

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Recompletion Date \_\_\_\_\_ Date Reached TD \_\_\_\_\_ Completion Date or Recompletion Date \_\_\_\_\_

API No.: \_\_\_\_\_

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

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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 #: \_\_\_\_\_

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.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input 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

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				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	BANISTER 'A' 2-22
Doc ID	1417588

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	BANISTER 'A' 2-22
Doc ID	1417588

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4391	4408			750 gal 20% MCA
4	4448	4459			450 gal 20% MCA
4	4491	4498			1050 gal 20% MCA
4	4734	4740			250 gal 20% MCA, 450 gal 20% MCA, 20 ball sealers
4	4744	4750			250 gal 20% MCA, 450 gal 20% MCA, 20 ball sealers
4	4824	4832			500 gal 20% MCA, 900 gal 20% MCA, 40 ball sealers



**TREATMENT REPORT**



**HURRICANE SERVICES INC**

Customer:	Murphn Drilling Inc	Date:	5/10/2018	Ticket No.:	100919
Field Rep:	Greg Condren				
Address:	P.O Box 661				
City, State:	Oakley Ks				
County, Zip:					

Field Order No.:	100919
Well Name:	Banister A 2-22
Location:	Mcdonald Ks
Formation:	
Type of Service:	Surface cement
Well Type:	oil
Age of Well:	new
Packer Type:	
Packer Depth:	
Treatment Via:	

Open Hole:	12.25"
Casing Depth:	384'
Casing Size:	8.625 23 lb/ft
Tubing Depth:	
Tubing Size:	
Liner Depth:	
Liner Size:	
Liner Top:	
Liner Bottom:	
Total Depth:	

Perf Depths (ft)	Perfs
<b>Total Perfs</b>	<b>0</b>

TIME	INJECTION RATE		PRESSURE		REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
	FLUID	N2/CO2	STP	ANNULUS				
9:00 PM					Arrive on location			
9:05 PM					Hold Safety meeting			
9:10 PM					Spot in equlpmnt			
9:15 PM					Rig up equlpmnt			
10:30 PM					Install centralizers on joints 2,5			
1:00 AM	3.5		30.0		Start pumping 10 bbls H2O Spacer			10.00
1:03 AM	3.5		50.0		Start cement at 14.8 ppg			
1:10 AM					Shut down , clean cuttings out of water jet			
1:15 AM	3.0		60.0		35 bbls cement away scaled at 14.8 ppg			
1:20 AM					Shut down , clean cuttings out of water jet			
1:36 AM	3.0		80.0		75 bbls away , end cement , scaled at 14.8 ppg			75.00
1:37 AM	3.0		80.0		Start H2O displacement			
1:43 AM	3.0		110.0		12 bbls cement away			
1:50 AM			110.0		End displacement , shut in swedge			23.00
1:55 AM					Rig down equlpmnt			
2:30 AM					Leave location			
					Got 19 bbls cement to surface			
					Mag pick up wasn't working at first, fixed started reading rate			
<b>TOTAL:</b>								<b>108.00</b>

**SUMMARY**

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
3.5	3.2	110.0	74.3

**PRODUCTS USED**

300 sx class A 3% calcium chloride 2% gel

Treater: Fennis Gardano

Customer: \_\_\_\_\_







MDCI  
 Banister 'A' #2-22  
 2310' FSL 1320'FWL  
 Sec. 22-2S-37W  
 3414' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	3296	+118	-4	3292	+122	Flat
B/Anhydrite	3329	+85	-6	3324	+90	-1
Topeka	4112	-698	Flat	4108	-694	+4
Oread	4254	-840	-1	4253	-839	Flat
Lansing	4331	-917	-4	4328	-914	-1
Stark	4557	-1143	-2	4559	-1145	-4
Mound City	4608	-1194	-3	4610	-1196	-5
Ft Scott	4734	-1320	-3	4733	-1319	-2
Oakley				4809	-1395	-2
Mississippian	DNR			DNR		
RTD	4934	-1520				
LTD				4934	-1520	



# Saman Sharifaie

## Petroleum Geologist

### GEOLOGIST'S REPORT

#### DRILLING TIME AND SAMPLE LOG

COMPANY: **Martin Drilling Co., Inc.**  
LEASE: **Banister "A" #2-22**

FIELD: **Wildcat**  
LOCATION: **2110' FSL & 1320' FWL**  
SEC: **22** TWP: **2S** RGE: **37W**  
COUNTY: **Cheyenne** STATE: **Kansas**  
CONTRACTOR: **Martin Drilling #3**  
RTD: **05/10/18** COMP: **05/21/18**  
SPUD: **4934'** LT: **4934'**  
MUD UP: **3.018"** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **4010'** TO RTD  
DRILLING TIME KEPT FROM: **4010'** TO RTD  
SAMPLES EXAMINED FROM: **4010'** TO RTD

GEOLOGICAL SUPERVISION FROM: **3710'**  
CND: **DILL, MEL, Smitc**  
REFERENCE WELL: **MDCT - Banister "A" #1-22**

FORMATION: **Flint**

Formation	Sample Tops	E-log Tops	Strat. Pos.
Anhydrite	3396 (+118)	3392 (+122)	Flint
Base Anhydrite	3329 (+88)	3324 (+90)	Flint
Toguski	4112 (+698)	4108 (+694)	-4
Orebed	4251 (+840)	4253 (+830)	Flint
Oriskany	4351 (+917)	4328 (+914)	-1
Stark	4357 (+915)	4329 (+915)	-4
Mound City	4608 (+1194)	4610 (+1196)	-5
Ft Scott	4734 (+1320)	4733 (+1319)	-2
Orkney	4809 (+1395)	4809 (+1395)	-2

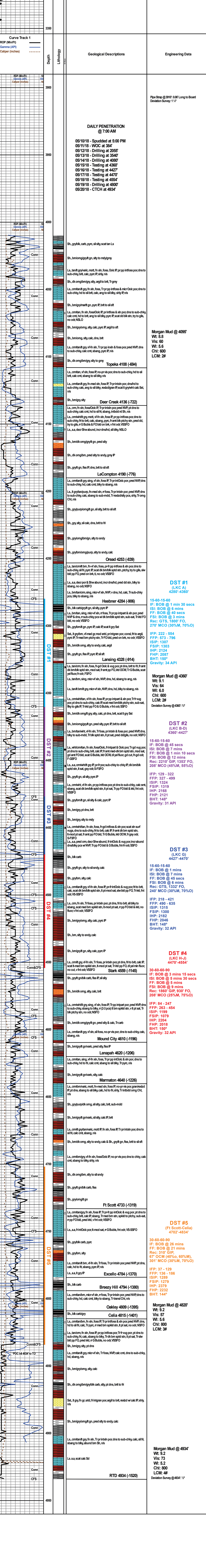


REMARKS: Due to fair to good shows of oil in multiple potential pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,  
Saman Sharifaie  
Petroleum Geologist

API #15-023-21483

\*Tops have been adjusted to electric logs



FORMATION: **Flint**

Formation	Sample Tops	E-log Tops	Strat. Pos.
Anhydrite	3396 (+118)	3392 (+122)	Flint
Base Anhydrite	3329 (+88)	3324 (+90)	Flint
Toguski	4112 (+698)	4108 (+694)	-4
Orebed	4251 (+840)	4253 (+830)	Flint
Oriskany	4351 (+917)	4328 (+914)	-1
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Ft Scott	4734 (+1320)	4733 (+1319)	-2
Orkney	4809 (+1395)	4809 (+1395)	-2



REMARKS: Due to fair to good shows of oil in multiple potential pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,  
Saman Sharifaie  
Petroleum Geologist

API #15-023-21483

\*Tops have been adjusted to electric logs





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Saman Sharifaie

### **Banister " A " 2-22**

#### **22-2s-37w Cheyenne,KS**

Start Date: 2018.05.15 @ 06:37:00

End Date: 2018.05.15 @ 16:14:00

Job Ticket #: 63215                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.21 @ 14:51:48

Murfin Drilling Co Inc

22-2s-37w Cheyenne,KS

Banister " A " 2-22

DST # 1

LKC " A "

2018.05.15



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**

**Banister " A " 2-22**

Job Ticket: 63215      **DST#: 1**  
 Test Start: 2018.05.15 @ 06:37:00

## GENERAL INFORMATION:

Formation: **LKC " A "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:29:16  
 Time Test Ended: 16:14:00  
 Interval: **4280.00 ft (KB) To 4360.00 ft (KB) (TVD)**  
 Total Depth: 4360.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 3414.00 ft (KB)  
 3409.00 ft (CF)  
 KB to GR/CF: 5.00 ft

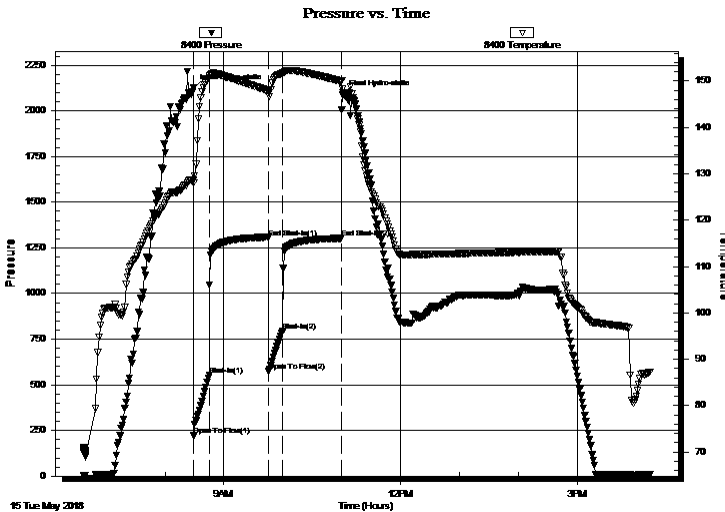
## Serial #: 8400

## Outside

Press@RunDepth: 795.84 psig @ 4293.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2018.05.15      End Date: 2018.05.15      Last Calib.: 2018.05.15  
 Start Time: 06:37:01      End Time: 16:14:16      Time On Btm: 2018.05.15 @ 08:29:01  
 Time Off Btm: 2018.05.15 @ 11:00:46

