

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

9/8/12

CONFIDENTIAL  
**WELL COMPLETION FORM**  
WELL HISTORY DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5144 **SEP 08 2010**

Name: Mull Drilling Company, Inc. **CONFIDENTIAL**

Address 1: 1700 N. Waterfront Parkway, Bldg #1200

Address 2: \_\_\_\_\_

City: Wichita State: KS Zip: 67206 + 6637

Contact Person: Mark Shreve

Phone: (316) 264-6366 **RECEIVED**

CONTRACTOR: License # 5929 **SEP 09 2010**

Name: Duke Drilling Co., Inc. **KCC WICHITA**

Wellsite Geologist: Kevin Kessler

Purchaser: Plains Marketing

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 #: \_\_\_\_\_

<u>7/2/10</u>	<u>7/10/10</u>	<u>8/2/10</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 135-25083-00-00

Spot Description: \_\_\_\_\_

NW SW SE SE Sec. 17 Twp. 17 S. R. 23 [ ] East [x] West

393 Feet from [ ] North / [x] South Line of Section

1,159 Feet from [x] East / [ ] West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW    [x] SE     SW

County: Ness

Lease Name: Snodgrass Well #: 4-17

Field Name: Opplinger

Producing Formation: Cherokee Sand

Elevation: Ground: 2426' Kelly Bushing: 2435'

Total Depth: 4560' Plug Back Total Depth: 4506'

Amount of Surface Pipe Set and Cemented at: 219 Feet

Multiple Stage Cementing Collar Used? [x] Yes [ ] No

If yes, show depth set: 1732' Feet

If Alternate II completion, cement circulated from: 1732'

feet depth to: surface w/ 130 sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: 22,000 ppm Fluid volume: 1,000 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: President/COO Date: 9/8/10

**KCC Office Use ONLY**

[x] Letter of Confidentiality Received  
Date: 9/8/10 - 9/8/12

[ ] Confidential Release Date: \_\_\_\_\_

[x] Wireline Log Received

[ ] Geologist Report Received

[ ] UIC Distribution

ALT [ ] [x] [ ] [ ] Approved by: NS Date: 9/8/10

Operator Name: Mull Drilling Company, Inc. Lease Name: Snodgrass Well #: 4-17  
 Sec. 17 Twp. 17 S. R. 23  East  West County: Ness

**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 <i>(Attach Additional Sheets)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Anhydrite	1733	(+ 702)
Electric Log Run	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	B/Anhydrite	1777	(+ 658)
Electric Log Submitted Electronically <i>(If no, Submit Copy)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Heebner Shale	3794	(-1359)
List All E. Logs Run:		B/KC	4111	(-1676)
Superior: CDL/CNL/PE; DIL/Micro & Sonic		Ft. Scott	4312	(-1877)
		Cherokee Sand	4385	(-1950)
		Mississippi	4485	(-2050)

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"	20#	219'	Common	150	3% cc, 2% gel
Production	7 7/8"	5 1/2"	14#	4549'	50/50 Poz	125	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input checked="" type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	1732'-Surface	SMD	130	

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4418' - 4436'	500 gal 7 1/2% MCA	
4	4386' - 4404'	500 gal 7 1/2% MCA + 250 gal 7 1/2% HCl + 750 gal	
		7 1/2-3% HF acid	

TUBING RECORD: Size: 2 3/8" Set At: 4484' Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: 8/2/10 Producing Method:  Flowing  Pumping  Gas Lift  Other (Explain) \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	64	N/A	4	N/A	38.5°

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____
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# QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4159

Date	7-2-10	Sec.	17	Twp.	17	Range	23	County	Ness	State	CONFIDENTIAL	Location		Finish	6:30pm
Lease	Snodgrass	Well No.	4-17		Location Piasan 44203 5S 3/4E M100										
Contractor	Duke Drlg				Owner										
Type Job	Surface				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.										
Hole Size	12 1/4		T.D.		220										
Csg.	8 5/8		Depth		219										
Tbg. Size					Charge To Mull Drlg										
Tool					Street										
Cement Left in Csg.	10 1/5		Shoe Joint		City										
Meas Line	20#		Displace		13 1/2 BBL										
											State				
											The above was done to satisfaction and supervision of owner agent or contractor.				
											Cement Amount Ordered 150 com 3% CO 2% gel				

**EQUIPMENT**

Pumptrk	1	No.	Cementer	Dave	Common	150
			Helper			
Bulktrk	8	No.	Driver	Rocky	Poz. Mix	
			Driver	40T		
Bulktrk		No.	Driver		Gel.	3
			Driver			

**JOB SERVICES & REMARKS**

Remarks:		Calcium	5
Rat Hole	Cement	Hulls	
Mouse Hole		Salt	
Centralizers	CIS	Flowseal	
Baskets		Kol-Seal	
D/V or Port Collar		Mud CLR 48	
		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	158
		Mileage	

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**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	Swage (Q)
Pumptrk Charge	Surface
Mileage	8

X Signature *John Ambruster*

Tax  
Discount  
Total Charge



CHARGE TO: **MULL DRILLING**  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

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TICKET  
**18804**  
 PAGE 1 OF 1

SERVICE LOCATIONS  
 1. **NESS CITY, KS** WELL/PROJECT NO. **SNODGRASS 4-17** LEASE **NESS** COUNTY/PARISH **NESS** STATE **KS** CITY **NESS CITY, KS** DATE **2/25/10** OWNER  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR **FRITZLER TRUCKING** RIG NAME/NO. SHIPPED VIA **LOCATION** DELIVERED TO ORDER NO.  
 3. WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **CEMENT PORT COLLAR** WELL PERMIT NO. WELL LOCATION **7N, 1E, N1W10**  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	OF			UM		UM	
575		1			MILEAGE B110	10	MIL	5	50	50
576D		1			Pump CHARGE	1	CSB	1100	100	1100
105		1			PORT COLLAR TOOL RENTAL	1	CSB	300	100	300
290		1			D-AIR	1	gal	35	100	35
276		1			FLOCELE	38	lbs	1	50	57
330		1			SWIFT MULTI DENSITY STANDARD	150	SXS	15	100	2250
581		1			SERVICE CHARGE CEMENT	200	SXS	1	50	300
582		1			MINIMUM DRAVAGE	19970	lbs	99.85	100	250

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 KCC WICHITA

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

DATE SIGNED **21 July 10** TIME SIGNED **1400**  AM.  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	4342	00
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 checked="" type="checkbox"/> YES	<input type="checkbox"/> NO				
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL	4508	45

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this invoice.

