

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form AGO-1
June 2009

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

4/5/13

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: Brad Rine
Purchaser: None

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

If Workover/Re-entry: Old Well Info as follows:
Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

12/27/2010 01/02/2011 01/03/2011
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 141-20426-0000
Spot Description: _____
SE NW NW NE Sec. 17 Twp. 10 S. R. 14 East West
380 Feet from North / South Line of Section
2210 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Osborne
Lease Name: Chris Well #: 1-17
Field Name: Wildcat
Producing Formation: None
Elevation: Ground: 1842 Kelly Bushing: 1847
Total Depth: 3620 Plug Back Total Depth: None
Amount of Surface Pipe Set and Cemented at: 221 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: _____ Feet
If Alternate II completion, cement circulated from: _____
feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: _____ 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: 04/05/2011

KCC Office Use ONLY
RECEIVED
Date: 4/5/11 - 4/5/13 APR 06 2011
 Letter of Confidentiality Received
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: NS Date: 4-27-11

Operator Name: Murfin Drilling Company, Inc. Lease Name: Chris Well #: 1-17
 Sec. 17 Twp. 10 S. R. 14 East West County: Osborne

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 <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 <div style="text-align: right; font-weight: bold; font-size: 1.2em;"> KCC APR 05 2011 CONFIDENTIAL </div>
--	---

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#	221	Common	160	3% cc, 2% gel

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

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	RECEIVED APR 06 2011 KCC WICHITA
Date of First, Resumed Production, SWD or ENHR: _____	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. _____ Gas Mcf _____ Water Bbls. _____	Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <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)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
---	--	--

MDCI Chris #1-17 380' FNL 2210' FEL Sec. 17-T10S-R14W 1847' KB							MDCI Tim #1-8 2310 FNL 1100 FWL Sec. 8-T10S-R14W 1953' KB	
Formation	Sample Top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum
Anhydrite	1072	+775	-37	1070	+777	-35	1141	+812
B/Anhydrite	1105	+742	-39	1104	+743	-38	1172	+781
Topeka	2770	-923	-18	2768	-921	-16	2858	-905
Heebner	3021	-1174	-23	3019	-1172	-21	3104	-1151
Toronto	3042	-1195	-21	3040	-1193	-19	3127	-1174
Lansing	3073	-1226	-22	3071	-1224	-20	3157	-1204
Stark	3282	-1435	-21	3280	-1433	-19	3367	-1414
BKC	3337	-1490	-24	3338	-1491	-22	3422	-1469
Cherokee	3450	-1603	-25	3448	-1601	-23	3531	-1578
Viola	3517	-1670	-17	3512	-1665	-14	3604	-1651
Simpson	3557	-1710	-21	3555	-1708	-19	3642	-1689
Arbuckle	3602	-1755	-17	NOL			3691	-1738
RTD	3620	-1773					3750	
LTD				3619	-1772		3751	

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QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Dec.

Date: 1/3/2011
 Invoice # 5080
 P.O.#:
 Due Date: 2/2/2011
 Division: Russell

Invoice

PROD COPY
New Well Drilling

Contact:
 Murfin Drilling Company
Address/Job Location:
 Murfin Drilling Company
 P.O. Box 288
 Russell Ks 67665

Reference:
 CHRIS 1-17

Description of Work:
 SURFACE JOB

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Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 733.07	No				
Common-Class A	160	\$ 2,089.46	Yes				
Bulk Truck Matl-Material Service Charge	168	\$ 359.66	No				
Pump Truck Mileage-Job to Nearest Camp	25	\$ 267.07	No				
Calcium Chloride	5	\$ 201.56	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	25	\$ 156.28	No				
Premium Gel (Bentonite)	3	\$ 52.28	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 3,859.39
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (578.91)

SubTotal for Taxable Items: \$ 1,991.81
 SubTotal for Non-Taxable Items: \$ 665.56

Total: \$ 3,280.48

Tax: \$ 155.36

7.80% Osborne County Sales Tax

Amount Due: \$ 3,435.84

Applied Payments:

Balance Due: \$ 3,435.84

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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03600 01640 3828

