

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 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	Mai Oil Operations, Inc.
Well Name	F.V. RIEDEL 'A' 4
Doc ID	1579535

All Electric Logs Run

DIL
CDN
Micro
Sonic

Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	F.V. RIEDEL 'A' 4
Doc ID	1579535

Tops

Name	Top	Datum
Anhydrite	923	1023
Topeka	2870	-924
Heebner	3105	-1159
Toronto	3124	-1178
Lansing	3190	-1244
Base KC	3401	-1455
Conglomerate	3405	-1459
Arbuckle	3428	-1482



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

Date: 5/5/2021
 Invoice # 2227

P.O.#:
 Due Date: 6/4/2021
 Division: Russell

Invoice

Contact:
 Mai Oil Operations
Address/Job Location:

8411 Preston Rd. Ste 800
 Dallas TX 75225-5520

Reference:
 F V REIDEL A 4 SEC 4-18-14

Description of Work:
 LONG SURFACE JOB

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 618.09	No				
Common-Class A	210	\$ 2,996.93	Yes				
POZ Mix-Standard	140	\$ 678.92	Yes				
Calcium Chloride	15	\$ 581.93	Yes				
Bulk Truck Matl-Material Service Charge	371	\$ 257.02	No				
Premium Gel (Bentonite)	6	\$ 120.54	Yes				
8 5/8" Top Rubber Plug	1	\$ 84.52	Yes				
Baffle Plate Aluminum, 8 5/8"	1	\$ 74.82	Yes				
Pump Truck Mileage-Job to Nearest Camp	18	\$ 56.11	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	18	\$ 43.64	No				

Invoice Terms:

Net 30

	SubTotal:	\$ 5,512.52
	<i>Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:</i>	\$ (137.81)
<hr/>		
	SubTotal for Taxable Items:	\$ 4,424.21
	SubTotal for Non-Taxable Items:	\$ 950.50
<hr/>		
	Total:	\$ 5,374.71
	Tax:	\$ 331.82
	Amount Due:	\$ 5,706.53
	Applied Payments:	
	Balance Due:	\$ 5,706.53

7.50% Barton County Sales Tax

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.
 ©2008-2013 Straker Investments, LLC. All rights reserved.

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. 2227

Date	5/5/21	Sec.	4	Twp.	18	Range	14	County	Barton	State	Kansas	On Location		Finish	5:00 PM
Lease								Location		4*281 Jct 15 1 1/2 W Sinto					

Lease F.V. Riedel A		Well No. 4		Owner	
Contractor Southwind Drilling		To Quality Oilwell Cementing, Inc.			
Type Job Surface		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size 12 1/4	T.D. 935	Charge To Mai Oil			
Csg. 8 5/8	Depth 934.49	Street			
Tbg. Size	Depth	City		State	
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. 20'	Shoe Joint 20'	Cement Amount Ordered		350 6% 4% CC 2% gel	
Meas Line	Displace 58				

EQUIPMENT			Common
Pumptrk 16	No. Cementer Helper David		210
Bulktrk 9	No. Driver Tom		Poz. Mix 140
Bulktrk	No. Driver		Gel. 6
Bulktrk	No. Driver		Calcium 15

JOB SERVICES & REMARKS		
Remarks:		Hulls
Rat Hole		Salt
Mouse Hole		Flowseal
Centralizers		Kol-Seal
Baskets		Mud CLR 48
D/V or Port Collar		CFL-117 or CD110 CAF 38
		Sand
		Handling 371
		Mileage
Ran 8 5/8 csg and est. circulation cemented with 350 sks		

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
Cement Did Circulate	1 Rubber plug

Pumptrk Charge	Long Surface Job	Tax
Mileage	18	Discount
Signature: <i>Frank J. Bone</i>		Total Charge
Thanks		

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. 2232

Date	5/13/21	Sec.	4	Twp.	18	Range	14	County	Barton	State	Kansas	On Location		Finish	3:05am
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Location Hwy 4 + 281 1S 1 1/2 W S.1110

Lease	F.V. Riedel A	Well No.	4	Owner	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.
Contractor	Southwind Drilling	Type Job	Production string	Charge To	Mar Oil
Hole Size	7 7/8	T.D.	3515	Street	
Csg.	5 1/2	Depth	3500	City	
Tbg. Size		Depth		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	29.5	Shoe Joint	29.5	Cement Amount Ordered	160 50% 10% salt 2% gel
Meas Line		Displace	85	1/4 flow	1000 gal mud clear

EQUIPMENT

Pumptrk	13	No.	Cementor	Helper	Paul	Common	96
Bulktrk	15	No.	Driver	Driver	Doug	Poz. Mix	64
Bulktrk	PU	No.	Driver	Driver	David	Gel.	3
						Calcium	

JOB SERVICES & REMARKS

Remarks:		Hulls	
Rat Hole	30 sks	Salt	13
Mouse Hole	20 sks	Flowseal	30ft
Centralizers	1,2,3,4,5,6,7,8,9,10	Kol-Seal	
Baskets		Mud CLR 48	1000 gal
D/V or Port Collar		CFL-117 or CD110 CAF	38
		Sand	
		Handling	176
		Mileage	

Ran 5 1/2 and established circulation, pumped 1000gal mud clear mixed 30 sks in Rathole 20 sks in Mouse hole cemented casing with 110 sks and displaced

Lift pressure @ 600
Landed plug @ 1400

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	10
Baskets	
AFU Inserts	
Float Shoe	1
Latch Down	1

Pumptrk Charge	prod string
Mileage	18
Tax	
Discount	
Total Charge	

X Signature *Robert Lued*

Thanks

JAMES C. MUSGROVE

Petroleum Geologist, LLC
212 Main Street
P.O. Box 215
Claflin, KS 67525

Office (620) 588-4250

Res. Claflin (620) 786-0839

Mai Oil Operations, Inc.
F.V. Riedel 'A' #4
SE-NE-NW-NW (455' FNL & 1035' FWL)
Section 4-18s-14w
Barton County, Kansas

Page 1

5 1/2" Production Casing Set

Contractor: Southwind Drilling Co. (rig #1)
Commenced: May 4, 2021
Completed: May 13, 2021
Elevation: 1946' K.B., 1944' D.F., 1936' G.L.
Casing program: Surface; 8 5/8" @ 934'
Production, 5 1/2" @ 3500'
Sample: Samples saved and examined 2800' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 2800' to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were four (4) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Eli; Dual Induction, Compensated Density/Neutron Log, Micro Log and Sonic

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	923	+1023
Base Anhydrite	949	+997
Topeka	2870	-924
Heebner	3105	-1159
Toronto	3124	-1178
Brown Lime	3182	-1236
Lansing	3190	-1244
Base Kansas City	3401	-1455
Conglomerate	678	-1459
Arbuckle	3428	-1482
Rotary Total Depth	3515	-1569
Log Total Depth	3520	-1574

(All tops and zone(s) corrected to Electric Log Measurements)

SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

TOPEKA SECTION

2870-2880' Limestone, tan, finely crystalline, fossiliferous, slightly cherty; poor porosity, no shows.

- 2918-2926' Limestone, white, finely crystalline, fossiliferous, chalky, no shows.
- 2940-2966' Limestone, tan, gray highly fossiliferous, scattered porosity; plus gray and tan, opaque chert, no shows.
- 2997-3012' Limestone, white, tan; finely crystalline, granular in part, chalky; no shows.
- 3035-3040' Limestone, tan, gray, fossiliferous, scattered porosity; trace brown edge staining, no show of free oil and no odor in fresh samples.
- 3060-3080' Limestone, tan, gray, fossiliferous, chalky in part; brown to dark brown stain, trace of free oil and no odor in fresh samples.
- 3096-3106' Limestone, gray, finely crystalline, chalky; plus gray opaque chert, no shows.

TORONTO SECTION

- 3124-3130' Limestone, gray white, fossiliferous, chalky, poor visible porosity, trace brown stain, no show of free oil and faint odor in fresh samples.

LANSING SECTION

- 3192-3197' Limestone, gray, cream oolitic, fair porosity; brown and golden brown stain, show of free oil and faint odor in fresh samples.
- 3202-3208' Limestone, gray, cream, oolitic, oomoldic, fair oomoldic porosity, trace brown stain, trace of free oil and no odor in fresh samples.
- 3216-3226' Limestone, white, oomoldic, slightly chalky; trace brown stain; trace of free oil and questionable odor in fresh samples.

Drill Stem Test #1 3181-3226
Log Measurement **3186-3231**

Times: 30-30-45-60

Blow: Weak to strong

**Recovery: 120' gas in pipe
 60' oil and gas cut mud
 (30% oil; 5% gas; 65% mud)**

Pressures:

ISIP	752	psi
FSIP	775	psi
IFP	15-26	psi
FFP	26-40	psi
HSH	1596-1568	psi

- 3247-3257' Limestone, gray, tan, oolitic, slightly chalky, trace brown stain, no free oil and no odor in fresh samples.