SWIFT OPERATOR **Joel R...** APPROVAL

Thank You!

001/007  
 MDC WICHITA  
 MDC-CHEY\_WELLS.CO  
 08/05/2010 08:54 FAX 7197678994

**JOB LOG**

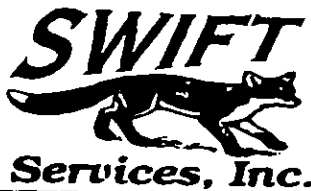
**SWIFT Services, Inc.**

DATE 21 July 10 PAGE NO. 1

CUSTOMER MWD DRILLING Co. WELL NO. LEASE SNODGRASS 4-17 JOB TYPE CEMENT PORT COLLAR TICKET NO. 18804

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0940							ON LOCATION PORT COLLAR @ 1770' 1780'
	1223				✓		1500	PRESSURE UP - HELD
	1228	3			✓		100	OPEN PORT COLLAR - TAKE INS. RATE.
	1234	4			✓	300		MIX CEMENT
		4	83		✓	400		MIX 150 SKS SAND @ 11.2ppg. CIRCULATE 20 SKS TO PIT
	1308				✓		1500	CLOSE PORT COLLAR - PRESSURE UP - HELD  RUN 4 JTS.
	1321	3	20		✓		500	REVERSE CLEAN.
	1340							WASH TRUCK.
	1400							JOB COMPLETE
								THANKS #110
								JASON, JEFF, GIDION
								RECEIVED
								SEP 09 2010
								KCC WICHITA

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SEP 09 2010  
CONFIDENTIAL



CHARGE TO: **MURK DRIG. Co. Inc.**  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET  
18652

PAGE 1 OF 2

CONFIDENTIAL

SERVICE LOCATIONS  
 1. **Ness City, KS**  
 WELL/PROJECT NO. **4-17** LEASE **SNODGRASS** COUNTY/PARISH **NESS** STATE **KS** CITY \_\_\_\_\_ DATE **7-11-10** OWNER **SAME**  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR **DUKE DRIG #2** RIG NAME/NO. \_\_\_\_\_ SHIPPED VIA **CT** DELIVERED TO **LOCATION** ORDER NO. \_\_\_\_\_  
 3. WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **5 1/2" LONGSTRENG** WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION **Ness City, KS - 8N, 3/4 E, N**  
 4. REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			UM		UM	
575		1			MILEAGE # 110	10	ME		5.00	50.00
578		1			PUMP CHARGE	1	NOB	4549 FT	1400.00	1400.00
221		1			LIQUID KCL	2	Gal		25.00	50.00
280		1			FLOCHECK-21	1000	Gal		2.50	2500.00
400		1			GUIDE SHOE	1	EA	5 1/2"	155.00	155.00
403		1			CEMENT BASKET	1	EA		200.00	200.00
404		1			PORT COLLAR TOPJT #67	1	EA	1770 FT	1900.00	1900.00
409		1			TURBOLEISERS	11	EA		65.00	715.00
410		1			TOP PLUG	1	EA		100.00	100.00
413		1			ROTOWALL SCRATCHERS	14	EA		40.00	560.00
415		1			INSERT FLOAT COLLAR w/ FOL UP	1	EA		330.00	330.00
419		1			ROTATING HEAD RENTAL	1	NOB		150.00	150.00

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KCC WICHITA

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 *[Signature]*  
 DATE SIGNED **7/11-10** TIME SIGNED **0400**  A.M.  P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
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 #1	8110.00
#2	2766.25
subtotal	10,876.25
TAX	
Less 6.3%	561.157
TOTAL	11,437.82

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this form.

SWIFT OPERATOR **WAVE WILSON** APPROVAL \_\_\_\_\_

Thank You!

08/02/2010 15:33 FAX 7197678994 MDC-CHEV\_WELLS.CO MDC WICHITA 001/003



PO Box 466  
Ness City, KS 67560  
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 18652

CUSTOMER: Mill Dair. Co. Inc. WELL: SWDGRASS 4-17 DATE: 7-11-10 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNT		TIME	DESCRIPTION	QTY		UNIT	UNIT PRICE	AMOUNT
		DEBIT	CREDIT			QTY	UNIT			
327		1			50/50 POZMAX (290GEL)	175		SKB	8.75	1531.25
276		1			FLOCELE	50		LBS	1.50	75.00
279		1			BSWTONITE GEL	3	300	SKB LBS	-	N/C
283		1			SALT	850		LBS	1.5	127.50
286		1			HALAD-1	75		LBS	6.00	450.00
290		1			D-ADR	2		GA	35.00	70.00
581		1			SERVICE CHARGE			CUBIC FEET	1.50	262.50
582		1			TOTAL WEIGHT	14820		LOADED MILES	74.1	2501.00

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CONTINUATION TOTAL: 2766.25

08/02/2010 15:33 FAX 7197678994  
 MDC-CHEY\_WELLS.CO  
 + MDC WICHITA  
 002/003

JOB LOG

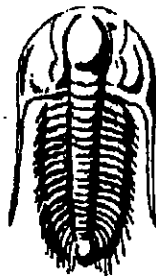
SWIFT Services, Inc.

