

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](mailto: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
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------

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) (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	Culbreath Oil & Gas Company, Inc.
Well Name	HAFFNER 1
Doc ID	1661624

All Electric Logs Run

Dual Induction
DCPL
MICRO Resistivity
Sonic



**STEVEN P. MURPHY, PG (KS LIC #228)**

**2501 ZARAH DRIVE**

**GREAT BEND, KS 67530**

**CELL: 620-639-3030**

**EMAIL: GEOMURPHY55@GMAIL.COM**

**Scale 1:240 (5"=100') Imperial  
Measured Depth Log**

**Well Name: Hafner #1**  
**API: 15-179-21482**  
**Location: Sheridan County**  
**License Number: 34344**  
**Spud Date: 3/19/2022**  
**Surface Coordinates: 500' FNL & 660' FEL (Approx. S2 N2 NE NE)**  
**Section 01-T10S-R26W**  
**Bottom Hole Coordinates: Same as above (Vertical well w/min deviation)**  
**Ground Elevation (ft): 2651'**  
**Logged Interval (ft): 3640'**  
**Formation: Oread through BKC**  
**Type of Drilling Fluid: Chemical (Andy's)**

**Region: Kansas**  
**Drilling Completed: 3/29/2022**  
**K.B. Elevation (ft): 2656'**  
**Total Depth (ft): RTD - 4225' LTD - 4226'**  
**To: TD**

Printed by StripLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### **OPERATOR**

**Company: Culbreath Oil & Gas, LLC**  
**Address: 3501 S. Yale**  
**Suite B**  
**Tulsa, OK 74135**

#### **GEOLOGIST**

**Name: Steven P. Murphy, PG (KS License #228)**  
**Company: Consulting Petroleum Geologist**  
**Address: 2501 Zarah Drive**  
**Great Bend, KS 67530**

#### **LogTops (Datum)**

**Open-hole logging was performed by Midwest Wireline. The following are formation tops w/associated datums:**

**Anhydrite Top - 2266 +374)**  
**Anhydrite Base - 2301 (+355)**  
**Heebner - 3840 (-1184)**  
**Toronto -3860 (-1204)**  
**Lansing - 3877 (-1221)**  
**Muncie Creek - 3993 (-1337)**  
**Stark - 4060 (-1404)**  
**Base KC - 4102 (-1404)**

**DSTs**

Drillstem testing was performed by Trilobite Testing:

**DST #1 3910-3943 (LKC "D")**

30:45:30:45  
 IF: BOB 9.5 min, NR  
 FF: BOB 11.5 min, NR  
 Recovery: 30' Mud w/oil spots  
 Rec: 78' MW (50%M, 50%W), 567' W  
 IHP: 1998 FHP: 1904  
 IFP: 39-205 ISIP: 936  
 FFP: 209-337 FSIP: 900  
 Chlorides: 2000 ppm

**DST #2 3943-3960 (LKC "E-F")**

30:45:30:45  
 IF: BOB 3 min, no return  
 FF: BOB 4 min, no return  
 Rec: 151' WM (40%W, 60%M), 1260' W  
 IHP: 2011 FHP: 1948  
 IFP: 69-440 ISIP: 1015  
 FFP: 450-678 FSIP: 1013  
 Chlorides: 7500 ppm

**DST #3 4027-4053 (LKC "I-J")**

30:30:30:30  
 IF: Weak blow, NR  
 FF: No blow, NR  
 Rec: 5' M  
 IHP: 2087 FHP: 1918  
 IFP: 21-24 ISIP: 41  
 FFP: 24-27 FSIP: 37



**COMMENTS**

Based on the results of DSTs and log & sample analysis, it was recommended that this test be plugged.

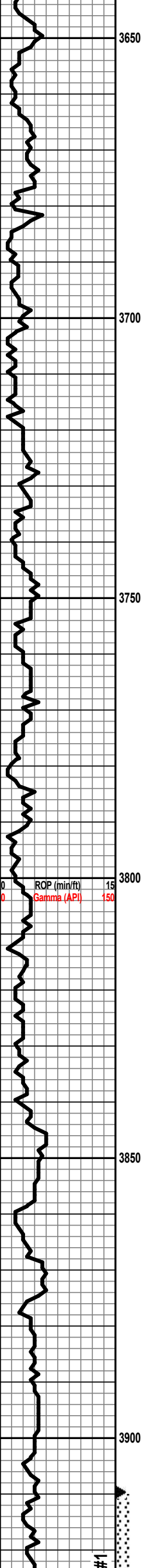
**ROCK TYPES**

 Anhy	 Coal	 Lmst	 Shcol
 Bent	 Congl	 Meta	 Shgy
 Brec	 Dol	 Mrlst	 Slstst
 Cht	 Gyp	 Salt	 Ss
 Clyst	 Igne	 Shale	 Till

**OTHER SYMBOLS**

<b>OIL SHOW</b>	 Dead	<b>INTERVAL</b>	<b>EVENT</b>
 Even	 Gas	 Core	 Conn
 Spotted		 Dst	 Rft
 Ques			 Sidewall

Curve Track 1 ROP (min/ft) ——— Gamma (API) - - - -	MD	Lithology	Oil Shows	Geological Descriptions	REMARKS
0 ROP (min/ft) 15 0 Gamma (API) 150					
0 ROP (min/ft) 15 0 Gamma (API) 150	3600				Surveys: 266' - 1/4 degree 3943' - 1 degree 4053' - 3/4 degree  Pipe strap @ 3943' - 0.05' long to board



LS: wht-gry, fxdn, foss, fr inxdn por, chalky

LS: as above

LS: wht-gry-bm, fxdn, foss, dk inclusions, blk SH

LS & SH: as above

LS: wht-bm, foss, pr-fr inter-foss por, chalky, wblk SH

LS: wht-bm, sl foss, dense, sl chalky

LS: as above

LS: wht-bm-gry, oolitic, chalky, dense, minor cht

SH: blk, carb

Heebner 3840 (-1184)

LS: wht-tan, ool, foss, foss inclusions, dense, chalky

LS: as above

Toronto 3860 (-1204)

LS: wht-bm-gry, cherty, dense

LS: as above

SH: blk-gm-red

Lansing 3877 (-1221)

LS: wht-gry, vfxdn, sl foss, chalky, dense, NS

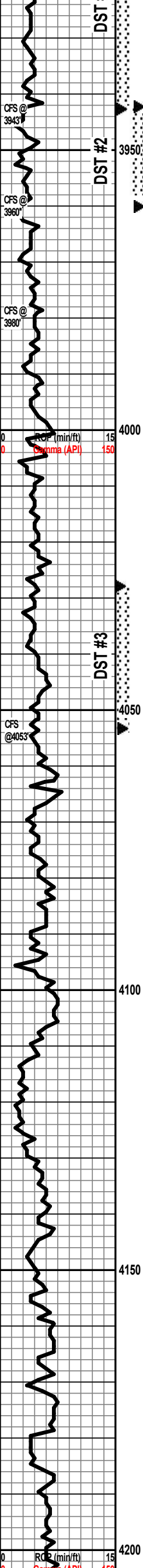
D LS: wht, ool, foss, pr inter-ool por, dense, tr dead oil on blk, nsfo, no odor

