

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

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

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 Peterson
Purchaser: MV Purchasing

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 #: _____

02/09/10 02/19/10 03/10/10
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 109-20886-0000
Spot Description: _____
NW NW SE SE Sec. 1 Twp. 13 S. R. 33 East West
1,050 Feet from North / South Line of Section
1,050 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Logan
Lease Name: DFT Well #: 2-1
Field Name: Wildcat
Producing Formation: LKC
Elevation: Ground: 3059 Kelly Bushing: 3069
Total Depth: 4750 Plug Back Total Depth: 4682
Amount of Surface Pipe Set and Cemented at: 223 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2600 Feet
If Alternate II completion, cement circulated from: 2600
feet depth to: surface w/ 165 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: 06/04/10

KCC Office Use ONLY
 Letter of Confidentiality Received RECEIVED
Date: 6-12-10 KANSAS CORPORATION COMMISSION
 Confidential Release Date: 6-12-10 JUN 09 2010
 Wireline Log Received
 Geologist Report Received
 UIC Distribution CONSERVATION DIVISION
ALT I II III Approved by: NJ Date: 6-21-10

Operator Name: Murfin Drilling Company, Inc. Lease Name: DFT Well #: 2-1
 Sec. 1 Twp. 13 S. R. 33 East West County: Logan

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
--	--

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#	223	Common	175	3% cc, 2% gel
Production		5 1/2	15.5#	4743	EA-2	175	

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 (Amount and Kind of Material Used)	Depth
4	4206 - 4214 LKC "H"		
4	4609 - 4613 Johnson	250 gal 15% MCA	

TUBING RECORD: Size: <u>2-3/8</u> Set At: <u>4269</u> Packer At: <u>4275</u> Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR.	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>21</u> Gas Mcf <u>107</u> Water Bbls. <u>107</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>4206 - 4214</u>
---	--	--

DFT #2-1 1050' FSL 1050' FEL Sec. 1-T13S-R33W 3069' KB							Voth #1-1 2100' FNL 2100' FWL Sec. 1-T13S-R33W 3065' KB	
Formation	SampleTops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Anhydrite	2542	+527	+17	2544	+525	+15	2555	+510
B/Anhydrite	2565	+504	+16	2567	+502	+14	2577	+488
Topeka	3793	-714	+6	3779	-710	+10	3785	-720
Heebner	4001	-932	+13	4000	-931	+14	4010	-945
Lansing	4045	-976	+11	4047	-978	+10	4053	-988
Stark	4279	-1210	+12	4280	-1211	+11	4287	-1222
Marmaton	4389	-1320	+15	4392	-1323	+12	4477	-1335
Up Pawnee	4481	-1412	+12	4483	-1414	+10	4489	-1424
Mississippi	4678	-1609	+16	4681	-1612	+13	4690	-1625
RTD	4750						4745	
LTD					4753		4747	

CONFIDENTIAL

JUN 08 2010

KCC

RECEIVED
KANSAS CORPORATION COMMISSION

JUN 09 2010

CONSERVATION DIVISION
WICHITA, KS



24 S. Lincoln Street
P.O. Box 31
Russell, KS 67665-2906

Voice: (785) 483-3887
Fax: (785) 483-5566

INVOICE

PROD COPY

Invoice Number: 121528
Invoice Date: Feb 9, 2010
Page: 1

*acct
log*

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

*operator pay
mcc
om*

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Murfin	DFT #2-1	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Feb 9, 2010	3/11/10

Quantity	Item	Description	Unit Price	Amount
175.00	MAT	Class A Common	15.45	2,703.75
3.00	MAT	Gel	20.80	62.40
6.00	MAT	Chloride	58.20	349.20
184.00	SER	Handling	2.40	441.60
15.00	SER	Mileage 184 sx @ .10 per sk per mi	18.40	276.00
1.00	SER	Surface	1,018.00	1,018.00
15.00	SER	Pump Truck Mileage	7.00	105.00

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CONSERVATION DIVISION
WICHITA, KS

Acc.	W.	Amount	Description
03600	01475	3597	5152.22 (1734.58)
			Cement S. Csg

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

\$ 1734.58

ONLY IF PAID ON OR BEFORE
Mar 6, 2010

Subtotal	4,955.95
Sales Tax	196.27
Total Invoice Amount	5,152.22
Payment/Credit Applied	
TOTAL	5,152.22

WV 1734.58
3417.64

ALLIED CEMENTING CO., LLC. 039192

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

SERVICE POINT:
Oakley

DATE <u>2-9-10</u>	SEC. <u>1</u>	TWP. <u>13</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION	JOB START <u>3:30pm</u>	JOB FINISH <u>6:00pm</u>
LEASE <u>DFT</u>	WELL # <u>2-1</u>	LOCATION <u>Oakley 11s 4w</u>			COUNTY <u>Logan</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>Gas winto</u>			

CONTRACTOR MusFin Drilling Rig 14 OWNER same

TYPE OF JOB Surface

HOLE SIZE <u>12 1/2</u>	T.D. <u>226'</u>	CEMENT
CASING SIZE <u>8 5/8</u>	DEPTH <u>226</u>	AMOUNT ORDERED <u>175 SKS com</u>
TUBING SIZE	DEPTH	<u>3/8" 20 gal</u>
DRILL PIPE	DEPTH	
TOOL	DEPTH	
PRES. MAX	MINIMUM	COMMON <u>175 SKS @ 15.45 2703.25</u>
MEAS. LINE	SHOE JOINT	POZMIX @
CEMENT LEFT IN CSG. <u>15'</u>		GEL <u>3 SKS @ 20.80 62.40</u>
PERFS.		CHLORIDE <u>6 SKS @ 58.20 349.20</u>
DISPLACEMENT <u>13.44 BBL</u>		ASC @

EQUIPMENT		
PUMP TRUCK # <u>431</u>	CEMENTER <u>Andrew</u>	
	HELPER <u>Kelly</u>	
BULK TRUCK # <u>377</u>	DRIVER <u>Wil</u>	
BULK TRUCK #	DRIVER	
HANDLING <u>184 SKS @ 2.40 441.60</u>		
MILEAGE <u>10 SK/mile 276.00</u>		
TOTAL <u>3832.95</u>		

REMARKS:

Cement did circulate

thank you

CHARGE TO: MusFin

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	
PUMP TRUCK CHARGE	<u>1018.00</u>
EXTRA FOOTAGE @	
MILEAGE <u>15 miles @ 7.00</u>	<u>105.00</u>
MANIFOLD @	
TOTAL	<u>1123.00</u>

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
TOTAL		

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KANSAS CORPORATION COMMISSION
JUN 09 2010
CONSERVATION DIVISION
WICHITA, KS

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 Unruh

SIGNATURE Greg Unruh

SALES TAX (if Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS



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



cc: Liz
cc: WF
cc: Len p. 1

Invoice

DATE	INVOICE #
2/19/2010	18353

BILL TO
Murfin Drilling Co Inc - Russell P. O. Box 288 Russell, KS 67665-0288

USED FOR Acidizing
Cement
Tool Rental

APPROVED JTK

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2-1	DFT	Logan	Murfin Drilling	Oil	Development	5-1/2" LongString	Jason

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	70	Miles	5.00	350.00
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
402-5	5 1/2" Centralizer	15	Each	55.00	825.00T
403-5	5 1/2" Cement Basket	2	Each	180.00	360.00T
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	225	Sacks	11.00	2,475.00T
276	Flocele	56	Lb(s)	1.50	84.00T
283	Salt	1,150	Lb(s)	0.15	172.50T
284	Calseal	11	Sack(s)	30.00	330.00T
285	CFR-1	160	Lb(s)	4.00	640.00T
290	D-Air	2	Gallon(s)	35.00	70.00T
581D	Service Charge Cement	225	Sacks	1.50	337.50
583D	Drayage	826.56	Ton Miles	1.00	826.56
	Subtotal				12,570.56
	Sales Tax Logan County			6.30%	608.36

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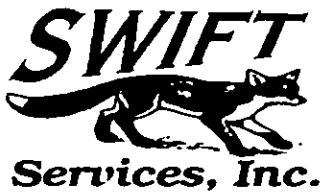
JUN 09 2010

CONSERVATION DIVISION
WICHITA, KS

USED FOR _____
APPROVED _____

We Appreciate Your Business!

Total \$13,178.92



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

TICKET
18353
 PAGE 1 OF 2

SERVICE LOCATIONS
 1. **NESS CITY**
 2.
 3.
 4. REFERRAL LOCATION

WELL/PROJECT NO. LEASE **DFT #2-1** COUNTY/PARISH **LOGAN** STATE **KS** CITY **OAKLEY, KS** DATE **19 FEB 10** OWNER

TICKET TYPE SERVICE SALES CONTRACTOR **MURFIN DRILLING** RIG NAME/NO. **#14** SHIPPED VIA DELIVERED TO **LOCATION** ORDER NO.

WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **5 1/2 LONG STRING** WELL PERMIT NO. WELL LOCATION **105, 4th 1/2 S, WIGTO**

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE #110	70	MIL			5.00	350.00
578		1			PUMP CHARGE	1	500			1400.00	1400.00
221		1			LIQUID KCL	4	25			25.00	100.00
280		1			FLOORCHECK 21	500	2			2.50	1250.00
402		1			5 1/2 NEUTRALIZERS	15	EA			55.00	825.00
403		1			5 1/2 CEMENT BASKET	2	EA			180.00	360.00
404		1			5 1/2 PORT COLLAR	1	EA			1900.00	1900.00
406		1			LATCH DOWN PLUG & RAFFLE 5 1/2	1	EA			225.00	225.00
407		1			5 1/2 INSERT FLOAT SHOE/AUTOFILL	1	EA			275.00	275.00
413		1			ROTO WALL SCRATCHERS	20	EA			40.00	800.00
419		1			ROTATING HEAD RENTAL	1	500			150.00	150.00

RECEIVED
 KANSAS CORPORATION COMMISSION
 JUN 09 2010
 CONSERVATION DIVISION
 WICHITA, KS

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 *Kevin Axelson*
 DATE SIGNED **19 FEB 10** TIME SIGNED **1:43 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	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				1	7635.40
WE UNDERSTOOD AND MET YOUR NEEDS?				2	4935.56
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Subtotal	12570.56
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Logan TAX 6.3%	608.36
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	13,178.92
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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

SWIFT OPERATOR *Janet R...* APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 18353

CUSTOMER MURPHY DRUG CO. INC.	WELL DFT 2+1	DATE 2-19-10	PAGE 2	OF 2
----------------------------------	-----------------	-----------------	-----------	---------

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF									
325		1				STANDARD CEMENT	EA-2	225	SIB		11.00	2475.00	
276		1				FLOCEL		56	LBS		1.50	84.00	
283		1				SALT		1150	LBS		.15	172.50	
284		1				CALSEAL		11	SKS	1100	LBS	30.00	330.00
285		1				CFR-1		160	LBS		4.00	640.00	
290		1				D-ARR		2	GAL		35.00	70.00	
						RECEIVED KANSAS CORPORATION COMMISSION JUN 09 2010 CONSERVATION DIVISION WASHINGTON, MO							
581		1				SERVICE CHARGE				CUBIC FEET	225	1.50	337.50
583		1				MILEAGE CHARGE	TOTAL WEIGHT	LOADED MILES		TON MILES	826.56	1.00	826.56
											CONTINUATION TOTAL	4935.56	

JOB LOG

SWIFT Services, Inc.

DATE 2-19-10 PAGE NO. 7

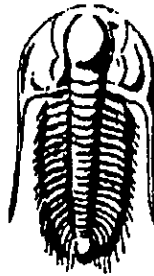
CUSTOMER MURFEN DRUG CO. INC WELL NO. 2-1 LEASE DFT JOB TYPE 5 1/2" LONGSTRENG TICKET NO. 18353

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/DAY)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2300							ON LOCATION
	2330							START 5 1/2" CASING IN WELL
								TD-4753 SETe 4743'
								TP-4745, 75 5 1/2" # 15.5
								ST-43.65 100' SCRATCHES
								CENTRAL LOGS-1,3,5,7,9,11,13,15,17,19,21,23,25
								CMT BSKTS--50,51 50,52
								PORT COLUR e 2598 TOP JT # 51
	0145							DROP BALL - CALCULATE ROTATE
	0250	6	5		✓	500	500	PUMP KCL - SPACER "
	0251	6	12		✓		500	PUMP 500 GAL FLOCHECK-21 "
	0253	6	5		✓		500	PUMP KCL - SPACER "
	0300		7-5					PLUG RH-MH (30 SKS - 20 SKS)
	0310	4 1/2	42		✓		300	MAX CEMENT - 175 SKS EA-2 = 15.4 PP6 "
	0320							WASH OUT PUMP - LINES
	0321							RELEASE LATCH DOWN PLUG
	0323		0		✓			DISPLACE PLUG (1 ST TANK KCL) "
	0338	6 1/2	102				800	SHOT OFF ROTATING
	0340		111.9				1500	PLUG DOWN - PSE UP LATCH IN PLUG
	0345							OK RELEASE PSE - HELD WASH TRUCK
	0430							JOB COMPLETE
								THANK YOU
								JASON R., ROGER B., LAJE, WAXIE

RECEIVED KANSAS CORPORATION COMMISSION

JUN 09 2010

CONSERVATION DIVISION WICHITA, KS



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.13 @ 07:53:05

End Date: 2010.02.13 @ 15:32:28

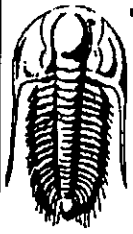
Job Ticket #: 37087 DST #: 1

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CONSERVATION DIVISION
WICHITA, KS

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 Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37087

DST#: 1

ATTN: Bob Petersen

Test Start: 2010.02.13 @ 07:53:05

GENERAL INFORMATION:

Formation: **LKC A LKC B**

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

Time Tool Opened: 09:57:28

Time Test Ended: 15:32:28

Test Type: **Conventional Bottom Hole**

Tester: **Mike Roberts**

Unit No: **35**

Interval: **3996.00 ft (KB) To 4094.00 ft (KB) (TVD)**

Total Depth: **4094.00 ft (KB) (TVD)**

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

Reference Elevations: **3069.00 ft (KB)**

3059.00 ft (CF)

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

Serial #: 6772

Inside

Press@RunDepth: **970.68 psig @ 3998.00 ft (KB)**

Start Date: **2010.02.13**

End Date:

2010.02.13

Start Time: **07:53:05**

End Time:

15:32:28

Capacity: **8000.00 psig**

Last Calib.: **2010.02.13**

Time On Btm: **2010.02.13 @ 09:57:13**

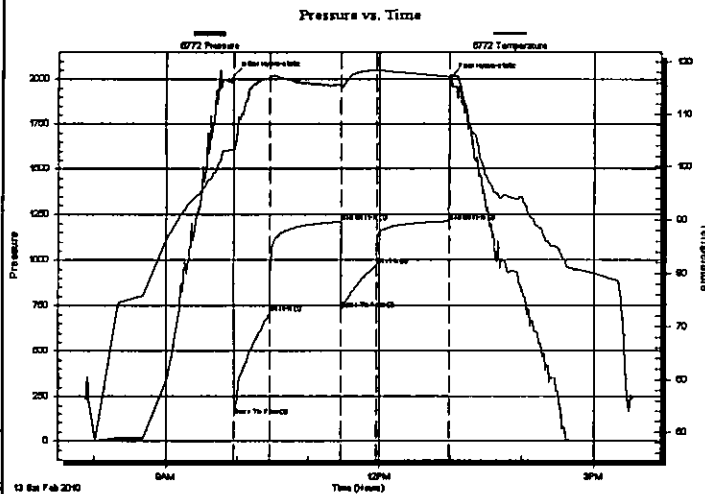
Time Off Btm: **2010.02.13 @ 12:59:28**

TEST COMMENT: IS:BOB in 1 Min.

IF:No return

FF:BOB in 2 Min.

FS:No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2021.47	103.35	Initial Hydro-static
1	142.05	102.77	Open To Flow (1)
30	708.08	117.06	Shut-In(1)
90	1209.68	115.59	End Shut-In(1)
90	730.50	115.41	Open To Flow (2)
120	970.68	118.39	Shut-In(2)
181	1211.44	117.21	End Shut-In(2)
183	2015.48	117.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	w cm 40% w 60% m	1.08
190.00	w m 50% w 50% m	0.93
475.00	gcmw 10 %g 40%m 50% w	5.48
665.00	mcw 30 % m 70 %w	9.33
540.00	mcw 5% m 95% w	7.57

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37087

DST#: 1

ATTN: Bob Petersen

Test Start: 2010.02.13 @ 07:53:05

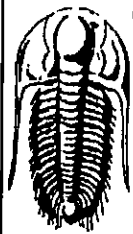
Tool Information

Drill Pipe:	Length: 3453.00 ft	Diameter: 3.80 inches	Volume: 48.44 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 51.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	3996.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	121.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3974.00	
Shut In Tool	5.00			3979.00	
Hydraulic tool	5.00			3984.00	
Safety Joint	3.00			3987.00	
Packer	5.00			3992.00	23.00 Bottom Of Top Packer
Packer	4.00			3996.00	
Stubb	1.00			3997.00	
Change Over Sub	1.00			3998.00	
Recorder	0.00	6772	Inside	3998.00	
Recorder	0.00	8373	Inside	3998.00	
Change Over Sub	1.00			3999.00	
Drill Pipe	64.00			4063.00	
Perforations	26.00			4089.00	
Bullnose	5.00			4094.00	98.00 Bottom Packers & Anchor