DATE 7-11-10 PAGE NO. 1

CUSTOMER Mull Drilg. Co, Inc WELL NO. 4-17 LEASE SWOGRASS JOB TYPE 5/2 LONGSTRESS TICKET NO. 18652

CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0400							ON LOCATION
	0430							START 5/2" CASING IN WELL
								TD-4560 SETC 4549
								TP-4549 5/2" 14
								ST- <del>33</del> 44'
								CENTRALIZERS-1,2,3,4,5,6,7,8,10,12,66
								CMT BSPTS-67
								PORT COLLAR-1770' TOPPT-67
	0620							DROP BALL - CIRCULATE ROTATE
	0803	6 1/4	5		✓		300	PUMP KCL SPACER
	0804	6 1/4	24		✓		300	PUMP FLOCHECK 21 (1000 GAL)
	0808	6 1/4	5		✓		300	PUMP KCL SPACER
	0810		7-5					PLUG RH (30SKS) MH (20SKS)
	0820	4	29		✓		200	MIX CEMENT- 125 SKS 50/50 P02 @ 14.4 PPG
	0829							WASH OUT PUMP LINES
	0830							RELEASE TOP PLUG RECEIVED
	0832	6 1/4	0		✓			DISPLACE PLUG SEP 09 2010
		6 1/4	100				450	SHOT OFF ROTATING KCC WICHITA
	0850	6 1/4	109.9				1250	PLUG DOWN
	0852						OK	RELEASE PEE- WELD WASH TANK
	1000							JOB COMPLETE
								THANK YOU WAYNE JOE LANE





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drlg. Co.**

1700 N Waterfront  
Wichita KS 67206

ATTN: Kevin Kessler

**17 17S 23W Ness KS**

**Snodgrass #4-17**

Start Date: 2010.07.06 @ 23:17:08

End Date: 2010.07.07 @ 07:46:38

Job Ticket #: 38771                      DST #: 1

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drig. Co.  
 1700 N Waterfront  
 Wichita KS 67206  
 ATTN: Kevin Kessler

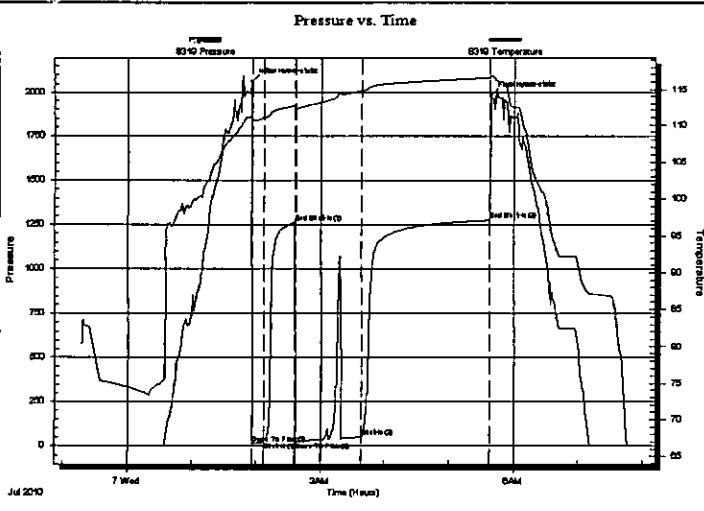
**Snodgrass #4-17**  
**17 17S 23W Ness KS**  
 Job Ticket: 38771      DST#: 1  
 Test Start: 2010.07.06 @ 23:17:08

## GENERAL INFORMATION:

Formation: **LKC "J"**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **01:56:38** Tester: **Brett Dickinson**  
 Time Test Ended: **07:46:38** Unit No: **47**  
 Interval: **4020.00 ft (KB) To 4060.00 ft (KB) (TVD)** Reference Elevations: **2434.00 ft (KB)**  
 Total Depth: **4060.00 ft (KB) (TVD)** **2426.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **KB to GR/CF: 8.00 ft**

**Serial #: 8319**      **Inside**  
 Press@RunDepth: **49.62 psig @ 4025.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2010.07.06** End Date: **2010.07.07** Last Calib.: **2010.07.07**  
 Start Time: **23:17:13** End Time: **07:46:37** Time On Btm: **2010.07.07 @ 01:55:08**  
 Time Off Btm: **2010.07.07 @ 05:38:37**

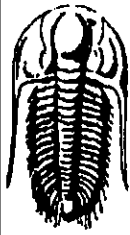
TEST COMMENT: IF-3.5in blow  
 IS-No blow  
 FF-5.5in blow  
 FS-No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.20	111.24	Initial Hydro-static
2	14.40	110.63	Open To Flow (1)
12	21.71	110.99	Shut-In (1)
41	1264.07	112.65	End Shut-In (1)
42	20.70	112.27	Open To Flow (2)
103	49.62	114.78	Shut-In (2)
223	1276.59	116.55	End Shut-In (2)
224	1981.72	116.79	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
74.00	Oilspotted SWCM 10%W 90%M	1.04
1.00	Free Oil	0.01

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drlg. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38771

DST#: 1

ATTN: Kevin Kessler

Test Start: 2010.07.06 @ 23:17:08

## Tool Information

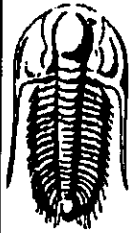
Drill Pipe:	Length: 4025.00 ft	Diameter: 3.80 inches	Volume: 56.46 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 56.46 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	4020.00 ft			Final 44000.00 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			4001.00	
Shut In Tool	5.00			4006.00	
Hydraulic tool	5.00			4011.00	
Packer	4.00			4015.00	20.00 Bottom Of Top Packer
Packer	5.00			4020.00	
Stubb	1.00			4021.00	
Perforations	3.00			4024.00	
Change Over Sub	1.00			4025.00	
Recorder	0.00	8319	Inside	4025.00	
Recorder	0.00	6719	Inside	4025.00	
Blank Spacing	31.00			4056.00	
Change Over Sub	1.00			4057.00	
Bullnose	3.00			4060.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 60.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mull Drig. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38771