D LS: wht-gry, fxdn, oolitic, foss, chalky, spotty dead str, nsfo, no odor

LS: wht-gry, dense, vfxdn, chalky, NS

DST #1 3810-3920 (LKC "D")  
30:45:30:45  
IF: BOB 9.5", no return  
FF: BOB 11.5", no return  
Rec: 78' MW (50%M, 50%W), 567' W  
IHP: 1998 FHP: 1904  
IFP: 39-205 ISIP: 936  
FFP: 209-337 FSIP: 900  
Chlorides: 2000 ppm

#1



LS: wht, m-xln, rhombic, fr-gd inxln por, fsfo, fr stn, str odor

LS: as above wLS: wht-gry, vfxln, dense, chalky, fite

SH: gry-gm-bm

SH: dk gry-gm-red

LS: wht, oolic, fr inter-ool por, ssfo, spotty stn, str odor

SH: gry-gm-maroon

LS: wht-vfxln, dense, oolitic, v chalky, NS

LS: as above wlite gry cht

LS & CHT: as above

SH: blk-gm

LS: wht-bm-gry, vfxln, dense, foss,oolitic inclusions,sl chalky,NS

LS: wht-gry, vfxln, dense, sl foss, chalky, NS

LS: wht-gry-bm, vfxln, dense, chalky, NS

SH: blk, carb

LS: wht-tan, fxl, foss, f-gd vug por, fsfo, str odor

LS: as above

Multi-colored shale

SH: as above wLS: wht-gry-bm, vfxln, dense, NS

SH: as above

SH: as above

LS: wht-bm, vfxln, dense w/some weath dol

LS: wht-tan-gry, vfxln, dense, conglomeritic, oolitic in pt,

Sst: wht-red-gm, vfg, NS

SH: red (wash red) Sst & Congl: red, as above

LS: wht-tan, vfxln, dense, sl chalky (wash red)

LS: wht-gry-bm, vfxln, dense, NS

SH: red-gry wLS: as above

LS: wht-gry-bm, vfxln, dense wabund multicolor sh

LS & SH: as above

DST #2 3942-3960 (LKC "F")  
 30:45:30:45  
 IF: BOB 3 min, no return  
 FF: BOB 4 min, no return  
 Rec: 151' WM (40%W, 60%M), 1260' W  
 IHP: 2011 FHP: 1948  
 IFP: 69-440 ISIP: 1015  
 FFP: 450-678 FSIP: 1013  
 Chlorides: 7500 ppm

**Muncie Crk 3993 (-1337)**

**Stark 4060 (-1404)**

DST #3 4027-4053 (LKC "I-J")  
 30:30:30:30  
 IF: Weak blow, NR  
 FF: No blow  
 Rec: 5' M  
 IHP: 2087 FHP: 1918  
 IFP: 21-24 ISIP: 41  
 FFP: 24-27 FSIP: 37

Note: Poo sample quality

" " " "

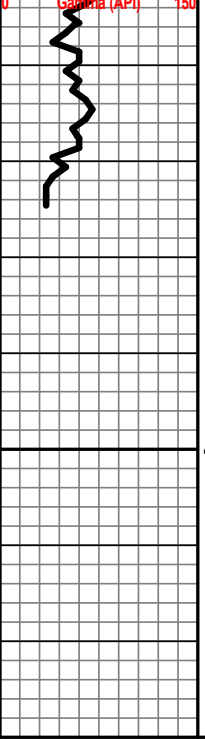
" " " "

Good samples now

**BKC 4102 (-1404)**

Note: Terrible samples





4250

RTD - 4225'    LTD - 4226'

"    "  
"    "

# FRANKS Oilfield Service, LLC

815 Main Street  
Victoria, KS 67671

Office (785) 639-3949  
24 Hour Service Line (785) 639-7269

Email: franksoilfield@yahoo.com

## Invoice

Date	Invoice #
3/19/2022	0537

Please Pay from this Invoice.  
Remit Payment to:  
815 Main Street  
Victoria, KS 67671  
Billing Questions-Call Tianna at  
(785) 639-3949

Bill To
Culbreath Oil & Gas Co., Inc. 3501 S Yale Ave Tulsa, OK 74135-8014

County/State	Lease/Well#	Terms	Job Type
Sheridan County, KS	Hoffner 1	Due on receipt	Surface

Description	Quantity	Rate	Amount
Pump Charge	1	1,150.00	1,150.00
Mileage	23	6.50	149.50
Ton Mileage (min.)	1	600.00	600.00
Surface Blend	175	24.50	4,287.50T

Accounts Due Net 10th. 1-1/2% Per Month on all Past Due Accounts. 18% Annual Rate.

**Subtotal** \$6,187.00

*We appreciate your business and look forward to serving you again!*

**Sales Tax (8.5%)** \$364.44

**Balance Due** \$6,551.44





# FRANKS Oilfield Service, LLC

815 Main Street  
Victoria, KS 67671

Office (785) 639-3949  
24 Hour Service Line (785) 639-7269

Email: franksoilfield@yahoo.com

## Invoice

Date	Invoice #
3/29/2022	0549

Please Pay from this Invoice.  
Remit Payment to:  
815 Main Street  
Victoria, KS 67671  
Billing Questions-Call Tianna at  
(785) 639-3949

Bill To
Culbreath Oil & Gas Co., Inc. 3501 S Yale Ave Tulsa, OK 74135-8014

County/State	Lease/Well#	Terms	Job Type
Sheridan County, Ka...	Haffner #1	Due on receipt	Rotary Plug

Description	Quantity	Rate	Amount
Pump Charge	1	1,500.00	1,500.00
Mileage	23	6.50	149.50
Ton Mileage (min.)	1	600.00	600.00
60/40 4% gel 1/4# floseal	240	16.75	4,020.00T
Discount		-940.42	-940.42

Accounts Due Net 10th. 1-1/2% Per Month on all Past Due Accounts. 18% Annual Rate.

