0825	3.5	0			150		Start gel
		3.5	18/0			150		Start water
	0830	4	5/0			150		start Cement
		4	55			300		circ Cement / raise weight
		4	60/0			300		End Cement / start Displacement
	0845		4.5			350		Cement Displaced
								Close P.C.
	0850					1000		Test Csg
								Run 5 jts
	0900	3	0					circ hole clean
	0905		18					Hole Clean

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120 sks SMD  
circ 15 sks to pit

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Thank you

Nick, Josh F. + John





P. O. Box 466  
Ness City, KS 67560  
Off: 785-798-2300



Acety — cc:LF  
cc:Leon p. 1

# Invoice

DATE	INVOICE #
5/12/2010	17585

<b>BILL TO</b>
Murfin Drilling Co Inc P. O. Box 130 Hill City, KS 67642-0130
USED FOR
APPROVED

- Acidizing
- Cement
- Tool Rental

*now well*  
*J.P.H.*

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-22	CarMichael	Rooks	Murfin Drilling	Oil	Development	LongString	Dave
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
578D-L	Pump Charge - Long String				1	Job	1,400.00	1,400.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
280	Flocheck 21				500	Gallon(s)	2.50	1,250.00T
290	D-Air				2	Gallon(s)	35.00	70.00T
402-5	5 1/2" Centralizer				10	Each	55.00	550.00T
403-5	5 1/2" Cement Basket				2	Each	200.00	400.00T
404-5	5 1/2" Port Collar				1	Each	1,900.00	1,900.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	225.00	225.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	275.00	275.00T
413-5	5 1/2" Roto Wall Scratcher				20	Each	40.00	800.00T
419-5	5 1/2" Rotating Head Rental				1	Each	150.00	150.00T
325	Standard Cement				150	Sacks	12.00	1,800.00T
328-4	60/40 Pozmix (4% Gel)				45		9.75	438.75T
276	Flocele				38	Lb(s)	1.50	57.00T
283	Salt				750	Lb(s)	0.15	112.50T
284	Calseal				7	Sack(s)	30.00	210.00T
285	CFR-1				106	Lb(s)	4.00	424.00T
581D	Service Charge Cement				195	Sacks	1.50	292.50
583D	Drayage				389.4	Ton Miles	1.00	389.40
	Subtotal							11,044.15
	Sales Tax Rooks County						5.30%	464.40

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<b>We Appreciate Your Business!</b>	<b>Total</b>	<b>\$11,508.55</b>
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CHARGE TO: MURFIN DR LG  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

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TICKET  
 17585  
 PAGE 1 OF 2

SERVICE LOCATIONS  
 1. FAV WELL/PROJECT NO. 1-22 LEASE CARMICHAEL COUNTY/PARISH ROOKS STATE KS CITY DATE 05-12-10 OWNER  
 2. NESS TICKET TYPE  SERVICE CONTRACTOR RIG NAME/NO. MURFIN DR LG # 16 SHIPPED VIA GT. DELIVERED TO 4 1/2 E. 2nd Ave. Sino Plaza ORDER NO.  
 3. WELL TYPE DIL WELL CATEGORY DEVELOP JOB PURPOSE LONGSTRING WELL PERMIT NO. 15-163-23866 WELL LOCATION 522.79.R17  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF		QTY.	U/M	QTY.	U/M	
575		1			MILEAGE #112	40	M		5.00	200.00
578		1			Pump SERVICE	1	EA		1400.00	1400.00
221		1			LIQUID UCL	4	GAZ		25.00	100.00
280		1			FLOCHICH 21	500	GAZ		2.50	1250.00
290		1			D-AIR	2	GAZ		35.00	70.00
402		1			CENTRALIZER	10	EA	5 1/2 IN	55.00	550.00
403		1			CMT BASKET	2	EA	5 1/2 IN	200.00	400.00
404		1			PORT COLLAR 1400FT	1	EA	5 1/2 IN	1900.00	1900.00
406		1			LATCH DOWN PLUG & Baffle	1	EA	5 1/2 IN	225.00	225.00
407		1			7-SEAT FLOOR SHOE 1/2 AUTO FILL	1	EA	5 1/2 IN	275.00	275.00
413		1			ROTO WALK SCRATCHERS	20	EA	100 FT	40.00	800.00
419		1			ROTATING HEAD RENTAL	1	EA	5 1/2 IN	150.00	150.00

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X Wade King  
 DATE SIGNED 05-12-10 TIME SIGNED 0700  A.M.  P.M.

REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL	7320	00
PAGE TOTAL	3724	15
Sub TOTAL	11044	15
Rooks TAX 5.3%	464	40
<b>TOTAL</b>	<b>11,508</b>	<b>55</b>



JOB LCG

SWIFT Services, Inc.

DATE 05-12-10 PAGE NO. 1

CUSTOMER MURFIN DRG WELL NO. 1-22 LEASE CARMICHAEL JOB TYPE LONGSTRING TICKET NO. 17585

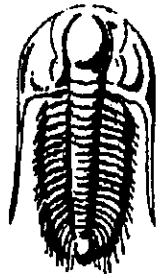
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0700							ON LOCATION CMT: RH.MH, 45s 60-40 4 1/2" CEL 5 1/2" = 150 S&A EA-2 RTD 3670, S&A PEE 3590, SJ 15.47, T&S ELT 3574 5 1/2" 155% PER CALIBRATION TOP # 52, 1400 FT CENT 2.345.79.1114.17.20 BAYETS 2.51 100 FT ROTOWALL SCRAPERS
	0800							START GS 64 FEET EQV
	0925							<del>WASH</del> - DROP BALL
	0930							BREAKING & ROTATE PIPE
	1025		8.4					PLUG RH. 30, MH 15 60-40
	1030	5.0	15		✓			KCL FLUSH
		S	12		✓			FLOCHECK 21 SPOGMS
			5		✓			KCL FLUSH
	1042		36.5		✓			EA 2 CMT
								DROPLED PLUG. WASHOUT PL
	1045	6.0	0		✓		200	START DRS 4" JOBS 2 1/2" KCL
		S	20		✓		200	
			49		✓		300	CMT ON BOTTOM
			75		✓		500	
			80		✓		600	
	1100	4.5	85		✓		1500	LAND PLUG
	1105							RELEASE - DRY
	1145							JOB COMPLETE
								THANK YOU! DAVE, JOAN, LANE