DST#: 1

ATTN: Kevin Kessler

Test Start: 2010.07.06 @ 23:17:08

**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:

95000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
74.00	Oilspotted SWCM 10%W 90%M	1.038
1.00	Free Oil	0.014

Total Length: 75.00 ft      Total Volume: 1.052 bbl

Num Fluid Samples: 0

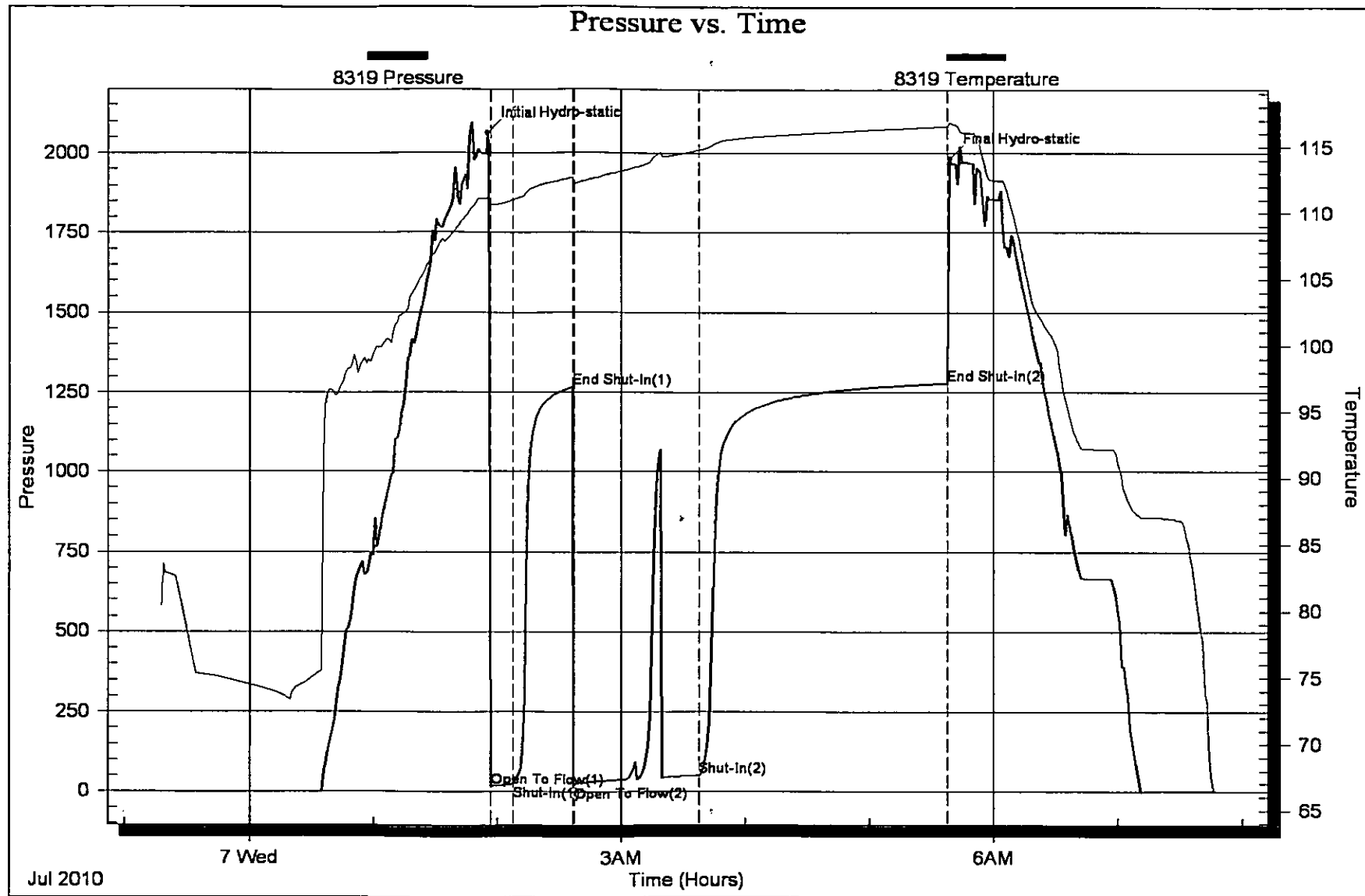
Num Gas Bombs: 0

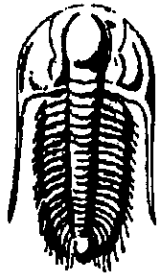
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drlg. Co.**

1700 N Waterfront  
Wichita KS 67206

ATTN: Kevin Kessler

**17 17S 23W Ness KS**

**Snodgrass #4-17**

Start Date: 2010.07.08 @ 06:56:40

End Date: 2010.07.08 @ 13:17:40

Job Ticket #: 38772                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drlg. Co.

