

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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom

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	Thoroughbred Associates L.L.C.
Well Name	HAGER UNIT 1-25
Doc ID	1617859

All Electric Logs Run

Dual Induction
Neutron
Micro
Sonic

Andrew White

Petroleum Geologist

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

Well Name: Hager Unit 1-25
API: 15-203-20367
Location: 25-19S-35W
License Number:
Spud Date: 12-18-21
Surface Coordinates: 452' FSL, 2621' FEL
Region: Wichita County, KS
Drilling Completed: 01-02-22

Bottom Hole
Coordinates:
Ground Elevation (ft): 3083
Logged Interval (ft): 3700 To: 4970
Formation: Mississippian
Type of Drilling Fluid: Chemical
K.B. Elevation (ft): 3095
Total Depth (ft): 4970

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Thoroughbred Associates LLC
Address: 8100 E. 22nd St., Bldg 600, Ste F
Wichita, KS, 67226

GEOLOGIST

Name: Andrew White
Company: White Explortation, Inc.
Address: 1635 N. Waterfront Pkwy, Ste. 100
Wichita, KS, 67206

Remarks

Due to negative DST results, sample evaluation, and log evaluation, it was decided that the Hager Unit 1-25 be plugged and abandoned.

General Info

Drilling Contractor: Duke Rig 1

Logs: ELI Wireline

DST: Trilobite

Gas Detector: None

Surveys: 372'-.5, 1357'-.75, 2361'-1, 3528'-1, 4000'-1, 4250'-.25

Daily Status

12/18/21: Spud @ 9:00 am, Ran 9 jts new 23# J-55 8-5/8" surface casing @ 371'. Cemented with 260 sacks H325, 3% cc, 2% gel, 1/4# celloflake

12/27/21: Drilling ahead @ 599'

12/28/21: Drilling ahead @ 2171'

12/29/21: Drilling ahead @ 3345'

12/30/21: Drilling ahead @ 4085'

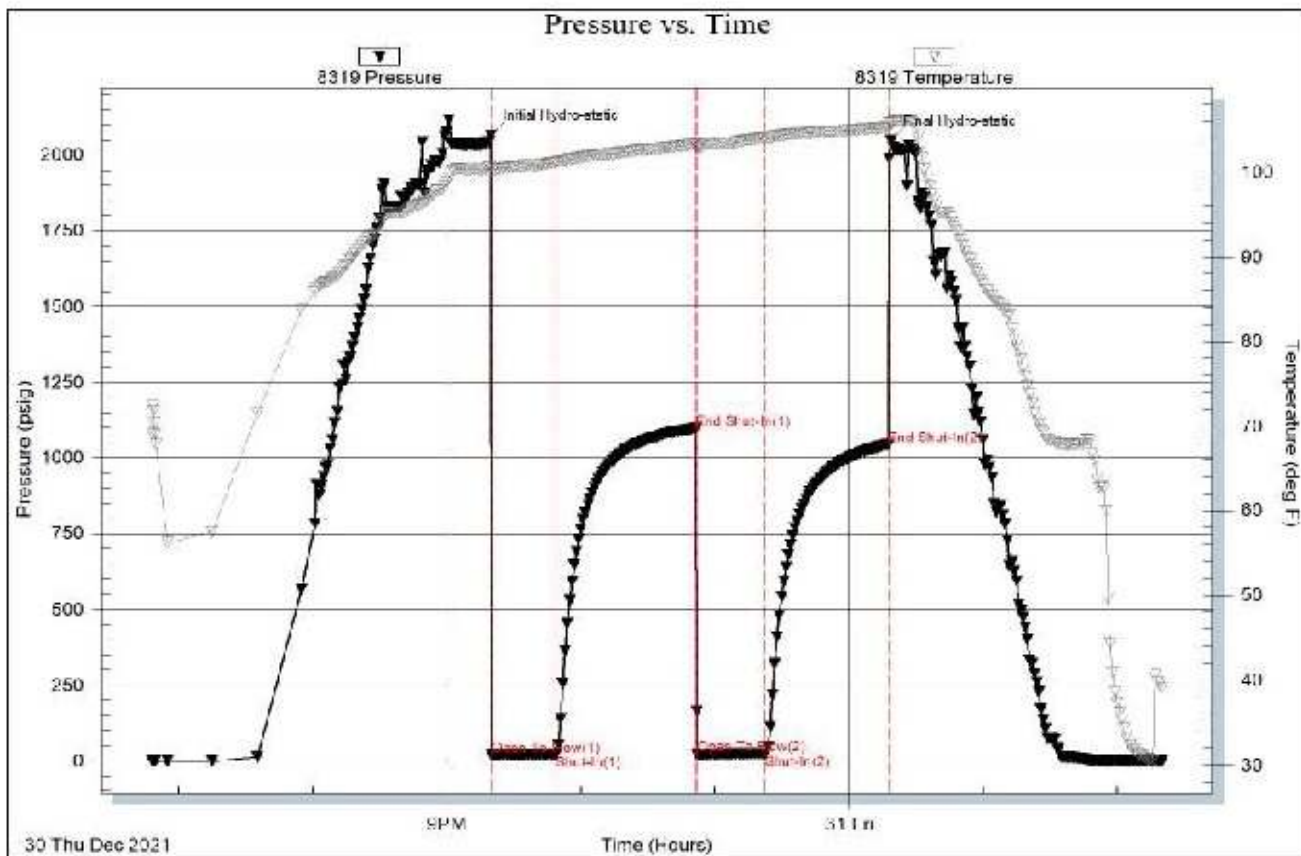
12/31/21: Drilling ahead @ 4300'

01/01/22: Drilling ahead @ 4525'

01/02/22: Drilling ahead @ 4770'

01/03/22: Logging @4970, hit bridge night before @ 4170', reamed and circulated in new mud, log initially went to 4950 due to icing before making it to true TD

	Thoroughbred			Thunderbird		Lario	
	Hager Unit 1-25			Lehman C# 1		#1-34 Coakes Living	
	25-19S-35W			3119S-34W		34-19S-35 W	
	452' FSL, 2621' FEL			C-NE_NE		1355' FNL, 1865' FEL	
	KB:3359			KB: 3093		KB: 3108	
	Sample	Log	Datum	Relationship		Relationship	
Base Anhy.	2301	2302	793	0		-33	
Heebner	3944	3942	-847	+7		-39	
Lansing	3990	3994	-899	0		-44	
Stark Shale	4300	4301	-1206	+7		-49	
Marmaton	4468	4478	-1383	0		-45	
Pawnee	4566	4570	-1475	+6		-43	
Ft. Scott	4594	4592	-1497	+12		-43	
Morrow Shale	4790	4794	-1699	+8		-37	
Miss	4879	4882	-1787	+18		-36	