**Subtotal** \$5,329.08

**Sales Tax (8.5%)** \$290.45

**Balance Due** \$5,619.53

*We appreciate your business and look forward to serving you again!*

# FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269  
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0549  
 LOCATION Hoxie  
 FOREMAN Tam Williams

## FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-29-22	34344	HAFNER 1				

CUSTOMER  
Culbreath Oil + Gas Comp. Inc  
 MAILING ADDRESS  
3501 S Yale Ave  
 CITY Tulsa STATE OK ZIP CODE 74135

TRUCK #	DRIVER	TRUCK #	DRIVER
<u>101</u>	<u>Tam W</u>		
<u>#2/103</u>	<u>Kain S</u>		

JOB TYPE Rammy Plug HOLE SIZE \_\_\_\_\_ HOLE DEPTH \_\_\_\_\_ CASING SIZE & WEIGHT \_\_\_\_\_  
 CASING DEPTH \_\_\_\_\_ DRILL PIPE 4 1/2" TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting + set up on LD Drilling. Plug as ordered.  
1st 2200' 50 sacks  
2nd 1400' 100 sacks  
3rd 300' 50 sacks  
4th Cement 10 sacks  
RH - 30 sacks 12:30 plugged

Back up move off Thanks Tam + Kain

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
<u>PC005</u>	<u>1</u>	<u>PUMP CHARGE PTA</u>	<u>\$1500.00</u>	<u>\$1500.00</u>
<u>M001</u>	<u>23</u>	<u>MILEAGE</u>	<u>\$6.50</u>	<u>\$149.50</u>
<u>M002</u>	<u>10.68 tons</u>	<u>Ton Mileage delivery</u>	<u>\$600.00</u>	<u>\$600.00</u>
<u>CB010</u>	<u>240 sacks</u>	<u>60/40 4% gel 1/4" Flo</u>	<u>\$16.75</u>	<u>\$4020.00</u>
			<u>sub total</u>	<u>\$6,269.50</u>
			<u>less 15% disc</u>	<u>\$940.42</u>
			<u>sub total</u>	<u>\$5329.08</u>
			SALES TAX	<u>290.45</u>
			ESTIMATED TOTAL	<u>5619.53</u>

AUTHORIZATION \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

**6\_10\_26 Sheridan, KS**  
**Haffner #1**  
Job Ticket: 68152      **DST#: 1**  
Test Start: 2022.03.26 @ 01:43:00

## GENERAL INFORMATION:

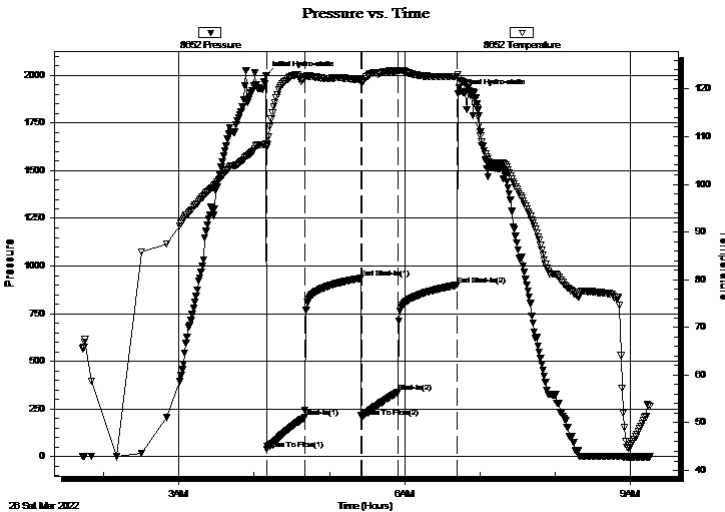
Formation: <b>LKC A</b>		Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock:	ft (KB)	Tester: Dustin Day
Time Tool Opened: 04:10:00		Unit No: 66
Time Test Ended: 09:16:00		
<b>Interval: 3910.00 ft (KB) To 3943.00 ft (KB) (TVD)</b>		Reference Elevations: 2656.00 ft (KB)
Total Depth: 3943.00 ft (KB) (TVD)		2651.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition:	KB to GR/CF: 5.00 ft

## Serial #: 8652      Outside

Press@RunDepth: 337.42 psig @ 3911.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2022.03.26      End Date: 2022.03.26	Last Calib.: 2022.03.26
Start Time: 01:43:05      End Time: 09:15:59	Time On Btm: 2022.03.26 @ 04:09:30
	Time Off Btm: 2022.03.26 @ 06:42:30

TEST COMMENT: IF-30- BOB in 9 1/2 min, Built to 29"  
SI1-45- No return  
FF-30- BOB in 11 1/2 min, Built to 27"  
SI2-45- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1998.28	108.40	Initial Hydro-static
1	39.32	107.74	Open To Flow (1)
31	205.31	122.24	Shut-In(1)
76	936.00	121.85	End Shut-In(1)
77	208.82	121.66	Open To Flow (2)
106	337.42	123.80	Shut-In(2)
153	899.85	122.62	End Shut-In(2)
153	1904.04	122.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
78.00	MW 50% mud 50% w ater	1.09
567.00	w ater 100%	7.95

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

**6\_10\_26 Sheridan, KS**

**Haffner #1**

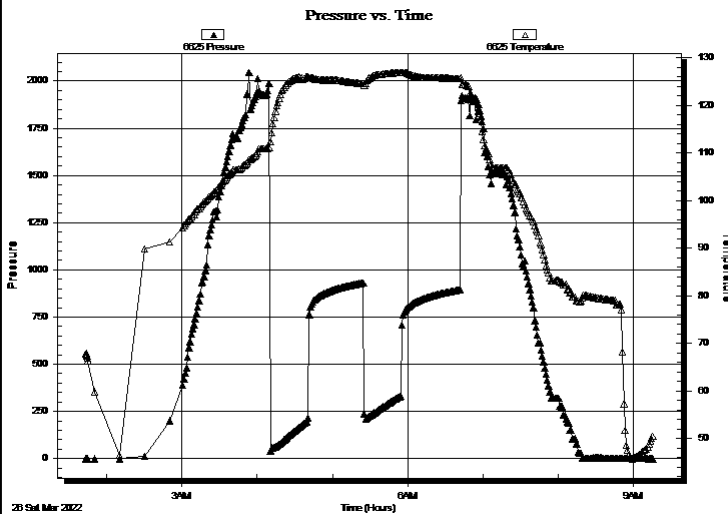
Job Ticket: 68152      **DST#: 1**  
Test Start: 2022.03.26 @ 01:43:00

### GENERAL INFORMATION:

Formation: **LKC A**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:10:00  
 Time Test Ended: 09:16:00  
 Interval: **3910.00 ft (KB) To 3943.00 ft (KB) (TVD)**  
 Total Depth: 3943.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition:  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Day  
 Unit No: 66  
 Reference Elevations: 2656.00 ft (KB)  
 2651.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6625      Inside**  
 Press@RunDepth:      psig @      3911.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2022.03.26      End Date: 2022.03.26      Last Calib.: 2022.03.26  
 Start Time: 01:43:05      End Time: 09:15:59      Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-30- BOB in 9 1/2 min, Built to 29"  
 SI1-45- No return  
 FF-30- BOB in 11 1/2 min, Built to 27"  
 SI2-45- No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
78.00	MW 50% mud 50% w ater	1.09
567.00	w ater 100%	7.95

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Culbreath Oil & Gas

**6\_10\_26 Sheridan, KS**

3501 S. Yale Ave. Suite B  
Tulsa, OK 74135

**Haffner #1**

Job Ticket: 68152

**DST#: 1**

ATTN: Steve Murphy

Test Start: 2022.03.26 @ 01:43:00

### 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: 51.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
78.00	MW 50% mud 50% w ater	1.094
567.00	w ater 100%	7.954

