

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 Recompletion Date _____ 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	Downing-Nelson Oil Co Inc
Well Name	ERNIE PFEIFER 1-1
Doc ID	1465884

Tops

Name	Top	Datum
Top Anhydrite	1466'	+666
Base Anhydrite	1508'	+624
Topeka	3170'	-1038
Heebner	3404'	-1272
Toronto	3426'	-1294
LKC	3444'	-1312
BKC	3693'	-1561
Marmaton	3740'	-1608
Conglomerate	3760'	-1628



Services, Inc.

CHARGE TO: Downing Nelson
ADDRESS
CITY, STATE, ZIP CODE

TICKET 27591

CITY, STATE, ZIP CODE

PAGE 1 OF 1

1. <i>Hayes, KS</i>	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
2. <i>Ness City, KS</i>	<i>1-1</i>	<i>Emix Driller</i>	<i>Ellis</i>	<i>KS</i>		<i>07/06/19</i>	
3.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <i>Discobry Drilling</i>	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
4.	WELL TYPE <i>D-1</i>	WELL CATEGORY <i>Nuss</i>	JOB PURPOSE <i>Shallows Surface</i>	<i>CT</i>	<i>Location</i>		
REFERRAL LOCATION		INVOICE INSTRUCTIONS		WELL PERMIT NO.		WELL LOCATION	

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UNIT	QTY.	UNIT	PRICE	AMOUNT
		LOC	ACCT	DF								
575					MILEAGE #110	20	mi	1	EA		5.00	100.00
576.5					Pump Charge - Shallows Surface	1	EA				925.00	925.00
290					D-Dir	2	gal				42.00	84.00
325					Standard Cement	150	SKS				13.50	2025.00
279					Bentonite Gel (20%)	3	SKS				30.00	90.00
278					Calcium Chloride (3%)	7	SKS				40.00	280.00
581					Service Charge Cement	150	SKS	14750	lbs		1.85	277.50
583					Drayage	46	mi	295	TM		0.95	280.25

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 *[Signature]* DATE SIGNED _____ TIME SIGNED _____

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

REMIT PAYMENT TO:

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

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?
WE UNDERSTOOD AND MET YOUR NEEDS?
OUR SERVICE WAS PERFORMED WITHOUT DELAY?
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?
ARE YOU SATISFIED WITH OUR SERVICES?

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 100

TOTAL 3800.59

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

SWIFT OPERATOR: *[Signature]* APPROVAL: *[Signature]*

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 07/06/19	PAGE NO. 1
TICKET NO. 27591	

CUSTOMER Downing & Nelson		WELL NO. 1-1		LEASE Ernie Prieter		JOB TYPE Surface		TICKET NO. 27591	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	1145								On location, Set up trucks. Rig still Drilling 221' 8 5/8" x 23"
									Start Running Casing Break Circulation Hook up to Swift
	1330	4	5			200			Pump Water Spacer ahead
	1330	4							Start Cement, Mix at 14.7ppg
		4	36			Val			Fin Cement
	1341	4							Start Displacement
	1345	4	13 1/4			200			Fin Displacement Cont Circulated to Surface Shut in
									Release Truck
	1350								Wash up Rack up
	1400								Job Complete
									Thanks Tom, Austin, Russell

SWIFT Services, Inc.

DATE 7-13-19	PAGE NO.
TICKET NO. 27628	

CHART NO.	TIME	RATE (BPM)	WELL NO. # 1-1	VOLUME (BBL) (GAL)	PUMPS		LEASE Ernie Pfeifer		JOB TYPE P/A	DESCRIPTION OF OPERATION AND MATERIALS
					T	C	PRESSURE (PSI)			
							TUBING	CASING		
	500									On location
	530	4		7				100		1st Plug - @ 1500'
		4		13				100		50 sks cmt
		4		3				100		pump wtr spacer
										pump cmt
										pump Disp
	610	4		2				100		2nd Plug @ 700'
		4		26				100		100 sks cmt
		4		2				100		pump wtr spacer
										pump cmt
										Disp
	630									3rd Plug @ 280'
		4		13				100		50 sks cmt
		0		2				0		pump cmt
										Disp
	740	5		2.5				0		4th plug 40'
										10 sks cmt
										pump cmt
	750	2.5		8				0		Plug Bar hole - 30 sks cmt
	755	2.5		4				0		PMG mouse hole - 15 sks cmt
	800									Job Complete
										Thanks
										David Zech & Kirby



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co.**

PO Box 1019
Has, KS 67601

ATTN: Marc Downing

Ernie Pfeifer #1-1

1-13S-20W Ellis,KS

Start Date: 2019.07.10 @ 11:23:58

End Date: 2019.07.10 @ 19:16:49

Job Ticket #: 64477 DST #: 1

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

Printed: 2019.07.16 @ 15:15:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

ATTN: Marc Dow ning

Job Ticket: 64477

DST#: 1

Test Start: 2019.07.10 @ 11:23:58

GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:43:04

Time Test Ended: 19:16:49

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3436.00 ft (KB) To 3512.00 ft (KB) (TVD)

Reference Elevations: 2131.00 ft (KB)

Total Depth: 3512.00 ft (KB) (TVD)

2123.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700

Outside

Press@RunDepth: 37.57 psig @ 3437.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.10

End Date:

2019.07.10

Last Calib.:

2019.07.10

Start Time:

11:23:59

End Time:

19:16:49

Time On Btm:

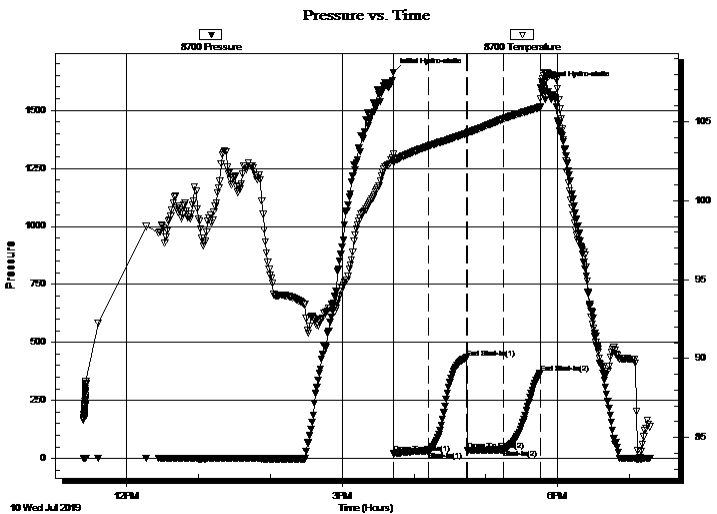
2019.07.10 @ 15:42:49

Time Off Btm:

2019.07.10 @ 17:47:04

TEST COMMENT: 30- IF- Weak blow built slowly to 1.69"
30- IS- No blow
30- FF- Weak blow built slowly to 1.49"
30- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1663.38	102.93	Initial Hydro-static
1	19.93	102.42	Open To Flow (1)
30	32.60	103.45	Shut-In(1)
61	433.71	104.26	End Shut-In(1)
62	36.30	104.31	Open To Flow (2)
92	37.57	105.17	Shut-In(2)
123	368.16	105.93	End Shut-In(2)
125	1608.12	107.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	SOCM, 10%O 90%M	0.41

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64477

DST#: 1

ATTN: Marc Dow ning

Test Start: 2019.07.10 @ 11:23:58

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.82 inches	Volume: 48.07 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 70000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3436.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	76.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3417.00	
Shut In Tool	5.00			3422.00	
Hydraulic tool	5.00			3427.00	
Packer	5.00			3432.00	20.00 Bottom Of Top Packer
Packer	4.00			3436.00	
Stubb	1.00			3437.00	
Recorder	0.00	6771	Inside	3437.00	
Recorder	0.00	8700	Outside	3437.00	
Perforations	6.00			3443.00	
Change Over Sub	1.00			3444.00	
Drill Pipe	64.00			3508.00	
Change Over Sub	1.00			3509.00	
Bullnose	3.00			3512.00	76.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64477

DST#: 1

ATTN: Marc Dow ning

Test Start: 2019.07.10 @ 11:23:58

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
50.00	SOCM, 10%O 90%M	0.413