Total Tool Length: 121.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37087

DST#: 1

ATTN: Bob Petersen

Test Start: 2010.02.13 @ 07:53:05

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 6.75 in³
Resistivity: 0.00 ohm.m
Salinity: 3500.00 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: 60000 ppm

Recovery Information

Recovery Table

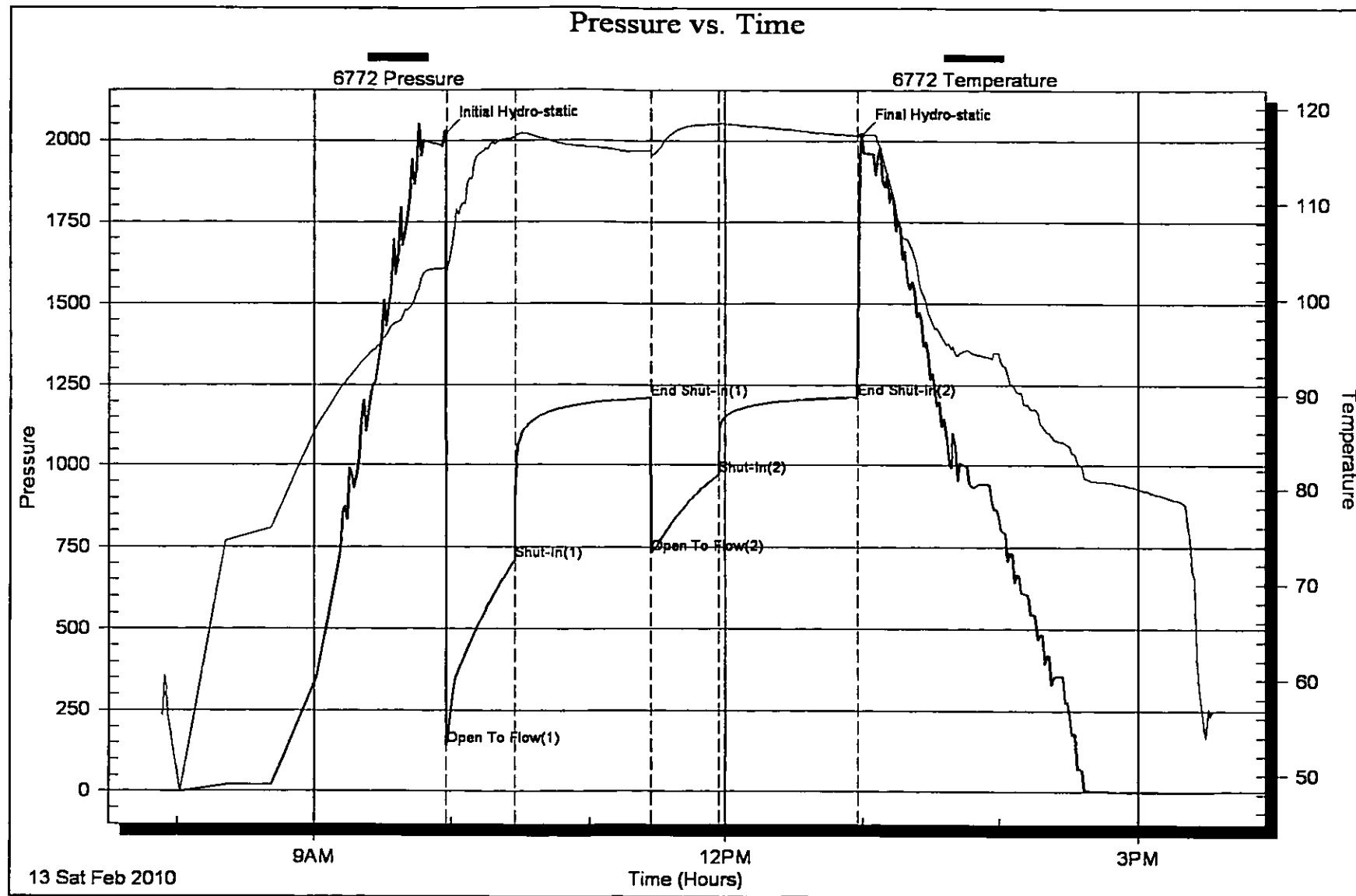
Length ft	Description	Volume bbl
220.00	w cm 40% w 60% m	1.082
190.00	w m 50% w 50% m	0.934
475.00	gcmw 10 %g 40%m 50% w	5.479
665.00	mcw 30 % m 70 %w	9.328
540.00	mcw 5% m 95% w	7.575

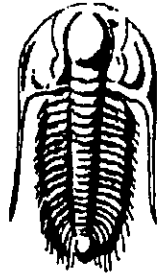
Total Length: 2090.00 ft Total Volume: 24.398 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW= 55.6* @ .169= 60,000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.14 @ 01:09:50

End Date: 2010.02.14 @ 09:36:44

Job Ticket #: 37048 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

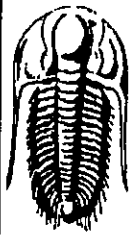
DFT #2-1

1-13-33 Logan KS

DST # 2

Lansing E-F

2010.02.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37048

DST#: 2

ATTN: Bob Petersen

Test Start: 2010.02.14 @ 01:09:50

GENERAL INFORMATION:

Formation: **Lansing E-F**

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

Time Tool Opened: 04:09:00

Time Test Ended: 09:36:44

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4110.00 ft (KB) To 4148.00 ft (KB) (TVD)**

Reference Elevations: **3069.00 ft (KB)**

Total Depth: **4148.00 ft (KB) (TVD)**

3059.00 ft (CF)

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

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: **475.50 psig @ 4112.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.02.14**

End Date: **2010.02.14**

Last Calib.: **2010.02.14**

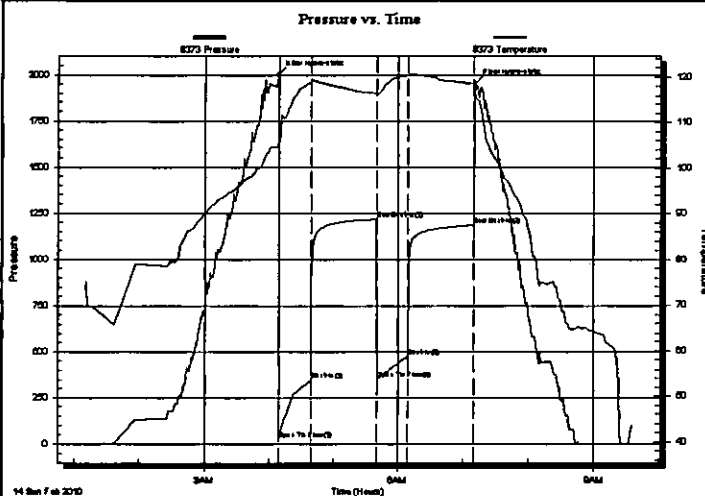
Start Time: **01:09:50**

End Time: **09:36:44**

Time On Btm: **2010.02.14 @ 04:07:30**

Time Off Btm: **2010.02.14 @ 07:11:14**

TEST COMMENT: IF: BOB in 5 min.
IS: No return.
FF: BOB in 9 min.
FS: No return.



PRESSURE SUMMARY

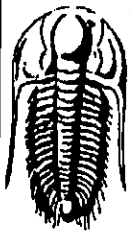
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.82	104.73	Initial Hydro-static
2	26.75	105.46	Open To Flow (1)
32	346.50	118.87	Shut-In(1)
93	1216.14	116.38	End Shut-In(1)
93	351.99	116.11	Open To Flow (2)
122	475.50	120.33	Shut-In(2)
182	1185.27	118.55	End Shut-In(2)
184	1957.81	116.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
376.00	mcw 95%w 5%m	1.85
282.00	mcw 70%w 30%m	2.46
376.00	w cm 30%w 70%m	5.27

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37048

DST#: 2

ATTN: Bob Petersen

Test Start: 2010.02.14 @ 01:09:50

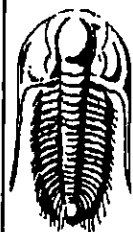
Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 80000.00 lb
		<u>Total Volume:</u>	<u>52.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4110.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4088.00	
Shut In Tool	5.00			4093.00	
Hydraulic tool	5.00			4098.00	
Safety Joint	3.00			4101.00	
Packer	5.00			4106.00	23.00 Bottom Of Top Packer
Packer	4.00			4110.00	
Stubb	1.00			4111.00	
Change Over Sub	1.00			4112.00	
Recorder	0.00	6772	Inside	4112.00	
Recorder	0.00	8373	Inside	4112.00	
Perforations	32.00			4144.00	
Bullnose	5.00			4149.00	39.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37048

