

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(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	Carmen Schmitt, Inc.
Well Name	SCHWINDT 1
Doc ID	1396060

All Electric Logs Run

Gamma/caliper
Dual Induction
Dual Comp Porosity
Micro

Form	ACO1 - Well Completion
Operator	Carmen Schmitt, Inc.
Well Name	SCHWINDT 1
Doc ID	1396060

Tops

Name	Top	Datum
Anhydrite	1903	535
Tarkio	3289	-851
Heebner Sh	3677	-1239
Toronto	3697	-1259
Lansing	3715	-1277
Muncie Creek	3864	-1426
Stark Sh.	3943	-1505
B/Kansas City	3998	-1560
Marmaton	4038	-1600
Altamont	4064	-1626
Pawnee	4147	-1709
Ft. Scott	4208	-1770
Cherokee Sh.	4233	-1795
Miss	4308	-1870

COPELAND

POST OFFICE BOX 438
 HAYSVILLE, KS 67060
 (316) 524-1225
 (316) 524-1027 FAX

Invoice

Acid & Cement

BURRTON, KS ♦ GREAT BEND, KS
 (620) 463-5161 (620) 793-3366
 FAX (620) 463-2104 FAX (620) 793-3536

INVOICE NUMBER:
C45665-IN

BILL TO:
CARMEN SCHMITT, INC.
P.O. BOX 47
GREAT BEND, KS 67530

LEASE: SCHWINDT #1

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS	
03/19/2018	C45665		03/12/2018		NET 30	
QUANTITY	U/M	ITEM NO./DESCRIPTION		D/C	PRICE	EXTENSION
1.00	EA	PRICE AS AGREED, TO CEMENT 224' OF 8 5/8 SURFACE WITH 185 JOINTS AGREED UP ON PRICE <i>7/10/43</i> <i>19448.0001</i> <i>Well Rte - Cement Surface</i>		0.00	2,995.00	2,995.00
REMIT TO:		COP		Net Invoice:		2,995.00
P.O. BOX 438 HAYSVILLE, KS 67060		FUEL SURCHARGE IS NOT TAXABLE AND IS ADDED TO MILEAGE, PUMP AND OR DELIVERY CHARGES ONLY.		TRECO Sales Tax:		239.60
RECEIVED BY		NET 30 DAYS		Invoice Total:		3,234.60

There will be a charge of 1.5% "per month" (18% annual rate) on all accounts over 30 days past due.

Copeland Acid & Cement is a subsidiary of Gressel Oil Field Service

Gressel Oil Field Service reserves a security interest in the goods sold until the same are paid for in full and reserve all the rights of a secured party under the Uniform Commercial Code.



FIELD ORDER N° C 45665

BOX 438 • HAYSVILLE, KANSAS 67060
316-524-1225

DATE 3 11 64 20

IS AUTHORIZED BY: Cornel Schmitt (NAME OF CUSTOMER)

Address _____ City _____ State _____

To Treat Well Schwirdt Well No. 1 Customer Order No. _____
As Follows: Lease Schwirdt

Sec. Twp. 18-14-25W County Trego State Ks
Range _____

CONDITIONS: As a part of the consideration hereof it is agreed that Copeland Acid Service is to service or treat at owners risk, the hereinbefore mentioned well and is not to be held liable for any damage that may accrue in connection with said service or treatment. Copeland Acid Service has made no representation, expressed or implied, and no representations have been relied on, as to what may be the results or effect of the servicing or treating said well. The consideration of said service or treatment is payable. There will be no discount allowed subsequent to such date. 6% interest will be charged after 60 days. Total charges are subject to correction by our invoicing department in accordance with latest published price schedules.

The undersigned represents himself to be duly authorized to sign this order for well owner or operator.

THIS ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED _____ By _____
Well Owner or Operator Agent

CODE	QUANTITY	DESCRIPTION	UNIT COST	AMOUNT
		Price as agreed to cement 224' of 8 5/8" surface with 185 lbs		2995.00
		Bulk Charge		
		Bulk Truck Miles		
		Process License Fee on _____ Gallons		
		TOTAL BILLING		2995.00

I certify that the above material has been accepted and used; that the above service was performed in a good and workmanlike manner under the direction, supervision and control of the owner, operator or his agent, whose signature appears below.

Copeland Representative Nathan W.

Station C.B.

Soutward Bill
Well Owner, Operator or Agent

Remarks _____

NET 30 DAYS



DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO Box 47
Great Bend KS 67530+0047

ATTN: Brad Rine

Schwindt #1

18-14S-25W Trego KS

Start Date: 2018.03.16 @ 18:14:00

End Date: 2018.03.17 @ 01:30:30

Job Ticket #: 63760 DST #: 1

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

Printed: 2018.03.20 @ 09:36:50



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
 PO Box 47
 Great Bend KS 67530+0047
 ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
 Job Ticket: 63760 **DST#: 1**
 Test Start: 2018.03.16 @ 18:14:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:53:45
 Time Test Ended: 01:30:30
 Interval: **3862.00 ft (KB) To 3895.00 ft (KB) (TVD)**
 Total Depth: 3895.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Spencer J. Staab
 Unit No: 84
 Reference Elevations: 2438.00 ft (KB)
 2428.00 ft (CF)
 KB to GR/CF: 10.00 ft

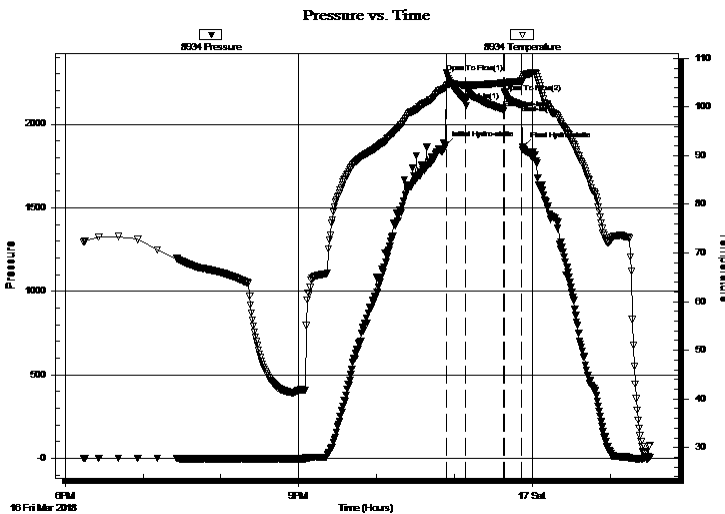
Serial #: 8934

Outside

Press@RunDepth: 2141.66 psig @ 3863.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.03.16 End Date: 2018.03.17 Last Calib.: 2018.03.17
 Start Time: 18:14:15 End Time: 01:30:30 Time On Btm: 2018.03.16 @ 22:53:00
 Time Off Btm: 2018.03.16 @ 23:52:45

TEST COMMENT: 15-IF-Weak Blow ; Built to 1"
 30-ISI-No Return
 10-FF-No Blow ; Pulled tool

PRESSURE SUMMARY



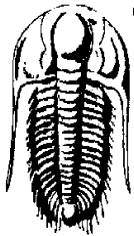
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.25	104.01	Initial Hydro-static
1	2309.55	104.45	Open To Flow (1)
16	2141.66	104.51	Shut-In(1)
45	2092.77	104.95	End Shut-In(1)
46	2192.09	105.01	Open To Flow (2)
59	2115.64	105.36	Shut-In(2)
60	1863.65	105.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100%M	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS

Schwindt #1

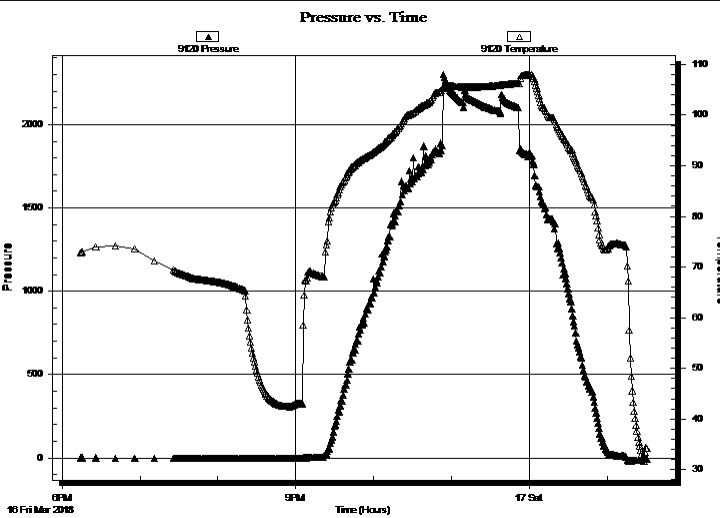
Job Ticket: 63760 **DST#: 1**
Test Start: 2018.03.16 @ 18:14:00