TEST COMMENT: 15-IFP- BOB in 1 min. 30 sec. Built to 177"  
 60-ISIP- Built to 271"  
 15-FFP- BOB in 40 sec. Built to 186"  
 60-FSIP- Built to 245"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2123.67	128.55	Initial Hydro-static
1	221.51	127.98	Open To Flow (1)
16	554.29	150.71	Shut-In(1)
76	1306.89	147.90	End Shut-In(1)
77	572.61	147.62	Open To Flow (2)
91	795.84	151.62	Shut-In(2)
151	1302.55	149.87	End Shut-In(2)
152	2086.85	148.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
270.00	MCO 30% m 70% o	1.89
1800.00	Free Oil 100%	25.25
0.00	GTS	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22-2s-37w Cheyenne,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Banister " A " 2-22**

Job Ticket: 63215

**DST#: 1**

ATTN: Saman Sharifaie

Test Start: 2018.05.15 @ 06:37:00

## Tool Information

Drill Pipe:	Length: 4071.00 ft	Diameter: 3.80 inches	Volume: 57.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 208.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4280.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	107.00 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			4254.00	
Shut In Tool	5.00			4259.00	
Hydraulic tool	5.00			4264.00	
Jars	5.00			4269.00	
Safety Joint	2.00			4271.00	
Packer	5.00			4276.00	27.00 Bottom Of Top Packer
Packer	4.00			4280.00	
Stubb	1.00			4281.00	
Perforations	11.00			4292.00	
Change Over Sub	1.00			4293.00	
Recorder	0.00	8789	Inside	4293.00	
Recorder	0.00	8400	Outside	4293.00	
Drill Pipe	63.00			4356.00	
Change Over Sub	1.00			4357.00	
Bullnose	3.00			4360.00	80.00 Bottom Packers & Anchor

**Total Tool Length: 107.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**  
**Banister " A " 2-22**  
Job Ticket: 63215      **DST#: 1**  
Test Start: 2018.05.15 @ 06:37:00

## Mud and Cushion Information

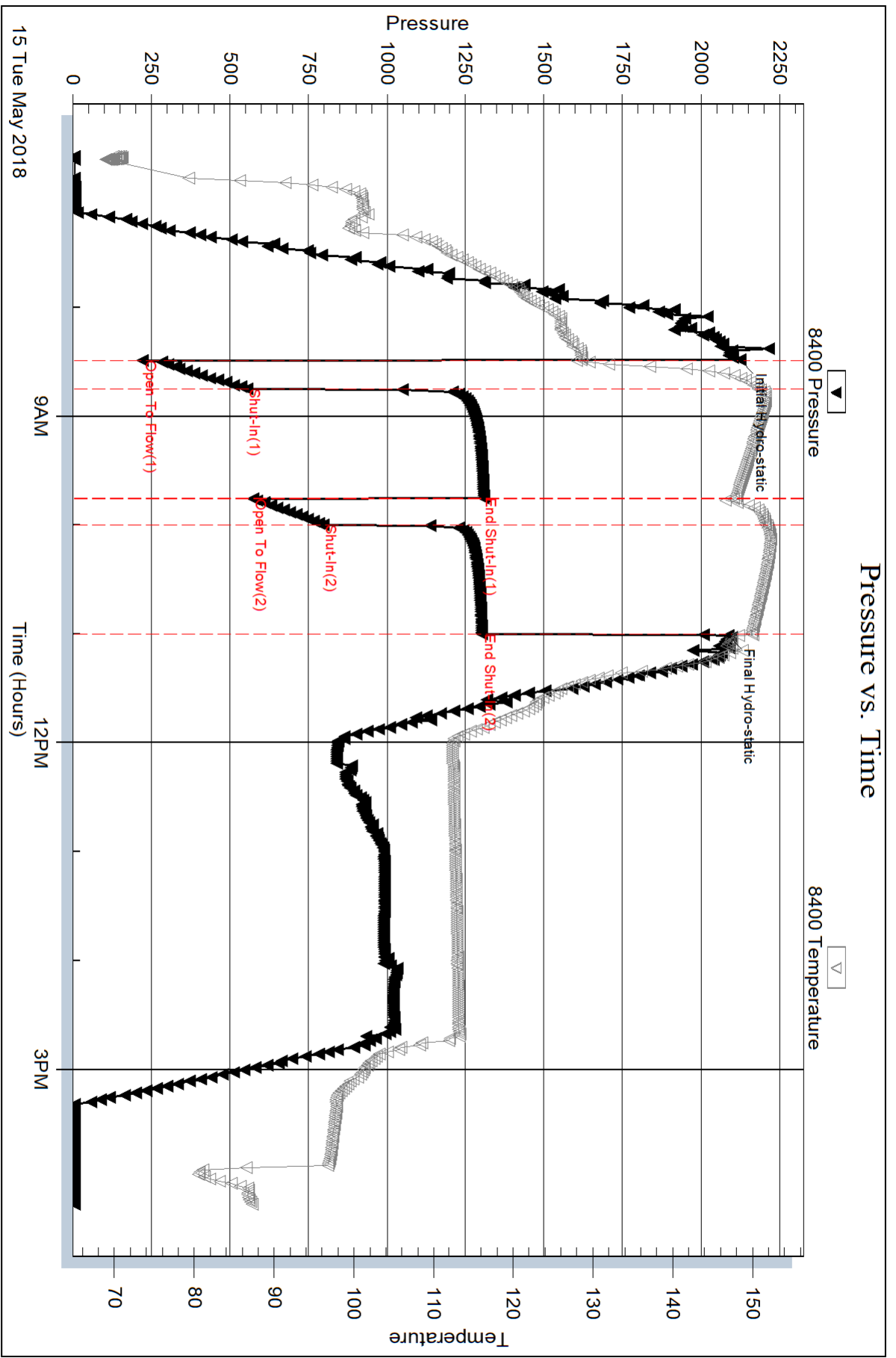
Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 64.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.95 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: 2.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	MCO 30% <sub>m</sub> 70% <sub>o</sub>	1.893
1800.00	Free Oil 100%	25.249
0.00	GTS	0.000

Total Length: 2070.00 ft      Total Volume: 27.142 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





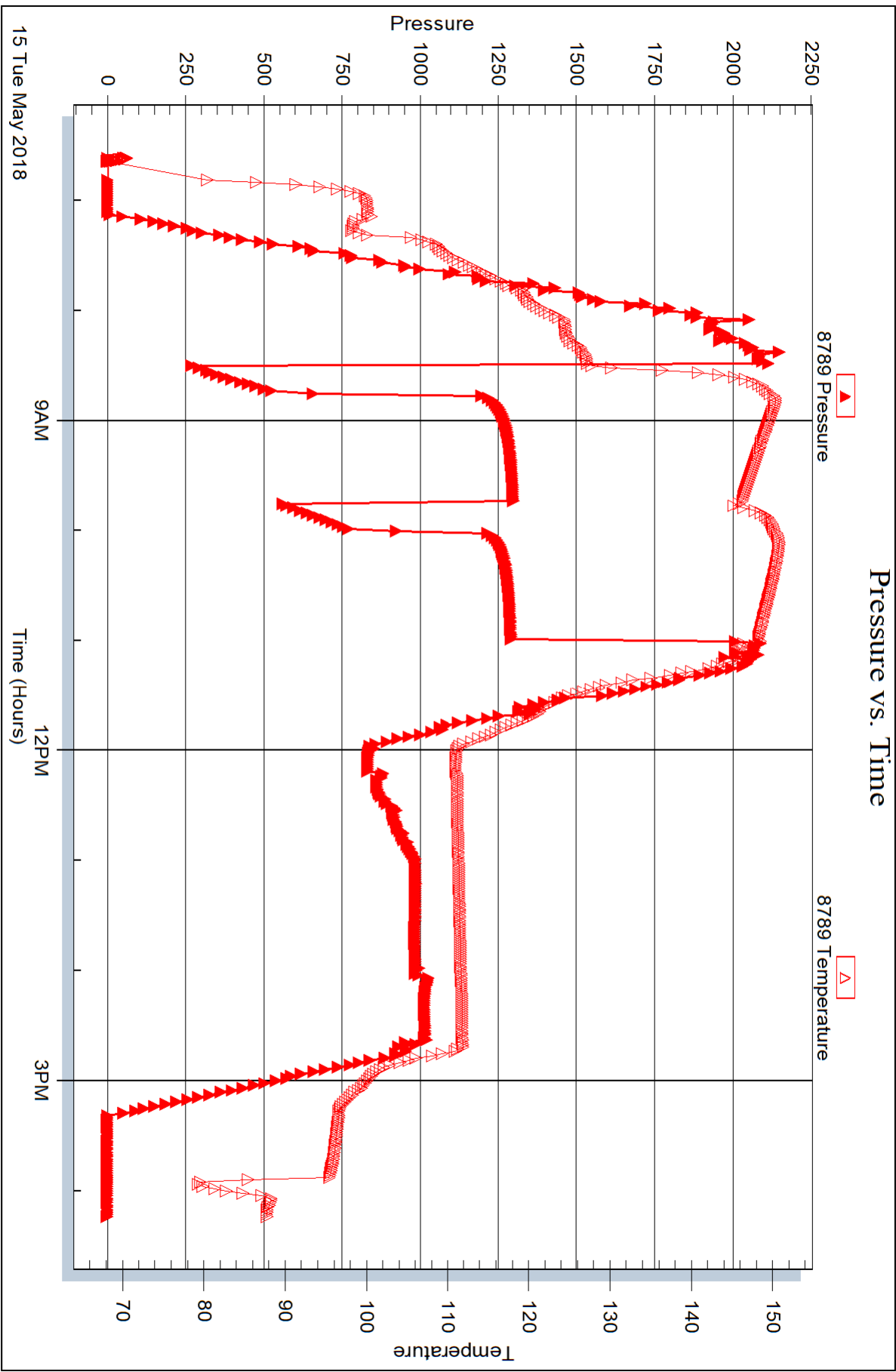
Serial #: 8789

Inside

Murfin Drilling Co Inc

Banister "A" 2-22

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Saman Sharifaie

### **Banister " A " 2-22**

#### **22-2s-37w Cheyenne,KS**

Start Date: 2018.05.16 @ 01:48:00

End Date: 2018.05.16 @ 11:46:00

Job Ticket #: 63216                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.21 @ 14:51:24