DST#: 2

ATTN: Bob Petersen

Test Start: 2010.02.14 @ 01:09:50

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.76 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
376.00	mcw 95%w 5%m	1.849
282.00	mcw 70%w 30%m	2.462
376.00	w cm 30%w 70%m	5.274

Total Length: 1034.00 ft Total Volume: 9.585 bbl

Num Fluid Samples: 0

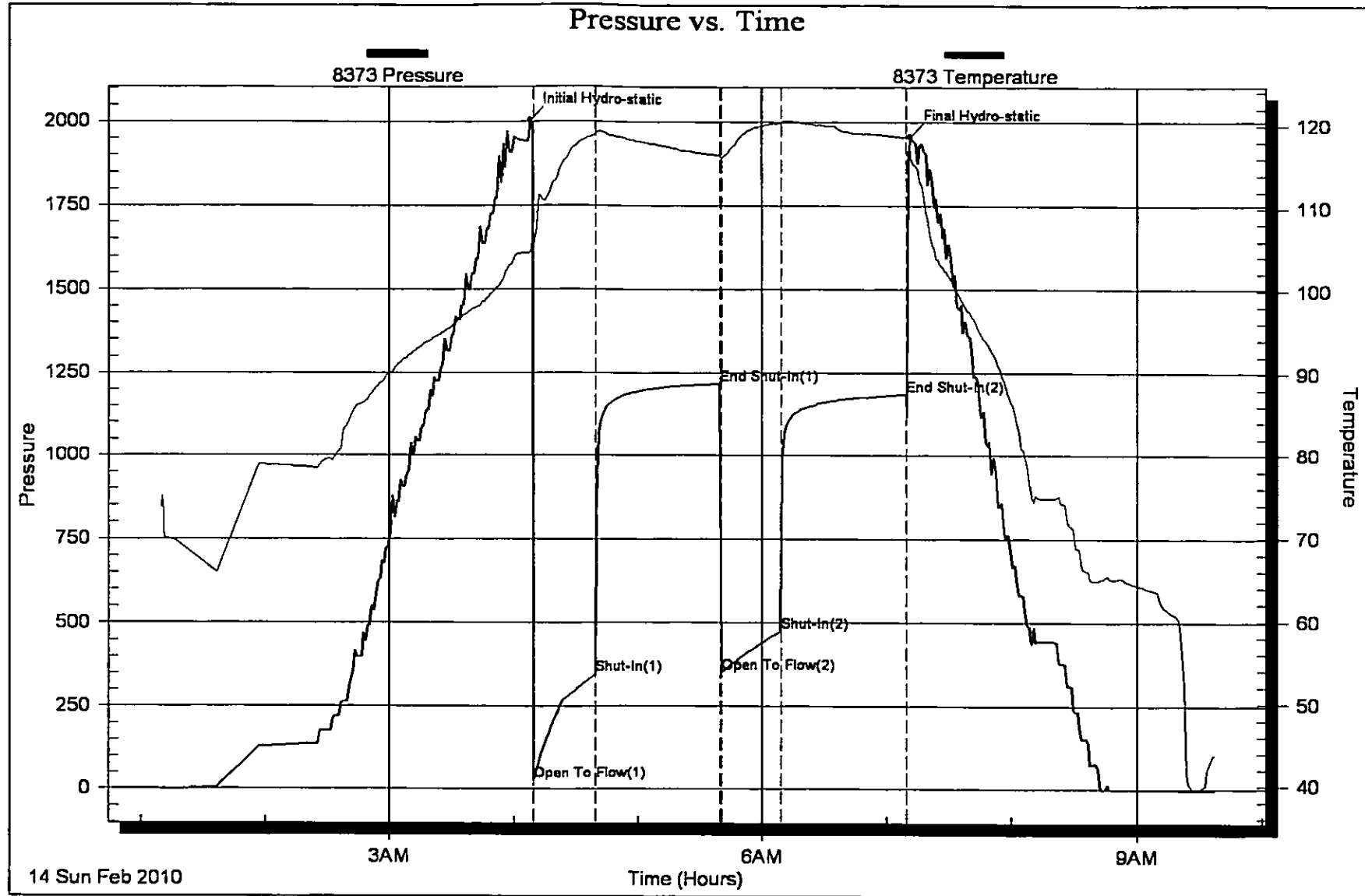
Num Gas Bombs: 0

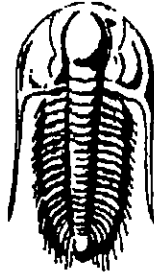
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .16@57=59000





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.15 @ 02:00:31

End Date: 2010.02.15 @ 10:03:55

Job Ticket #: 37049 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

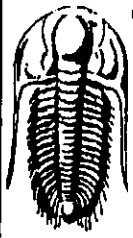
DFT #2-1

1-13-33 Logan KS

DST # 3

LKC H&I

2010.02.15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37049

DST#: 3

ATTN: Bob Petersen

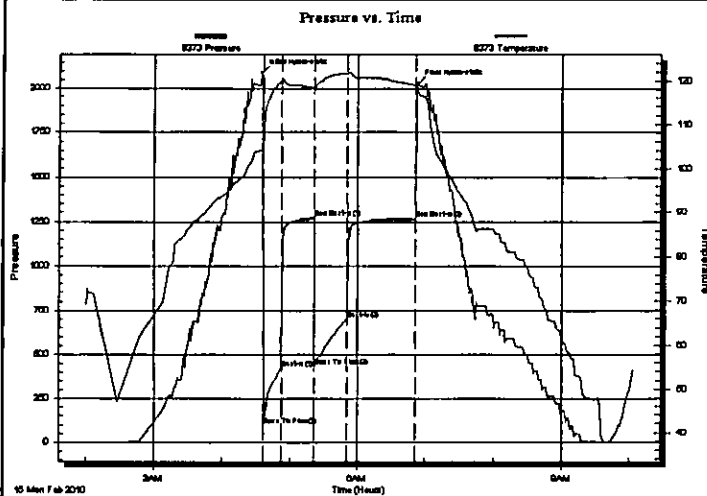
Test Start: 2010.02.15 @ 02:00:31

GENERAL INFORMATION:

Formation: **LKC H&I**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 04:36:11
 Time Test Ended: 10:03:55
 Interval: **4187.00 ft (KB) To 4247.00 ft (KB) (TVD)**
 Total Depth: **4247.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Brandon Turley**
 Unit No: **35**
 Reference Elevations: **3069.00 ft (KB)**
3059.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 8373 Inside
 Press@RunDepth: **700.93 psig @ 4189.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.02.15** End Date: **2010.02.15** Last Calib.: **2010.02.15**
 Start Time: **02:00:31** End Time: **10:03:55** Time On Btm: **2010.02.15 @ 04:34:41**
 Time Off Btm: **2010.02.15 @ 06:52:55**

TEST COMMENT: IF: BOB in 1 min.
 IS: Surface blow built to 1 1/2 in 30 min.
 FF: BOB in 3 min.
 FS: Surface blow built to 1 in 60 min.



PRESSURE SUMMARY

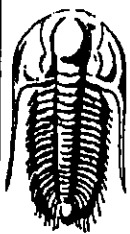
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.29	104.12	Initial Hydro-static
2	95.64	103.84	Open To Flow (1)
18	424.07	119.94	Shut-In(1)
47	1268.04	118.50	End Shut-In(1)
47	435.58	118.13	Open To Flow (2)
76	700.93	121.60	Shut-In(2)
137	1265.99	119.07	End Shut-In(2)
139	2031.08	118.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
658.00	ocm w 10%o 80%w 10%m	4.31
376.00	w mcgo 30%g 30%o 10%w 30%m	5.27
376.00	gocw m 10%g 30%o 10%w 50%m	5.27
94.00	mw cgo 5%g 55%o 10%w 30%m	1.32
84.00	go 5%g 95%o	1.18

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37049

DST#: 3

ATTN: Bob Petersen

Test Start: 2010.02.15 @ 02:00:31

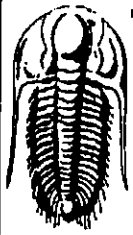
Tool Information

Drill Pipe:	Length: 3646.00 ft	Diameter: 3.80 inches	Volume: 51.14 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 53.80 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4187.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4165.00	
Shut In Tool	5.00			4170.00	
Hydraulic tool	5.00			4175.00	
Safety Joint	3.00			4178.00	
Packer	5.00			4183.00	23.00 Bottom Of Top Packer
Packer	4.00			4187.00	
Stubb	1.00			4188.00	
Change Over Sub	1.00			4189.00	
Recorder	0.00	6772	Inside	4189.00	
Recorder	0.00	8373	Inside	4189.00	
Perforations	20.00			4209.00	
Change Over Sub	1.00			4210.00	
Drill Pipe	32.00			4242.00	
Change Over Sub	1.00			4243.00	
Bullnose	5.00			4248.00	61.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37049