REC'D  
SEP 07 2010  
CONFIDENTIAL

RECEIVED

SEP 12 2010

KCC WICHITA



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Murfin Drilling Co., Inc.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolzle

**22 9S 17W Rooks KS**

**Carmichael #1-22**

Start Date: 2010.05.08 @ 18:45:47

End Date: 2010.05.09 @ 01:43:47

Job Ticket #: 38582                      DST #: 1

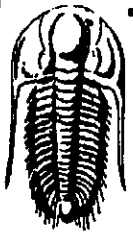
Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

KCC  
SEP 9 2010  
CONFIDENTIAL

RECEIVED

SEP 9 2010

KCC WICHITA



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38582

**DST#: 1**

ATTN: Bob Stolze

Test Start: 2010.05.08 @ 18:45:47

## GENERAL INFORMATION:

Formation: **Toronto, Lansing "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:39:47

Time Test Ended: 01:43:47

Interval: **3225.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Total Depth: **3290.00 ft (KB) (TVD)**

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

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **47**

Reference Elevations: **2115.00 ft (KB)**

**2110.00 ft (CF)**

**KB to GR/CF: 5.00 ft**

## Serial #: 8319

Inside

Press@RunDepth: **33.10 psig @ 3228.00 ft (KB)**

Start Date: **2010.05.08**

End Date:

**2010.05.09**

Capacity: **8000.00 psig**

Last Calib.:

**2010.05.09**

Start Time: **18:45:52**

End Time:

**01:43:46**

Time On Btrr

**2010.05.08 @ 21:38:17**

Time Off Btrr

**2010.05.09 @ 00:24:46**

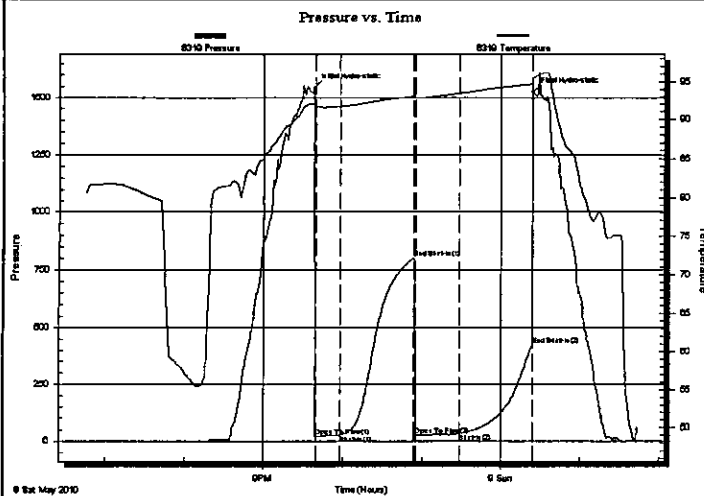
## TEST COMMENT:

IF-very weak surface blow

ISI-no blow

FF-very weak surface blow died in 15min

FSI-no blow



## PRESSURE SUMMARY

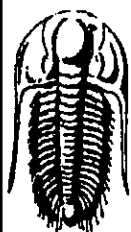
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1546.40	92.06	Initial Hydro-static
2	20.45	91.68	Open To Flow (1)
20	24.48	91.72	Shut-In(1)
76	802.27	93.14	End Shut-In(1)
77	26.69	92.93	Open To Flow (2)
110	33.10	93.54	Shut-In(2)
166	424.12	94.78	End Shut-In(2)
167	1529.84	95.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	OCM 10%O 90%M	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38582

**DST#: 1**

ATTN: Bob Stozle

Test Start: 2010.05.08 @ 18:45:47

### Tool Information

Drill Pipe:	Length: 3204.00 ft	Diameter: 3.80 inches	Volume: 44.94 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 44000.00 lb
			<u>Total Volume: 45.09 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3225.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	88.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

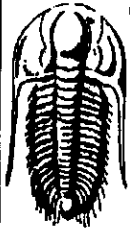
Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3203.00	
Shut In Tool	5.00			3208.00	
Hydraulic tool	5.00			3213.00	
Safety Joint	3.00			3216.00	
Packer	4.00			3220.00	23.00 Bottom Of Top Packer
Packer	5.00			3225.00	
Stubb	1.00			3226.00	
Perforations	1.00			3227.00	
Change Over Sub	1.00			3228.00	
Recorder	0.00	8319	Inside	3228.00	
Recorder	0.00	8369	Inside	3228.00	
Blank Spacing	31.00			3259.00	
Change Over Sub	1.00			3260.00	
Perforations	27.00			3287.00	
Bullnose	3.00			3290.00	65.00 Bottom Packers & Anchor

**Total Tool Length: 88.00**

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**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38582      **DST#: 1**

ATTN: Bob Stolze

Test Start: 2010.05.08 @ 18:45:47

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2100.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	OCM 10%O 90%M	0.074