Total Length: 50.00 ft Total Volume: 0.413 bbl

Num Fluid Samples: 0

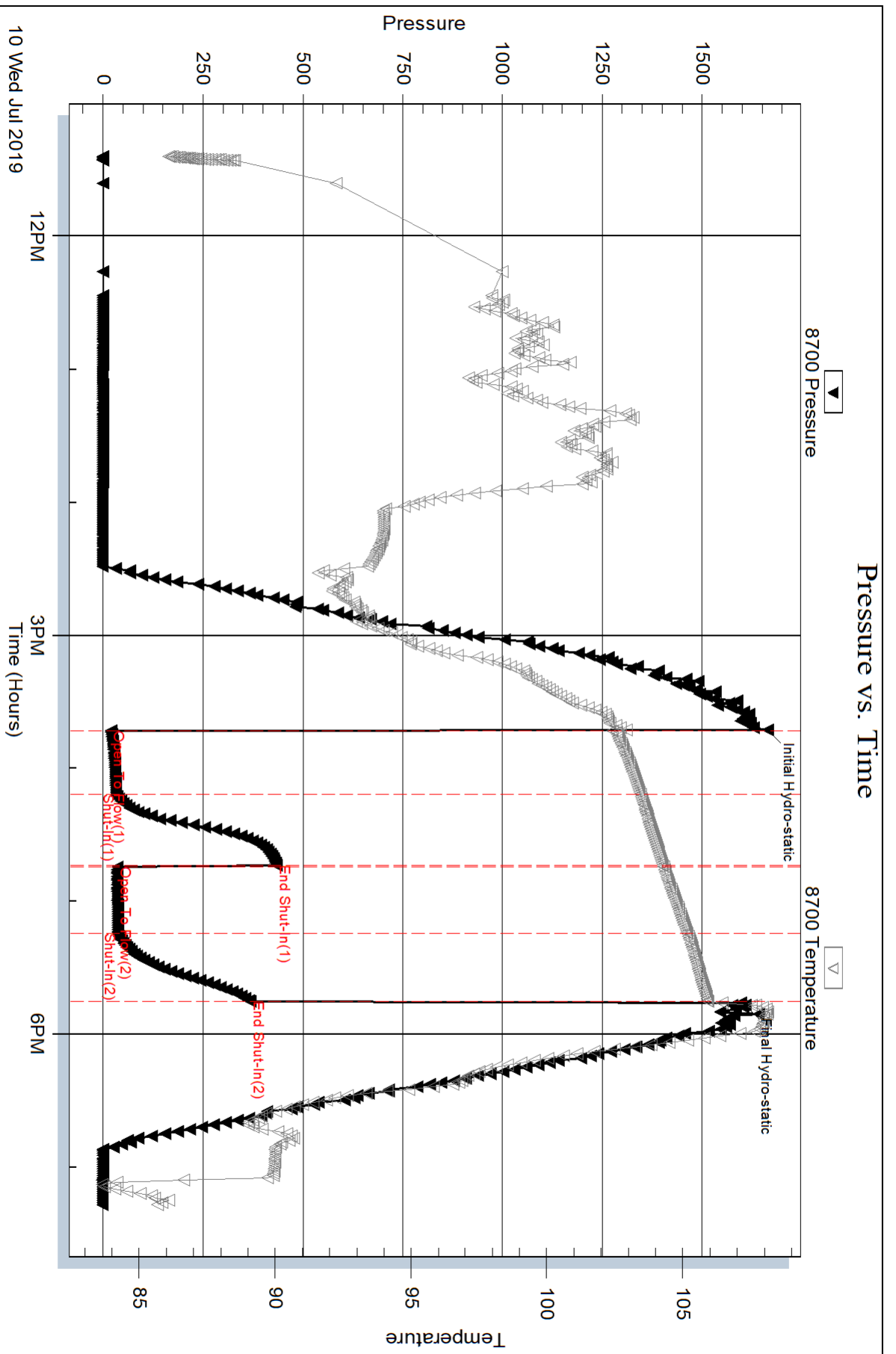
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



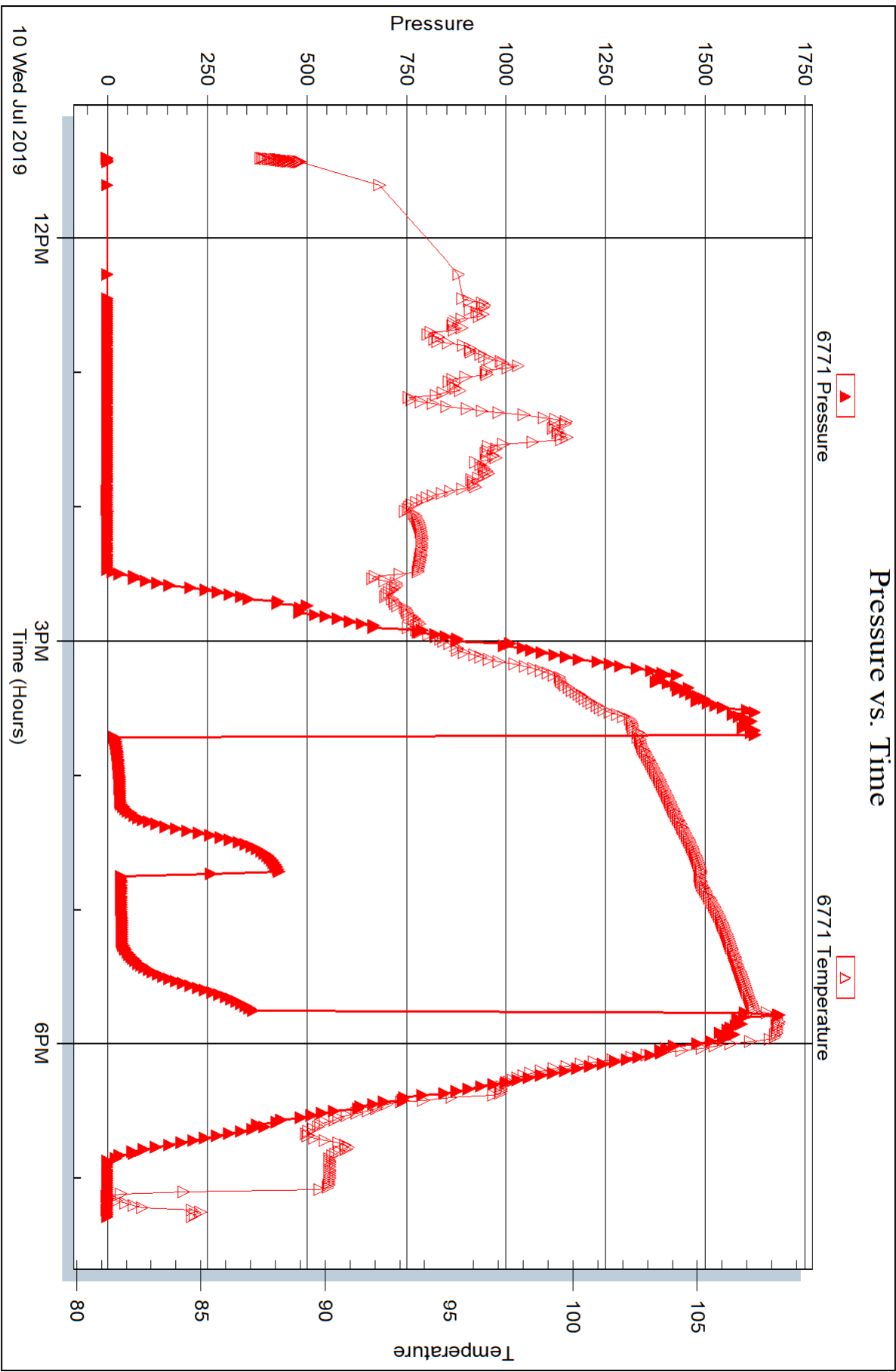
Serial #: 6771

Inside

Dow nting-Nelson Oil Co.

Ernie Pfeifer #1-1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co.**

PO Box 1019
Has, KS 67601

ATTN: Marc Downing

Ernie Pfeifer #1-1

1-13S-20W Ellis,KS

Start Date: 2019.07.11 @ 01:03:45

End Date: 2019.07.11 @ 06:30:36

Job Ticket #: 64478 DST #: 2

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

Printed: 2019.07.16 @ 15:14:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64478

DST#: 2

ATTN: Marc Dow ning

Test Start: 2019.07.11 @ 01:03:45

GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:03:06

Time Test Ended: 06:30:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3507.00 ft (KB) To 3525.00 ft (KB) (TVD)

Reference Elevations: 2131.00 ft (KB)

Total Depth: 3525.00 ft (KB) (TVD)

2123.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: 23.80 psig @ 3508.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.11

End Date:

2019.07.11

Last Calib.:

2019.07.11

Start Time: 01:03:46

End Time:

06:30:36

Time On Btm:

2019.07.11 @ 03:02:51

Time Off Btm:

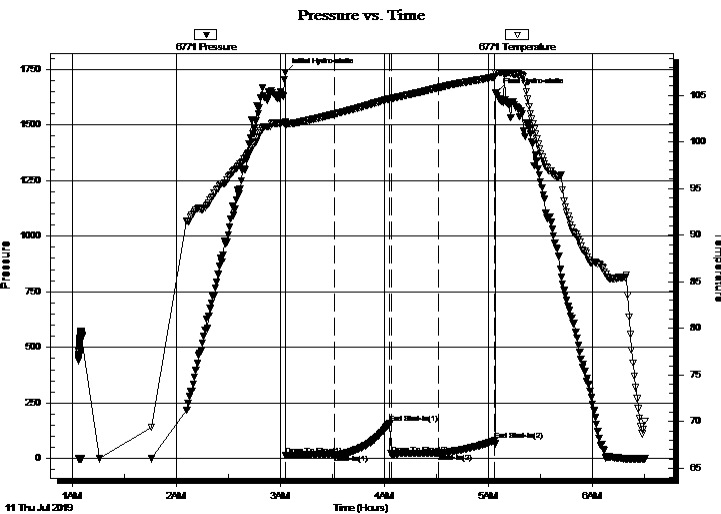
2019.07.11 @ 05:04:21

TEST COMMENT: 30- IF- Weak blow built slowly to 1.23"

30- IS- No blow

30- FF- Surface blow

30- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1735.48	102.13	Initial Hydro-static
1	13.91	101.85	Open To Flow (1)
29	19.48	102.98	Shut-In(1)
61	159.03	104.64	End Shut-In(1)
62	21.48	104.66	Open To Flow (2)
89	23.80	105.81	Shut-In(2)
121	80.68	106.96	End Shut-In(2)
122	1645.13	107.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM	0.15

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64478

DST#: 2

ATTN: Marc Dow ning

Test Start: 2019.07.11 @ 01:03:45

Tool Information

Drill Pipe:	Length: 3487.00 ft	Diameter: 3.82 inches	Volume: 49.43 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	75000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3507.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	18.00 ft				
Tool Length:	38.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3488.00	
Shut In Tool	5.00			3493.00	
Hydraulic tool	5.00			3498.00	
Packer	5.00			3503.00	20.00 Bottom Of Top Packer
Packer	4.00			3507.00	
Stubb	1.00			3508.00	
Recorder	0.00	6771	Inside	3508.00	
Recorder	0.00	8700	Outside	3508.00	
Perforations	14.00			3522.00	
Bullnose	3.00			3525.00	18.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64478

DST#: 2

ATTN: Marc Dow ning

Test Start: 2019.07.11 @ 01:03:45

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	OSM	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