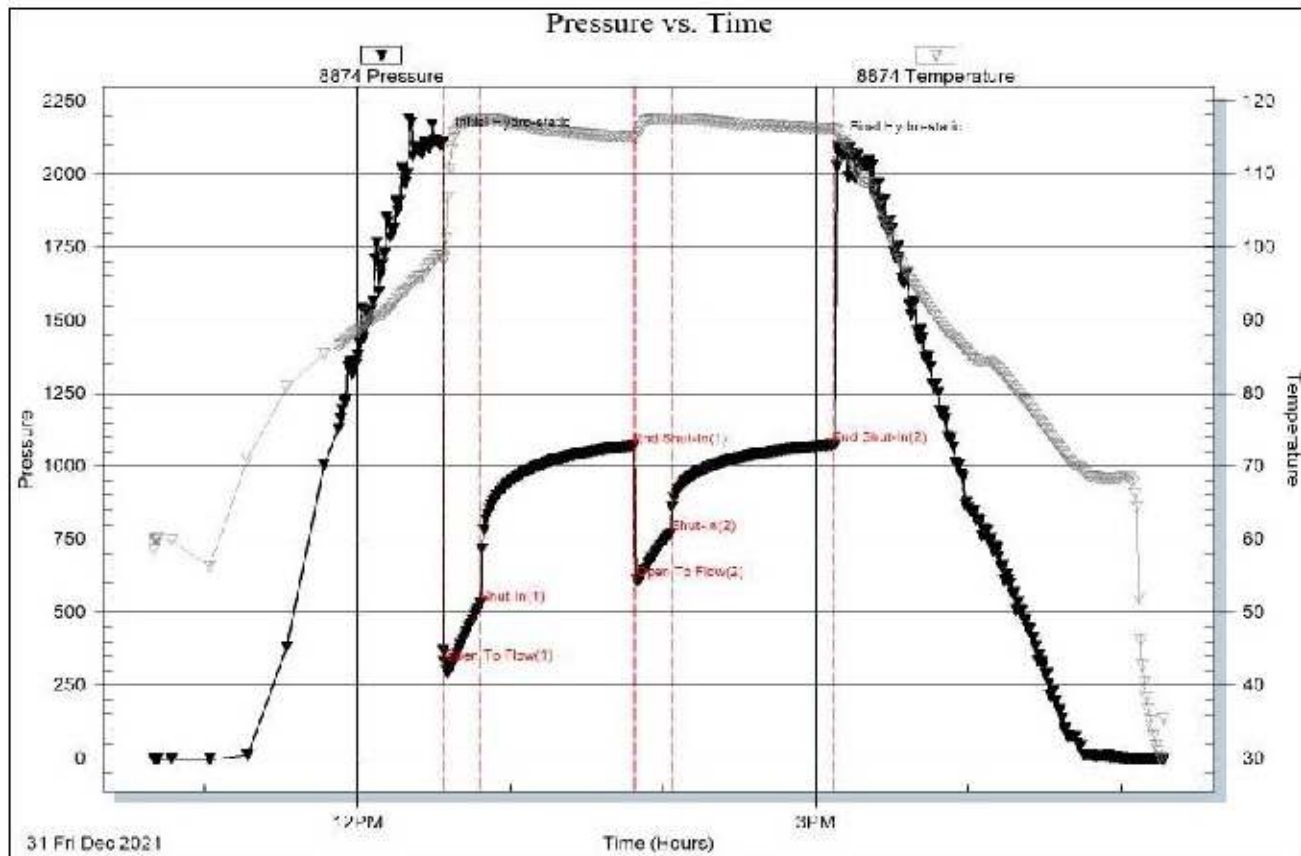
Serial #: 8874

Inside

Thoroughbred Associates, LLC

Hager Unit #1-25

LSI Test Number: 2



ROCK TYPES

LITHOLOGY

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

- Sltst
- Ss
- Till

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel

- Ferr
- Glau
- Gyp
- Hvymn
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

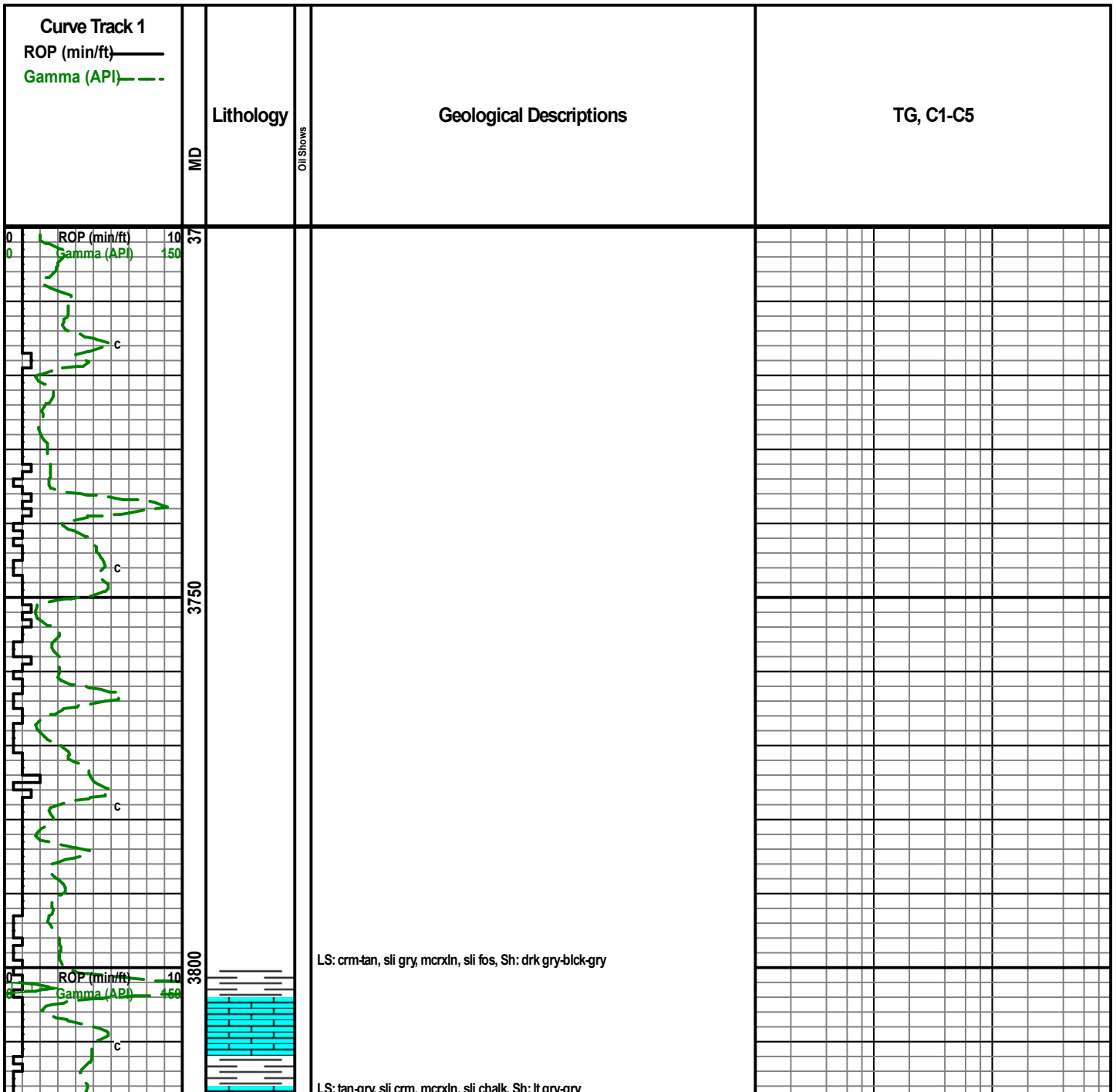
FOSSIL

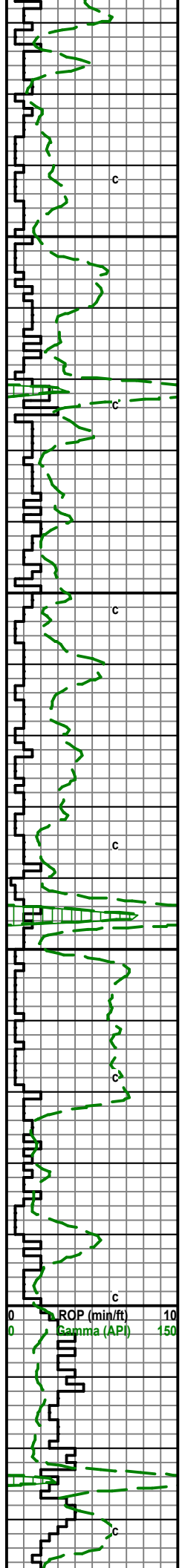
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec

- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg





3850
3900
3950
4000



LS: crm-tan, mcrxln, chalk

LS: tan-crm, sli gry, sli fos, sli chalk

LS: crm-gry-tan, mcrxln, sli fos, some Sh: drk gry-blck, gry

LS: tan-crm, sli gry, mcrxln, sli fos

LS: tan/crm, gry, mcr-*fx*ln, sli fos, sli chalk

LS: tan/brwn, sli crm, mcr-*fx*ln, sli fos

LS: AA with Sh: drk gry-blk-gry

LS: tan/brwn, crm, sli gry, mcr-*fx*ln, sli fos, sli chalk, Sh: gry-drk gry-grn/teal

AA

LS: crm-gry, sli tan, mcrxln, sli chalk

LS: crm, sli gry, mcrxln, sli *fx*ln, sli chert, sli fos

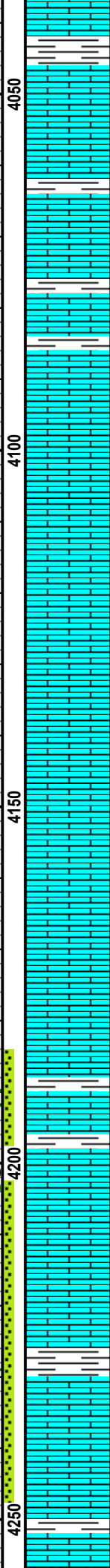
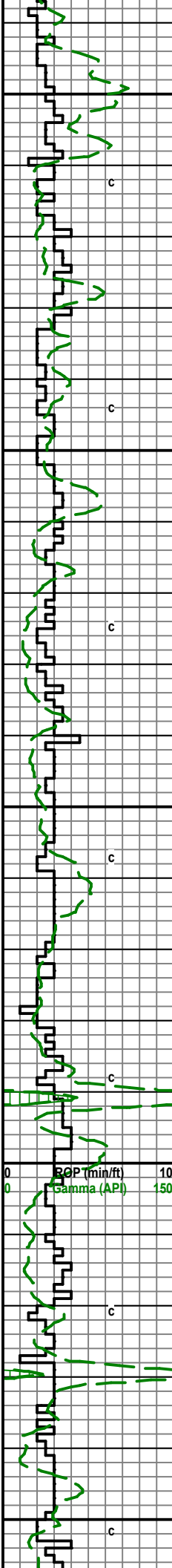
LS: crm-gry, mcrxln, some Sh: drk gry-gry

AA

Heebner Shale: 3942 (-847)

Lansing: 3994 (-899)

Bit Trip in Button Strap 2.69 short to board



LS: crm-gry, mcrxln, sli fos, Sh: gry-lt gry-red-teal

AA

LS: crm-gry, sli tan, mcrxln, some fxdn, sli fos, sli chalk, sli chert, some Sh: AA

LS: crm-gry, mcrxln, sli chalk, sli fos, Sh: gry-drk gry-lt gry, some red-teal

LS: crm/tan-gry, mcrxln, sli chert

LS: gry-crm, tan/brwn in part, mcrxln some fxdn, sli chalk, sli chert, prt ool/oom

LS: crm-gry, mcrxln, cherty, sli chalk

LS: crm-gry, mcrxln, sli cherty, some tan/brwn, oom

LS: AA

LS: crm, sli gry, mcrxln

AA

LS: crm-gry, mcrxln, sli cherty, sli chalk

LS: crm-gry, mcrxln, sli chert

LS: crm-gry, sli tan, mcrxln, sli chert

LS: crm/tan-gry, mcrxln, some fxdn, recal, sli vug por no show

LS: crm/tan-gry, mcrxln, cherty, few pieces, edge stain, SFO on break, couple dark drops, dull yellow fluor, pos sli odor, sli vis frac por, Sh: gry-lt gry

LS: gry-crm/tan, mcrxln, some fxdn, sli fos, sli chert, no show, pos sli odor

LS: crm, mcrxln, some fxdn, sli chalk, no show

LS: crm-gry, sli tan, mcr-fxdn, fos, sli chalk, Sh: drk gry-blck-gry

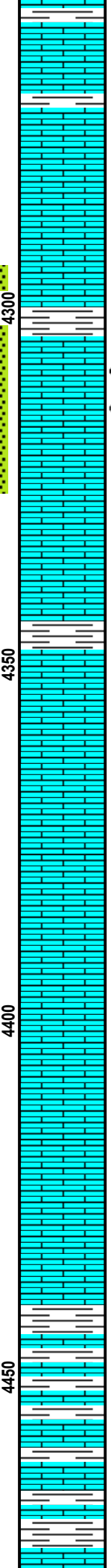
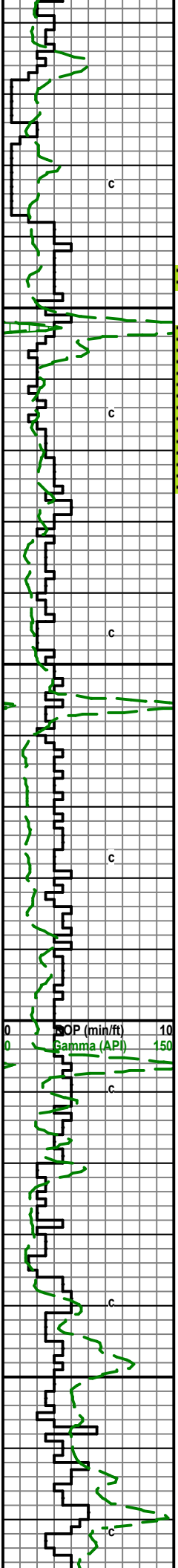
LS: crm-tan-brwn, mcrxln, some fxdn, ool in part, ques stain on few pieces, no odor, no show

LS: gry-crm, mcrxln, some fxdn, some ool, sli cherty

Mudco mdchk
Wt: 9.2 Vis: 52
pH: 11.5 Fil: 7.2
LCM: 5#

DST #1 4184-4250
30-60-30-60
IF: 1/4" blow
FF: no blow
Rec: 20' M
IFP: 19-22 ISIP: 1098
FFP: 22-24 FSIP: 1043

CFS 60"



LS: crm-gry, mcrxln, some Sh: drk gry-gry, sli blk

LS: crm, sli gry, mcrxln, some fxdn, ool, sli chalk, some Sh: AA

LS: crm, mcrxln, some fxdn, ool, chalk

LS: crm, mcrxln, sli fxdn, ool, oom, sli chalk

LS: AA with gry, fxdn, sli mxln, sli fos, some Sh: drk gry-blck

● LS: crm-gry, mcr-fxdn, sli chalk, fr stain, fr vis por, SFO, fr odor, sli dull yellow fluor, few pieces dead oil,