Total Length: 645.00 ft

Total Volume: 9.048 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

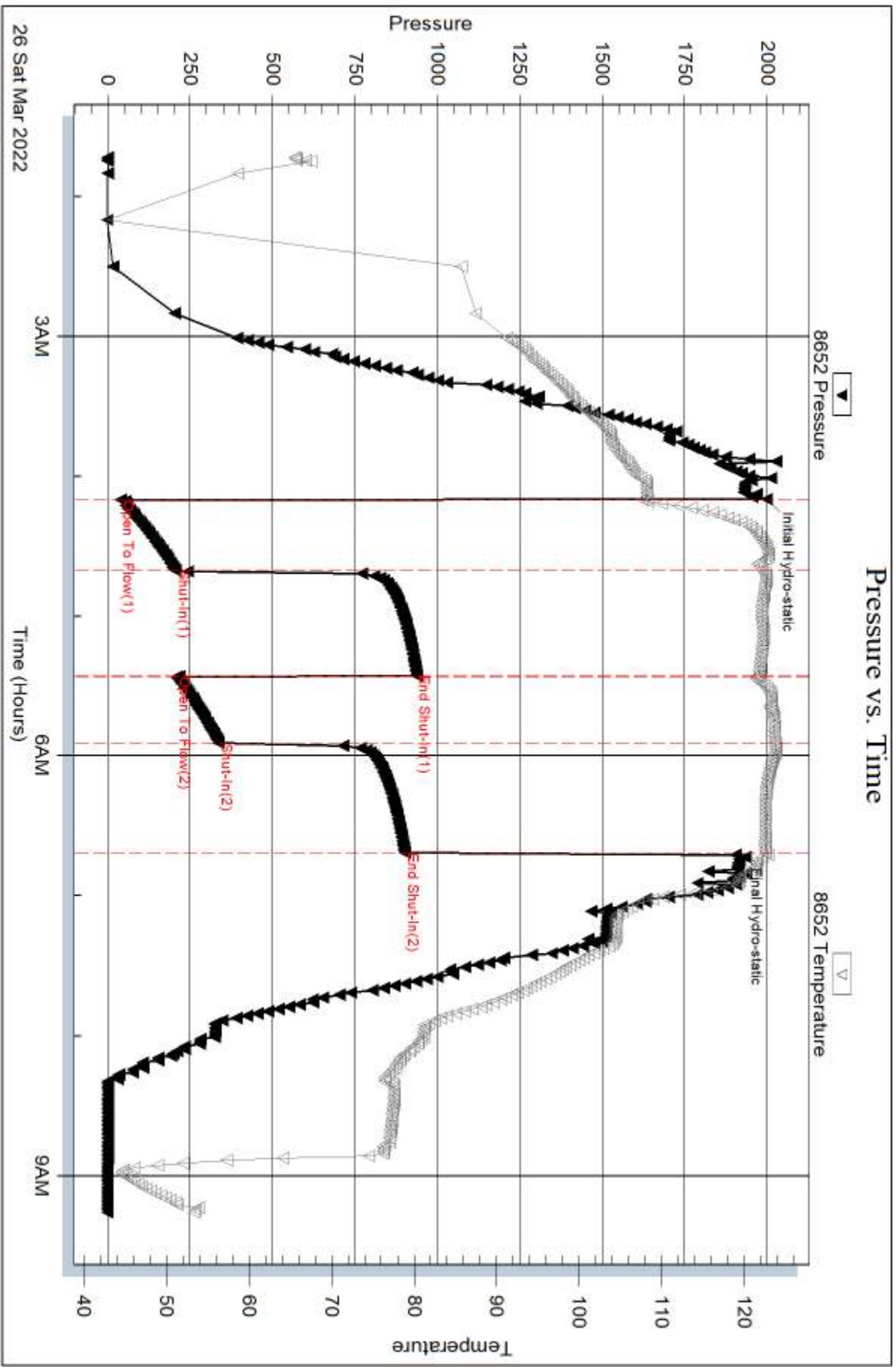
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1# LCM