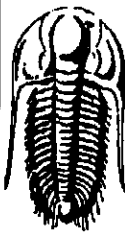
Snodgrass #4-17

17 17S 23W Ness KS

DST # 2

Fl.Scott

2010.07.08



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drlg. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38772

**DST#: 2**

ATTN: Kevin Kessler

Test Start: 2010.07.08 @ 06:56:40

## GENERAL INFORMATION:

Formation: **Ft.Scott**

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

Time Tool Opened: 09:36:10

Time Test Ended: 13:17:40

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **47**

Interval: **4290.00 ft (KB) To 4350.00 ft (KB) (TVD)**

Reference Elevations: **2434.00 ft (KB)**

Total Depth: **4350.00 ft (KB) (TVD)**

**2426.00 ft (CF)**

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

**KB to GR/CF: 8.00 ft**

**Serial #: 8319**

**Inside**

Press@RunDepth: **16.61 psig @ 4295.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.07.08**

End Date:

**2010.07.08**

Last Calib.: **2010.07.08**

Start Time: **06:56:45**

End Time:

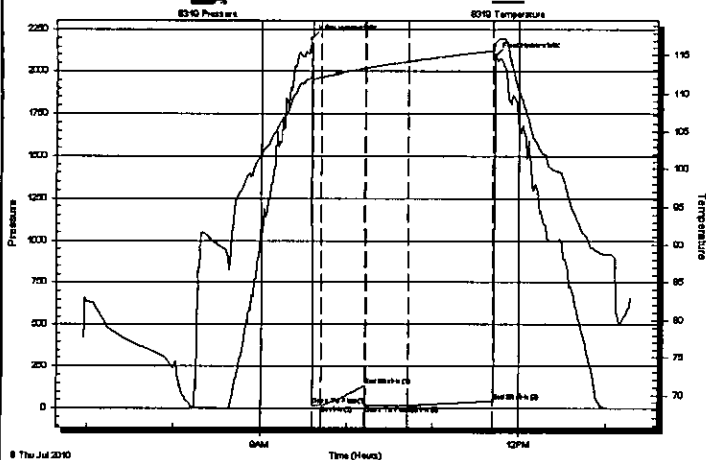
**13:17:39**

Time On Btm: **2010.07.08 @ 09:34:40**

Time Off Btm: **2010.07.08 @ 11:43:09**

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

Pressure vs. Time



## PRESSURE SUMMARY

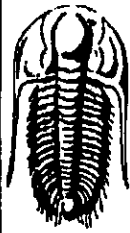
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2194.07	112.14	Initial Hydro-static
2	16.72	111.83	Open To Flow (1)
7	17.32	112.11	Shut-In(1)
38	131.15	113.25	End Shut-In(1)
38	18.21	113.24	Open To Flow (2)
68	16.61	114.14	Shut-In(2)
127	42.42	115.64	End Shut-In(2)
129	2092.94	116.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Oil spotted mud	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mull Drig. Co.  
1700 N Waterfront  
Wichita KS 67206

**Snodgrass #4-17**

**17 17S 23W Ness KS**

Job Ticket: 38772

DST#: 2

ATTN: Kevin Kessler

Test Start: 2010.07.08 @ 06:56:40

## Tool Information

Drill Pipe:	Length: 4276.00 ft	Diameter: 3.80 inches	Volume: 59.98 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 59.98 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4290.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

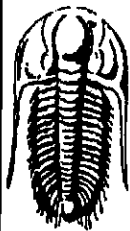
Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4271.00	
Shut In Tool	5.00			4276.00	
Hydraulic tool	5.00			4281.00	
Packer	4.00			4285.00	20.00 Bottom Of Top Packer
Packer	5.00			4290.00	
Stubb	1.00			4291.00	
Perforations	3.00			4294.00	
Change Over Sub	1.00			4295.00	
Recorder	0.00	8319	Inside	4295.00	
Recorder	0.00	6719	Inside	4295.00	
Blank Spacing	32.00			4327.00	
Change Over Sub	1.00			4328.00	
Perforations	19.00			4347.00	
Bullnose	3.00			4350.00	60.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drig. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38772