DST#: 3

ATTN: Bob Petersen

Test Start: 2010.02.15 @ 02:00:31

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

55000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
658.00	ocmw 10%o 80%w 10%m	4.311
376.00	w mcgo 30%g 30%o 10%w 30%m	5.274
376.00	gocw m 10%g 30%o 10%w 50%m	5.274
94.00	mw cgo 5%g 55%o 10%w 30%m	1.319
84.00	go 5%g 95%o	1.178

Total Length: 1588.00 ft

Total Volume: 17.356 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

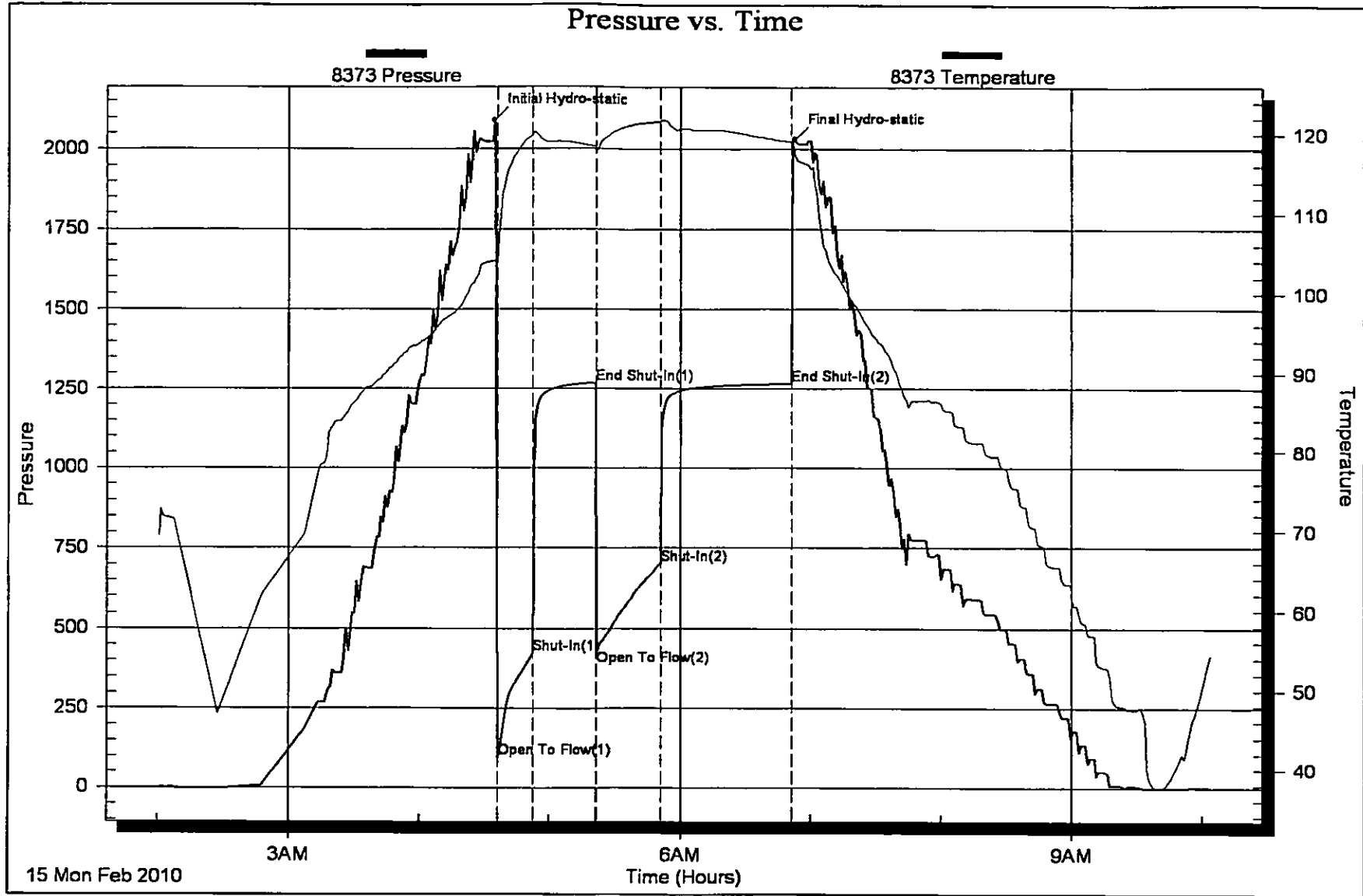
Serial #:

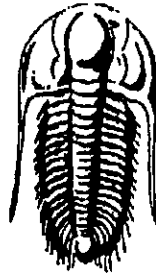
Laboratory Name:

Laboratory Location:

Recovery Comments: 29@20=33

.18@53=55000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.15 @ 17:04:47

End Date: 2010.02.16 @ 00:54:41

Job Ticket #: 37050 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

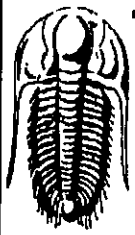
DFT #2-1

1-13-33 Logan KS

DST # 4

LKC J

2010.02.15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37050

DST#: 4

ATTN: Bob Petersen

Test Start: 2010.02.15 @ 17:04:47

GENERAL INFORMATION:

Formation: **LKC J**

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

Time Tool Opened: 19:14:42

Time Test Ended: 00:54:41

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4244.00 ft (KB) To 4273.00 ft (KB) (TVD)**

Reference Elevations: **3069.00 ft (KB)**

Total Depth: **4273.00 ft (KB) (TVD)**

3059.00 ft (CF)

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

KB to GRVCF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: **423.57 psig @ 4245.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.02.15**

End Date: **2010.02.16**

Last Calib.: **2010.02.16**

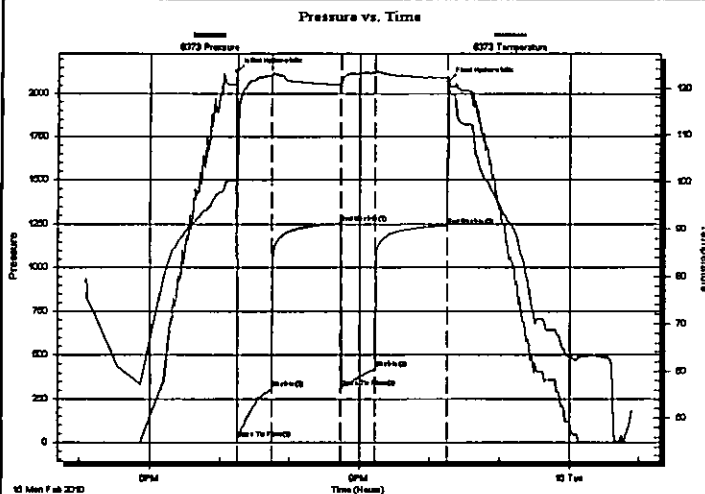
Start Time: **17:04:47**

End Time: **00:54:41**

Time On Btm: **2010.02.15 @ 19:13:57**

Time Off Btm: **2010.02.15 @ 22:15:41**

TEST COMMENT: IF: BOB in 6 min.
IS: Surface blow built to 1/2 in 60 min.
FF: BOB in 8 min.
FS: Surface blow built to 1/4 in 60 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2126.96	100.28	Initial Hydro-static
1	19.70	100.26	Open To Flow (1)
31	306.73	122.53	Shut-In(1)
90	1252.37	120.72	End Shut-In(1)
91	312.91	120.39	Open To Flow (2)
120	423.57	123.17	Shut-In(2)
181	1238.90	122.09	End Shut-In(2)
182	2067.84	120.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
470.00	mcw 95%w 5%m	2.31
282.00	mcw 90%w 10%m	3.32
178.00	mcw Trace of oil 70%w 30%m	2.50
10.00	oil 100%o	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37050

DST#: 4

ATTN: Bob Petersen

Test Start: 2010.02.15 @ 17:04:47

Tool Information

Drill Pipe:	Length: 3710.00 ft	Diameter: 3.80 inches	Volume: 52.04 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 85000.00 lb
		<u>Total Volume:</u>	<u>54.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: initial 72000.00 lb
Depth to Top Packer:	4244.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 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
Stubb	1.00			4222.00	
Shut In Tool	5.00			4227.00	
Hydraulic tool	5.00			4232.00	
Safety Joint	3.00			4235.00	
Packer	5.00			4240.00	23.00 Bottom Of Top Packer
Packer	4.00			4244.00	
Stubb	1.00			4245.00	
Recorder	0.00	6772	Inside	4245.00	
Recorder	0.00	8373	Inside	4245.00	
Perforations	23.00			4268.00	
Bullnose	5.00			4273.00	29.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37050