○ LS: gry-crm, mcrxln, sli chalk

LS: crm-gry, mcrxln sli chalk

LS: crm-gry, mcrxln, sli fxdn, sli fos, some Sh: gry-drk gry

LS: gry, sli crm, mcrxln, sli fos, sli chert

LS: AA

L:S gry-crm, mcrxln

LS: gry, sli crm, mcrxln, sli chert

LS: gry-crm, mcrxln, some fxdn, sli chert

LS: gry-crm, mcrxln, sli fxdn, sli chalk

LS: gry-crm, sli tan/brwn, mcrxln, sli fxdn, sli chalk

LS: gry-crm, mcrxln, sli chert, sli chalk, some Sh: gry-drk gry

LS: crm-tan, mcrxln, some fxdn, sli chalk, Sh: gry-lt gry, sli rd-teal

AA

AA

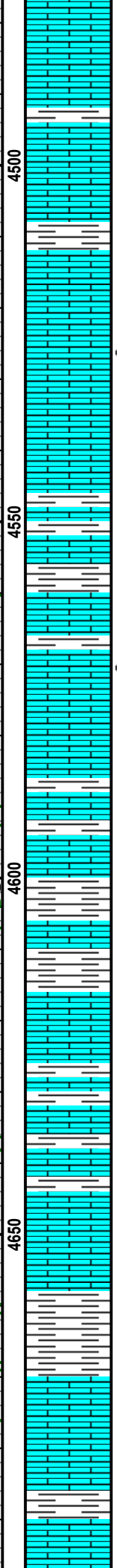
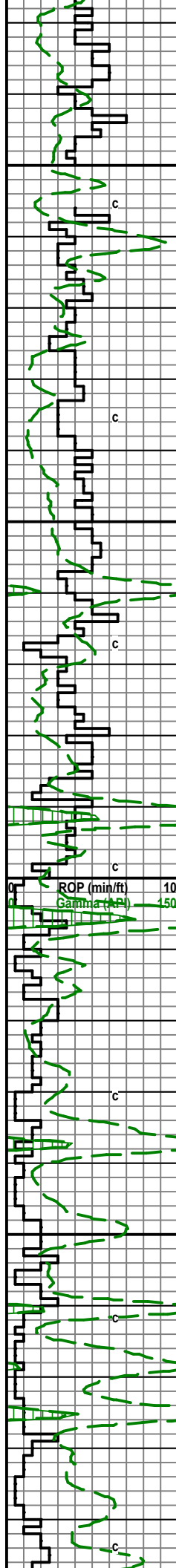
DST #2 4295-4325
 15-60-15-60
 IF: BOB 30 sec, 121.5"
 FF: BOB 30 sec, 78.2"
 Rec: 1670' MCW (98%W, 2%M)
 IFP: 327-528 ISIP: 1069
 FFP: 612-769 FSIP: 1072

Stark Shale: 4301 (-1206)

Mudco mdchk
 Wt: 9.2 Vis: 52
 pH: 11.5 Fil: 6.4
 LCM: 6#

CFS 60"

Mudco md chk
 Wt: 9.2 Vis: 51
 pH: 11.0 Fil: 8.0
 LCM: 3#



LS: gry-crm, sli tan, mcr-foxn, sli fos, sli chalk, Sh: lt gry

LS: gry-crm, sli tan, mcrxln, sli foxn, sli fos, sli chert, Sh: drk gry-gry, sli blk

LS: tan, sli gry-crm, mcrxln, sli fos, sli chert, Sh: gry-lt gry-drk gry, sli blk

LS: tan, sli gry-crm, mcrxln, sli fos, sli chert, Sh: gry-drk gry

LS: gry-crm, sli tan, mcr-foxn, sli ool,

LS: gry-crm, sli tan, mcr-foxn, sli ool, sli chert, no odor, sli dull yell fluor few pieces pos stain, one piece stain, pr vis por, SFO few drop on break

LS: gry-crm, sli tan, mcrxln, sli foxn, ool/oom,

LS: gry, sli crm, mcr-foxn, sli ool, Sh: gry-drk gry

LS: crm.tan-gry, mcrxln, sli fos, Sh: drk gry-gry-lt gry, some blk

LS: gry-crm, mcrxln, sli fos, Sh: AA

LS: gry-crm, sli tan, mcr-foxn, some mxln, ool/oom, couple pieces pos stain, pos dead oil

LS: crm-gry, sli tan, mcr-foxn, sli ool, Sh: drk gry-gry, some blk and lt gry

LS: gry-crm, mcrxln, sli chalk, no show, Sh: AA

LS: gry-crm, mcrxln, sli foxn, sli chalk

LS: gru-crm, mcrxln, ShL drk gry-blck-gry

Sh: gry-drk gry-blck, LS: crm-gy, sli tan/brwn, mcr-foxn, chalk

LS: crm-tan, sli gry, mcrxln, some foxn, sli fos, Sh: drk gry-gry, sli blk

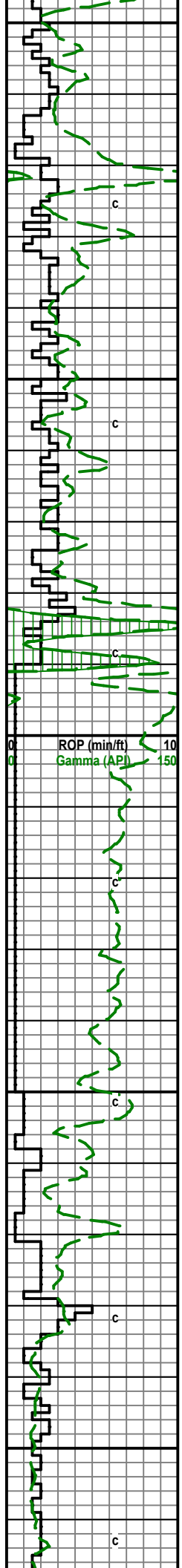
Sh: gry-drk gry-blck, LS: gry-crm, sli tan, mcrxln sli fos

LS: crm-gry, mcr-foxn, sli chalk, Sh: drk gry-gry-blck

LS: crm-gry, foxn-mcrxln, Sh: gry-lt gry-drk gry

LS: gry-crm, sli tan, mcr-foxn, sli fos, Sh: gry-drk gry- lt gry- blk

Marmaton: 4478 (-1383)	
Geograph off	
Adjust drill time	
CFS 60"	
Pawnee: 4570 (-1475)	
CFS 60"	
Ft. Scott: 4592 (-1497)	
CFS 60"	Bit trip PDC



4700
4750
4800
4850
4900

LS: gry-crm, sli tan, mcrxln, some fxdn, sli fos, Sh: gry-drk gry-lt gry

LS: crm-gry, sli tan, mcrxln, some fxdn, sli fos, sli chalk, Sh: AA

LS: crm-gry, mcrxln, Sh: gry-lt gry-drk gry,

LS: gry-crm, mcrxln, sli fos, Sh: AA

LS: gry-crm, mcrxln, sli fos, Sh: gry-drk gry

LS: crm-gry, mcrxln, sli fos, Sh: AA

LS: and Sh: AA

LS: crm-gry, sli tan, mcrxln, some fxdn, sli fos, Sh: gry-drk gry-lt gry

LS: gry-crm, mcrxln, sli fxdn, sli chert, sli fos, Sh: gry-drk gry

Sh: gry-drk gry-lt gry, teal, still lots of LS: gry-crm, mcr sli fxdn, sli fos, pyrite