3268-3281' Limestone, white, cream, oomoldic, good oomoldic porosity, fair brown stain and saturation, good show of free oil and good odor in fresh samples.

Drill Stem Test #2		3234-3276'
	Log Measurement	3239-3281'
Times:	30-30-30-45	
Blow:	Weak	
Recovery:	30' mud with oil specks	
Pressures:	ISIP 405 psi	
	FSIP 260 psi	
	IFP 17-19 psi	
	FFP 36-28 psi	
	HSH 1632-1596 psi	

3301-3310' Limestone, tan, finely crystalline, slightly cherty, few chalky; questionable discoloration, no free oil and no odor in fresh samples.

3332-3338' Limestone; gray, fossiliferous; few sub-oomoldic, chalky, trace brown stain, no free oil and faint odor in fresh samples.

3350-3358' Limestone, white, medium crystalline, scattered inter-crystalline type porosity, brown and black stain, no free oil and no odor.

3364-3375' Limestone, white, gray, fine and medium crystalline, few fossiliferous, chalky increasingly cherty (dense)

3379-3388' Limestone, white, highly chalky, poor viable porosity; black stain, no free oil and no odor in fresh samples.

ARBUCKLE SECTION

3428-3436' Dolomite, white and cream, medium crystalline, good inter-crystalline porosity; fair brown stain and saturation, show of free oil and good odor in fresh samples.

Drill Stem Test #3 **3390-3432**
Log Measurement **3395-3437**

Times: 30-30-30-45

Blow: Strong

Recovery: 265' gas in pipe
 491' clean gassy oil
 126' oil and gas cut mud
 (10% gas; 10% oil; 80% mud)
 63' oil and gas cut mud
 (30% gas; 5% oil 65% mud)

Pressures: ISIP 963 psi
 FSIP 948 psi
 IFP 49-172 psi
 FFP 176-270 psi
 HSH 1757-1688 psi

3437-3447' Dolomite, white/cream; medium and coarse crystalline, good inter-crystalline and vuggy type porosity, fair to good brown stain and saturation, show of free oil and good odor in fresh samples.

Drill Stem Test #4 **3433-3442**
Log Measurement **3438-3447**

Times: 15-20-20-30

Blow: Strong

Recovery: 567' gas in pipe
 441' clean gassy oil
 63' oil and gas cut muddy water
 (10% gas; 10% oil; 30% water; 50% mud)
 252' muddy water
 189' water

Pressures: ISIP 808 psi
 FSIP 806 psi
 IFP 147-248 psi
 FFP 290-389 psi
 HSH 1741-1715 psi

3450-3460' Dolomite, cream, white, medium crystalline, fair porosity, brown and black (tarry) stain. Trace free oil and faint odor in fresh samples.

3460-3480' Dolomite, as above, fair to good porosity, brown and black stain, trace of free oil and faint odor in fresh samples.

3480-3500' Dolomite, white and cream, medium to course crystalline, good inter-crystalline porosity, glauconitic, brown and black (dead) stain, show of free oil and faint odor in fresh samples.

Mai Oil Operations, Inc.
F.V. Riedel 'A' #4
SE-NE-NW-NW (455' FNL & 1035' FWL)
Section 4-18s-14w
Barton County, Kansas

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3500-3520' Dolomite, cream, white, medium and coarse crystalline, good inter-crystalline to vuggy type porosity, few glauconitic, few sandy; black (dead) stain, no free oil and no odor in fresh samples.

Rotary Total Depth: 3515 (-1569)
Log Total Depth: 3520 (-1574)

Recommendations:

5 1/2" production casing was set and cemented on the Mai Operations Oil Inc. F.V. Riedel 'A' #4.

Respectfully yours,

James C. Musgrove
Petroleum Geologist



DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

8411 Preston Rd
Dallas TX 75225

ATTN: Jim Musgrove

F.V. Riedel 'A' #4

4-18S-14W Barton,KS

Start Date: 2021.05.09 @ 10:56:00

End Date: 2021.05.09 @ 18:15:30

Job Ticket #: 67189 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.05.13 @ 16:35:17



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67189

DST#: 1

ATTN: Jim Musgrove

Test Start: 2021.05.09 @ 10:56:00

GENERAL INFORMATION:

Formation: **LKC A - C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:17:30

Time Test Ended: 18:15:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3181.00 ft (KB) To 3226.00 ft (KB) (TVD)

Reference Elevations: 1946.00 ft (KB)

Total Depth: 3226.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8671 Outside

Press@RunDepth: 40.19 psig @ 3182.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.05.09 End Date: 2021.05.09

Last Calib.: 2021.05.09

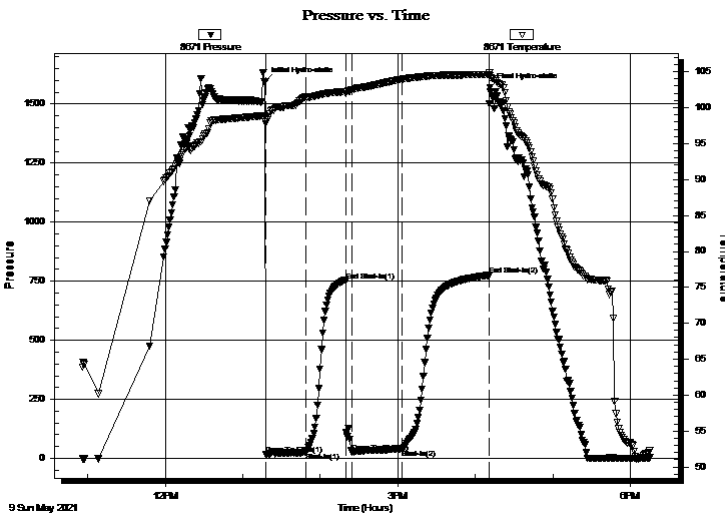
Start Time: 10:56:05 End Time: 18:15:29

Time On Btm: 2021.05.09 @ 13:17:15

Time Off Btm: 2021.05.09 @ 16:11:15

TEST COMMENT: 30 - IF - Blow started out weak but built to 3"
30 - ISI - No Return
45 - FF - Blow started right away and built to B.o.B in 35 mins
60 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.13	98.73	Initial Hydro-static
1	15.90	97.78	Open To Flow (1)
32	25.75	101.52	Shut-In(1)
63	751.80	102.22	End Shut-In(1)
67	26.42	102.51	Open To Flow (2)
106	40.19	103.94	Shut-In(2)
173	774.91	104.62	End Shut-In(2)
174	1568.55	104.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM - 5%g - 15%o - 80%m	0.62

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67189

DST#: 1

ATTN: Jim Musgrove

Test Start: 2021.05.09 @ 10:56:00

Tool Information

Drill Pipe:	Length: 3169.00 ft	Diameter: 3.25 inches	Volume: 32.52 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 32.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3181.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3162.00	
Hydraulic tool	5.00			3167.00	
Em Tool	4.00			3171.00	
Packer	5.00			3176.00	24.00 Bottom Of Top Packer
Packer	5.00			3181.00	
Stubb	1.00			3182.00	
Recorder	0.00	8354	Inside	3182.00	
Recorder	0.00	8671	Outside	3182.00	
perforations	8.00			3190.00	
Change Over Sub	1.00			3191.00	
Drill Pipe	31.00			3222.00	
Change Over Sub	1.00			3223.00	
Bullnose	3.00			3226.00	45.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67189

DST#: 1

ATTN: Jim Musgrove

Test Start: 2021.05.09 @ 10:56:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOCM - 5%g - 15%o - 80%m	0.616

