

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
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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	K & N Petroleum, Inc.
Well Name	SOEKEN 21-1
Doc ID	1649454

All Electric Logs Run

Sonic Log
Compensated Density/Neutron Log
Micro Log
Dual Induction Log
Sector Bond/Gamma Ray CCL Log

Form	ACO1 - Well Completion
Operator	K & N Petroleum, Inc.
Well Name	SOEKEN 21-1
Doc ID	1649454

Tops

Name	Top	Datum
Anhydrite	648	1182
Base Anhydrite	658	1172
Heebner	2886	-1056
Toronto	2902	-1072
Douglas	2914	-1084
Brown Lime	2994	-1164
Lansing	3005	-1175
BKC	3265	-1435
Arbuckle	3268	-1438







**TREATMENT REPORT**

Acid Stage No. \_\_\_\_\_

Date 5/18/2022 District GB F.O. No. 50564  
 Company K&N Petroleum  
 Well Name & No. Soeken 22-1  
 Location \_\_\_\_\_ Field \_\_\_\_\_  
 County Barton State KS  
 Casing: Size 5.5" Type & Wt. \_\_\_\_\_ Set at \_\_\_\_\_ ft.  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Formation: \_\_\_\_\_ Perf. \_\_\_\_\_ to \_\_\_\_\_  
 Liner: Size \_\_\_\_\_ Type & Wt. \_\_\_\_\_ Top at \_\_\_\_\_ ft. Bottom at \_\_\_\_\_ ft.  
 Cemented:  Yes  No Perforated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Tubing: Size & Wt. \_\_\_\_\_ Swung at \_\_\_\_\_ ft.  
 Perforated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Open Hole Size \_\_\_\_\_ T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

Type Treatment: \_\_\_\_\_ Amt. \_\_\_\_\_ Type Fluid \_\_\_\_\_ Sand Size \_\_\_\_\_ Pounds of Sand \_\_\_\_\_  
 Bkdown \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 Flush \_\_\_\_\_ Bbl./Gal. \_\_\_\_\_  
 Treated from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0  
 from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0  
 from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. No. ft. 0  
 Actual Volume of Oil / Water to Load Hole: \_\_\_\_\_ Bbl./Gal.  
 Pump Trucks. No. Used: Std. 320 Sp. \_\_\_\_\_ Twin \_\_\_\_\_  
 Auxiliary Equipment \_\_\_\_\_ 360  
 Personnel Nathan Greg Joe  
 Auxiliary Tools \_\_\_\_\_  
 Plugging or Sealing Materials: Type \_\_\_\_\_  
 \_\_\_\_\_ Gals. \_\_\_\_\_ lb.

Company Representative Kyle and Ed Treater Nathan W.

TIME a.m./p.m.	PRESSURES		Total Fluid Pumped	REMARKS
	Tubing	Casing		
10:30		5.5"		On Location.
				Pipe-3372' Centralizers-1,3,5,7,9,11
				PBTD-3360 Basket-2
				Run in casing and tag bottom. Pick up and spot cllar at groiund level.
				Break circulation with mud pump. Circulate for 30 minutes
				Pump 600gal of Mud Flush
				Plug Rat hole with 30sk and mouse hole with 20sk.
				Mix 225sk 60/40poz 2%gel .5%C-37 .5%C41p .25%C12 10% Salt and 5#/sk Gilsonite
				Wash out pump and lines
				Displace with 81.9bbbls at 7.5bpm-1200#
				Plug landed at 1500# Release pressure. Float Held.
				Thank You! Nathan W.



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**

**Soeken 21-1**

Job Ticket: 68877

**DST#: 1**

Test Start: 2022.05.14 @ 04:19:20

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:49:50

Time Test Ended: 11:33:05

Test Type: Conventional Bottom Hole (Initial)

Tester: Matt Smith

Unit No: 68

**Interval: 2994.00 ft (KB) To 3040.00 ft (KB) (TVD)**

Reference Elevations: 1830.00 ft (KB)

Total Depth: 3040.00 ft (KB) (TVD)

1820.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8788**

**Inside**

Press@RunDepth: 174.12 psig @ 2995.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.05.14

End Date:

2022.05.14

Last Calib.: 2022.05.14

Start Time: 04:19:25

End Time:

11:33:04

Time On Btm: 2022.05.14 @ 06:48:05

Time Off Btm: 2022.05.14 @ 09:41:05

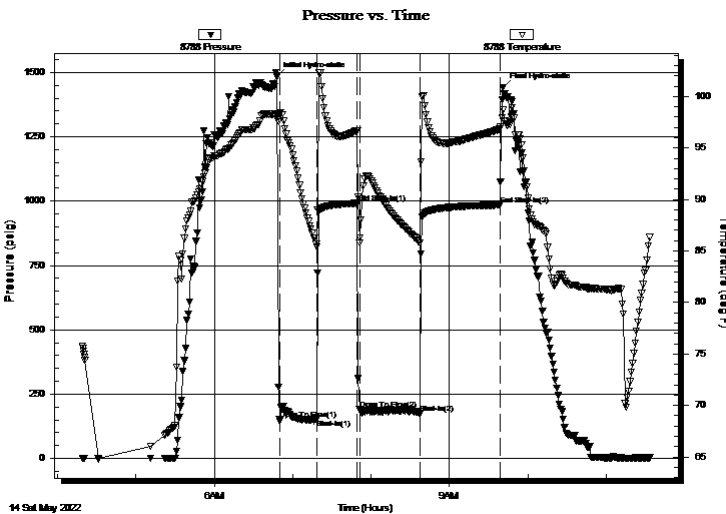
TEST COMMENT: IF: Strong Blow . B.O.B. 20 sec. G.T.S. in 3 mins. (30)

IS: No Blow . (30)

FF: Strong Blow . B.O.B. & G.T.S immediate. (45)

FS: No Blow . (60)

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1482.14	98.12	Initial Hydro-static
2	150.88	98.25	Open To Flow (1)
31	154.07	85.41	Shut-In(1)
62	991.93	96.71	End Shut-In(1)
64	189.71	86.27	Open To Flow (2)
109	174.12	85.80	Shut-In(2)
171	984.59	96.85	End Shut-In(2)
173	1440.02	98.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
32.00	GOCM 13%g 80%o 7%m	0.45
64.00	GOCM 21%g 75%o 4%m	0.90
64.00	GOCM 40%g 40%o 20%m	0.90
64.00	GOCM 20%g 40%o 40%m	0.90

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.09	507.49
Last Gas Rate	0.88	15.15	634.30
Max. Gas Rate	0.75	25.27	619.64





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
 1105 Walnut St  
 Great Bend, Ks. 67530  
 ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
 Job Ticket: 68877 **DST#: 1**  
 Test Start: 2022.05.14 @ 04:19:20

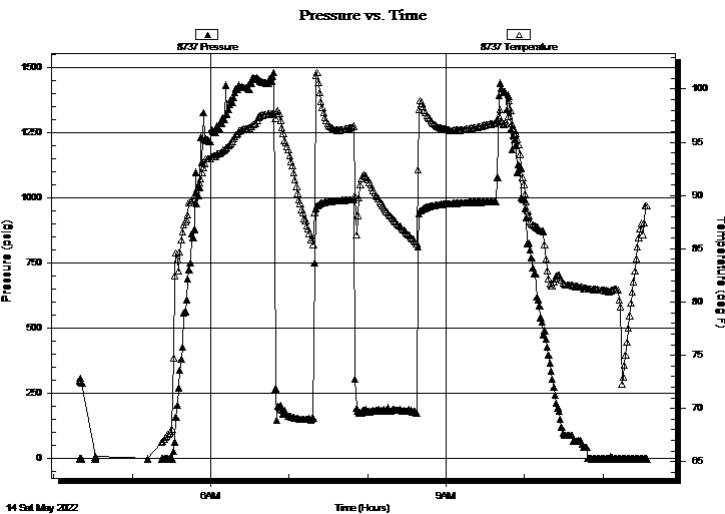
**GENERAL INFORMATION:**

Formation: **Lansing**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 06:49:50 Tester: Matt Smith  
 Time Test Ended: 11:33:05 Unit No: 68  
**Interval: 2994.00 ft (KB) To 3040.00 ft (KB) (TVD)**  
 Reference Elevations: 1830.00 ft (KB)  
 Total Depth: 3040.00 ft (KB) (TVD) 1820.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8737 Outside**

Press@RunDepth: psig @ 2995.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.05.14 End Date: 2022.05.14 Last Calib.: 2022.05.14  
 Start Time: 04:19:42 End Time: 11:33:21 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Strong Blow . B.O.B. 20 sec. G.T.S. in 3 mins. (30)  
 IS: No Blow . (30)  
 FF: Strong Blow . B.O.B. & G.T.S immediate. (45)  
 FS: No Blow . (60)



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
32.00	GOCM 13%g 80%o 7%m	0.45
64.00	GOCM 21%g 75%o 4%m	0.90
64.00	GOCM 40%g 40%o 20%m	0.90
64.00	GOCM 20%g 40%o 40%m	0.90

**Gas Rates**

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.09	507.49
Last Gas Rate	0.88	15.15	634.30
Max. Gas Rate	0.75	25.27	619.64



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
Job Ticket: 68877      **DST#: 1**  
Test Start: 2022.05.14 @ 04:19:20

### 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:	3400 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3400.00 ppm			
Filter Cake: 0.20 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
32.00	GOCM 13%g 80%o 7%m	0.449
64.00	GOCM 21%g 75%o 4%m	0.898
64.00	GOCM 40%g 40%o 20%m	0.898
64.00	GOCM 20%g 40%o 40%m	0.898

Total Length: 224.00 ft      Total Volume: 3.143 bbl  
Num Fluid Samples: 1      Num Gas Bombs: 2      Serial #: P 10 MAS  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

K & N Petroleum Inc

**21-17s-11w Barton Co, Ks**

1105 Walnut St  
Great Bend, Ks. 67530

**Soeken 21-1**

Job Ticket: 68877

**DST#: 1**

ATTN: Max Lovely

Test Start: 2022.05.14 @ 04:19:20

### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	10	0.75	18.09	507.49
1	20	0.75	21.05	553.72
1	30	0.75	20.79	549.66
2	10	0.75	25.27	619.64
2	20	0.88	15.68	645.67
2	30	0.88	15.51	642.03
2	40	0.88	15.08	632.79
2	45	0.88	15.15	634.30