DST#: 4

ATTN: Bob Petersen

Test Start: 2010.02.15 @ 17:04:47

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

57000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
470.00	mcw 95%w 5%m	2.311
282.00	mcw 90%w 10%m	3.318
178.00	mcw Trace of oil 70%w 30%m	2.497
10.00	oil 100%o	0.140

Total Length: 940.00 ft Total Volume: 8.266 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

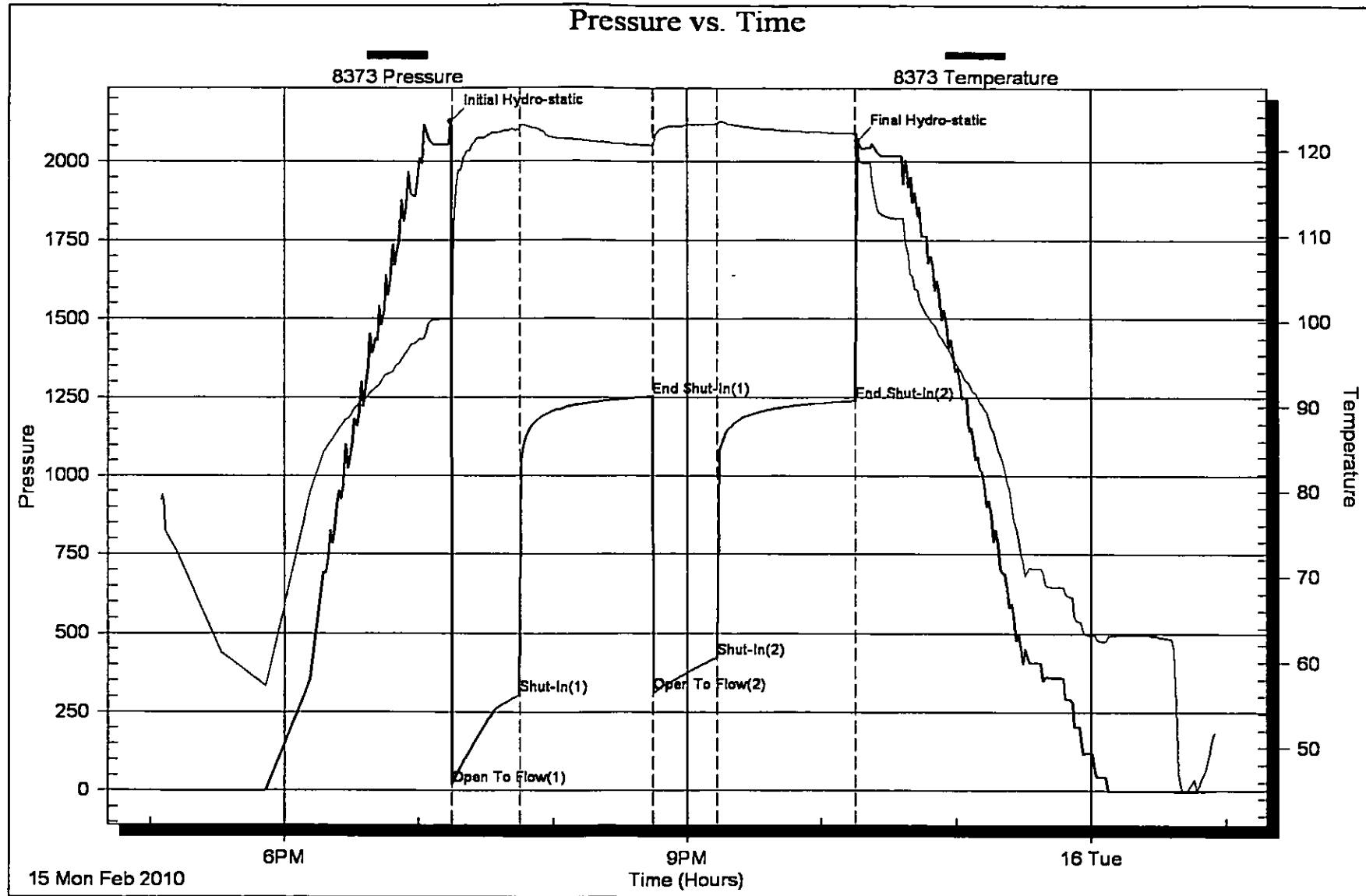
Serial #:

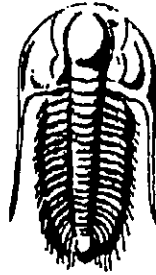
Laboratory Name:

Laboratory Location:

Recovery Comments: 27@20=31

.16@58=57000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.16 @ 23:55:11

End Date: 2010.02.17 @ 07:38:50

Job Ticket #: 37051 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

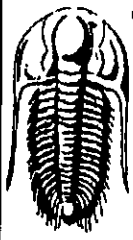
DFT #2-1

1-13-33 Logan KS

DST # 5

Altamount Pawnee

2010.02.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37051

DST#: 5

ATTN: Bob Petersen

Test Start: 2010.02.16 @ 23:55:11

GENERAL INFORMATION:

Formation: **Altamount Pawnee**

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

Time Tool Opened: 02:34:51

Time Test Ended: 07:38:50

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4395.00 ft (KB) To 4492.00 ft (KB) (TVD)**

Reference Elevations: **3069.00 ft (KB)**

Total Depth: **4492.00 ft (KB) (TVD)**

3059.00 ft (CF)

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

KB to GR/CF: 10.00 ft

Serial #: 8373

Inside

Press@RunDepth: **29.41 psig @ 4396.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.02.16**

End Date: **2010.02.17**

Last Calib.: **2010.02.17**

Start Time: **23:55:11**

End Time: **07:38:50**

Time On Btm: **2010.02.17 @ 02:33:36**

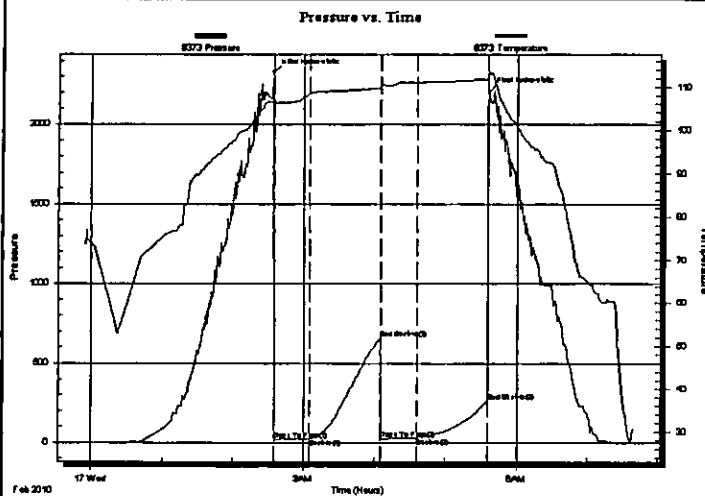
Time Off Btm: **2010.02.17 @ 05:36:35**

TEST COMMENT: IF: 1/2 blow died in 13 min.

IS: No return.

FF: No blow.

FS: No return.



PRESSURE SUMMARY

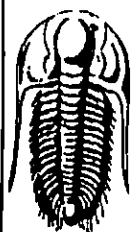
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2327.68	106.71	Initial Hydro-static
2	17.22	105.47	Open To Flow (1)
32	22.38	108.42	Shut-In(1)
92	658.13	109.87	End Shut-In(1)
92	24.60	110.06	Open To Flow (2)
123	29.41	111.18	Shut-In(2)
182	260.98	111.93	End Shut-In(2)
183	2209.94	113.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud some oil spots 100% m	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37051

DST#: 5

ATTN: Bob Petersen

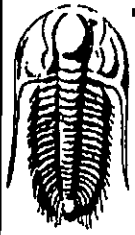
Test Start: 2010.02.16 @ 23:55:11

Tool Information

Drill Pipe:	Length: 3837.00 ft	Diameter: 3.80 inches	Volume: 53.82 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4395.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	97.00 ft			
Tool Length:	120.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4373.00	
Shut In Tool	5.00			4378.00	
Hydraulic tool	5.00			4383.00	
Safety Joint	3.00			4386.00	
Packer	5.00			4391.00	23.00 Bottom Of Top Packer
Packer	4.00			4395.00	
Stubb	1.00			4396.00	
Recorder	0.00	6772	inside	4396.00	
Recorder	0.00	8373	inside	4396.00	
Perforations	26.00			4422.00	
Change Over Sub	1.00			4423.00	
Drill Pipe	63.00			4486.00	
Change Over Sub	1.00			4487.00	
Bullnose	5.00			4492.00	97.00 Bottom Packers & Anchor
Total Tool Length:	120.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37051

DST#: 5

ATTN: Bob Petersen

Test Start: 2010.02.16 @ 23:55:11

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: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud some oil spots 100% ^m	0.098

