

Confidentiality Requested:

☐ Yes ☒ NoKANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

July 2014

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 30717

Name: Downing Nelson Oil Co., Inc.

Address 1: PO Box 1019

Address 2:

City: Hays State: KS Zip: 67601 +

Contact Person: Ron Nelson

Phone: (785) 621-2610

CONTRACTOR: License # 31548

Name: Discovery Drilling Co., Inc.

Wellsite Geologist: Marc Downing

Purchaser: Coffeyville Resources

Designate Type of Completion:

- ☒ New Well ☐ Re-Entry ☐ Workover
- ☒ Oil ☐ WSW ☐ SWD ☐ SLOW
- ☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
- ☐ OG ☐ GSW ☐ Temp. Abd.
- ☐ 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 ENHR ☐ Conv. to SWD
- ☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

- ☐ Commingled
- ☐ Dual Completion
- ☐ SWD
- ☐ ENHR
- ☐ GSW

Permit #:

Permit #:

Permit #:

Permit #:

Permit #:

07/11/2017

07/18/2017

09/14/2017

Spud Date or

Date Reached TD

Completion Date or

Recompletion Date

Recompletion Date

API No. 15 - 195-23,025-00-00

Spot Description:

SW SE NW SE Sec. 17 Twp. 13 S. R. 21 ☐ East ☒ West1,537 Feet from ☐ North / ☒ South Line of Section1,722 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: Trego

Lease Name: Bollig Well #: 2-17

Field Name: Riga

Producing Formation: Marmaton

Elevation: Ground: 2190 Kelly Bushing: 2198

Total Vertical Depth: 3970 Plug Back Total Depth:

Amount of Surface Pipe Set and Cemented at: 221 Feet

Multiple Stage Cementing Collar Used? ☒ Yes ☐ No

If yes, show depth set: 1571 Feet

If Alternate II completion, cement circulated from: 1571

feet depth to: 0 w/ 155 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 44,000 ppm Fluid volume: 320 bbls

Dewatering method used: Hauled free fluid

Location of fluid disposal if hauled offsite:

Operator Name: Downing Nelson Oil Co., Inc.

Lease Name: Dinkel #1 (SWD) License #: 30717

Quarter NW/4 Sec. 3 Twp. 14 S. R. 21 ☐ East ☒ West

County: Trego Permit #: D-25,156

INSTRUCTIONS: The original form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. If confidentiality is requested and approved, side two of this form will be held confidential for a period of 2 years. Rules 82-3-130, 82-3-106 and 82-3-107 apply. Drill Stem Test, Cement Tickets and Geological Well Report must be attached.

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.

Signature: Mitchell Mene

Title: Office Manager

Date: 10/03/2017

KCC Office Use ONLY

☐ Confidentiality Requested

Date:

☐ Confidential Release Date:☐ Wireline Log Received☒ Geologist Report Received☐ UIC DistributionALT ☐ I ☒ II ☐ III Approved by: KJR

Date: 10-10-2017

Operator Name: Downing Nelson Oil Co., Inc. Lease Name: Bollig Well #: 2-17
 Sec. 17 Twp. 13 S. R. 21 ☐ East ☒ West County: Trego

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 (Attach Additional Sheets)	☒ Yes ☐ No	☒ Log	Formation (Top), Depth and Datum	☐ Sample
Samples Sent to Geological Survey	☐ Yes ☒ No	Name	Top	Datum
Cores Taken	☐ Yes ☒ No	Top Anhydrite	1602'	+597
Electric Log Run	☒ Yes ☐ No	Base Anhydrite	1640'	+559
List All E. Logs Run:		Topeka	3277'	-1078
Micro, Compensated Density Neutron, Dual Induction		Heebner	3504'	-1305
		Toronto	3524'	-1325
		LKC	3538'	-1339
		BKC	3778'	-1579

CASING RECORD ☒ New ☐ 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
Surface Pipe	12.25	8.625	23	221	Common	150	2% Gel & 3% CC
Production Casing	7.875	5.5	14	3965	EA/2	150	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate				
☐ Protect Casing				
☐ Plug Back TD				
☐ Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No (If No, skip questions 2 and 3)
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No (If No, skip question 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)

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3879'-3888'	500 gallons 20% Mud Acid	3879-3888
TUBING RECORD: Size: 2.375 Set At: 3909 Packer At:		Liner Run: ☐ Yes ☐ No	
Date of First, Resumed Production, SWD or ENHR. 09/14/2017		Producing Method: ☐ Flowing ☒ Pumping ☐ Gas Lift ☐ Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. 43	Gas Mcf 0	Water Bbls. 2
			Gas-Oil Ratio Gravity

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease (If vented, Submit ACO-18.)	METHOD OF COMPLETION: ☐ Open Hole ☒ Perf. ☐ Dually Comp. (Submit ACO-5) ☐ Commingled (Submit ACO-4) ☐ Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
--	---	--

Downing Nelson Oil Co., Inc.

PO Box 1019

Hays, KS 67601

Lease Bollig #2-17

API # 15-195-23025-00-00

County: Trego **State:** Kansas

Formation	Log Tops	Datum
Top Anhydrite	1602'	+597
Base Anhydrite	1640'	+559
Topeka	3277'	-1078
Heebner	3504'	-1305
Toronto	3524'	-1325
LKC	3538'	-1339
BKC	3778'	-1579
Marmaton	3866'	-1667
Cherokee Shale	3909'	-1710
Arbuckle	3950'	-1751

Received
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OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS



CHARGE TO:
Downing-Nelson Oil Co Inc
 ADDRESS
 CITY, STATE, ZIP CODE

Received
 KANSAS CORPORATION COMMISSION
 OCT 06 2017
 CONSERVATION DIVISION
 WICHITA, KS

TICKET 30436

PAGE 1 OF 1

SERVICE LOCATIONS
 1. Hays Ks
 2. Ness City Ks
 3.
 4.
 REFERRAL LOCATION

WELL/PROJECT NO. 2-17
 LEASE Bolling
 COUNTY/PARISH Trego
 STATE Ks
 CITY

TICKET TYPE
☐ SERVICE
☐ SALES
 CONTRACTOR Discovery Drilling
 RIG NAME/NO. Rig # 4
 SHIPPED VIA CT
 DELIVERED TO Location

DATE 7-11-17
 ORDER NO.
 WELL TYPE Oil
 WELL CATEGORY development
 JOB PURPOSE Shallow Surface
 WELL PERMIT NO.
 WELL LOCATION

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		QTY.		U/M		UNIT PRICE		AMOUNT	
		LOC	ACCT	DF													
575		1			MILEAGE Trk # 110	30		mi						5.00		150.00	
576S		1			Pump Charge	1		ea						800.00		800.00	
290		1			D-Air	2		Gal						42.00		84.00	
325		2			Standard Cmt	150		sls						12.25		1837.50	
279		2			Bentonite Gel	3		sls						25.00		75.00	
278		2			Calcium Chloride	7		sls						40.00		280.00	
581		2			SERVICE CHARGE CEMENT	150		sls						1.50		225.00	
582		2			MINIMUM DRAINAGE CHARGE	14750		LBS		221.25		tm		250.00		250.00	

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X
 DATE SIGNED 7-11-17 TIME SIGNED 1530 5:30 P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				3226.50	
WE UNDERSTOOD AND MET YOUR NEEDS?				3701.50	
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				1070	
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				7.55	
ARE YOU SATISFIED WITH OUR SERVICE?				Trego Co	
☐ YES ☐ NO				TAX 8.00	
☐ CUSTOMER DID NOT WISH TO RESPOND				163.91	
				TOTAL	3445.26

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Dave Edgerton APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE

7-11-17

CUSTOMER

Downing-Nelson

WELL NO.

2-17

LEASE

Rolling

JOB TYPE

Shallow Surf.

TICKET NO.

30436

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1530							On location
								Csg- 8 5/8
								RTD- 221
								pipe- 221
	1600							Break Circ on Bottom
	1615	5	5					pump wtr spacer
		5	36					pump cmr
	1625	5	12					Disp cmr
	1630							End Disp
								Circulated 40 sks cmr to p
								Thanks
								David, Austin & Isaac

Received
KANSAS CORPORATION COMMISSION

OCT 06 2017

CONSERVATION DIVISION
WICHITA, KS

JOB LOG

SWIFT Services, Inc.

DATE

7-14-17

PAGE NO.

1

CUSTOMER

WELL NO.

LEASE

JOB TYPE

TICKET NO.

Dawing & Nelson

#2-7

Bolling

5 1/2" Two-Stage

30706

CHART
NO.

TIME

RATE
(BPM)VOLUME
(BBL) (GAL)

PUMPS

T C

PRESSURE (PSI)

TUBING

CASING

DESCRIPTION OF OPERATION AND MATERIALS

0630

on location

5 1/2" 14"

RTD-3970'

LTD-3970'

TP-3965'

SS-42.35'

D.U. #57 1570'

cent - #1 3" 5" 7" 9" 11" #56

Basket - #57

0730

Start 5 1/2" 14" casing in well

0900

Drop ball Circulate

* Rotate *

0950

6 1/2

12

✓

300

Pump 500 gal Mud Flush

6 1/2

20

✓

300

Pump 20 bbl KCL Flush

0955

4 1/2

36

✓

200

Mix 150 sks EA-2 @ 15.5 ppq

wash out Pump + Lines

Release Latch Down Plug

1010

6 1/2

Ø

✓

100

Start Displacement

6 1/2

58

✓

200

Pump Mud

1030

6 1/2

45.7

✓

1500

Land Latch Down Plug * Release Hold *

1035

Drop Bomb

1045

Ø

Ø

✓

1400

Open D.U. Tool

1055

6 1/2

20

✓

200

Pump 20 bbl KCL Flush

Plug RH-MH

(30-15)

1110

5 1/2

86

✓

200

mix 155 sks SMD 1/4" Fl @ 11.2 ppq

wash out Pump + Lines

Release Top Plug

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WICHITA, KS

1135

5 1/2

Ø

✓

100

Start Displacement

5 1/2

27

✓

300

Circulate Cement to Surface * 20 sks *

1145

5 1/2

38

✓

1800

Land Top Plug Close D.U. Tool

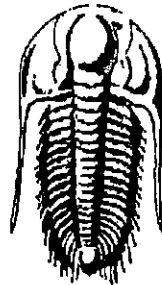
Release Pressure * Hold *

wash up trucks

1215

Job Complete

Thank You
Dave Preston Isaac



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Bollig #2-17

17-13S-21W Trego,KS

Start Date: 2017.07.15 @ 14:50:00

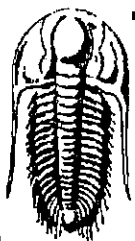
End Date: 2017.07.15 @ 21:24:00

Job Ticket #: 62989 DST #: 1

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

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

Printed: 2017.07.19 @ 08:52:43



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62989

DST#: 1

ATTN: Marc Downing

Test Start: 2017.07.15 @ 14:50:00

GENERAL INFORMATION:

Formation: LKC "C"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:15

Time Test Ended: 21:24:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3560.00 ft (KB) To 3585.00 ft (KB) (TVD)

Total Depth: 3585.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8934

Outside

Press@RunDepth: 50.70 psig @ 3561.00 ft (KB)

Start Date: 2017.07.15

End Date:

2017.07.15

Start Time: 14:50:15

End Time:

21:24:00

Capacity: 8000.00 psig

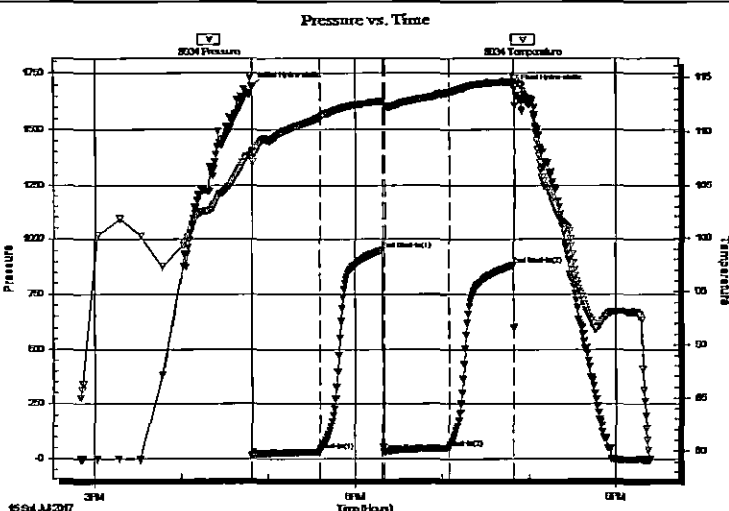
Last Calib.: 2017.07.15

Time On Btm: 2017.07.15 @ 16:49:00

Time Off Btm: 2017.07.15 @ 19:49:30

TEST COMMENT: IF-45-Fair Blow; BOB in 25 mins
ISI-45-Weak Blow; Surface Blow throughout
FF-45-Fair Blow; BOB in 13 mins
FSI-45-Weak Surface Blow Throughout