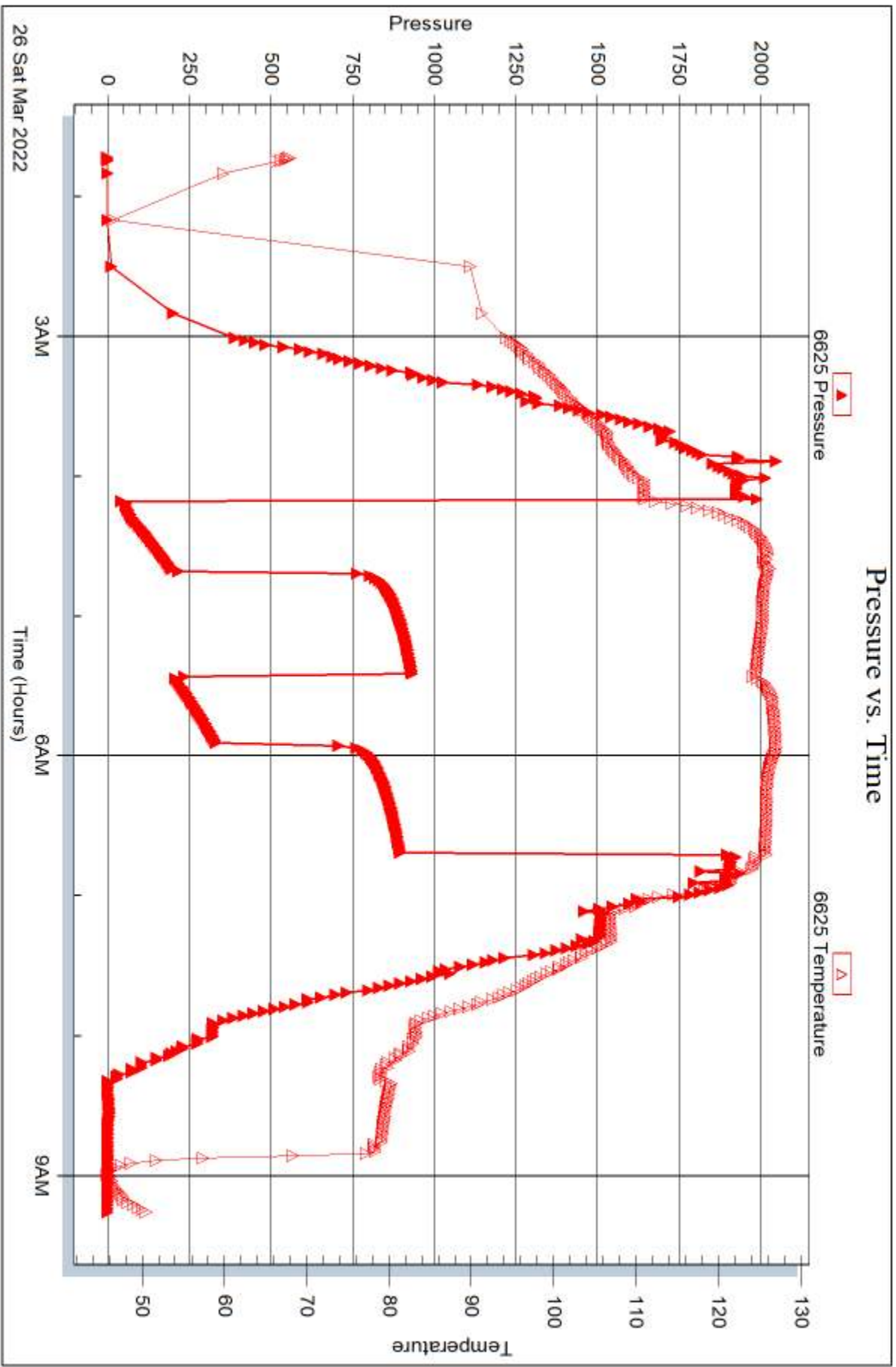
Serial #: 6625

Inside

Culbreath Oil & Gas

Halfner #1

DST Test Number: 1





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

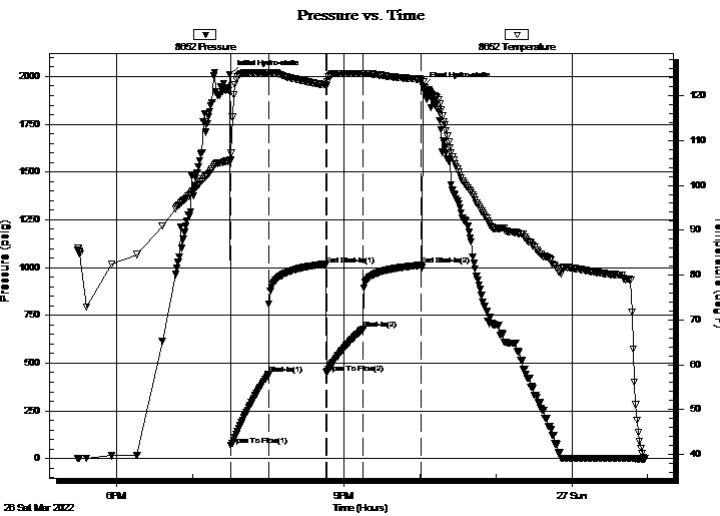
**6\_10\_26 Sheridan, KS**  
**Haffner #1**  
Job Ticket: 68153      **DST#: 2**  
Test Start: 2022.03.26 @ 17:29:00

## GENERAL INFORMATION:

Formation: **LKC B**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:30:15  
Time Test Ended: 00:58:15  
Interval: **3943.00 ft (KB) To 3960.00 ft (KB) (TVD)**  
Total Depth: 3960.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition:  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Dustin Day  
Unit No: 66  
Reference Elevations: 2656.00 ft (KB)  
2651.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8652      Outside**  
Press@RunDepth: 678.31 psig @ 3944.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2022.03.26      End Date: 2022.03.27      Last Calib.: 2022.03.27  
Start Time: 17:29:00      End Time: 00:58:15      Time On Btm: 2022.03.26 @ 19:29:45  
Time Off Btm: 2022.03.26 @ 22:02:30

**TEST COMMENT:** IF-30- BOB in 3 min, Built to 90 3/4"  
SI1-45- No return  
FF-30- BOB in 4 min, Built to 61"  
SI2-45- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2010.82	105.74	Initial Hydro-static
1	68.90	105.56	Open To Flow (1)
31	439.95	125.05	Shut-In(1)
76	1015.42	122.39	End Shut-In(1)
76	449.59	122.22	Open To Flow (2)
106	678.31	124.89	Shut-In(2)
152	1013.23	123.64	End Shut-In(2)
153	1948.06	123.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
151.00	WM 60% mud 40% w ater	2.12
1260.00	w ater 100%	17.67

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

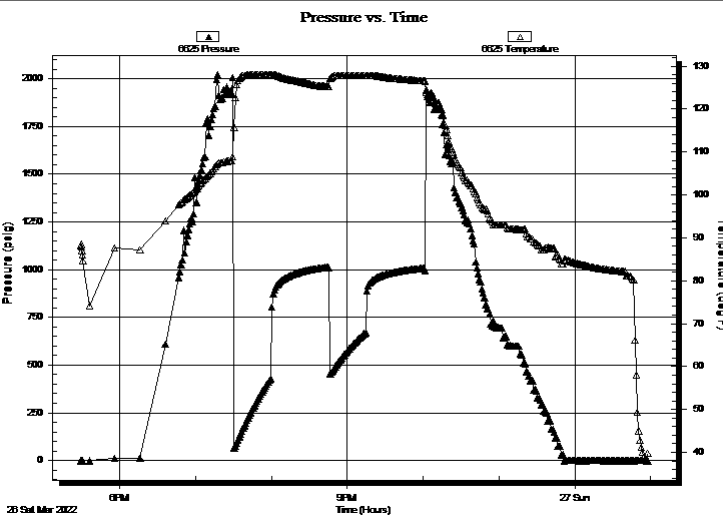
**6\_10\_26 Sheridan, KS**  
**Haffner #1**  
Job Ticket: 68153 **DST#: 2**  
Test Start: 2022.03.26 @ 17:29:00

## GENERAL INFORMATION:

Formation: **LKC B**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:30:15  
 Time Test Ended: 00:58:15  
 Interval: **3943.00 ft (KB) To 3960.00 ft (KB) (TVD)**  
 Total Depth: 3960.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition:  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Dustin Day  
 Unit No: 66  
 Reference Elevations: 2656.00 ft (KB)  
 2651.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6625** Inside  
 Press@RunDepth: psig @ 3944.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.03.26 End Date: 2022.03.27 Last Calib.: 2022.03.27  
 Start Time: 17:29:00 End Time: 00:58:15 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-30- BOB in 3 min, Built to 90 3/4"  
 SI1-45- No return  
 FF-30- BOB in 4 min, Built to 61"  
 SI2-45- No return



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

Recovery		
Length (ft)	Description	Volume (bbl)
151.00	WM 60% mud 40% w ater	2.12
1260.00	w ater 100%	17.67

\* Recovery from multiple tests

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Culbreath Oil & Gas

**6\_10\_26 Sheridan, KS**

3501 S. Yale Ave. Suite B  
Tulsa, OK 74135

**Haffner #1**

Job Ticket: 68153

**DST#: 2**

ATTN: Steve Murphy

Test Start: 2022.03.26 @ 17:29:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

7500 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
151.00	WM 60% mud 40% water	2.118
1260.00	water 100%	17.674

Total Length: 1411.00 ft      Total Volume: 19.792 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