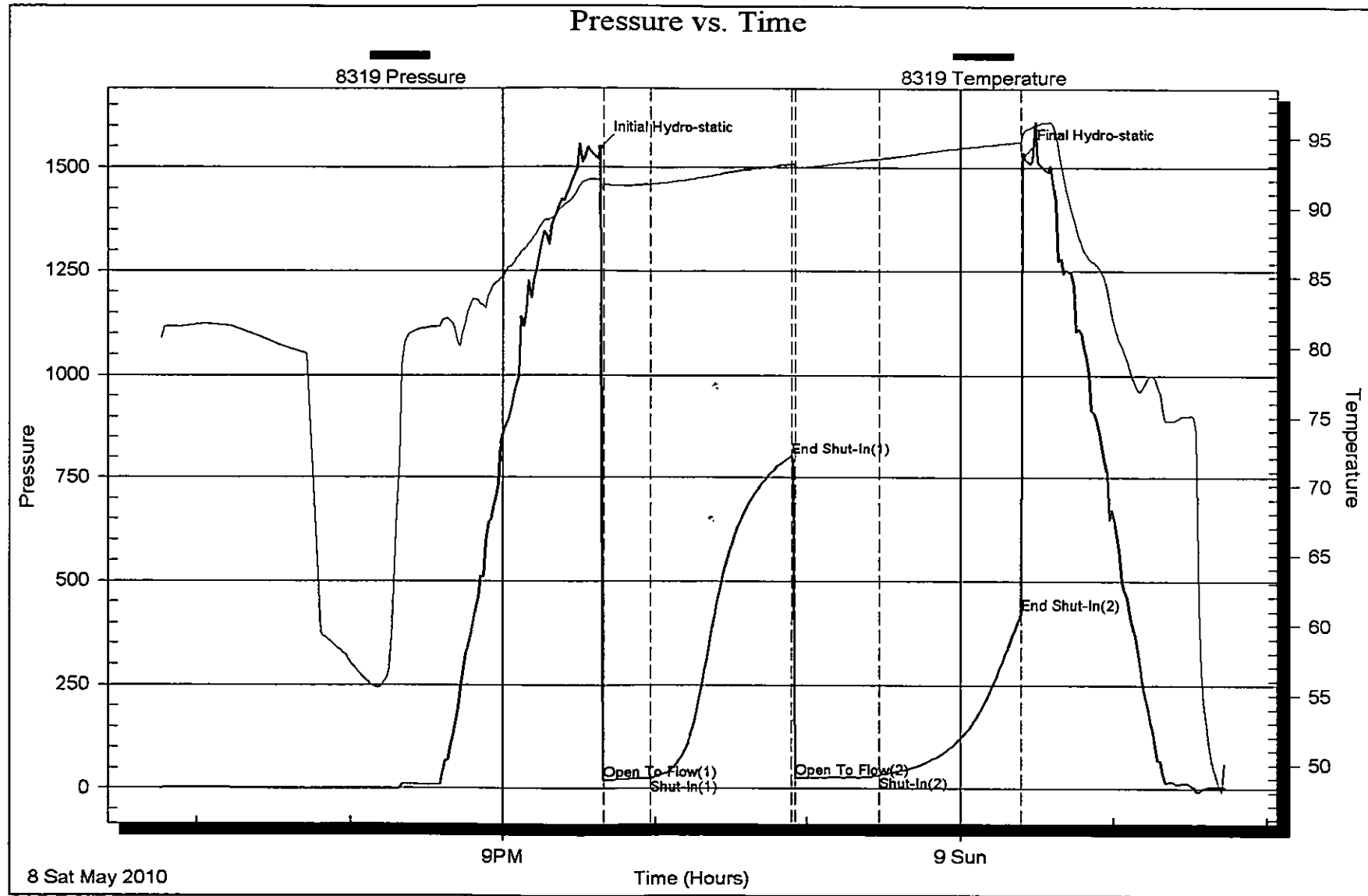
Total Length: 15.00 ft      Total Volume: 0.074 bbl

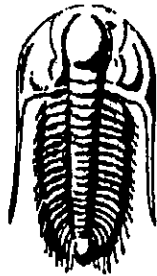
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**22 9S 17W Rooks KS**

**Carmichael #1-22**

Start Date: 2010.05.09 @ 08:12:54

End Date: 2010.05.09 @ 15:19:24

Job Ticket #: 38583                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Co., Inc.

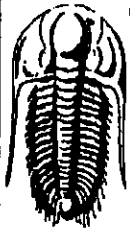
Carmichael #1-22

22 9S 17W Rooks KS

DST # 2

LKC"B,C,D"

2010.05.09



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**Carmichael #1-22**

**22 9S 17W Rooks KS**

Job Ticket: 38583

**DST#: 2**

Test Start: 2010.05.09 @ 08:12:54

## GENERAL INFORMATION:

Formation: **LKC"B,C,D"**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 09:40:54

Time Test Ended: 15:19:24

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: **3280.00 ft (KB) To 3340.00 ft (KB) (TVD)**

Total Depth: 3340.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2115.00 ft (KB)

2110.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6719**

Inside

Press@RunDepth: 93.48 psig @ 3283.00 ft (KB)

Start Date: 2010.05.09 End Date: 2010.05.09

Start Time: 08:12:59 End Time: 15:19:23

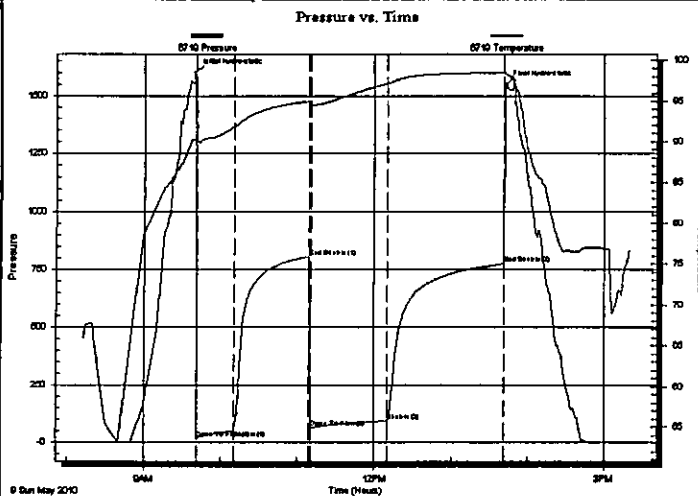
Capacity: 8000.00 psig

Last Calib.: 2010.05.09

Time On Btm: 2010.05.09 @ 09:39:54

Time Off Btm: 2010.05.09 @ 13:42:53

**TEST COMMENT:** IF-10in blow  
ISI-very weak surface blow died in 13min  
FF-6.75in blow  
FSI-very weak surface blow died in 30min