Total Length: 60.00 ft Total Volume: 0.616 bbl

Num Fluid Samples: 0

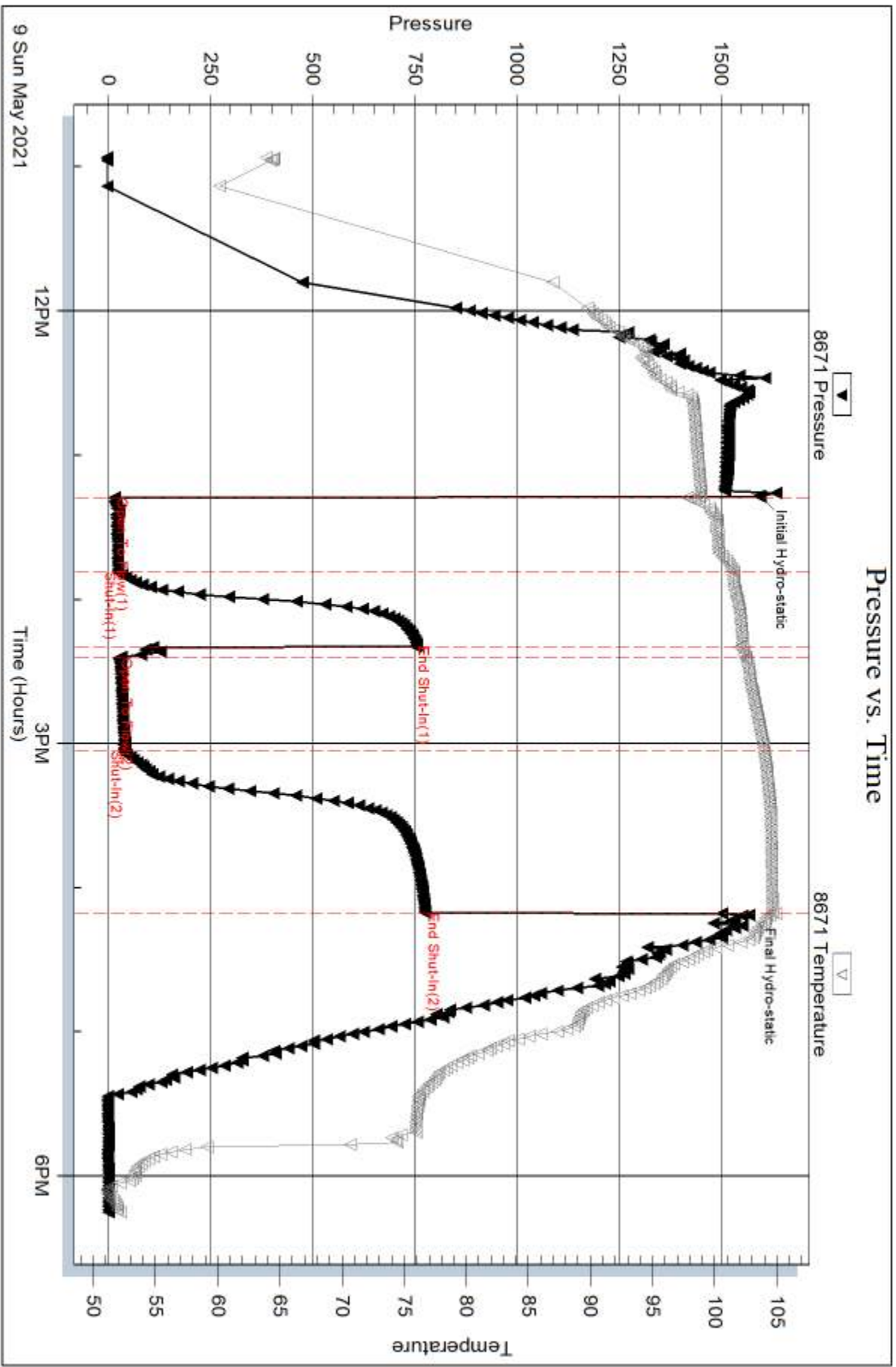
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



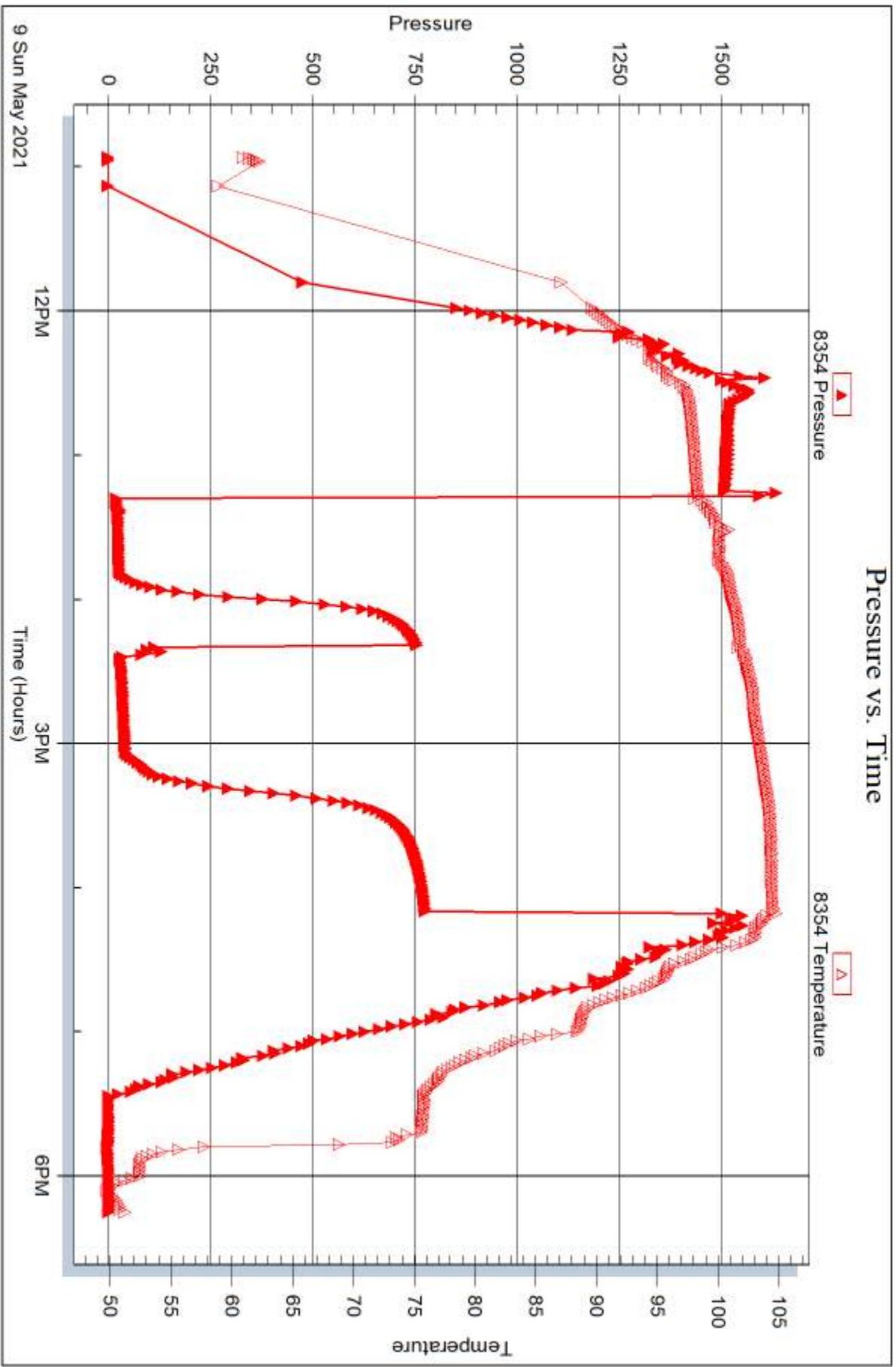
Serial #: 8354

Inside

Mai Oil Operations

F.V. Riedel 'A' #4

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

8411 Preston Rd
Dallas TX 75225

ATTN: Jim Musgrove

F.V. Riedel 'A' #4

4-18S-14W Barton,KS

Start Date: 2021.05.10 @ 05:15:00

End Date: 2021.05.10 @ 10:44:00

Job Ticket #: 67190 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.05.13 @ 16:34:52



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67190

DST#: 2

ATTN: Jim Musgrove

Test Start: 2021.05.10 @ 05:15:00

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:46:15

Time Test Ended: 10:44:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 77

Interval: 3234.00 ft (KB) To 3276.00 ft (KB) (TVD)

Reference Elevations: 1946.00 ft (KB)

Total Depth: 3276.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8671

Outside

Press@RunDepth: 27.47 psig @ 3235.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.05.10

End Date:

2021.05.10

Last Calib.:

2021.05.10

Start Time: 05:15:05

End Time:

10:43:59

Time On Btm:

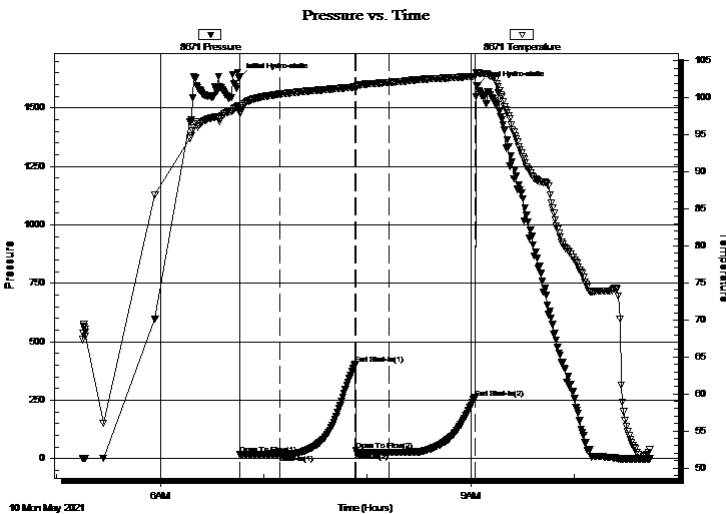
2021.05.10 @ 06:46:00

Time Off Btm:

2021.05.10 @ 09:03:15

TEST COMMENT: 30 - IF - Weak surface blow throughout
30 - ISI - No Return
30 - FF - Weak blow throughout
45 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.21	98.42	Initial Hydro-static
1	17.10	97.95	Open To Flow (1)
23	19.36	100.50	Shut-In(1)
67	405.36	101.48	End Shut-In(1)
68	36.71	101.26	Open To Flow (2)
87	27.47	102.09	Shut-In(2)
137	260.32	102.93	End Shut-In(2)
138	1596.80	103.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM 100% m w / oil spots	0.31

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67190

DST#: 2

ATTN: Jim Musgrove

Test Start: 2021.05.10 @ 05:15:00

Tool Information

Drill Pipe:	Length: 3232.00 ft	Diameter: 3.25 inches	Volume: 33.16 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 33.16 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3234.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	66.00 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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Shut In Tool	5.00			3215.00	
Hydraulic tool	5.00			3220.00	
Em Tool	4.00			3224.00	
Packer	5.00			3229.00	24.00 Bottom Of Top Packer
Packer	5.00			3234.00	
Stubb	1.00			3235.00	
Recorder	0.00	8354	Inside	3235.00	
Recorder	0.00	8671	Outside	3235.00	
perforations	5.00			3240.00	
Change Over Sub	1.00			3241.00	
Drill Pipe	31.00			3272.00	
Change Over Sub	1.00			3273.00	
Bullnose	3.00			3276.00	42.00 Bottom Packers & Anchor

Total Tool Length: 66.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 67190

DST#: 2

ATTN: Jim Musgrove

Test Start: 2021.05.10 @ 05:15:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OSM 100% m w / oil spots	0.308

Total Length: 30.00 ft Total Volume: 0.308 bbl

Num Fluid Samples: 0

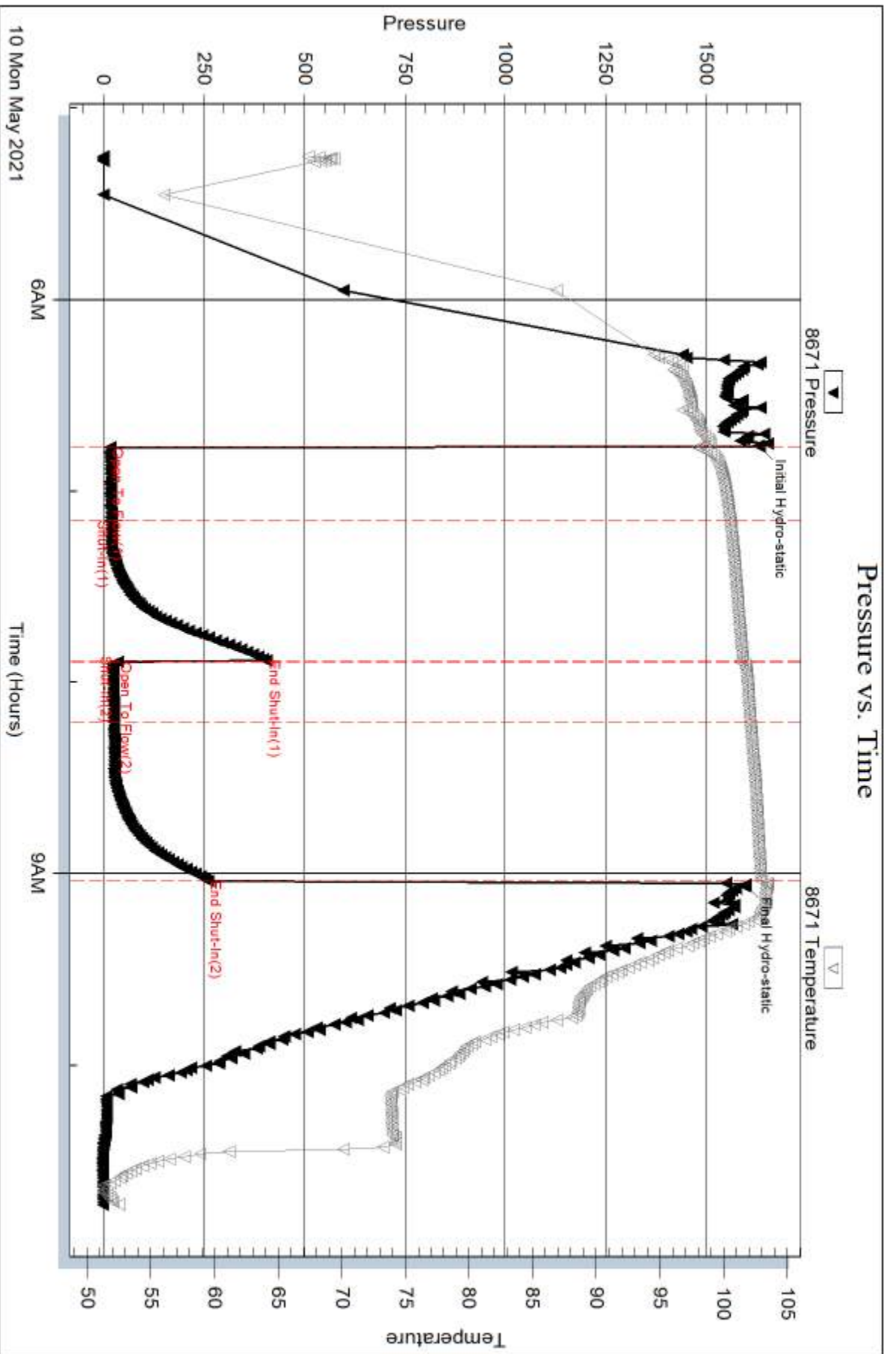
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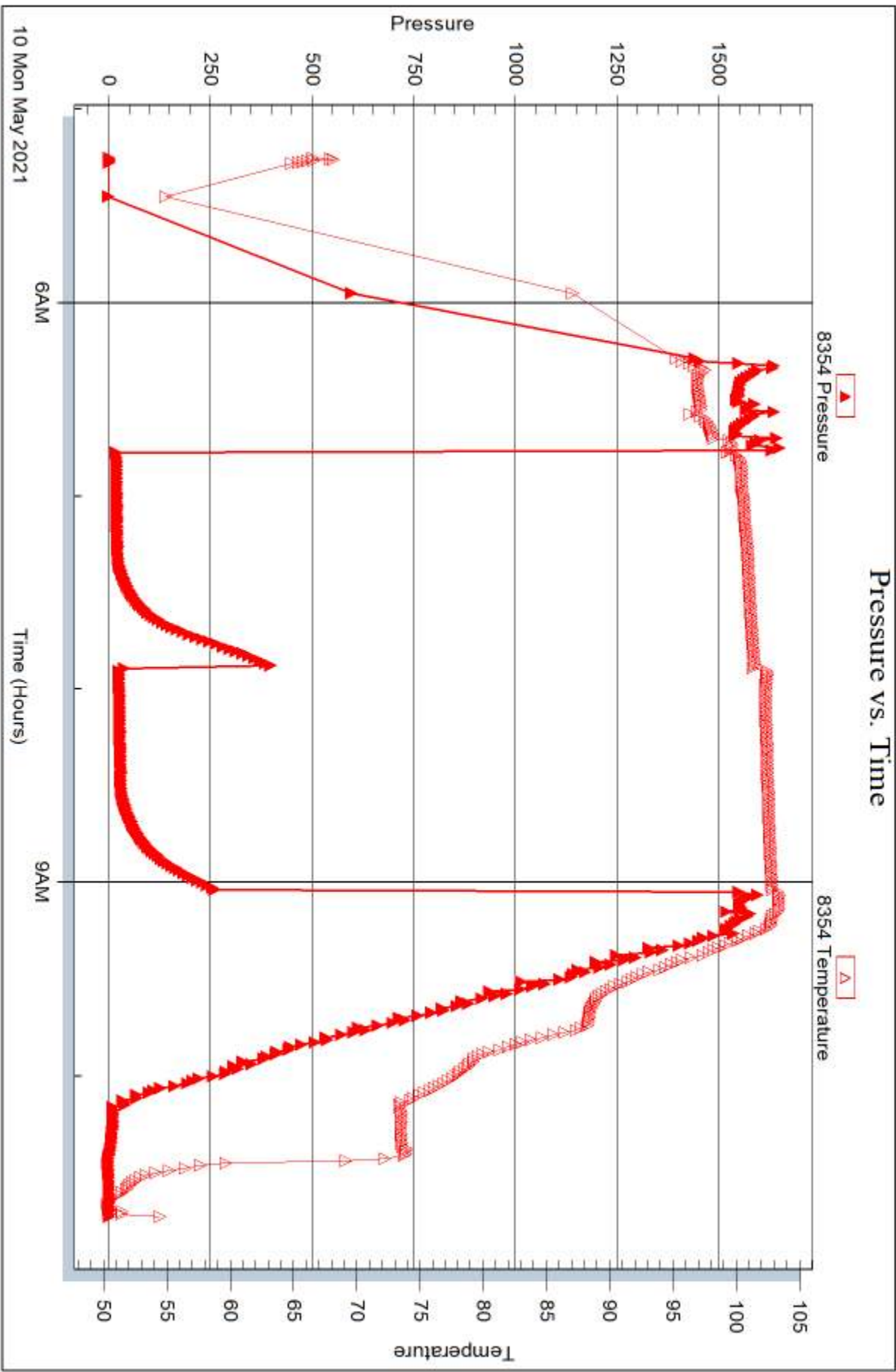
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