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1691.42	108.23	Initial Hydro-static
1	13.60	107.23	Open To Flow (1)
47	34.60	111.28	Shut-In(1)
90	951.75	112.77	End Shut-In(1)
91	33.47	112.42	Open To Flow (2)
136	50.70	113.59	Shut-In(2)
180	884.36	114.61	End Shut-In(2)
181	1679.58	114.92	Final Hydro-static

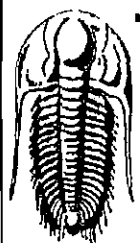
Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCO 40%M 60%O	1.11
0.00	350' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62989

DST#: 1

ATTN: Marc Downing

Test Start: 2017.07.15 @ 14:50:00

GENERAL INFORMATION:

Formation: LKC "C"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:15

Time Test Ended: 21:24:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3560.00 ft (KB) To 3585.00 ft (KB) (TVD)

Total Depth: 3585.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3561.00 ft (KB)

Start Date: 2017.07.15

End Date:

2017.07.15

Start Time: 14:50:15

End Time:

21:24:00

Capacity: 8000.00 psig

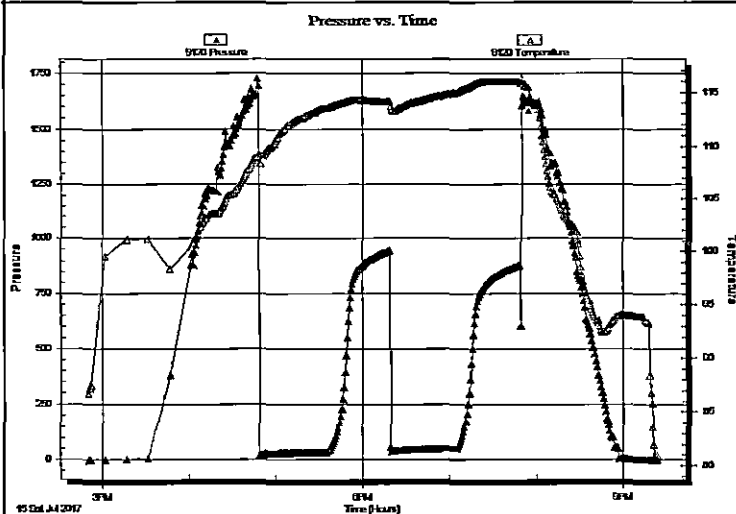
Last Calib.: 2017.07.15

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-45-Fair Blow; BOB in 25 mins
ISI-45-Weak Blow; Surface Blow throughout
FF-45-Fair Blow; BOB in 13 mins
FSI-45-Weak Surface Blow Throughout

PRESSURE SUMMARY



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

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCO 40%M 60%O	1.11
0.00	350' GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62989

DST#: 1

ATTN: Marc Downing

Test Start: 2017.07.15 @ 14:50:00

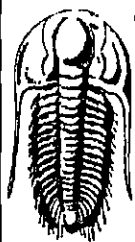
Tool Information

Drill Pipe:	Length: 3516.00 ft	Diameter: 3.80 inches	Volume: 49.32 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: 49.48 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	57000.00 lb
Depth to Top Packer:	3560.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	25.00 ft				
Tool Length:	45.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3541.00	
Shut In Tool	5.00			3546.00	
Hydraulic tool	5.00			3551.00	
Packer	5.00			3556.00	20.00 Bottom Of Top Packer
Packer	4.00			3560.00	
Stubb	1.00			3561.00	
Recorder	0.00	9120	Inside	3561.00	
Recorder	0.00	8934	Outside	3561.00	
Perforations	20.00			3581.00	
Bullnose	4.00			3585.00	25.00 Bottom Packers & Anchor
Total Tool Length:	45.00				

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62989

DST#: 1

ATTN: Marc Downing

Test Start: 2017.07.15 @ 14:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 2500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	MCO 40%M 60%O	1.111
0.00	350' GIP	0.000

Total Length: 100.00 ft

Total Volume: 1.111 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1&1/2#LCM

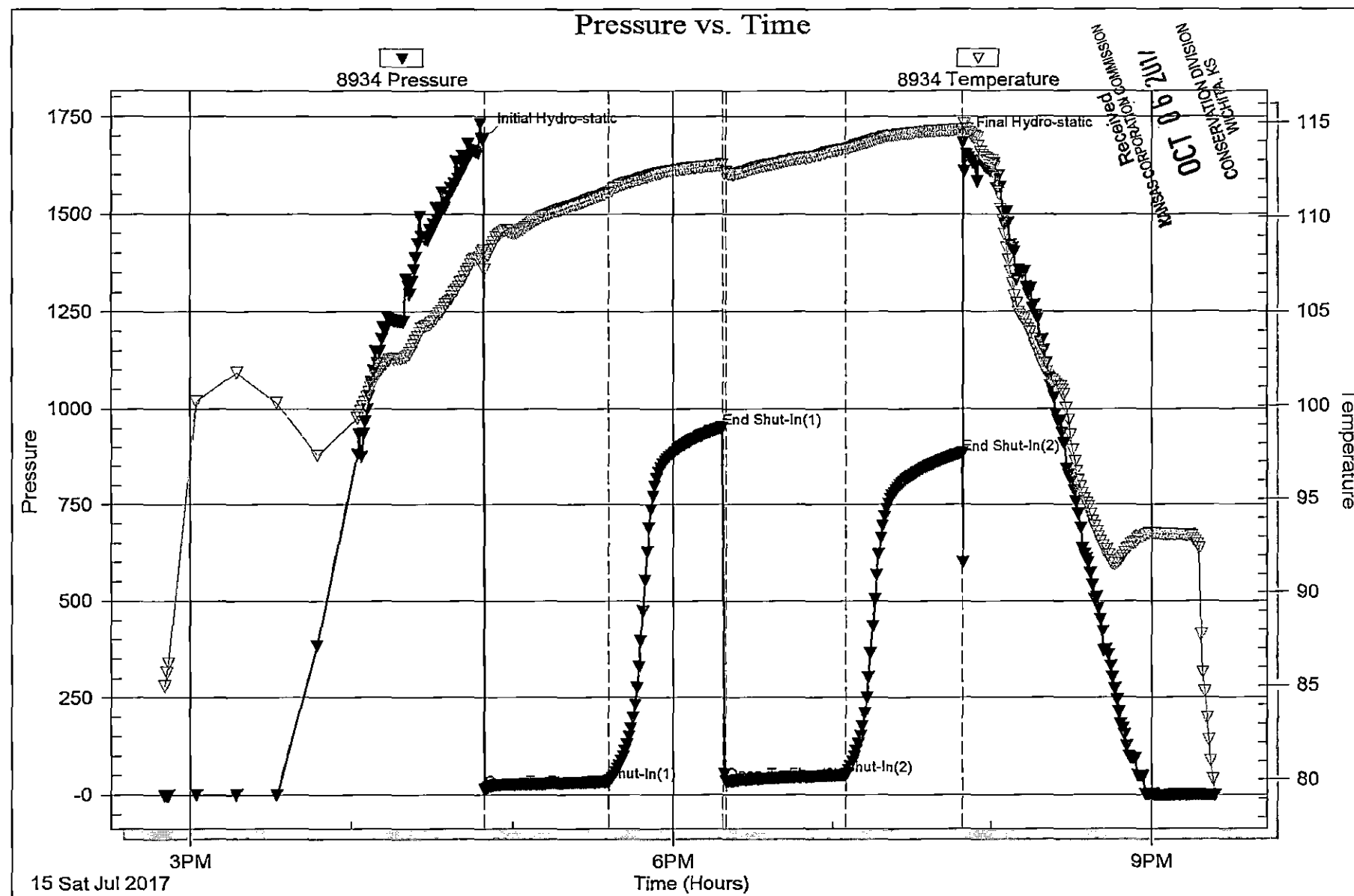
Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

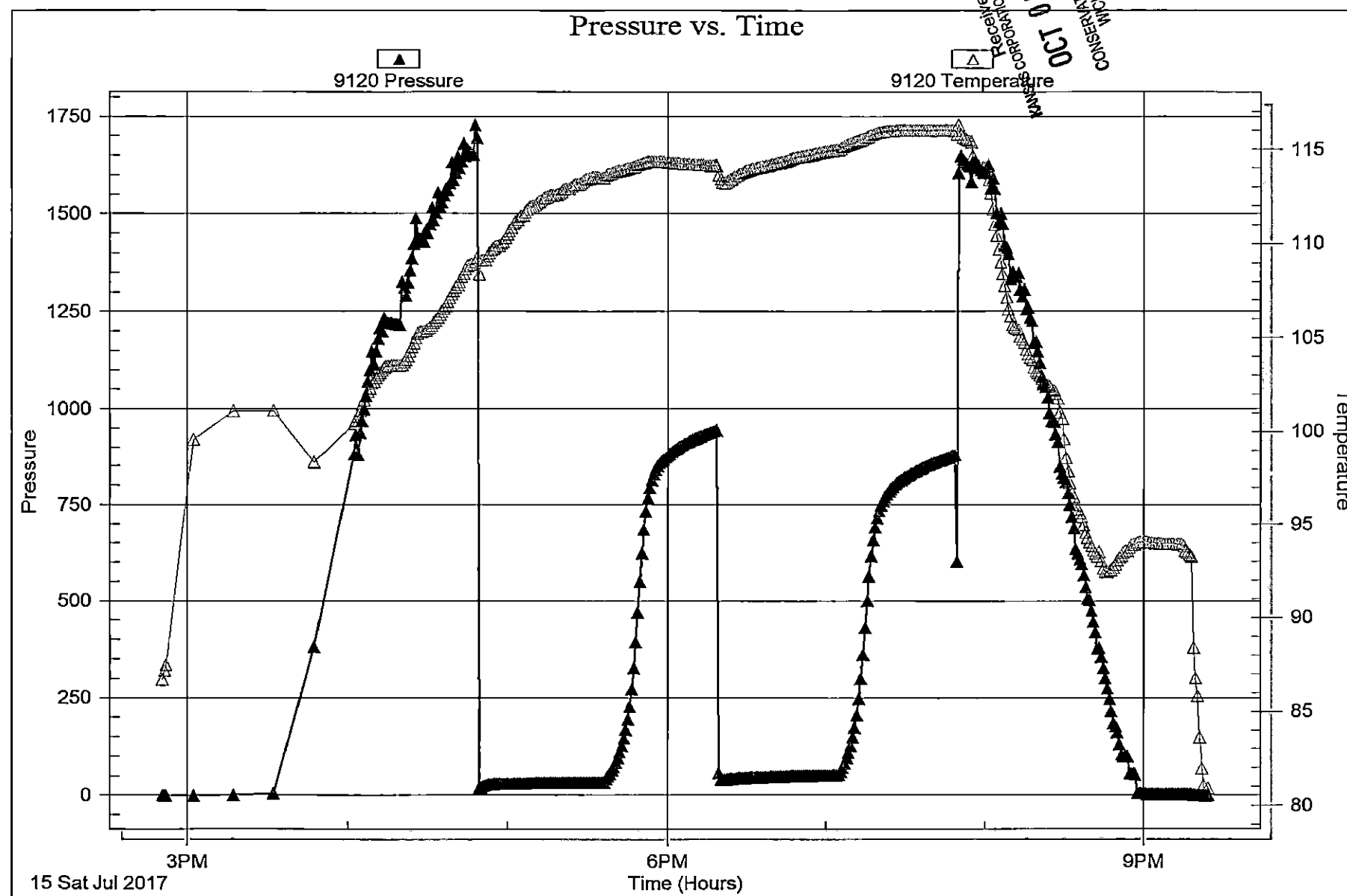
Serial #: 8934

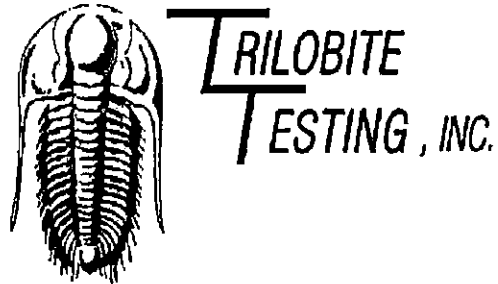
Outside Downing Nelson Oil Co

Bollig #2-17

DST Test Number: 1







DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Bollig #2-17

17-13S-21W Trego,KS

Start Date: 2017.07.16 @ 04:53:00

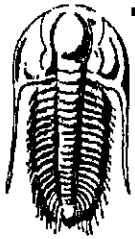
End Date: 2017.07.16 @ 10:04:00

Job Ticket #: 62990 DST #: 2

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

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

Printed: 2017.07.19 @ 08:52:19



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

17-13S-21W Trego, KS

Bollig #2-17

Job Ticket: 62990

DST#: 2

Test Start: 2017.07.16 @ 04:53:00

GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:39:45

Time Test Ended: 10:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: **3600.00 ft (KB) To 3617.00 ft (KB) (TVD)**