## PRESSURE SUMMARY

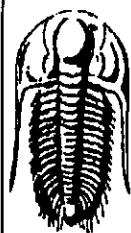
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1601.45	90.18	Initial Hydro-static
1	18.28	89.90	Open To Flow (1)
31	53.31	91.76	Shut-In(1)
90	804.69	94.97	End Shut-In(1)
91	63.86	94.59	Open To Flow (2)
151	93.48	97.17	Shut-In(2)
242	773.11	98.44	End Shut-In(2)
243	1552.61	98.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud	0.10
80.00	MCW 70%W 30%M	1.03
30.00	WOCM 40%O 10%W 50%M	0.42
50.00	Free Oil 25%G 75%O	0.70
0.00	120ft GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38583

**DST#: 2**

ATTN: Bob Stolze

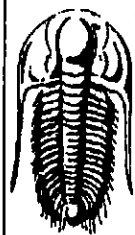
Test Start: 2010.05.09 @ 08:12:54

### Tool Information

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 45.51 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3280.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	83.00 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			3258.00	
Shut In Tool	5.00			3263.00	
Hydraulic tool	5.00			3268.00	
Safety Joint	3.00			3271.00	
Packer	4.00			3275.00	23.00 Bottom Of Top Packer
Packer	5.00			3280.00	
Stubb	1.00			3281.00	
Perforations	1.00			3282.00	
Change Over Sub	1.00			3283.00	
Recorder	0.00	6719	Inside	3283.00	
Recorder	0.00	8369	Inside	3283.00	
Blank Spacing	31.00			3314.00	
Change Over Sub	1.00			3315.00	
Perforations	22.00			3337.00	
Bullnose	3.00			3340.00	60.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>83.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38583

**DST#: 2**

ATTN: Bob Stolze

Test Start: 2010.05.09 @ 08:12:54

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

120000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud	0.098
80.00	MCW 70%W 30%M	1.031
30.00	WOCM 40%O 10%W 50%M	0.421
50.00	Free Oil 25%G 75%O	0.701
0.00	120ft GIP	0.000