8411 Preston Rd
Dallas TX 75225

ATTN: Jim Musgrove

F.V. Riedel 'A' #4

4-18S-14W Barton,KS

Start Date: 2021.05.11 @ 09:47:30

End Date: 2021.05.11 @ 16:40:00

Job Ticket #: 66843 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.05.13 @ 16:34:23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 66843

DST#: 3

ATTN: Jim Musgrove

Test Start: 2021.05.11 @ 09:47:30

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:07:30

Time Test Ended: 16:40:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 3390.00 ft (KB) To 3432.00 ft (KB) (TVD)

Reference Elevations: 1946.00 ft (KB)

Total Depth: 3432.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8674 Outside

Press@RunDepth: 270.32 psig @ 3391.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.05.11 End Date: 2021.05.11

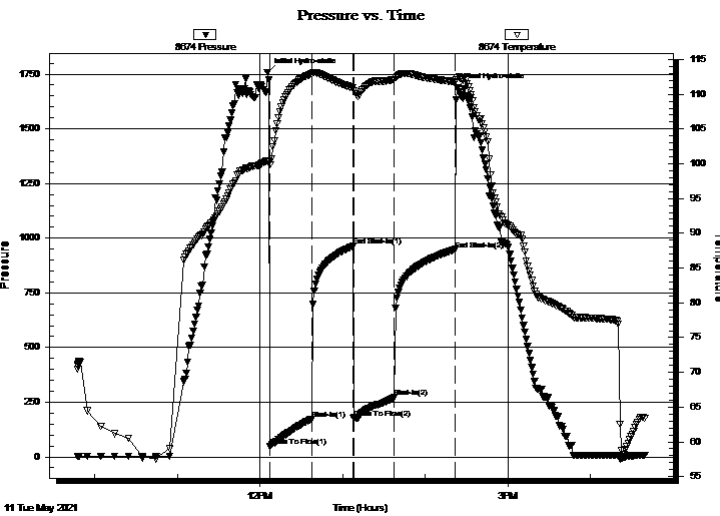
Last Calib.: 2021.05.11

Start Time: 09:47:35 End Time: 16:39:59

Time On Btm: 2021.05.11 @ 12:05:30

Time Off Btm: 2021.05.11 @ 14:23:30

TEST COMMENT: IF: BOB in 3 mins. 89"
IS: 1/4" blow built to 9"
FF: 1/4" blow BOB in 6 min. 49"
FS: Surface blow built to 5 1/2" 30-30-30-45



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1757.77	100.47	Initial Hydro-static
2	48.95	99.89	Open To Flow (1)
32	172.44	112.88	Shut-In(1)
62	962.51	110.92	End Shut-In(1)
63	176.83	110.56	Open To Flow (2)
92	270.32	112.15	Shut-In(2)
137	948.11	111.77	End Shut-In(2)
138	1688.10	112.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 30%g 5%o 65%m	0.88
126.00	gocm 10%g 10%o 80%m	1.77
491.00	go 20%g 80%o	6.89
0.00	265 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

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 66843

DST#: 3

ATTN: Jim Musgrove

Test Start: 2021.05.11 @ 09:47:30

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.80 inches	Volume: 47.57 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 30000.00 lb
			<u>Total Volume: 47.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 22000.00 lb
Depth to Top Packer:	3390.00 ft			Final 26000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	65.00 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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Stubb	1.00			3368.00	
Shut In Tool	5.00			3373.00	
Hydraulic tool	5.00			3378.00	
EM Tool	3.00			3381.00	
Packer	5.00			3386.00	23.00 Bottom Of Top Packer
Packer	4.00			3390.00	
Stubb	1.00			3391.00	
Recorder	0.00	8790	Inside	3391.00	
Recorder	0.00	8674	Outside	3391.00	
Perforations	4.00			3395.00	
Change Over Sub	1.00			3396.00	
Drill Pipe	32.00			3428.00	
Change Over Sub	1.00			3429.00	
Bullnose	3.00			3432.00	42.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket: 66843

DST#: 3

ATTN: Jim Musgrove

Test Start: 2021.05.11 @ 09:47:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	gocm 30%g 5%o 65%m	0.884
126.00	gocm 10%g 10%o 80%m	1.767
491.00	go 20%g 80%o	6.887
0.00	265 GIP	0.000

Total Length: 680.00 ft

Total Volume: 9.538 bbl

Num Fluid Samples: 0

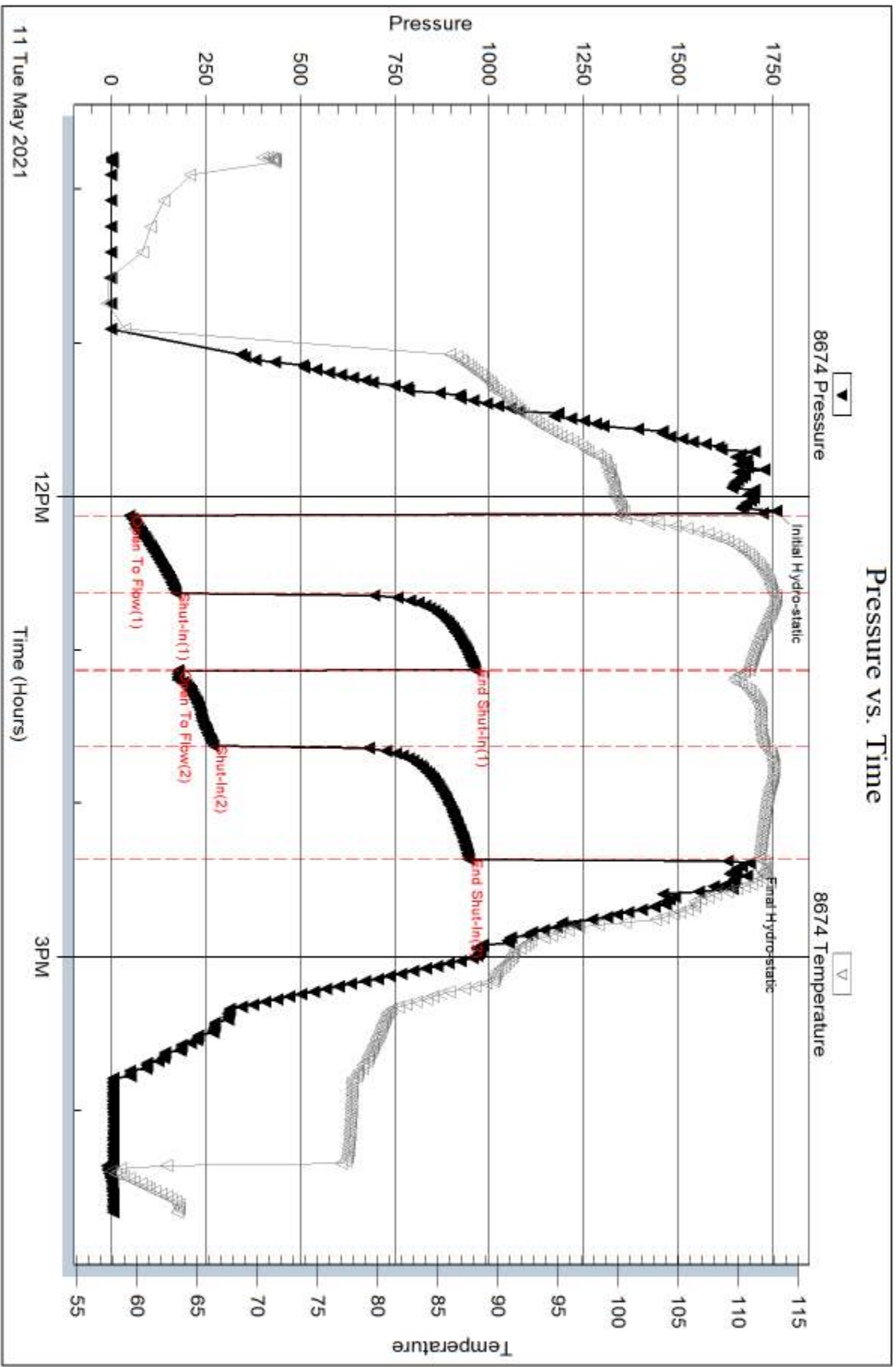
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 37@60=37