GENERAL INFORMATION:

Formation: LKC 'H'				
Deviated: No Whipstock:	ft (KB)	Test Type:	Conventional Bottom Hole (Initial)	
Time Tool Opened: 22:53:45		Tester:	Spencer J. Staab	
Time Test Ended: 01:30:30		Unit No:	84	
Interval: 3862.00 ft (KB) To 3895.00 ft (KB) (TVD)		Reference Elevations:	2438.00 ft (KB)	
Total Depth: 3895.00 ft (KB) (TVD)			2428.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF:	10.00 ft	

Serial #: 9120	Inside				
Press@RunDepth: psig @	3863.00 ft (KB)	Capacity:	8000.00 psig		
Start Date: 2018.03.16	End Date: 2018.03.17	Last Calib.:	2018.03.17		
Start Time: 18:14:15	End Time: 01:30:30	Time On Btm:			
		Time Off Btm:			

TEST COMMENT: 15-IF-Weak Blow ; Built to 1"
30-ISI-No Return
10-FF-No Blow ; Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100%M	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63760 **DST#: 1**
Test Start: 2018.03.16 @ 18:14:00

Tool Information

Drill Pipe:	Length: 3847.00 ft	Diameter: 3.80 inches	Volume: 53.96 bbl	Tool Weight:	2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume: 53.96 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3862.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.00 ft				
Tool Length:	61.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3835.00	
Shut In Tool	5.00			3840.00	
Hydraulic tool	5.00			3845.00	
Jars	5.00			3850.00	
Safety Joint	3.00			3853.00	
Packer	5.00			3858.00	28.00 Bottom Of Top Packer
Packer	4.00			3862.00	
Stubb	1.00			3863.00	
Recorder	0.00	9120	Inside	3863.00	
Recorder	0.00	8934	Outside	3863.00	
Perforations	29.00			3892.00	
Bullnose	3.00			3895.00	33.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63760 **DST#: 1**
Test Start: 2018.03.16 @ 18:14:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5700.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud 100%M	0.042

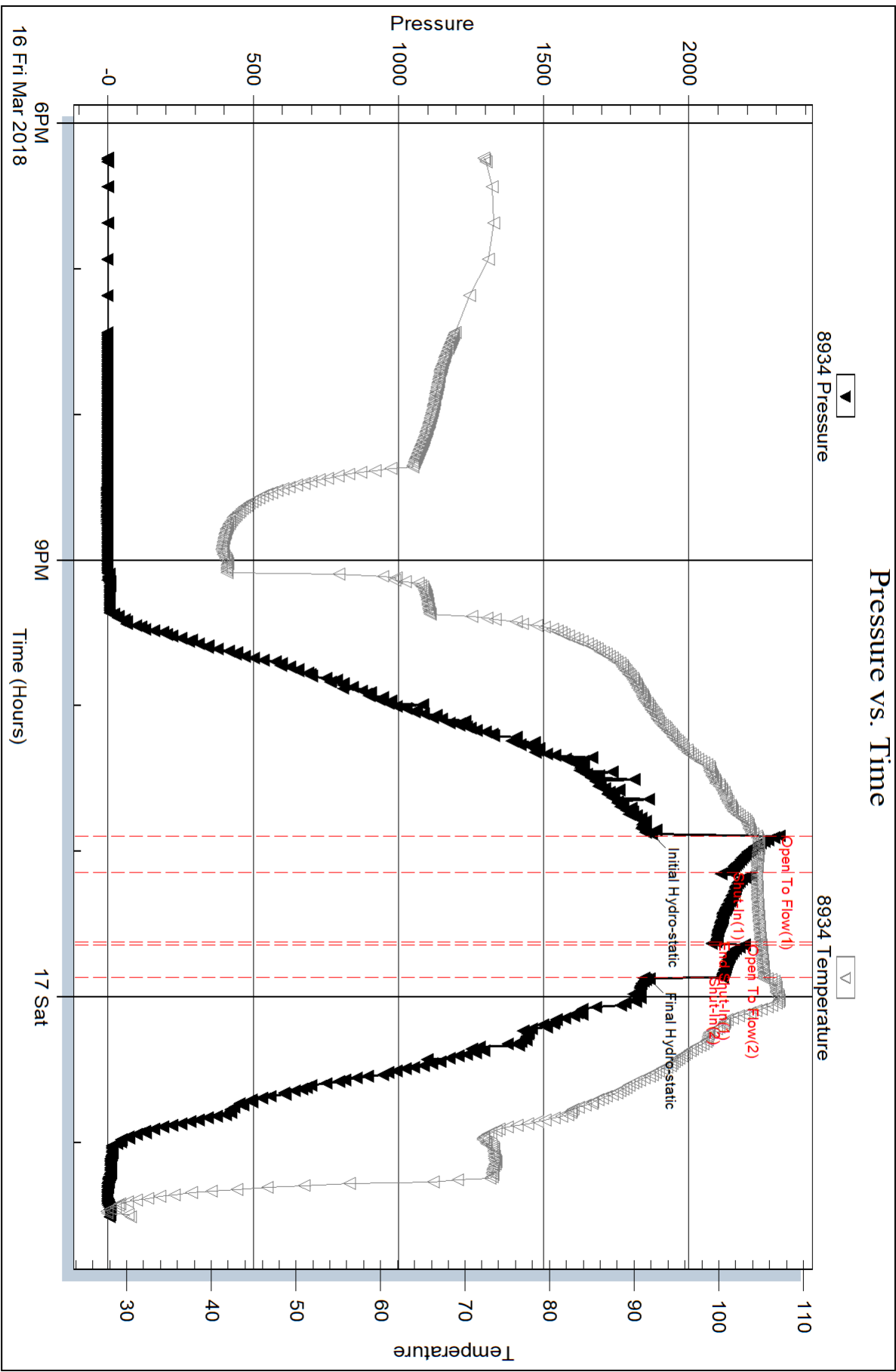
Total Length: 3.00 ft Total Volume: 0.042 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 2#LCM

Serial #: 8934

Outside Carmen Schmitt, Inc.