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22-2s-37w Cheyenne,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Banister " A " 2-22**

Job Ticket: 63216

**DST#: 2**

ATTN: Saman Sharifaie

Test Start: 2018.05.16 @ 01:48:00

## Tool Information

Drill Pipe:	Length: 4134.00 ft	Diameter: 3.80 inches	Volume: 57.99 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 208.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.01 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4360.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	94.00 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			4334.00	
Shut In Tool	5.00			4339.00	
Hydraulic tool	5.00			4344.00	
Jars	5.00			4349.00	
Safety Joint	2.00			4351.00	
Packer	5.00			4356.00	27.00 Bottom Of Top Packer
Packer	4.00			4360.00	
Stubb	1.00			4361.00	
Perforations	1.00			4362.00	
Recorder	0.00	8789	Inside	4362.00	
Recorder	0.00	8400	Outside	4362.00	
Perforations	29.00			4391.00	
Change Over Sub	1.00			4392.00	
Drill Pipe	31.00			4423.00	
Change Over Sub	1.00			4424.00	
Bullnose	3.00			4427.00	67.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>94.00</b>				



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**  
**Banister " A " 2-22**  
Job Ticket: 63216      **DST#: 2**  
Test Start: 2018.05.16 @ 01:48:00

**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: ppm
Viscosity: 64.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.96 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: 2.00 inches		

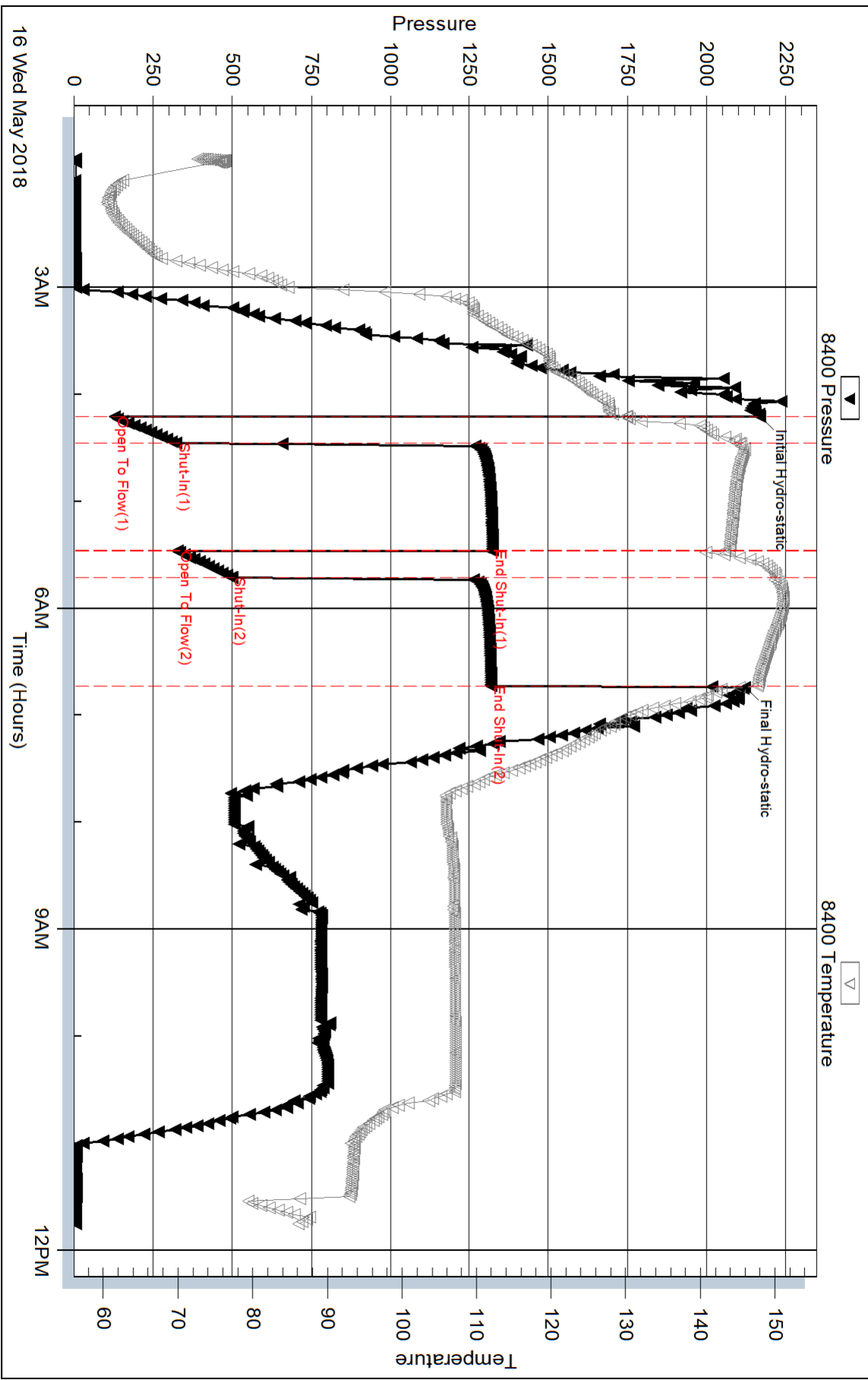
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
208.00	MCO 45% <sub>m</sub> 55% <sub>o</sub>	1.023
1353.00	Free Oil 100%	18.979
0.00	2210 GIP	0.000

Total Length: 1561.00 ft      Total Volume: 20.002 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time



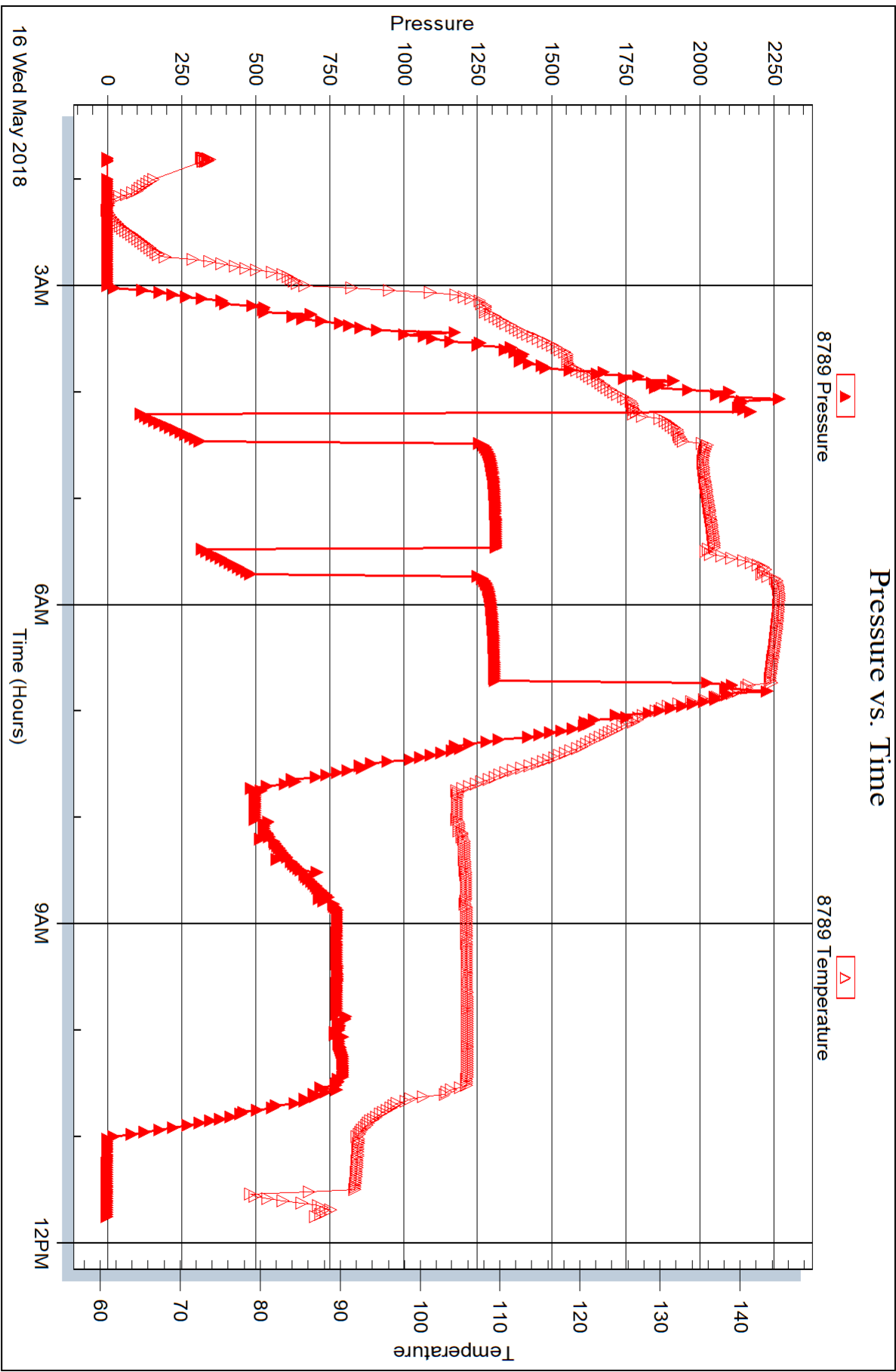
Serial #: 8789

Inside

Murfin Drilling Co Inc

Banister " A " 2-22

DST Test Number: 2







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Saman Sharifaie

### **Banister " A " 2-22**

#### **22-2s-37w Cheyenne,KS**

Start Date: 2018.05.16 @ 21:06:00

End Date: 2018.05.17 @ 07:15:00

Job Ticket #: 63217                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.21 @ 14:51:00