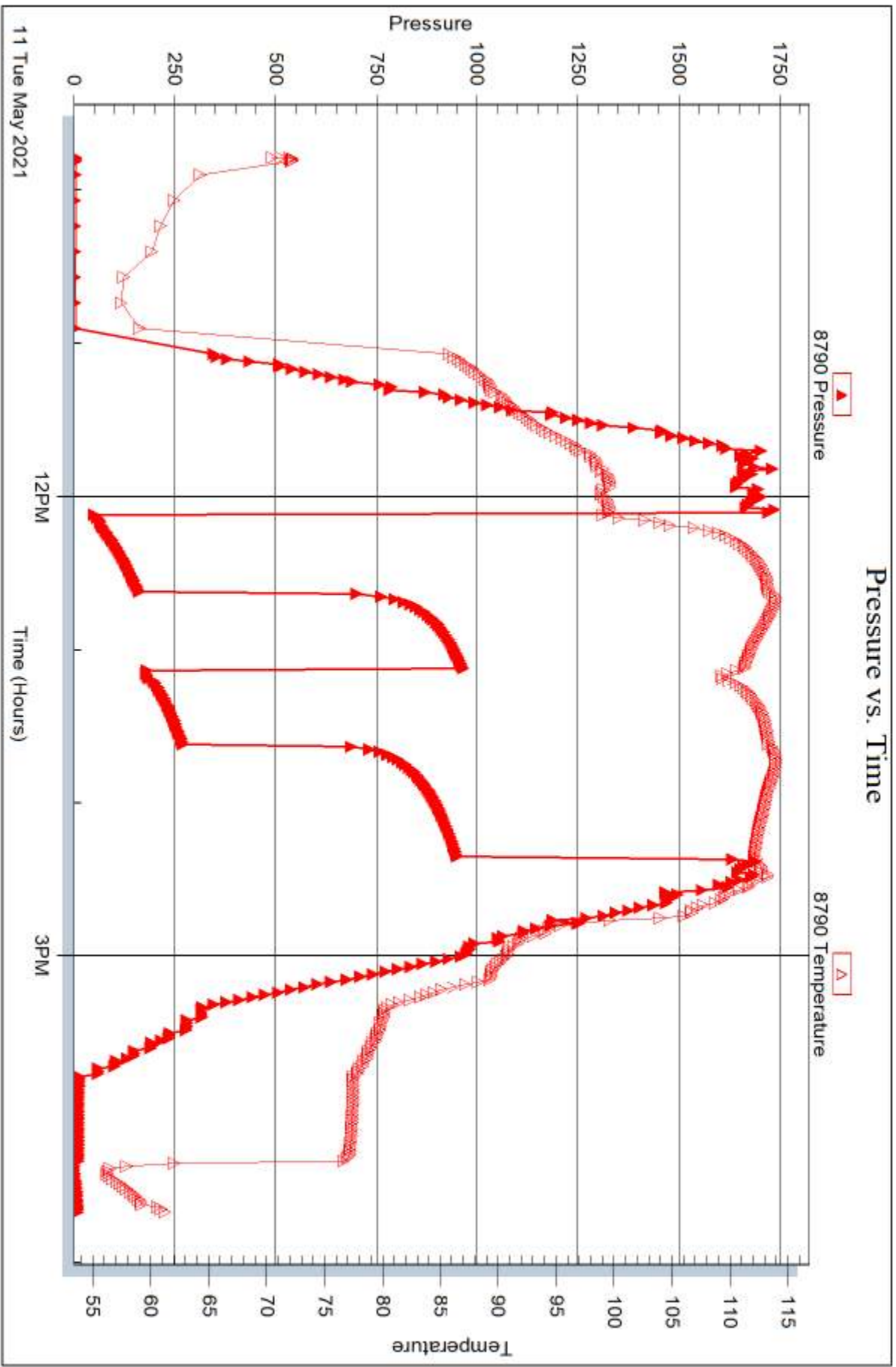
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Inside

Mai Oil Operations

F.V. Riedel 'A' #4

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 66843

Printed: 2021.05.13 @ 16:34:24



DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

8411 Preston Rd
Dallas TX 75225

ATTN: Jim Musgrove

F.V. Riedel 'A' #4

4-18S-14W Barton,KS

Start Date: 2021.05.11 @ 23:05:26

End Date: 2021.05.12 @ 04:47:26

Job Ticket #: DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.05.13 @ 16:33:51



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

ATTN: Jim Musgrove

Job Ticket: **DST#: 4**

Test Start: 2021.05.11 @ 23:05:26

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:43:26

Time Test Ended: 04:47:26

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 3433.00 ft (KB) To 3442.00 ft (KB) (TVD)

Reference Elevations: 1946.00 ft (KB)

Total Depth: 3442.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8674 Outside

Press@RunDepth: 389.08 psig @ 3434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.05.11

End Date:

2021.05.12

Last Calib.: 2021.05.12

Start Time: 23:05:31

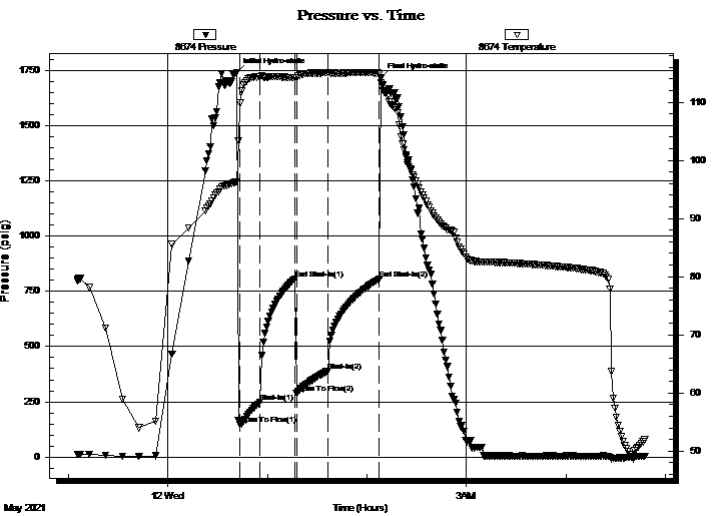
End Time:

04:47:25

Time On Btm: 2021.05.12 @ 00:41:26

Time Off Btm: 2021.05.12 @ 02:08:26

TEST COMMENT: IF: BOB in 1 min. 81"
IS: 1/4" blow built to 8 1/4"
FF: BOB in 2 min. 62"
FS: 1/4" blow built to 11 1/2" 15-20-20-30



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1741.16	96.29	Initial Hydro-static
2	147.19	109.83	Open To Flow (1)
14	248.40	114.34	Shut-In(1)
35	807.56	114.16	End Shut-In(1)
36	290.28	114.22	Open To Flow (2)
55	389.08	115.04	Shut-In(2)
86	805.65	114.98	End Shut-In(2)
87	1715.33	113.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
189.00	water 100%w	1.94
252.00	mcw 80%w 20%m	2.59
63.00	gocw m 10%g 10%o 30%w 50%m	0.65
441.00	go 20%g 80%o	4.52
0.00	567 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

ATTN: Jim Musgrove

Job Ticket: **DST#: 4**

Test Start: 2021.05.11 @ 23:05:26

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:43:26

Time Test Ended: 04:47:26

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 3433.00 ft (KB) To 3442.00 ft (KB) (TVD)

Reference Elevations: 1946.00 ft (KB)

Total Depth: 3442.00 ft (KB) (TVD)

1936.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8790 Inside

Press@RunDepth: psig @ 3434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.05.11 End Date: 2021.05.12

Last Calib.: 2021.05.12

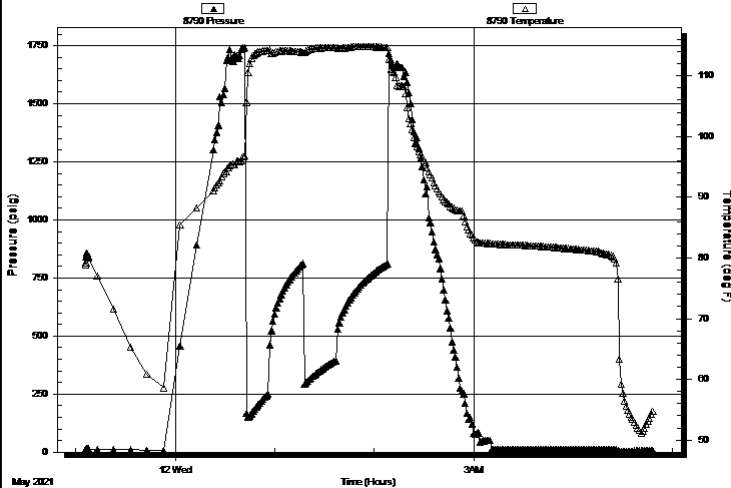
Start Time: 23:06:03 End Time: 04:47:57

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 1 min. 81"
IS: 1/4" blow built to 8 1/4"
FF: BOB in 2 min. 62"
FS: 1/4" blow built to 11 1/2" 15-20-20-30