Schw indt #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 63760

Printed: 2018.03.20 @ 09:36:51

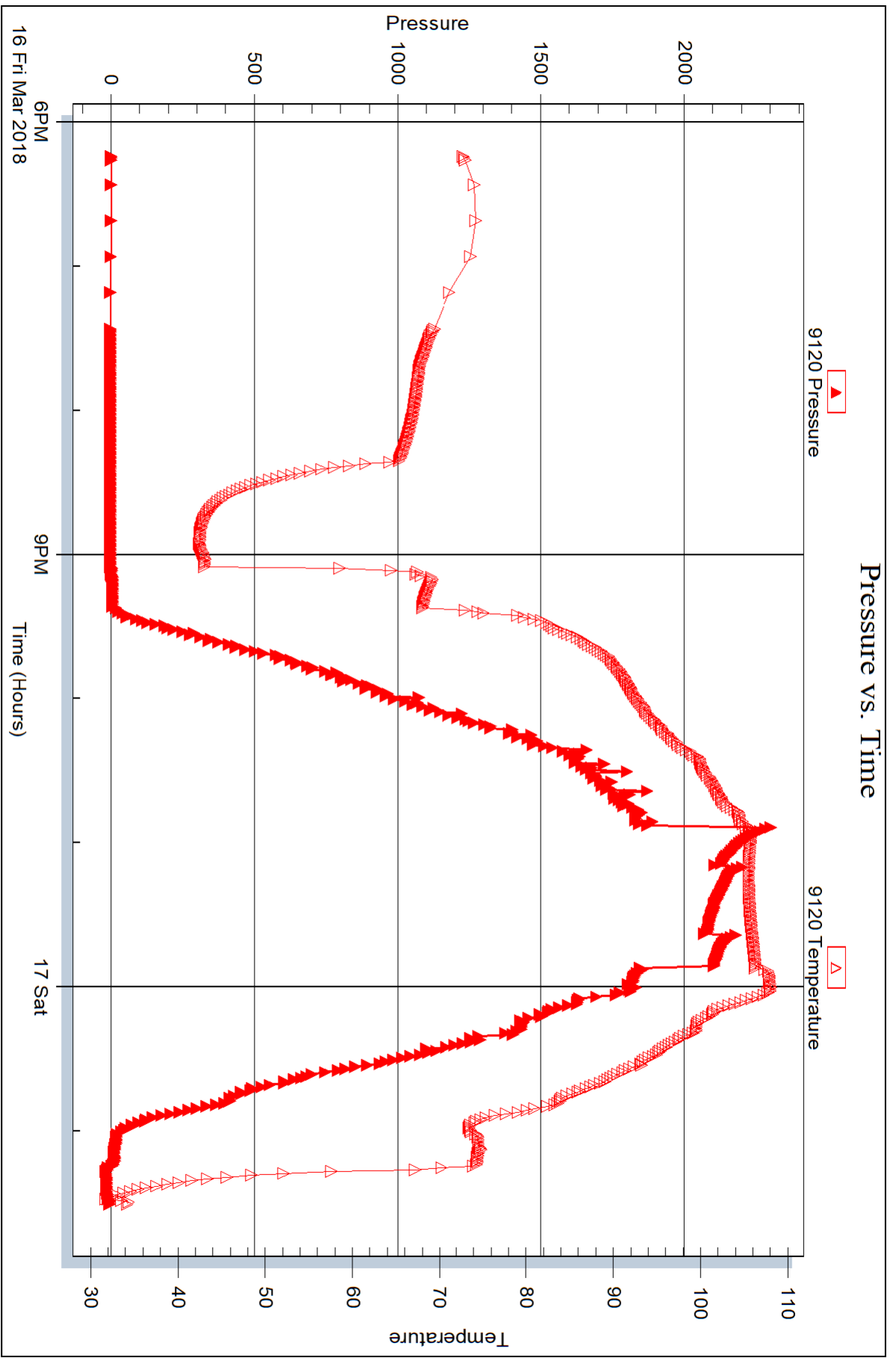
Serial #: 9120

Inside

Carmen Schmitt, Inc.

Schw indt #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO Box 47
Great Bend KS 67530+0047

ATTN: Brad Rine

Schwindt #1

18-14S-25W Trego KS

Start Date: 2018.03.17 @ 02:17:00

End Date: 2018.03.17 @ 08:52:15

Job Ticket #: 63761 DST #: 2

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

Printed: 2018.03.20 @ 09:36:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

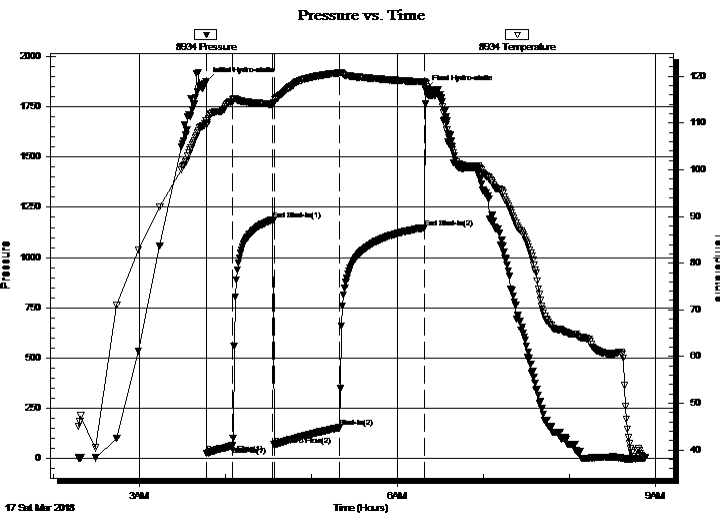
18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63761 **DST#: 2**
Test Start: 2018.03.17 @ 02:17:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:46:45
Time Test Ended: 08:52:15
Interval: **3862.00 ft (KB) To 3895.00 ft (KB) (TVD)**
Total Depth: 3895.00 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: 2438.00 ft (KB)
2428.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8934 Outside
Press@RunDepth: 152.94 psig @ 3863.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.17 End Date: 2018.03.17 Last Calib.: 2018.03.17
Start Time: 02:17:15 End Time: 08:52:15 Time On Btm: 2018.03.17 @ 03:46:30
Time Off Btm: 2018.03.17 @ 06:19:30

TEST COMMENT: 15-IF-Strong Blow ; BOB in 8 mins
30-ISI-No Return
45-FF-Fair Blow ; BOB in 13 mins
60-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1876.52	110.54	Initial Hydro-static
1	23.50	109.72	Open To Flow (1)
18	62.58	114.64	Shut-In(1)
46	1187.96	114.02	End Shut-In(1)
47	67.26	114.32	Open To Flow (2)
93	152.94	120.76	Shut-In(2)
153	1149.09	118.77	End Shut-In(2)
153	1835.20	118.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 10%M 90%W	1.68
60.00	GSWOCM 10%G 2%W 3%O 85%M	0.84
120.00	GO 15%G 85%O	1.68

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

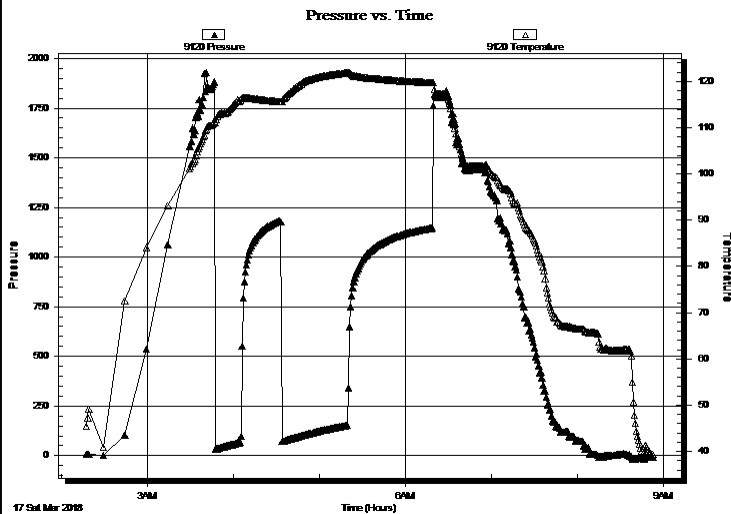
18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63761 **DST#: 2**
Test Start: 2018.03.17 @ 02:17:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 03:46:45 Tester: Spencer J. Staab
Time Test Ended: 08:52:15 Unit No: 84
Interval: 3862.00 ft (KB) To 3895.00 ft (KB) (TVD) Reference Elevations: 2438.00 ft (KB)
Total Depth: 3895.00 ft (KB) (TVD) 2428.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 9120 Inside
Press@RunDepth: psig @ 3863.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.17 End Date: 2018.03.17 Last Calib.: 2018.03.17
Start Time: 02:17:15 End Time: 08:52:15 Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IF-Strong Blow ; BOB in 8 mins
30-ISI-No Return
45-FF-Fair Blow ; BOB in 13 mins
60-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 10%M 90%W	1.68
60.00	GSWOCM 10%G 2%W 3%O 85%M	0.84
120.00	GO 15%G 85%O	1.68

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63761 **DST#: 2**
Test Start: 2018.03.17 @ 02:17:00

Tool Information

Drill Pipe:	Length: 3847.00 ft	Diameter: 3.80 inches	Volume: 53.96 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 53.96 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3862.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3835.00	
Shut In Tool	5.00			3840.00	
Hydraulic tool	5.00			3845.00	
Jars	5.00			3850.00	
Safety Joint	3.00			3853.00	
Packer	5.00			3858.00	28.00 Bottom Of Top Packer
Packer	4.00			3862.00	
Stubb	1.00			3863.00	
Recorder	0.00	9120	Inside	3863.00	
Recorder	0.00	8934	Outside	3863.00	
Perforations	29.00			3892.00	
Bullnose	3.00			3895.00	33.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Carmen Schmitt, Inc.
PO Box 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63761 **DST#: 2**
Test Start: 2018.03.17 @ 02:17:00