Total Depth: 3617.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8934

Outside

Press@RunDepth: 35.73 psig @ 3601.00 ft (KB)

Start Date: 2017.07.16

End Date:

2017.07.16

Start Time: 04:53:15

End Time:

10:04:00

Capacity: 8000.00 psig

Last Calib.: 2017.07.16

Time On Btm: 2017.07.16 @ 06:39:30

Time Off Btm: 2017.07.16 @ 08:40:30

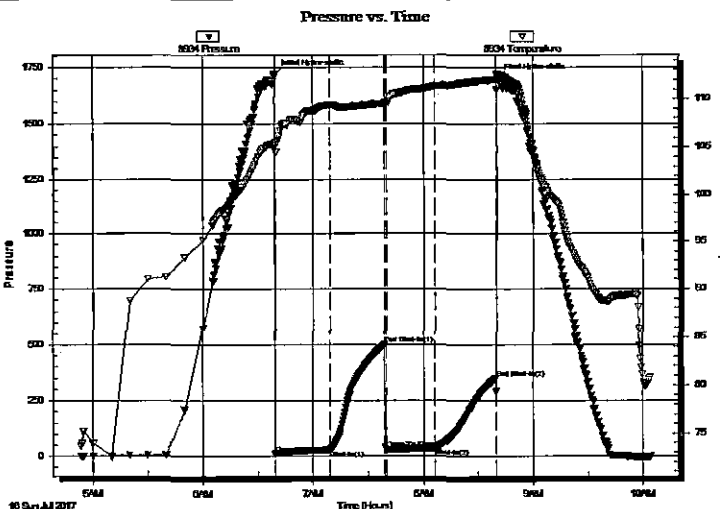
TEST COMMENT: IF-30-Weak Blow ; Built from surface to 2 1/4"

ISI-30-No Return

FF-30-Weak Blow ; Built from surface to 1"

FSI-30-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1719.21	105.50	Initial Hydro-static
1	10.92	104.46	Open To Flow (1)
30	29.14	109.42	Shut-In(1)
60	500.46	109.55	End Shut-In(1)
61	30.84	109.53	Open To Flow (2)
87	35.73	111.37	Shut-In(2)
120	348.60	112.01	End Shut-In(2)
121	1700.79	112.49	Final Hydro-static

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WICHITA, KS

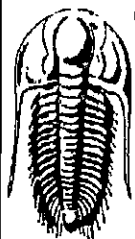
Recovery

Length (ft)	Description	Volume (bbl)
50.00	OWCM 5%O 35%W 60%M	0.41
10.00	WMCO 20%W 30%M 50%O	0.14

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62990

DST#: 2

ATTN: Marc Downing

Test Start: 2017.07.16 @ 04:53:00

GENERAL INFORMATION:

Formation: LKC "E"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:39:45

Time Test Ended: 10:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3600.00 ft (KB) To 3617.00 ft (KB) (TVD)

Total Depth: 3617.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3601.00 ft (KB)

Start Date: 2017.07.16

End Date:

2017.07.16

Capacity: 8000.00 psig

Last Calib.: 2017.07.16

Start Time: 04:53:15

End Time:

10:04:00

Time On Btm:

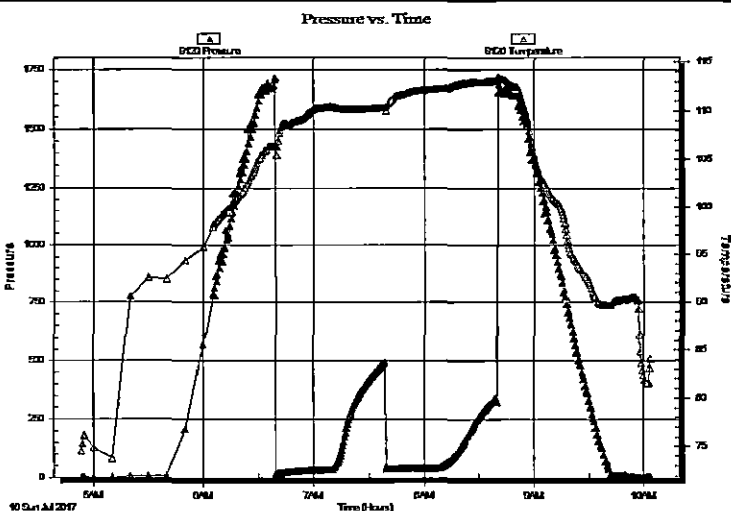
Time Off Btm:

TEST COMMENT: IF-30-Weak Blow; Built from surface to 2 1/4"

ISI-30-No Return

FF-30-Weak Blow; Built from surface to 1"

FSI-30-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Received
KANSAS CORPORATION COMMISSION
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WICHITA, KS

Recovery

Length (ft)	Description	Volume (bbl)
50.00	OWCM 5%O 35%W 60%M	0.41
10.00	WMCO 20%W 30%M 50%O	0.14

Gas Rates

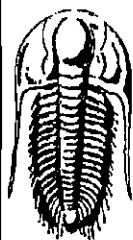
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 62990

Printed: 2017.07.19 @ 08:52:20



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019

Bollig #2-17

Hays KS 67601

Job Ticket: 62990

DST#: 2

ATTN: Marc Downing

Test Start: 2017.07.16 @ 04:53:00

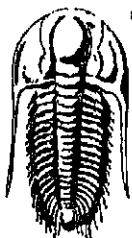
Tool Information

Drill Pipe:	Length: 3580.00 ft	Diameter: 3.80 inches	Volume: 50.22 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	61000.00 lb
			<u>Total Volume: 50.38 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3600.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	17.00 ft				
Tool Length:	37.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3581.00	
Shut In Tool	5.00			3586.00	
Hydraulic tool	5.00			3591.00	
Packer	5.00			3596.00	20.00 Bottom Of Top Packer
Packer	4.00			3600.00	
Stubb	1.00			3601.00	
Recorder	0.00	9120	Inside	3601.00	
Recorder	0.00	8934	Outside	3601.00	
Perforations	12.00			3613.00	
Bullnose	4.00			3617.00	17.00 Bottom Packers & Anchor
Total Tool Length:	37.00				

Received
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OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019

Bollig #2-17

Hays KS 67601

Job Ticket: 62990

DST#: 2

ATTN: Marc Downing

Test Start: 2017.07.16 @ 04:53:00

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:

36000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	OWCM 5%O 35%W 60%M	0.410
10.00	WMCO 20%W 30%M 50%O	0.140

Total Length: 60.00 ft

Total Volume: 0.550 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1&1/2#LCM

RW= .119@85degrees

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OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