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
189.00	water 100%w	1.94
252.00	mcw 80%w 20%m	2.59
63.00	gocw m 10%g 10%o 30%w 50%m	0.65
441.00	go 20%g 80%o	4.52
0.00	567 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket:

DST#: 4

ATTN: Jim Musgrove

Test Start: 2021.05.11 @ 23:05:26

Tool Information

Drill Pipe:	Length: 3425.00 ft	Diameter: 3.25 inches	Volume: 35.14 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			<u>Total Volume: 35.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3433.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	29.00 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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Stubb	1.00			3414.00	
Shut In Tool	5.00			3419.00	
Hydraulic tool	5.00			3424.00	
Packer	5.00			3429.00	20.00 Bottom Of Top Packer
Packer	4.00			3433.00	
Stubb	1.00			3434.00	
Recorder	0.00	8790	Inside	3434.00	
Recorder	0.00	8674	Outside	3434.00	
Perforations	5.00			3439.00	
Bullnose	3.00			3442.00	9.00 Bottom Packers & Anchor
Total Tool Length:	29.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations

4-18S-14W Barton,KS

8411 Preston Rd
Dallas TX 75225

F.V. Riedel 'A' #4

Job Ticket:

DST#: 4

ATTN: Jim Musgrove

Test Start: 2021.05.11 @ 23:05:26

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

36000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
189.00	water 100%w	1.939
252.00	mcw 80%w 20%m	2.586
63.00	gocw m 10%g 10%o 30%w 50%m	0.646
441.00	go 20%g 80%o	4.525
0.00	567 GIP	0.000

Total Length: 945.00 ft Total Volume: 9.696 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

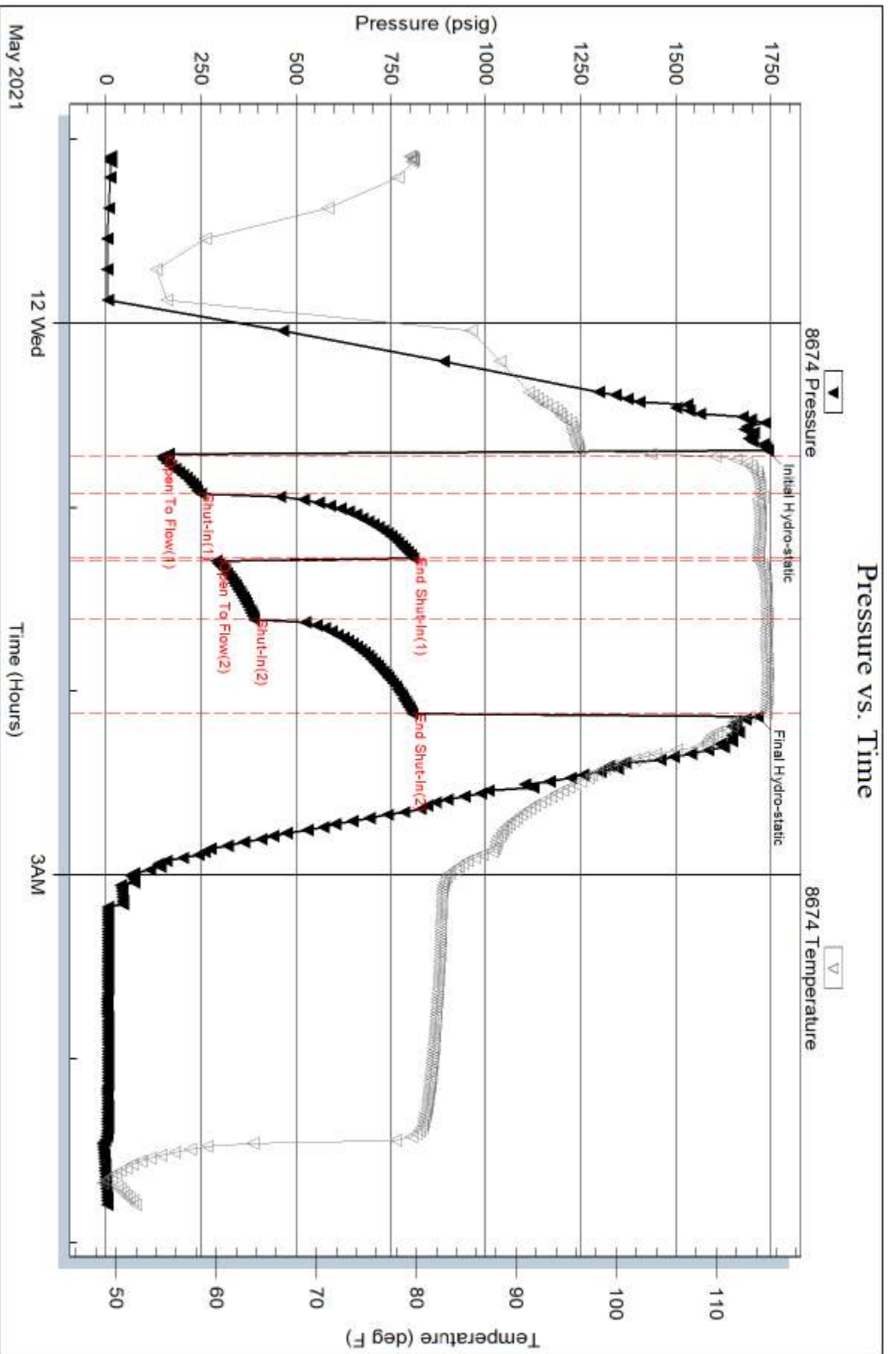
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 36@50=37

.32@43=36000



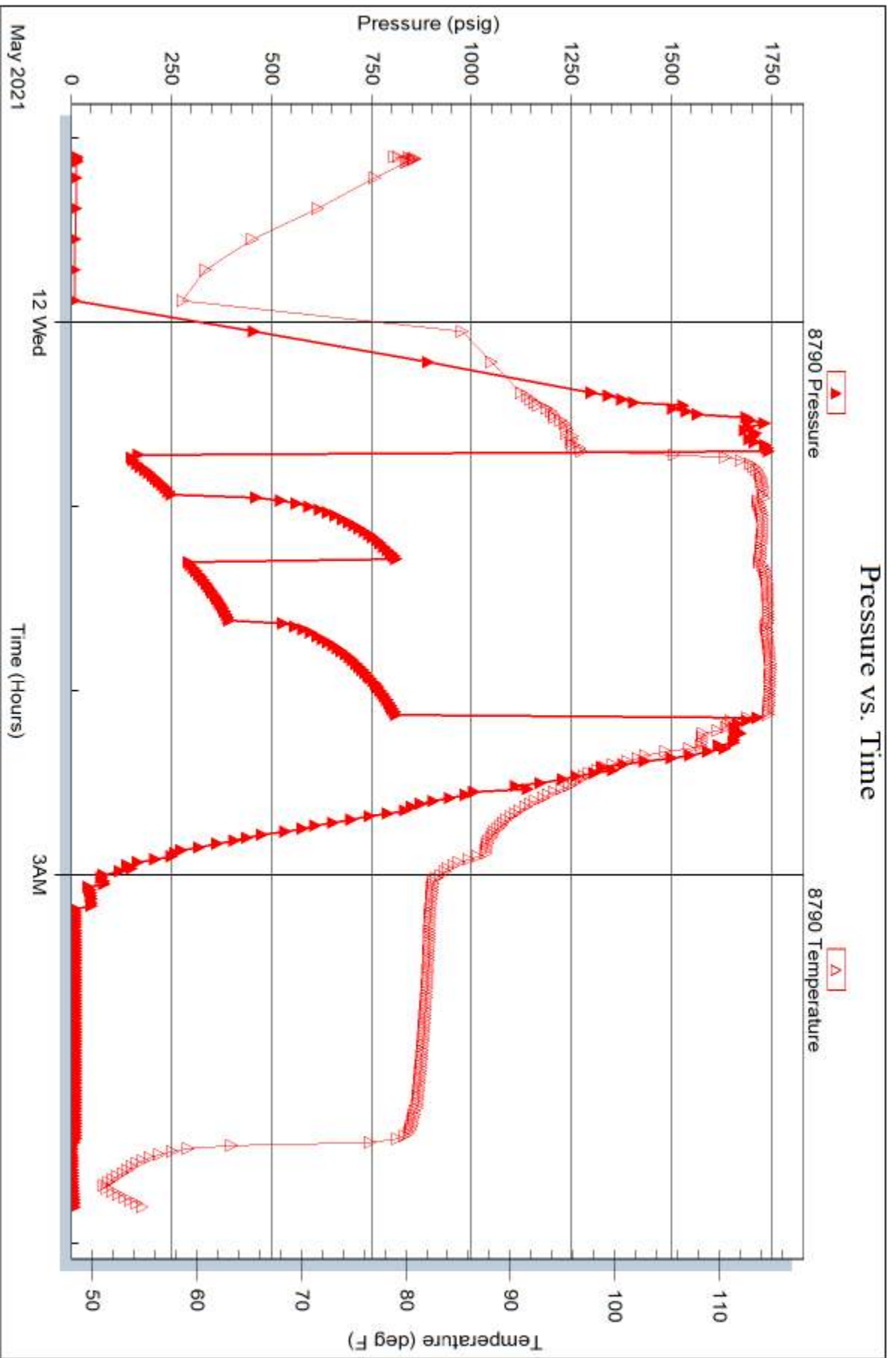
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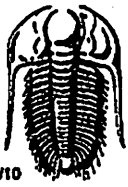
Inside