**DST#: 2**

ATTN: Kevin Kessler

Test Start: 2010.07.08 @ 06:56:40

## 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:

bbf

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Oil spotted mud	0.070

Total Length: 5.00 ft

Total Volume: 0.070 bbl

Num Fluid Samples: 0

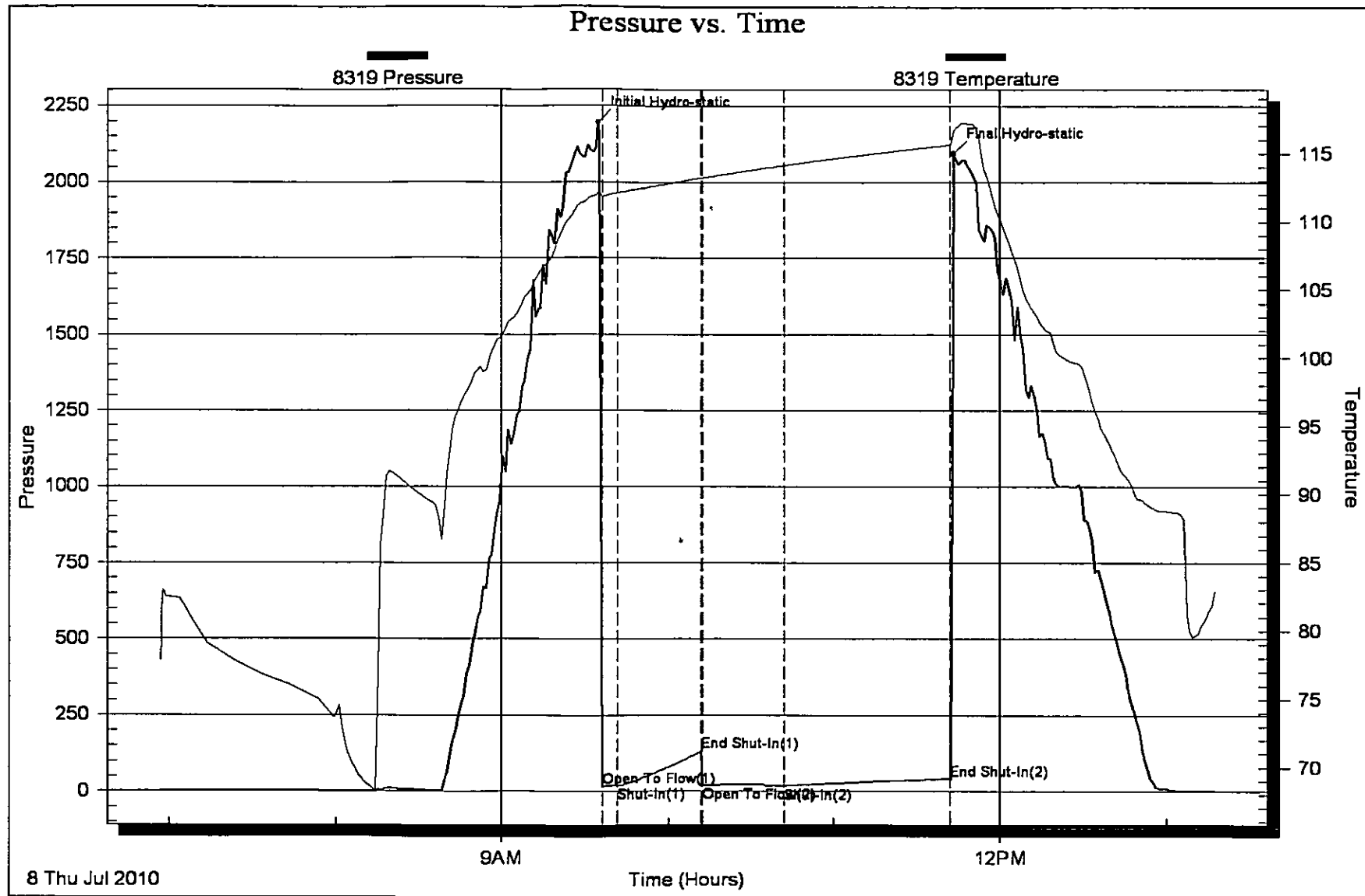
Num Gas Bombs: 0

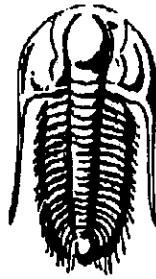
Serial#:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drlg. Co.**

1700 N Waterfront  
Wichita KS 67206

ATTN: Kevin Kessler

**17 17S 23W Ness KS**

**Snodgrass #4-17**

Start Date: 2010.07.08 @ 20:18:21

End Date: 2010.07.09 @ 04:33:51

Job Ticket #: 38773                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drlg. Co.

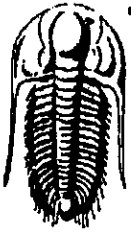
Snodgrass #4-17

17 17S 23W Ness KS

DST # 3

Cherokee Sd.

2010.07.08



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drlg. Co.  
1700 N Waterfront  
Wichita KS 67206  
ATTN: Kevin Kessler

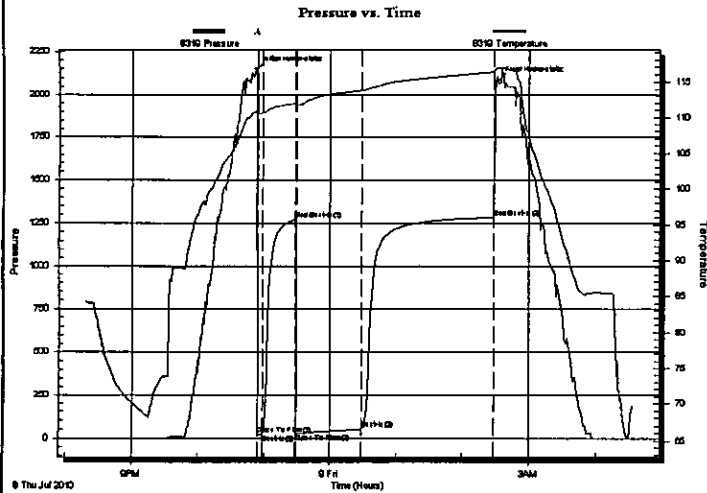
**Snodgrass #4-17**  
**17 17S 23W Ness KS**  
Job Ticket: 38773      DST#: 3  
Test Start: 2010.07.08 @ 20:18:21

## GENERAL INFORMATION:

Formation: **Cherokee Sd.**  
Deviated: **No** Whipstock:                      ft (KB)  
Time Tool Opened: 22:53:51  
Time Test Ended: 04:33:51  
Interval: **4320.00 ft (KB) To 4395.00 ft (KB) (TVD)**  
Total Depth: **4395.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition:                      KB to GR/CF: **8.00 ft**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brett Dickinson**  
Unit No: **47**  
Reference Elevations: **2434.00 ft (KB)**  
**2426.00 ft (CF)**

**Serial #: 8319**      **Inside**  
Press@RunDepth: **53.42 psig @ 4326.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.07.08**      End Date: **2010.07.09**      Last Calib.: **2010.07.09**  
Start Time: **20:18:26**      End Time: **04:33:50**      Time On Btm: **2010.07.08 @ 22:51:51**  
Time Off Btm: **2010.07.09 @ 02:31:51**

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



## PRESSURE SUMMARY

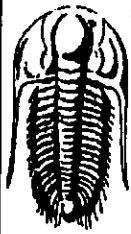
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2145.40	110.76	Initial Hydro-static
2	23.25	110.48	Open To Flow (1)
7	25.91	110.61	Shut-In(1)
37	1270.31	111.94	End Shut-In(1)
38	28.07	111.67	Open To Flow (2)
97	53.42	113.82	Shut-In(2)
217	1282.67	116.35	End Shut-In(2)
220	2083.87	116.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	VSMCO 95%O 5%M	0.42
30.00	MCO 70%O 30%M	0.42
30.00	OCM 20%O 80%M	0.42