3435.84

Comment S. (Sg)

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APR 06 2011

KCC WICHITA

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1441

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

No. 5080

Date	12-27-10	Sec.	17	Twp.	10	Range	14	County	Osborne	State	KS	On Location		Finish	4:30 PM	
Lease	Chris		Well No.	#1-17		Location Paradise, Ks - E to 182 Ave. 7 1/2 N, Ew										
Contractor	Muefin Drilling #16							Owner	4N, E+ S to Rig							
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" h		T.D.	222'												
Csg.	8 3/8"		Depth	221'		Charge To	Muefin Drilling									
Tbg. Size			Depth			Street										
Tool			Depth			City					State					
Cement Left in Csg.	15'		Shoe Joint	15'		The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line			Displace	13 BLS		Cement Amount Ordered 160 sx Common 3% CC 2% Gel										

EQUIPMENT

Pumptrk	1	No.	Cementar	Deate	Common	160
Bulktrk	8	No.	Driver	Cory	Poz. Mix	
Bulktrk	p.u.	No.	Driver	Rick	Gel.	3
			Driver		Calcium	5

JOB SERVICES & REMARKS

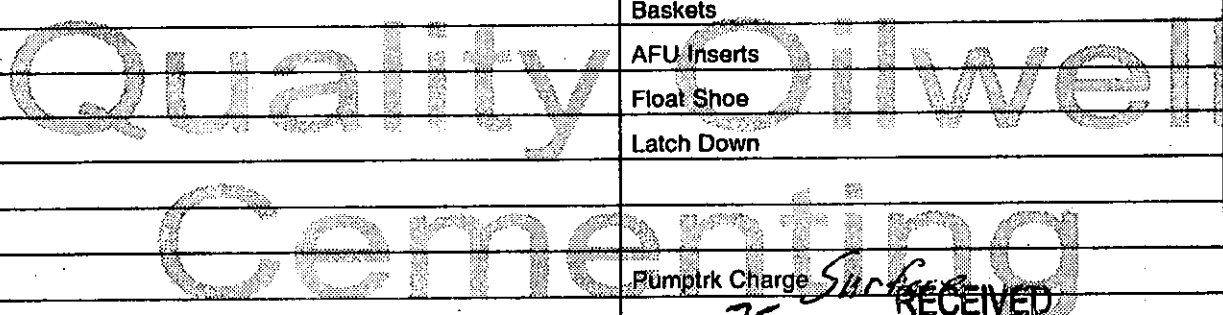
Remarks:	Cement did Circulate				
Rat Hole					
Mouse Hole					
Centralizers					
Baskets					
D/V or Port Collar					

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Sand	
Handling	168
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	



Pumptrk Charge	Surface	RECEIVED APR 06 2011	Tax
Mileage	25		Discount
Signature: <i>Ag. [Signature]</i>		KCC WICHITA	Total Charge



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Dec -

Date: 1/4/2011
 Invoice # 4404

P.O.#:

Due Date: 2/3/2011

Division: Russell

PROD COPY

Invoice

Contact:
 Murfin Drilling Company
Address/Job Location:
 Murfin Drilling Company
 P.O. Box 288
 Russell Ks 67665

Reference:
 CHRIS 1-17

Description of Work:
 PLUG JOB

*New well DrA
 LR
 KCC*

APR 05 2011

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Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	No				
Common-Class A	108	\$ 1,430.54	Yes				
Bulk Truck Mat-Material Service Charge	186	\$ 403.89	No				
POZ Mix-Standard	72	\$ 359.59	Yes				
Pump Truck Mileage-Job to Nearest Camp	25	\$ 270.89	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	25	\$ 158.51	No				
Premium Gel (Bentonite)	6	\$ 106.05	Yes				
Flo Seal	45	\$ 97.71	Yes				
Dry Hole Plug	1	\$ 60.80	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 3,879.37

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (581.90)

SubTotal for Taxable Items: \$ 1,746.49

SubTotal for Non-Taxable Items: \$ 708.29

Total: \$ 3,297.46

Tax: \$ 136.23

7.80% Osborne County Sales Tax

Amount Due: \$ 3,433.69

Applied Payments:

Balance Due: \$ **3,433.69**

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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KCC WICHITA
 ATA

03600 016 40 3828

3433.69

QUALITY OILWELL CEMENTING, INC.