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**

**Banister " A " 2-22**

Job Ticket: 63217      **DST#: 3**  
 Test Start: 2018.05.16 @ 21:06:00

## GENERAL INFORMATION:

Formation: **LKC " G "**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 23:40:46  
 Time Test Ended: 07:15:00  
 Interval: **4427.00 ft (KB) To 4470.00 ft (KB) (TVD)**  
 Total Depth: 4470.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 3414.00 ft (KB)  
 3409.00 ft (CF)  
 KB to GR/CF: 5.00 ft

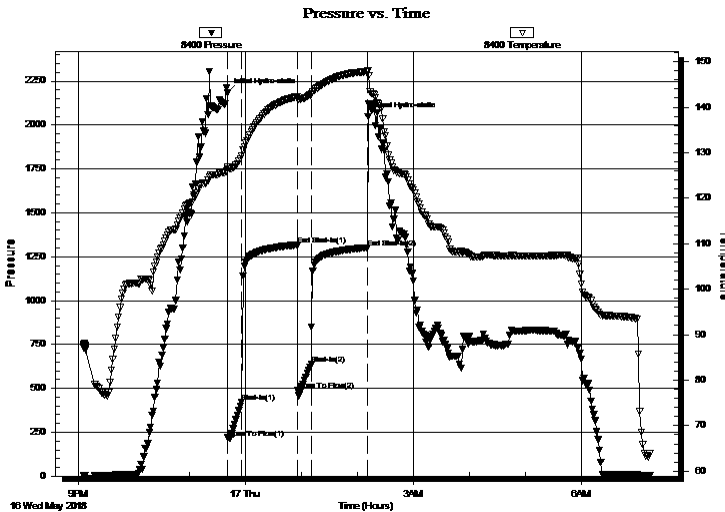
## Serial #: 8400

## Outside

Press@RunDepth: 635.11 psig @ 4435.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2018.05.16      End Date: 2018.05.17      Last Calib.: 2018.05.17  
 Start Time: 21:06:01      End Time: 07:14:46      Time On Btm: 2018.05.16 @ 23:40:31  
 Time Off Btm: 2018.05.17 @ 02:11:16

**TEST COMMENT:** 15-IFP- BOB in 1 min. 10 sec. Built to 162"  
 60-ISIP- BOB in 7 min. Built to 280"  
 15-FFP- BOB in 45 sec. Built to 138"  
 60-FSIP- BOB in 6 min. Built to 192"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2182.24	126.89	Initial Hydro-static
1	218.12	126.39	Open To Flow (1)
15	420.96	129.30	Shut-In(1)
75	1314.51	142.30	End Shut-In(1)
75	489.53	141.91	Open To Flow (2)
90	635.11	142.83	Shut-In(2)
151	1300.00	147.79	End Shut-In(2)
151	2045.95	148.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	MCO 30% m 70% o	1.47
1332.00	Free Oil 100%	18.68
0.00	GTS	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**  
**Banister " A " 2-22**  
Job Ticket: 63217      **DST#: 3**  
Test Start: 2018.05.16 @ 21:06:00

**Tool Information**

Drill Pipe:	Length: 4197.00 ft	Diameter: 3.80 inches	Volume: 58.87 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 208.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 59.89 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4427.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4401.00	
Shut In Tool	5.00			4406.00	
Hydraulic tool	5.00			4411.00	
Jars	5.00			4416.00	
Safety Joint	2.00			4418.00	
Packer	5.00			4423.00	27.00 Bottom Of Top Packer
Packer	4.00			4427.00	
Stubb	1.00			4428.00	
Perforations	6.00			4434.00	
Change Over Sub	1.00			4435.00	
Recorder	0.00	8789	Inside	4435.00	
Recorder	0.00	8400	Outside	4435.00	
Drill Pipe	31.00			4466.00	
Change Over Sub	1.00			4467.00	
Bullnose	3.00			4470.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**  
**Banister " A " 2-22**  
Job Ticket: 63217      **DST#: 3**  
Test Start: 2018.05.16 @ 21:06:00

**Mud and Cushion Information**

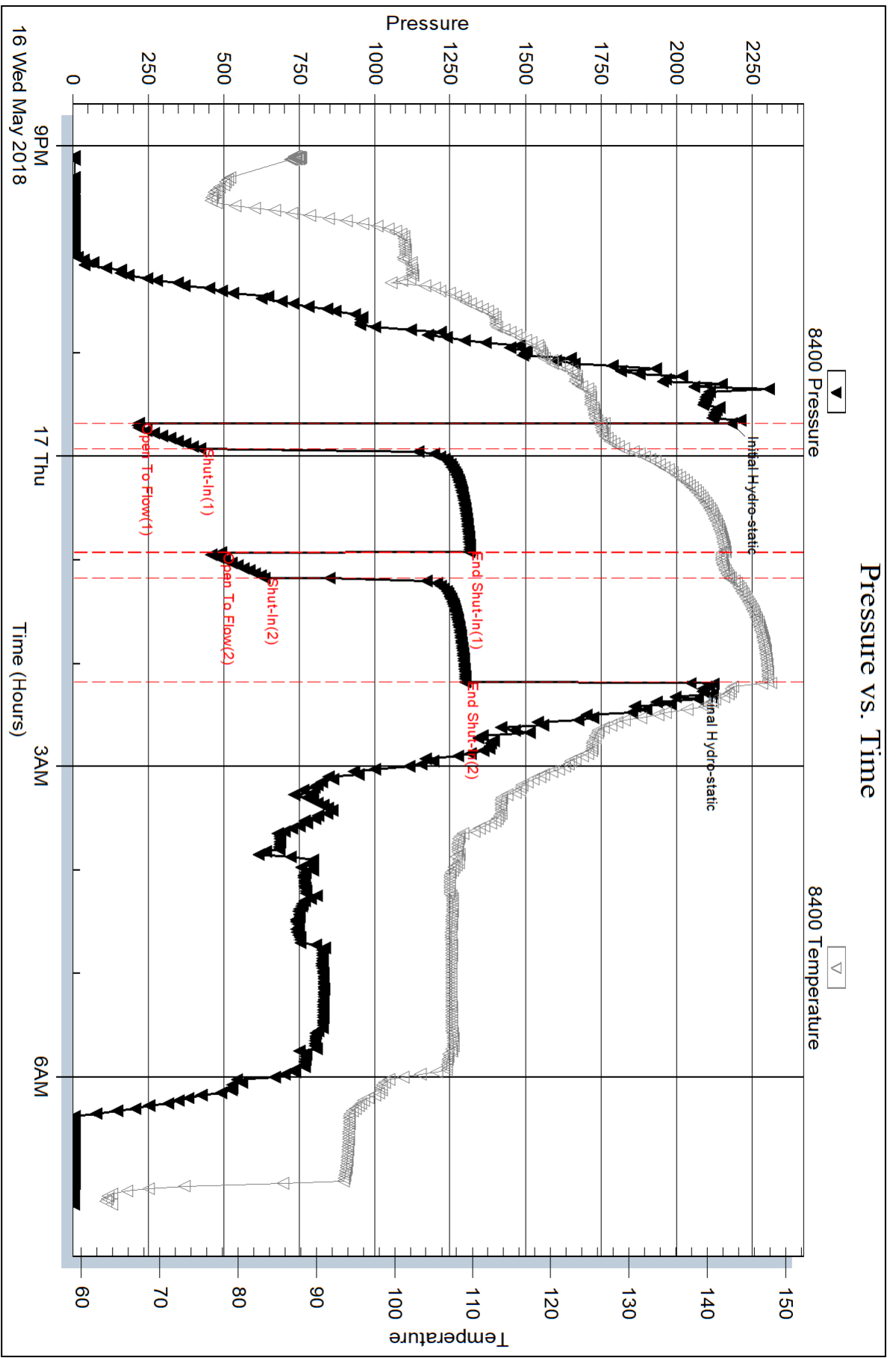
Mud Type: Gel Chem	Cushion Type:	Oil API: 32 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.57 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 600.00 ppm		
Filter Cake: 1.00 inches		

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
240.00	MCO 30% <sub>m</sub> 70% <sub>o</sub>	1.472
1332.00	Free Oil 100%	18.684
0.00	GTS	0.000