Mud and Cushion Information

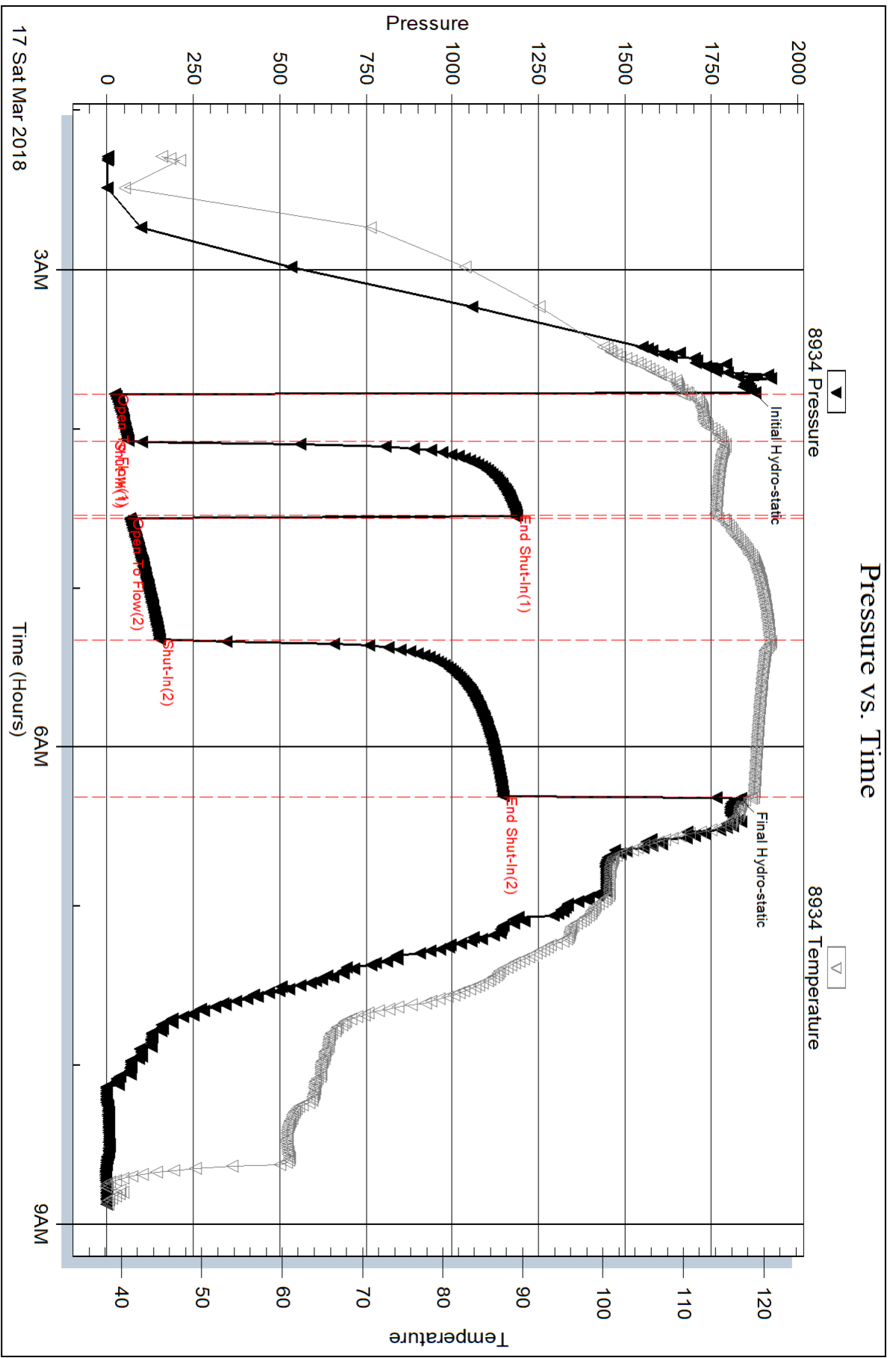
Mud Type: Gel Chem	Cushion Type:	Oil API: 23 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 75000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5700.00 ppm		
Filter Cake: inches		

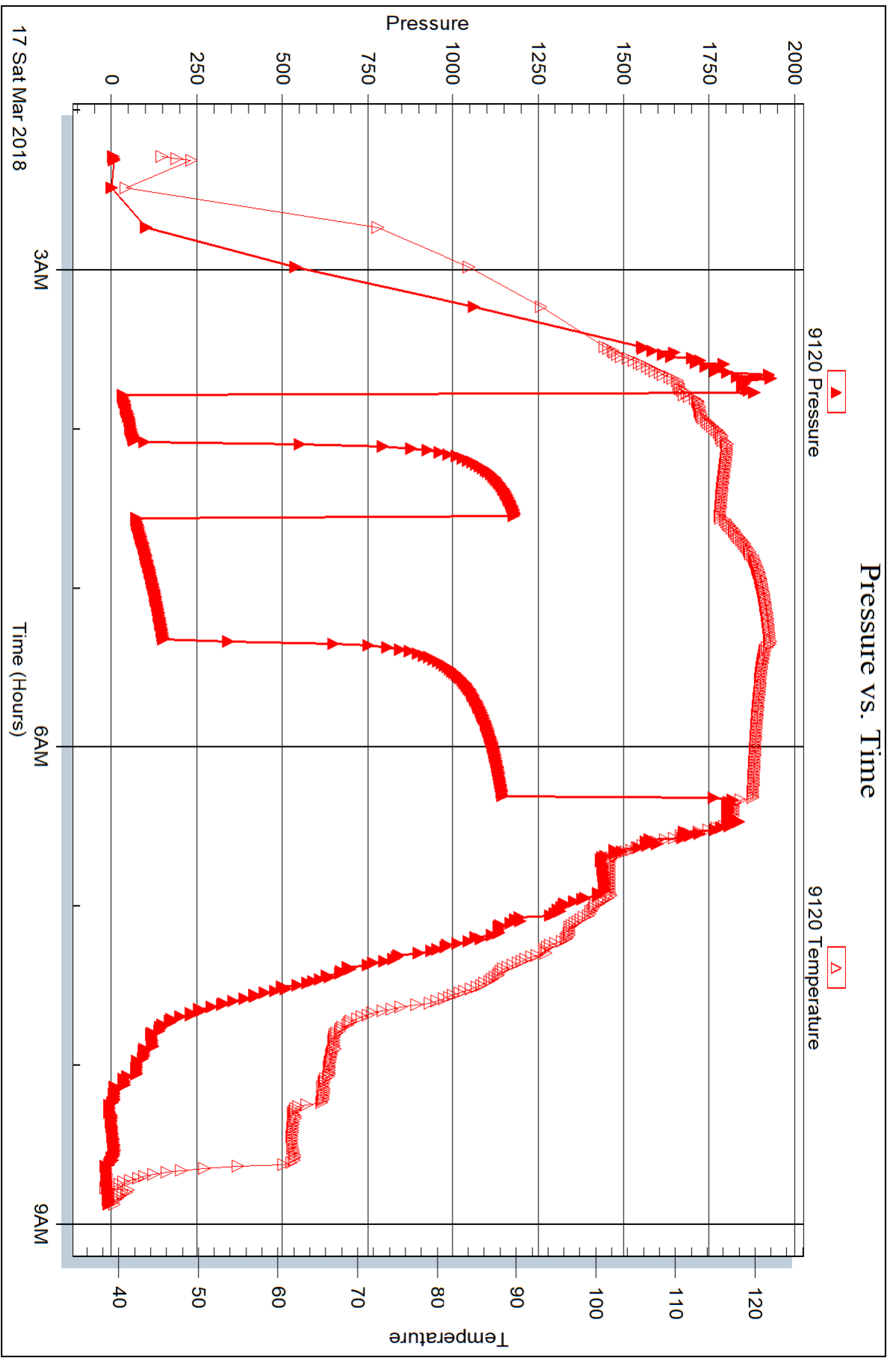
Recovery Information

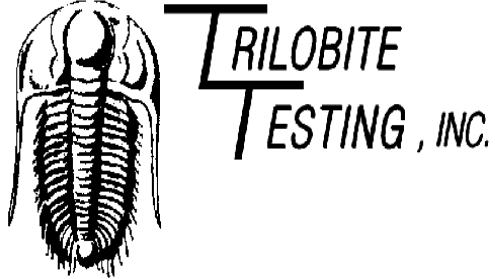
Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 10%M 90%W	1.683
60.00	GSWOCM 10%G 2%W 3%O 85%M	0.842
120.00	GO 15%G 85%O	1.683

Total Length: 300.00 ft Total Volume: 4.208 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 2#LCM
RW=.211@36F







DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO BOX 47
Great Bend KS 67530+0047