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

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

No. 4404

Date	1-3-11	Sec.	17	Twp.	10	Range	14	County	Osborne	State	KS	On Location		Finish	11:00AM				
Lease	Chris	Well No.	1-17			Location Paradise 1/2 E 1 N 1/2 W 4 N E into													
Contractor	Muffin #16					Owner													
Type Job	PTA					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	7 7/8					T.D. 3582 3620													
Csg.	4 1/2 x-hole					Depth 3582													
Tbg. Size						Depth 1090													
Tool						Depth 575													
Cement Left in Csg.						Shoe Joint													
Meas Line						Displace													
												Charge To				Muffin Drilling			
												Street							
												City				State			
The above was done to satisfaction and supervision of owner agent or contractor.																			
												Cement Amount Ordered				180 ⁶⁰ 40 45 gel 4 lb flt / sx			

EQUIPMENT

Pumptrk	5	No.	Cementer	Brandon	Common	108
			Helper			
Bulktrk	3	No.	Driver	Doug	Poz. Mix	72
			Driver			
Bulktrk	PH	No.	Driver	Brian	Gel.	6
			Driver			

JOB SERVICES & REMARKS

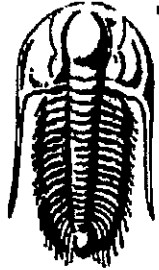
Remarks:	Hulls	
Rat Hole	Salt	KCC
Mouse Hole	Flowseal	45#
Centralizers	Kol-Seal	APR 05 2011
Baskets	Mud CLR 48	CONFIDENTIAL
D/V or Port Collar	CFL-117 or CD110 CAF 38	
Mix 25sx @ 3582'	Sand	
Mix 25sx @ 1090'	Handling	186
Mix 80sx @ 575'	Mileage	
Mix 105sx @ 40'		

FLOAT EQUIPMENT

30sx Rh	Guide Shoe	
15 mh	Centralizer	
	Baskets	
	AFU Inserts	
Thank You!!	Float Shoe	RECEIVED
	Latch Down	APR 06 2011
	1-8 5/8 dry hole plug	KCC WICHITA
	Pumptrk Charge	plug
	Mileage	25

X Signature *Angie Lidd*

Tax
Discount
Total Charge



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Wtr Ste 300
Wichita KS 67202

ATTN: Scott Robinson

17-10-14 Osborne KS

Chris # 1-17

Start Date: 2010.12.30 @ 08:47:06

End Date: 2010.12.30 @ 14:14:06

Job Ticket #: 041358 DST #: 1

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

Murfin Drilling Co. Inc.

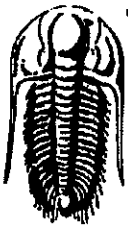
Chris # 1-17

17-10-14 Osborne KS

DST # 1

Topoka B

2010.12.30



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041358 DST#: 1

ATTN: Scott Robinson

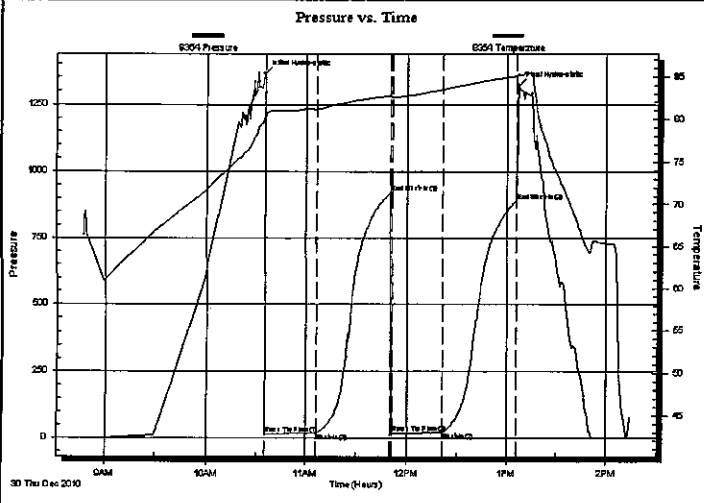
Test Start: 2010.12.30 @ 08:47:06

GENERAL INFORMATION:

Formation: **Topeka B**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:35:21
 Time Test Ended: 14:14:06
 Interval: **2793.00 ft (KB) To 2815.00 ft (KB) (TVD)**
 Total Depth: **2815.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Dan Bangle
 Unit No: 38
 Reference Elevations: 1847.00 ft (KB)
 1842.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8354 Inside
 Press@RunDepth: 20.90 psig @ 2794.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.12.30 End Date: 2010.12.30 Last Calib.: 2010.12.30
 Start Time: 08:47:07 End Time: 14:14:06 Time On Btm: 2010.12.30 @ 10:34:21
 Time Off Btm: 2010.12.30 @ 13:06:51

TEST COMMENT: IF-Weak -died in 20 min
 FF-No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1362.95	79.86	Initial Hydro-static
1	15.14	80.14	Open To Flow (1)
32	17.79	81.20	Shut-In(1)
76	920.86	82.79	End Shut-In(1)
77	17.63	82.64	Open To Flow (2)
107	20.90	83.51	Shut-In(2)
152	890.87	85.05	End Shut-In(2)
153	1320.92	85.31	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	OCM 30%o 70%m	0.02

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (MMcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041358 **DST#: 1**

ATTN: Scott Robinson

Test Start: 2010.12.30 @ 08:47:06

Tool Information

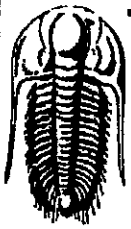
Drill Pipe:	Length: 2756.00 ft	Diameter: 3.80 inches	Volume: 38.66 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 38.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	2793.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	50.00 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			2766.00	
Shut In Tool	5.00			2771.00	
Hydraulic tool	5.00			2776.00	
Jars	5.00			2781.00	
Safety Joint	3.00			2784.00	
Packer	5.00			2789.00	28.00 Bottom Of Top Packer
Packer	4.00			2793.00	
Stubb	1.00			2794.00	
Recorder	0.00	8354	Inside	2794.00	
Recorder	0.00	8520	Outside	2794.00	
Perforations	18.00			2812.00	
Bullnose	3.00			2815.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041358

DST#: 1

ATTN: Scott Robinson

Test Start: 2010.12.30 @ 08:47:06

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: 76.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	OCM 30%o 70%m	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