Total Length: 1572.00 ft      Total Volume: 20.156 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



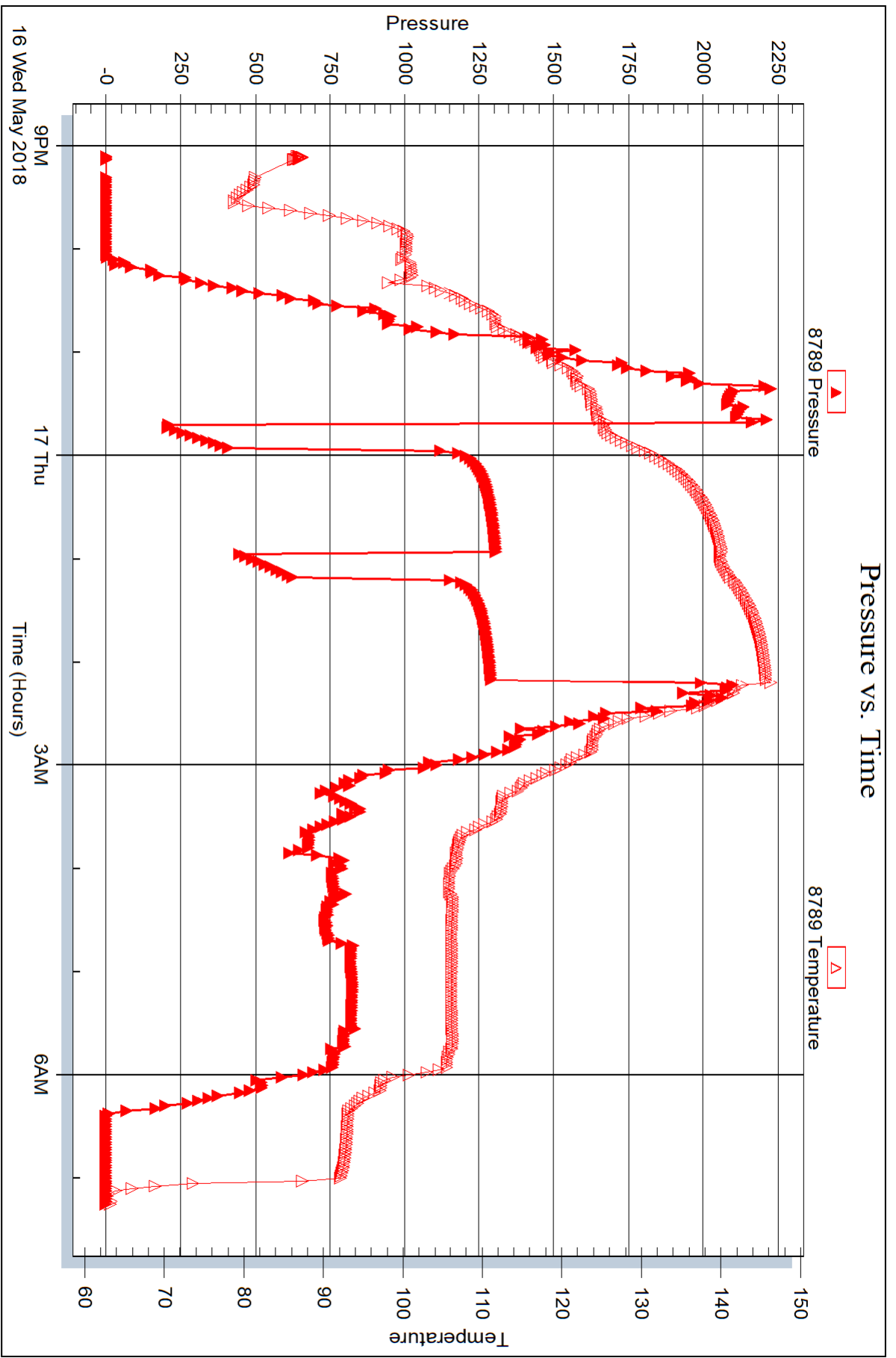
Serial #: 8789

Inside

Murfin Drilling Co Inc

Banister "A" 2-22

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63217

Printed: 2018.05.21 @ 14:51:01



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Saman Sharifaie

### **Banister " A " 2-22**

#### **22-2s-37w Cheyenne,KS**

Start Date: 2018.05.17 @ 22:20:00

End Date: 2018.05.18 @ 09:02:00

Job Ticket #: 63218                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.21 @ 14:49:55





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**

**Banister " A " 2-22**

Job Ticket: 63218 **DST#: 4**

Test Start: 2018.05.17 @ 22:20:00

## GENERAL INFORMATION:

Formation: **LKC " H - J "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:47:01  
 Time Test Ended: 09:02:00  
 Interval: **4470.00 ft (KB) To 4554.00 ft (KB) (TVD)**  
 Total Depth: 4554.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 3414.00 ft (KB)  
 3409.00 ft (CF)  
 KB to GR/CF: 5.00 ft

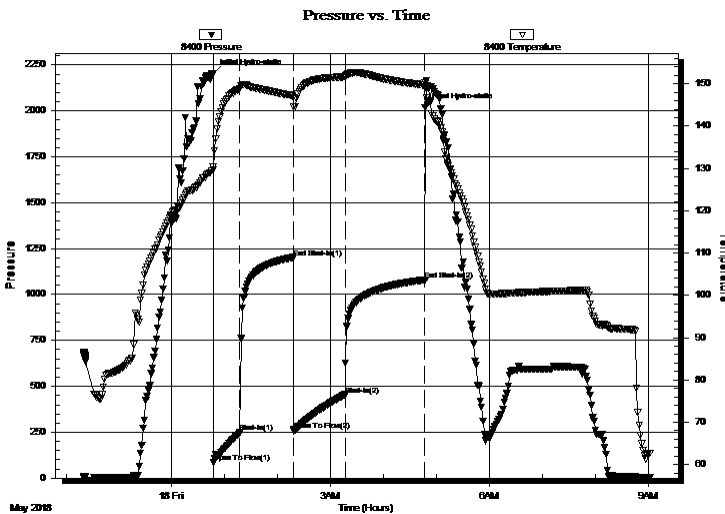
## Serial #: 8400

**Outside**

Press@RunDepth: 454.17 psig @ 4471.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2018.05.17 End Date: 2018.05.18 Last Calib.: 2018.05.18  
 Start Time: 22:20:01 End Time: 09:02:01 Time On Btm: 2018.05.18 @ 00:46:46  
 Time Off Btm: 2018.05.18 @ 04:47:16

**TEST COMMENT:** 30-IFP- BOB in 3 min. 15 sec. Built to 132"  
 60-ISIP- BOB in 5 min. 30 sec. Built to 188"  
 60-FFP- BOB in 5 min. Built to 162"  
 90-FSIP- BOB in 9 min. Built to 206"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2204.17	130.37	Initial Hydro-static
1	83.59	129.70	Open To Flow (1)
31	247.15	148.93	Shut-In(1)
91	1199.00	147.14	End Shut-In(1)
91	262.69	146.68	Open To Flow (2)
150	454.17	151.79	Shut-In(2)
240	1079.23	149.69	End Shut-In(2)
241	2018.35	150.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
208.00	MCO 25% m 75% o	1.02
930.00	Free Oil 100%	13.05
0.00	1860 GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc  
250 N Water Ste 300  
Wichita KS 67202-1216  
ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**  
**Banister " A " 2-22**  
Job Ticket: 63218      **DST#: 4**  
Test Start: 2018.05.17 @ 22:20:00

## Tool Information

Drill Pipe:	Length: 4259.00 ft	Diameter: 3.80 inches	Volume: 59.74 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 208.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 60.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4470.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	111.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4444.00	
Shut In Tool	5.00			4449.00	
Hydraulic tool	5.00			4454.00	
Jars	5.00			4459.00	
Safety Joint	2.00			4461.00	
Packer	5.00			4466.00	27.00      Bottom Of Top Packer
Packer	4.00			4470.00	
Stubb	1.00			4471.00	
Recorder	0.00	8789	Inside	4471.00	
Recorder	0.00	8400	Outside	4471.00	
Perforations	15.00			4486.00	
Change Over Sub	1.00			4487.00	
Drill Pipe	63.00			4550.00	
Change Over Sub	1.00			4551.00	
Bullnose	3.00			4554.00	84.00      Bottom Packers & Anchor

**Total Tool Length: 111.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**22-2s-37w Cheyenne,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Banister " A " 2-22**

Job Ticket: 63218

**DST#: 4**

ATTN: Saman Sharifaie

Test Start: 2018.05.17 @ 22:20:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 105.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 4.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
208.00	MCO 25% <sub>m</sub> 75% <sub>o</sub>	1.023
930.00	Free Oil 100%	13.045
0.00	1860 GIP	0.000