Mai Oil Operations

F.V. Riedel 'A' #4

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67189

Well Name & No. R.V. Riedel 'A' #4 Test No. 1 Date 5-9-21
 Company Mai Oil Operations Elevation 1944 KB 1936 GL
 Address 8411 Preston Rd Ste 800 Dallas Tx, 75225
 Co. Rep / Geo. Jim Musgrave Rig Southwind 8
 Location: Sec. 4 Twp 18s Rge. 14w Co. Barton State Ks

Interval Tested 3181 - 3226' Zone Tested LKC-A-C
 Anchor Length 45' Drill Pipe Run 3169' Mud Wt. 9.1
 Top Packer Depth 3176' Drill Collars Run Ø Vis 52
 Bottom Packer Depth 3181' Wt. Pipe Run Ø WL 88
 Total Depth 3226' Chlorides 3000 ppm System LCM 2.5#

Blow Description IF - Blow started out weak & built up to 3"
ISI - No Return
FF - Blow started right away & built to B.O.B in 35 mins
FSI - No Return

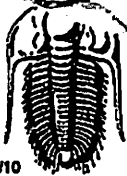
Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>600m</u>	<u>5</u>	<u>5</u>	<u>80</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100 BHT 104PF Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1596 Test 1200 T-On Location 10:00am
 (B) First Initial Flow 15 Jars T-Started 10:56am
 (C) First Final Flow 25 Safety Joint T-Open 1:17pm
 (D) Initial Shut-In 751 Circ Sub T-Pulled 4:02pm
 (E) Second Initial Flow 26 Hourly Standby T-Out 10:15pm
 (F) Second Final Flow 40 Mileage 100 R/T 125 Comments _____
 (G) Final Shut-In 774 Sampler _____
 (H) Final Hydrostatic 1518 Straddle _____ EM Tool _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Extra Packer _____ Ruined Packer _____
 Final Flow 45 Extra Recorder _____ Extra Copies _____
 Final Shut-In 60 Day Standby _____ Sub Total 0
 Sub Total 1325 Accessibility _____ Total 1325
 Sub Total 1325 MP/DST Disc'd _____

Approved By _____ Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.
 personal # 785-303-0902 Thanks



TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67190

Well Name & No. R.V. Kiedel 'A' #4 Test No. 2 Date 5-10-20
 Company Main Oil Operations Elevation 1946 KB 1936 GL
 Address 8411 Preston Rd Ste 800 Dallas TX 75225
 Co. Rep / Geo. Jim Musgrave Rig _____
 Location: Sec. 4 Twp. 18s Rge. 14w Co. Barton State Ks

Interval Tested 3234-3276 Zone Tested LKC-D
 Anchor Length 42 Drill Pipe Run 3232 Mud Wt. 9.1
 Top Packer Depth 3229 Drill Collars Run 0 Vls 52
 Bottom Packer Depth 3234 Wt. Pipe Run 0 WL 8.8
 Total Depth 3276 Chlorides 3000 ppm System LCM 2.5#

Blow Description IF - Blow stayed at a weak blow
IST - No Return
FE - Blow stayed at a weak blow
Est - No Return

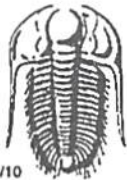
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OSM</u>	<u>spots</u>		<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 11632 Test 1200 T-On Location 5:05 am
 (B) First Initial Flow 17 Jars _____ T-Started 5:15 am
 (C) First Final Flow 19 Safety Joint _____ T-Open 6:37 am
 (D) Initial Shut-In 405 Circ Sub _____ T-Pulled 8:55 am
 (E) Second Initial Flow 36 Hourly Standby _____ T-Out 10:35 am
 (F) Second Final Flow 27 Mileage 100 B/T 125 Comments _____
 (G) Final Shut-In 210 Sampler _____
 (H) Final Hydrostatic 1596 Straddle _____ EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1325
 Sub Total 1325 MP/DST Disc't _____

Approved By _____ Our Representative Paul Foster
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785-656-0157



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 66843

Well Name & No. F. U. Riedel A #4 Test No. 23 Date 5-11-21
 Company Mri oil operation Elevation 1946 KB 1936 GL
 Address _____
 Co. Rep / Geo. Jim Musgrove Rig Southwind #1
 Location: Sec. 4 Twp 18^S Rge. 14W Co. Barton State KS

Interval Tested 3390 3432 Zone Tested Arbuckle
 Anchor Length 42 Drill Pipe Run 3391 Mud Wt. 9.3
 Top Packer Depth 3385 Drill Collars Run — Vis 45
 Bottom Packer Depth 3390 Wt. Pipe Run — WL 8.8
 Total Depth 3432 Chlorides 3000 ppm System LCM 2

Blow Description IF: BoB in 3 min. 89"
IS: 1/4 blow built to 9.
FF: 1/4 blow BoB in 6 min. 49"
FS: surface blow built to 5 1/2.

Rec	Feet of	%gas	%oil	%water	%mud
<u>491</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>126</u>	<u>90cm</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>63</u>	<u>90cm</u>	<u>30</u>	<u>5</u>	<u>65</u>	
<u>—</u>	<u>265 GIP</u>				

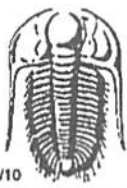
Rec Total 680 BHT 111 Gravity 37 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1757 Test 1200 T-On Location 7:20
 (B) First Initial Flow 48 Jars _____ T-Started 9:47
 (C) First Final Flow 172 Safety Joint _____ T-Open 12:07
 (D) Initial Shut-In 962 Circ Sub NIL T-Pulled 14:22
 (E) Second Initial Flow 176 Hourly Standby _____ T-Out 16:40
 (F) Second Final Flow 270 Mileage 250 - 312.50 Comments out of town
 (G) Final Shut-In 948 Sampler _____
 (H) Final Hydrostatic 1688 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 30 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 45 Day Standby _____ Extra Copies _____
 Sub Total 1325 Accessibility _____ Sub Total 0
 Sub Total 1325 MP/DST Disc't _____

Approved By [Signature] Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 66844

Well Name & No. F.U. Riedel A #4 Test No. 4 Date 5-11-21
 Company Mg: oil operation Elevation 1946 KB 1936 GL
 Address _____
 Co. Rep / Geo. Jim Musgrove Rig Southwind #1
 Location: Sec. 4 Twp 18S Rge. 14W Co. Barton State K5

Interval Tested 3433 3442 Zone Tested Arbuckle
 Anchor Length 9 Drill Pipe Run 3425 Mud Wt. 9.2
 Top Packer Depth 3428 Drill Collars Run — Vls 53
 Bottom Packer Depth 3433 Wt. Pipe Run — WL 8.8
 Total Depth 3442 Chlorides 3500 ppm System LCM 2
 Blow Description IF: BoB in 1 min, 81"
IS: 1/4 blow built to 8 1/4.
FF: BoB in 2 min, 62
FS: 1/4 blow built to 11 1/2.

Rec	Feet of	%gas	%oil	%water	%mud
<u>441</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>63</u>	<u>90 cwm</u>	<u>10</u>	<u>10</u>	<u>30</u>	<u>50</u>
<u>252</u>	<u>mcw</u>			<u>80</u>	<u>20</u>
<u>189</u>	<u>water</u>				<u>100</u>
	<u>567 GIP</u>				

Rec Total 945 BHT 115 Gravity 37 API RW .32 @ 43 °F Chlorides 36,000 ppm
 (A) Initial Hydrostatic 1741 Test 1200 T-On Location 22:20
 (B) First Initial Flow 147 Jars _____ T-Started 23:05
 (C) First Final Flow 248 Safety Joint _____ T-Open 00:41
 (D) Initial Shut-In 807 Circ Sub NIL T-Pulled 2:06
 (E) Second Initial Flow 290 Hourly Standby _____ T-Out 4:48
 (F) Second Final Flow 389 Mileage 250 - 125 Comments out of town
 (G) Final Shut-In 805 Sampler _____
 (H) Final Hydrostatic 1715 Straddle _____
 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 15 Extra Packer _____
 Initial Shut-In 20 Extra Recorder _____
 Final Flow 20 Day Standby _____
 Final Shut-In 30 Accessibility _____
 Sub Total 1325 Total 1325 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
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