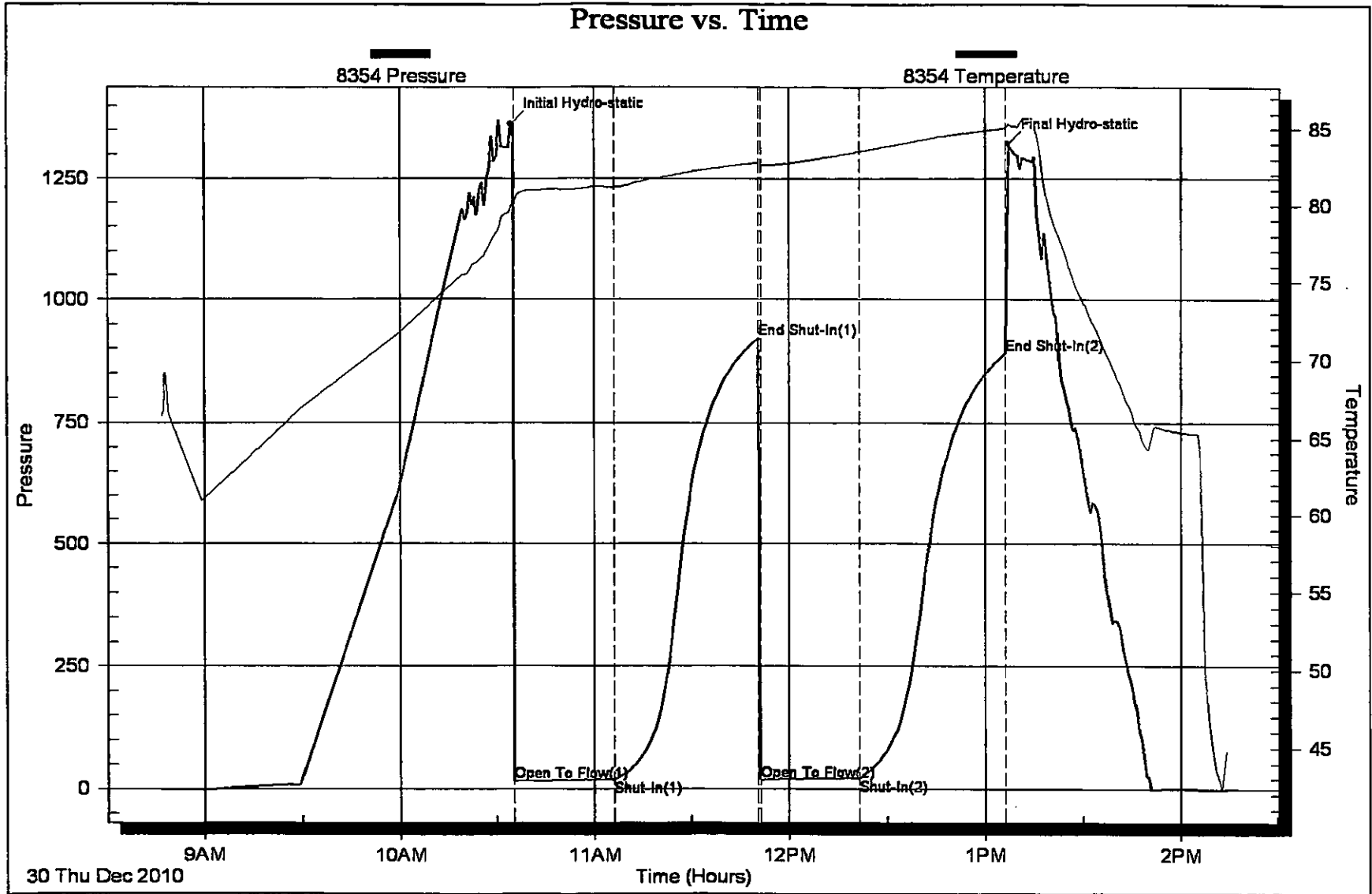
Num Gas Bombs: 0

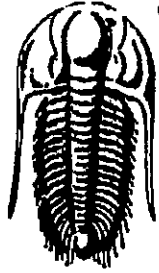
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Wtr Ste 300
Wichita KS 67202

ATTN: Scott Robinson

17-10-14 Osborne KS

Chris # 1-17

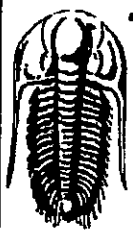
Start Date: 2010.12.31 @ 09:35:44

End Date: 2010.12.31 @ 16:37:14

Job Ticket #: 041024 DST #: 2

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

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N Wtr Ste 300
Wichita KS 67202

ATTN: Scott Robinson

Chris # 1-17

17-10-14 Osborne KS

Job Ticket: 041024

DST#: 2

Test Start: 2010.12.31 @ 09:35:44

GENERAL INFORMATION:

Formation: **LSG-A&B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:05:14

Time Test Ended: 16:37:14

Interval: 3053.00 ft (KB) To 3114.00 ft (KB) (TVD)

Total Depth: 3114.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Reference Elevations: 1847.00 ft (KB)

1842.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6672

Inside

Press@RunDepth: 50.18 psig @ 3091.00 ft (KB)

Start Date: 2010.12.31 End Date:

Start Time: 09:35:45 End Time:

Capacity: 8000.00 psig

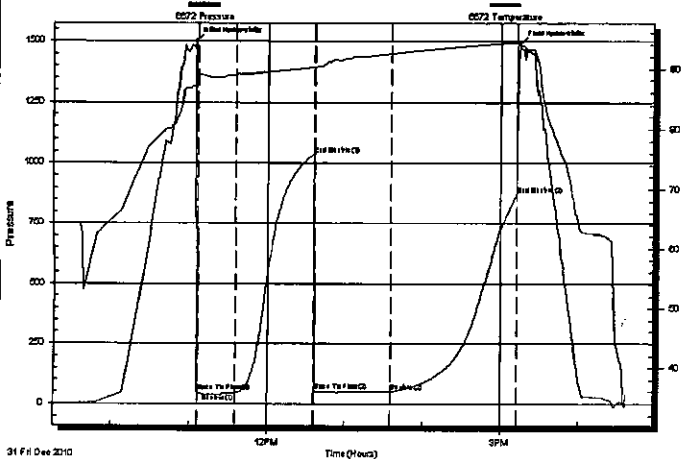
Last Calib.: 2010.12.31

Time On Btm: 2010.12.31 @ 11:04:14

Time Off Btm: 2010.12.31 @ 15:14:14

TEST COMMENT: IFF-Weak blow built to 2 1/4 in
ISI-Dead no blow back
FFP-Weak blow built to 1 1/4 in
FSI-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

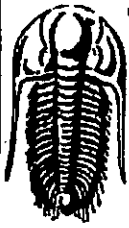
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1500.71	87.02	Initial Hydro-static
1	51.30	88.09	Open To Flow (1)
31	42.27	88.91	Shut-In(1)
92	1037.12	90.30	End Shut-In(1)
92	54.50	90.20	Open To Flow (2)
151	50.18	92.51	Shut-In(2)
248	872.60	94.25	End Shut-In(2)
250	1486.73	93.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	VSOCM5%O95%M	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041024

DST#: 2

ATTN: Scott Robinson

Test Start: 2010.12.31 @ 09:35:44

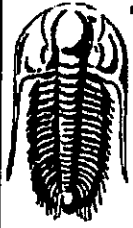
Tool Information

Drill Pipe:	Length: 3010.00 ft	Diameter: 3.80 inches	Volume: 42.22 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 36000.00 lb
			<u>Total Volume: 42.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3053.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 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			3026.00	
Shut In Tool	5.00			3031.00	
Hydraulic tool	5.00			3036.00	
Jars	5.00			3041.00	
Safety Joint	3.00			3044.00	
Packer	4.00			3048.00	28.00 Bottom Of Top Packer
Packer	5.00			3053.00	
Stubb	1.00			3054.00	
Perforations	4.00			3058.00	
Change Over Sub	1.00			3059.00	
Drill Pipe	31.00			3090.00	
Change Over Sub	1.00			3091.00	
Recorder	0.00	6672	Inside	3091.00	
Recorder	0.00	8321	Outside	3091.00	
Perforations	20.00			3111.00	
Bullnose	3.00			3114.00	61.00 Bottom Packers & Anchor
Total Tool Length:	89.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041024