ATTN: Brad Rine

Schwindt #1

18-14S-25W Trego KS

Start Date: 2018.03.17 @ 20:14:00

End Date: 2018.03.18 @ 02:35:00

Job Ticket #: 63762 DST #: 3

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

Printed: 2018.03.20 @ 09:35:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63762 **DST#: 3**
Test Start: 2018.03.17 @ 20:14:00

GENERAL INFORMATION:

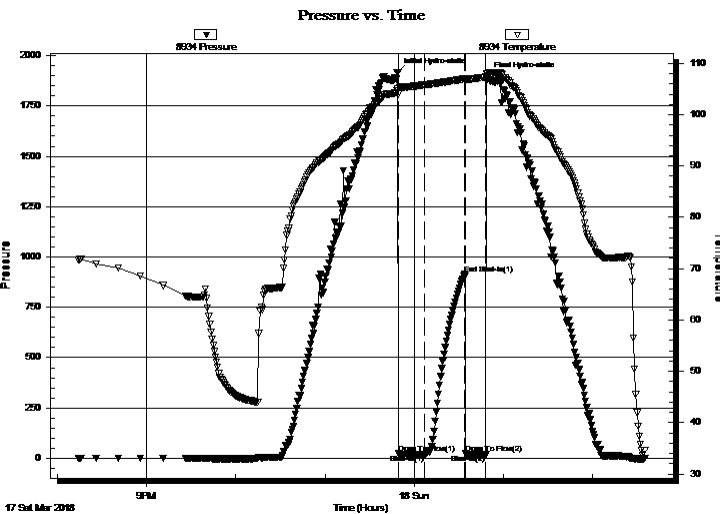
Formation: LKC		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:	ft (KB)	Tester: Spencer J. Staab
Time Tool Opened: 23:49:15		Unit No: 84
Time Test Ended: 02:35:00		
Interval: 3920.00 ft (KB) To 3948.00 ft (KB) (TVD)		Reference Elevations: 2438.00 ft (KB)
Total Depth: 3948.00 ft (KB) (TVD)		2428.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 10.00 ft

Serial #: 8934

Outside

Press@RunDepth: 19.36 psig @ 3921.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2018.03.17	End Date: 2018.03.18
Start Time: 20:14:15	End Time: 02:35:00
	Last Calib.: 2018.03.18
	Time On Btm: 2018.03.17 @ 23:49:00
	Time Off Btm: 2018.03.18 @ 00:49:15

TEST COMMENT: 15-IF-Weak Blow ; Built to 3/4"
30-ISI-No Return
10-FF-No Blow ; Pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1916.42	105.08	Initial Hydro-static
1	22.77	104.00	Open To Flow (1)
18	19.36	105.79	Shut-In(1)
45	914.70	106.96	End Shut-In(1)
46	25.19	106.41	Open To Flow (2)
60	17.71	107.34	Shut-In(2)
61	1895.91	108.06	Final Hydro-static

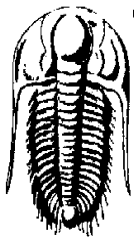
Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%M	0.07

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

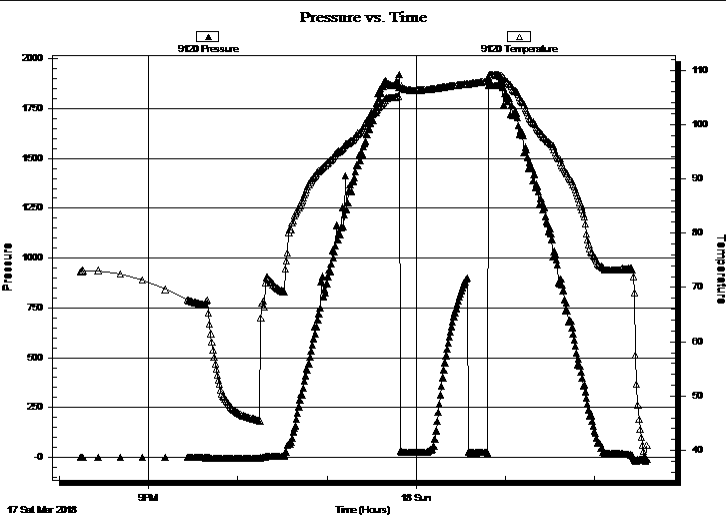
18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63762 **DST#: 3**
Test Start: 2018.03.17 @ 20:14:00

GENERAL INFORMATION:

Formation: **LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:49:15
Time Test Ended: 02:35:00
Interval: **3920.00 ft (KB) To 3948.00 ft (KB) (TVD)**
Total Depth: 3948.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2438.00 ft (KB)
2428.00 ft (CF)
KB to GR/CF: 10.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J. Staab
Unit No: 84

Serial #: 9120 **Inside**
Press@RunDepth: psig @ 3921.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.03.17 End Date: 2018.03.18 Last Calib.: 2018.03.18
Start Time: 20:14:15 End Time: 02:35:00 Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IF-Weak Blow ; Built to 3/4"
30-ISI-No Return
10-FF-No Blow ; Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%M	0.07

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63762 **DST#: 3**
Test Start: 2018.03.17 @ 20:14:00

Tool Information

Drill Pipe:	Length: 3910.00 ft	Diameter: 3.80 inches	Volume: 54.85 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 54.85 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3920.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3893.00	
Shut In Tool	5.00			3898.00	
Hydraulic tool	5.00			3903.00	
Jars	5.00			3908.00	
Safety Joint	3.00			3911.00	
Packer	5.00			3916.00	28.00 Bottom Of Top Packer
Packer	4.00			3920.00	
Stubb	1.00			3921.00	
Recorder	0.00	9120	Inside	3921.00	
Recorder	0.00	8934	Outside	3921.00	
Perforations	24.00			3945.00	
Bullnose	3.00			3948.00	28.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63762 **DST#: 3**
Test Start: 2018.03.17 @ 20:14:00

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: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5900.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%M	0.070

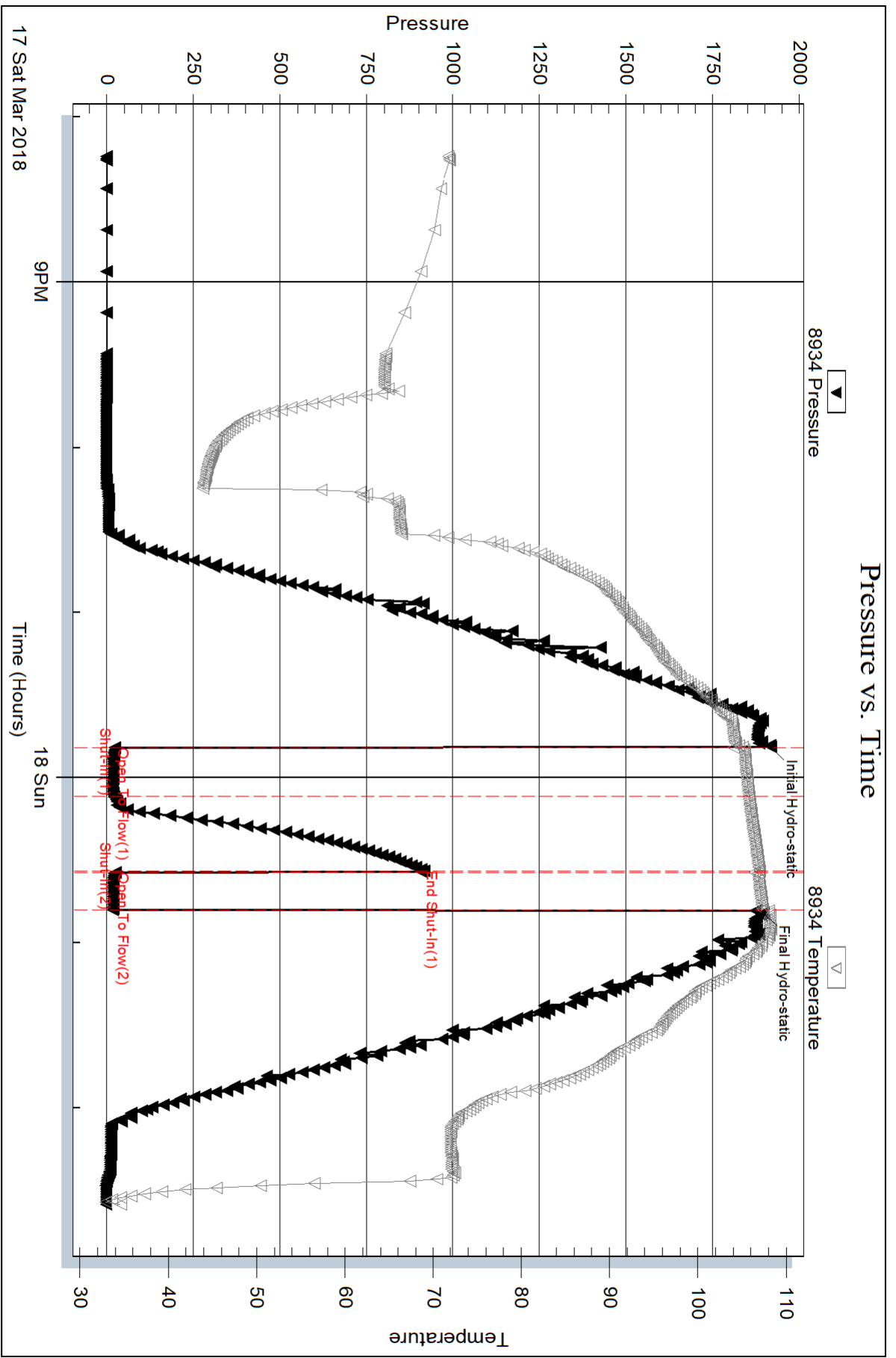
Total Length: 5.00 ft Total Volume: 0.070 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 2#LCM