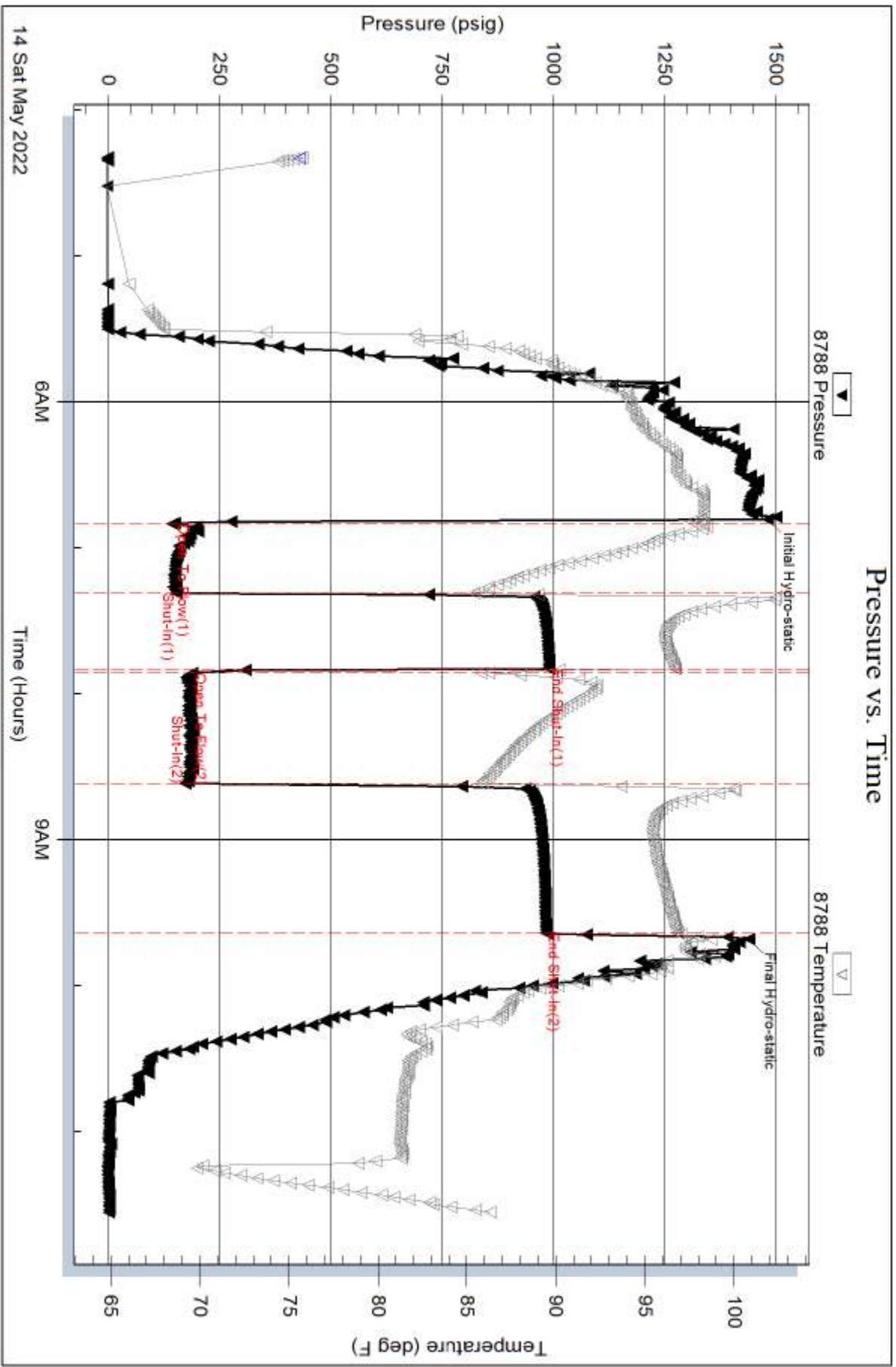
Serial #: 8788

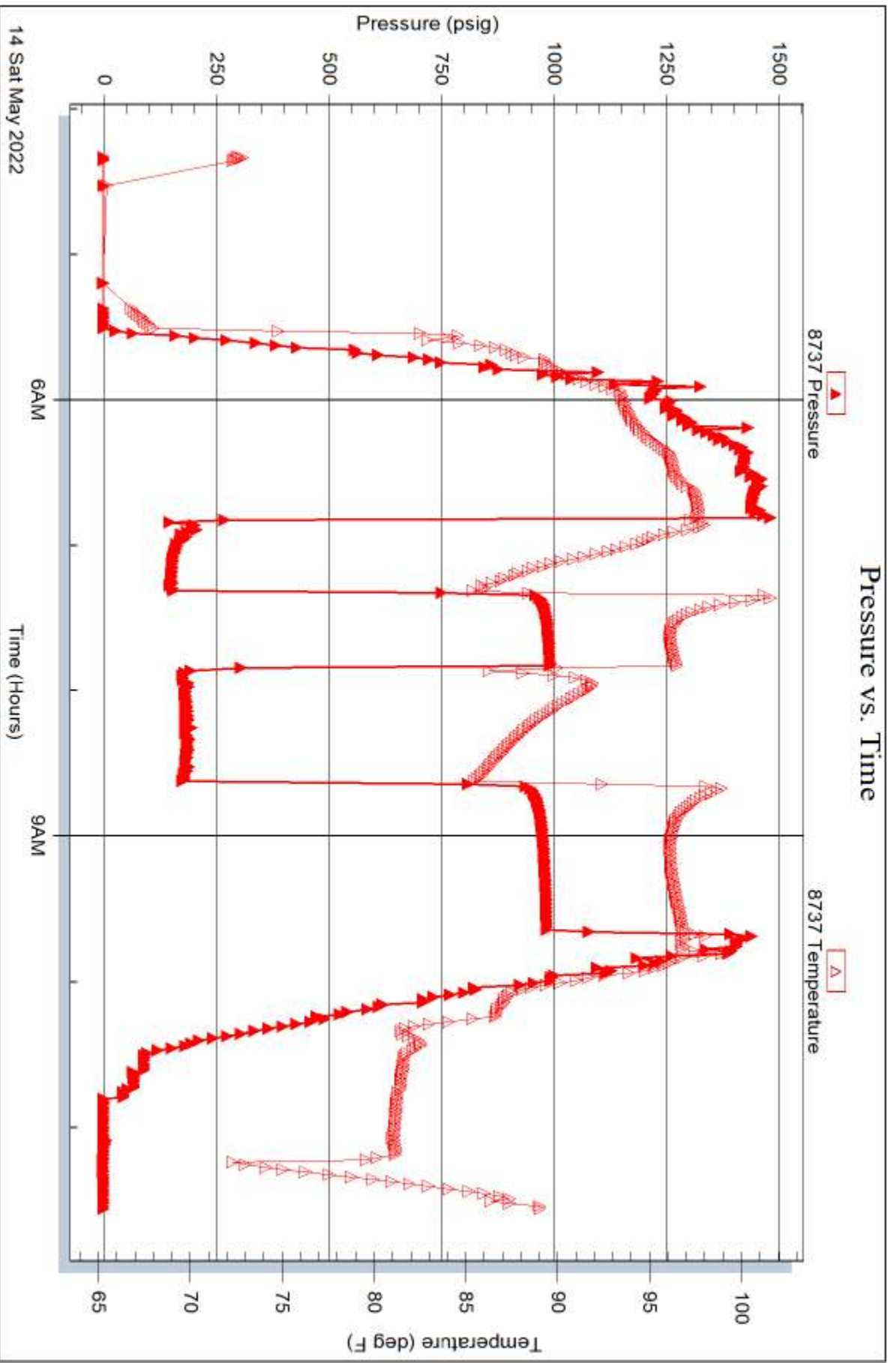
Inside

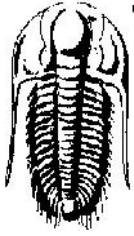
K & N Petroleum Inc

Soeken 21-1

DST Test Number: 1







**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
 1105 Walnut St  
 Great Bend, Ks. 67530  
 ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
 Job Ticket: 68878 **DST#: 2**  
 Test Start: 2022.05.14 @ 19:18:13

## GENERAL INFORMATION:

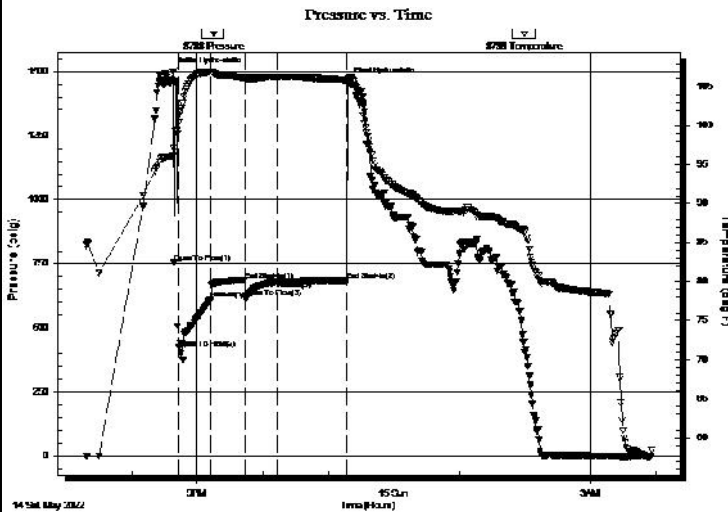
Formation: **Lansing C-D**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 20:38:58  
 Tester: Matt Smith  
 Time Test Ended: 03:56:28  
 Unit No: 68  
 Interval: **3040.00 ft (KB) To 3092.00 ft (KB) (TVD)**  
 Reference Elevations: 1830.00 ft (KB)  
 Total Depth: 3092.00 ft (KB) (TVD)  
 1820.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 10.00 ft

## Serial #: 8788

Inside

Press@RunDepth: 610.19 psig @ 3041.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.05.14 End Date: 2022.05.15 Last Calib.: 2022.05.15  
 Start Time: 19:18:18 End Time: 03:56:28 Time On Btm: 2022.05.14 @ 20:37:58  
 Time Off Btm: 2022.05.14 @ 23:17:58

TEST COMMENT: IF: Strong Blow . B.O.B. in 20sec. G.T.S. in 7 mins. (30)  
 IS: Strong Blow . B.O.B. in 20 secs, after Bleeding off for 5 minuts. Built to 633". (30)  
 FF: Strong Blow . B.O.B. & G.T.S. immediate. .1/4" Choke. (30)  
 FS: Strong Blow . B.O.B. immediaate after a 7 min Bleed off. Built over 800". (60)



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1500.14	96.14	Initial Hydro-static
1	755.54	97.09	Open To Flow (1)
5	422.68	100.37	Open To Flow (2)
35	610.19	106.94	Shut-In(1)
66	685.17	106.15	End Shut-In(1)
66	619.90	106.11	Open To Flow (3)
96	681.38	106.33	Shut-In(2)
159	684.12	105.84	End Shut-In(2)
160	1458.87	105.97	Final Hydro-static

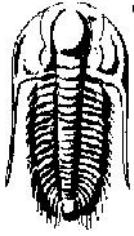
## Recovery

Length (ft)	Description	Volume (bbl)
59.00	GM 2%g 98m	0.83
192.00	GOCM 25%g 50%o 25%m	2.69
0.00	955' GIP	0.00
1837.00	GCO 100%o	25.77

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	11.14	93.56
Last Gas Rate	0.25	1.01	24.45
Max. Gas Rate	0.38	15.26	108.65

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

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1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

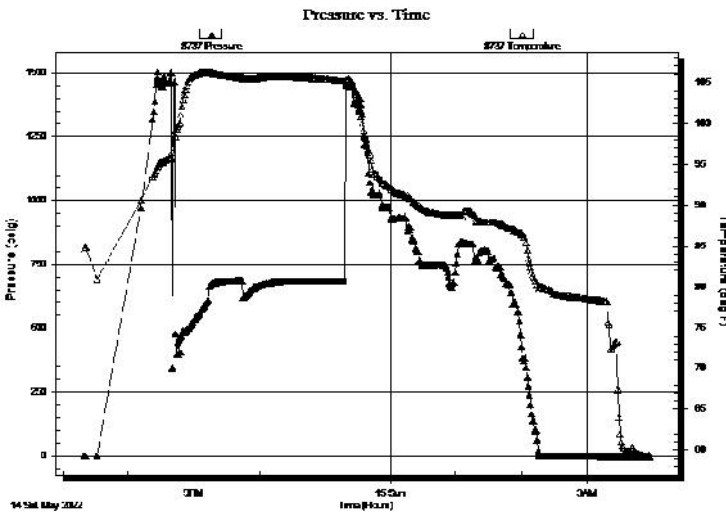
**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
Job Ticket: 68878 **DST#: 2**  
Test Start: 2022.05.14 @ 19:18:13

## GENERAL INFORMATION:

Formation: **Lansing C-D**  
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 20:38:58 Tester: Matt Smith  
Time Test Ended: 03:56:28 Unit No: 68  
**Interval: 3040.00 ft (KB) To 3092.00 ft (KB) (TVD)** Reference Elevations: 1830.00 ft (KB)  
Total Depth: 3092.00 ft (KB) (TVD) 1820.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8737 Outside**  
Press@RunDepth: psig @ 3041.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2022.05.14 End Date: 2022.05.15 Last Calib.: 2022.05.15  
Start Time: 19:19:39 End Time: 03:58:04 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF: Strong Blow . B.O.B. in 20sec. G.T.S. in 7 mins. (30)  
IS: Strong Blow . B.O.B. in 20 secs, after Bleeding off for 5 minuts. Built to 633". (30)  
FF: Strong Blow . B.O.B. & G.T.S. immediate. .1/4" Choke. (30)  
FS: Strong Blow . B.O.B. immediaate after a 7 min Bleed off. Built over 800". (60)