DST#: 2

ATTN: Scott Robinson

Test Start: 2010.12.31 @ 09:35:44

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

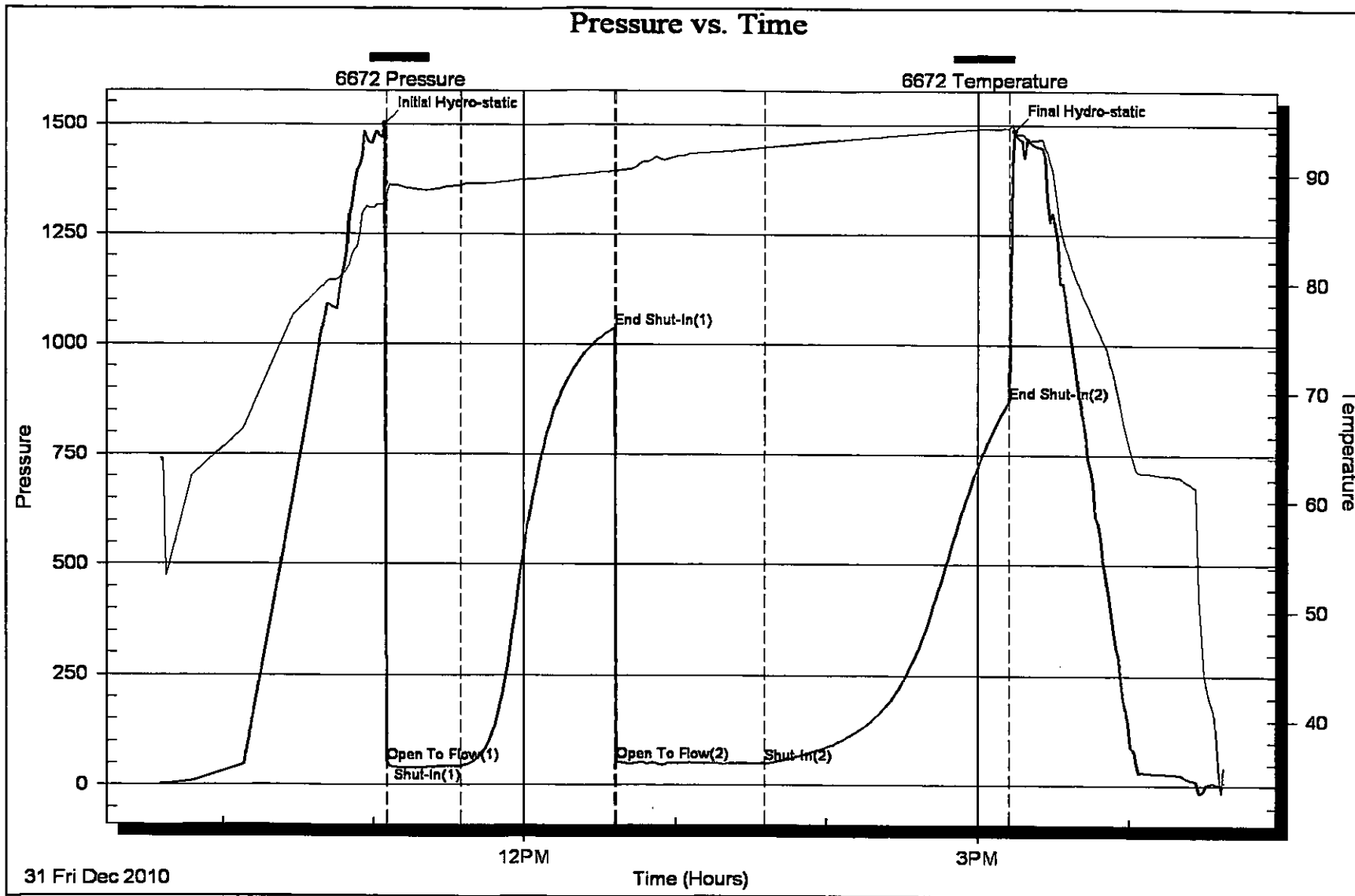
Length ft	Description	Volume bbl
10.00	VSOCM5%O95%M	0.049

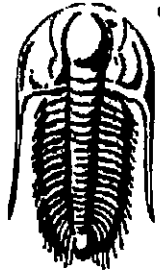
Total Length: 10.00ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N Wtr Ste 300
Wichita KS 67202

ATTN: Scott Robinson

17-10-14 Osborne KS

Chris # 1-17

Start Date: 2010.12.31 @ 23:13:56

End Date: 2011.01.01 @ 07:23:26

Job Ticket #: 041025 DST #: 3

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N Wtr Ste 300
Wichita KS 67202

ATTN: Scott Robinson

Chris # 1-17

17-10-14 Osborne KS

Job Ticket: 041025 DST#: 3

Test Start: 2010.12.31 @ 23:13:56

GENERAL INFORMATION:

Formation: **LSG-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:49:26

Time Test Ended: 07:23:26

Interval: **3110.00 ft (KB) To 3134.00 ft (KB) (TVD)**

Total Depth: **3134.00 ft (KB) (TVD)**

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

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Reference Elevations: 1847.00 ft (KB)