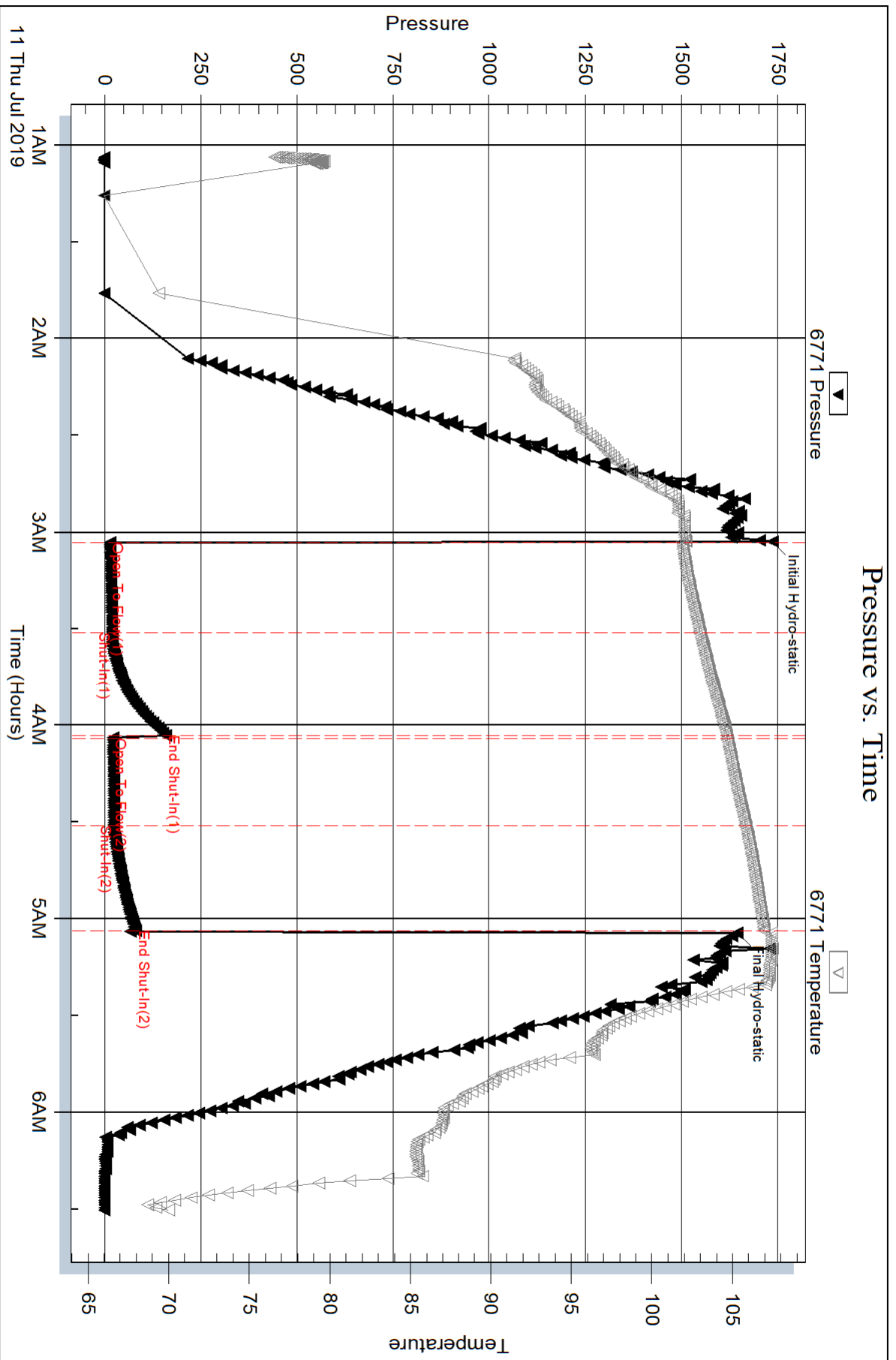
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

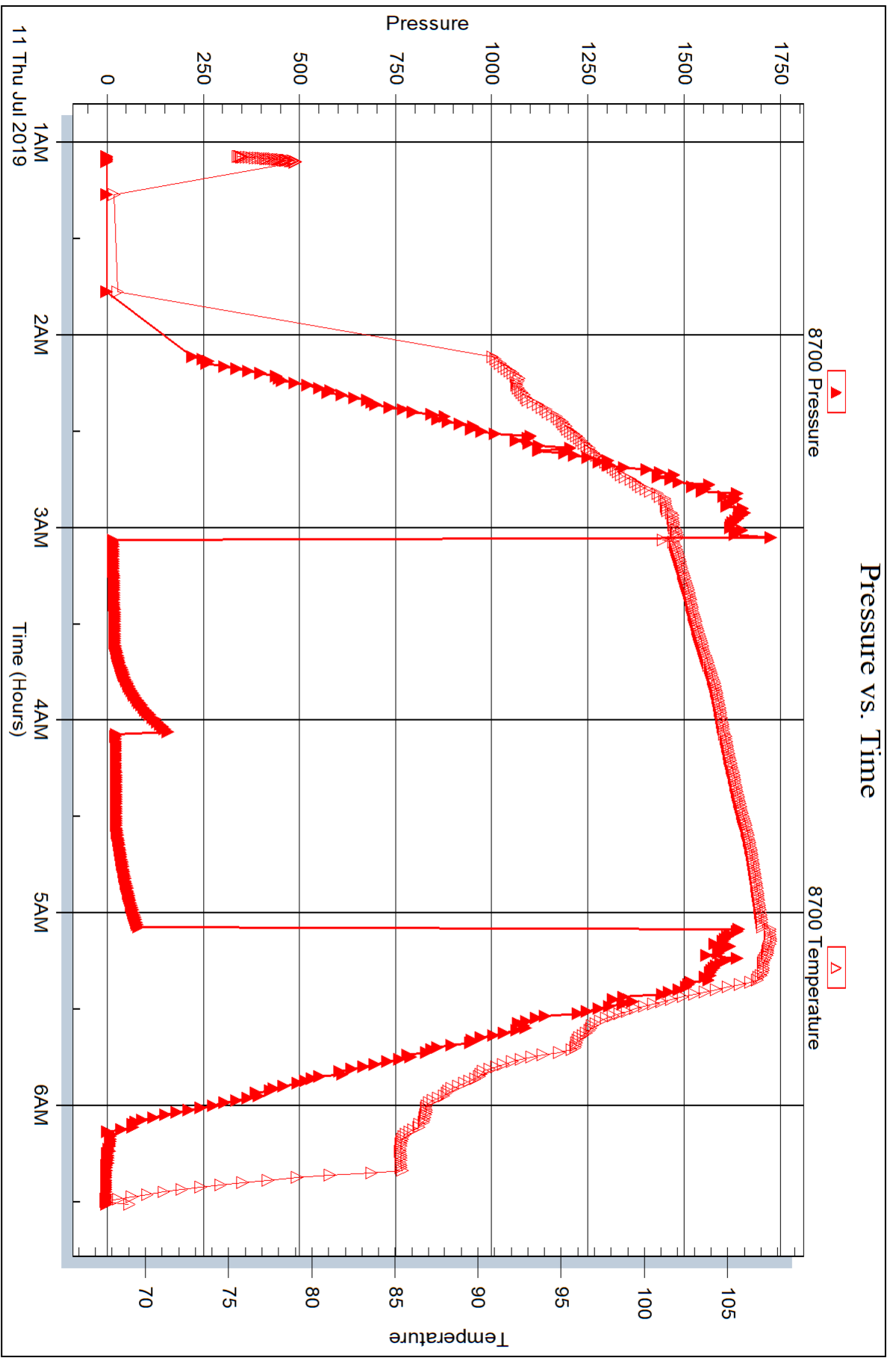


Serial #: 8700

Outside Dow nting-Nelson Oil Co.

Ernie Peifer #1-1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co.**

PO Box 1019
Has, KS 67601

ATTN: Marc Downing

Ernie Pfeifer #1-1

1-13S-20W Ellis,KS

Start Date: 2019.07.12 @ 12:22:05

End Date: 2019.07.12 @ 18:07:26

Job Ticket #: 64479 DST #: 3

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

Printed: 2019.07.16 @ 15:13:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64479

DST#: 3

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 12:22:05

GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:59:26

Time Test Ended: 18:07:26

Test Type: Conventional Straddle (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3746.00 ft (KB) To 3815.00 ft (KB) (TVD)

Reference Elevations: 2131.00 ft (KB)

Total Depth: 3865.00 ft (KB) (TVD)

2123.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: 57.76 psig @ 3747.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.12

End Date:

2019.07.12

Last Calib.:

2019.07.12

Start Time: 12:22:06

End Time:

18:07:26

Time On Btm:

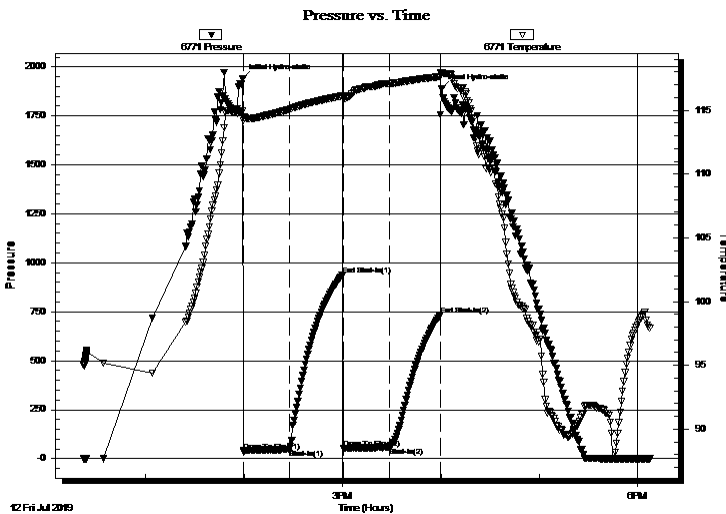
2019.07.12 @ 13:59:11

Time Off Btm:

2019.07.12 @ 16:00:26

TEST COMMENT: 30- IF- Slow ly built to 1.50"
30- IS- No blow
30- FF- Weak surface blow
30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1941.14	114.93	Initial Hydro-static
1	38.13	114.18	Open To Flow (1)
29	49.55	115.07	Shut-In(1)
61	938.24	116.14	End Shut-In(1)
62	51.94	115.97	Open To Flow (2)
90	57.76	117.08	Shut-In(2)
121	731.54	117.64	End Shut-In(2)
122	1889.55	117.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	M	0.10

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64479

DST#: 3

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 12:22:05

Tool Information

Drill Pipe:	Length: 3708.00 ft	Diameter: 3.82 inches	Volume: 52.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3746.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	3815.00 ft			
Interval betw een Packers:	69.00 ft			
Tool Length:	139.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3727.00	
Shut In Tool	5.00			3732.00	
Hydraulic tool	5.00			3737.00	
Packer	5.00			3742.00	20.00 Bottom Of Top Packer
Packer	4.00			3746.00	
Stubb	1.00			3747.00	
Recorder	0.00	6771	Inside	3747.00	
Recorder	0.00	8700	Outside	3747.00	
Perforations	18.00			3765.00	
Change Over Sub	1.00			3766.00	
Drill Pipe	32.00			3798.00	
Change Over Sub	1.00			3799.00	
Perforations	12.00			3811.00	
Blank Off Sub	1.00			3812.00	
Blank Spacing	3.00			3815.00	69.00 Tool Interval
Packer	1.00			3816.00	
Stubb	1.00			3817.00	
Perforations	11.00			3828.00	
Change Over Sub	1.00			3829.00	
Recorder	0.00	8367	Below	3829.00	
Drill Pipe	32.00			3861.00	
Change Over Sub	1.00			3862.00	
Bullnose	3.00			3865.00	50.00 Bottom Packers & Anchor
Total Tool Length:	139.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64479

DST#: 3

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 12:22:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	M	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

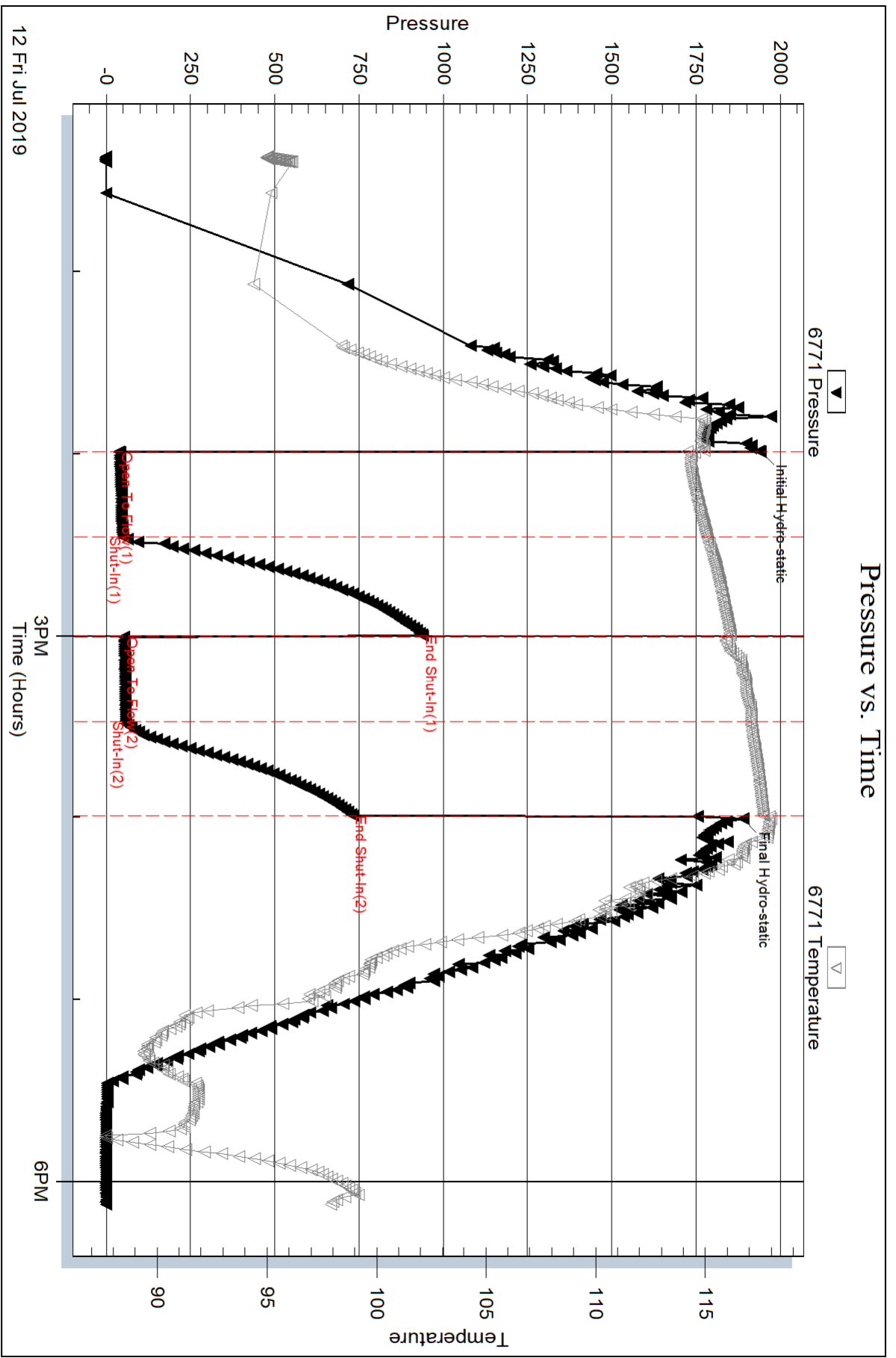
Serial #: 6771

Inside

Dow nung-Nelson Oil Co.

Ernie Peifer #1-1

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 64479

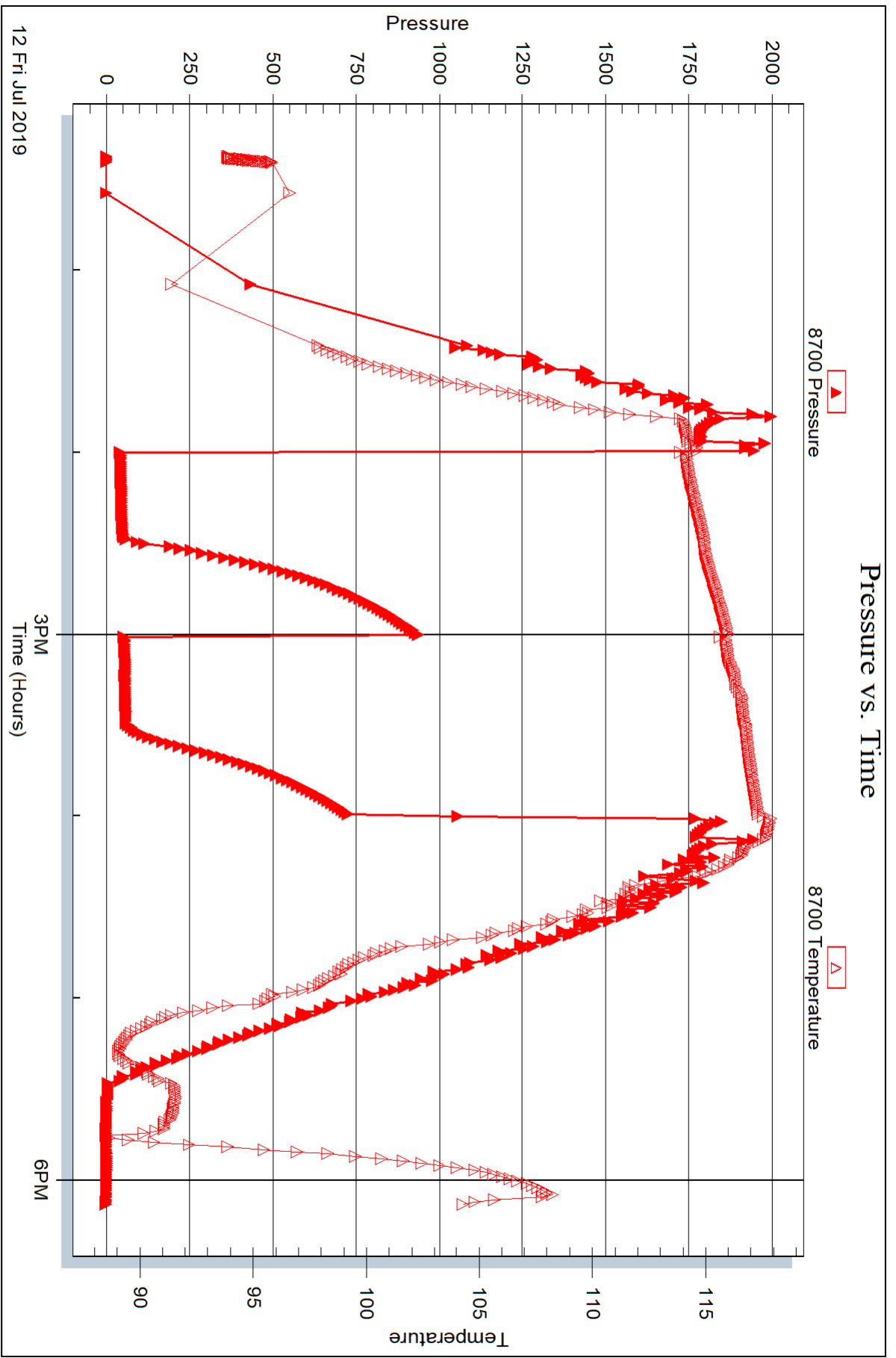
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Serial #: 8700

Outside Dow nting-Nelson Oil Co.