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Mull Drig. Co.  
1700 N Waterfront  
Wichita KS 67206  
ATTN: Kevin Kessler

**Snodgrass #4-17**  
**17 17S 23W Ness KS**  
Job Ticket: 38773      DST#: 3  
Test Start: 2010.07.08 @ 20:18:21

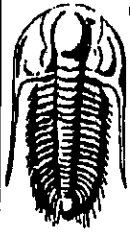
**Tool Information**

Drill Pipe:	Length: 4306.00 ft	Diameter: 3.80 inches	Volume: 60.40 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 60.40 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4320.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	103.00 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			4293.00		
Shut in Tool	5.00			4298.00		
Hydraulic tool	5.00			4303.00		
Jars	5.00			4308.00		
Safety Joint	3.00			4311.00		
Packer	4.00			4315.00	28.00	Bottom Of Top Packer
Packer	5.00			4320.00		
Stubb	1.00			4321.00		
Perforations	4.00			4325.00		
Change Over Sub	1.00			4326.00		
Recorder	0.00	8319	Inside	4326.00		
Recorder	0.00	6719	Inside	4326.00		
Blank Spacing	63.00			4389.00		
Change Over Sub	1.00			4390.00		
Perforations	2.00			4392.00		
Bullnose	3.00			4395.00	75.00	Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>103.00</b>					



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drig. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38773

**DST#: 3**

ATTN: Kevin Kessler

Test Start: 2010.07.08 @ 20:18:21

## 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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	VSMCO 95%O 5%M	0.421
30.00	MCO 70%O 30%M	0.421
30.00	OCM 20%O 80%M	0.421

Total Length: 90.00 ft

Total Volume: 1.263 bbl

Num Fluid Samples: 0

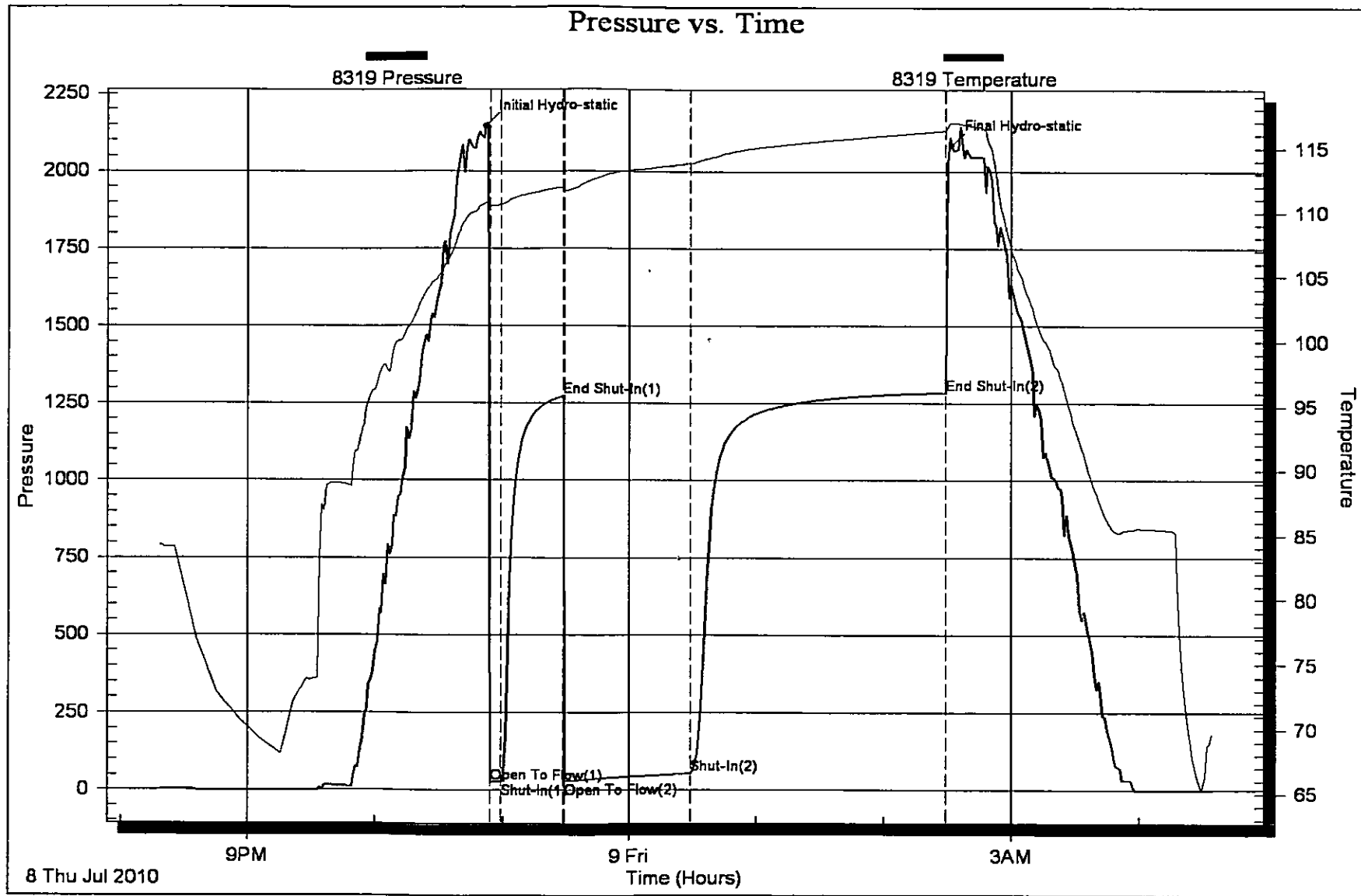
Num Gas Bombs: 0

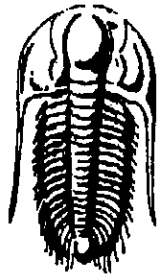
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mull Drlg. Co.**

1700 N Waterfront  
Wichita KS 67206

ATTN: Kevin Kessler

**17 17S 23W Ness KS**

**Snodgrass #4-17**

Start Date: 2010.07.09 @ 11:15:32

End Date: 2010.07.09 @ 19:10:32

Job Ticket #: 38774                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Mull Drlg. Co.