AA

AA with some SS: opaque, fgrn, well sort, round-sub round, pyrite

Sh: gry-drk gry-lt gry, sli blk, some SS: AA LS: crm-gry, mcrxln,

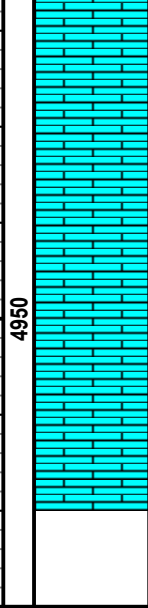
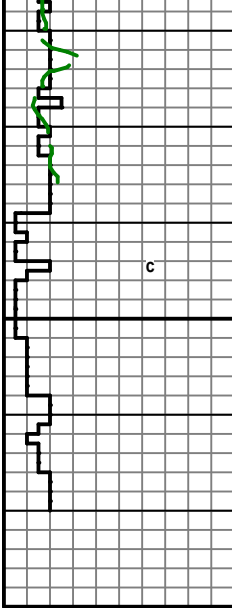
LS: crm, sli gry, mcrxln, some fxdn, wash from above

Sample mostly wash from uphole, some LS: crm, fxdn, sli ool St. Gen

Mudco mdchk
Wt: 9.5 Vis: 49
pH: 10.0 Fil: 9.6
LCM: 3#

Morrow Shale: 4794 (-1699)

Mississippian: 4882 (-1787)



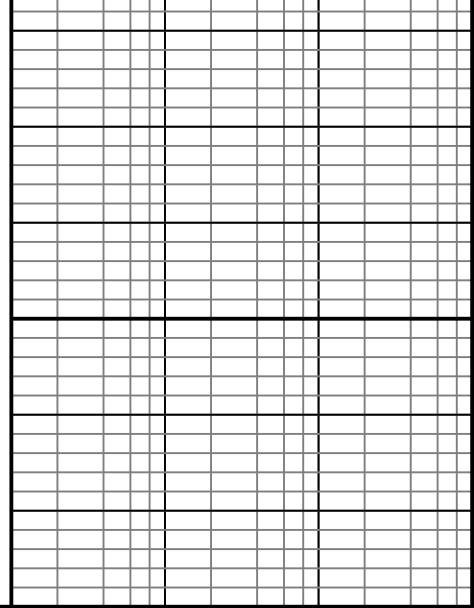
LS: crm, sli gry-tan, mcr-fxn, ool

LS: crm-gry, sli tan, mcr-fxn, ool

LS: crm, sli gry-tan, fmxln, ool, sandy

RTD 4970

LTD 4972





DRILL STEM TEST REPORT

Prepared For: **Thoroughbred Assosiates, LLC**

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226

ATTN: Andy White

Hager Unit #1-25

25-19s-35w Wichita,KS

Start Date: 2021.12.30 @ 18:48:00

End Date: 2021.12.31 @ 02:19:45

Job Ticket #: 67710 DST #: 1

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

Printed: 2022.01.04 @ 09:18:12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67710

DST#: 1

Test Start: 2021.12.30 @ 18:48:00

GENERAL INFORMATION:

Formation: **LKC H-I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:19:45

Time Test Ended: 02:19:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4184.00 ft (KB) To 4250.00 ft (KB) (TVD)

Reference Elevations: 3095.00 ft (KB)

Total Depth: 4250.00 ft (KB) (TVD)

3083.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8319 Outside

Press@RunDepth: 24.59 psig @ 4185.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.30

End Date:

2021.12.31

Last Calib.: 2021.12.31

Start Time: 18:48:05

End Time:

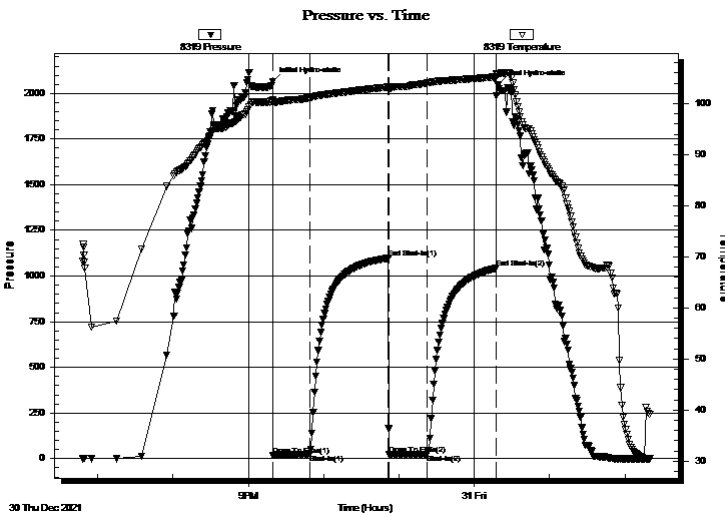
02:19:44

Time On Btm: 2021.12.30 @ 21:19:30

Time Off Btm: 2021.12.31 @ 00:18:45

TEST COMMENT: IF: 1/4" blow .
IS: No return.
FF: No blow .
FS: No return. 30-60-30-60

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2064.53	100.65	Initial Hydro-static
1	19.36	100.25	Open To Flow (1)
30	22.49	101.11	Shut-In(1)
92	1098.59	103.24	End Shut-In(1)
93	22.38	102.94	Open To Flow (2)
123	24.59	104.01	Shut-In(2)
178	1043.26	105.22	End Shut-In(2)
180	2047.00	105.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100m	0.28

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67710

DST#: 1

Test Start: 2021.12.30 @ 18:48:00

Tool Information

Drill Pipe:	Length: 4185.00 ft	Diameter: 3.80 inches	Volume: 58.70 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: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4184.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	96.00 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			4155.00	
Shut In Tool	5.00		Fluid	4160.00	
Hydraulic tool	5.00			4165.00	
Em Tool	3.00			4168.00	
Jars	5.00			4173.00	
Safety Joint	2.00			4175.00	
Packer	5.00		Inside	4180.00	30.00 Bottom Of Top Packer
Packer	4.00			4184.00	
Stubb	1.00			4185.00	
Recorder	0.00	8874	Inside	4185.00	
Recorder	0.00	8319	Outside	4185.00	
Perforations	29.00			4214.00	
Change Over Sub	1.00			4215.00	
Drill Pipe	31.00			4246.00	
Change Over Sub	1.00			4247.00	
Bullnose	3.00			4250.00	66.00 Bottom Packers & Anchor
Total Tool Length:	96.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67710

DST#: 1

Test Start: 2021.12.30 @ 18:48:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100m	0.281