Ernie Peifer #1-1

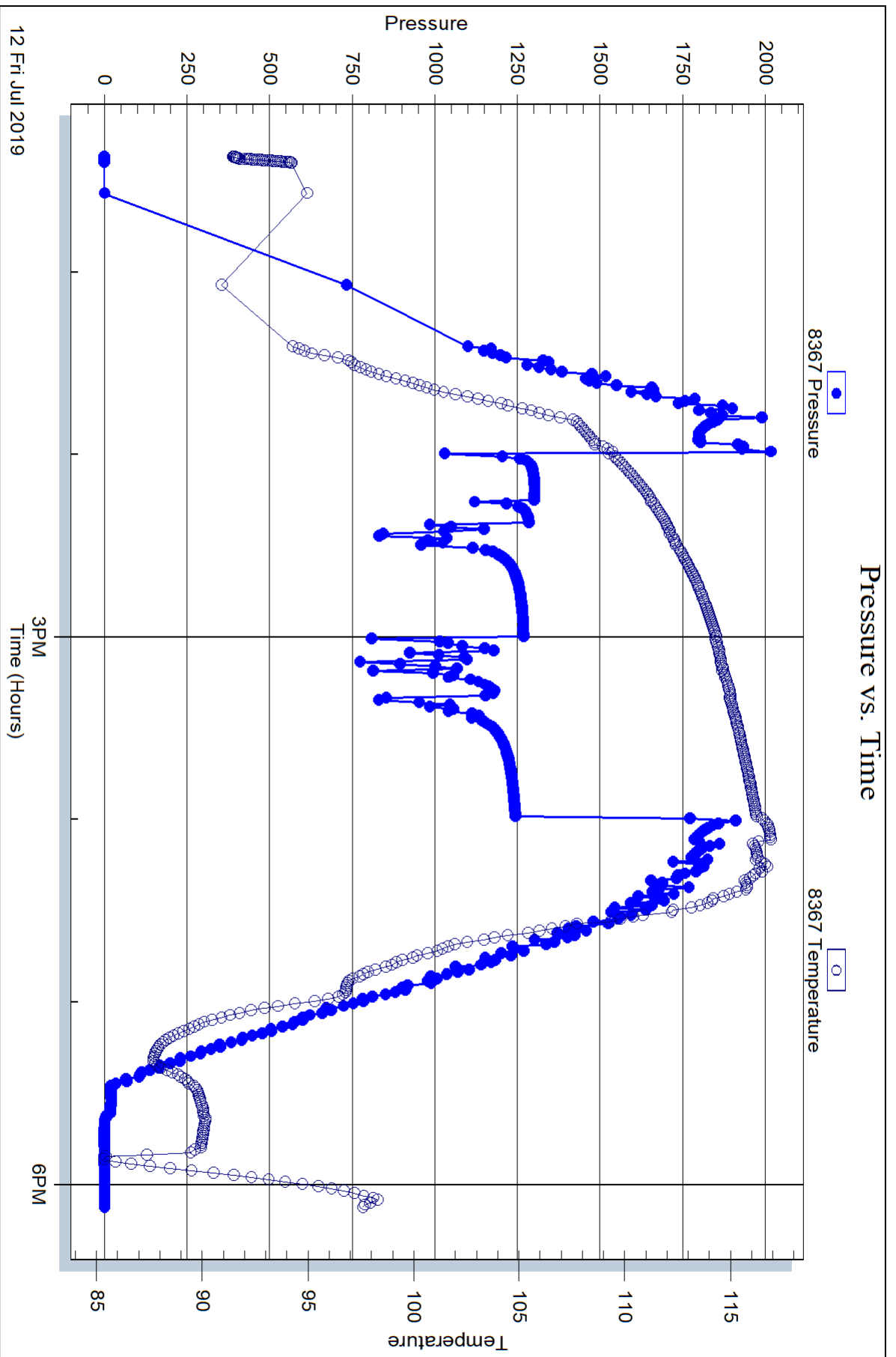
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 64479

Printed: 2019.07.16 @ 15:13:15





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co.**

PO Box 1019
Has, KS 67601

ATTN: Marc Downing

Ernie Pfeifer #1-1

1-13S-20W Ellis,KS

Start Date: 2019.07.12 @ 18:33:53

End Date: 2019.07.13 @ 01:24:14

Job Ticket #: 64480 DST #: 4

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

Printed: 2019.07.16 @ 15:08:57



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64480

DST#: 4

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 18:33:53

GENERAL INFORMATION:

Formation: **KC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:31:29
 Time Test Ended: 01:24:14
 Interval: **3565.00 ft (KB) To 3653.00 ft (KB) (TVD)**
 Total Depth: 3865.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2131.00 ft (KB)
 2123.00 ft (CF)
 KB to GR/CF: 8.00 ft

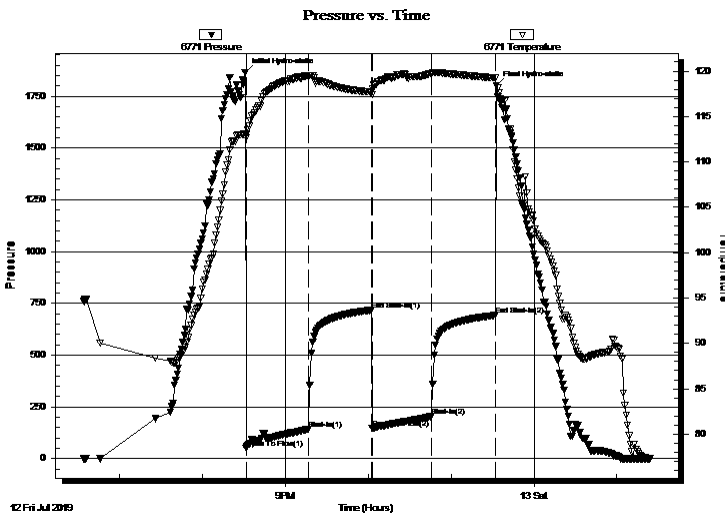
Serial #: 6771

Inside

Press@RunDepth: 203.37 psig @ 3566.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.07.12 End Date: 2019.07.13 Last Calib.: 2019.07.13
 Start Time: 18:33:54 End Time: 01:24:14 Time On Btm: 2019.07.12 @ 20:31:14
 Time Off Btm: 2019.07.12 @ 23:32:44

TEST COMMENT: 45- IF- BOB 18 mins. Built to 19.62"
 45- IS- No blow
 45- FF- BOB 39 mins. Built to 12.50"
 45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1865.83	113.10	Initial Hydro-static
1	51.66	112.65	Open To Flow (1)
46	143.66	119.47	Shut-In(1)
91	717.74	117.64	End Shut-In(1)
92	147.10	118.05	Open To Flow (2)
135	203.37	119.77	Shut-In(2)
181	692.47	119.25	End Shut-In(2)
182	1803.25	118.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
330.00	WM, 35%W 65%M	4.38

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.
 PO Box 1019
 Has, KS 67601
 ATTN: Marc Dow ning

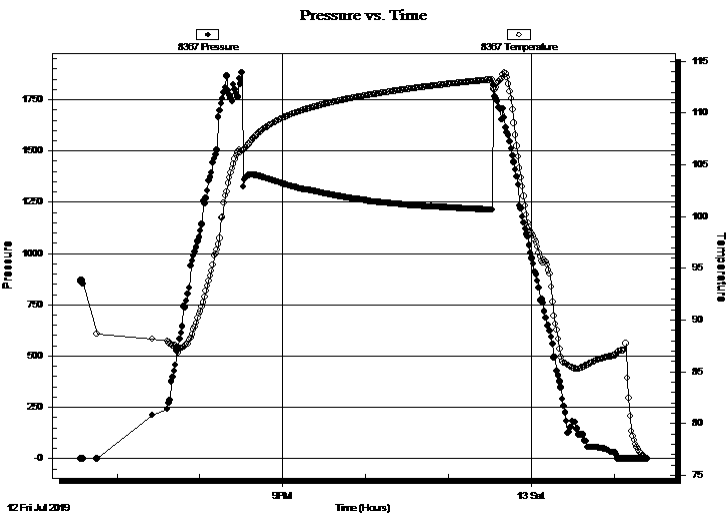
1-13S-20W Ellis,KS
Ernie Pfeifer #1-1
 Job Ticket: 64480 **DST#: 4**
 Test Start: 2019.07.12 @ 18:33:53

GENERAL INFORMATION:

Formation: **KC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:31:29
 Time Test Ended: 01:24:14
 Interval: **3565.00 ft (KB) To 3653.00 ft (KB) (TVD)**
 Total Depth: 3865.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2131.00 ft (KB)
 2123.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8367 Below (Straddle)
 Press@RunDepth: psig @ 3671.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.07.12 End Date: 2019.07.13 Last Calib.: 2019.07.13
 Start Time: 18:33:38 End Time: 01:23:58 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- BOB 18 mins. Built to 19.62"
 45- IS- No blow
 45- FF- BOB 39 mins. Built to 12.50"
 45- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
330.00	WM, 35%W 65%M	4.38

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64480

DST#: 4

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 18:33:53

Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.82 inches	Volume: 49.88 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3565.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	3653.00 ft			
Interval betw een Packers:	88.00 ft			
Tool Length:	320.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3546.00	
Shut In Tool	5.00			3551.00	
Hydraulic tool	5.00			3556.00	
Packer	5.00			3561.00	20.00 Bottom Of Top Packer
Packer	4.00			3565.00	
Stubb	1.00			3566.00	
Recorder	0.00	6771	Inside	3566.00	
Recorder	0.00	8700	Outside	3566.00	
Perforations	3.00			3569.00	
Change Over Sub	1.00			3570.00	
Drill Pipe	63.00			3633.00	
Change Over Sub	1.00			3634.00	
Perforations	15.00			3649.00	
Blank Off Sub	1.00			3650.00	
Blank Spacing	3.00			3653.00	88.00 Tool Interval
Packer	1.00			3654.00	
Stubb	1.00			3655.00	
Perforations	15.00			3670.00	
Change Over Sub	1.00			3671.00	
Recorder	0.00	8367	Below	3671.00	
Drill Pipe	190.00			3861.00	
Change Over Sub	1.00			3862.00	
Bullnose	3.00			3865.00	212.00 Bottom Packers & Anchor
Total Tool Length:	320.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co.