Total Length: 1138.00 ft      Total Volume: 14.068 bbl

Num Fluid Samples: 0

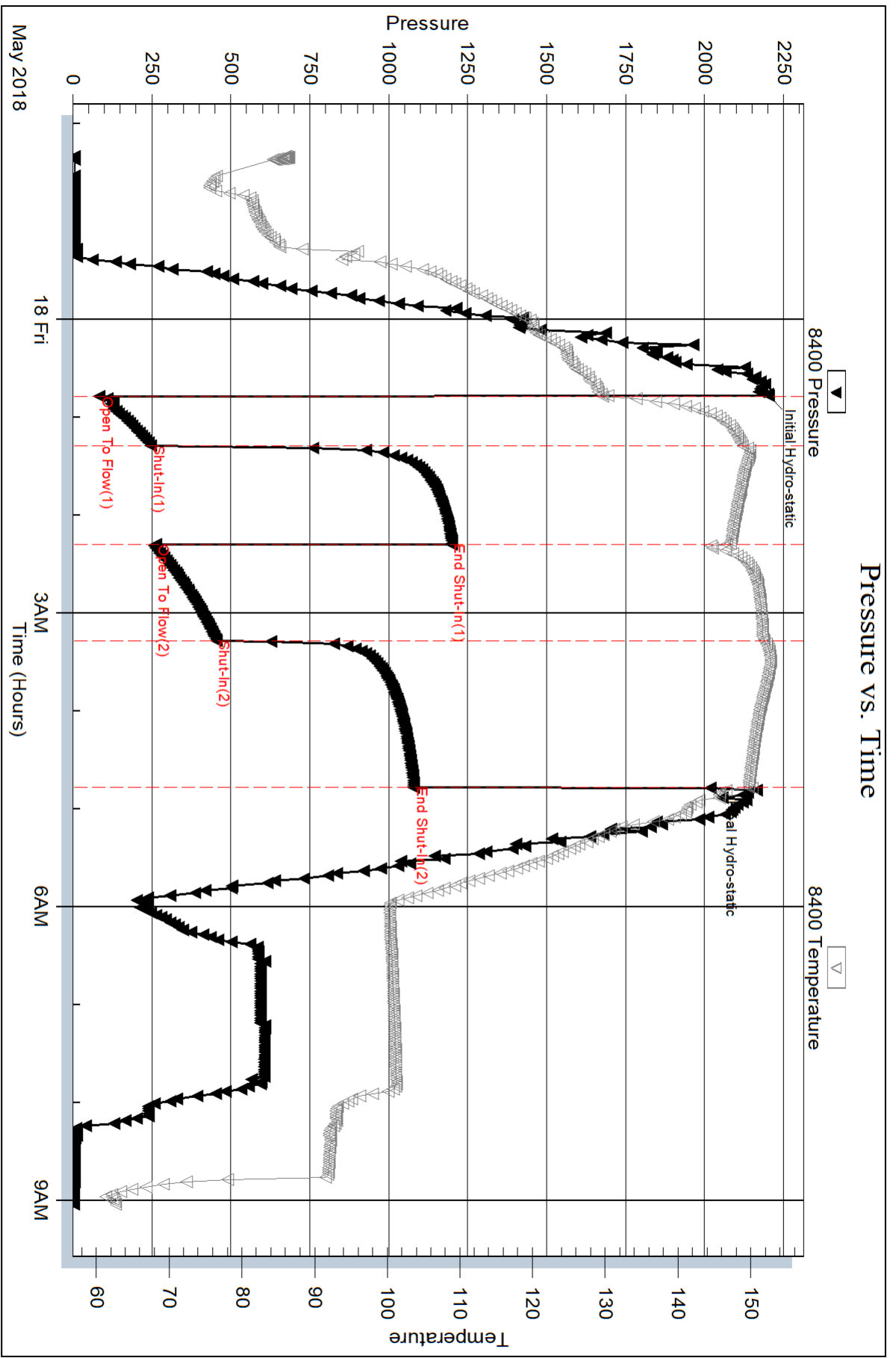
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



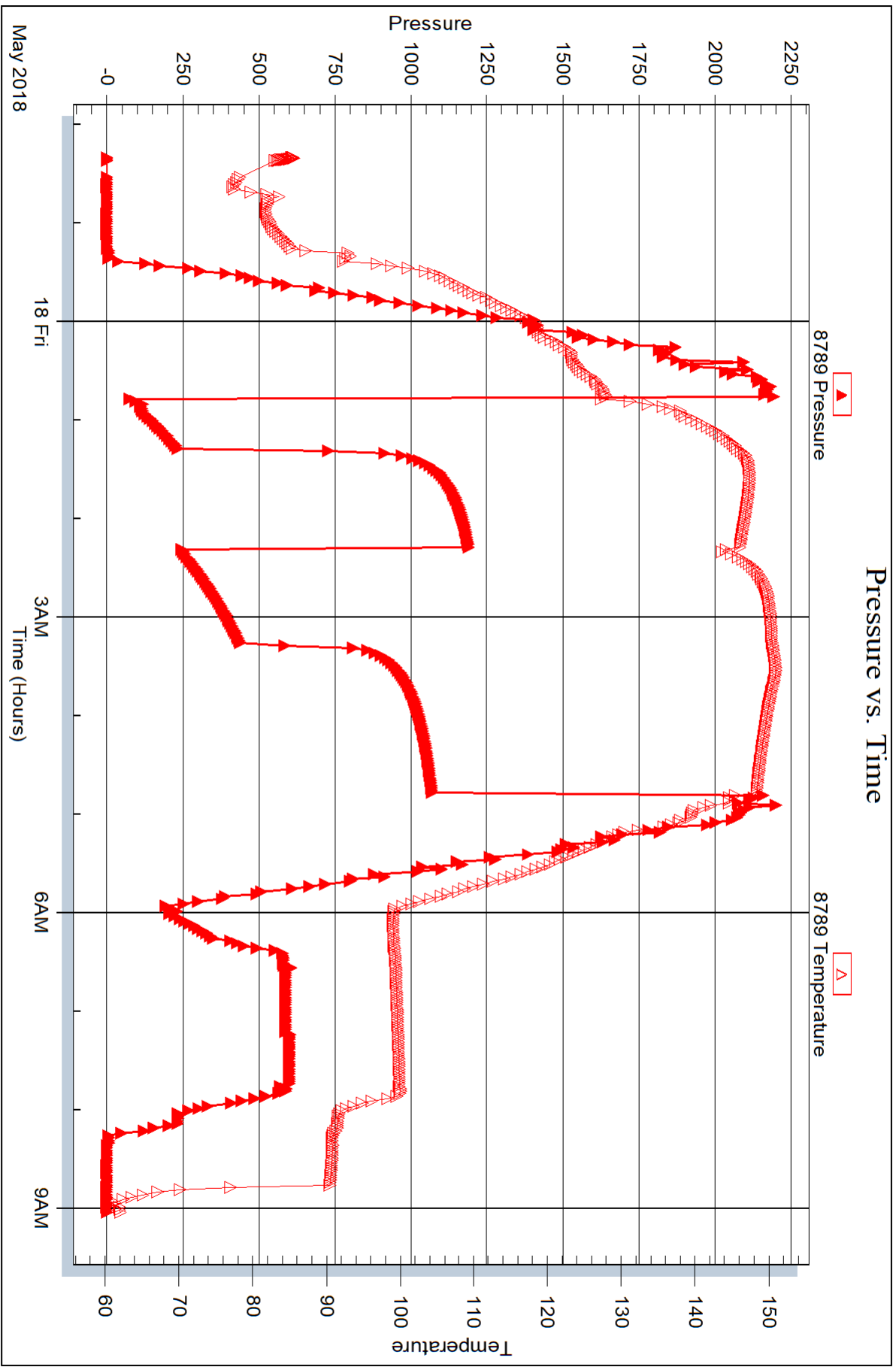
Serial #: 8789

Inside

Murfin Drilling Co Inc

Banister " A " 2-22

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300  
Wichita KS 67202-1216

ATTN: Saman Sharifaie

### **Banister " A " 2-22**

#### **22-2s-37w Cheyenne,KS**

Start Date: 2018.05.19 @ 14:14:00

End Date: 2018.05.19 @ 23:10:00

Job Ticket #: 63219                      DST #: 5

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.21 @ 14:49:35



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co Inc  
 250 N Water Ste 300  
 Wichita KS 67202-1216  
 ATTN: Saman Sharifaie

**22-2s-37w Cheyenne,KS**

**Banister " A " 2-22**

Job Ticket: 63219      **DST#: 5**  
 Test Start: 2018.05.19 @ 14:14:00

## GENERAL INFORMATION:

Formation: **Ft Scott - Celia**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:15:01  
 Time Test Ended: 23:10:00  
 Interval: **4702.00 ft (KB) To 4834.00 ft (KB) (TVD)**  
 Total Depth: 4834.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 3414.00 ft (KB)  
 3409.00 ft (CF)  
 KB to GR/CF: 5.00 ft

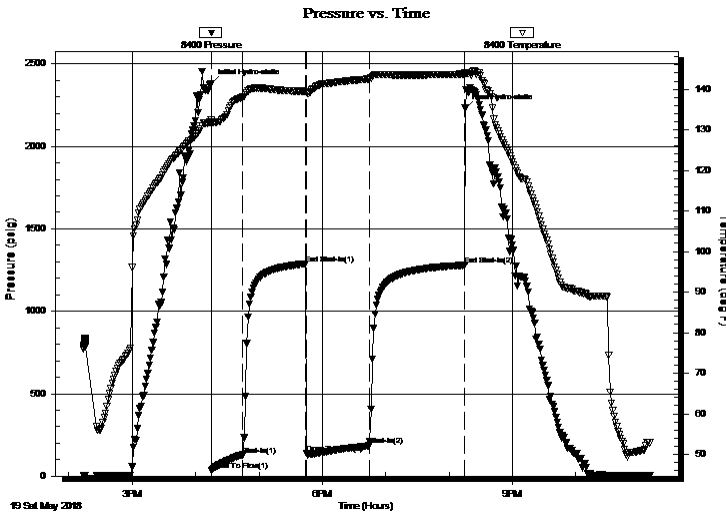
## Serial #: 8400

**Outside**

Press@RunDepth: 185.88 psig @ 4707.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2018.05.19      End Date: 2018.05.19      Last Calib.: 2018.05.19  
 Start Time: 14:14:01      End Time: 23:10:01      Time On Btm: 2018.05.19 @ 16:14:46  
 Time Off Btm: 2018.05.19 @ 20:15:01

