

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	STECKLINE BROTHERS 1-34
Doc ID	1409957

Tops

Name	Top	Datum
Top Anhydrite	1829'	+554
Base Anhydrite	1875'	+508
Topeka	3504'	-1121
Heebner	3739'	-1356
Toronto	3755'	-1372
LKC	3771'	-1388
BKC	4014'	-1631
Marmaton	4120'	-1737
Cherokee Shale	4169'	-1786
Cherokee Sand	4210'	-1827
Conglomerate	4234'	-1851
Mississippi	4286'	-1903



SWIFT Services, Inc.

TICKET 27217

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

PAGE 1 OF 1

SERVICE LOCATIONS

1. Hays, KS WELL/PROJECT NO. 1-34 LEASE Steel Line COUNTY/PARISH Trego STATE KS CITY _____ DATE 04/10/18 OWNER _____

2. Miss. City, KS TICKET TYPE SALES CONTRACTOR Discover Drilling Inc RIG NAME/NO. _____ SHIPPED VIA CT DELIVERED TO Location ORDER NO. _____

3. WELL TYPE D-1 WELL CATEGORY Development JOB PURPOSE Cement Shallow Surface WELL PERMIT NO. _____

4. REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.				UNIT PRICE	AMOUNT	
		LOC	ACCT	DE		QTY.	UM	QTY.	UM			
575		1			MILEAGE #113	30	mi			5.00	150.00	
576.5		1			Ramp Charge - Shallow Surface	1	EA			875.00	875.00	
290		1			D-4, r	1	gal			42.00	42.00	
325		2			Standard Cement	150	SKS			13.00	1950.00	
278		2			Calcium Chloride (30%)	7	SKS			40.00	280.00	
279		2			Benbowite Gel (20%)	3	SKS			30.00	90.00	
581		2			Service Charge Cement	150	SKS			1.25	216.25	
583		2			Drayage	245	mi			0.95	282.75	
REMIT PAYMENT TO: SWIFT SERVICES, INC. P.O. BOX 466 NESS CITY, KS 67560 785-798-2300					<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TAX <u>190.20</u> <u>0.54</u> <u>3538.44</u>		TOTAL <u>3978.50</u>	

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

DATE SIGNED: Galvin by [Signature] TIME SIGNED: A.M. P.M.

SWIFT OPERATOR: [Signature] APPROVAL: _____

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

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 04/10/18 PAGE NO. 1

CUSTOMER Downing + Nelson WELL NO. 1-34 LEASE Steckline JOB TYPE Shallow Surface TICKET NO. 27217

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2115							On location, set up trucks 221' of 8 5/8 x 23#
	2145							Break Circulation
	2200	4	5			100		Start water ahead
		4				100		Start Cement
		4	36			Var		Fin Cement, Start Displacement
	2215	4	13			150		Fin Displacement, Cmt Circulated. Shut in
								Release Truck
								Wash up truck
	2230							Job Complete
								Thanks, Jon, Austin, Wayne
								Circulated 10 SKs to pit.



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 27223

CUSTOMER
Downing-Nelson

WELL
Steekline 1-34

DATE
04/18/18

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WEIGHT				UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY	U/M	QTY	U/M		
330						Swift Mrs. H. Density Std	200	SKS			16.25	3250.00
325						Standard Cement	158	SKS			13.00	1950.00
284						Calscal	7	SKS			35.00	245.00
283						Salt	800	lbs			0.20	160.00
292						Halad 322	70	lbs			8.00	560.00
276						Flascel	88	lbs			2.80	220.00
581												
583												
SERVICE CHARGE						Cement					1.75	6.12
MILEAGE CHARGE											1.85	6.12
TOTAL WEIGHT						35687						
LOADED MILES						30						
UNLOADED MILES						350						
TON MILES						53441						
CONTINUATION TOTAL												7451.75

JOB LOG

SWIFT Services, Inc.

DATE 04/18/18 PAGE NO. 1

CUSTOMER Dawsoning + Nelson WELL NO. #1-34 LEASE Steckline JOB TYPE Long String TICKET NO. 27223

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2200							On location w/ Float Equipment
								RTD - 4330'
								Total Pipe - 4327.62', 103 JTs
								Insert - 4284.9'
								Centralizers - 1, 3, 5, 7, 9, 11, 60
								Basket - 61
								D.U. - #61 = 1796.19'
	0030							Start Pipe w/ Float Equipment
	0235							Break Circulation on Bottom
	0330	2	7					Plug Rat hole w/ 30 SKS
		2	5					Plug Mouschole w/ 15 SKS
	0345	4	12			300		Pump Mud Flush
		4	20			300		Pump KCL Spacer
		3				300		Start Cmt, EA-2
		3	25			Vac		Fin Cmt, Drop Plug, Wash out Pump Lines
	0405	7				Vac		Start Displacement
		7	85			500		Catch Cmt
	0420	6	10 1/2			750		Land Plug Lift 750 psi, Land 1300 psi
								Release, Drop Bomb, Wait
	0445					1000		Open D.U. Tool, Pump into
	0446	4				300		Start SMD Cmt
	0510	5	110			Vac		Fin SMD Cmt
								Drop Plug, Wash out Pump Lines
	0515	6				Vac		Start Displacement
	0525	6	44			500		Fin Displacement Lift 500 psi
								Land 1200 psi
								Circulated 35 SKS to pit.
								Release truck
								Wash up
								Rack up
	0545							Job Complete

Thanks
Jon, Austin, Kirby



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company Inc**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Steckline #1-34