## PRESSURE SUMMARY

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

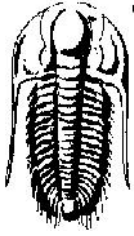
## Recovery

Length (ft)	Description	Volume (bbl)
59.00	GM 2%g 98m	0.83
192.00	GOCM 25%g 50%o 25%m	2.69
0.00	955' GIP	0.00
1837.00	GCO 100%o	25.77

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.38	11.14	93.56
Last Gas Rate	0.25	1.01	24.45
Max. Gas Rate	0.38	15.26	108.65

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
Job Ticket: 68878      **DST#: 2**  
Test Start: 2022.05.14 @ 19:18:13

### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	10	0.38	11.14	93.56
1	10	0.38	11.14	93.56
1	20	0.38	15.26	108.65
1	30	0.38	1.62	58.68
2	10	0.25	4.68	30.27
2	20	0.25	1.01	24.45



Serial #: 8788

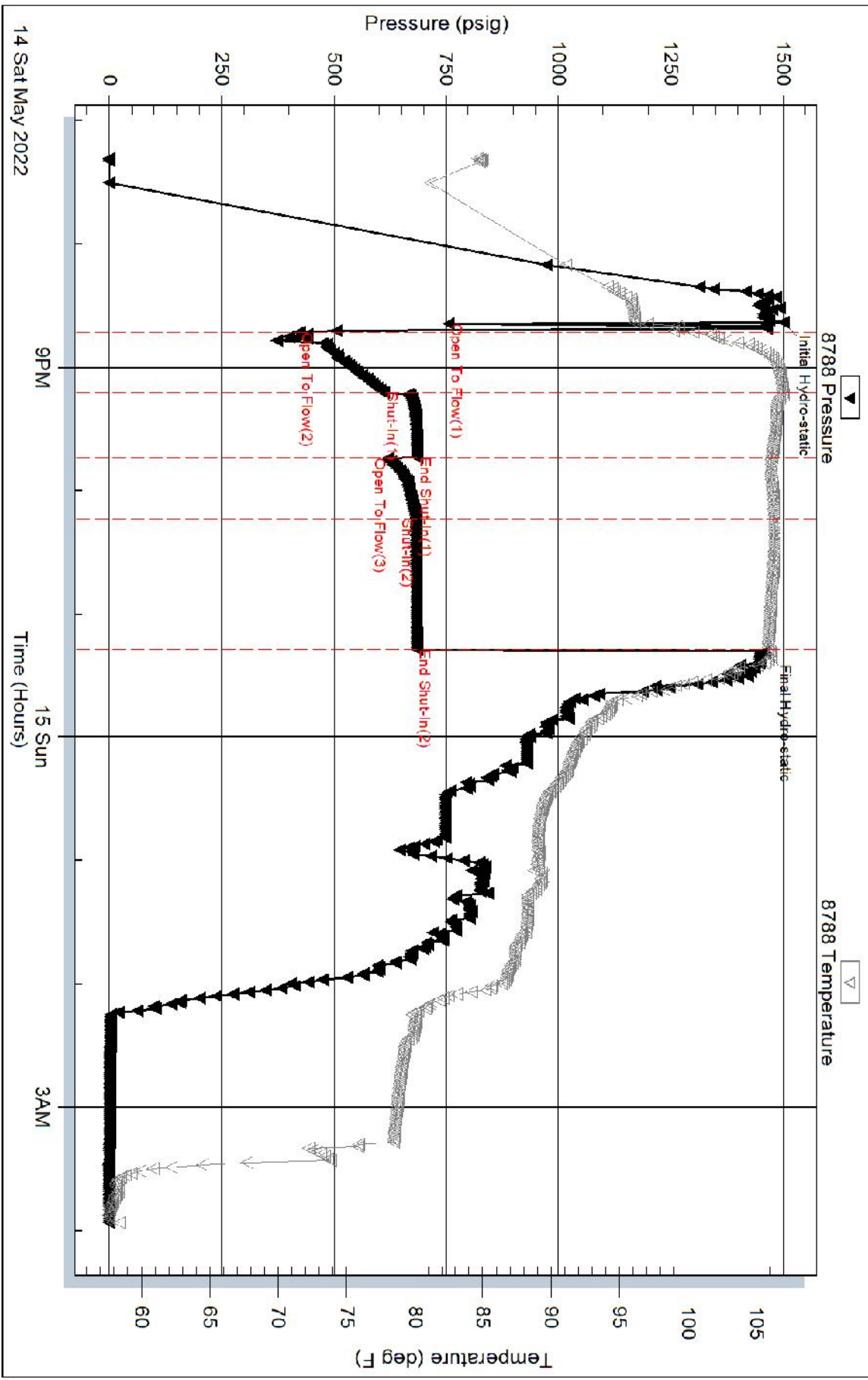
Inside

K & N Petroleum Inc

Soeken 21-1

DST Test Number: 2

### Pressure vs. Time

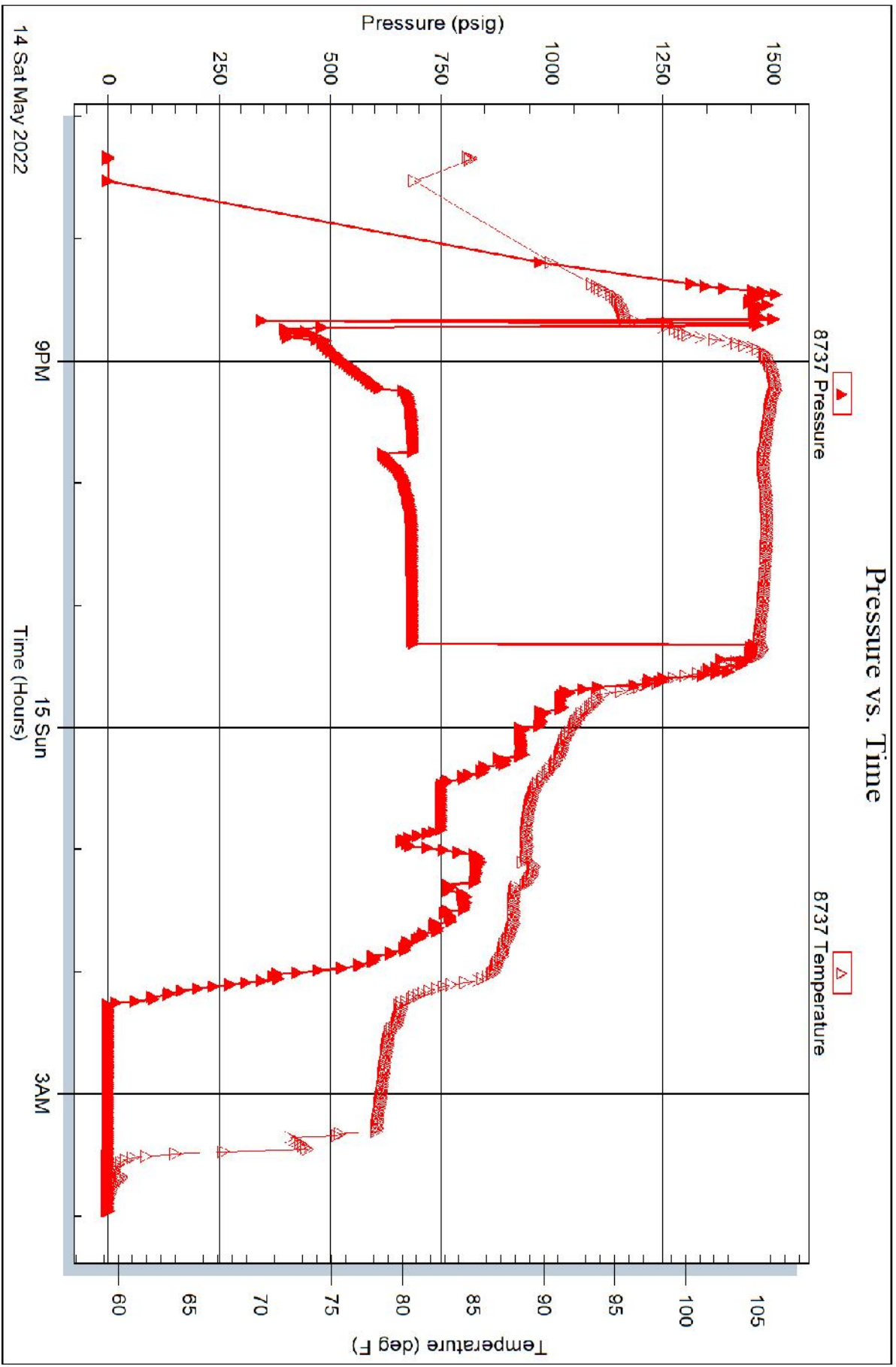


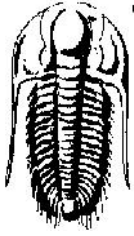
Serial #: 8737

Outside K & N Petroleum Inc

Soeken 21-1

DST Test Number: 2





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
 1105 Walnut St  
 Great Bend, Ks. 67530  
 ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
 Job Ticket: 68879 **DST#: 3**  
 Test Start: 2022.05.15 @ 10:23:34

## GENERAL INFORMATION:

Formation: **Lansing G**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 11:56:49 Tester: Matt Smith  
 Time Test Ended: 16:59:19 Unit No: 68  
 Interval: **3092.00 ft (KB) To 3114.00 ft (KB) (TVD)** Reference Elevations: 1830.00 ft (KB)  
 Total Depth: 3114.00 ft (KB) (TVD) 1820.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

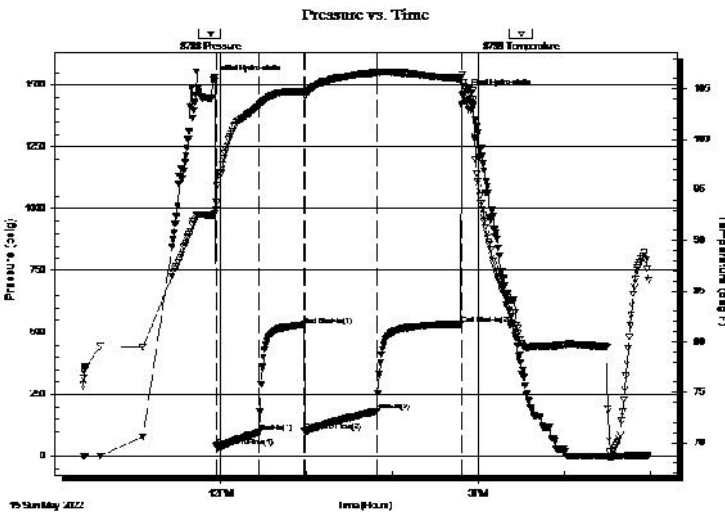
## Serial #: 8788

Inside

Press@RunDepth: 182.61 psig @ 3093.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.05.15 End Date: 2022.05.15 Last Calib.: 2022.05.15  
 Start Time: 10:23:39 End Time: 16:59:18 Time On Btm: 2022.05.15 @ 11:54:19  
 Time Off Btm: 2022.05.15 @ 14:49:49

TEST COMMENT: IF: Strong Blow . B.O.B. in 2 mins. Built to 47.79". (30)  
 IS: Weak Blow . Built to 2.27". (30)  
 FF: Strong Blow . B.O.B. in 10 mins. Built to 34.12". (45)  
 FS: Weak Blow . Built to 1.70". (60)

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1519.76	92.52	Initial Hydro-static
3	40.22	93.77	Open To Flow (1)
33	98.20	103.32	Shut-In(1)
64	531.45	104.66	End Shut-In(1)
65	102.41	104.33	Open To Flow (2)
115	182.61	106.57	Shut-In(2)
174	534.91	106.02	End Shut-In(2)
176	1464.71	105.20	Final Hydro-static