1842.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **6672**

Inside

Press@RunDepth: 376.89 psig @ 3111.00 ft (KB)

Start Date: 2010.12.31

End Date:

2011.01.01

Start Time: 23:13:57

End Time:

07:23:26

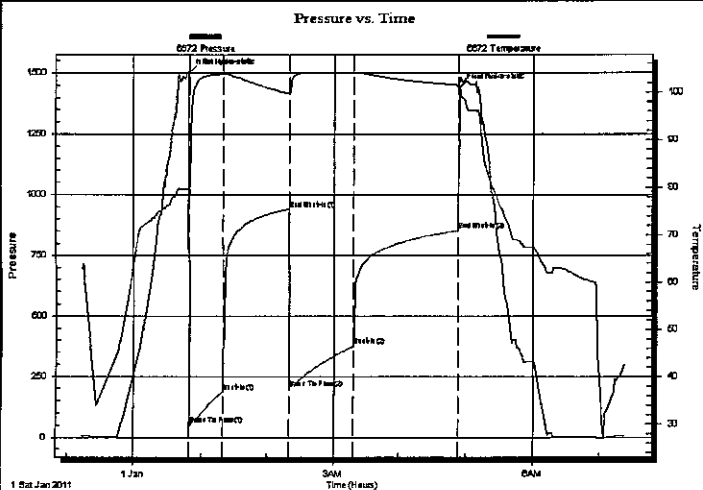
Capacity: 8000.00 psig

Last Calib.: 2011.01.01

Time On Btm: 2011.01.01 @ 00:48:56

Time Off Btm: 2011.01.01 @ 04:53:26

TEST COMMENT: IFP-Strong blow BOB in 4 min
ISI-Weak surface blow built to 1/2 in
FFP-Strong blow BOB in 5 1/2 min
FSI-Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1500.21	79.49	Initial Hydro-static
1	51.69	79.27	Open To Flow (1)
31	187.81	103.74	Shut-In(1)
91	939.91	99.70	End Shut-In(1)
91	201.88	99.68	Open To Flow (2)
150	376.89	103.95	Shut-In(2)
244	853.40	101.50	End Shut-In(2)
245	1443.02	101.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
508.00	MV5%M95%W	6.84
252.00	MV with a scum of oil 10%M90%W	3.53
1.00	VSOCMV2%O5%M93%W	0.01
0.00	59 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041025 **DST#: 3**

ATTN: Scott Robinson

Test Start: 2010.12.31 @ 23:13:56

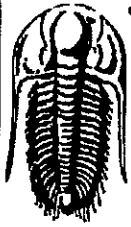
Tool Information

Drill Pipe:	Length: 3074.00 ft	Diameter: 3.80 inches	Volume: 43.12 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 58000.00 lb
			Total Volume: 43.27 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3110.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3083.00	
Shut In Tool	5.00			3088.00	
Hydraulic tool	5.00			3093.00	
Jars	5.00			3098.00	
Safety Joint	3.00			3101.00	
Packer	4.00			3105.00	28.00 Bottom Of Top Packer
Packer	5.00			3110.00	
Stubb	1.00			3111.00	
Recorder	0.00	6672	Inside	3111.00	
Recorder	0.00	8321	Outside	3111.00	
Perforations	20.00			3131.00	
Bullnose	3.00			3134.00	24.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

Chris # 1-17

250 N Wtr Ste 300
Wichita KS 67202

17-10-14 Osborne KS

Job Ticket: 041025

DST#: 3

ATTN: Scott Robinson

Test Start: 2010.12.31 @ 23:13:56

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 62.00 sec/qt
Water Loss: 6.38 in³
Resistivity: ohm.m
Salinity: 2000.00 ppm
Filter Cake: inches

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

Oil API: deg API
Water Salinity: 225000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
508.00	MW5%M95%W	6.844
252.00	MW with a scum of oil 10%M90%W	3.535
1.00	VSOCMW2%O5%M93%W	0.014
0.00	59 GIP	0.000

Total Length: 761.00 ft Total Volume: 10.393 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .164 @ 16.6F = 225000