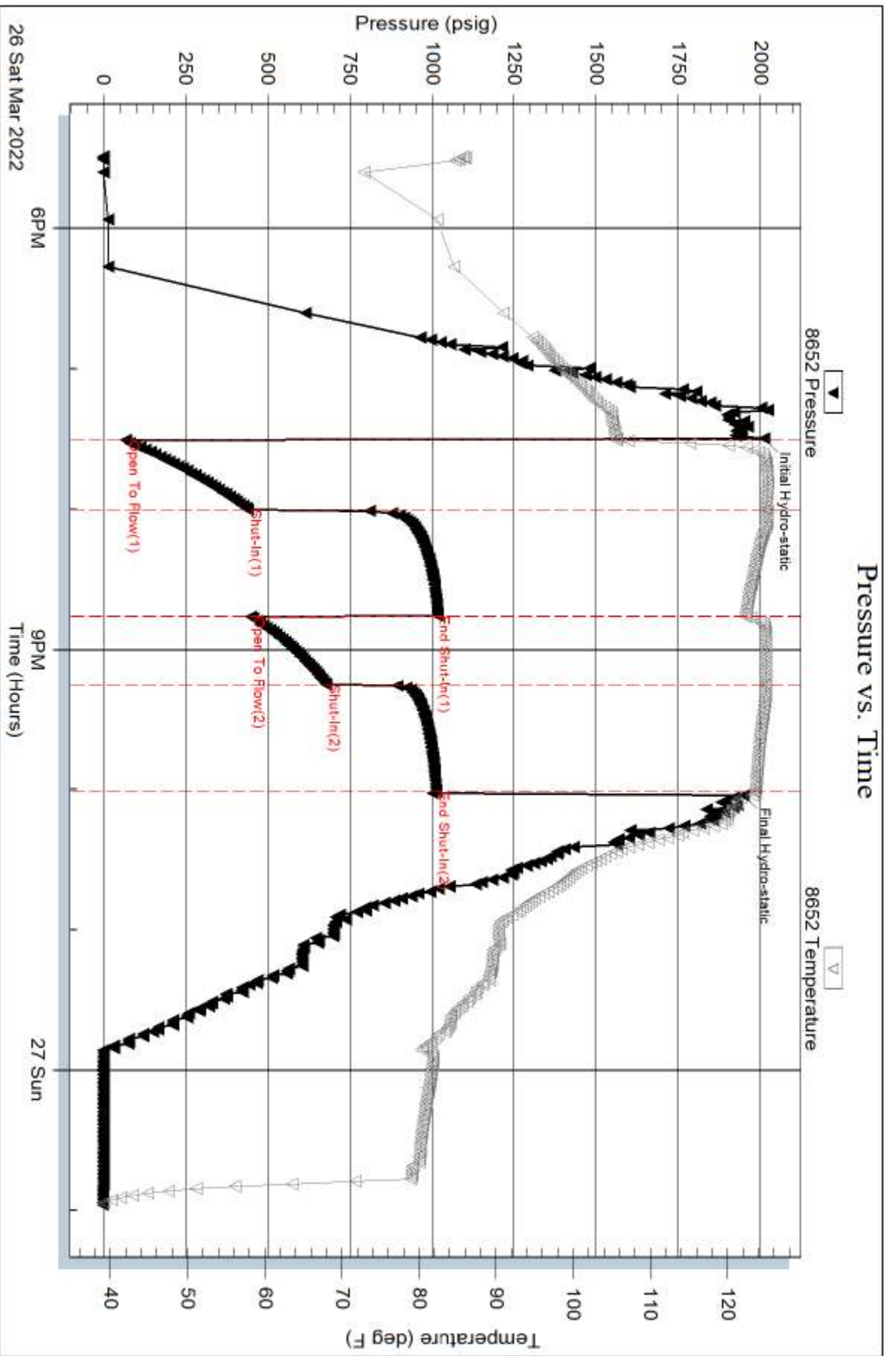
Recovery Comments: 2 1/2# LCM

Serial #: 8652

Outside Culbreath Oil & Gas

Hafrer #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 68153

Printed: 2022.03.27 @ 01:09:21

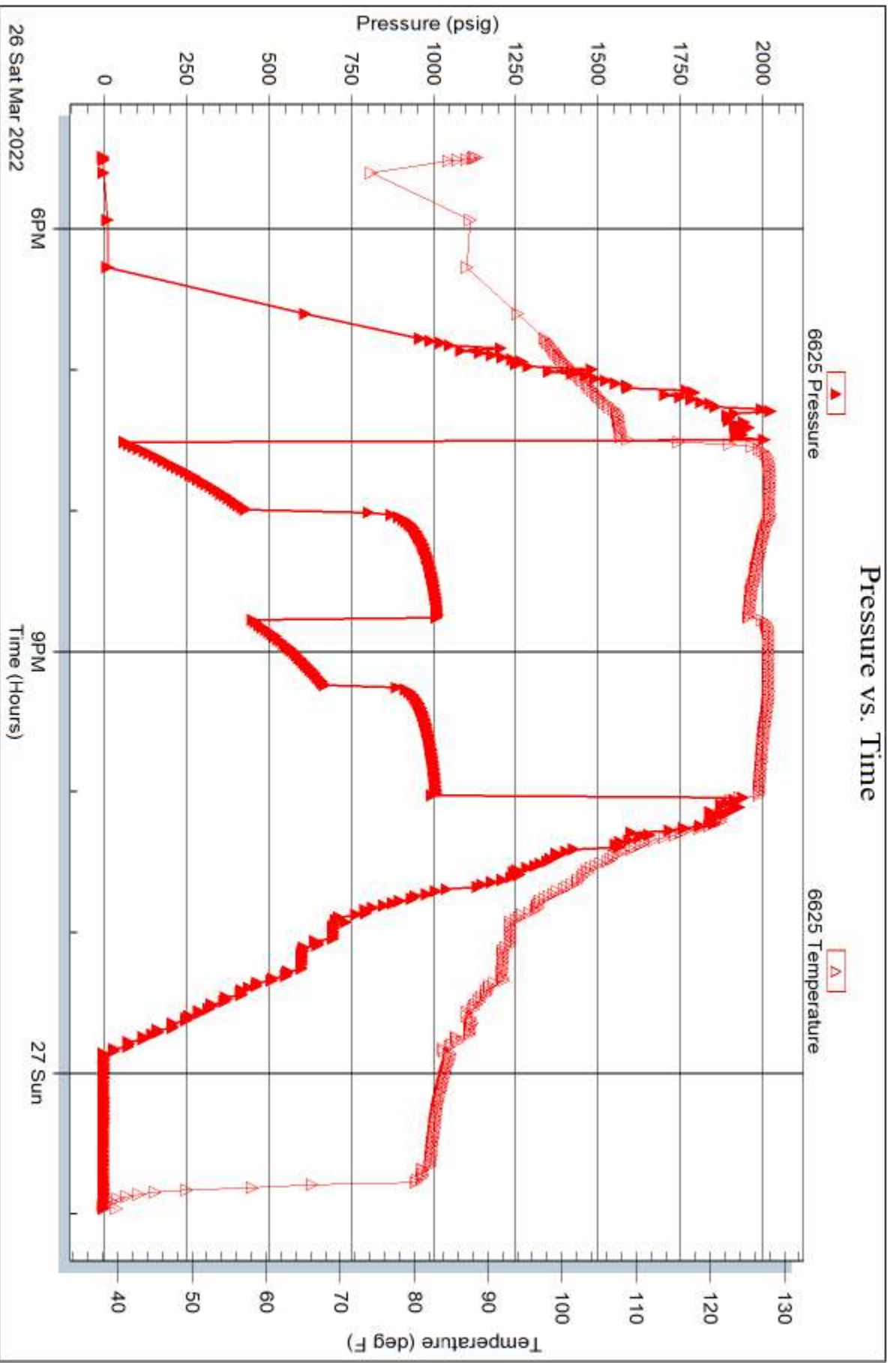
Serial #: 6625

Inside

Culbreath Oil & Gas

Hafrer #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 68153

Printed: 2022.03.27 @ 01:09:21



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

**6\_10\_26 Sheridan, KS**

**Haffner #1**

Job Ticket: 68154

**DST#: 3**

Test Start: 2022.03.27 @ 18:17:00

## GENERAL INFORMATION:

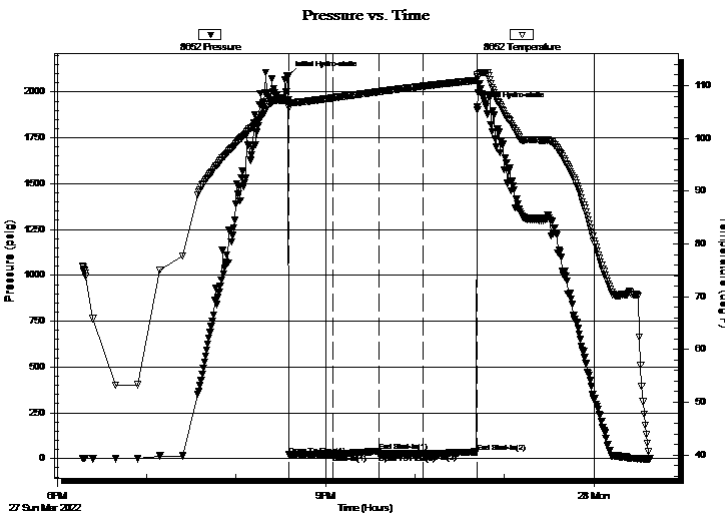
Formation: **LKC K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:35:15  
 Time Test Ended: 00:37:15  
 Interval: **4028.00 ft (KB) To 4063.00 ft (KB) (TVD)**  
 Total Depth: 4063.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Dustin Day  
 Unit No: 66  
 Reference Elevations: 2656.00 ft (KB)  
 2651.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8652 Outside**

Press@RunDepth: 27.21 psig @ 4029.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.03.27 End Date: 2022.03.28 Last Calib.: 2022.03.28  
 Start Time: 18:17:00 End Time: 00:37:15 Time On Btm: 2022.03.27 @ 20:35:00  
 Time Off Btm: 2022.03.27 @ 22:41:30

TEST COMMENT: IF-30- Weak surface blow  
 SI1-30- No return  
 FF-30- No blow  
 SI2-30- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2087.33	107.23	Initial Hydro-static
1	21.15	105.74	Open To Flow (1)
30	24.26	107.67	Shut-In(1)
61	40.73	108.84	End Shut-In(1)
61	24.23	108.85	Open To Flow (2)