Serial #: 8934

Outside Carmen Schmitt, Inc.

Schw indt #1

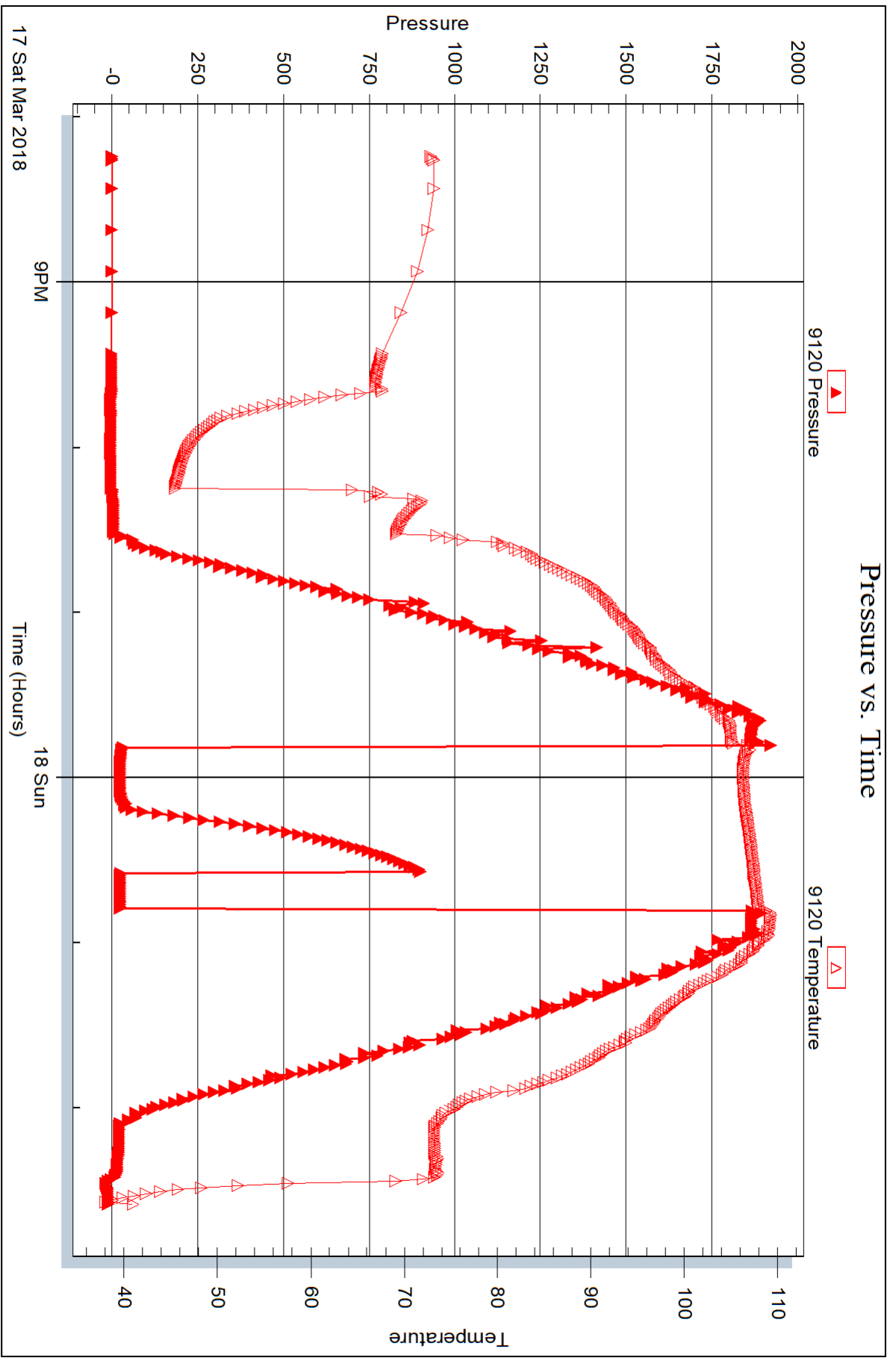
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63762

Printed: 2018.03.20 @ 09:35:43





DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO BOX 47
Great Bend KS 67530+0047

ATTN: Brad Rine

Schwindt #1

18-14S-25W Trego KS

Start Date: 2018.03.18 @ 11:31:00

End Date: 2018.03.18 @ 19:53:00

Job Ticket #: 63763 DST #: 4

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

Printed: 2018.03.20 @ 09:35:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
 PO BOX 47
 Great Bend KS 67530+0047
 ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
 Job Ticket: 63763 **DST#: 4**
 Test Start: 2018.03.18 @ 11:31:00

GENERAL INFORMATION:

Formation: **LKC 'K'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:33:00
 Time Test Ended: 19:53:00
 Interval: **3959.00 ft (KB) To 3973.00 ft (KB) (TVD)**
 Total Depth: 3973.00 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: 2438.00 ft (KB)
 2428.00 ft (CF)
 KB to GR/CF: 10.00 ft

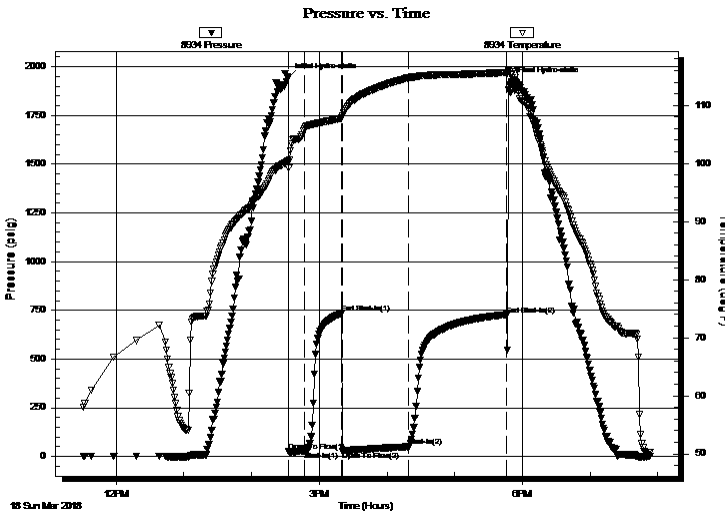
Serial #: 8934

Outside

Press@RunDepth: 49.60 psig @ 3960.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.03.18 End Date: 2018.03.18 Last Calib.: 2018.03.18
 Start Time: 11:31:15 End Time: 19:53:00 Time On Btm: 2018.03.18 @ 14:32:45
 Time Off Btm: 2018.03.18 @ 17:50:15

TEST COMMENT: 15-IF-Weak Blow ; Built to 4"
 30-ISI-No Return
 60-FF-Fair Blow ; BOB in 23 mins
 90-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1944.96	100.23	Initial Hydro-static
1	24.59	99.20	Open To Flow (1)
14	28.01	106.03	Shut-In(1)
47	733.43	107.77	End Shut-In(1)
48	27.13	108.20	Open To Flow (2)
107	49.60	114.74	Shut-In(2)
194	728.04	115.66	End Shut-In(2)
198	1922.93	115.22	Final Hydro-static