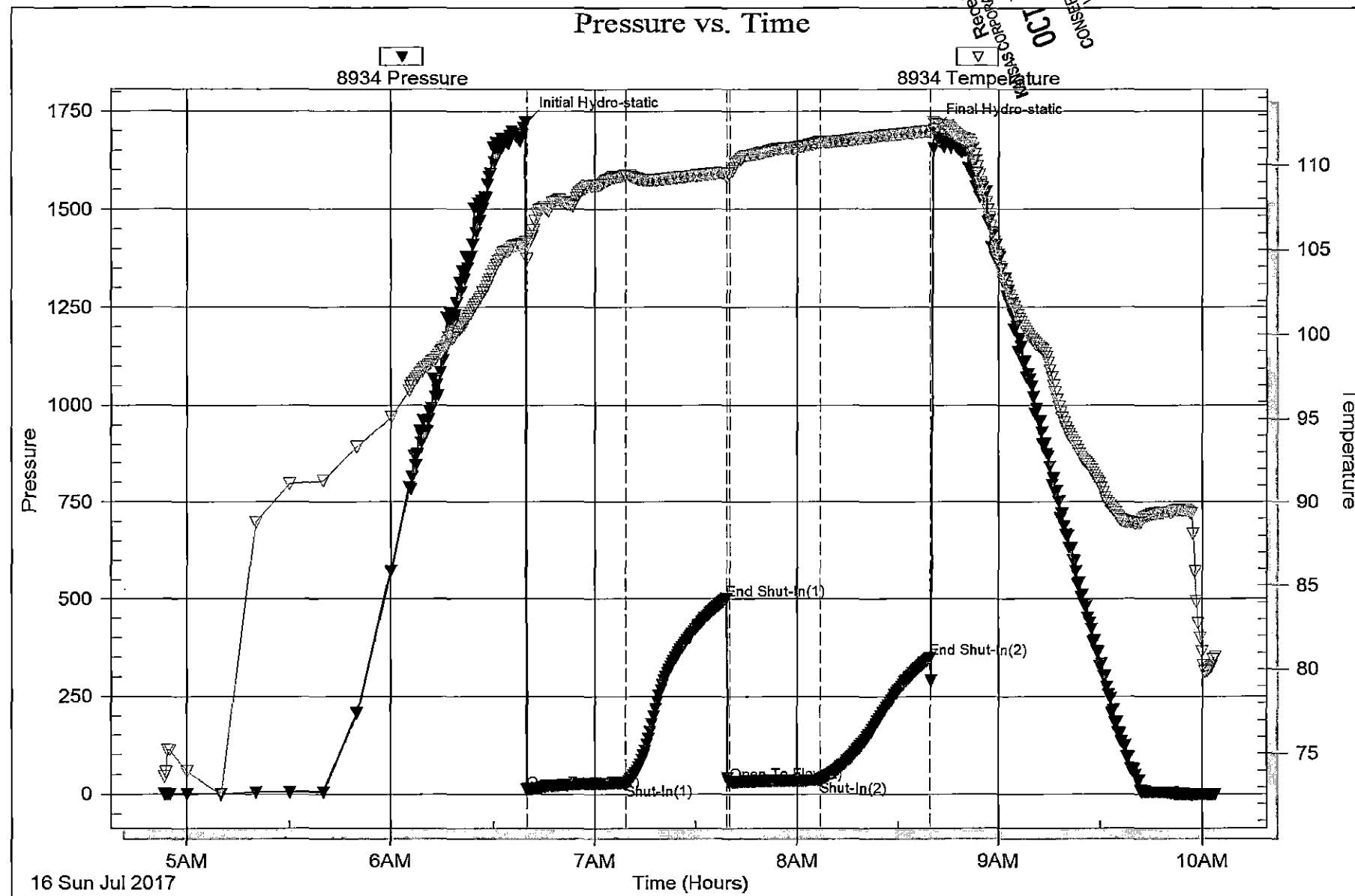
Serial #: 8934

Outside Downing Nelson Oil Co

Bollig #2-17

DST Test Number: 2

NO. 100-100000-000000
OCT 06 2017
WICHITA KS
CONFECTION DIVISION
RECEIVED
CORPORATION



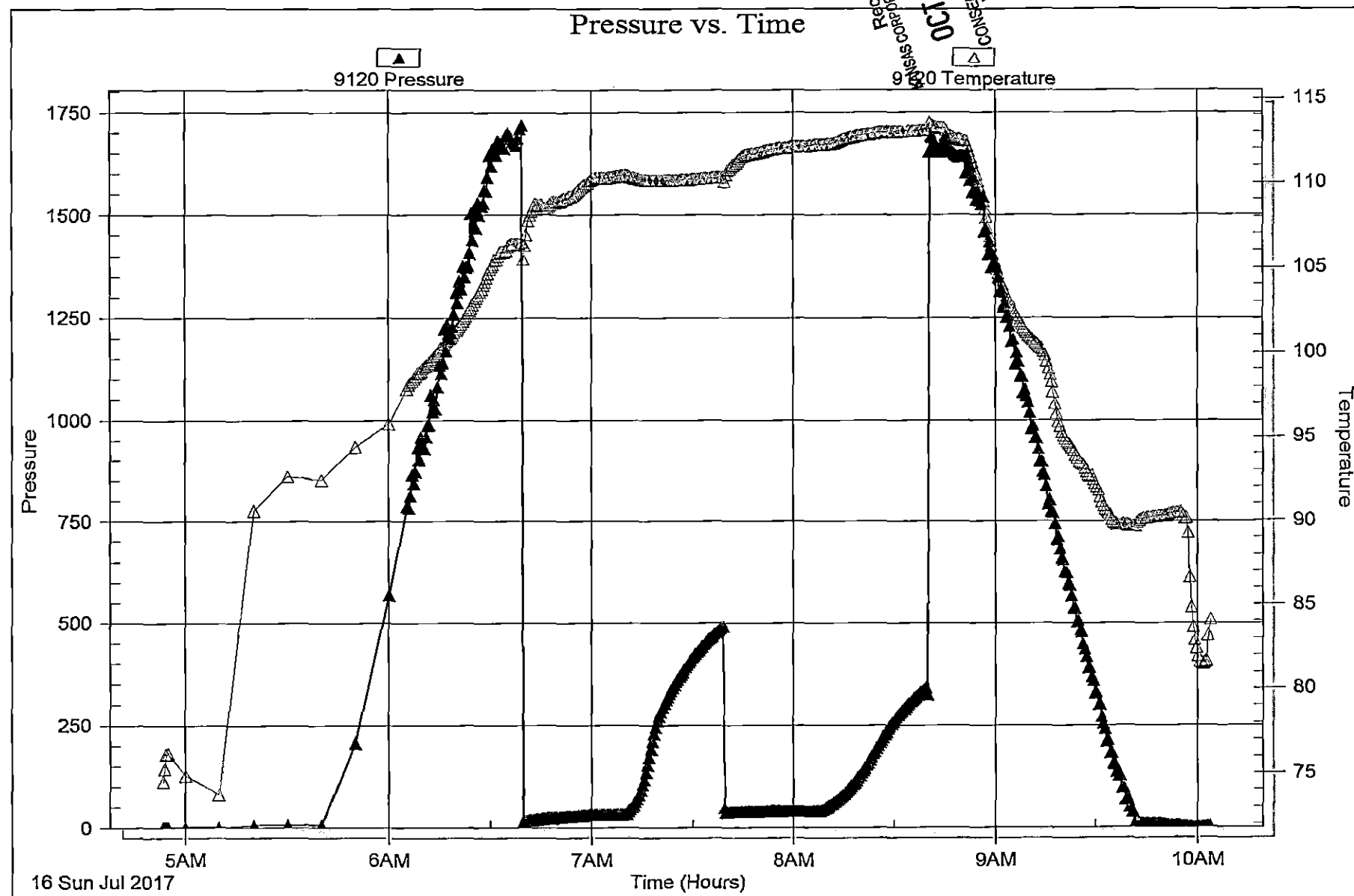
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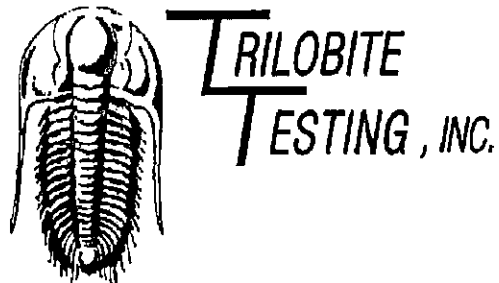
Inside

Downing Nelson Oil Co

Bollig #2-17

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Bollig #2-17

17-13S-21W Trego,KS

Start Date: 2017.07.16 @ 22:39:00

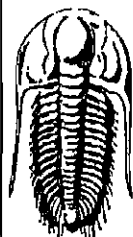
End Date: 2017.07.17 @ 04:00:00

Job Ticket #: 62991 DST #: 3

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

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

Printed: 2017.07.19 @ 08:51:56



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

17-13S-21W Trego, KS

Bollig #2-17

Job Ticket: 62991

DST#: 3

Test Start: 2017.07.16 @ 22:39:00

GENERAL INFORMATION:

Formation: LKC "H-J"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:26:15

Time Test Ended: 04:00:00

Interval: 3663.00 ft (KB) To 3734.00 ft (KB) (TVD)

Total Depth: 3734.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8934

Inside

Press@RunDepth: 12.58 psig @ 3666.00 ft (KB)

Start Date: 2017.07.16

End Date:

2017.07.17

Start Time: 22:39:15

End Time:

04:00:00

Capacity: 8000.00 psig

Last Calib.: 2017.07.17

Time On Btm: 2017.07.17 @ 00:25:45

Time Off Btm: 2017.07.17 @ 02:27:15

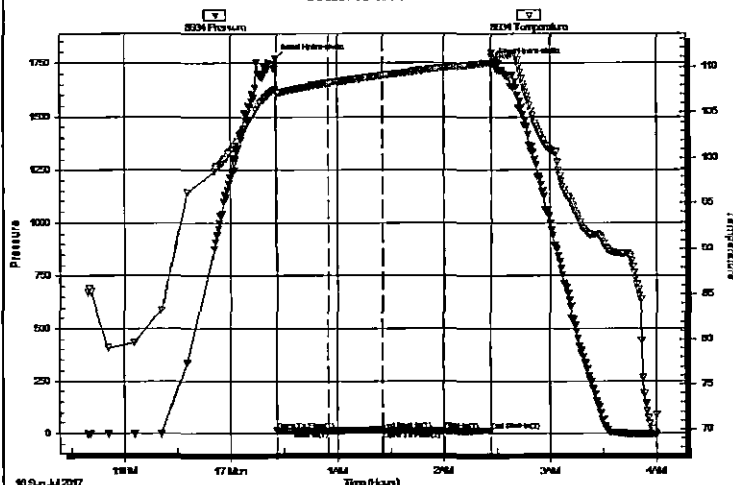
TEST COMMENT: 30-IF-Weak Blow; Built to 1/4"

30-ISI-No Return

30-FF-No Blow

30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.97	107.56	Initial Hydro-static
1	12.85	107.06	Open To Flow (1)
30	12.71	108.20	Shut-In(1)
60	16.81	109.04	End Shut-In(1)
60	11.35	109.04	Open To Flow (2)
95	12.58	109.87	Shut-In(2)
121	14.67	110.43	End Shut-In(2)
122	1750.08	111.03	Final Hydro-static

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WICHITA, KS

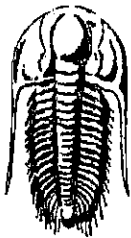
Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM 2%O 98%M	0.01

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bolig #2-17

Job Ticket: 62991

DST#: 3

ATTN: Marc Downing

Test Start: 2017.07.16 @ 22:39:00

GENERAL INFORMATION:

Formation: LKC "H-J"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:26:15

Time Test Ended: 04:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3663.00 ft (KB) To 3734.00 ft (KB) (TVD)

Total Depth: 3734.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3666.00 ft (KB)

Start Date: 2017.07.16

End Date:

2017.07.17

Capacity: 8000.00 psig

Last Calib.:

2017.07.17

Start Time: 22:39:15

End Time:

04:00:00

Time On Btm:

Time Off Btm:

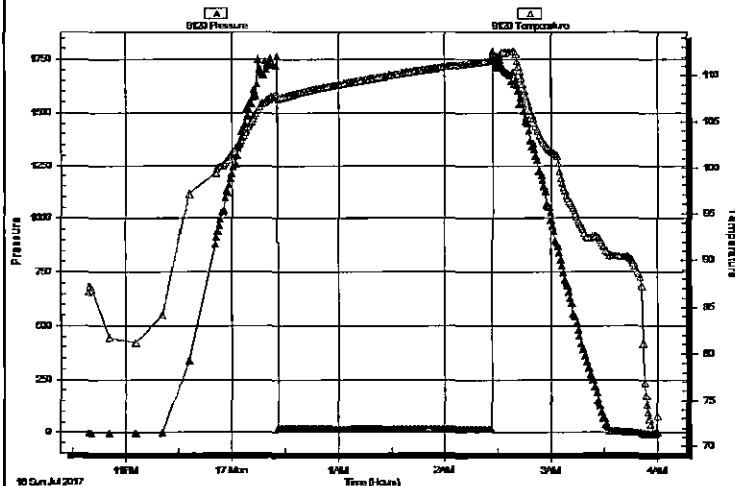
TEST COMMENT: 30-IF-Weak Blow; Built to 1/4"

30-ISI-No Return

30-FF-No Blow

30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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WICHITA, KS

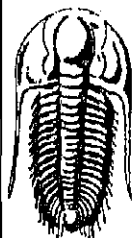
Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM 2% O 98% M	0.01

* Recovery from multiple tests

Gas Rates

Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
----------------	-----------------	------------------



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019

Bollig #2-17

Hays KS 67601

Job Ticket: 62991

DST#: 3

ATTN: Marc Downing

Test Start: 2017.07.16 @ 22:39:00

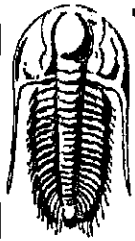
Tool Information

Drill Pipe:	Length:	3643.00 ft	Diameter:	3.80 inches	Volume:	51.10 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	32.00 ft	Diameter:	2.25 inches	Volume:	0.16 bbl	Weight to Pull Loose:	60000.00 lb
					Total Volume:	51.26 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		32.00 ft					String Weight: Initial	59000.00 lb
Depth to Top Packer:		3663.00 ft					Final	59000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		71.00 ft						
Tool Length:		91.00 ft						
Number of Packers:		1	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3644.00	
Shut In Tool	5.00			3649.00	
Hydraulic tool	5.00			3654.00	
Packer	5.00			3659.00	20.00 Bottom Of Top Packer
Packer	4.00			3663.00	
Stubb	1.00			3664.00	
Perforations	1.00			3665.00	
Change Over Sub	1.00			3666.00	
Recorder	0.00	9120	Inside	3666.00	
Recorder	0.00	8934	Inside	3666.00	
Drill Pipe	63.00			3729.00	
Change Over Sub	1.00			3730.00	
Bullnose	4.00			3734.00	71.00 Bottom Packers & Anchor

Total Tool Length: 91.00

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CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62991

DST#: 3

ATTN: Marc Downing

Test Start: 2017.07.16 @ 22:39:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 45.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OCM 2%O 98%M	0.010

Total Length: 2.00 ft

Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1&1/2#LCM

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KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