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

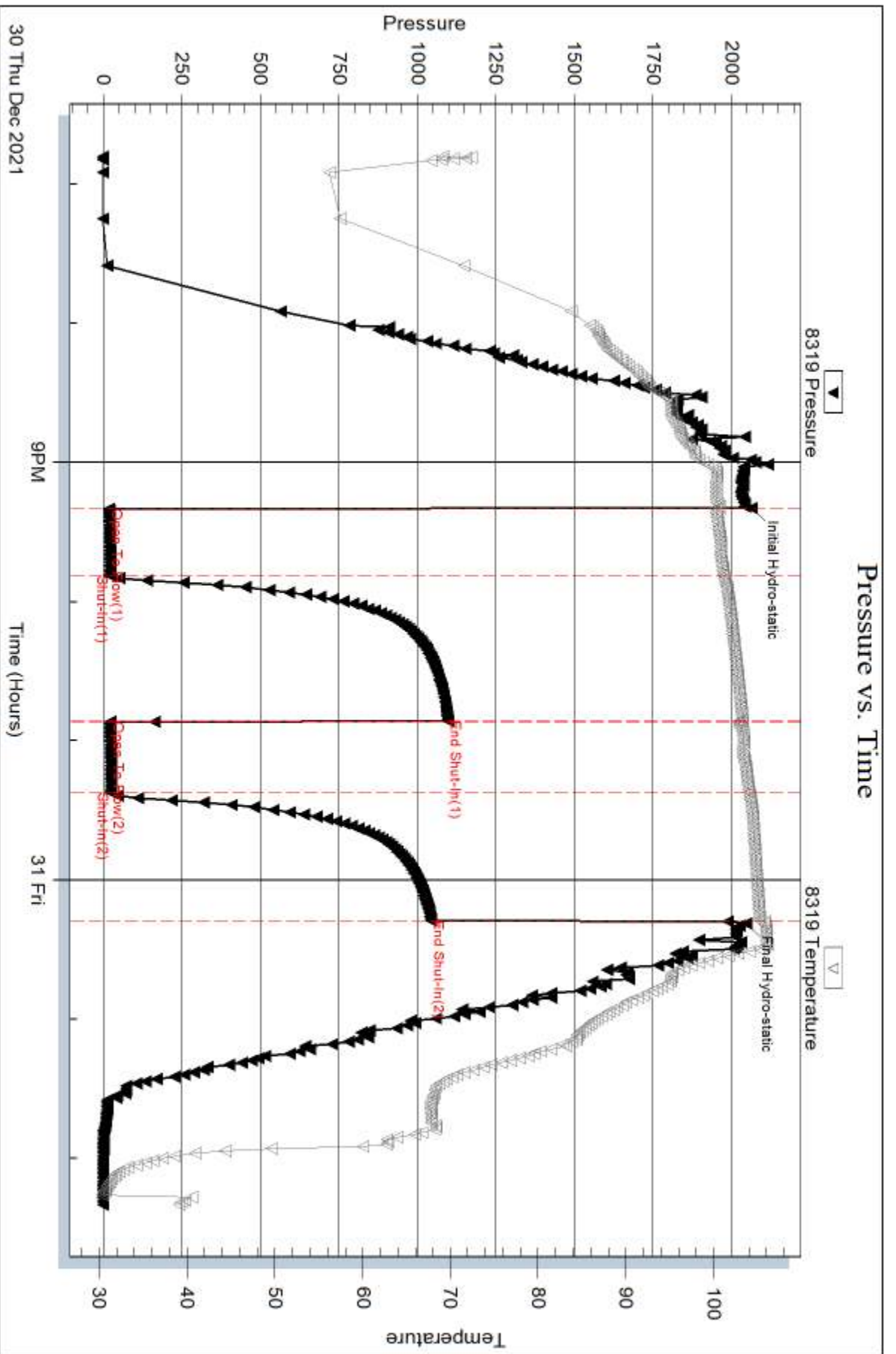
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



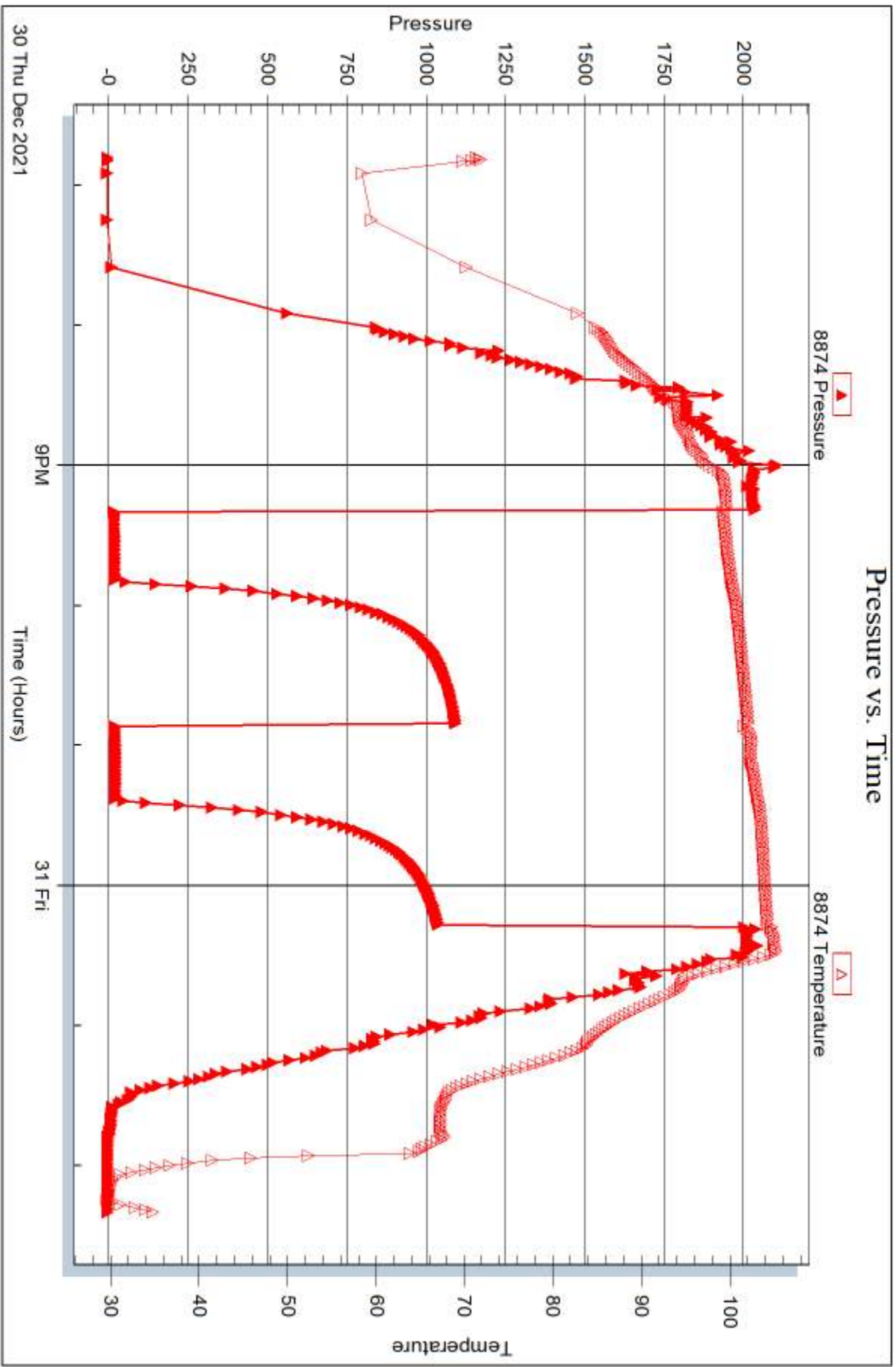
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Inside

Thoroughbred Associates, LLC

Heger Unit #1-25

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 67710

Printed: 2022.01.04 @ 09:18:13



DRILL STEM TEST REPORT

Prepared For: **Thoroughbred Assosiates, LLC**

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226

ATTN: Andy White

Hager Unit #1-25

25-19s-35w Wichita,KS

Start Date: 2021.12.31 @ 10:40:00

End Date: 2021.12.31 @ 17:17:00

Job Ticket #: 67711 DST #: 2

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

Printed: 2022.01.04 @ 09:07:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67711

DST#: 2

Test Start: 2021.12.31 @ 10:40:00

GENERAL INFORMATION:

Formation: **Swope**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:34:00

Time Test Ended: 17:17:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4295.00 ft (KB) To 4325.00 ft (KB) (TVD)

Reference Elevations: 3095.00 ft (KB)

Total Depth: 4325.00 ft (KB) (TVD)

3083.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8874 Inside

Press@RunDepth: 769.09 psig @ 4296.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.31