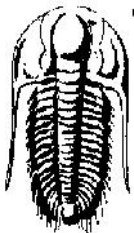
## Recovery

Length (ft)	Description	Volume (bbl)
192.00	MCW 2% <i>m</i> 98% <i>w</i>	2.69
64.00	GVSOMCW 2% <i>g</i> 5% <i>o</i> 2% <i>m</i> 91% <i>w</i>	0.90
64.00	GOWCM 15% <i>g</i> 20% <i>o</i> 15% <i>w</i> 50% <i>m</i>	0.90
36.00	GOWCM 20% <i>g</i> 35% <i>o</i> 5% <i>w</i> 40% <i>m</i>	0.50
0.00	448' GIP 100% <i>g</i>	0.00

## Gas Rates

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

\* Recovery from multiple tests



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

21-17s-11w Barton Co, Ks  
**Soeken 21-1**  
Job Ticket: 68879 **DST#: 3**  
Test Start: 2022.05.15 @ 10:23:34

### GENERAL INFORMATION:

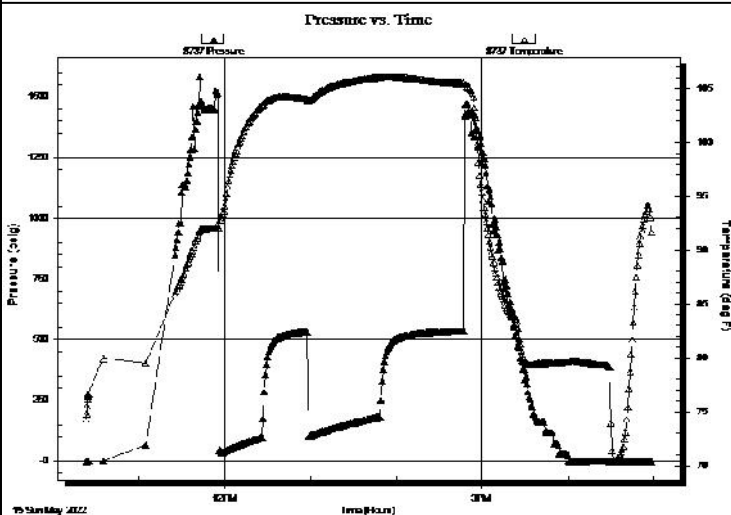
Formation: **Lansing G**  
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 11:56:49 Tester: Matt Smith  
Time Test Ended: 16:59:19 Unit No: 68  
**Interval: 3092.00 ft (KB) To 3114.00 ft (KB) (TVD)** Reference Elevations: 1830.00 ft (KB)  
Total Depth: 3114.00 ft (KB) (TVD) 1820.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8737**

**Outside**

Press@RunDepth: psig @ 3093.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2022.05.15 End Date: 2022.05.15 Last Calib.: 2022.05.15  
Start Time: 10:23:21 End Time: 16:59:00 Time On Btm:  
Time Off Btm:

TEST COMMENT: IF: Strong Blow . B.O.B. in 2 mins. Built to 47.79". (30)  
IS: Weak Blow . Built to 2.27". (30)  
FF: Strong Blow . B.O.B. in 10 mins. Built to 34.12". (45)  
FSI: Weak Blow . Built to 1.70". (60)



### PRESSURE SUMMARY

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

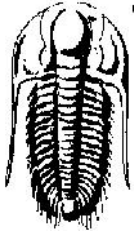
### Recovery

Length (ft)	Description	Volume (bbl)
192.00	MCW 2% <i>m</i> 98% <i>w</i>	2.69
64.00	GV SOMCW 2% <i>g</i> 5% <i>o</i> 2% <i>m</i> 91% <i>w</i>	0.90
64.00	GOWCM 15% <i>g</i> 20% <i>o</i> 15% <i>w</i> 50% <i>m</i>	0.90
36.00	GOWCM 20% <i>g</i> 35% <i>o</i> 5% <i>w</i> 40% <i>m</i>	0.50
0.00	448' GIP 100% <i>g</i>	0.00

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
Job Ticket: 68879      **DST#: 3**  
Test Start: 2022.05.15 @ 10:23:34

## 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:	90000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.60 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5200.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
192.00	MCW 2% <sub>m</sub> 98% <sub>w</sub>	2.693
64.00	GV SOMCW 2% <sub>g</sub> 5% <sub>o</sub> 2% <sub>m</sub> 91% <sub>w</sub>	0.898
64.00	GOWCM 15% <sub>g</sub> 20% <sub>o</sub> 15% <sub>w</sub> 50% <sub>m</sub>	0.898
36.00	GOWCM 20% <sub>g</sub> 35% <sub>o</sub> 5% <sub>w</sub> 40% <sub>m</sub>	0.505
0.00	448' GIP 100% <sub>g</sub>	0.000

Total Length: 356.00 ft      Total Volume: 4.994 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: None

Laboratory Name:      Laboratory Location:

Recovery Comments: 448 Feet of Gas in Pipe.  
Rw is .08 @ 81 Degrees = 90,000 Chlorides..

Serial #: 8788

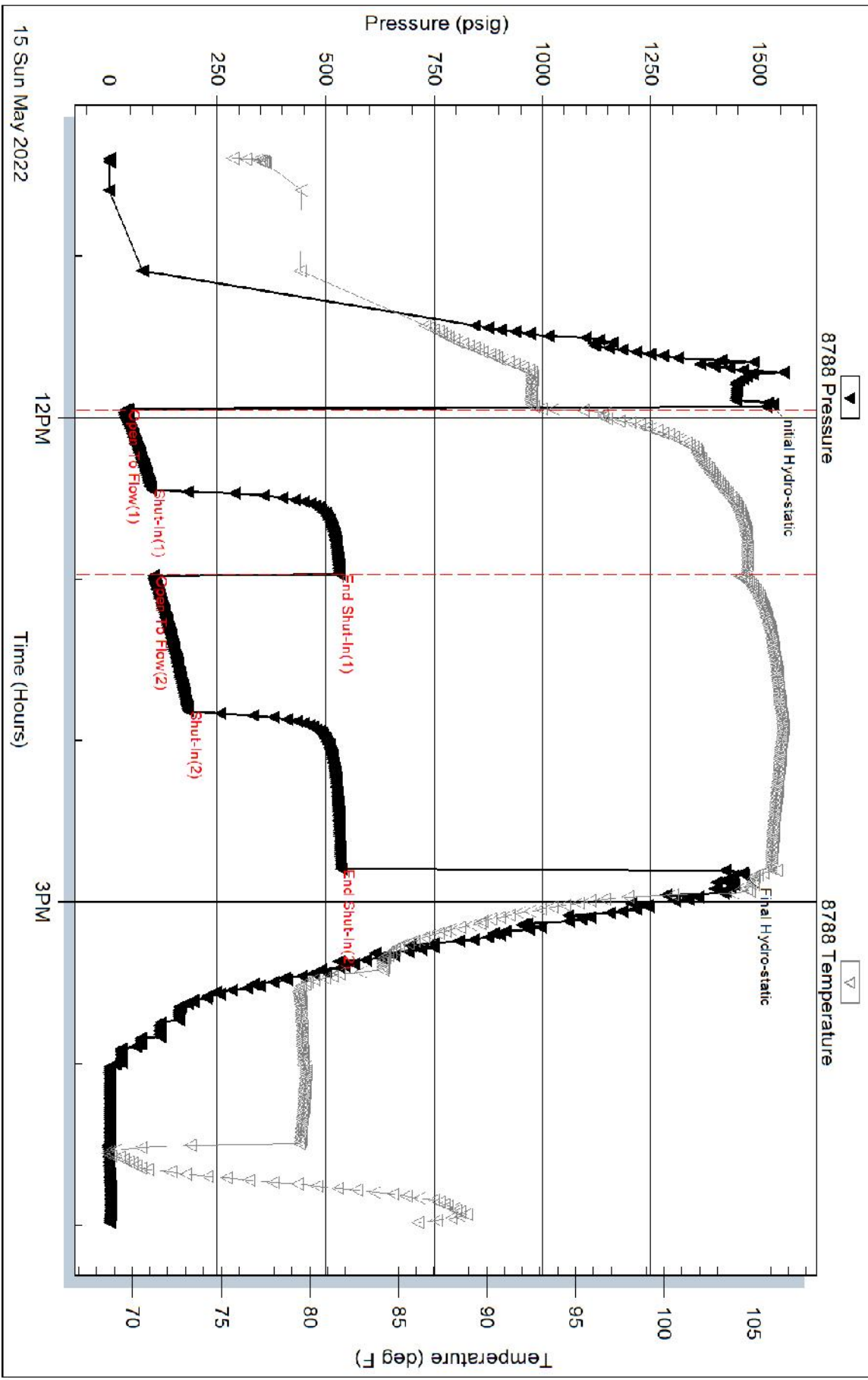
Inside

K & N Petroleum Inc

Soeken 21-1

DST Test Number: 3

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 68879

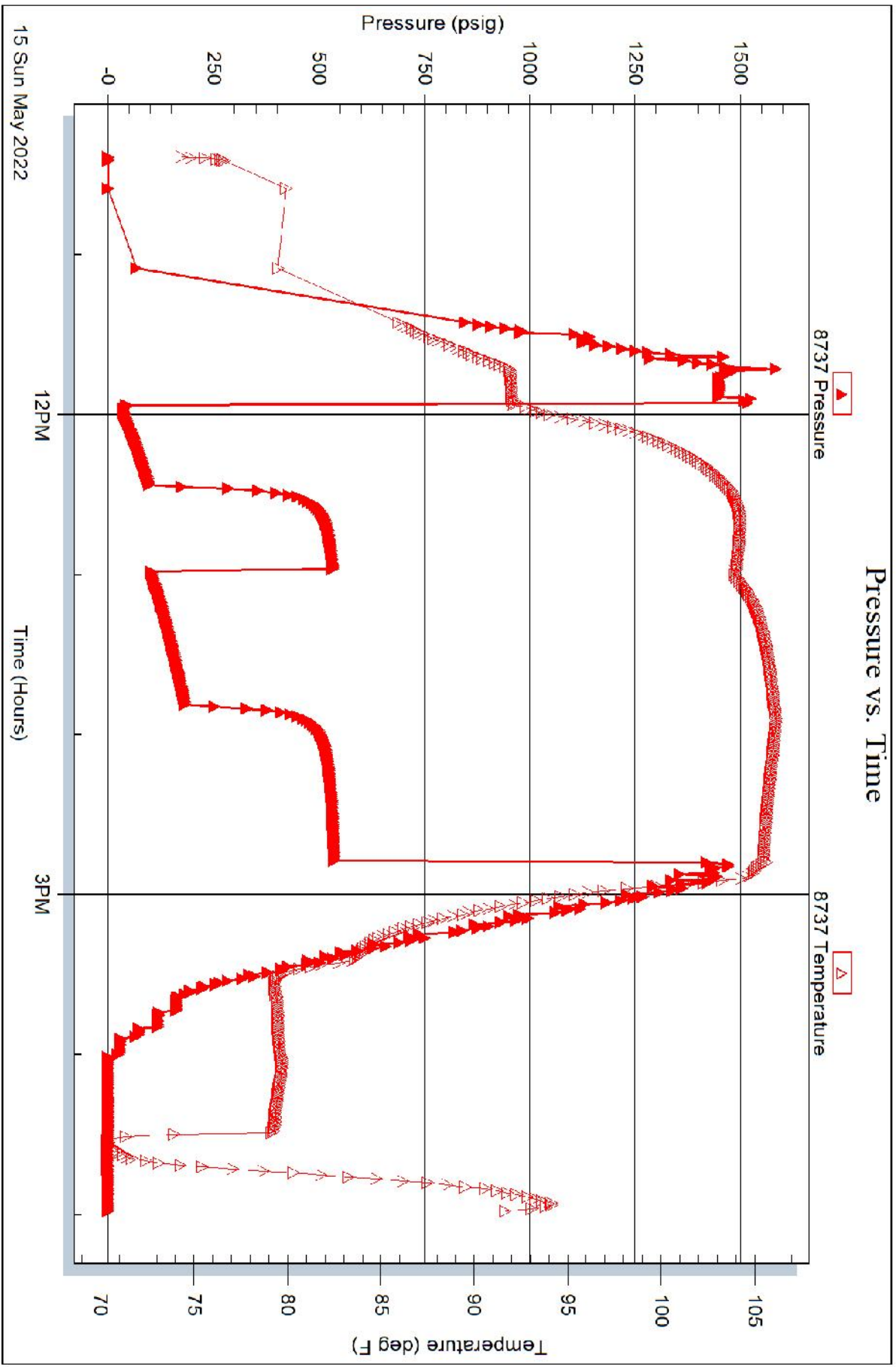
Printed: 2022.05.15 @ 19:01:04

Serial #: 8737

Outside K & N Petroleum Inc

Soeken 21-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 68879

Printed: 2022.05.15 @ 19:01:04



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
 1105 Walnut St  
 Great Bend, Ks. 67530  
 ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**