1-13S-20W Ellis,KS

PO Box 1019
Has, KS 67601

Ernie Pfeifer #1-1

Job Ticket: 64480

DST#: 4

ATTN: Marc Dow ning

Test Start: 2019.07.12 @ 18:33:53

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:

62000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
330.00	WM, 35%W 65%M	4.382

Total Length: 330.00 ft Total Volume: 4.382 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

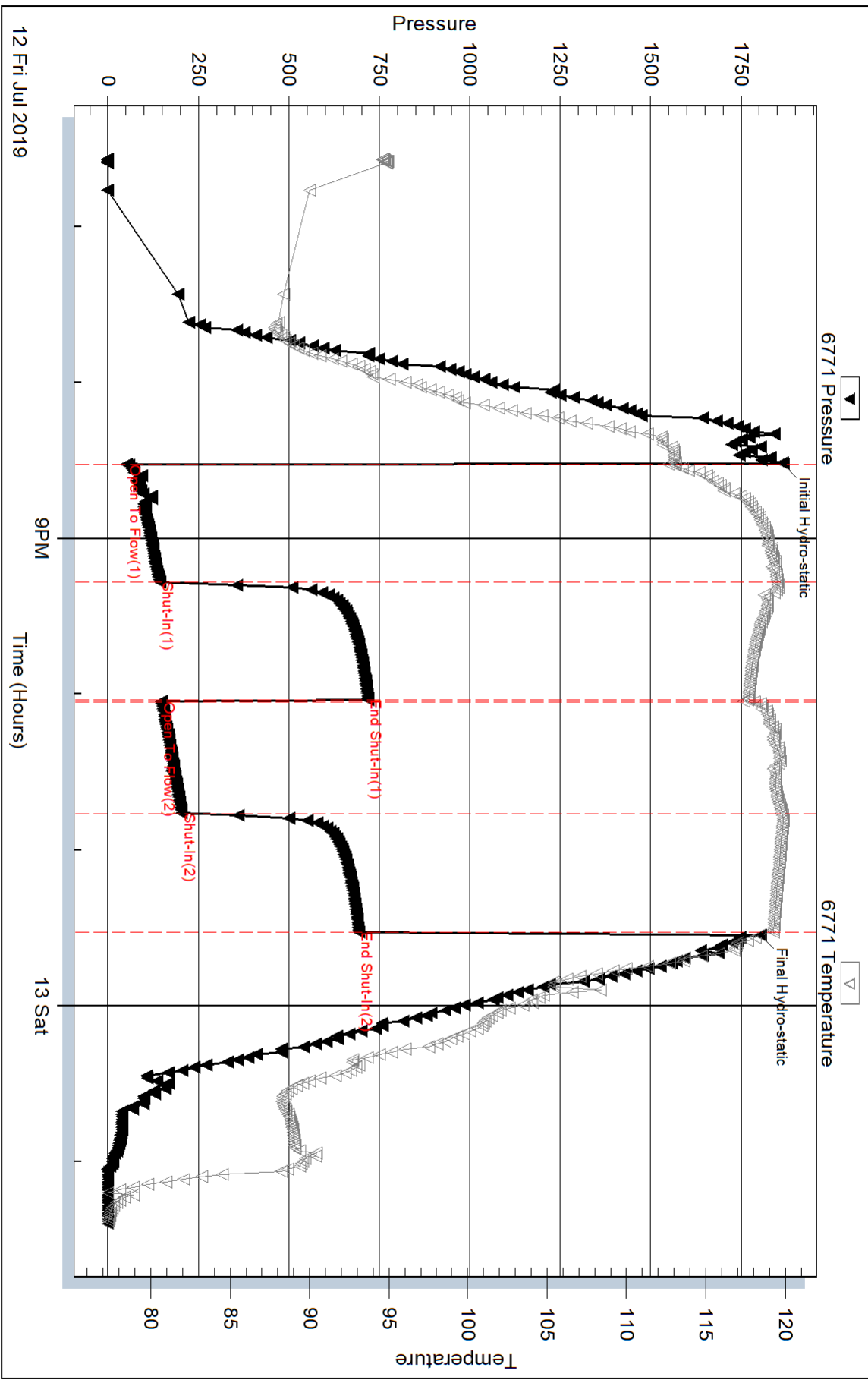
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .10@74deg