34-13S-22W Trego,KS

Start Date: 2018.04.15 @ 04:56:00

End Date: 2018.04.15 @ 10:18:02

Job Ticket #: 63075 DST #: 1

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

Printed: 2018.04.18 @ 08:20:12

Downing Nelson Oil Company Inc

34-13S-22W Trego,KS

Steckline #1-34

DST # 1

LKC E - F

2018.04.15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

34-13S-22W Trego, KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63075

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.15 @ 04:56:00

GENERAL INFORMATION:

Formation: **LKC E - F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:54:02

Time Test Ended: 10:18:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 3834.00 ft (KB) To 3855.00 ft (KB) (TVD)

Reference Elevations: 2383.00 ft (KB)

Total Depth: 3855.00 ft (KB) (TVD)

2375.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6755

Inside

Press@RunDepth: 15.71 psig @ 3835.00 ft (KB)

Capacity: psig

Start Date: 2018.04.15

End Date:

2018.04.15

Last Calib.:

2018.04.15

Start Time: 04:56:01

End Time:

10:18:02

Time On Btm:

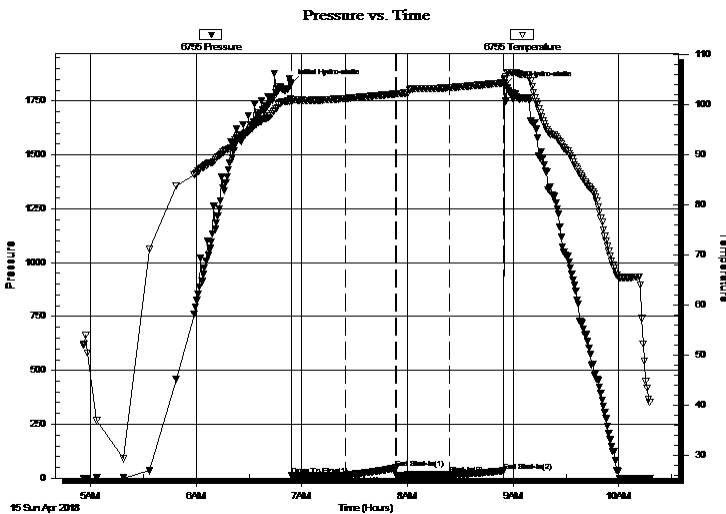
2018.04.15 @ 06:53:47

Time Off Btm:

2018.04.15 @ 08:55:17

TEST COMMENT: IFP 30 Minutes Light surface blow off and on throughout
ISI 30 Minutes No blow back
FFP 30 Minutes Dead no blow / Flush tool no help
FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1831.14	101.23	Initial Hydro-static
1	13.61	100.50	Open To Flow (1)
31	13.95	101.23	Shut-In(1)
60	47.23	102.14	End Shut-In(1)
60	13.83	102.15	Open To Flow (2)
90	15.71	103.39	Shut-In(2)
121	33.98	104.34	End Shut-In(2)
122	1821.98	105.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w /show of oil in tool/ Mud 100%	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

34-13S-22W Trego, KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63075

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.15 @ 04:56:00

GENERAL INFORMATION:

Formation: **LKC E - F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:54:02

Time Test Ended: 10:18:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 3834.00 ft (KB) To 3855.00 ft (KB) (TVD)

Reference Elevations: 2383.00 ft (KB)

Total Depth: 3855.00 ft (KB) (TVD)

2375.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6752 Outside

Press@RunDepth: 35.08 psig @ 3836.00 ft (KB)

Capacity: psig

Start Date: 2018.04.15

End Date:

2018.04.15

Last Calib.:

1899.12.30

Start Time: 04:56:01

End Time:

10:18:02

Time On Btm:

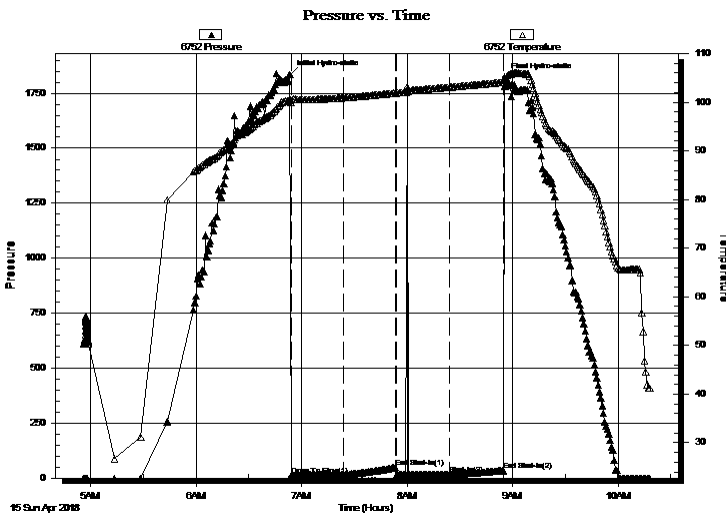
2018.04.15 @ 06:53:32

Time Off Btm:

2018.04.15 @ 08:55:17

TEST COMMENT: IFP 30 Minutes Light surface blow off and on throughout
ISI 30 Minutes No blow back
FFP 30 Minutes Dead no blow / Flush tool no help
FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1833.03	100.47	Initial Hydro-static
1	13.77	99.86	Open To Flow (1)
31	14.66	100.90	Shut-In(1)
60	48.03	101.88	End Shut-In(1)
61	14.96	101.89	Open To Flow (2)
91	16.72	103.09	Shut-In(2)
121	35.08	104.09	End Shut-In(2)
122	1822.91	104.45	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
5.00	Mud w /show of oil in tool/ Mud 100%	0.02