91	27.21	109.89	Shut-In(2)
127	37.22	111.00	End Shut-In(2)
127	1918.41	112.02	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%	0.07

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE**  
TESTING, INC.

# DRILL STEM TEST REPORT

Culbreath Oil & Gas  
3501 S. Yale Ave. Suite B  
Tulsa, OK 74135  
ATTN: Steve Murphy

**6\_10\_26 Sheridan, KS**

**Haffner #1**

Job Ticket: 68154

**DST#: 3**

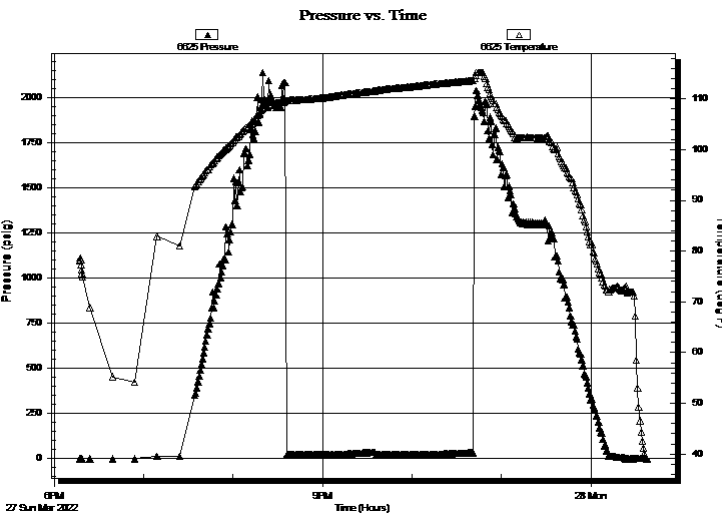
Test Start: 2022.03.27 @ 18:17:00

## GENERAL INFORMATION:

Formation: **LKC K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:35:15  
 Time Test Ended: 00:37:15  
 Interval: **4028.00 ft (KB) To 4063.00 ft (KB) (TVD)**  
 Total Depth: 4063.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Dustin Day  
 Unit No: 66  
 Reference Elevations: 2656.00 ft (KB)  
 2651.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6625 Inside**  
 Press@RunDepth: psig @ 4029.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.03.27 End Date: 2022.03.28 Last Calib.: 2022.03.28  
 Start Time: 18:17:00 End Time: 00:37:15 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-30- Weak surface blow  
 SI1-30- No return  
 FF-30- No blow  
 SI2-30- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%	0.07

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Culbreath Oil & Gas

**6\_10\_26 Sheridan, KS**

3501 S. Yale Ave. Suite B  
Tulsa, OK 74135

**Haffner #1**

Job Ticket: 68154

**DST#: 3**

ATTN: Steve Murphy

Test Start: 2022.03.27 @ 18:17:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