Snodgrass #4-17

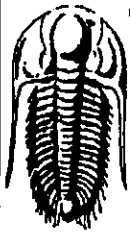
17 17S 23W Ness KS

DST # 4

Cherokee Sd.

2010.07.09





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Mull Drlg. Co.  
1700 N Waterfront  
Wichita KS 67206  
ATTN: Kevin Kessler

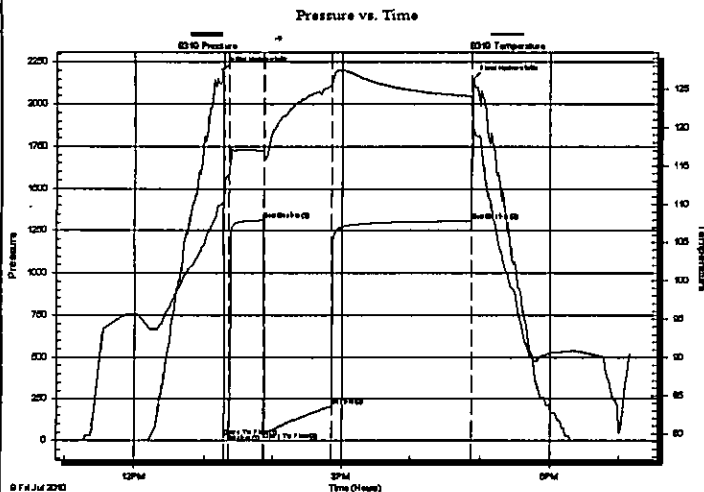
**Snodgrass #4-17**  
**17 17S 23W Ness KS**  
Job Ticket: 38774      DST#: 4  
Test Start: 2010.07.09 @ 11:15:32

## GENERAL INFORMATION:

Formation: **Cherokee Sd.**  
Deviated: **No Whipstock:**                      ft (KB)  
Time Tool Opened: 13:17:02  
Time Test Ended: 19:10:32  
Interval: **4385.00 ft (KB) To 4415.00 ft (KB) (TVD)**  
Total Depth: **4415.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition:                      KB to GR/CF: **8.00 ft**  
Test Type: **Conventional Bottom Hole**  
Tester: **Brett Dickinson**  
Unit No: **47**  
Reference Elevations: **2434.00 ft (KB)**  
**2426.00 ft (CF)**

**Serial #: 8319**      Inside  
Press@RunDepth: **208.61 psig @ 4412.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.07.09**      End Date: **2010.07.09**      Last Calib.: **2010.07.09**  
Start Time: **11:15:37**      End Time: **19:10:31**      Time On Btm: **2010.07.09 @ 13:15:32**  
Time Off Btm: **2010.07.09 @ 16:53:31**

TEST COMMENT: IF-5in blow  
IS-No blow  
FF-BOB in 12min  
FSI very weak surface blow died in 10min



## PRESSURE SUMMARY

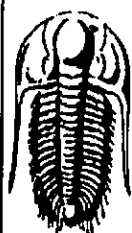
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2201.01	110.06	Initial Hydro-static
2	25.73	109.77	Open To Flow (1)
6	43.17	113.84	Shut-In(1)
36	1312.38	116.90	End Shut-In(1)
37	50.51	116.10	Open To Flow (2)
96	208.61	125.56	Shut-In(2)
217	1308.16	124.02	End Shut-In(2)
218	2147.62	120.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
410.00	GO 20%G 80%O	5.75
90.00	SGOCM 10%G 10%O 80%M	1.26
0.00	165ft GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mill Drg. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38774

**DST#: 4**

ATTN: Kevin Kessler

Test Start: 2010.07.09 @ 11:15:32

### Tool Information

Drill Pipe:	Length: 4370.00 ft	Diameter: 3.80 inches	Volume: 61.30 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 61.30 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4385.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 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			4358.00	
Shut In Tool	5.00			4363.00	
Hydraulic tool	5.00			4368.00	
Jars	5.00			4373.00	
Safety Joint	3.00			4376.00	
Packer	4.00			4380.00	28.00 Bottom Of Top Packer
Packer	5.00			4385.00	
Stubb	1.00			4386.00	
Perforations	26.00			4412.00	
Recorder	0.00	8319	Inside	4412.00	
Recorder	0.00	6719	Inside	4412.00	
Bullnose	3.00			4415.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 58.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Mill Drlg. Co.

**Snodgrass #4-17**

1700 N Waterfront  
Wichita KS 67206

**17 17S 23W Ness KS**

Job Ticket: 38774

DST#: 4

ATTN: Kevin Kessler

Test Start: 2010.07.09 @ 11:15:32

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	40 deg API
Mud Weight: 9.00 lb/gal	Cushion Length:	Water Salinity:	ppm
Viscosity: 52.00 sec/qt			
Water Loss: 8.77 in <sup>3</sup>	Cushion Volume:		
Resistivity: ohm.m			
Salinity: 3500.00 ppm	Gas Cushion Type:		
Filter Cake: inches	Gas Cushion Pressure:		

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
410.00	GO 20%G 80%O	5.751
90.00	SGOCM 10%G 10%O 80%M	1.262
0.00	165ft GIP	0.000

Total Length: 500.00 ft      Total Volume: 7.013 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