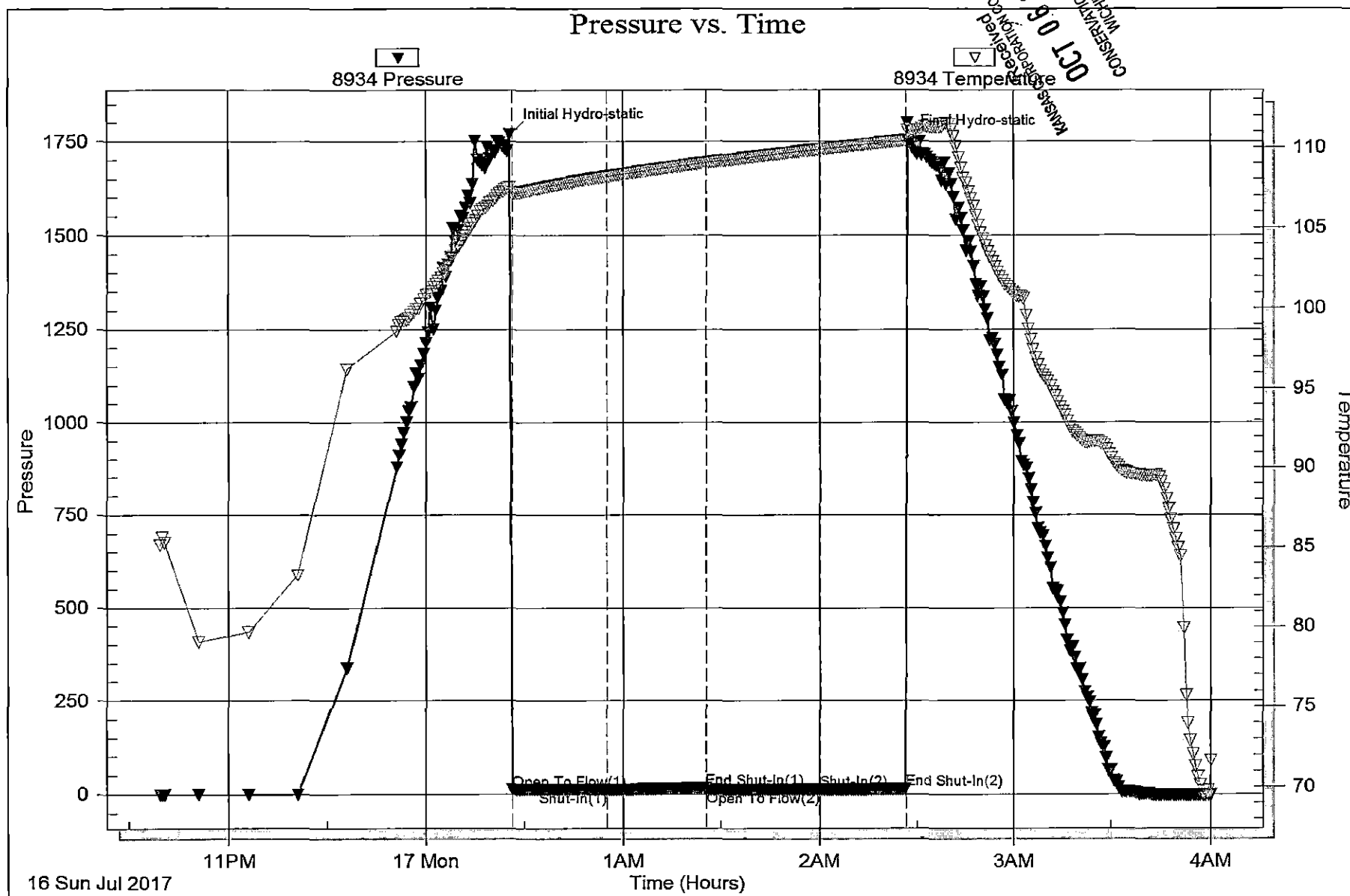
Serial #: 8934

Inside

Downing Nelson Oil Co

Bollig #2-17

DST Test Number: 3



Serial #: 9120

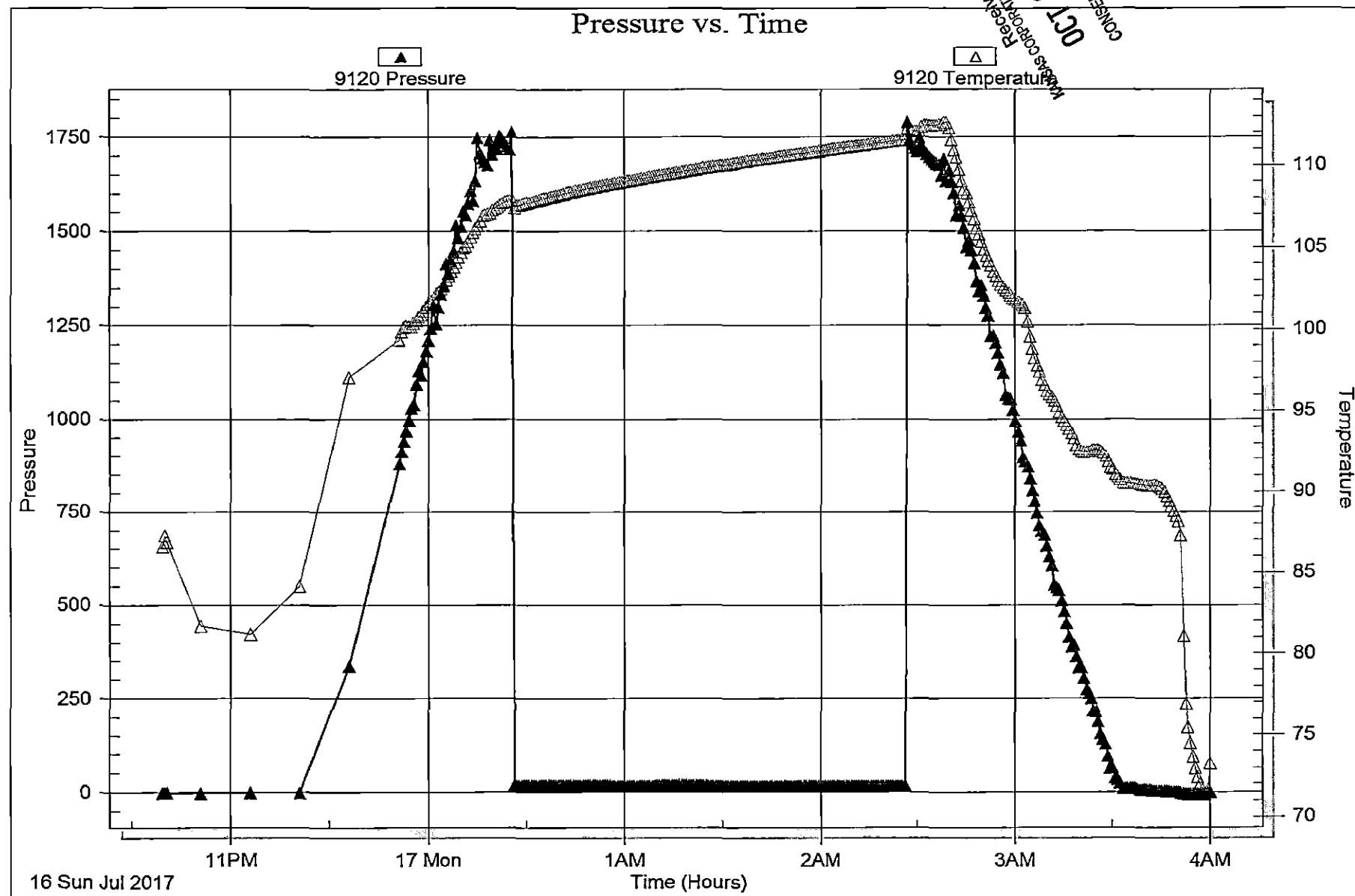
Inside

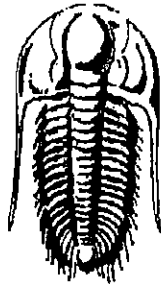
Downing Nelson Oil Co

Bolig #2-17

DST Test Number: 3

OCT 06 2017
Received
KANSAS CORPORATION COMMISSION
WICHITA, KS
CONSERVATION DIVISION





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Bolig #2-17

17-13S-21W Trego, KS

Start Date: 2017.07.17 @ 20:30:00

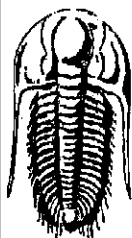
End Date: 2017.07.18 @ 03:39:15

Job Ticket #: 62992 DST #: 4

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

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

Printed: 2017.07.19 @ 08:51:28



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62992

DST#: 4

ATTN: Marc Downing

Test Start: 2017.07.17 @ 20:30:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:20:15

Time Test Ended: 03:39:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: **3871.00 ft (KB) To 3904.00 ft (KB) (TVD)**

Reference Elevations: 2197.00 ft (KB)

Total Depth: 3904.00 ft (KB) (TVD)

2190.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8934

Outside

Press@RunDepth: 325.72 psig @ 3873.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.17

End Date:

2017.07.18

Last Calib.: 2017.07.18

Start Time: 20:30:15

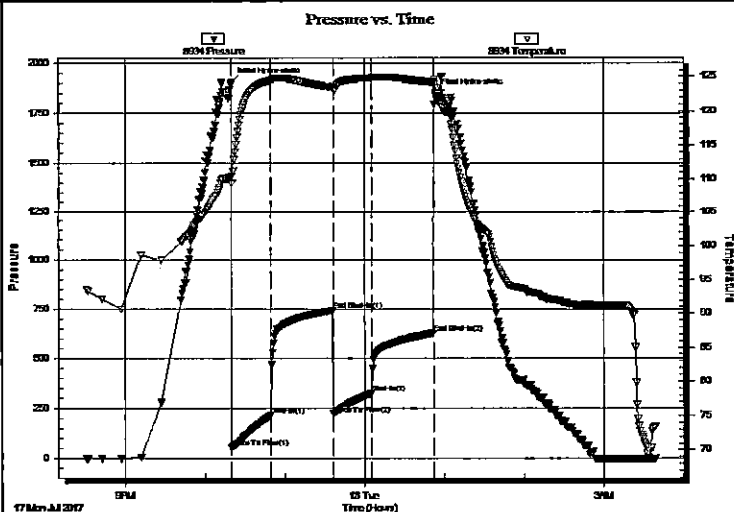
End Time:

03:39:15

Time On Btm: 2017.07.17 @ 22:20:00

Time Off Btm: 2017.07.18 @ 00:53:00

TEST COMMENT: 30-IF-Strong Blow; BOB in 2 mins
45-ISI-Fair Blow; BOB in 30 mins
30-FF-Strong Blow; BOB in 20 seconds
45-FSI-Fair Blow; Built to 5"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1900.79	110.38	Initial Hydro-static
1	56.03	109.50	Open To Flow (1)
30	215.42	124.45	Shut-In(1)
77	744.93	123.39	End Shut-In(1)
77	223.58	123.12	Open To Flow (2)
106	325.72	124.82	Shut-In(2)
152	631.10	124.22	End Shut-In(2)
153	1846.95	123.90	Final Hydro-static

Received
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WICHITA, KS

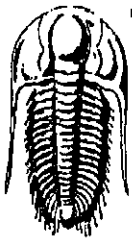
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 15%G 20%M 65%O	1.39
740.00	Gassy Oil 20%G 80%O	10.38
0.00	630' GIP 100%G	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62992

DST#: 4

ATTN: Marc Downing

Test Start: 2017.07.17 @ 20:30:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:20:15

Time Test Ended: 03:39:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3871.00 ft (KB) To 3904.00 ft (KB) (TVD)

Total Depth: 3904.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GRVCF: 7.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3873.00 ft (KB)

Start Date: 2017.07.17

End Date:

2017.07.18

Start Time: 20:30:15

End Time:

03:39:15

Capacity: 8000.00 psig

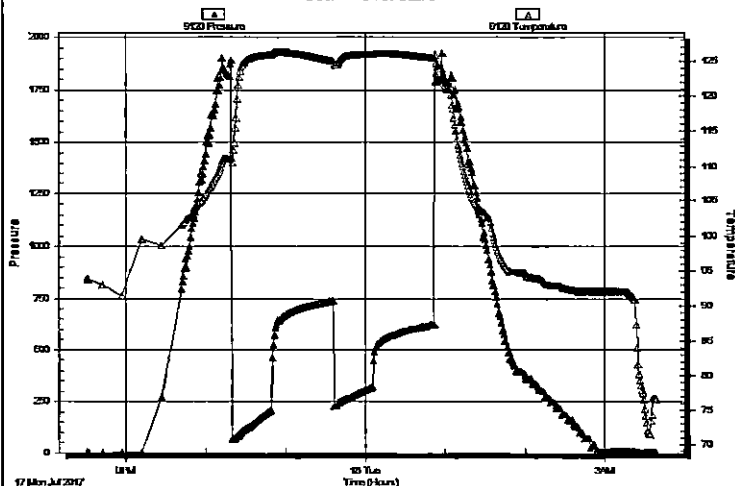
Last Calib.: 2017.07.18

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Strong Blow; BOB in 2 mins
45-ISI-Fair Blow; BOB in 30 mins
30-FF-Strong Blow; BOB in 20 seconds
45-FSI-Fair Blow; Built to 5"