End Date:

2021.12.31

Last Calib.: 2021.12.31

Start Time: 10:40:05

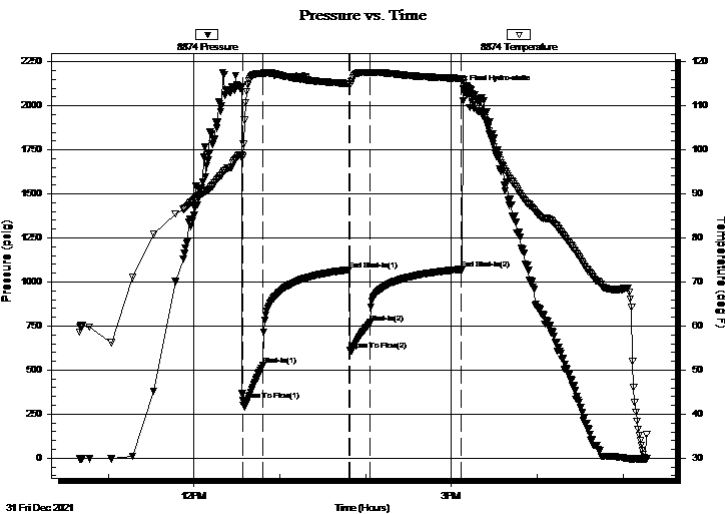
End Time:

17:16:59

Time On Btm: 2021.12.31 @ 12:33:30

Time Off Btm: 2021.12.31 @ 15:08:30

TEST COMMENT: IF: BOB @ 30 sec. 121.5" blow .
IS: No return.
FF: BOB @ 30 sec. 78.2" blow .
FS: No return. 15-60-15-60



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2108.64	98.85	Initial Hydro-static
1	327.74	98.52	Open To Flow (1)
15	528.26	117.33	Shut-In(1)
75	1069.37	114.98	End Shut-In(1)
76	612.36	114.83	Open To Flow (2)
90	769.09	117.47	Shut-In(2)
154	1072.12	116.14	End Shut-In(2)
155	2094.00	115.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1670.00	smcw 2m 98w (oil spots on top)	23.43

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67711

DST#: 2

Test Start: 2021.12.31 @ 10:40:00

Tool Information

Drill Pipe:	Length: 4278.00 ft	Diameter: 3.80 inches	Volume: 60.01 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: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 60.01 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4295.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	60.00 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			4266.00	
Shut In Tool	5.00		Fluid	4271.00	
Hydraulic tool	5.00			4276.00	
Em Tool	3.00			4279.00	
Jars	5.00			4284.00	
Safety Joint	2.00			4286.00	
Packer	5.00		Inside	4291.00	30.00 Bottom Of Top Packer
Packer	4.00			4295.00	
Stubb	1.00			4296.00	
Recorder	0.00	8874	Inside	4296.00	
Recorder	0.00	8319	Outside	4296.00	
Perforations	26.00			4322.00	
Bullnose	3.00			4325.00	30.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thoroughbred Associates, LLC

25-19s-35w Wichita, KS

8100 E 22nd St N
Bldg 600 Ste F
Wichita, KS 67226
ATTN: Andy White

Hager Unit #1-25

Job Ticket: 67711

DST#: 2

Test Start: 2021.12.31 @ 10:40:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 6.39 in³
Resistivity: ohm.m
Salinity: 4400.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 53000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1670.00	smcw 2m 98w (oil spots on top)	23.426

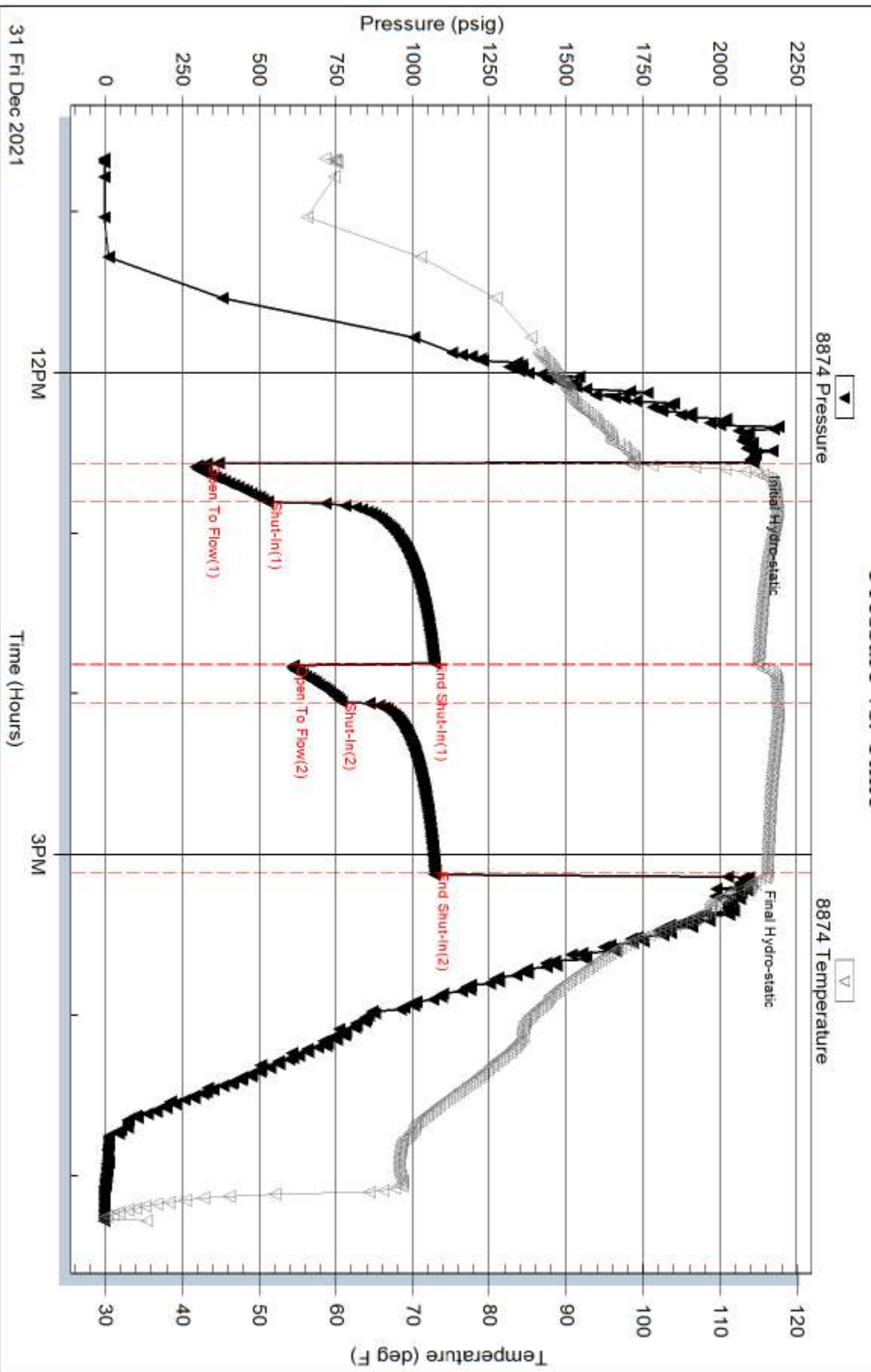
Total Length: 1670.00 ft Total Volume: 23.426 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: rw is .233 2 43f = 53000ppm