Pressure vs. Time

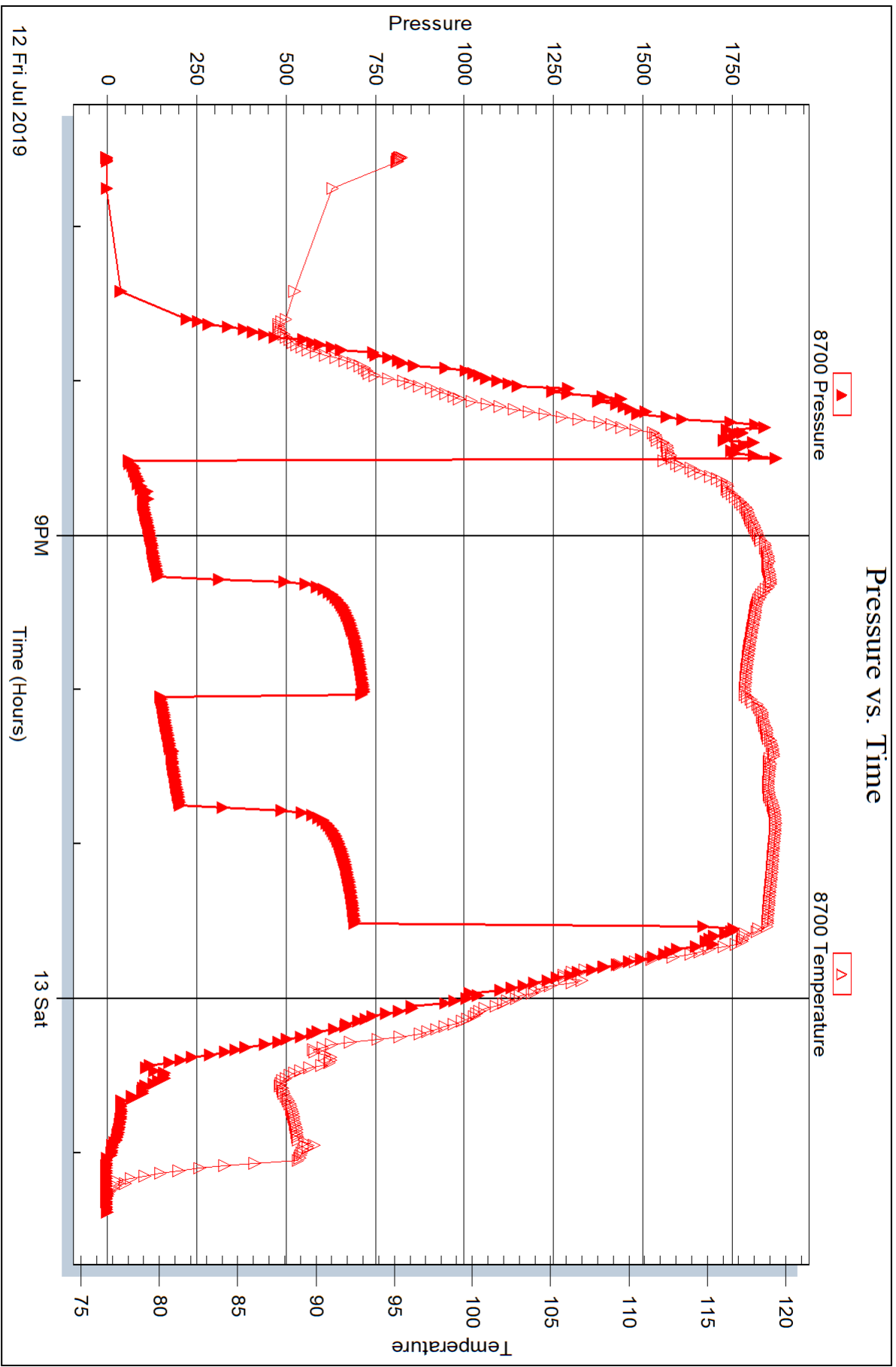


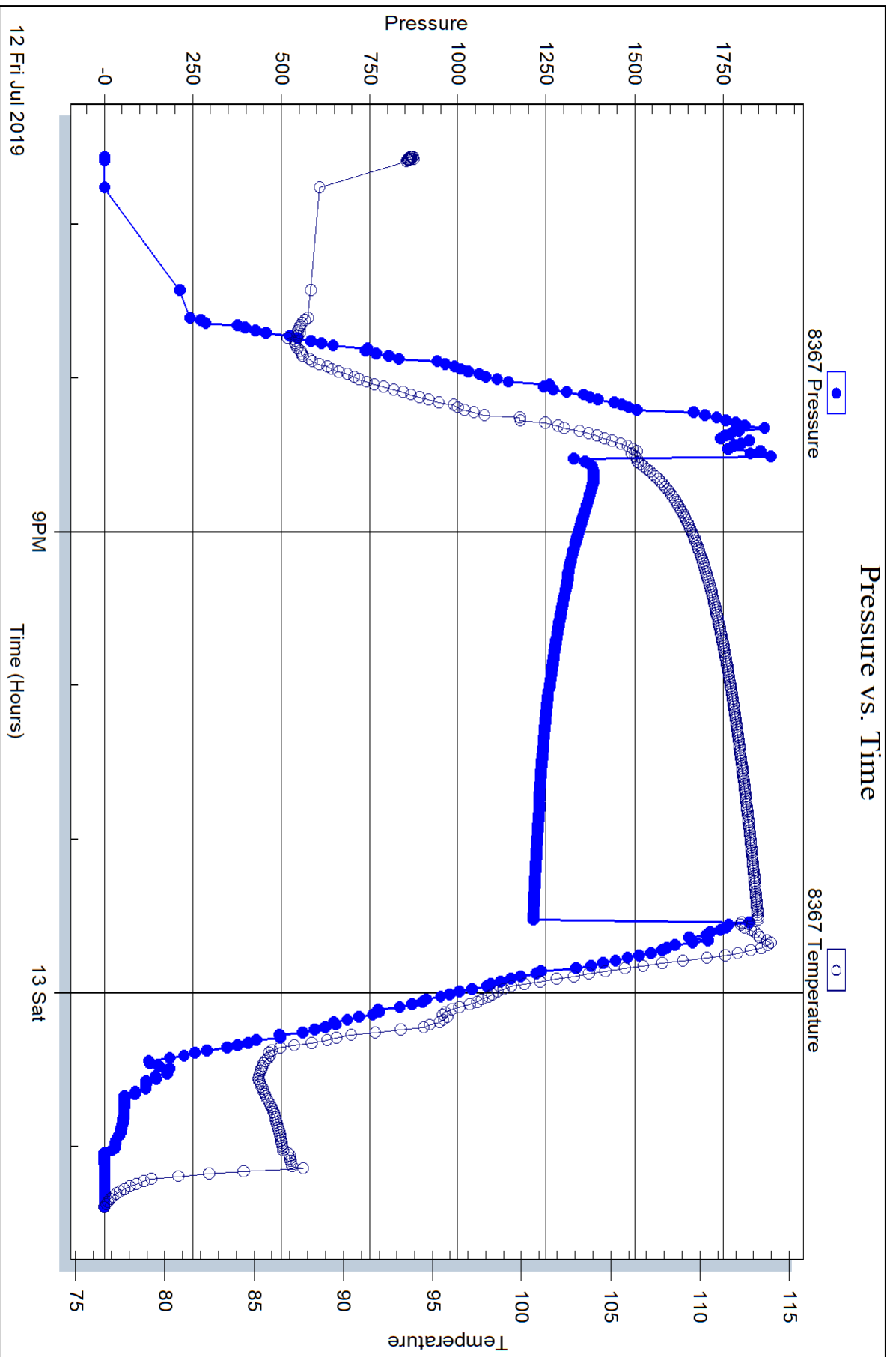
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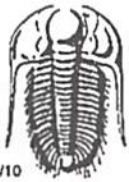
Outside Dow n/ing-Nelson Oil Co.

Enie Peifer #1-1

DST Test Number: 4







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64477

Well Name & No. Emie Pfeiffer #1-1 Test No. 1 Date 7/10/19
 Company Downing Nelson Oil Co, Inc. Elevation 2131 KB 2123 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 4
 Location: Sec. 1 Twp 13 S Rge. 20 W Co. Ellis State KS

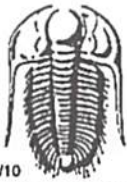
Interval Tested 3436-3512 Zone Tested LKC "A+D"
 Anchor Length 26' Drill Pipe Run 3391 Mud Wt. 8.6
 Top Packer Depth 3431 Drill Collars Run 32 Vis 30
 Bottom Packer Depth 3436 Wt. Pipe Run _____ WL 8.0
 Total Depth 3512 Chlorides 4,000 ppm System LCM 1#
 Blow Description IF - Weak blow built slowly to 1.69"
ISI - No blow
FF - Weak blow built slowly to 1.49"
FSE - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>SOCMA</u>		<u>10</u>		<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 50' BHT 106° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1663</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1110</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars _____	T-Started <u>1124</u>
(C) First Final Flow <u>33</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1543</u>
(D) Initial Shut-In <u>434</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1743</u>
(E) Second Initial Flow <u>36</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1919</u>
(F) Second Final Flow <u>38</u>	<input checked="" type="checkbox"/> Mileage <u>32 RT</u> <u>32</u>	Comments _____
(G) Final Shut-In <u>368</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1608</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1232</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1232</u>	

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64478

4/10

Well Name & No. Ernie Pfeiffer #1-1 Test No. 2 Date 7/11/19
 Company Downing Nelson Oil Co. Inc. Elevation 2131 KB 2123 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 4
 Location: Sec. 1 Twp 13 S Rge. 20 W Co. Ellis State KS

Interval Tested 3507-3525 Zone Tested LKC "E"
 Anchor Length 18' Drill Pipe Run 3487 Mud Wt. 8.6
 Top Packer Depth 3507 Drill Collars Run 32 Vis 50
 Bottom Packer Depth 3507 Wt. Pipe Run — WL 8.0
 Total Depth 3525 Chlorides 4,000 ppm System LCM 1#

Blow Description IF - Weak blow built slowly to 1.23"
ISD - No blow
PF - Surface blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>OSM</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 30' BHT 107° Gravity 1200 API RW — @ — °F Chlorides — ppm

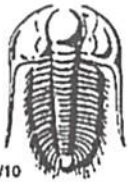
(A) Initial Hydrostatic	<u>1735</u>	<input checked="" type="checkbox"/> Test	<u>1200</u>	T-On Location	<u>0047</u>
(B) First Initial Flow	<u>14</u>	<input type="checkbox"/> Jars		T-Started	<u>0104</u>
(C) First Final Flow	<u>19</u>	<input type="checkbox"/> Safety Joint		T-Open	<u>0303</u>
(D) Initial Shut-In	<u>159</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>0503</u>
(E) Second Initial Flow	<u>21</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>0632</u>
(F) Second Final Flow	<u>24</u>	<input checked="" type="checkbox"/> Mileage	<u>32 RT 32</u>	Comments	
(G) Final Shut-In	<u>81</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1645</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	
		<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
		<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	

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

Sub Total 1232
 Total 1232
 MP/DST Disc't —

Approved By _____ Our Representative Bannon Lunsdale

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64479**

4/10

Well Name & No. Ernie Pfeifer #1-1 Test No. 3 Date 7/12/19
 Company Downing-Nelson Oil Co. Inc. Elevation 2131 KB 2123 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Mr Jason T. Alm Rig Discovery 4
 Location: Sec. 1 Twp 13 S Rge. 20 W Co. Ellis State KS

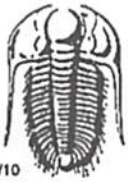
Interval Tested 3746-3815 Zone Tested Cong. Sand
 Anchor Length 69' Tail: 50' Drill Pipe Run 3208 Mud Wt. 8.8
 Top Packer Depth 3741-3746 Drill Collars Run 32 Vis 60
 Bottom Packer Depth 3815 Wt. Pipe Run _____ WL 9.6
 Total Depth 3865 Chlorides 5,600 ppm System LCM 1#
 Blow Description IF - slowly built to 1.50"
ISF - No blow
FF - Weak surface blow
FST - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>M</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 20' BHT 118° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 1941 Test 1200 T-On Location 1135
 (B) First Initial Flow 38 Jars _____ T-Started 1222
 (C) First Final Flow 50 Safety Joint _____ T-Open 1359
 (D) Initial Shut-In 938 Circ Sub _____ T-Pulled 1559
 (E) Second Initial Flow 52 Hourly Standby _____ T-Out 1807
 (F) Second Final Flow 58 Mileage 32 RT ³² Comments _____
 (G) Final Shut-In 732 Sampler _____
 (H) Final Hydrostatic 1890 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer 320
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 2152
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1832

Approved By _____ Our Representative Brannan Lonsdale

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64480

Well Name & No. Ernie Pfeifer #1-1 Test No. 4 Date 7/12/19
 Company Downing-Nelson Oil Co, Inc Elevation 2131 KB 2123 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Jason T Alm Rig Discovery 4
 Location: Sec. 1 Twp 13 S Rge. 20 W Co. Ellis State KS

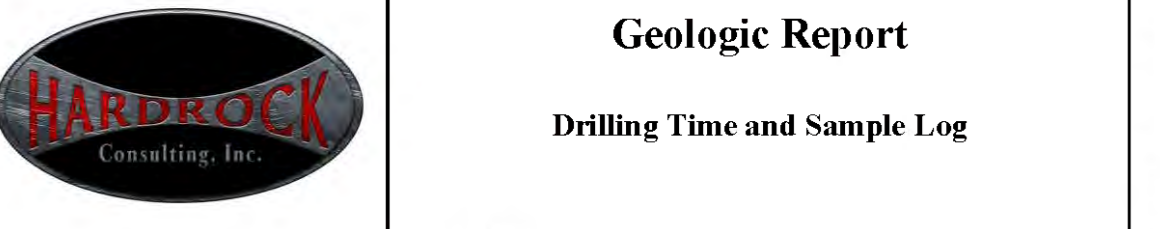
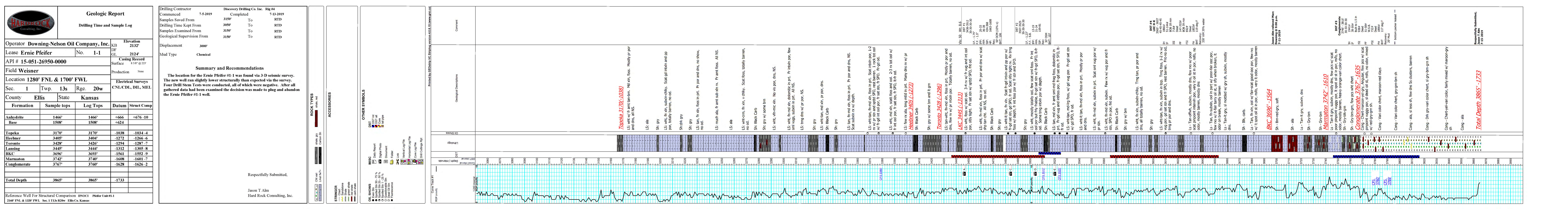
Interval Tested 3565-3653 Zone Tested KC
 Anchor Length 88' tail: 212' Drill Pipe Run 3519 Mud Wt. 8.8
 Top Packer Depth 3560-3565 Drill Collars Run 32 Vis 60
 Bottom Packer Depth 3653 Wt. Pipe Run _____ WL 9.6
 Total Depth 3865 Chlorides 5,000 ppm System LCM 1#
 Blow Description IF-BOB 18 mins Built to 19.62"
ISF- No blow
FF-BOB 39 mins Built to 12.50"
FST- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>330</u>	<u>WM</u>			<u>35</u>	<u>65</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 330' BHT 119° Gravity _____ API RW .10 @ 74 °F Chlorides 62,000 ppm
 (A) Initial Hydrostatic 1866 Test 1200 T-On Location 1807
 (B) First Initial Flow 52 Jars _____ T-Started 1833
 (C) First Final Flow 144 Safety Joint _____ T-Open 2031
 (D) Initial Shut-In 718 Circ Sub _____ T-Pulled 2331
 (E) Second Initial Flow 147 Hourly Standby _____ T-Out 7/13 0123
 (F) Second Final Flow 203 Mileage _____
 (G) Final Shut-In 692 Sampler _____
 (H) Final Hydrostatic 1803 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1800
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1800