**Soeken 21-1**

Job Ticket: 68879

**DST#: 4**

Test Start: 2022.05.16 @ 02:01:22

## GENERAL INFORMATION:

Formation: **Lansing H-I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:38:37

Time Test Ended: 08:14:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

**Interval: 3148.00 ft (KB) To 3200.00 ft (KB) (TVD)**

Total Depth: 3200.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1830.00 ft (KB)

1820.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8788 Inside**

Press@RunDepth: 39.52 psig @ 3149.00 ft (KB)

Start Date: 2022.05.16

End Date: 2022.05.16

Start Time: 02:01:27

End Time: 08:14:06

Capacity: 8000.00 psig

Last Calib.: 2022.05.16

Time On Btm: 2022.05.16 @ 03:38:07

Time Off Btm: 2022.05.16 @ 06:37:22

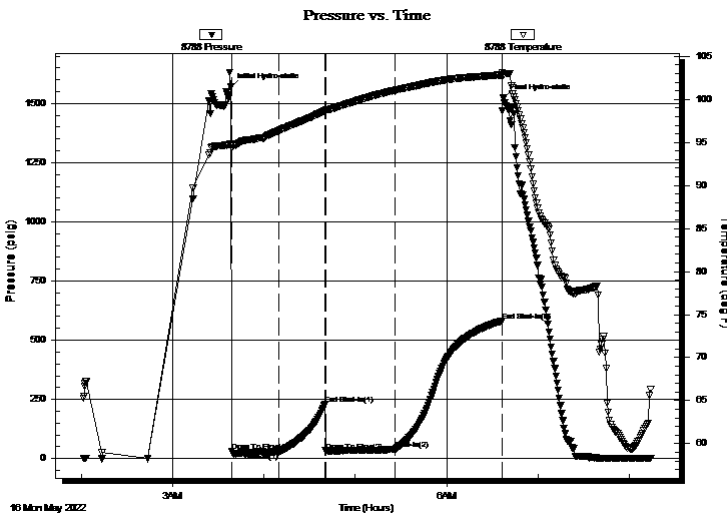
**TEST COMMENT:** IF: Strong Blow . B.O.B. in 5 mint. Built to 17.43". (30)

IS: No Blow . (30)

FF: Strong Blow . (45)

FS: No Blow . (60)

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1568.84	94.80	Initial Hydro-static
1	31.98	94.37	Open To Flow (1)
32	27.45	96.36	Shut-In(1)
62	227.97	98.67	End Shut-In(1)
63	29.64	98.76	Open To Flow (2)
109	39.52	101.06	Shut-In(2)
179	581.57	102.85	End Shut-In(2)
180	1522.42	102.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
64.00	GOCM 27%g 32%o 41%m	0.90
0.00	448' GIP 100%g	0.00

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
 1105 Walnut St  
 Great Bend, Ks. 67530  
 ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**

**Soeken 21-1**

Job Ticket: 68879

**DST#: 4**

Test Start: 2022.05.16 @ 02:01:22

## GENERAL INFORMATION:

Formation: **Lansing H-I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:38:37

Time Test Ended: 08:14:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

**Interval: 3148.00 ft (KB) To 3200.00 ft (KB) (TVD)**

Reference Elevations: 1830.00 ft (KB)

Total Depth: 3200.00 ft (KB) (TVD)

1820.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8737 Outside**

Press@RunDepth: psig @ 3149.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.05.16 End Date: 2022.05.16

Last Calib.: 2022.05.16

Start Time: 02:01:33 End Time: 08:14:12

Time On Btm:

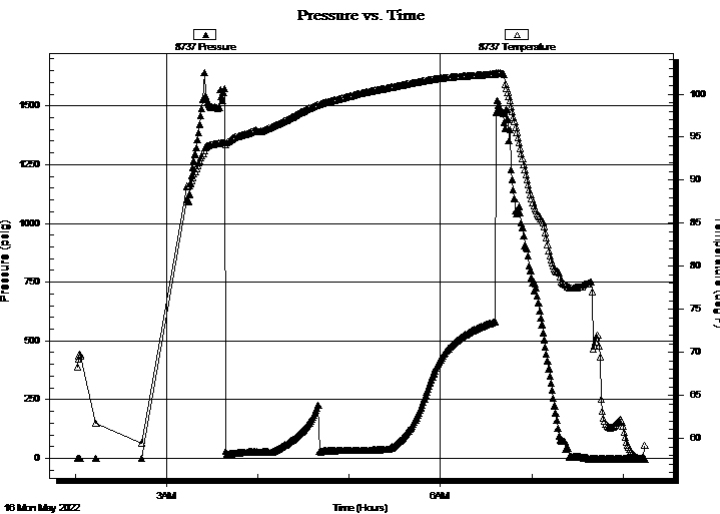
Time Off Btm:

**TEST COMMENT:** IF: Strong Blow . B.O.B. in 5 mint. Built to 17.43". (30)

IS: No Blow . (30)

FF: Strong Blow . (45)

FS: No Blow . (60)



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
64.00	GOCM 27%g 32%o 41%m	0.90
0.00	448' GIP 100%g	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**  
**Soeken 21-1**  
Job Ticket: 68879      **DST#: 4**  
Test Start: 2022.05.16 @ 02:01:22

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 8.00 lb/gal	Cushion Length: ft	Water Salinity:	4900 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4900.00 ppm			
Filter Cake: 0.20 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
64.00	GOCM 27%g 32%o 41%m	0.898
0.00	448' GIP 100%g	0.000

Total Length: 64.00 ft      Total Volume: 0.898 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: None  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