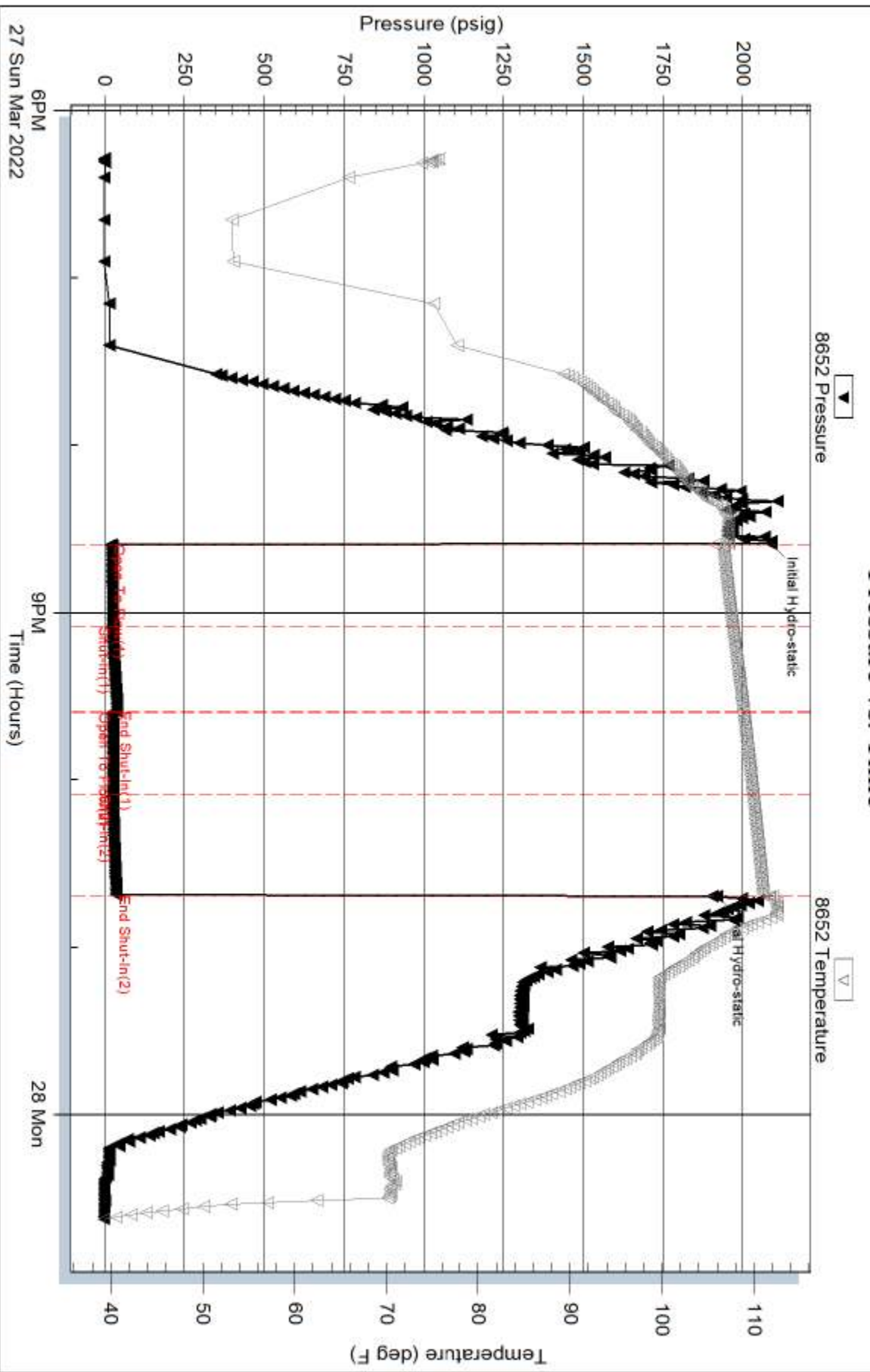
Serial #: 8652

Outside Culbreath Oil & Gas

Halfnr #1

DST Test Number: 3

### Pressure vs. Time



Tribble Testing, Inc

Ref. No: 68154

Printed: 2022.03.28 @ 01:12:28

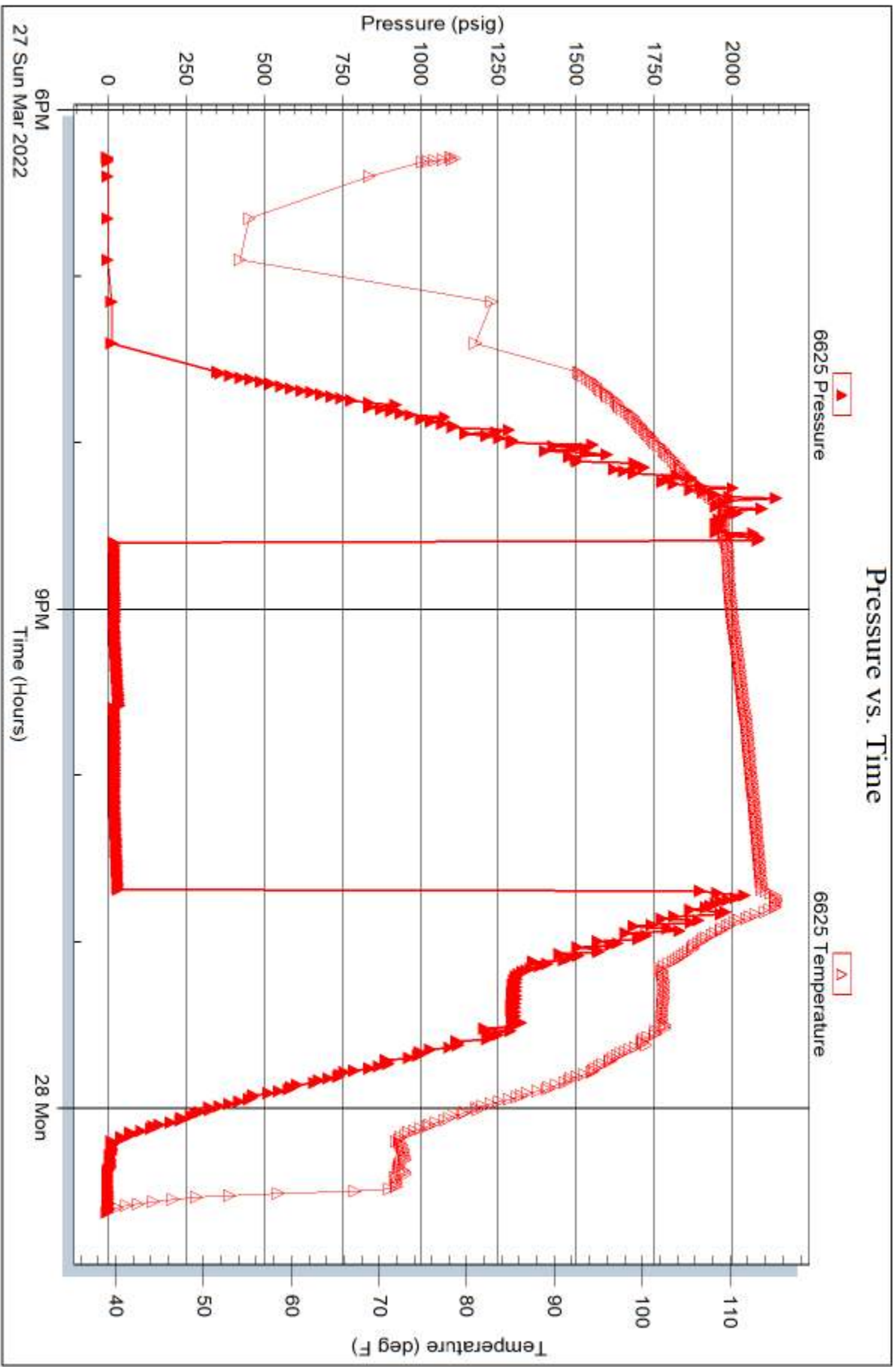
Serial #: 6625

Inside

Culbreath Oil & Gas

Halfrnr #1

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 68154

Printed: 2022.03.28 @ 01:12:29