Pressure vs. Time

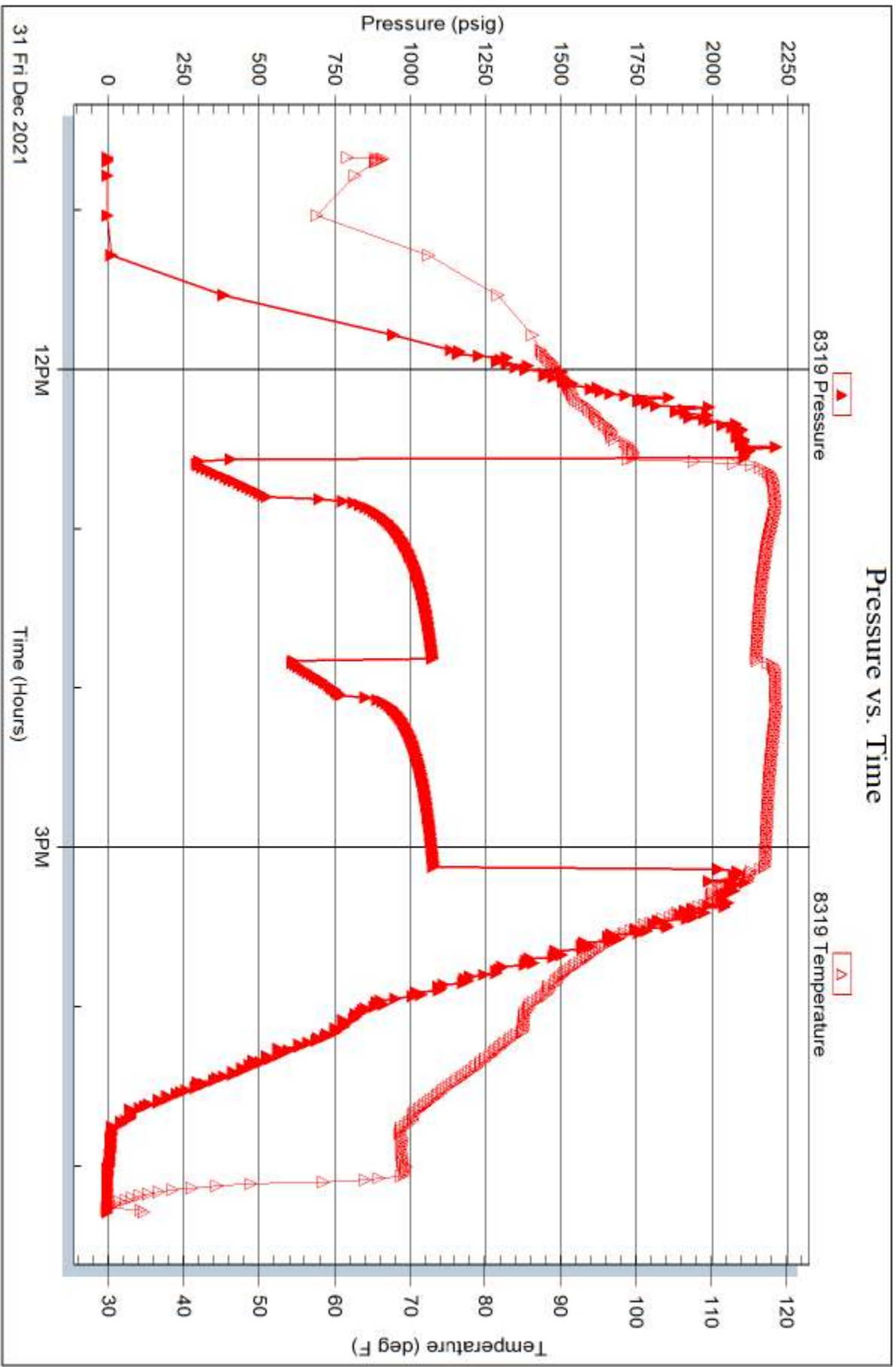


Serial #: 8319

Outside Thoroughbred Associates, LLC

Heger Unit #1-25

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 67711

Printed: 2022.01.04 @ 09:07:59



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **67710**

Well Name & No. Hager Unit # 1-25 Test No. 1 Date 12/31/2021
 Company Thoroughbred Associates, LLC Elevation 3095 KB 3083 GL
 Address _____
 Co. Rep / Geo. Andy White Rig Duke #1
 Location: Sec. 25 Twp 19S Rge. 35W Co. Wichita State Ks

Interval Tested 4184-4250 Zone Tested LKC H-I
 Anchor Length 66 Drill Pipe Run 4185 Mud Wt. 9.2
 Top Packer Depth 4179 Drill Collars Run Ø Vis 52
 Bottom Packer Depth 4184 Wt. Pipe Run Ø WL 7.2
 Total Depth 4250 Chlorides 3400 ppm System LCM 5#
 Blow Description IT ¼" blow
IST No return
FF 16 blow
FSI No return.

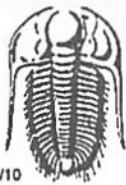
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>MUD</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 26 BHT 105 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2064</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>1800</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1848</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2121</u>
(D) Initial Shut-In <u>1098</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0021</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0220</u>
(F) Second Final Flow <u>24</u>	<input checked="" type="checkbox"/> Mileage <u>49 RT</u> 61.25	Comments _____
(G) Final Shut-In <u>1043</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2047</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility _____	Total <u>2186.25</u>
	Sub Total <u>1836.25</u>	MP/DST Disc't _____

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67711

Well Name & No. Hager Unit # 1-25 Test No. 2 Date 12/31/2021
 Company Thoroughbred Associates, LLC Elevation 3095 KB 9083 GL
 Address _____
 Co. Rep / Geo. Andy White Rig Rite #1
 Location: Sec. 25 Twp 19s Rge. 35w Co. Wichita State Ks

Interval Tested 4295-4325 Zone Tested Sudope
 Anchor Length 30 Drill Pipe Run 4278 Mud Wt. 9.2
 Top Packer Depth 4290 Drill Collars Run Ø Vis 48
 Bottom Packer Depth 4245 Wt. Pipe Run Ø WL 64
 Total Depth 4325 Chlorides 4400 ppm System LCM 6#
 Blow Description IF BOB@ 30sec 121.5"
ISI No return.
FF BOB@ 30sec 78.2"
FSI No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1670</u>	<u>5.00W</u>			<u>98</u>	<u>2</u>
	<u>oil spots on top</u>				

Rec Total 1670 BHT 117 Gravity - API RW 1233 @ 43 °F Chlorides 53,000 ppm
 (A) Initial Hydrostatic 2108 Test 1450 T-On Location 1000
 (B) First Initial Flow 327 Jars 250 T-Started 1040
 (C) First Final Flow 528 Safety Joint 75 T-Open 1232
 (D) Initial Shut-In 1069 Circ Sub _____ T-Pulled 1506
 (E) Second Initial Flow 612 Hourly Standby _____ T-Out 1717
 (F) Second Final Flow 769 Mileage x2 61.25+61.25 Comments _____
 (G) Final Shut-In 1072 Sampler _____ PP Tool @ 0900
 (H) Final Hydrostatic 2094 Straddle _____ 12/03/2021 12/31/21
 Shale Packer 250 EM Tool 350 NS
 Extra Packer _____ Ruined Shale Packer _____
 Extra Recorder _____ Ruined Packer _____
 Day Standby 2d 15.75h Sub Total 1600
 Accessibility _____ Total 3747.50
 Sub Total 2147.50 MP/DST Disc't _____

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.