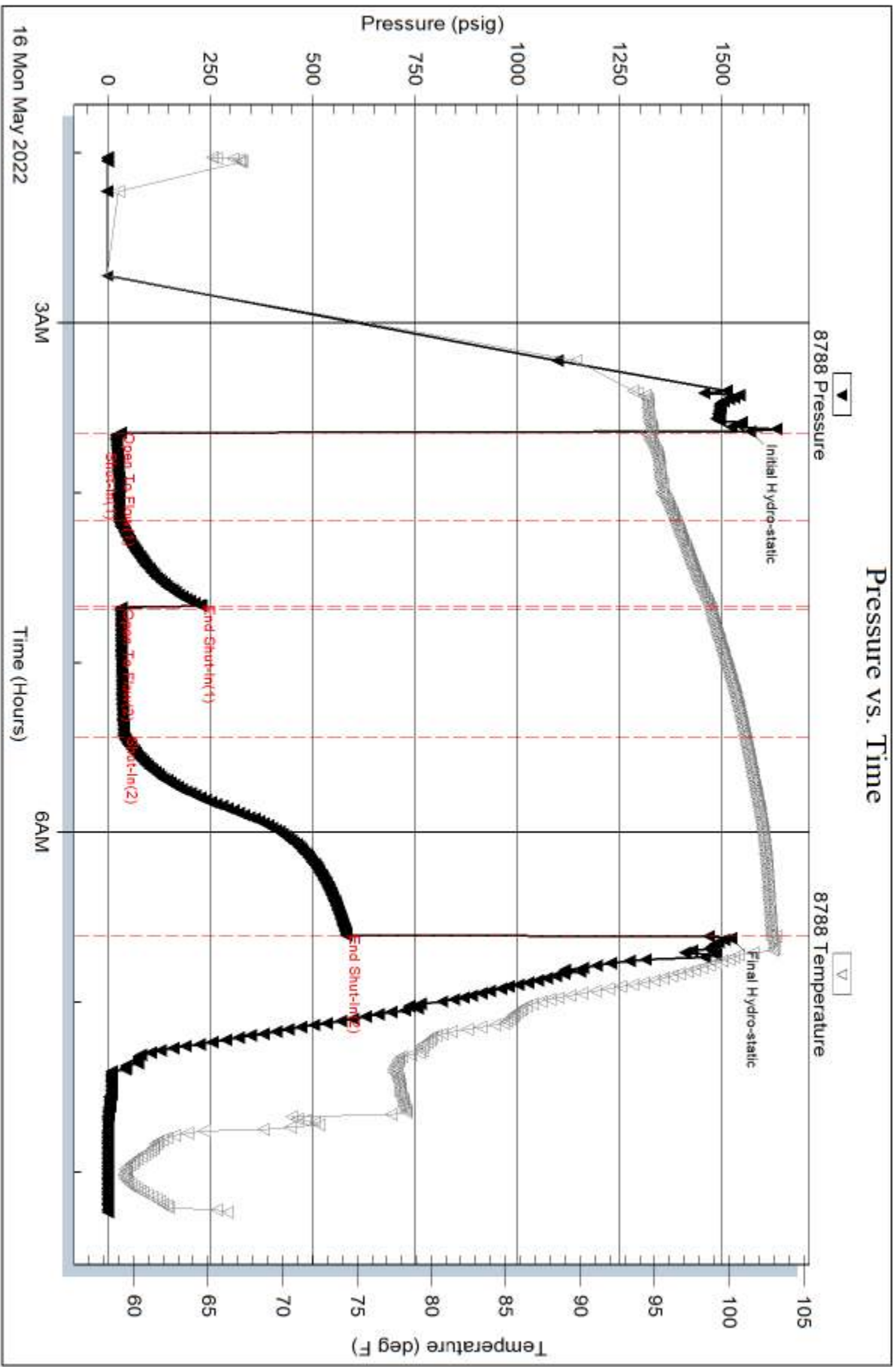
Serial #: 8788

Inside

K & N Petroleum Inc

Soeken 21-1

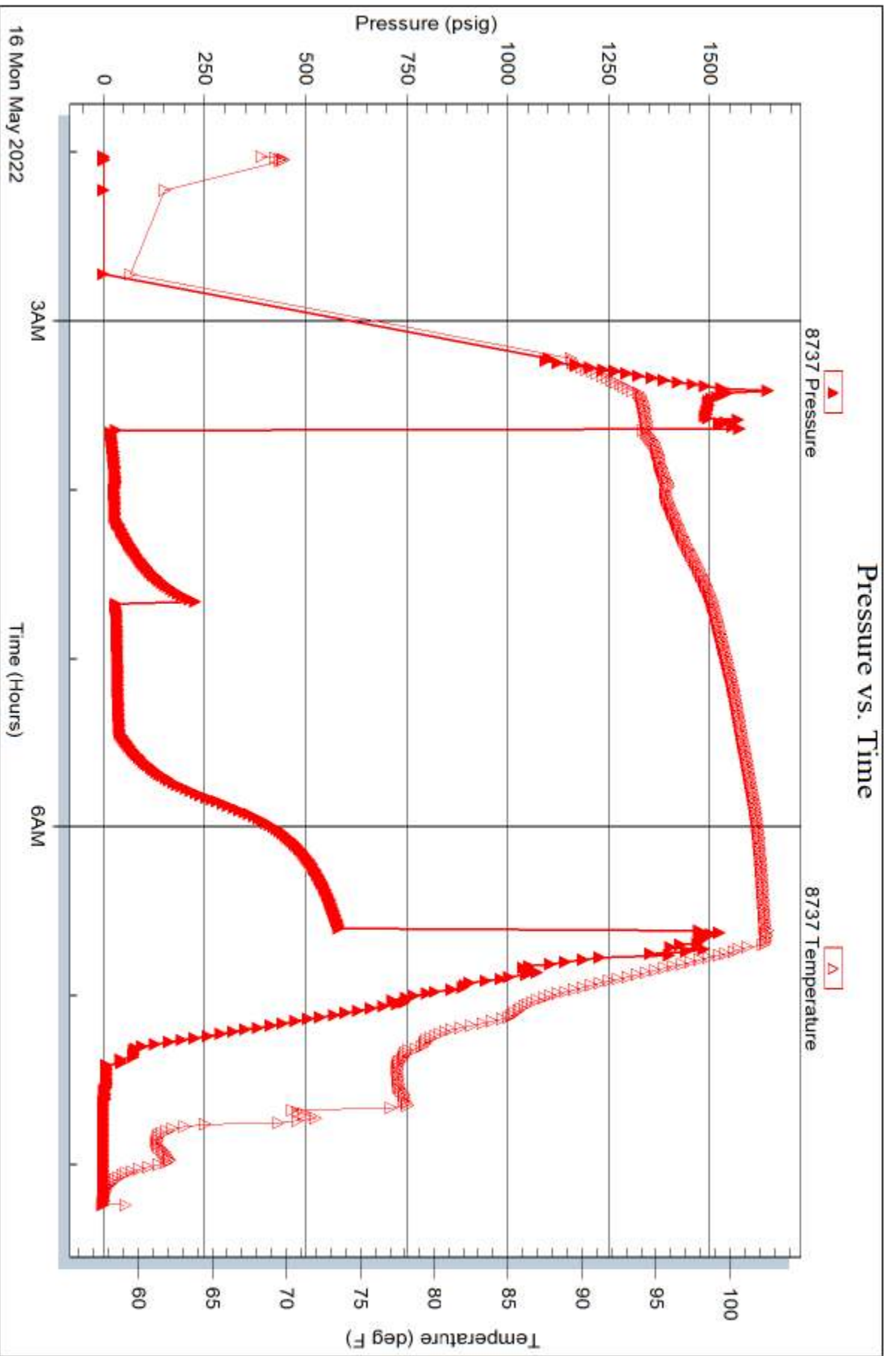
DST Test Number: 4



Tribble Testing, Inc

Ref. No: 68879

Printed: 2022.05.16 @ 08:56:12





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

K & N Petroleum Inc  
1105 Walnut St  
Great Bend, Ks. 67530  
ATTN: Max Lovely

**21-17s-11w Barton Co, Ks**

**Soeken 21-1**

Job Ticket: 68881

**DST#: 5**

Test Start: 2022.05.16 @ 20:02:47

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:33:32  
 Time Test Ended: 04:19:32  
 Interval: **3245.00 ft (KB) To 3279.00 ft (KB) (TVD)**  
 Total Depth: 3279.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Matt Smith  
 Unit No: 68  
 Reference Elevations: 1830.00 ft (KB)  
 1820.00 ft (CF)  
 KB to GR/CF: 10.00 ft

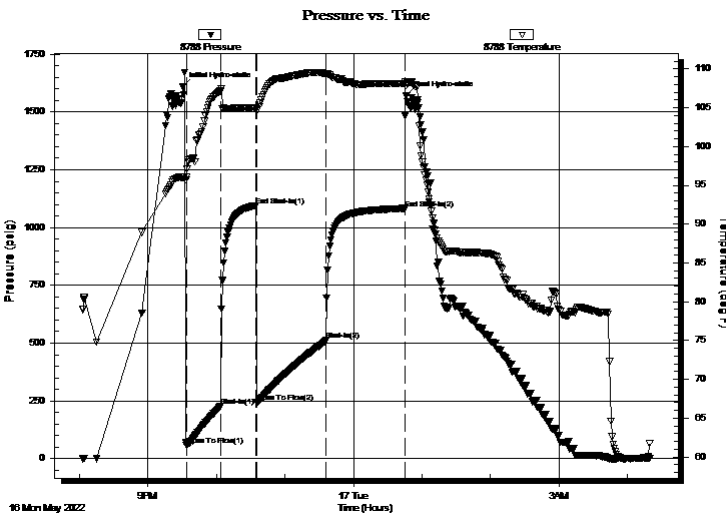
## Serial #: 8788

Inside

Press@RunDepth: 511.49 psig @ 3246.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.05.16 End Date: 2022.05.17 Last Calib.: 2022.05.17  
 Start Time: 20:02:52 End Time: 04:19:31 Time On Btm: 2022.05.16 @ 21:30:17  
 Time Off Btm: 2022.05.17 @ 00:46:17

TEST COMMENT: IF: Strong Blow . B.O.B. in 3 mins. Built to 68.49". (30)  
 IS: No Blow . (30)  
 FF: Strong Blow . B.O.B. in 5 mins. Built to 71.63". (60)  
 FS: No Blow . (60)

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1607.73	96.03	Initial Hydro-static
4	57.95	96.02	Open To Flow (1)
34	227.91	107.17	Shut-In(1)
65	1094.58	105.02	End Shut-In(1)
65	242.13	104.58	Open To Flow (2)
126	511.49	109.36	Shut-In(2)
195	1082.71	108.09	End Shut-In(2)
196	1571.84	107.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
64.00	GOCM 10%g 15%o 75%m	0.90
128.00	GOCM 25%g 10%o 65%m	1.80
1516.00	CO 100%o	21.27
0.00	352' GIP 100%g	0.00

\* Recovery from multiple tests

## Gas Rates

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



# DRILL STEM TEST REPORT

K & N Petroleum Inc

21-17s-11w Barton Co, Ks

1105 Walnut St  
Great Bend, Ks. 67530

**Soeken 21-1**

Job Ticket: 68881

**DST#: 5**

ATTN: Max Lovely

Test Start: 2022.05.16 @ 20:02:47

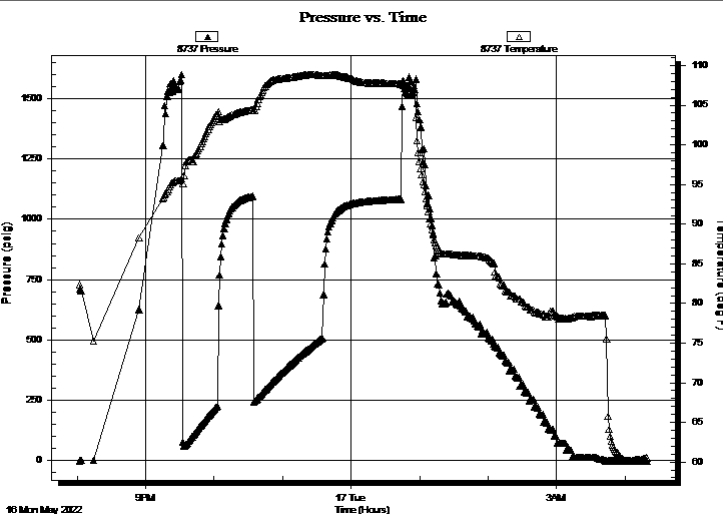
## GENERAL INFORMATION:

Formation:	<b>Arbuckle</b>			Test Type:	Conventional Bottom Hole (Reset)
Deviated:	No Whipstock:		ft (KB)	Tester:	Matt Smith
Time Tool Opened:	21:33:32			Unit No:	68
Time Test Ended:	04:19:32			Reference Elevations:	1830.00 ft (KB)
Interval:	<b>3245.00 ft (KB) To 3279.00 ft (KB) (TVD)</b>				1820.00 ft (CF)
Total Depth:	3279.00 ft (KB) (TVD)			KB to GR/CF:	10.00 ft
Hole Diameter:	7.88 inches	Hole Condition:	Fair		

## Serial #: 8737 Outside

Press@RunDepth:		psig @	3246.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2022.05.16	End Date:	2022.05.17	Last Calib.:	2022.05.17
Start Time:	20:02:17	End Time:	04:18:56	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: Strong Blow . B.O.B. in 3 mins. Built to 68.49". (30)  
 IS: No Blow . (30)  
 FF: Strong Blow . B.O.B. in 5 mins. Built to 71.63". (60)  
 FS: No Blow . (60)



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
64.00	GOCM 10%g 15%o 75%m	0.90
128.00	GOCM 25%g 10%o 65%m	1.80
1516.00	CO 100%o	21.27
0.00	352' GIP 100%g	0.00

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

K & N Petroleum Inc

**21-17s-11w Barton Co, Ks**

1105 Walnut St  
Great Bend, Ks. 67530

**Soeken 21-1**

Job Ticket: 68881

**DST#: 5**

ATTN: Max Lovely

Test Start: 2022.05.16 @ 20:02:47

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 5.40 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 3400.00 ppm  
Filter Cake: 0.20 inches

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

Oil API: deg API  
Water Salinity: 3400 ppm

## Recovery Information

Recovery Table

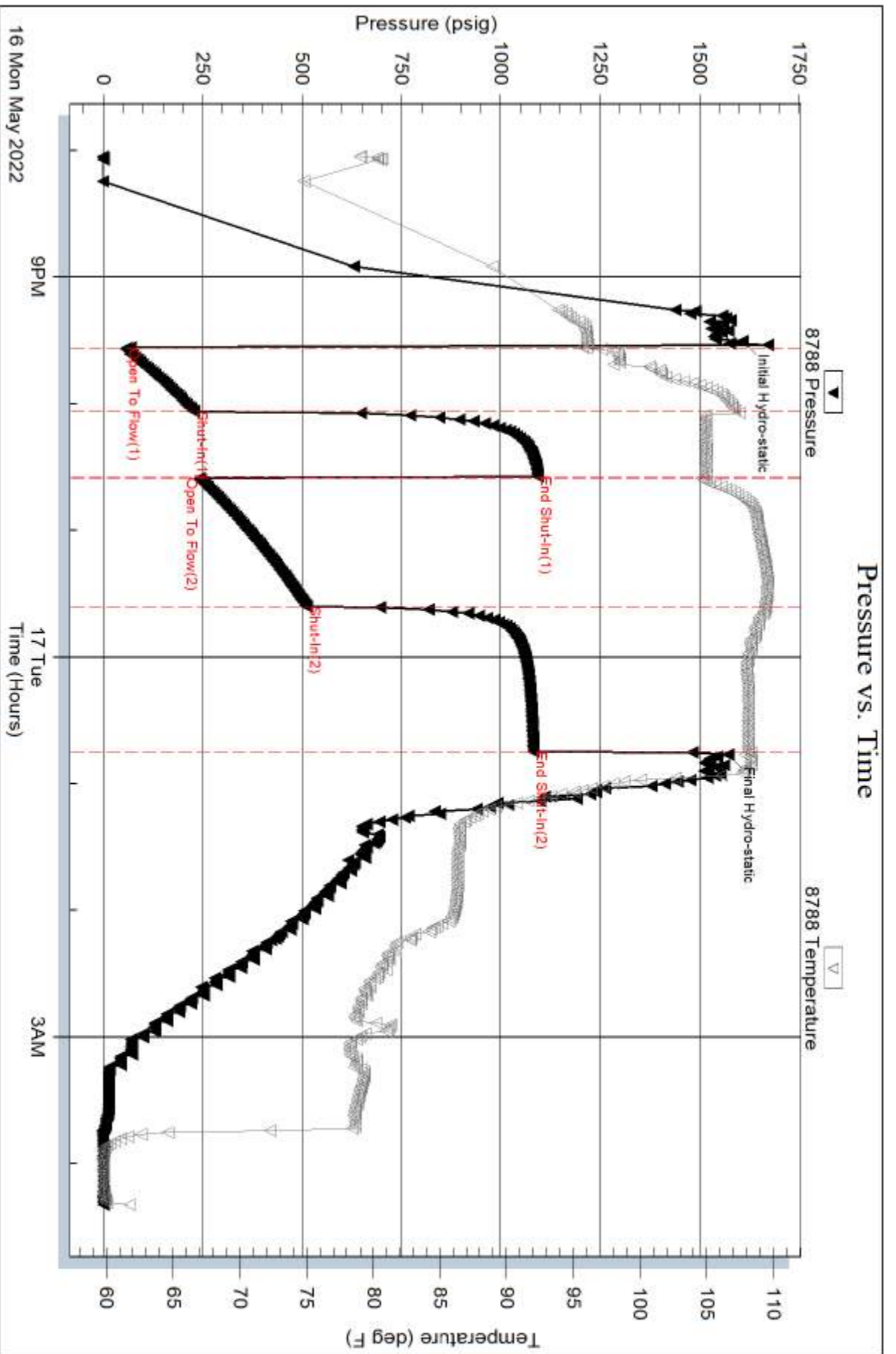
Length ft	Description	Volume bbl
64.00	GOCM 10%g 15%o 75%m	0.898
128.00	GOCM 25%g 10%o 65%m	1.796
1516.00	CO 100%o	21.265
0.00	352' GIP 100%g	0.000