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

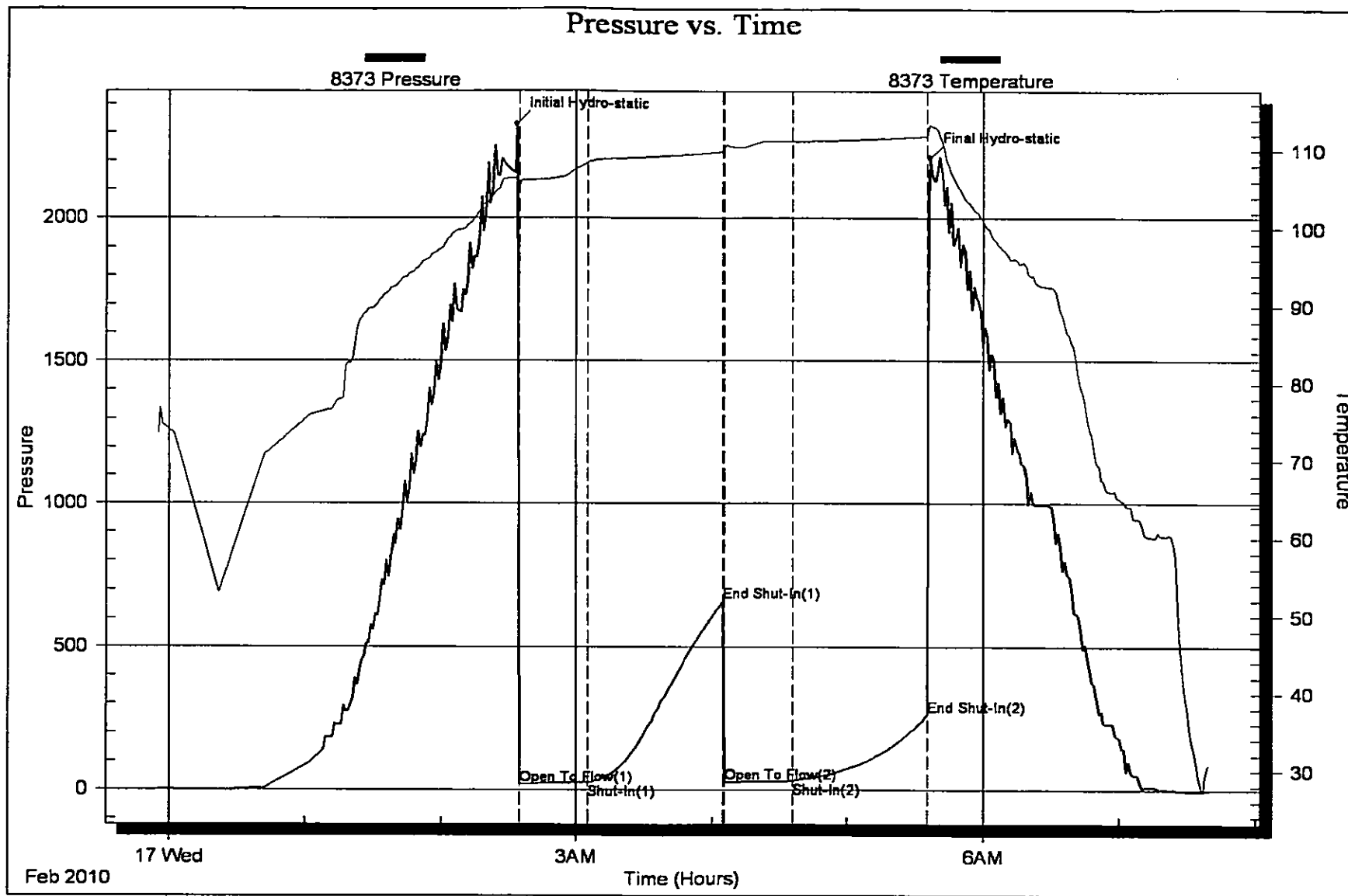
Num Gas Bombs: 0

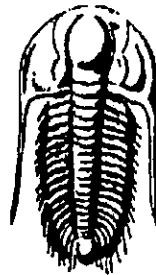
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.17 @ 17:48:19

End Date: 2010.02.18 @ 00:31:43

Job Ticket #: 37052 DST #: 6

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

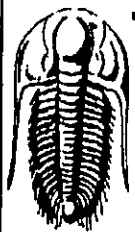
DFT #2-1

1-13-33 Logan KS

DST # 6

Lower Pawnee- Cherok

2010.02.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37052

DST#: 6

ATTN: Bob Petersen

Test Start: 2010.02.17 @ 17:48:19

GENERAL INFORMATION:

Formation: **Lower Pawnee- Cherok**

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

Time Tool Opened: 19:33:59

Time Test Ended: 00:31:43

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4505.00 ft (KB) To 4582.00 ft (KB) (TVD)**

Reference Elevations: **3069.00 ft (KB)**

Total Depth: **4582.00 ft (KB) (TVD)**

3059.00 ft (CF)

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

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

Serial #: 8373

Inside

Press@RunDepth: **64.77 psig @ 4506.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.02.17**

End Date: **2010.02.18**

Last Calib.: **2010.02.18**

Start Time: **17:48:19**

End Time: **00:31:43**

Time On Btm: **2010.02.17 @ 19:32:59**

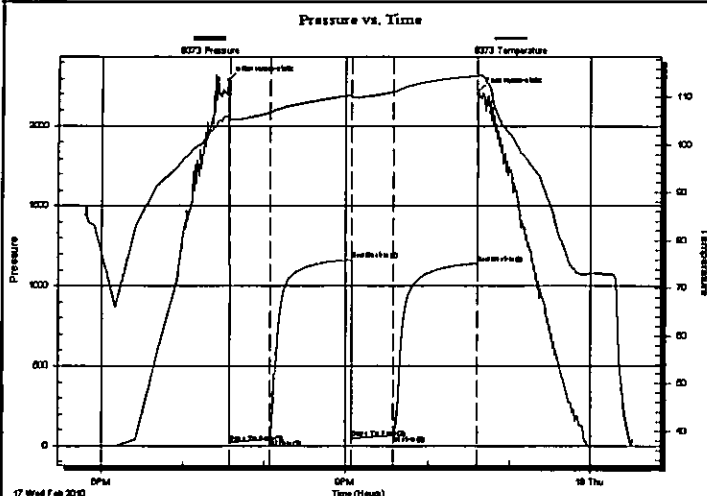
Time Off Btm: **2010.02.17 @ 22:36:43**

TEST COMMENT: IF: 1/4 blow built to 2 in 30 min.

IS: No return.

FF: No blow.

FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2292.46	106.05	Initial Hydro-static
1	18.80	105.39	Open To Flow (1)
32	42.09	106.69	Shut-In(1)
91	1163.31	110.34	End Shut-In(1)
91	46.47	109.82	Open To Flow (2)
122	64.77	111.06	Shut-In(2)
183	1141.23	114.56	End Shut-In(2)
184	2221.98	114.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	mud 100% m	0.47

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37052

DST#: 6

ATTN: Bob Petersen

Test Start: 2010.02.17 @ 17:48:19

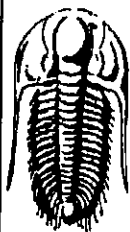
Tool Information

Drill Pipe:	Length: 3964.00 ft	Diameter: 3.80 inches	Volume: 55.60 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 58.26 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4505.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	100.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4483.00	
Shut In Tool	5.00			4488.00	
Hydraulic tool	5.00			4493.00	
Safety Joint	3.00			4496.00	
Packer	5.00			4501.00	23.00 Bottom Of Top Packer
Packer	4.00			4505.00	
Stubb	1.00			4506.00	
Recorder	0.00	6772	inside	4506.00	
Recorder	0.00	8373	inside	4506.00	
Perforations	6.00			4512.00	
Change Over Sub	1.00			4513.00	
Drill Pipe	63.00			4576.00	
Change Over Sub	1.00			4577.00	
Bullnose	5.00			4582.00	77.00 Bottom Packers & Anchor

Total Tool Length: 100.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37052

DST#: 6

ATTN: Bob Petersen

Test Start: 2010.02.17 @ 17:48:19

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: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 8900.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	mud 100% _m	0.467