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company Inc

34-13S-22W Trego,KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63075

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.15 @ 04:56:00

Tool Information

Drill Pipe:	Length: 3806.00 ft	Diameter: 3.80 inches	Volume: 53.39 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 53.54 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3834.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	21.00 ft				
Tool Length:	41.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3819.00	
Hydraulic tool	5.00			3824.00	
Top Packer	5.00			3829.00	
Packer	5.00			3834.00	20.00 Bottom Of Top Packer
Recorder	1.00	6755	Inside	3835.00	
Recorder	1.00	6752	Outside	3836.00	
Anchor	16.00			3852.00	
Bullnose	3.00			3855.00	21.00 Anchor Tool

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company Inc

34-13S-22W Trego,KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63075

DST#: 1

ATTN: Marc Downing

Test Start: 2018.04.15 @ 04:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w/show of oil in tool/ Mud 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

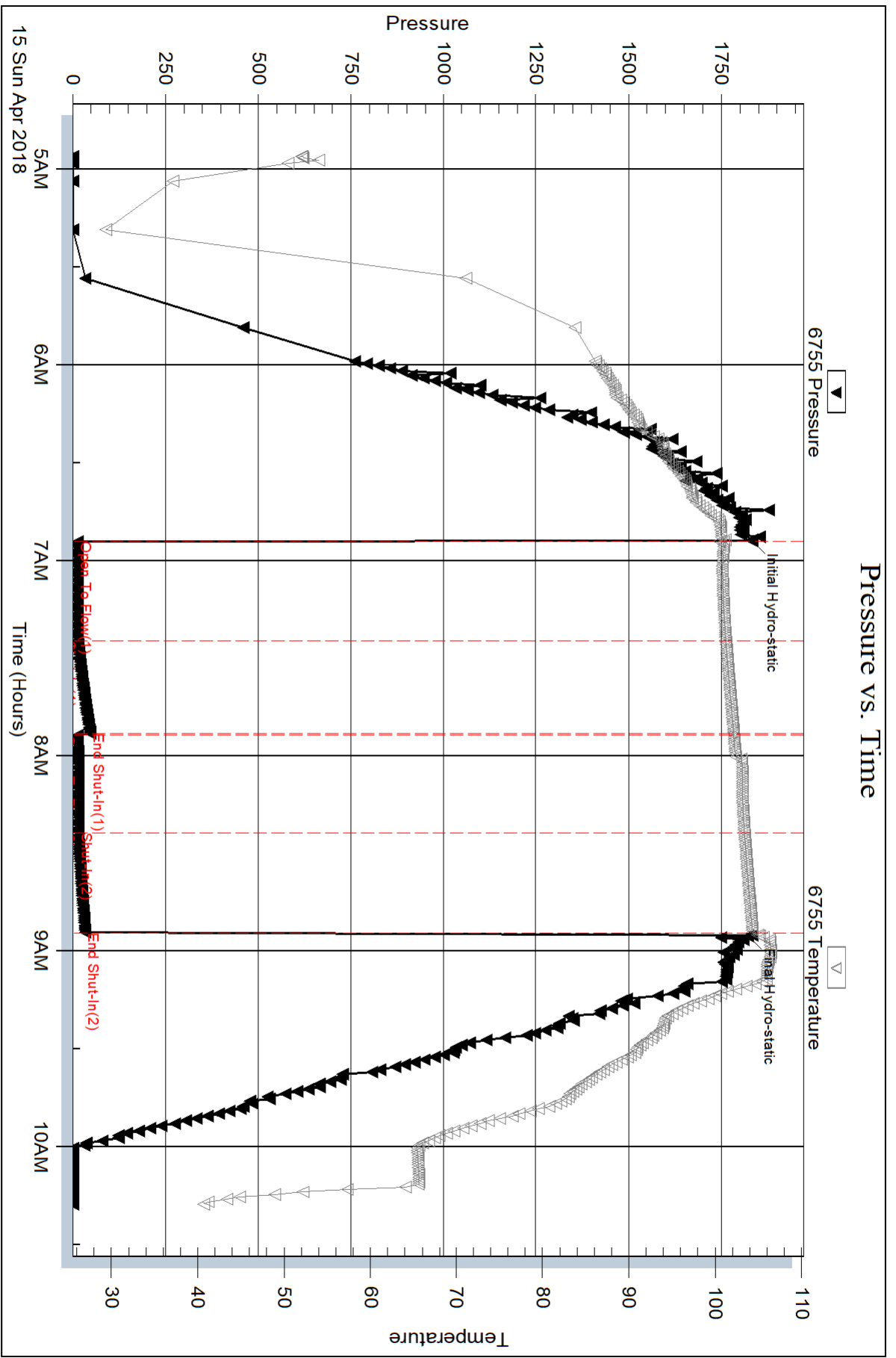
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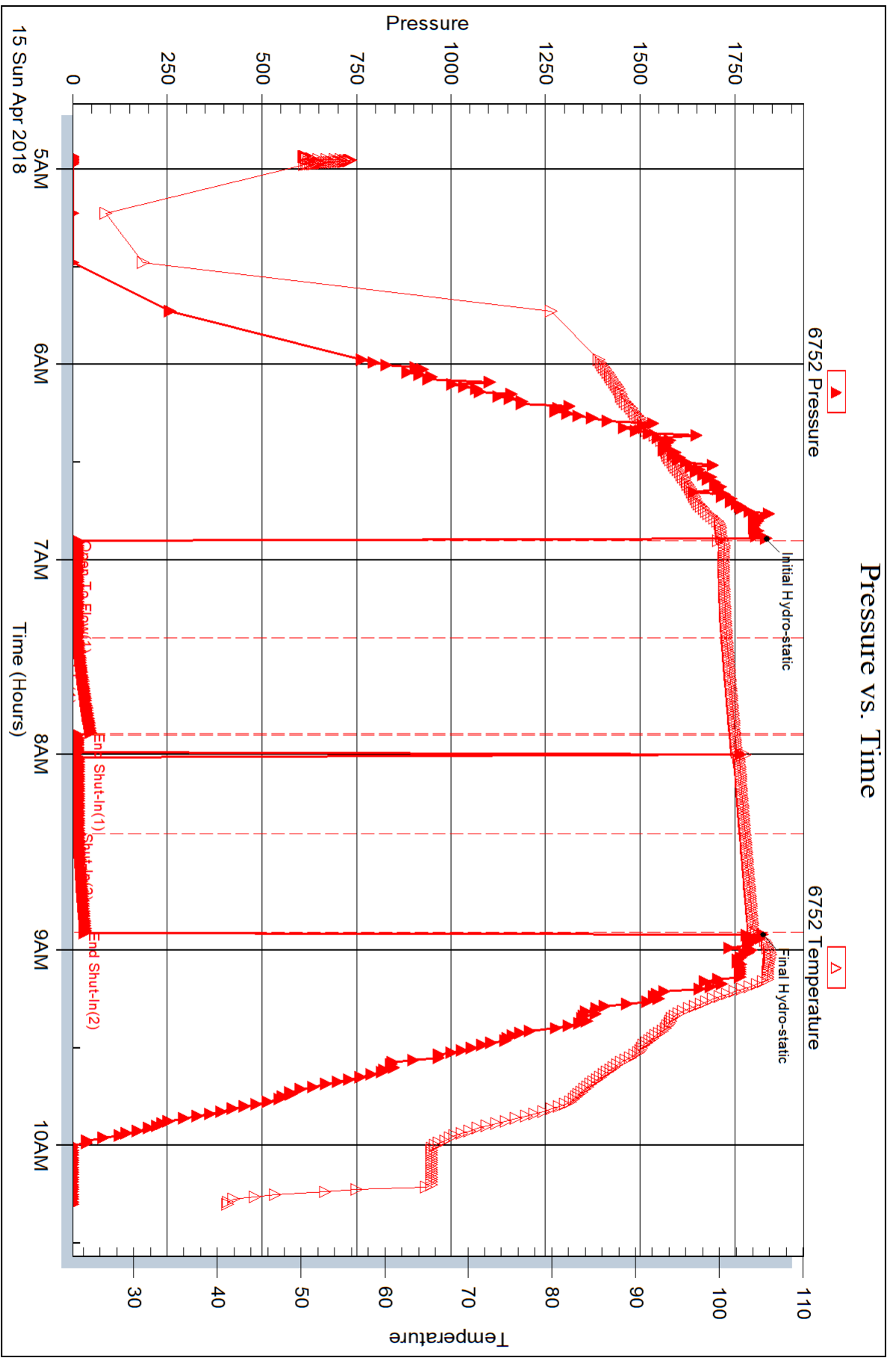
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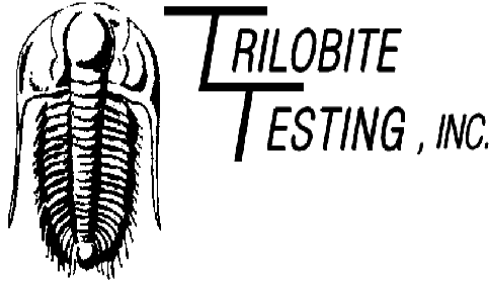
Downing Nelson Oil Company Inc