Total Length: 180.00 ft

Total Volume: 2.251 bbl

Num Fluid Samples: 0

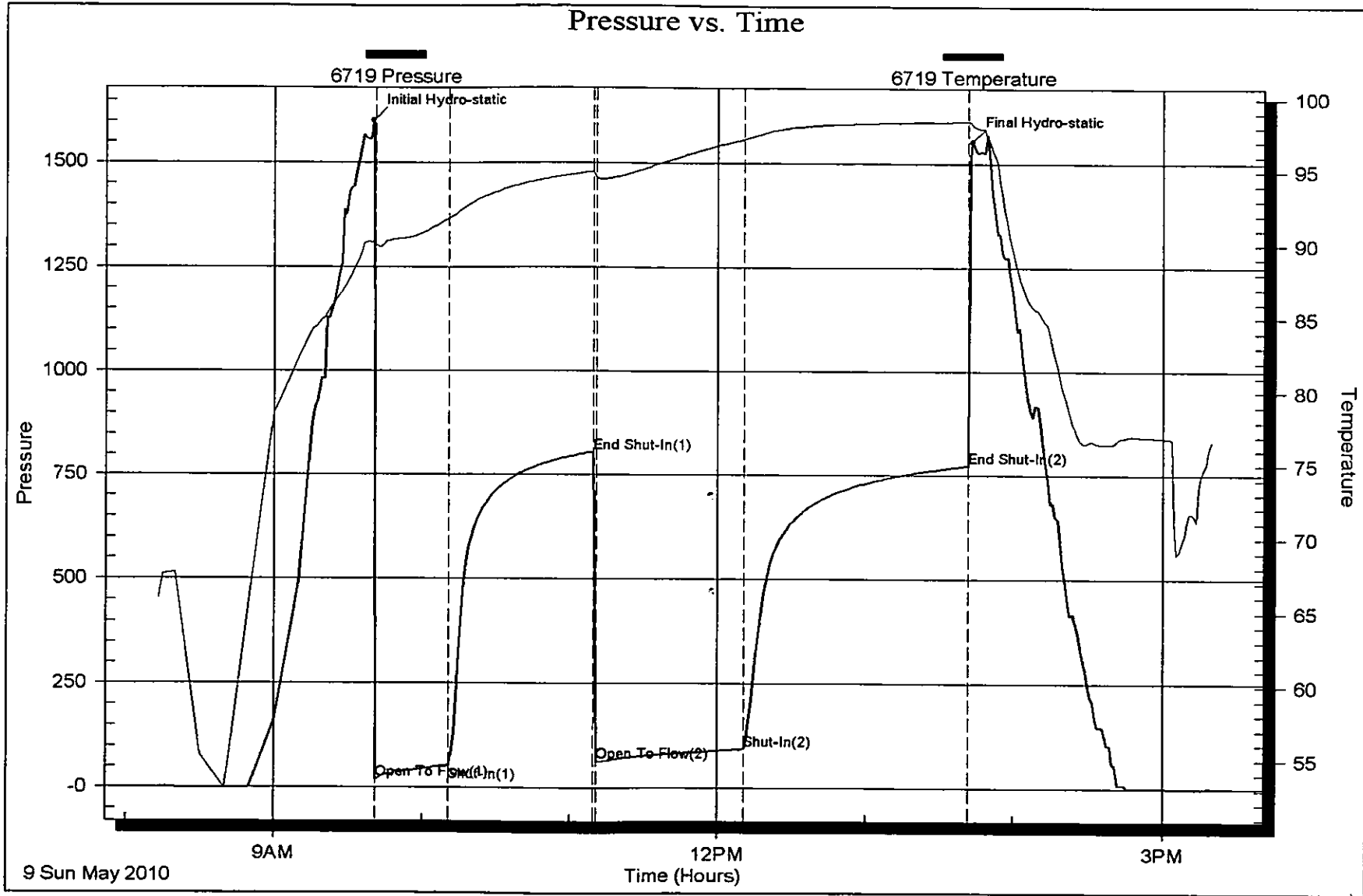
Num Gas Bombs: 0

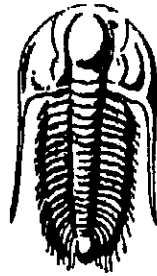
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**22 9S 17W Rooks KS**

**Carmichael #1-22**

Start Date: 2010.05.10 @ 00:26:04

End Date: 2010.05.10 @ 08:21:04

Job Ticket #: 38584                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Co., Inc.

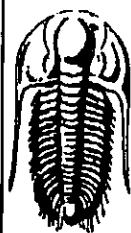
Carmichael #1-22

22 9S 17W Rooks KS

DST # 3

LKC"E,F,G,H,"

2010.05.10



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**Carmichael #1-22**

**22 9S 17W Rooks KS**

Job Ticket: 38584 **DST#: 3**

Test Start: 2010.05.10 @ 00:26:04

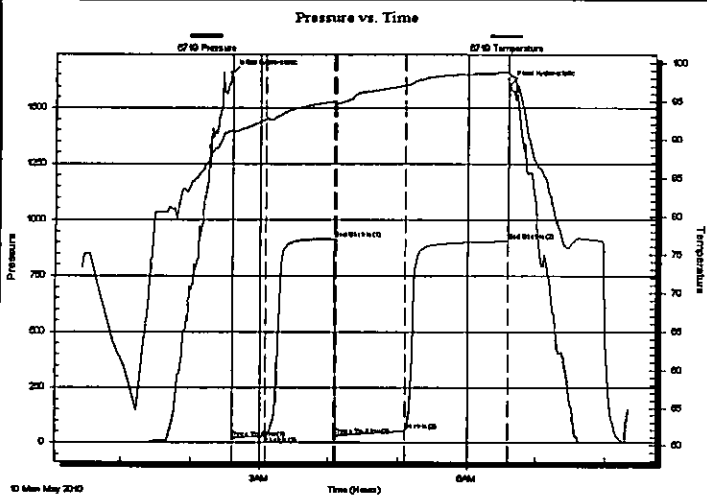
## GENERAL INFORMATION:

Formation: **LKC"E,F,G,H,"**  
 Deviated: **No Whipstock** ft (KB)  
 Time Tool Opened: 02:36:04  
 Time Test Ended: 08:21:04  
 Interval: **3340.00 ft (KB) To 3425.00 ft (KB) (TVD)**  
 Total Depth: **3425.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition:  
 Test Type: **Conventional Bottom Hole**  
 Tester: **Brett Dickinson**  
 Unit No: **47**  
 Reference Elevations: **2115.00 ft (KB)**  
**2110.00 ft (CF)**  
**KB to GR/CF: 5.00 ft**

## Serial #: 6719

Press@RunDepth: **51.70 psig @** ft (KB) Capacity: **8000.00 psig**  
 Start Date: **2010.05.10** End Date: **2010.05.10** Last Calib.: **2010.05.10**  
 Start Time: **00:26:09** End Time: **08:21:03** Time On Btm: **2010.05.10 @ 02:35:04**  
 Time Off Btm: **2010.05.10 @ 06:37:03**

TEST COMMENT: IF-2.25in blow  
 ISI-No blow  
 FF-BOB in 21min  
 FSI-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1656.32	91.16	Initial Hydro-static
1	15.84	91.04	Open To Flow (1)
31	28.99	92.67	Shut-In(1)
90	915.10	95.00	End Shut-In(1)
91	28.30	94.72	Open To Flow (2)
151	51.70	97.19	Shut-In(2)
241	904.27	98.78	End Shut-In(2)
242	1607.57	98.45	Final Hydro-static

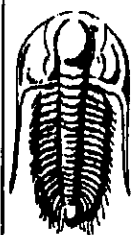
## Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 20%O 80%M	0.43
50.00	GO 20%G 80%O	0.70
0.00	140ft GIP	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38584

**DST#: 3**

ATTN: Bob Stolze

Test Start: 2010.05.10 @ 00:26:04

### Tool Information

Drill Pipe:	Length: 3299.00 ft	Diameter: 3.80 inches	Volume: 46.28 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 46.43 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3340.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	108.00 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			3318.00	
Shut In Tool	5.00			3323.00	
Hydraulic tool	5.00			3328.00	
Safety Joint	3.00			3331.00	
Packer	4.00			3335.00	23.00 Bottom Of Top Packer
Packer	5.00			3340.00	
Stubb	1.00			3341.00	
Perforations	1.00			3342.00	
Change Over Sub	1.00			3343.00	
Recorder	0.00	8319	Inside	3343.00	
Recorder	0.00	8369	Inside	3343.00	
Blank Spacing	63.00			3406.00	
Change Over Sub	1.00			3407.00	
Perforations	15.00			3422.00	
Bullnose	3.00			3425.00	85.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>108.00</b>				



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38584

**DST#: 3**

ATTN: Bob Stolze

Test Start: 2010.05.10 @ 00:26:04

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OCM 20%O 80%M	0.428
50.00	GO 20%G 80%O	0.701
0.00	140ft GIP	0.000