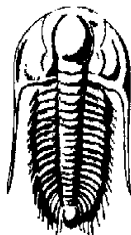
Recovery

Length (ft)	Description	Volume (bbl)
55.00	HOCM 25%O 75%M	0.77
25.00	GO 10%G 90%O	0.35

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Carmen Schmitt, Inc.
 PO BOX 47
 Great Bend KS 67530+0047
 ATTN: Brad Rine

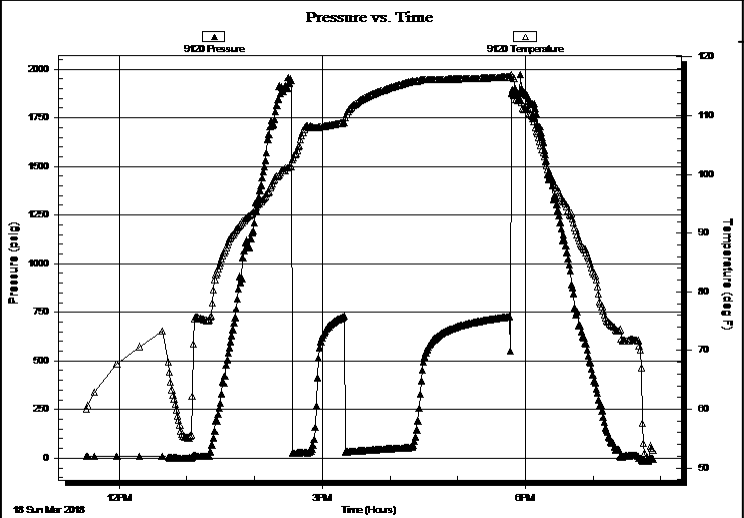
18-14S-25W Trego KS
Schwindt #1
 Job Ticket: 63763 **DST#: 4**
 Test Start: 2018.03.18 @ 11:31:00

GENERAL INFORMATION:

Formation: LKC 'K'			Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)			Tester: Spencer J. Staab
Time Tool Opened: 14:33:00			Unit No: 84
Time Test Ended: 19:53:00			Reference Elevations: 2438.00 ft (KB)
Interval: 3959.00 ft (KB) To 3973.00 ft (KB) (TVD)			2428.00 ft (CF)
Total Depth: 3973.00 ft (KB) (TVD)			KB to GR/CF: 10.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Fair		

Serial #: 9120	Inside			Capacity: 8000.00 psig
Press@RunDepth: psig @ 3960.00 ft (KB)				Last Calib.: 2018.03.18
Start Date: 2018.03.18	End Date: 2018.03.18			Time On Btm:
Start Time: 11:31:15	End Time: 19:53:00			Time Off Btm:

TEST COMMENT: 15-IF-Weak Blow ; Built to 4"
 30-ISI-No Return
 60-FF-Fair Blow ; BOB in 23 mins
 90-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
55.00	HOCM 25%O 75%M	0.77
25.00	GO 10%G 90%O	0.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63763 **DST#: 4**
Test Start: 2018.03.18 @ 11:31:00

Tool Information

Drill Pipe:	Length: 3942.00 ft	Diameter: 3.80 inches	Volume: 55.30 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 55.30 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3959.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 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			3932.00	
Shut In Tool	5.00			3937.00	
Hydraulic tool	5.00			3942.00	
Jars	5.00			3947.00	
Safety Joint	3.00			3950.00	
Packer	5.00			3955.00	28.00 Bottom Of Top Packer
Packer	4.00			3959.00	
Stubb	1.00			3960.00	
Recorder	0.00	9120	Inside	3960.00	
Recorder	0.00	8934	Outside	3960.00	
Perforations	10.00			3970.00	
Bullnose	3.00			3973.00	14.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Carmen Schmitt, Inc.
PO BOX 47
Great Bend KS 67530+0047
ATTN: Brad Rine

18-14S-25W Trego KS
Schwindt #1
Job Ticket: 63763 **DST#: 4**
Test Start: 2018.03.18 @ 11:31:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.79 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5500.00 ppm		
Filter Cake: inches		

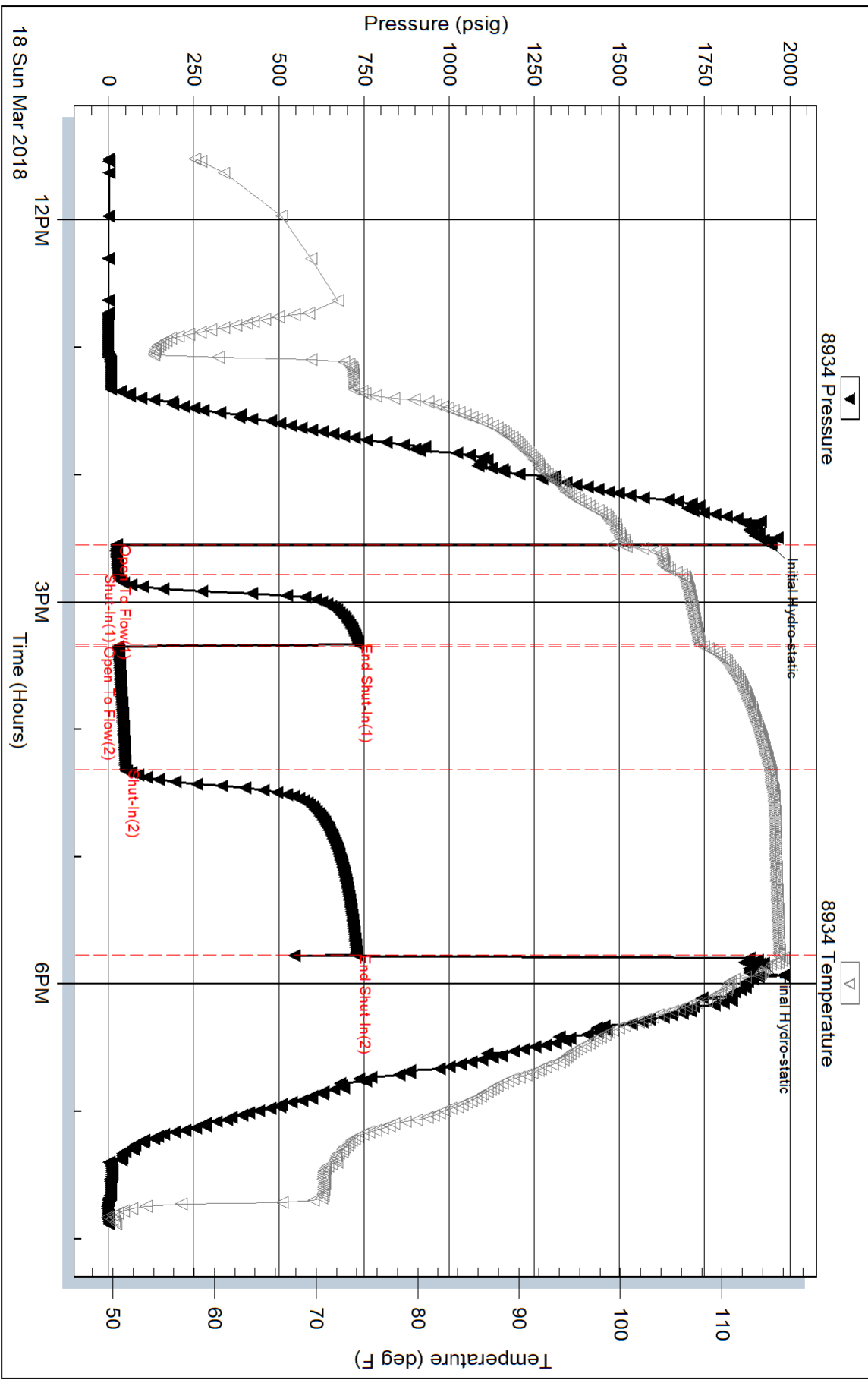
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
55.00	HOCM 25%O 75%M	0.772
25.00	GO 10%G 90%O	0.351

Total Length: 80.00 ft Total Volume: 1.123 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 2#LCM