Seckline #1-34

DST Test Number: 1







DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company Inc**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Steckline #1-34

34-13S-22W Trego,KS

Start Date: 2018.04.16 @ 18:50:00

End Date: 2018.04.17 @ 01:16:02

Job Ticket #: 63477 DST #: 2

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

Printed: 2018.04.18 @ 08:19:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Company Inc

34-13S-22W Trego, KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63477

DST#: 2

ATTN: Marc Downing

Test Start: 2018.04.16 @ 18:50:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:37:02

Time Test Ended: 01:16:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4159.00 ft (KB) To 4214.00 ft (KB) (TVD)

Reference Elevations: 2383.00 ft (KB)

Total Depth: 4214.00 ft (KB) (TVD)

2375.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6755

Inside

Press@RunDepth: 169.72 psig @ 4160.00 ft (KB)

Capacity: psig

Start Date: 2018.04.16

End Date:

2018.04.17

Last Calib.:

2018.04.17

Start Time:

18:50:01

End Time:

01:16:02

Time On Btm:

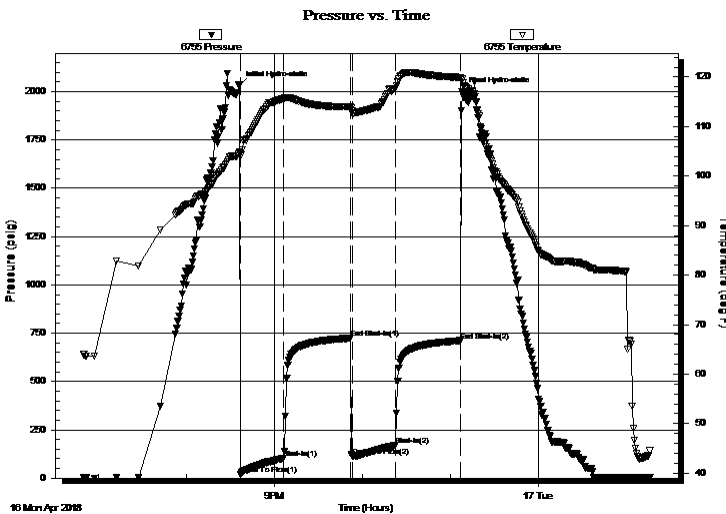
2018.04.16 @ 20:36:32

Time Off Btm:

2018.04.16 @ 23:08:02

TEST COMMENT: IFP 30 Minutes Blow built to BOB in 12 minutes
ISI 45 Minutes Light surface blow back for 20 minutes
FFP 30 Minutes Blow built to 10"
FSI 45 Minutes Light surface blow back for 10 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2032.33	105.03	Initial Hydro-static
1	19.62	104.74	Open To Flow (1)
30	103.79	115.69	Shut-In(1)
76	723.89	114.01	End Shut-In(1)
77	112.54	113.11	Open To Flow (2)
106	169.72	117.67	Shut-In(2)
151	711.36	119.91	End Shut-In(2)
152	1998.10	119.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	Muddy Oil/ Mud 40% Oil 60%	3.21
169.00	Clean Oil 10%	2.37

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company Inc

34-13S-22W Trego,KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63477

DST#: 2

ATTN: Marc Dow ning

Test Start: 2018.04.16 @ 18:50:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:37:02

Time Test Ended: 01:16:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4159.00 ft (KB) To 4214.00 ft (KB) (TVD)

Reference Elevations: 2383.00 ft (KB)

Total Depth: 4214.00 ft (KB) (TVD)

2375.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6752

Outside

Press@RunDepth: 712.27 psig @ 4161.00 ft (KB)

Capacity: psig

Start Date: 2018.04.16

End Date: 2018.04.17

Last Calib.: 2018.04.17

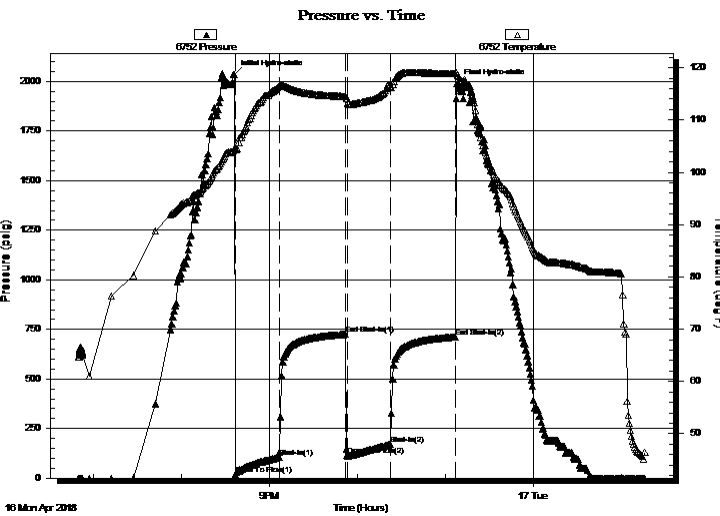
Start Time: 18:50:01

End Time: 01:16:02

Time On Btm: 2018.04.16 @ 20:36:32

Time Off Btm: 2018.04.16 @ 23:08:02

TEST COMMENT: IFP 30 Minutes Blow built to BOB in 12 minutes
ISI 45 Minutes Light surface blow back for 20 minutes
FFP 30 Minutes Blow built to 10"
FSI 45 Minutes Light surface blow back for 10 minutes



PRESSURE SUMMARY

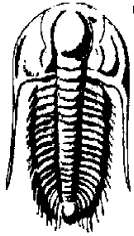
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.04	104.61	Initial Hydro-static
1	20.21	104.45	Open To Flow (1)
31	106.46	116.49	Shut-In(1)
76	724.69	114.51	End Shut-In(1)
77	114.61	114.09	Open To Flow (2)
107	171.18	116.22	Shut-In(2)
151	712.27	118.90	End Shut-In(2)
152	1990.50	119.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	Muddy Oil/ Mud 40% Oil 60%	3.21
169.00	Clean Oil 10%	2.37

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company Inc

34-13S-22W Trego,KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63477

DST#: 2

ATTN: Marc Downing

Test Start: 2018.04.16 @ 18:50:00

Tool Information

Drill Pipe:	Length: 4122.00 ft	Diameter: 3.80 inches	Volume: 57.82 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4159.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.74 ft			
Tool Length:	74.74 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Shut-In Tool	5.00			4144.00	
Hydraulic tool	5.00			4149.00	
Top Packer	5.00			4154.00	
Packer	5.00			4159.00	20.00 Bottom Of Top Packer
Recorder	1.00	6755	Inside	4160.00	
Recorder	1.00	6752	Outside	4161.00	
Anchor	16.00			4177.00	
Change Over Sub	1.00			4178.00	
Drill Pipe	31.74			4209.74	
Change Over Sub	1.00			4210.74	
Bullnose	3.00			4213.74	54.74 Anchor Tool