Total Length: 1708.00 ft      Total Volume: 23.959 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #: None

Laboratory Name:      Laboratory Location:

Recovery Comments: Gravity Is 40 At 60 Degrees



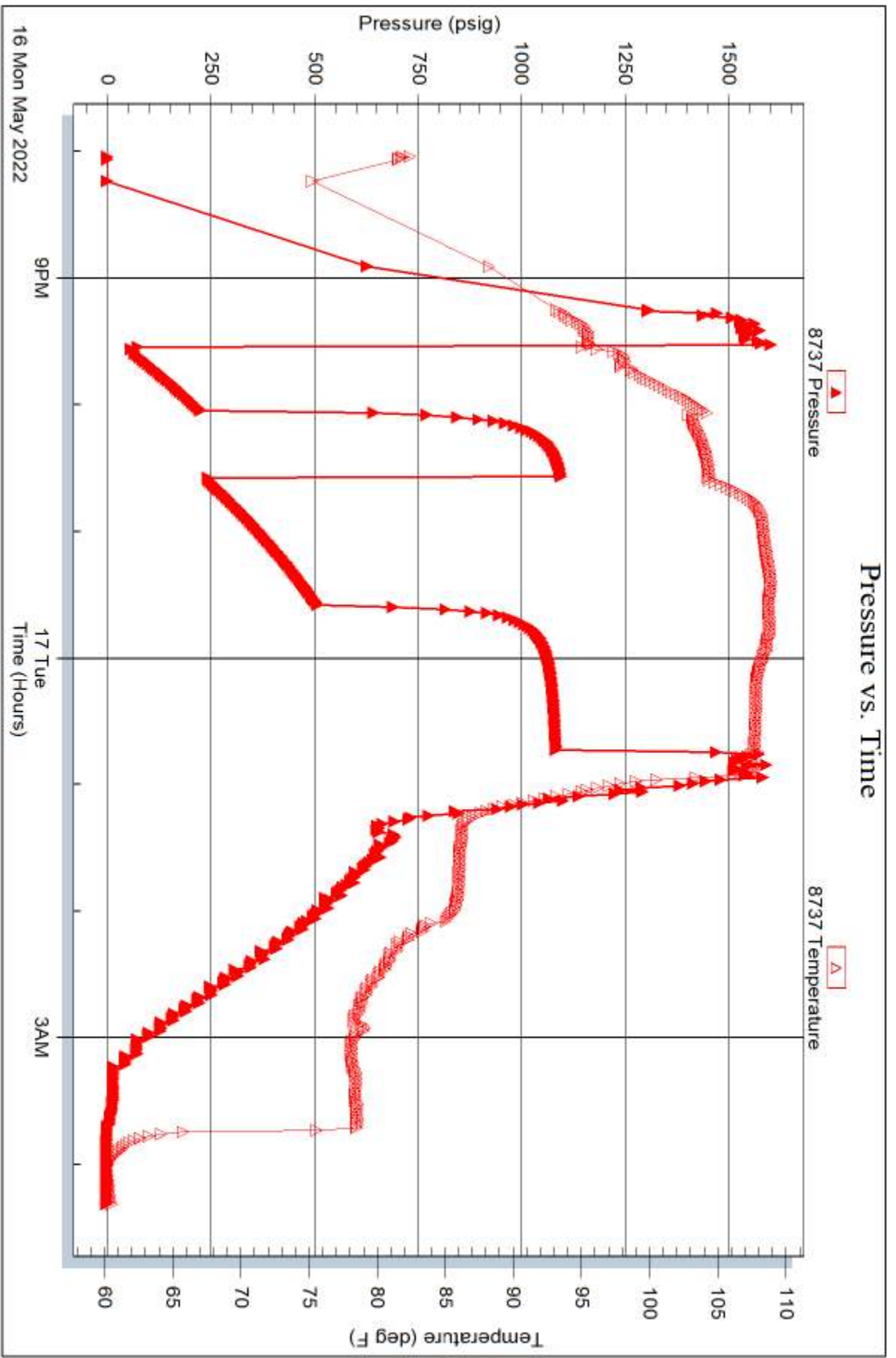


Serial #: 8737

Outside K & N Petroleum Inc

Soeken 21-1

DST Test Number: 5



Max R. Lovely

# GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY K&N Petroleum  
 LEASE Soeken 21-1  
 FIELD Kraft - Prusa  
 LOCATION W/2 SE SE SE  
 SEC 21 TWP 17 RGE 11W  
 COUNTY Barton STATE KS  
 CONTRACTOR Southwind Rig #1  
 SPUD 5-10-22 COMP 5-17-22  
 RTD 3375 LTD 3376  
 MUD UP 2620 TYPE MUD Chem

ELEVATIONS  
 KB 1830

DF  
 GL 1820

Measurements Are All  
 From KB

CASING  
 SURFACE 8 5/8 @ 654'  
 PRODUCTION 5 1/2"

ELECTRICAL SURVEYS  
 COMP N/D  
 DUAL IND SONIC

## FORMATION TOPS AND STRUCTURAL POSITION

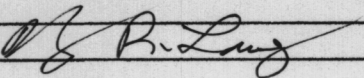
FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION		
				A	B	C
Anhydrite	633	648	1182	1192	1199	
Base Anhydrite	653	658	1172			
Topeka	NA			-747		
Heebner	2885	2886	-1056	-1042	-1055	
Toronto	2900	2902	-1072	-1059	-1074	
Douglas	2914	2914	-1084	-1071	-1090	
Brown Lime	2987	2994	-1164	-1149		
Lansing	3003	3005	-1175	-1161	-1183	-1183
BKC	3226	3265	-1435	-1419		
Arbuckle	3269	3268	-1438	-1423	-1454	-1451
RTD	3375	3376				

## REFERENCE WELLS FOR STRUCTURE

- A Blueridge Soeken #11 S/2 SE NE NW 22-17-11W  
 B JR Evans #1 Soeken 1620'FSL, 200'FEL 21-17-11W  
 C Vickers #3 Soeken NE SE SE 21-17-11W

## REMARKS

5 1/2" CASING RAN TO FURTHER EVALUATE THE SOEKEN 21-1 FOR ECONOMIC CAPABILITIES.

RESPECTFULLY SUBMITTED  


## LEGEND

								
Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

DRILLING TIME IN MINUTES  
 PER FOOT

Rate of Penetration Decreases

LITH

OIL

LOG 7710

Rate of Penetration Decreases

5" 10" 15" 20" 25"

DEPTH

GEOLOGY

SAMPLE DESCRIPTIONS

SHOWS

REMARKS

600

ANHYDRITE  
633 + 1197BASE  
ANHYDRITE  
653 + 1177

700

2700

LS, GRY, VF XTLN, DNS, HRD,  
TITE, NS

SH, GRY

LS, TAN, BRN, FXTLN, BRTL,  
M HRD, P XTLN Ø, SCT FOSS, NSCHT TAN/GRY, SL OPAQ,  
SHARP, Pcs ABUN FOSS, NSLS, TAN, BRN, WHT, VF XTLN,  
Pcs V DNS + HRD, Pcs w/ ABUN  
SML FOSS, MOSTLY TITE, NSLS, CRM, BUFF, SOFT, BRTL,  
V SL CHLKY, F → P XTLN Ø, NS