Total Length: 100.00 ft

Total Volume: 1.129 bbl

Num Fluid Samples: 0

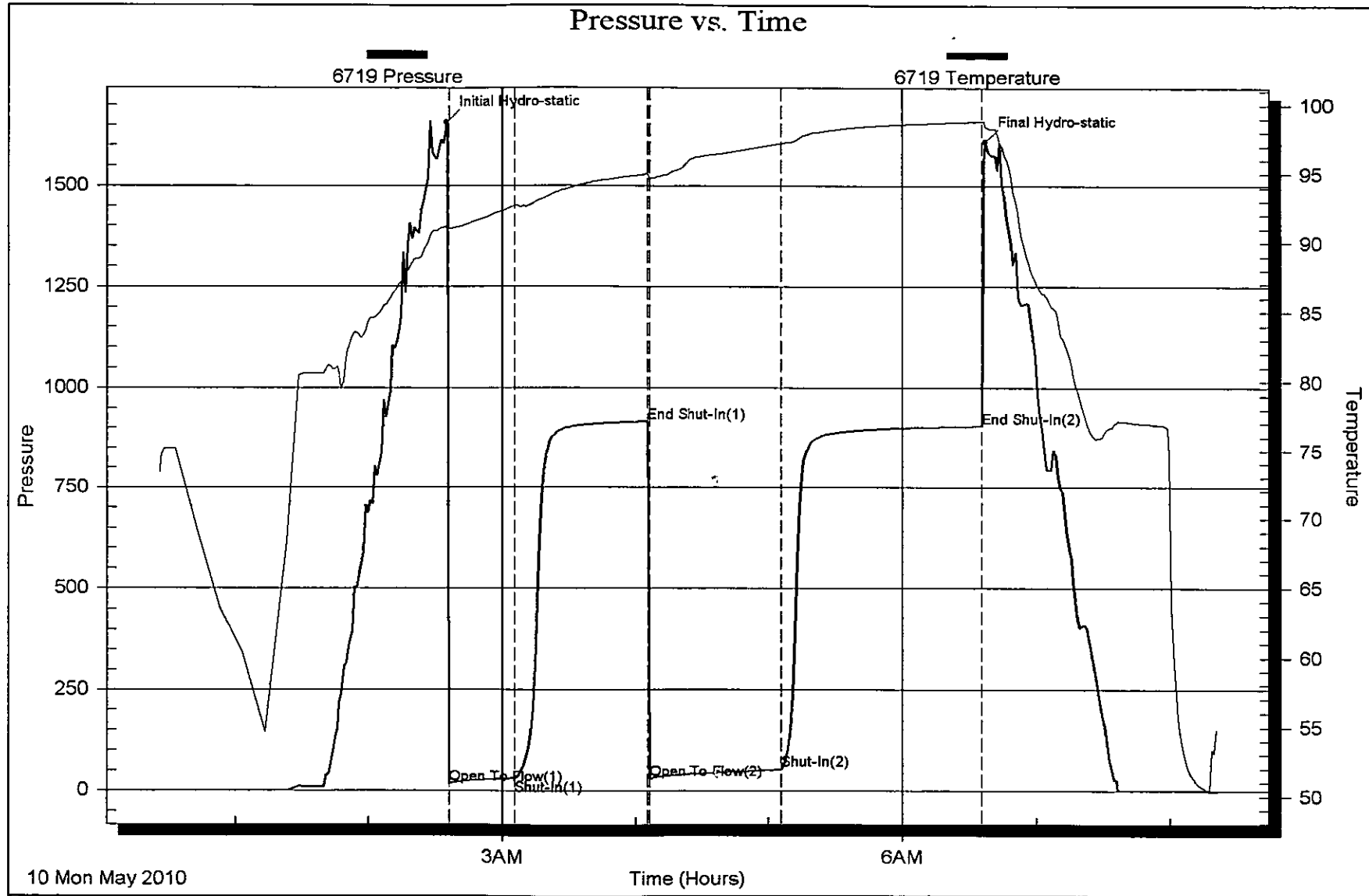
Num Gas Bombs: 0

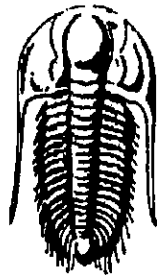
Serial #:

Laboratory Name: \*

Laboratory Location:

Recovery Comments:





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**22 9S 17W Rooks KS**

**Carmichael #1-22**

Start Date: 2010.05.10 @ 13:32:07

End Date: 2010.05.10 @ 19:15:07

Job Ticket #: 38585                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Co., Inc.

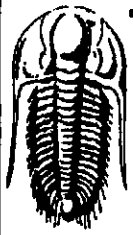
Carmichael #1-22

22 9S 17W Rooks KS

DST # 4

LKC

2010.05.10



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N Water STE300  
Wichita KS 67202