Total Tool Length: 74.74



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company Inc

34-13S-22W Trego, KS

PO Box 1019
Hays, KS 67601

Steckline #1-34

Job Ticket: 63477

DST#: 2

ATTN: Marc Downing

Test Start: 2018.04.16 @ 18:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
248.00	Muddy Oil/ Mud 40% Oil 60%	3.206
169.00	Clean Oil 10%	2.371

Total Length: 417.00 ft

Total Volume: 5.577 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

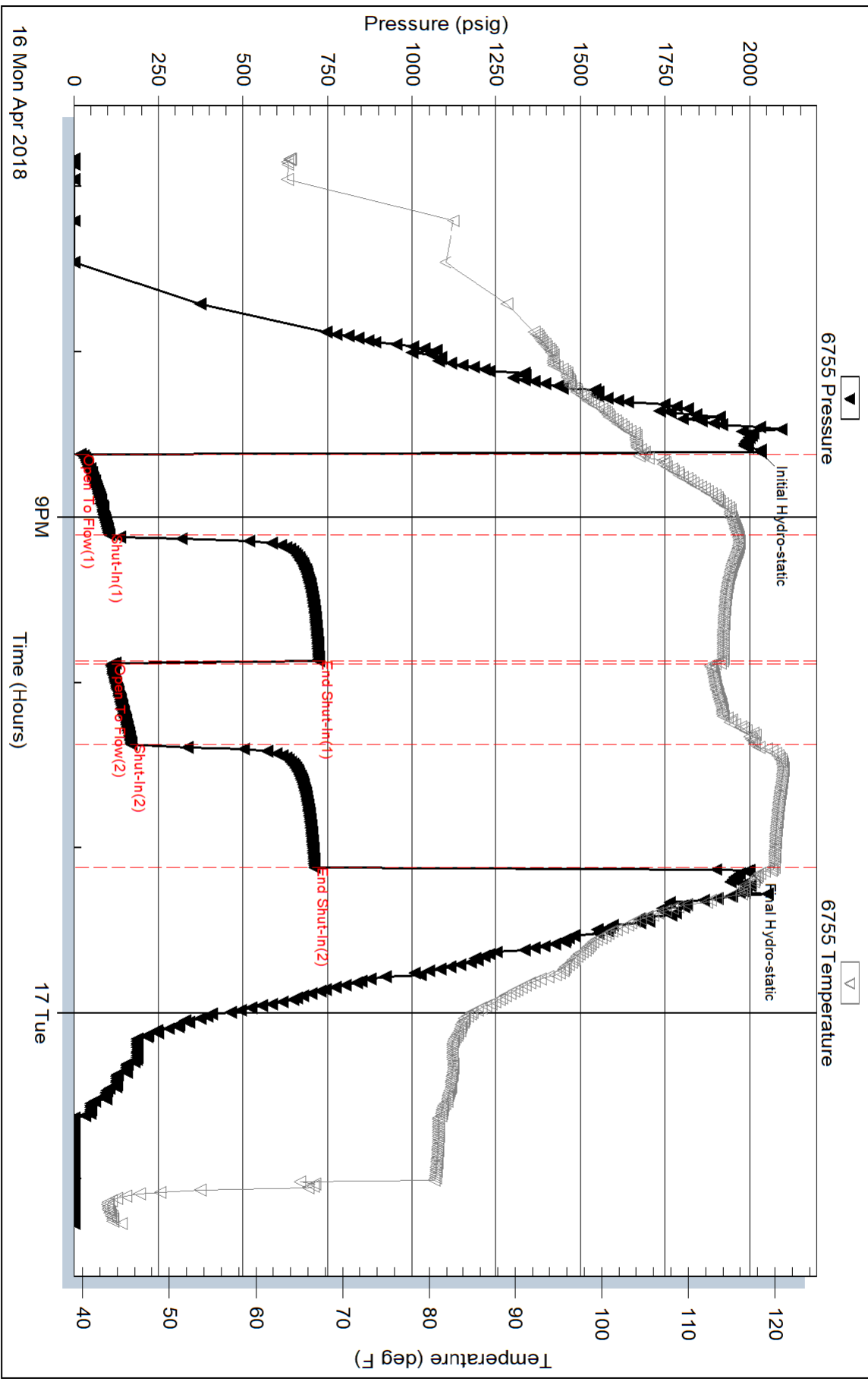
Serial #:

Laboratory Name:

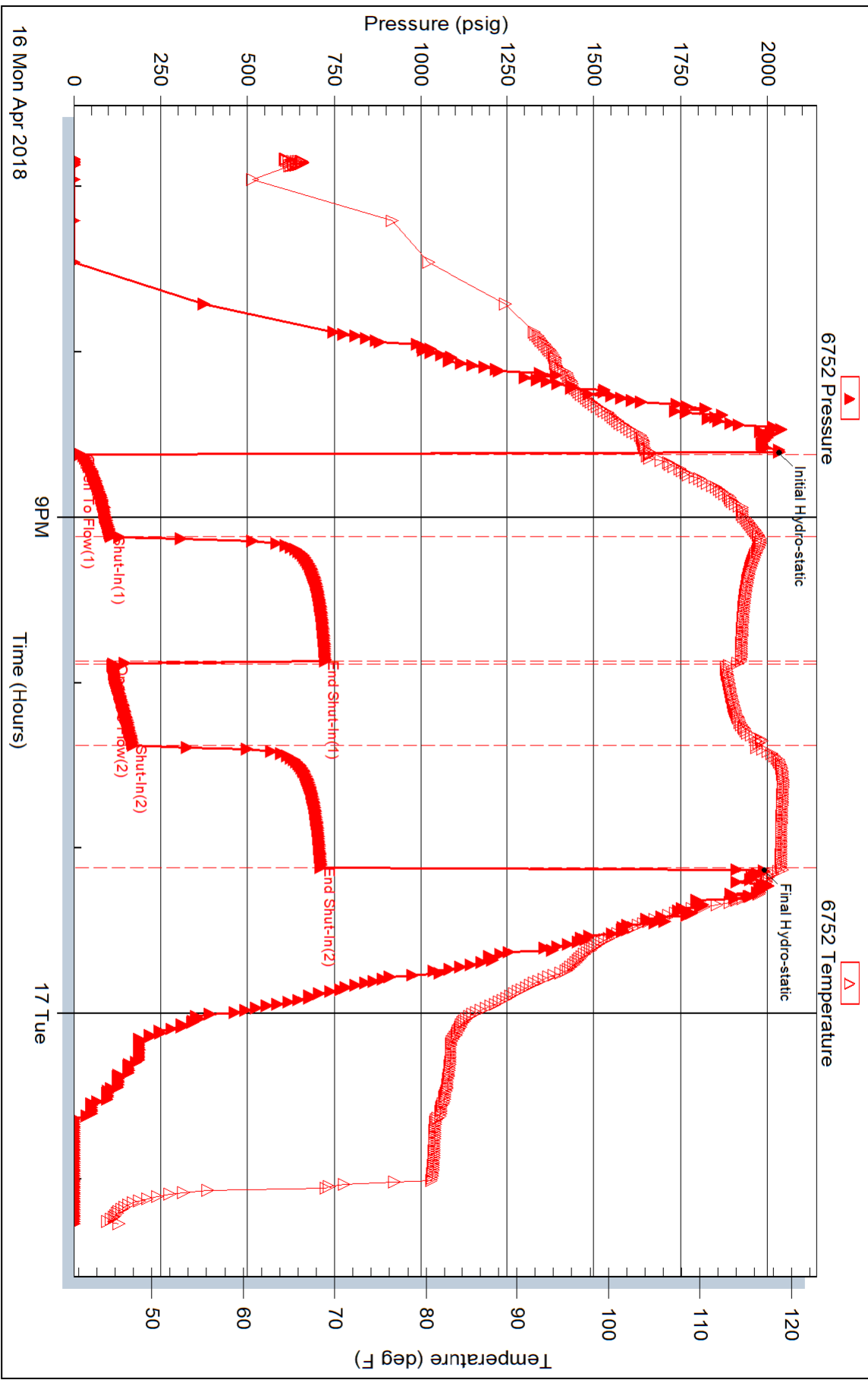
Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63075**

Well Name & No. Steckline #1-34 Test No. 1 Date 15 Apr 18
 Company Downing-Nelson O.I. Company Inc Elevation 2383 KB 2375 GL
 Address PO Box 1019 Hays Kansas 67601
 Co. Rep / Geo. Marc Downing Rig Discovery Rig 4
 Location: Sec. 34 Twp. 135 Rge. 22W Co. Trego State KS

Interval Tested 3834-3855 Zone Tested Lansing/Kansas City zones E&F
 Anchor Length 21 Drill Pipe Run 3806 Mud Wt. 8.7
 Top Packer Depth 3829 Drill Collars Run 30 Vis 53
 Bottom Packer Depth 3834 Wt. Pipe Run - WL 7.2
 Total Depth 3855 Chlorides 4000 ppm System LCM 1#

Blow Description I.F. Right surface blow off w/ on throughout
I.S.I. No blow back
FF Dead no blow / Flush tool no help
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud w/show oil in tool</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 104 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic	<u>1831</u>	<input checked="" type="checkbox"/> Test	<u>1050</u>	T-On Location	<u>3:08 am</u>
(B) First Initial Flow	<u>13</u>	<input type="checkbox"/> Jars		T-Started	<u>4:56 am</u>
(C) First Final Flow	<u>13</u>	<input type="checkbox"/> Safety Joint		T-Open	<u>6:54 am</u>
(D) Initial Shut-In	<u>47</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>8:54 am</u>
(E) Second Initial Flow	<u>13</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>10:18 am</u>
(F) Second Final Flow	<u>15</u>	<input type="checkbox"/> Mileage	<u>68 68 mi</u>	Comments	
(G) Final Shut-In	<u>33</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1821</u>	<input type="checkbox"/> Straddle			

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

Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1118

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1118
 MP/DST Disc't _____

Approved By _____

Our Representative



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63477**

Well Name & No. Steckline #1-34 Test No. 2 Date 16 Apr 15
 Company Downing Nelson Oil Company Inc Elevation 2383 KB 2375 GL
 Address PO Box 1019 Hays Kansas 67601
 Co. Rep / Geo. Marc Downing Rig Discovery Rig 4
 Location: Sec. 34 Twp 13S Rge. 22W Co. Trego State KS

Interval Tested 4159-4214 Zone Tested Cherokee Sand
 Anchor Length 55 Drill Pipe Run 4122 Mud Wt. 9.1
 Top Packer Depth 4154 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 4159 Wt. Pipe Run - WL 7.2
 Total Depth 4214 Chlorides 2000 ppm System LCM 2#