**TEST COMMENT:** 30-IFP- BOB in 26 min. Built to 12"  
 60-ISIP- No Blow Died Back to 10"  
 60-FFP- BOB in 21 min. Built to 30"  
 90-FSIP- No Blow Died Back to 29"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2378.96	132.38	Initial Hydro-static
1	37.11	131.56	Open To Flow (1)
30	129.18	138.04	Shut-In(1)
90	1288.93	139.49	End Shut-In(1)
90	136.49	139.09	Open To Flow (2)
150	185.88	142.54	Shut-In(2)
240	1279.17	143.73	End Shut-In(2)
241	2231.93	144.15	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
301.00	MCO 30% m 70% o	2.33
67.00	OCM 40% o 60% m	0.94
0.00	310 GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co Inc

**22-2s-37w Cheyenne,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Banister " A " 2-22**

Job Ticket: 63219

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2018.05.19 @ 14:14:00

## Tool Information

Drill Pipe:	Length: 4476.00 ft	Diameter: 3.80 inches	Volume: 62.79 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 208.00 ft	Diameter: 2.25 inches	Volume: 1.02 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 63.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4702.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	132.00 ft			
Tool Length:	159.00 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			4676.00	
Shut In Tool	5.00			4681.00	
Hydraulic tool	5.00			4686.00	
Jars	5.00			4691.00	
Safety Joint	2.00			4693.00	
Packer	5.00			4698.00	27.00 Bottom Of Top Packer
Packer	4.00			4702.00	
Stubb	1.00			4703.00	
Perforations	3.00			4706.00	
Change Over Sub	1.00			4707.00	
Recorder	0.00	8789	Inside	4707.00	
Recorder	0.00	8400	Outside	4707.00	
Drill Pipe	94.00			4801.00	
Change Over Sub	1.00			4802.00	
Perforations	29.00			4831.00	
Bullnose	3.00			4834.00	132.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>159.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co Inc

**22-2s-37w Cheyenne,KS**

250 N Water Ste 300  
Wichita KS 67202-1216

**Banister " A " 2-22**

Job Ticket: 63219

**DST#: 5**

ATTN: Saman Sharifaie

Test Start: 2018.05.19 @ 14:14:00

## 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:

bbbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 3.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
301.00	MCO 30% <sub>m</sub> 70% <sub>o</sub>	2.327
67.00	OCM 40% <sub>o</sub> 60% <sub>m</sub>	0.940
0.00	310 GIP	0.000

Total Length: 368.00 ft      Total Volume: 3.267 bbl

Num Fluid Samples: 0

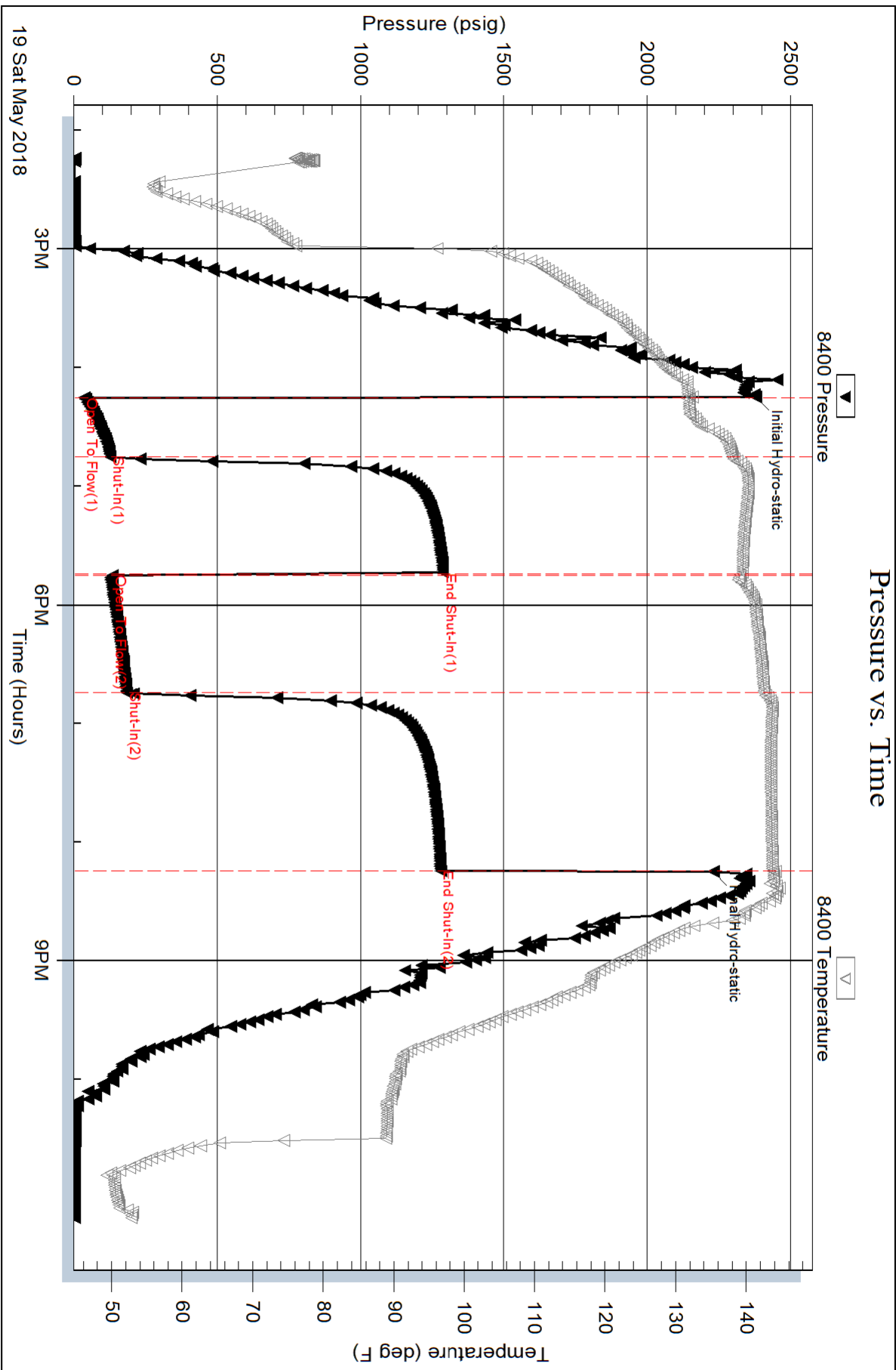
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



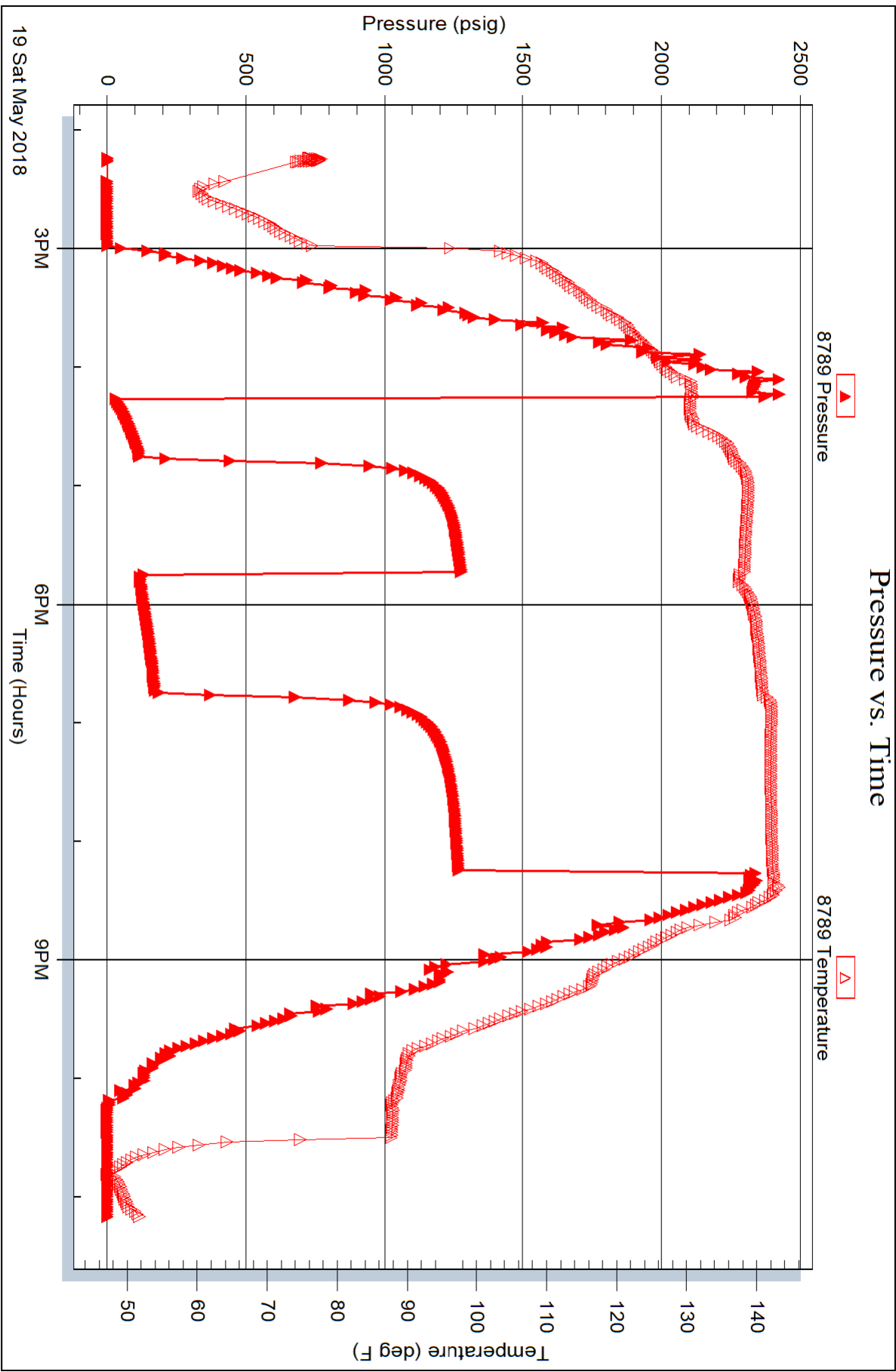
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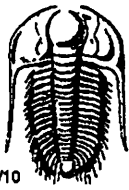
Inside