Total Length: 95.00 ft

Total Volume: 0.467 bbl

Num Fluid Samples: 0

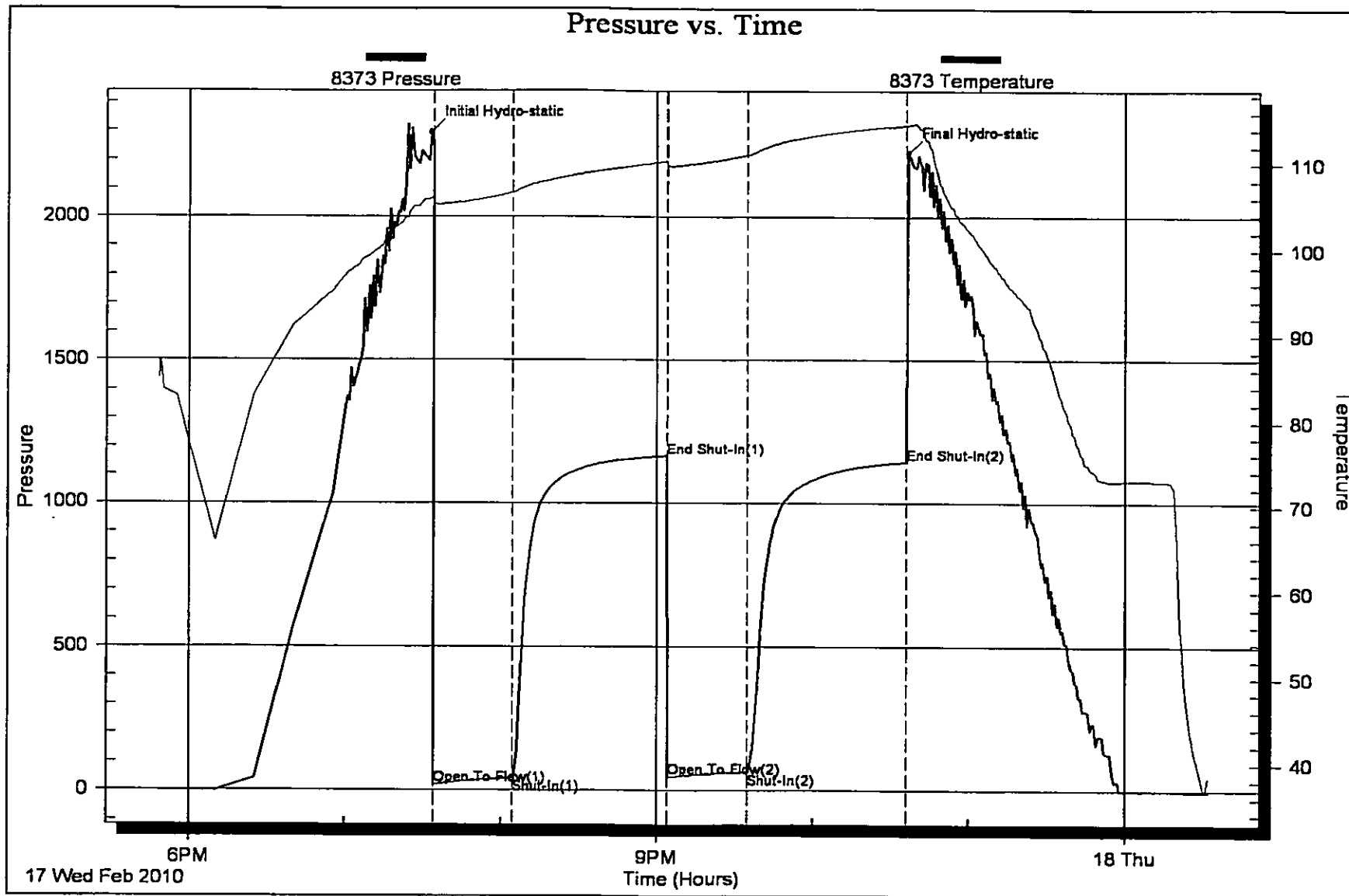
Num Gas Bombs: 0

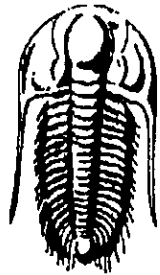
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Bob Petersen

1-13-33 Logan KS

DFT #2-1

Start Date: 2010.02.18 @ 09:21:25

End Date: 2010.02.18 @ 18:22:20

Job Ticket #: 37053 DST #: 7

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Company, Inc.

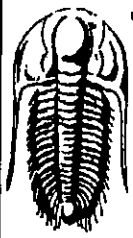
DFT #2-1

1-13-33 Logan KS

DST # 7

Johnson

2010.02.18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37053

DST#: 7

ATTN: Bob Petersen

Test Start: 2010.02.18 @ 09:21:25

GENERAL INFORMATION:

Formation: **Johnson**

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

Time Tool Opened: 11:15:20

Time Test Ended: 18:22:20

Test Type: **Conventional Bottom Hole**

Tester: **Brandon Turley**

Unit No: **35**

Interval: **4582.00 ft (KB) To 4630.00 ft (KB) (TVD)**

Total Depth: **4630.00 ft (KB) (TVD)**

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

Reference Elevations: **3069.00 ft (KB)**

3059.00 ft (CF)

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

Serial #: **8373**

Inside

Press@RunDepth: **984.35 psig @ 4583.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.02.18**

End Date: **2010.02.18**

Last Calib.: **2010.02.18**

Start Time: **09:21:25**

End Time: **18:22:20**

Time On Btm: **2010.02.18 @ 11:14:20**

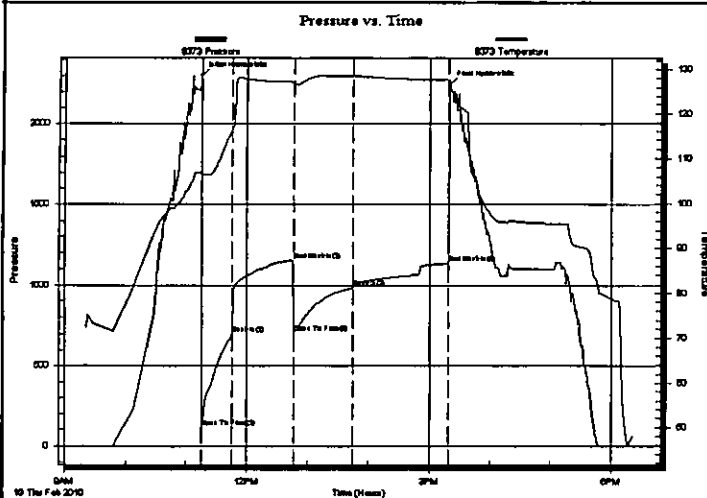
Time Off Btm: **2010.02.18 @ 15:19:19**

TEST COMMENT: IF: BOB in 1 1/2 min.

IS: BOB in 35 min.

FF: BOB in 3 min.

FS: BOB in 40 min.



PRESSURE SUMMARY

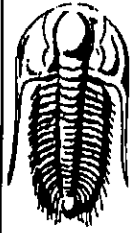
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2301.92	106.95	Initial Hydro-static
1	111.73	106.37	Open To Flow (1)
32	698.45	116.37	Shut-in(1)
92	1151.62	127.05	End Shut-in(1)
93	705.45	126.89	Open To Flow (2)
151	984.35	128.46	Shut-in(2)
244	1135.24	127.52	End Shut-in(2)
245	2247.43	127.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
94.00	ocmw 5%o 65%w 30%m	0.46
470.00	ocmw 10%o 60%w 30%m	2.53
1692.00	w mcgo 20%g 40%o 20%w 20%m	23.73
0.00	940 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37053

DST#: 7

ATTN: Bob Petersen

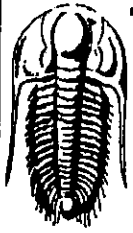
Test Start: 2010.02.18 @ 09:21:25

Tool Information

Drill Pipe:	Length: 4027.00 ft	Diameter: 3.80 inches	Volume: 56.49 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: 540.00 ft	Diameter: 2.25 inches	Volume: 2.66 bbl	Weight to Pull Loose: 100000.0 lb
			Total Volume: 59.15 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4582.00 ft			Final 86000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4560.00	
Shut In Tool	5.00			4565.00	
Hydraulic tool	5.00			4570.00	
Safety Joint	3.00			4573.00	
Packer	5.00			4578.00	23.00 Bottom Of Top Packer
Packer	4.00			4582.00	
Stubb	1.00			4583.00	
Recorder	0.00	6772	Inside	4583.00	
Recorder	0.00	8373	Inside	4583.00	
Perforations	8.00			4591.00	
Change Over Sub	1.00			4592.00	
Drill Pipe	32.00			4624.00	
Change Over Sub	1.00			4625.00	
Bullnose	5.00			4630.00	48.00 Bottom Packers & Anchor
Total Tool Length:	71.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company, Inc.

DFT #2-1

250 N Water STE 300
Wichita KS 67202

1-13-33 Logan KS

Job Ticket: 37053

DST#: 7

ATTN: Bob Petersen

Test Start: 2010.02.18 @ 09:21:25

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	49000 ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 8900.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	ocmw 5%o 65%w 30%m	0.462
470.00	ocmw 10%o 60%w 30%m	2.530
1692.00	w mcgo 20%g 40%o 20%w 20%m	23.734
0.00	940 GIP	0.000

Total Length: 2256.00 ft Total Volume: 26.726 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .17@63= 49000

No clean oil.