Blow Description I.F. Blow built to BOB in 12 minutes
I.S.I Light surface blow back for 20 minutes
FF Blow built to 10 inches
F.S.I Light surface blow back for 10 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>248</u>	<u>Muddy Oil</u>	<u>60</u>	<u>oil</u>	<u>40</u>	<u>mud</u>
<u>169</u>	<u>Clean Oil</u>	<u>100</u>	<u>oil</u>	<u></u>	<u>mud</u>
<u></u>	<u></u>	<u></u>	<u>oil</u>	<u></u>	<u>mud</u>
<u></u>	<u></u>	<u></u>	<u>oil</u>	<u></u>	<u>mud</u>
<u></u>	<u></u>	<u></u>	<u>oil</u>	<u></u>	<u>mud</u>

Rec Total 417 BHT 119 Gravity 36 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2032</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>3:30 pm</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u></u>	T-Started <u>6:50 pm</u>
(C) First Final Flow <u>103</u>	<input type="checkbox"/> Safety Joint <u></u>	T-Open <u>8:36 pm</u>
(D) Initial Shut-In <u>723</u>	<input type="checkbox"/> Circ Sub <u></u>	T-Pulled <u>11:06 pm</u>
(E) Second Initial Flow <u>112</u>	<input type="checkbox"/> Hourly Standby <u></u>	T-Out <u>1:15 pm</u>
(F) Second Final Flow <u>169</u>	<input checked="" type="checkbox"/> Mileage <u>136 68</u>	Comments <u>loaded tools 4/17 17:15</u>
(G) Final Shut-In <u>711</u>	<input type="checkbox"/> Sampler <u></u>	
(H) Final Hydrostatic <u>1998</u>	<input type="checkbox"/> Straddle <u></u>	<input type="checkbox"/> Ruined Shale Packer <u></u>

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

Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 1286

Total 1286
 MP/DST Disc't

Approved By Our Representative [Signature]

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

Marc A. Downing		Geologic Report	
Consulting Petroleum Geologist		Drilling Time and Sample Log	
Operator Downing-Nelson Oil Co., Inc.		Elevation	
Lease Stecklein Brothers No. 1-34		KB 2383	
API # 15-195-23046-0000		DF 2381	
Field Wildcat		GL 2375	
Location 748' FNL & 1057' FEL		Casing Record	
Sec. 34 Twp. 13s Rge. 22w		Surface 8 5/8" @ 221'	
County Trego State Kansas		Production 5 1/2" @ 4329'	
Formation Top Anhydrite Sample tops 1828 Log Tops 1829 Datum +554 Struct Comp +2		Electrical Surveys	
Base Anhydrite 1875 Log Tops 1875 Datum +508 Struct Comp -1		CNDL, DIL	
Top Anhydrite 1828 Log Tops 1829 Datum +554 Struct Comp +2		MEL	
Base Anhydrite 1875 Log Tops 1875 Datum +508 Struct Comp -1			
Topeka 3504 Log Tops 3504 Datum -1121 Struct Comp -6			
Heebner 3738 Log Tops 3739 Datum -1356 Struct Comp -4			
Toronto 3755 Log Tops 3755 Datum -1372 Struct Comp -4			
LKC 3768 Log Tops 3771 Datum -1388 Struct Comp -5			
BKC 4014 Log Tops 4014 Datum -1631 Struct Comp -2			
Marmaton 4119 Log Tops 4120 Datum -1737 Struct Comp -2			
Cherokee Sh 4166 Log Tops 4169 Datum -1786 Struct Comp -2			
Cherokee Sand 4210 Log Tops 4210 Datum -1827 Struct Comp FL			
Conglomerate 4233 Log Tops 4234 Datum -1851 Struct Comp -2			
Mississippi 4283 Log Tops 4286 Datum -1903 Struct Comp -3			
Total Depth 4330 Log Tops 4330 Datum -1947 Struct Comp			
Reference Well For Structural Comparison Staab Oil Co. - Mong-Benno #1			
500' FSL & 2130' FEL Sec. 27-13s-22w			

Drilling Contractor		Discovery Drilling, Rig #4	
Commenced 4-10-18		Completed 4-17-18	
Samples Saved From 3500		To RTD	
Drilling Time Kept From 3400		To RTD	
Samples Examined From 3500		To RTD	
Geological Supervision From 3500		To RTD	

Summary and Recommendations

Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.

Respectfully Submitted,

Marc A. Downing

ROCK TYPES

Carbon Sh
Ss
Lmst fvr/> shale, gry
Limestone
red shale
Chert, dark
Vancoren chert
Chert White

ACCESSORIES

DST Int
DST alt
Core
II tail pipe
Misc
Daily Report
Digital Photo
Document
Folder
Link
Vertical Log File
Horizontal Log File
Core Log File
Drill Cuttings Rpt

OTHER SYMBOLS

Oil Shows
Lithology
DST
Depth Intervals
Core Intervals

MINERAL

Chert, dark
Vancoren chert
Chert White

OIL SHOWS

Ev. Sh
Spotted Sin 50 - 75 %
Spotted Sin 25 - 50 %
Spotted Sin 1 - 25 %
Questionable Sin
Dead Oil Sin
Fluorescence

STRONGER

Lmst fvr/> shale, gry
Limestone
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Dolprim

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Spotted Sin 1 - 25 %
Questionable Sin
Dead Oil Sin
Fluorescence

STRONGER

Lmst fvr/> shale, gry
Limestone
red shale
Chert, dark
Dolprim

MINERAL

Chert, dark
Vancoren chert
Chert White

OIL SHOWS

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