Murfin Drilling Co Inc

Banister " A " 2-22

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63215

Well Name & No. Banister "A" 2-22 Test No. 1 Date 5-15-18  
 Company Murfin Drilling Co. Inc. Elevation 3414 KB 3409 GL  
 Address 250 N. Water Ste 300 Wichita KS 67202-1216  
 Co. Rep / Geo. SAMAN SHARIFAIE Rig Murfin 3  
 Location: Sec. 22 Twp. 25 Rge. 37W Co. Cheyenne State KS

Interval Tested 4280-4360 Zone Tested LRC "A"  
 Anchor Length 80 Drill Pipe Run 4071 Mud Wt. 9.1  
 Top Packer Depth 4275 Drill Collars Run ~~208~~ 208 Vis 64  
 Bottom Packer Depth 4280 Wt. Pipe Run 0 WL 6  
 Total Depth 4360 Chlorides 600 ppm System LCM 2

Blow Description IFP - BOBIN 1/2 min. Built to 177 in.  
ISIP - BOB - Built to 271 in.  
FFP - BOBIN 40 sec. Built to 186 in.  
FSIP - BOB - Built to 245 in.

Rec <u>270</u>	Feet of <u>MCO</u>	%gas <u>70</u>	%oil	%water <u>30</u>	%mud
Rec <u>1800</u>	Feet of <u>Free Oil</u>	%gas <u>100</u>	%oil	%water	%mud
Rec _____	Feet of _____	%gas _____	%oil	%water	%mud
Rec _____	Feet of _____	%gas _____	%oil	%water	%mud
Rec _____	Feet of <u>Gas to Surface</u>	%gas _____	%oil	%water	%mud

Rec Total 2070 BHT \_\_\_\_\_ Gravity 34 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2123  
 (B) First Initial Flow 221  
 (C) First Final Flow 554  
 (D) Initial Shut-In 1306  
 (E) Second Initial Flow 572  
 (F) Second Final Flow 795  
 (G) Final Shut-In 1302  
 (H) Final Hydrostatic 2086

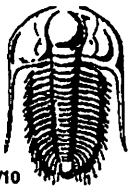
Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub 50  
 Hourly Standby \_\_\_\_\_  
 Mileage 117 RT  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1642

T-On Location 05:10  
 T-Started 06:37  
 T-Open 08:30  
 T-Pulled 11:00  
 T-Out 16:14

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1642  
 MP/DST Disc't \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Approved By [Signature] Our Representative



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63216

Well Name & No. BANISTER "A" 2-22 Test No. 2 Date 5-16-18  
 Company MURFIN DRILLING Co. INC. Elevation 3414 KB 3409 GL  
 Address 250 N. WATER ST. 300 WICHITA KS 67206-1216  
 Co. Rep / Geo. SAMAN SHARIFAIE Rig MURFIN 3  
 Location: Sec. 22 Twp. 2<sup>S</sup> Rge. 37<sup>W</sup> Co. Cheyenne State KS

Interval Tested 4360 - 4427 Zone Tested LK C " B-D "  
 Anchor Length 67 Drill Pipe Run 4134 Mud Wt. 9.1  
 Top Packer Depth 4355 Drill Collars Run 208 Vis 64  
 Bottom Packer Depth 4360 Wt. Pipe Run 0 WL 6  
 Total Depth 4427 Chlorides 600 ppm System LCM 2

Blow Description IFP - BOB in 45 sec. Built to 135 in.  
ISIP - BOB in 7 min. Built to 216 in.  
FFP - BOB in 1 min. 10 sec. Built to 69 in.  
FSIP - BOB in 12 min. Built to 100 in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>208</u>	<u>MCO</u>	<u>55</u>		<u>45</u>	
<u>1353</u>	<u>Free Oil</u>	<u>100</u>			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

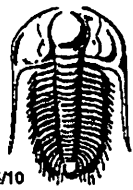
Rec Total 1561 BHT 148 Gravity 31 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2167</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>01:00</u>
(B) First Initial Flow <u>128</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>01:48</u>
(C) First Final Flow <u>322</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>04:13</u>
(D) Initial Shut-In <u>1323</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>06:43</u>
(E) Second Initial Flow <u>327</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:46</u>
(F) Second Final Flow <u>498</u>	<input checked="" type="checkbox"/> Mileage <u>117</u>	Comments
(G) Final Shut-In <u>1319</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2120</u>	<input type="checkbox"/> Straddle	
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Approved By [Signature] Our Representative

Sub Total 0  
 Total 1642.00  
 MP/DST Disc't



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63217

Well Name & No. Banister "A" 2-22 Test No. 3 Date 5-16-18  
 Company Murfin Drilling Co. Inc. Elevation 3414 KB 3409 GL  
 Address 250 N. Water Ste 300 Wichita KS 67206-1216  
 Co. Rep / Geo. SAMAN SHARIF Aie Rig Murfin 3  
 Location: Sec. 22 Twp. 25 Rge. 37W Co. Cheyenne State KS

Interval Tested 4427-4470 Zone Tested LKC "D"  
 Anchor Length 43 Drill Pipe Run 4197 Mud Wt. 9  
 Top Packer Depth 4422 Drill Collars Run 208 Vis 62  
 Bottom Packer Depth 4427 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4470 Chlorides 600 ppm System LCM 1

Blow Description IFP - BOB in 1min. 10sec. Built to 162 in.  
ISIP - BOB in 7min. Built to 280 in.  
FFP - BOB in 45 sec. Built to 138 in.  
FSIP - BOB in 6min. Built to 192 in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>240</u>	<u>MCO</u>	<u>70</u>		<u>30</u>	
<u>1332</u>	<u>Free Oil</u>	<u>100</u>			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1572 BHT 148 Gravity 32 API RW @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2182  
 (B) First Initial Flow 218  
 (C) First Final Flow 420  
 (D) Initial Shut-In 1314  
 (E) Second Initial Flow 489  
 (F) Second Final Flow 635  
 (G) Final Shut-In 1300  
 (H) Final Hydrostatic 2045

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub 50  
 Hourly Standby \_\_\_\_\_  
 Mileage 117  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1642

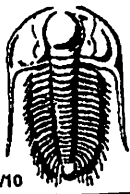
T-On Location 20:23  
 T-Started 21:06  
 T-Open 23:41  
 T-Pulled 02:11  
 T-Out 07:15  
 Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1642  
 MP/DST Disc't \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 60  
 Final Flow 15  
 Final Shut-In 60

Approved By [Signature]

Our Representative





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63218

4710

Well Name & No. Banister "A" 2-22 Test No. 4 Date 5-17-18  
 Company Murfin Drilling Co. Inc Elevation 3414 KB 3409 GL  
 Address 250 N. Water Ste. 300 Wichita KS 67206-1216  
 Co. Rep / Geo. Samad Sharif Aie Rig Murfin 3  
 Location: Sec. 22 Twp. 25 Rge. 37W Co. Cheyenne State KS

Interval Tested 4470 - 4554 Zone Tested LKC "H-I"  
 Anchor Length 84 Drill Pipe Run 4259 Mud Wt. 8.9  
 Top Packer Depth 4465 Drill Collars Run 208 Vis 105  
 Bottom Packer Depth 4470 Wt. Pipe Run 0 WL 5.2  
 Total Depth 4554 Chlorides 1200 ppm System LCM 4

Blow Description IFP - BOB in 3min, 15sec. Built to 132in.  
ISIP - BOB in 5min 30sec. Built to 188in.  
FFP - BOB in 5min. Built to 162in.  
FSIP - BOB in 9min. Built to 206in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>208</u>			<u>75</u>		<u>25</u>
<u>930</u>	<u>Free Oil</u>		<u>100</u>		
<u>1138</u>	<u>1860</u>				
<u>2200</u>					

Rec Total 2200 BHT 150 Gravity 32 API RW @          °F Chlorides          ppm

- (A) Initial Hydrostatic 2204
- (B) First Initial Flow 83
- (C) First Final Flow 247
- (D) Initial Shut-In 1199
- (E) Second Initial Flow 262
- (F) Second Final Flow 454
- (G) Final Shut-In 1079
- (H) Final Hydrostatic 2018

- Initial Open 30
- Initial Shut-In 60
- Final Flow 60
- Final Shut-In 90

Approved By [Signature]

- Test 1150
- Jars 250
- Safety Joint 75
- Circ Sub 50
- Hourly Standby
- Mileage 117
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

Sub Total 1642  
 Our Representative

- T-On Location 21:18
- T-Started 22:20
- T-Open 00:47
- T-Pulled 04:47
- T-Out 09:02

Comments           
 Ruined Shale Packer           
 Ruined Packer           
 Extra Copies           
 Sub Total 0  
 Total 1642  
 MP/DST Disc't