ATTN: Bob Stoizle

**Carmichael #1-22**

**22 9S 17W Rooks KS**

Job Ticket: 38585

**DST#: 4**

Test Start: 2010.05.10 @ 13:32:07

### GENERAL INFORMATION:

Formation: **LKC"1"**

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

Time Tool Opened: 15:16:07

Time Test Ended: 19:15:07

Interval: **3425.00 ft (KB) To 3445.00 ft (KB) (TVD)**

Total Depth: **3445.00 ft (KB) (TVD)**

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

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **47**

Reference Elevations: **2115.00 ft (KB)**

**2110.00 ft (CF)**

KB to GR/CF: **5.00 ft**

### Serial #: 8369

**Inside**

Press@RunDepth: **17.58 psig @ 3442.00 ft (KB)**

Start Date: **2010.05.10**

End Date: **2010.05.10**

Start Time: **13:32:12**

End Time: **19:15:06**

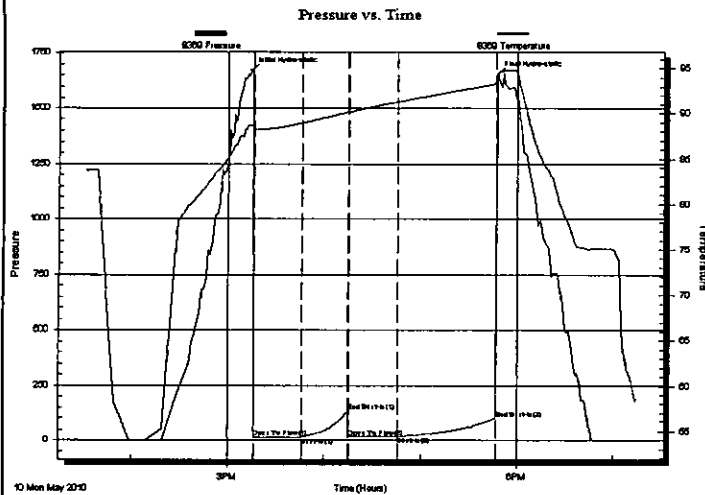
Capacity: **8000.00 psig**

Last Calib.: **2010.05.10**

Time On Btm: **2010.05.10 @ 15:14:37**

Time Off Btm: **2010.05.10 @ 17:47:37**

TEST COMMENT: IF-1/4in blow  
IS-No blow  
FF-No blow  
FSI-No blow



### PRESSURE SUMMARY

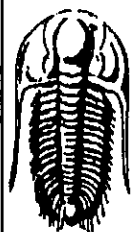
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1670.09	88.64	Initial Hydro-static
2	14.50	88.27	Open To Flow (1)
32	15.73	88.92	Shut-In(1)
61	133.98	90.12	End Shut-In(1)
61	16.65	90.11	Open To Flow (2)
91	17.58	91.29	Shut-In(2)
152	98.99	93.30	End Shut-In(2)
153	1650.68	94.29	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOQM 5%O 95%M	0.02

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38585

**DST#: 4**

ATTN: Bob Stolze

Test Start: 2010.05.10 @ 13:32:07

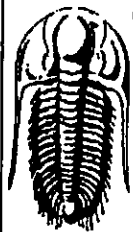
### Tool Information

Drill Pipe:	Length: 3400.00 ft	Diameter: 3.80 inches	Volume: 47.69 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 47.84 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3425.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	43.00 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			3403.00	
Shut In Tool	5.00			3408.00	
Hydraulic tool	5.00			3413.00	
Safety Joint	3.00			3416.00	
Packer	4.00			3420.00	23.00 Bottom Of Top Packer
Packer	5.00			3425.00	
Stubb	1.00			3426.00	
Perforations	16.00			3442.00	
Recorder	0.00	6719	Inside	3442.00	
Recorder	0.00	8369	Inside	3442.00	
Bullnose	3.00			3445.00	20.00 Bottom Packers & Anchor

**Total Tool Length: 43.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38585

DST#: 4

ATTN: Bob Stolze

Test Start: 2010.05.10 @ 13:32:07

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	VSOQM 5%O 95%M	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