Approved By _____ Our Representative Brennan Loosdale

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Geologic Report

Drilling Time and Sample Log

Operator **Downing-Nelson Oil Company, Inc.**

Lease **Ernie Pfeifer** No. **1-1**

API # **15-051-26950-0000**

Field **Weisner**

Location **1280' FNL & 1700' FWL**

Sec. **1** Twp. **13s** Rge. **20w**

County **Ellis** State **Kansas**

Formation **Sample tops** **Log Tops** **Datum** **Struct Comp**

Anhydrite **1466'** **1466'** **+666** **+676 -10**

Base **1508'** **1508'** **+624**

Topeka **3170'** **3170'** **-1038** **-1034 -4**

Heebner **3405'** **3404'** **-1272** **-1266 -6**

Toronto **3428'** **3426'** **-1294** **-1287 -7**

Lansing **3445'** **3444'** **-1312** **-1305 -8**

BKC **3696'** **3693'** **-1561** **-1552 -9**

Marmaton **3742'** **3740'** **-1608** **-1601 -7**

Conglomerate **3767'** **3760'** **-1628** **-1626 -2**

Total Depth **3865'** **3865'** **-1733**

Reference Well For Structural Comparison **DNOCI Pfeifer Unit #1-1**
2160' FNL & 1320' FWL Sec. 1 T13s R20w Ellis Co. Kansas

Drilling Contractor	Discovery Drilling Co. Inc.	Rig #4
Commenced	7-5-2019	Completed 7-13-2019
Samples Saved From	3150'	To RTD
Drilling Time Kept From	3050'	To RTD
Samples Examined From	3150'	To RTD
Geological Supervision From	3150'	To RTD

Displacement **3000'**

Mud Type **Chemical**

Elevation **2132'**

KB **2124'**

DF **2124'**

GL **2124'**

Casing Record Surface **8 5/8" @ 223'**

Production **None**

Electrical Surveys **CNL/CDL, DIL, MEL**

Summary and Recommendations

The location for the Ernie Pfeifer #1-1 was found via 3-D seismic survey. The new well ran slightly lower structurally than expected via the survey. Four Drill Stem Tests were conducted, all of which were negative. After all gathered data had been examined the decision was made to plug and abandon the Ernie Pfeifer #1-1 well.

Respectfully Submitted,

Jason T Alm

Hard Rock Consulting, Inc.

ROCK TYPES
 shale, red
 shale, gry
 Carbon Sh

ACCESSORIES

OTHER SYMBOLS

OIL SHOWS

MISC

STRINGER

Printed by GEOstrip VC Simplot version 4.0.8.15 (www.gstri.ca)

Curve Track #1

ROP (min/ft)

DST

Lithology

Oil Shows

Geological Descriptions

Comment

V/S: 50 Wt: 8.6
 DST #1
 3436-3512
 30-30-30-30
 I.F. - 1.75"
 F.F. - 1.5"
 IFF: 20-33
 FFP: 36-38
 SIP: 434-368
 RP: 1663-1608
 Rec: 50 OCM (10% o)
 BHT: 106

DST #2
 3697-3525
 30-30-30-30
 I.F. - 1.23"
 F.F. - S.B.
 IFF: 13-19
 FFP: 21-24
 SIP: 159-81
 Rec: 30 OSM
 BHT: 107

DST #4
 LIC H-K
 3565' - 3653'
 45-45-45-45
 1866#
 30-1-44#
 30-1-16 min
 718#
 Dead
 147-203#
 B08 39 min
 692#
 Dead
 1803#
 BHT
 Recovery: 119 deg F
 330 W/M 35% water

DST #3
 Conglomerate
 3746' - 3815'
 30-30-30-30
 1941#
 38-50#
 938#
 Dead
 N.S.#
 732#
 Dead
 1890#
 BHT
 Recovery: 117 deg F
 20' Mud
 ** bottom packer leaked **

Jason Alm relieved Marc Downing @ 9:00 p.m. 7-11-2019

Respectfully Submitted, Jason T Alm 7-15-2019

Total Depth 3865' - 1733

Topoka 3170' (-1038)

LS: wht w/ fr amt tan-brn. Md xin, foss. Mostly pr por and dns, all NS.

LS: ala

Sh: gry

LS: wht, fn xin, subxin-chiky. Scat gd inlxn and pp por, totally barren, no od.

Sh: drk gry

Sh: gry

LS: tan, fn xin, foss in prt. Pr por and dns, no show, no od.

LS: much ala, fr amt sub xin rx. Fr amt foss. All NS.

LS: ala

LS: wht-orm, fn xin, v chiky. Scat foss, totally barren, no od.

Sh: Black Carb

Sh: gry w/ some brn

LS: wht, vfn-mic xin. No vis por, dns, NS.

LS: wht, fn-md xin, dolomitic in prt. Fr inlxn por, few sml vugs, subxin in prt. All NS.

LS: trng dns w/ pr por, NS.

Sh: gry

LS: wht-tan, md xin, pr por, dns.

Sh: Black Carb

Sh: gry

LS: tan, fn-md xin, foss in prt. Pr por and dns, NS. Scat subxin rx w/ depth.

LS: wht-tan, fn-md xin, foss in prt. Scat inlxn por, 1-2 rx w/ pr stn and spdd SFO, rest barren. 1 rock tot ool w/ fr-gd int ool por, fr sat stn, fr SFO. Fr-gd od.

LS: wht, md xin, scatt foss and ool. 2-3 rx tot ool w/ fr int ool por, fr sat stn, fr SFO, lt-fr od.

LS: few rx ala, trng midd in prt. Many dns rx w/ pr Heebner 3405' (-1273)

Sh: Black Carb

Sh: gry w/ some brn and lt grn

Toronto 3428' (-1296)

LS: tan-wht, fn-md xin, foss in prt. Mostly pr por and dns, few rx w/ pr inlxn por. Totally barren, no od.

LKC 3445' (-1313)

LS: wht, foss w/ scat ool. 3-4 rx w/ fr vug and int ool por, stly tight. Fr sat stn w/ spdd SFO, fnt od.

LS: wht, fn-md xin, foss in prt. Pr por and dns w/ scat shp tan cht. All NS, no od.

Sh: Black Carb

Sh: gry

LS: wht-tan, fn-md xin, fr amt sm-md frag foss, dolomitic in prt. Fr-gd vug and intfoss por, fr-gd sat stn, fr SFO, lt-fr od.

LS: wht-tan, md-trlng foss, w/ gd vug por. Fr-gd sat stn w/ gd SFO, fr od.

LS: wht, mostly totally ool, few scat sml foss. Fr int ool por but frly friable, fr-gd sat stn w/ fr-gd SFO, lt-fr od. Some trng inlxn por w/ depth.

Sh: Black Carb

LS: tan, md xin, fr amt sm-md frag foss, dolomitic in prt. Fr-gd vug and intfoss por, fr-gd sat stn, fr SFO, lt-fr od.

LS: wht-tan, md-trlng foss, w/ gd vug por. Fr-gd sat stn w/ gd SFO, fr od.

LS: wht, fn xin, subxin in prt. Scat sml vug por w/ pr stn.

LS: wht, fn xin, subxin in prt. Scat sml vug por w/ pr stn, SFO in por, fnt od.

Sh: Black Carb

Sh: gry w/ brn

LS: wht, fn xin, subxin-chiky. Trng tan, pr por and dns, all totally barren, no od.

Sh: gry

LS: wht-tan, fn xin, subxin in top. Trng foss, 1-2 rx w/ vug por, gd sat stn and fr SFO, rest barren. Fnt-no od, trng pr por and dns.

LS - Tan-offwh, subxin, mostly dns, few rx w/ poor scat pinpoint interxin por, very lt oil st in por, nsfo, no odor, mostly barren, heavy orange-var color chert.

LS - Tan, fn-subxin, ool in part w/ poor-fair ooc por, few rx w/ lt-fair tarry oil st, sl sfo when broken, lt odor on break, mostly barren

LS - Tan-ht gry, sl mottled w/ gry sh, subxin, mostly dns.

Sh - Blk, carb.

LS - Tan, fn xin, ool w/ fair-scat good ooc por, few rx w/ w/ it spot oil st in por, nsfo, very lt odor, mostly barren

BKC 3696' - 1564

Sh - Brn-red-gry, soft

Sh - ala

LS - Tan-ht gry, subxin, dns

Sh - Gry-brn

Sh - Gry-brn

Marmaton 3742' - 1610

LS - Tan-ht gry, subxin, mostly dns, few pcs w/ scat poor pinpoint vuggy por, lt spot oil st in por, nsfo, no odor, mostly barren, heavy orange-var color chert.

Sh - Gry-brn-gm

Sh - Gry-brn-gm, few pcs wht chert

Conglomerate 3767' - 1635

Cong - Chert-maroon-yel-gry, Angular, few pcs w/ scat pinpoint vuggy por, sl dead oil st, nsfo, no odor, mixed w/ red-gry-gm sh.

Cong - Vari color chert, maroon-red clays

Cong - Vari color chert, gry-gm-brn sh

Cong - ala, sl less sh, few dns Ss clusters, barren

Cong - Dk gry-var color chert, sl gry-brn-gm sh

Cong - Chert-yel-var color, fairly mixed w/ maroon-gry sh

Cong - ala

Total Depth 3865' - 1733