LS, WHT, CRM, VF XTLN, V DNS

GEO ON LOCATION  
5-13-2022MUD CHECK  
VIS: 60+

WT: 8.8  
CHLOR: 3.400 LCM: 2  
FILT: 5.2

2800

LS, BUFF, F → VF XTLN, CLEAN,  
HRD, NO VIS Ø, NS

LS, CRM, TAN, GRY, F XTLN,  
M HRD, NO VIS Ø, NS  
SCT CRIN'S

SH, GRY, LT GRY,

LS, GRY/TAN, F XTLN, V HRD, NS

LS, BRN, TAN, SOFT, ALGAL, G Ø  
NS

CHT, BLK, WHT, FRESH, SHARP  
NS

LS, GRY, F + M XTLN, M HRD,  
F → G XTLN Ø, SCT FO N TRAY,  
SL DULL FLUOR STNG, M-DK BRN  
FO, NO ODOR, SCT FO

SCT FO  
NO ODOR  
FLUOR  
STN

LS, BRN, VF XTLN, DNS, V HRD  
TITE, 1 PC W/G EDGE STNG,

NO ODOR

CHT, GRY, BLK, BRN, SHARP,  
FRESH, NS

LS, BRN, CRM, F + M XTLN, Pcs  
W/ ABUN SML FOSS, M HRD,  
P Ø, NS

HEEBNER  
2885-1055

SH, BLK, DK GRY, CARB  
LS, TAN, BRN, F XTLN, DNS,  
HRD, NO Ø

TORONTO  
2900

2900-1070

LS, WHT, F + M XTLN, S → M HRD,  
G PP XTLN Ø STRKS, DD BLK  
OIL STNG, N Ø, NO ODOR, NO FO  
NO FLUOR

DD  
STNG  
NO ODOR

DOUGLAS  
2914-1084

LS, CRM, TAN, F XTLN, SCT  
FOSS, HRD, NO VIS Ø, NS

SH, GRY, GRN

SH, GRY

SH, GRY, GRN, RED, BLK, SCT  
GRY SCT STN

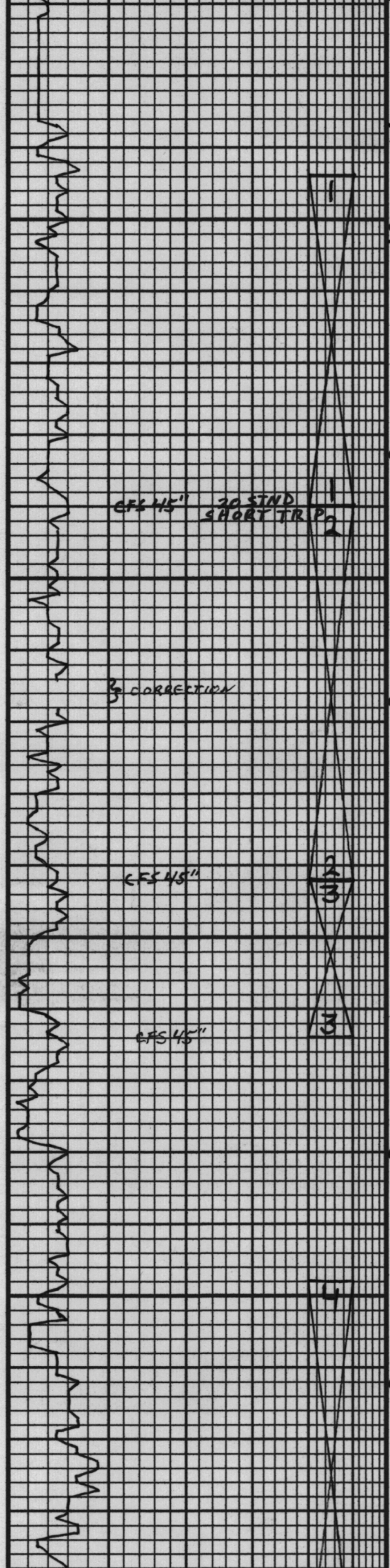
SS, GRY CMT, MED GRN, W SORT  
CLR QTZ GRNS, P → FCMT'D,

G INT GRNLR Ø, NS

SS, GRY/GRN CMT, FINE CLR  
GRNS, W SORT, SL SLTY,  
FAIR Ø, SOFT, NS

CFS 46

CFS 46



BROWN LIME  
2987-1157

LANSING  
3000  
3003-1173

DEV 1 1/4°

3' correction

3100

TRASHY SAMPLES  
SLTSTN, GRAY, ABUN MICA

LS, RED/BRN, VF XTLN, VHRD,  
DNS, NO APP Ø, NS

LS, WHT, VF XTLN, MHRD, G PP  
+ VUG Ø, GSFO - BRK, TAN OIL,  
G FLUOR, G ODOR

LS, WHT, VF XTLN, MHRD, PP +  
SML VUG Ø, DK STNG, SCT BRN  
FO on BRK, ? GAS BBLs, G FLUOR

R.A.  
INCR STNG, INCR GAS  
G RAINBOW N CUP

R.A. SCT CHALK w/STNG + FO,  
G ODOR

LS, BRN, VF XTLN, VHRD, V DNS,  
W CMT'D MED DOLS w/N, TITE  
NS

SH, GRN

LS, BUFF, F XTLN w/LG TAN FRAGS  
w/ CMT'D FRAGS, MHRD, SL BRTL  
VP Ø, NS

SH, GRN

LS, BRN, GRN, F XTLN w/LG TAN  
FRAGS, NO VIS Ø, NS

LS, WHT, m → CRS XTLN, HRD,  
G XTLN + VUG Ø, LT ODOR, SLOW  
BLEED, LT BRN O + GAS, SL RAINBOW  
GSFO - BRK

LS, GRN / BRN, F XTLN, DNS, TITE  
NS

CHT, BRN + WHT, FRESH, SHARP, NS

LS, WHT / CRM, VF XTLN, Pcs w/G  
EDGE STNG - LT ODOR, G FLUOR  
FO

LS, WHT / CRM, F → CRS XTLN, SL  
DOL + FOSS, G Ø, G FLUOR FO,  
SSG, LT ODOR

SH, VARICOLOR

LS, CRM / BUFF, F XTLN, BRTL,  
HRD, VG OOM + VUG Ø, G FLUOR  
STNG, GSFO + GAS, SL BLEED

LS, TAN, WHT, F XTLN, VHRD,  
NO APP Ø, NS

SH, GRN, GRN

SH, BLK, CARB  
SH, GRN

LS, BUFF, F XTLN, HRD, G OOM Ø,  
V SL FLUOR STNG, V FEW FO SPTS,  
NO ODOR

LS, GRN, WHT, VHRD, ABUN DK GRN  
W CMT'D CONGL, TITE, NS

LS, BRN, GRN, VF XTLN, DNS,  
HRD, TITE, NS

LS, BUFF, F XTLN, VHRD, G SCT  
VUG + SL OOM Ø, G FLUOR STN,  
G ODOR, LT BRN FO, G FO N TRAY

LS, BRN, TAN, F XTLN, SCT W CMT  
DOLS, VHRD, Pcs OOM, MOSTLY  
TITE, NS

LS, WHT, F XTLN, SL CHLKY, MHRD,  
F Ø, G FLUOR, FSFO, SCT VUG Ø,  
G XTLN Ø, FAIR BLEED, G ODOR

LS, TAN, VF XTLN, V DNS + HRD,  
TITE, NS

LS, WHT, F XTLN, ABUN FOSS,  
SL HRD, G FOSS Ø, GSGAS, FSFO,  
STR.

G ODOR  
GSFO  
FLUOR

G ODOR  
SCT FO  
? GAS  
RAINBOW

INCR  
GAS  
RAINBOW

G ODOR  
STNG  
FO

LT ODOR  
SL BLEED  
FO  
FLUOR

LT ODOR  
FLUOR  
FO

LT ODOR  
SSG  
GSFO

GSFO  
BLEED  
GSGAS

0 SPTS

FLUOR  
FSFO  
G ODOR  
LT BRN Ø  
GASSY

FSFO  
GSGAS  
STR.

DST #1 2994-3040  
30.30.45.60  
Tool SLID 3'  
IF: BOB 20sec, GTS 3min  
ISI: NO BB  
FF: GTS Immed  
FS: NO BB  
REC: 64' GOCM - 20%G, 40%O  
64' GOCM - 40%G, 40%O  
64' GOCM - 21%G, 75%O  
32' GOCM - 13%G, 80%O  
FP: 74' 151-154, 190-174 7/8"  
SIP: 992-985  
HP: 1482-1440

STRAP 3067.62  
BOARD 3067.93 "CORR"  
SHORT .31

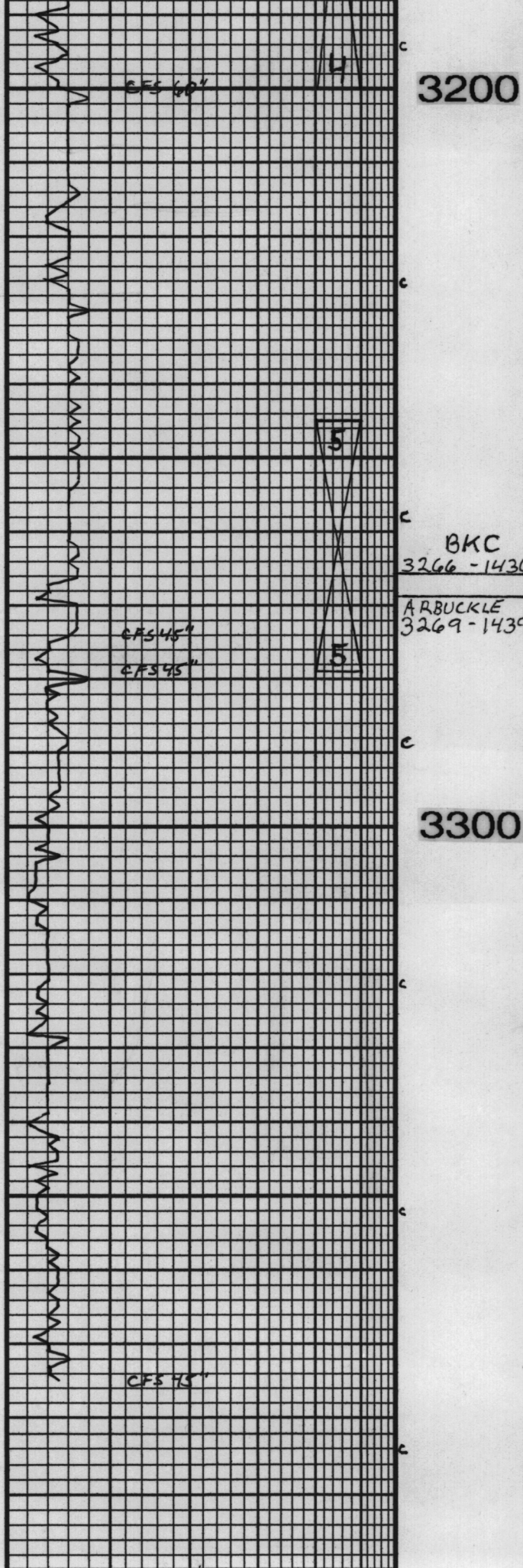
7:AM 5-14-22  
DST #1 @ 3040'  
MUD CHECK  
VIS: 56 WT: 9.2  
CHLOR: 5,200 LCM: 2  
FILT: 5.6

7:AM 5-15-22  
DRILLING @ 3092'  
MUD CHECK  
VIS: 58 WT: 9.0  
CHLOR: 4900 LCM: 1  
FILT: 5.2

DST #2 3040-3092  
30.30.30.60  
IF: GTS 7min  
ISI: BOB 20 sec, 633"  
FF: GTS Immed - 1/4" choke  
FSI: BOB Immed → 800"  
REC: 955' GIP  
251' GOCM  
1837' CGO - 36°  
FP: 423-610, 620-681  
SIP: 685-684  
HP: 1500-1459

DST #3 3092-3114  
30.30.45.60  
IF: BOB 2 min → 47"  
ISI: 2" BB  
FF: BOB 10 min → 34"  
FSI: 1.7' BB  
REC: 448' GIP:  
36' GOWCM: 20%G, 35%O  
64' GOWCM: 15%G, 20%O  
64' GVSOMCW: 21%G, 5%O  
192' MCA

FP: 40-98, 102-183  
SIP: 531-535  
HP: 1570-1115



STR ODDK, Pcs G, GASSY OIL BLEED, LS. INCR OOL, F DOL, F SFO+G	ODOR BLEED FSFO FSGAS	7:AM 5-16-22 DST #4 @ 3200' MUD CHECK VIS: 60+ WT: 9.0 CHLOR 4.900 LCM: 1 FILT: 5.4
LS. WHT, TAN, CRM, F XTLN, FOSS, TITE, NS		
LS. GRY, CRM, BRN, V F XTLN, DNS, V HRD, TITE, NS		
A.A.		
SH. GRY		DST #4 3148-3200 30.30.45.60 IF: BOB 5 min → 17.43" ISI: NO BB FF: BOB 20 min → 13.6" FSI: NO BLOW REC: 448' GIP 64' GOCM: 27%G, 32%O
LS. WHT, LT GRY, V F XTLN, DNS, HRD, TITE, NS		
LS. CRM, TAN, V F XTLN, DNS, V HRD, BLOCKY, TITE, NS		
LS. WHT, TAN, F XTLN, SCT CHLK W/ LT FLUOR STNG, SCT SML FO DROPLETS, FAIR ODOR	FLUOR ODOR FO	FP: 32-27, 30-40 SIP: 228-582 HP: 1569-1522
LS. CRM, TAN, F XTLN, DNS, HRD, M XTLN, F XTLN Ø, NS		
SH. DK GRY, SNDY SS, DOLO, VG GRNLR Ø, G SAT STNG, VG FO+GAS on BRK, SL HRD, G ODOR	G ODOR FO FLUOR	
DOLO, TAN, BUFF, M XTLN, V HRD, G SAT FLUOR STNG, G ODOR, PP XTLN Ø, V HRD, G FO on BRK LOOKS LIKE 40° GRAV OIL.	FLUOR G ODOR FO	7:AM 5-17-22 DRLG @ 3279' DST #5 3245-3279 30.30.60.60 IF: BOB 3 min - 68.49" ISI: NO BB FF: BOB 5 min - 71.63" FSI: NO BB REC: 352' GIP 1516' CO 128' GOCM - 25%G, 10%O 64' GOCM - 10%G, 15%O 40' API FP: 58-228, 242-511 SIP: 1095-1083 HP: 1608-1572
DOLO, TAN, M XTLN, HRD, G SAT FLUOR STNG, G ODOR, G XTLN Ø, G FO on BRK	FO G ODOR FLUOR	
DOLO. A.A.		
DOLO, BUFF, SUCRO, V HRD, V DNS, STRKY FLUOR STNG, Ø. HUY ODOR	FLUOR HUY ODOR	
CHT, MILKY WHT, SHARP, NS		
DOLO, CHT, TAN, V F SUCR XTLN, V HRD, DNS, TITE, NS		
A.A.		
DOLO, WHT, F+M XTLN, V HRD, F→G XTLN Ø, STRKY SHO STNG+ FO N MXTLN, G ODOR	G ODOR FO STN	MUD CHECK VIS: 60 WT: 9.0 CHLDR: 5.000 LCM: 2 FILT: 5.4
DOLO, WHT, TAN, LT GRY, V F XTLN, V DNS+HRD, TITE, NS		
A.A.		
DOLO, GRY, WHT, BRN, V F XTLN, V DNS+HRD, TITE		
SCT, WHT CHT, ABUN WHT OOLS W/IN		
DOLO, TAN, BUFF, F XTLN, HRD, NO APP Ø, NS		
		ELI: JEFF LUEBBERS MUD-CO: GARY SCHMIDTBERGER TRILORITE: MATT SMITH