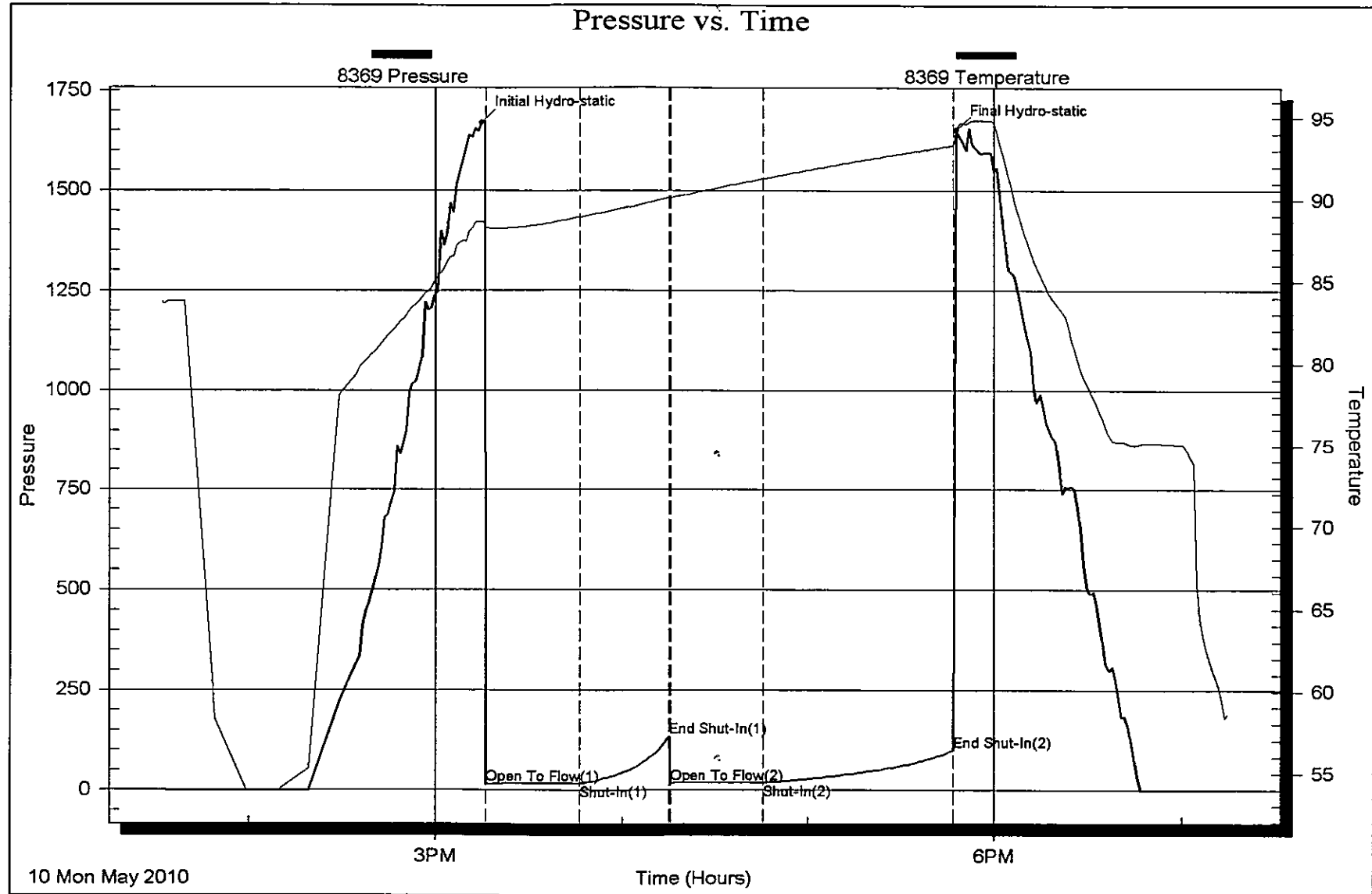
Num Gas Bombs: 0

Serial #:

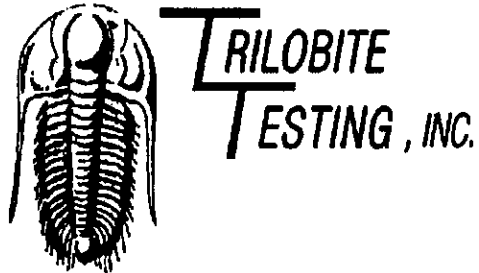
Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N Water STE 300  
Wichita KS 67202

ATTN: Bob Stolze

**22 9S 17W Rooks KS**

**Carmichael #1-22**

Start Date: 2010.05.11 @ 03:39:33

End Date: 2010.05.11 @ 08:51:33

Job Ticket #: 38586                      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

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38586

**DST#: 5**

ATTN: Bob Stolze

Test Start: 2010.05.11 @ 03:39:33

## GENERAL INFORMATION:

Formation: **LKC"J,K,L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:16:03

Time Test Ended: 08:51:33

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: **3444.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Total Depth: 3510.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2115.00 ft (KB)

2110.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6719**

Inside

Press@RunDepth: 17.65 psig @ 3448.00 ft (KB)

Start Date: 2010.05.11

Start Time: 03:39:38

End Date: 2010.05.11

End Time: 08:51:32

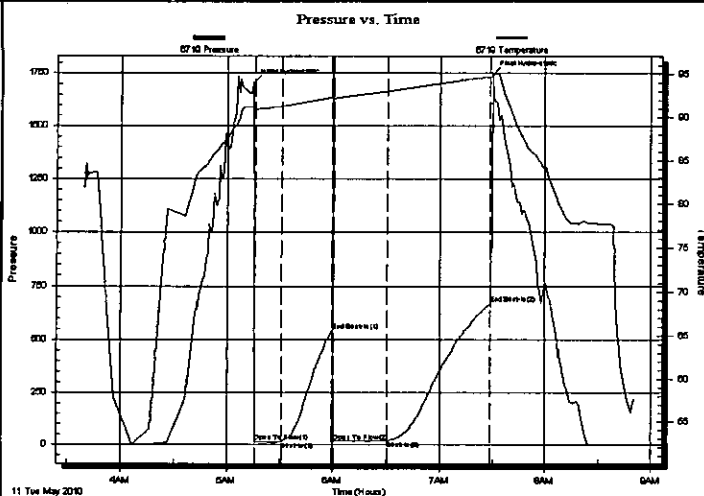
Capacity: 8000.00 psig

Last Calib.: 2010.05.11

Time On Btm: 2010.05.11 @ 05:15:03

Time Off Btm: 2010.05.11 @ 07:30:03

TEST COMMENT: IF-No blow  
IS-No blow  
FF-No blow  
FS-No blow



## PRESSURE SUMMARY

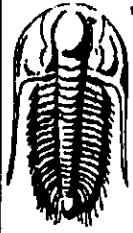
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1702.62	91.22	Initial Hydro-static
1	15.50	90.91	Open To Flow (1)
17	16.59	91.28	Shut-In(1)
45	538.70	92.30	End Shut-In(1)
46	17.04	92.22	Open To Flow (2)
76	17.65	93.03	Shut-In(2)
134	666.90	94.67	End Shut-In(2)
135	1745.00	94.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	VSOQM 10%O 90%M	0.01

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38586

**DST#: 5**

ATTN: Bob Stolzie

Test Start: 2010.05.11 @ 03:39:33

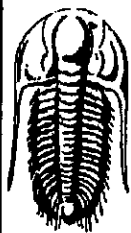
**Tool Information**

Drill Pipe:	Length: 3424.00 ft	Diameter: 3.80 inches	Volume: 48.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 48.18 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3444.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	89.00 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			3422.00	
Shut In Tool	5.00			3427.00	
Hydraulic tool	5.00			3432.00	
Safety Joint	3.00			3435.00	
Packer	4.00			3439.00	23.00 Bottom Of Top Packer
Packer	5.00			3444.00	
Stubb	1.00			3445.00	
Perforations	2.00			3447.00	
Change Over Sub	1.00			3448.00	
Recorder	0.00	6719	Inside	3448.00	
Recorder	0.00	8319	Inside	3448.00	
Blank Spacing	31.00			3479.00	
Change Over Sub	1.00			3480.00	
Perforations	27.00			3507.00	
Bullnose	3.00			3510.00	66.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**Carmichael #1-22**

250 N Water STE 300  
Wichita KS 67202

**22 9S 17W Rooks KS**

Job Ticket: 38586

**DST#: 5**

ATTN: Bob Stoizle

Test Start: 2010.05.11 @ 03:39:33

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm m	Gas Cushion Pressure: psig		
Salinity: 3200.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
3.00	VSOCM 10%O 90%M	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