Pressure vs. Time



PRESSURE SUMMARY

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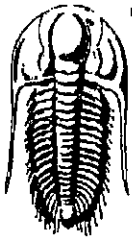
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 15%G 20%M 65%O	1.39
740.00	Gassy Oil 20%G 80%O	10.38
0.00	630' 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

TOOL DIAGRAM

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62992

DST#: 4

ATTN: Marc Downing

Test Start: 2017.07.17 @ 20:30:00

Tool Information

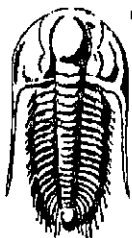
Drill Pipe:	Length:	3833.00 ft	Diameter:	3.80 inches	Volume:	53.77 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	32.00 ft	Diameter:	2.25 inches	Volume:	0.16 bbl	Weight to Pull Loose:	64000.00 lb
					Total Volume:	53.93 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		14.00 ft					String Weight: Initial	59000.00 lb
Depth to Top Packer:		3871.00 ft					Final	63000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		33.00 ft						
Tool Length:		53.00 ft						
Number of Packers:		1	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3852.00	
Shut In Tool	5.00			3857.00	
Hydraulic tool	5.00			3862.00	
Packer	5.00			3867.00	20.00 Bottom Of Top Packer
Packer	4.00			3871.00	
Stubb	1.00			3872.00	
Perforations	1.00			3873.00	
Recorder	0.00	9120	Inside	3873.00	
Recorder	0.00	8934	Outside	3873.00	
Perforations	27.00			3900.00	
Bullnose	4.00			3904.00	33.00 Bottom Packers & Anchor

Total Tool Length: 53.00

Received
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OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62992

DST#: 4

ATTN: Marc Downing

Test Start: 2017.07.17 @ 20:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 8.78 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

37 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GMCO 15%G 20%M 65%O	1.392
740.00	Gassy Oil 20%G 80%O	10.380
0.00	630' GIP 100%G	0.000

Total Length: 860.00 ft

Total Volume: 11.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1&1/2#LCM

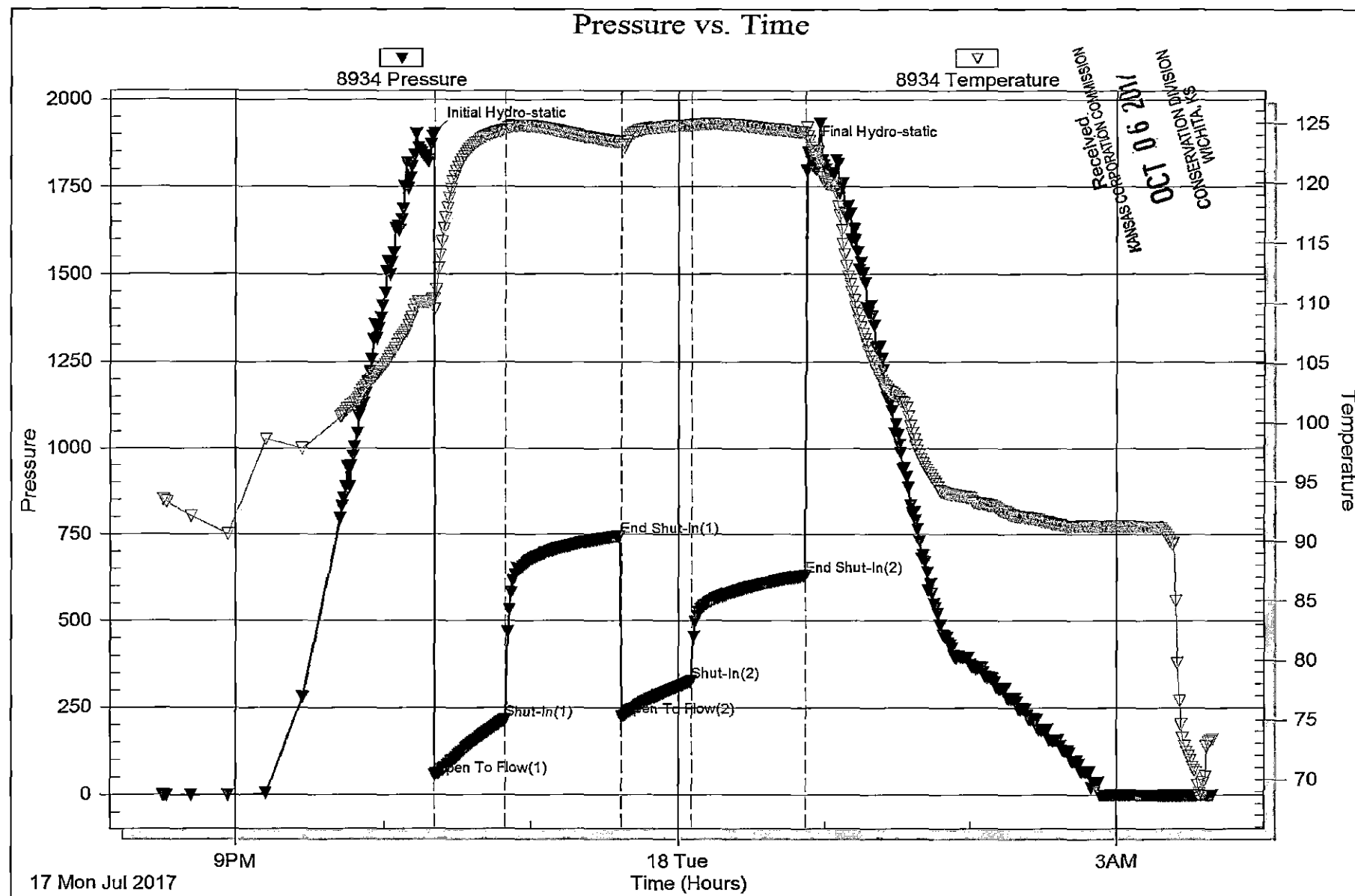
Received
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WICHITA, KS

Serial #: 8934

Outside Downing Nelson Oil Co

Bollig #2-17

DST Test Number: 4



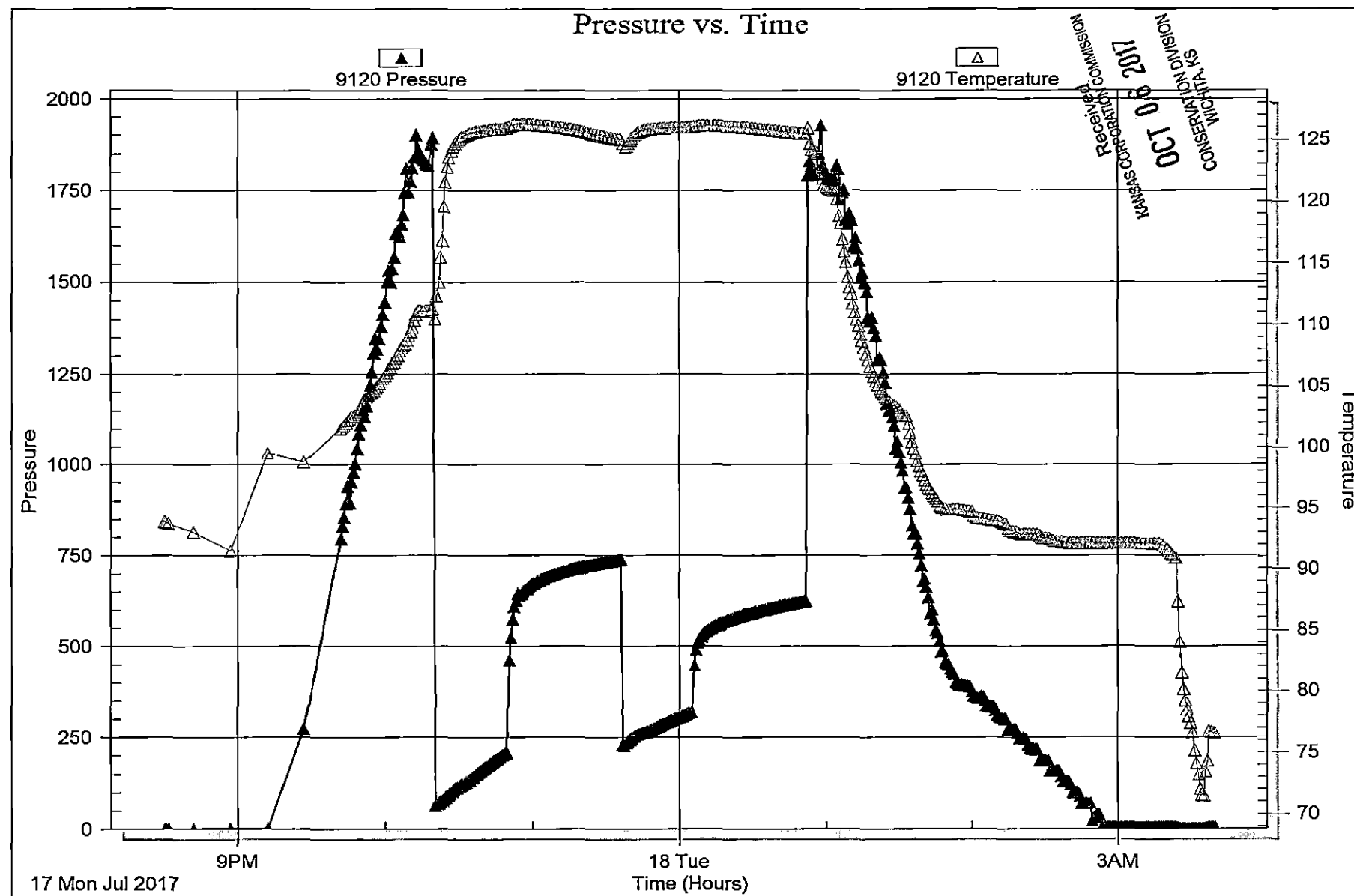
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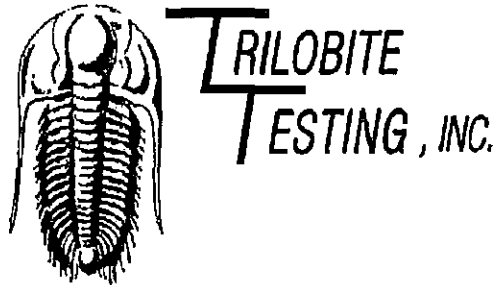
Inside

Downing Nelson Oil Co

Bolig #2-17

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Bollig #2-17

17-13S-21W Trego,KS

Start Date: 2017.07.18 @ 12:53:00

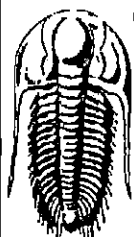
End Date: 2017.07.18 @ 19:18:30

Job Ticket #: 62993 DST #: 5

Received
KANSAS CORPORATION COMMISSION
OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

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

Printed: 2017.07.19 @ 08:50:32



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

17-13S-21W Trego,KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62993

DST#: 5

ATTN: Marc Dow ning

Test Start: 2017.07.18 @ 12:53:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:40:45

Time Test Ended: 19:18:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3898.00 ft (KB) To 3970.00 ft (KB) (TVD)

Total Depth: 3970.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8934

Inside

Press@RunDepth: 295.46 psig @ 3902.00 ft (KB)

Start Date: 2017.07.18

End Date:

2017.07.18

Start Time: 12:53:15

End Time:

19:18:30

Capacity: 8000.00 psig

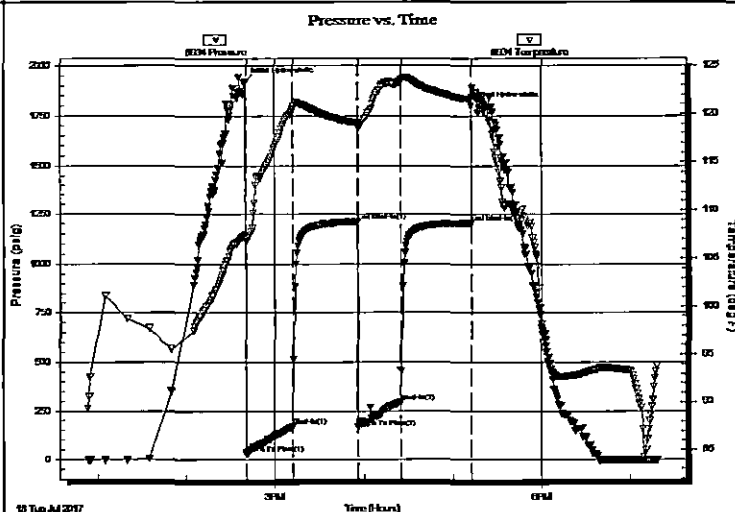
Last Calib.: 2017.07.18

Time On Btm: 2017.07.18 @ 14:40:15

Time Off Btm: 2017.07.18 @ 17:12:30

TEST COMMENT: 30-IF-Fair Blow; BOB in 10 mins
45-ISI-Weak Blow; Built to 1/4"; Died 25 mins in
30-FF-Fair Blow; BOB in 11 mins
45-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1922.75	107.37	Initial Hydro-static
1	31.39	106.78	Open To Flow (1)
32	171.20	120.50	Shut-In(1)
76	1209.09	118.99	End Shut-In(1)
76	164.49	118.66	Open To Flow (2)
105	295.46	123.37	Shut-In(2)
152	1203.84	121.45	End Shut-In(2)
153	1801.68	121.67	Final Hydro-static

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OCT 06 2017
CONSERVATION DIVISION
WICHITA, KS

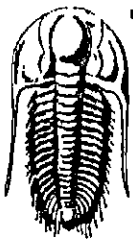
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GCWM 10%G 40%W 50%M	1.39
290.00	GWCM 10%G 10%W 80%M	4.07
120.00	WCM 10%W 90%M	1.68
10.00	OCM 5%O 95%M	0.14
0.00	60' GIP 100%G	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

17-13S-21W Trego, KS

Bollig #2-17

Job Ticket: 62993

DST#: 5

Test Start: 2017.07.18 @ 12:53:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:40:45

Time Test Ended: 19:18:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3898.00 ft (KB) To 3970.00 ft (KB) (TVD)

Total Depth: 3970.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 9120

Inside

Press@RunDepth: psig @ 3902.00 ft (KB)

Start Date: 2017.07.18

End Date:

2017.07.18

Start Time: 12:53:15

End Time:

19:18:30

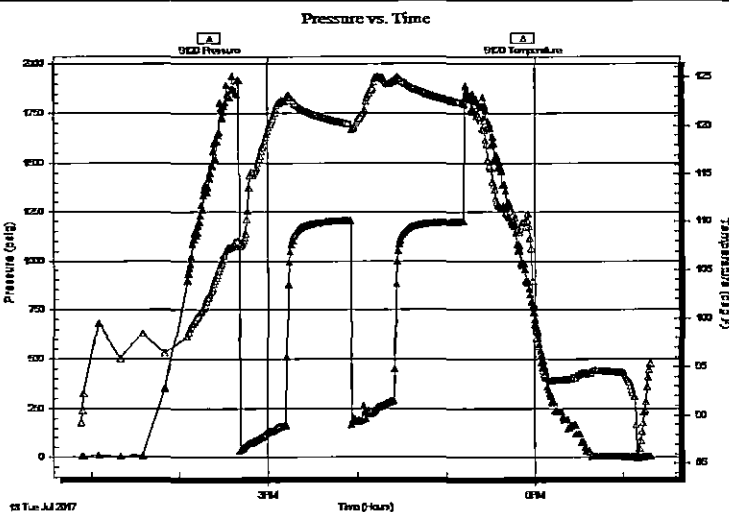
Capacity: 8000.00 psig

Last Calib.: 2017.07.18

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Fair Blow; BOB in 10 mins
45-ISI-Weak Blow; Built to 1/4"; Died 25 mins in
30-FF-Fair Blow; BOB in 11 mins
45-FSI-No Return



PRESSURE SUMMARY

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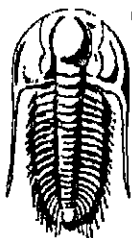
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GCWM 10%G 40%W 50%M	1.39
290.00	GWCM 10%G 10%W 80%M	4.07
120.00	WCM 10%W 90%M	1.68
10.00	OCM 5%O 95%M	0.14
0.00	60' 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

TOOL DIAGRAM

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62993

DST#: 5

ATTN: Marc Downing

Test Start: 2017.07.18 @ 12:53:00

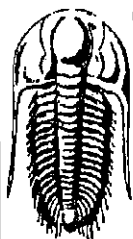
Tool Information

Drill Pipe:	Length: 3864.00 ft	Diameter: 3.80 inches	Volume: 54.20 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	35000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	64000.00 lb
		<u>Total Volume:</u>	<u>54.36 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	63000.00 lb
Depth to Top Packer:	3898.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	72.00 ft				
Tool Length:	92.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3879.00	
Shut In Tool	5.00			3884.00	
Hydraulic tool	5.00			3889.00	
Packer	5.00			3894.00	20.00 Bottom Of Top Packer
Packer	4.00			3898.00	
Stubb	1.00			3899.00	
Perforations	2.00			3901.00	
Change Over Sub	1.00			3902.00	
Recorder	0.00	9120	Inside	3902.00	
Recorder	0.00	8934	Inside	3902.00	
Drill Pipe	63.00			3965.00	
Change Over Sub	1.00			3966.00	
Bullnose	4.00			3970.00	72.00 Bottom Packers & Anchor

Total Tool Length: 92.00

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CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co

17-13S-21W Trego, KS

PO Box 1019
Hays KS 67601

Bollig #2-17

Job Ticket: 62993

DST#: 5

ATTN: Marc Downing

Test Start: 2017.07.18 @ 12:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 9.19 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

7600 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GCWM 10%G 40%W 50%M	1.392
290.00	GWCM 10%G 10%W 80%M	4.068
120.00	WCM 10%W 90%M	1.683
10.00	OCM 5%O 95%M	0.140
0.00	60' GIP 100%G	0.000

Total Length: 540.00 ft

Total Volume: 7.283 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

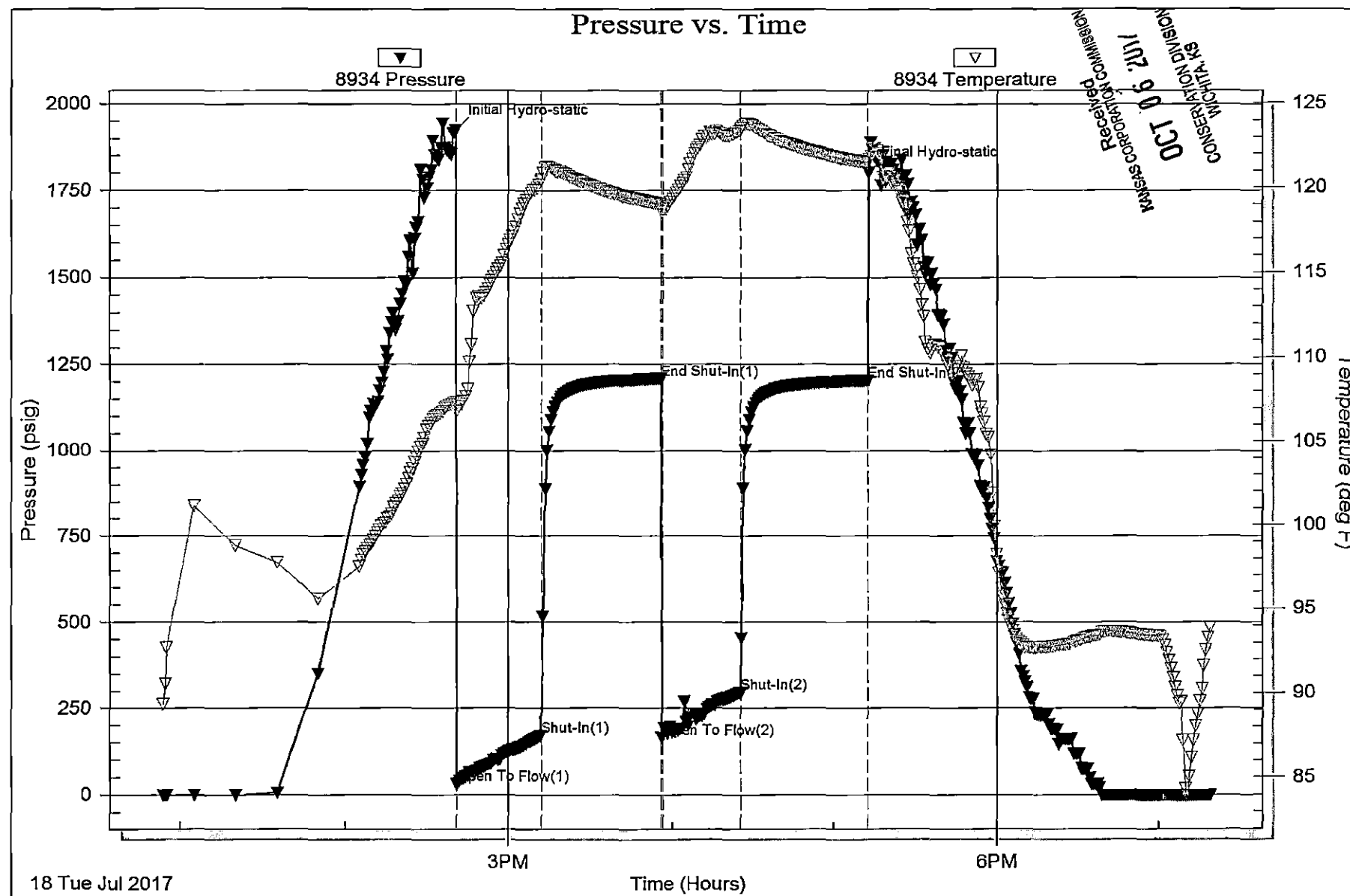
Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM

RW=.256@98degrees

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WICHITA, KS



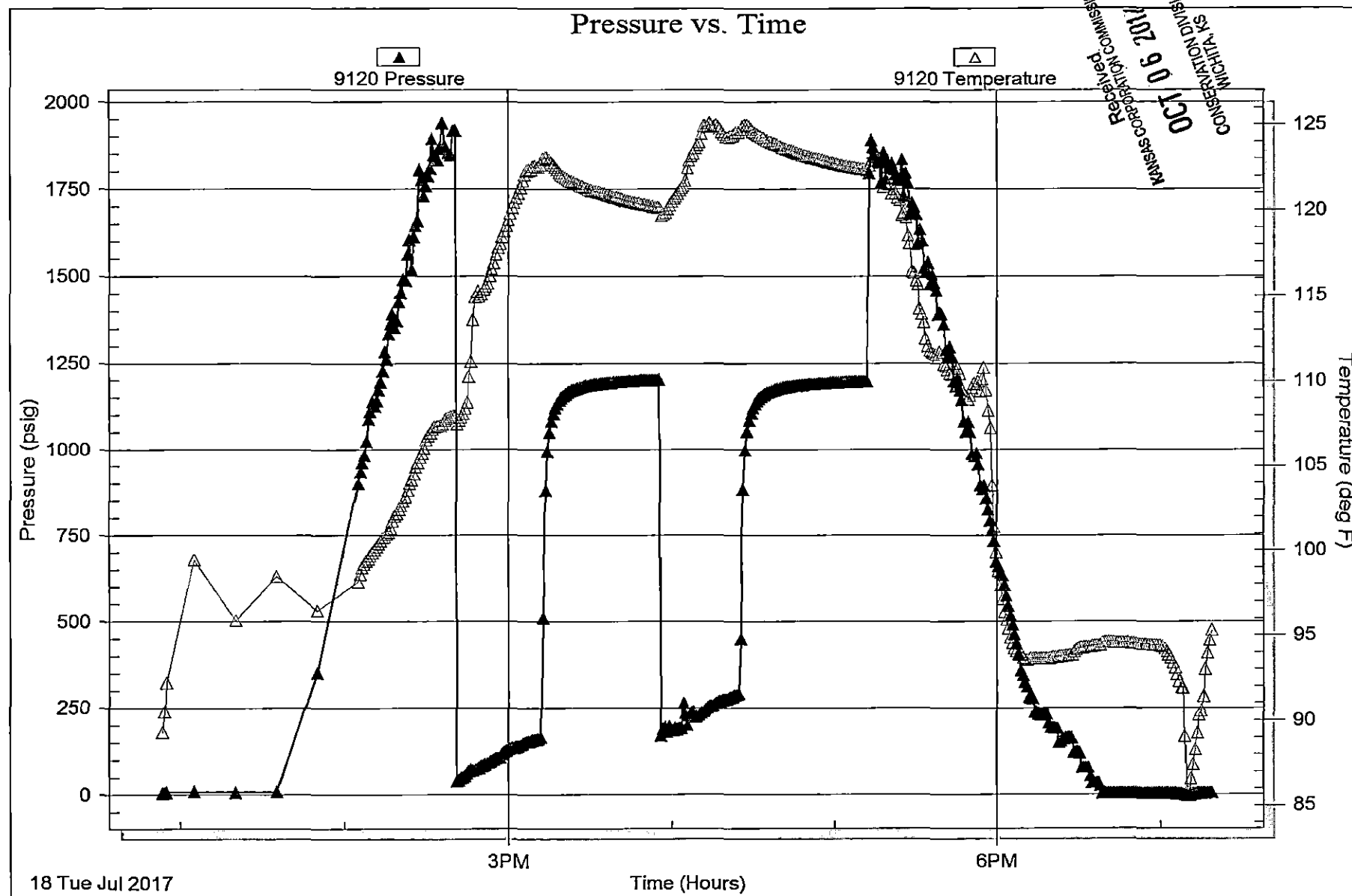
Serial #: 9120

Inside

Downing Nelson Oil Co

Ballig #2-17

DST Test Number: 5



TEST TICKET

Commerce Parkway • Hays, Kansas 67601

NO. 62989

Well Name & No. Bollig # 2-17 Test No. 1 Date 07/15/2017
 Company DNOC Elevation 2197 KB 2190 GL
 Address PO BOX 1019 Hays KS 67601
 Co. Rep / Geo. More Downing Rig Discovery #4
 Location: Sec. 17 Twp. 13S Rge. 21W Co. Trego State Ks

Interval Tested 3560' - 3585' Zone Tested LHC "C"
 Anchor Length 25' Drill Pipe Run - Mud Wt. 8.8
 Top Packer Depth 3555' Drill Collars Run 32' Vis 55
 Bottom Packer Depth 3560' Wt. Pipe Run - WL 8
 Total Depth 3585' Chlorides 2500 ppm System LCM 1 1/2#

Blow Description 17- Fair Blow, BOB in 25 mins
1st Weak Blow: Surface Blow throughout
77- Fair Blow: BOB in 13 mins
75- Weak Surface Blow throughout

Rec <u>100'</u>	Feet of <u>MCO</u>	%gas <u>60</u>	%oil	%water <u>40</u>	%mud
Rec	Feet of <u>350' JOP</u>	<u>100</u> %gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100' BHT 114° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1691
 (B) First Initial Flow 13
 (C) First Final Flow 34
 (D) Initial Shut-In 951
 (E) Second Initial Flow 33
 (F) Second Final Flow 50
 (G) Final Shut-In 884
 (H) Final Hydrostatic 1679

☒ Test 1050
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☒ Mileage 56.27 42
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility

T-On Location 14:00
 T-Started 14:50
 T-Open 16:48
 T-Pulled 19:48
 T-Out 21:22

Comments

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

Sub Total 1092

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1092
 MP/DST Disc't

Approved By

Our Representative Spencer J. Frank Thanks

Trillite 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.

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62990

Well Name & No. Bollig #2-17 Test No. 2 Date 07/16/2017
 Company DNOC Elevation 2197 KB 2190 GL
 Address PO BOX 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 17 Twp. 13s Rge. 21st Co. Trego State Ks

Interval Tested 3600' - 3617' Zone Tested LHC "E"
 Anchor Length 17' Drill Pipe Run 3580' Mud Wt. 8.8
 Top Packer Depth 3595' Drill Collars Run 32' Vis 55
 Bottom Packer Depth 3600' Wt. Pipe Run — WL 8
 Total Depth 3617' Chlorides 2,500 ppm System LCM 1 1/2 #

Blow Description 17-Weak Blow; Built from surface to 2 1/4"

18- No Return

77-Weak Blow; Built from surface to 1"

78- No Return

Rec <u>50'</u>	Feet of <u>OGUCM</u>	%gas <u>5</u>	%oil <u>35</u>	%water <u>60</u>	%mud
Rec <u>10'</u>	Feet of <u>WMC</u>	%gas <u>50</u>	%oil <u>20</u>	%water <u>30</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60' BHT 112° Gravity — API RW 119 @ 85 °F Chlorides 36,000 ppm

(A) Initial Hydrostatic 1719 ☒ Test 1050 T-On Location 04:18
 (B) First Initial Flow 10 ☐ Jars — T-Started 04:53
 (C) First Final Flow 29 ☐ Safety Joint — T-Open 06:38
 (D) Initial Shut-In 500 ☐ Circ Sub — T-Pulled 08:38
 (E) Second Initial Flow 30 ☐ Hourly Standby — T-Out 10:02
 (F) Second Final Flow 35 ☒ Mileage 5687 42 Comments —
 (G) Final Shut-In 348 ☐ Sampler —
 (H) Final Hydrostatic 1700 ☐ Straddle —
☐ Shale Packer —
☐ Extra Packer —
☐ Extra Recorder —
☐ Day Standby —
☐ Accessibility —

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1092
 Total 1092
 MP/DST Disc't —

Approved By — Our Representative Spencer J. Staal Thanks!
 TriLOBITE TESTING INC. shall not be liable for damaged or 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.
 RECEIVED
 KANSAS CORPORATION COMMISSION
 OCT 06 2017
 CONSERVATION DIVISION
 WICHITA, KS



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62991

Well Name & No. Bollig #2-17 Test No. 3 Date 07/16/2017
 Company ONOCO Elevation 2197 KB 2190 GL
 Address PO BOX 1019 Hays Ks 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 17 Twp. 13N Rge. 21W Co. Trego State Ks

Interval Tested 3663' - 3734' Zone Tested LHC "H-J"
 Anchor Length 71' Drill Pipe Run 3643' Mud Wt. 9
 Top Packer Depth 3658' Drill Collars Run 32' Vis 45
 Bottom Packer Depth 3663' Wt. Pipe Run - WL 8
 Total Depth 3734' Chlorides 3,000 ppm System LCM 12#

Blow Description 17-Week Blow; Built to 1/4"

ISO- No Return

77- No Blow

7SD- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>OCM</u>	<u>2</u>		<u>98</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 2' BHT 111° Gravity - API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic 1768
 (B) First Initial Flow 12
 (C) First Final Flow 12
 (D) Initial Shut-In 16
 (E) Second Initial Flow 11
 (F) Second Final Flow 12
 (G) Final Shut-In 14
 (H) Final Hydrostatic 1750

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

☒ Test 1050
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☒ Mileage 5627 42
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1092

T-On Location 22:11
 T-Started 22:39
 T-Open 00:25 07/17/2017
 T-Pulled 02:30
 T-Out 03:58
 Comments

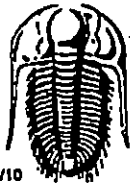
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1092
 MP/DST Disc't

Approved By

Our Representative James J. Stank Thank

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.

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 WICHITA, KS



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

62992

NO.

Well Name & No. Bolig #2-17 Test No. 4 Date 07/17/2017
 Company DNOC Elevation 2197 KB 2190 GL
 Address PO BOX 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 17 Twp. 13s Rge. 21w Co. Trego State Ks

Interval Tested 3871' - 3904' Zone Tested Marmaton
 Anchor Length 33' Drill Pipe Run 3833' Mud Wt. 9
 Top Packer Depth 3866' Drill Collars Run 32' Vis 51
 Bottom Packer Depth 3871' Wt. Pipe Run - WL 8.8
 Total Depth 3904' Chlorides 5,000 ppm System LCM 1 1/2#

Blow Description 17- Strong Blow; BOB in 2 mins
18- Fair Blow; BOB in 30 mins
19- Strong Blow; BOB in 20 seconds
20- Fair Blow; BOB in 5"

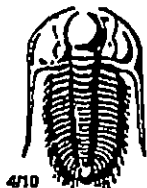
Rec <u>740'</u>	Feet of <u>Heavy Oil</u>	<u>20</u> %gas	<u>80</u> %oil	%water	%mud
Rec <u>120'</u>	Feet of <u>DNOC</u>	<u>15</u> %gas	<u>65</u> %oil	%water <u>20</u>	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 860' BHT 124° Gravity 37° API RW - @ - °F Chlorides - ppm
 (A) Initial Hydrostatic 1900 ☒ Test 1050 T-On Location 19:50
 (B) First Initial Flow 56 ☐ Jars _____ T-Started 20:30
 (C) First Final Flow 215 ☐ Safety Joint _____ T-Open 22:19
 (D) Initial Shut-In 744 ☐ Circ Sub _____ T-Pulled 00:50 07/18/2017
 (E) Second Initial Flow 223 ☐ Hourly Standby _____ T-Out 03:37
 (F) Second Final Flow 325 ☒ Mileage 5687 42 Comments _____
 (G) Final Shut-In 631 ☐ Sampler _____
 (H) Final Hydrostatic 1846 ☐ Straddle _____

Initial Open 30 ☐ Ruined Shale Packer _____
 Initial Shut-In 45 ☐ Ruined Packer _____
 Final Flow 30 ☐ Extra Copies _____
 Final Shut-In 45 ☐ Extra Recorder _____
 Sub Total 1092 ☐ Day Standby _____
 Total 1092 ☐ Accessibility _____
 MP/DST Disc't _____

Approved By _____ Our Representative Spencer J. Jacobs Thanks.
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 WICHITA, KS



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

62993

NO.

Well Name & No. Bolly #2-17 Test No. 5 Date 07/18/2017
 Company ONOCJ Elevation 2197 KB 2190 GL
 Address PO BOX 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 17 Twp. 13 Rge. 21 Co. Trego State KS

Interval Tested 3898'-3970' Zone Tested Arbuckle
 Anchor Length 72' Drill Pipe Run 3864' Mud Wt. 8.9
 Top Packer Depth 3893' Drill Collars Run 32' Vis 53
 Bottom Packer Depth 3898' Wt. Pipe Run - WL 9.2
 Total Depth 3970' Chlorides 5,000 ppm System LCM 1#

Blow Description 77- Fair Blow; BOB in 10 mins
78- Weak Blow; Built to 1/4"; Died 25 mins
79- Fair Blow; BOB in 11 mins
75- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>OCM</u>	<u>5</u>		<u>95</u>	
<u>120'</u>	<u>WCM</u>		<u>10</u>	<u>90</u>	
<u>290'</u>	<u>WCM</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>120'</u>	<u>WCM</u>	<u>10</u>	<u>40</u>	<u>50</u>	
<u>60'</u>	<u>21P</u>	<u>100</u>			

Rec Total 540' BHT 121° Gravity - API RW 256 @ 98° F Chlorides 7,600 ppm

(A) Initial Hydrostatic 1922
 (B) First Initial Flow 31
 (C) First Final Flow 171
 (D) Initial Shut-In 1209
 (E) Second Initial Flow 164
 (F) Second Final Flow 29.5
 (G) Final Shut-In 1203
 (H) Final Hydrostatic 1801

☒ Test 1050
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☒ Mileage 5627 42
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1092

T-On Location 12:30
 T-Started 12:53
 T-Open 14:40
 T-Pulled 17:10
 T-Out 19:16
 Comments

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total
 Total 1092
 MP/DST Disc't

Approved By

Our Representative

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