Pressure vs. Time



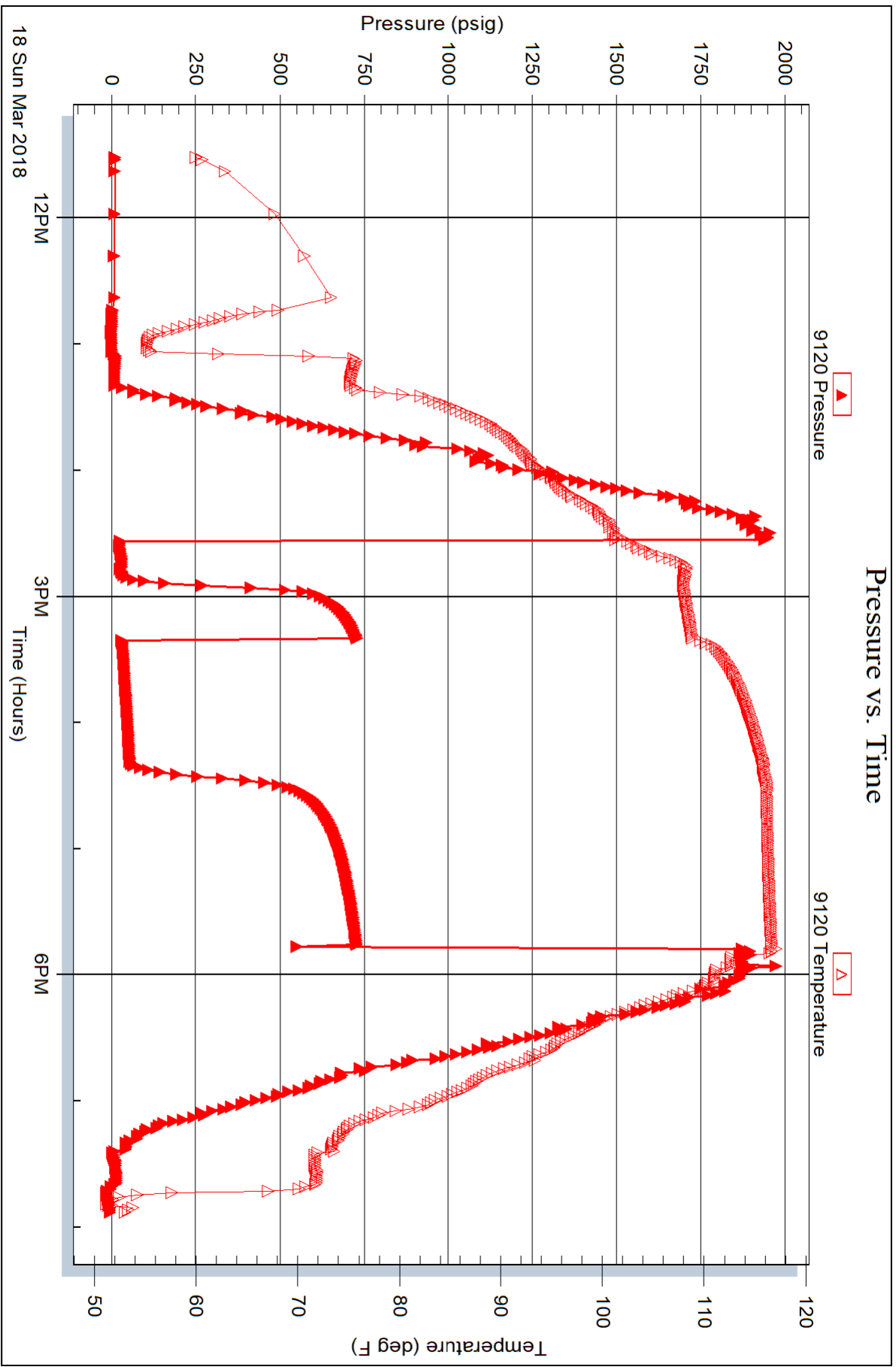
Serial #: 9120

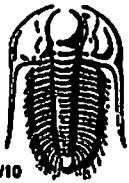
Inside

Carmen Schmitt, Inc.

Schw indt #1

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63760

Well Name & No. Schwindt #1 Test No. 1 Date 03/16/2018
 Company Carmen Schmitt, Inc Elevation 2438 KB 2428 GL
 Address PO BOX 47 Great Bend Ks 67530 + 0047
 Co. Rep / Geo. Brad Rine Rig Southwind #8
 Location: Sec. 18 Twp 14s Rge. 25w Co. Trego State Ks

Interval Tested 3862' - 3895' Zone Tested LHC 'A'
 Anchor Length 33' Drill Pipe Run 3847' Mud Wt. 8.9
 Top Packer Depth 3857' Drill Collars Run - Vis 62
 Bottom Packer Depth 3862' Wt. Pipe Run - WL 7.2
 Total Depth 3895' Chlorides 5700 ppm System LCM 2

Blow Description 77-Weak Blow; Build to 1"
50- No Return
77- No Blow; Pulled tool
78- - -

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 3' BHT 105 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1873</u>	<input checked="" type="checkbox"/> Test <u>850</u>	T-On Location <u>17:46</u>
(B) First Initial Flow <u>2309</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:14</u>
(C) First Final Flow <u>2141</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:53</u>
(D) Initial Shut-In <u>2092</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>23:50</u>
(E) Second Initial Flow <u>2192</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>01:29 03/17/2018</u>
(F) Second Final Flow <u>2115</u>	<input checked="" type="checkbox"/> Mileage <u>120R7</u> 120	Comments <u>stayed in hole</u>
(G) Final Shut-In <u>1863</u>	<input type="checkbox"/> Sampler	<u>9:50</u> <u>tool plugged</u>
(H) Final Hydrostatic <u>1863</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 15
 Initial Shut-In 30
 Final Flow 10
 Final Shut-In -

Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

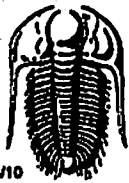
Sub Total 1295

Sub Total 0
 Total 1295
 MP/DST Disc't

Approved By _____ Our Representative Spencer J. Stahl Thanks!

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.

785-259-0056



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63761

Well Name & No. Schwindt #1 Test No. 2 Date 03/17/2018
 Company Carmen Schmitt, Inc. Elevation 2438 KB 8428 GL
 Address PO BOX 47 Street Bend Ks 67530-0047
 Co. Rep / Geo. Brad Rine Rig Southwind #8
 Location: Sec. 18 Twp 14s Rge. 25w Co. Trego State Ks

Interval Tested 3862'-3895' Zone Tested LKC 'A'
 Anchor Length 33' Drill Pipe Run 3847' Mud Wt. 8.9
 Top Packer Depth 3857' Drill Collars Run - Vis 62
 Bottom Packer Depth 3862' Wt. Pipe Run - WL 7.2
 Total Depth 3895' Chlorides 5700 ppm System LCM 2

Blow Description 17- Strong Blow, BOBIN 8 mins
1st No Return
77- Fair Blow, BOBIN 13 mins
78- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>120'</u>	<u>MCCW</u>		<u>90</u>	<u>10</u>	
<u>60'</u>	<u>MSWOCM</u>	<u>10</u>	<u>3</u>	<u>2</u>	<u>85</u>
<u>120'</u>	<u>Clean Oil Jersey</u>	<u>15</u>	<u>85</u>		
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

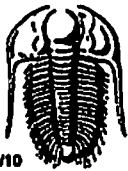
Rec Total 300' BHT 118° Gravity 23° API RW .211 @ 36 °F Chlorides 75,000 ppm

(A) Initial Hydrostatic <u>1876</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>02:10</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>02:17</u>
(C) First Final Flow <u>62</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>03:47</u>
(D) Initial Shut-In <u>1187</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>06:17</u>
(E) Second Initial Flow <u>67</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>08:52</u>
(F) Second Final Flow <u>152</u>	<input type="checkbox"/> Mileage	Comments
(G) Final Shut-In <u>1149</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1835</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>15</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>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1375</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1375</u>	

Approved By _____ Our Representative Spencer J. Stahl 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.

785-259-0656



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63762

Well Name & No. Schwindt #1 Test No. 3 Date 03/17/2018
 Company Carmen Schmitt, Inc Elevation 2438 KB 2428 GL
 Address PO BOX 47 Great Bend Ks 67530 +0047
 Co. Rep / Geo. Brad Kline Rig Southwind #8
 Location: Sec. 18 Twp 14s Rge. 25w Co. Trego State Ks

Interval Tested 3920' - 3948' Zone Tested LHC
 Anchor Length 28' Drill Pipe Run 3910' Mud Wt. 8.9
 Top Packer Depth 3915' Drill Collars Run - Vis 53
 Bottom Packer Depth 3920' Wt. Pipe Run - WL 6.8
 Total Depth 3948' Chlorides 5,900 ppm System LCM 2#

Blow Description 17- Weak Blow; Built to 3/4"
1st- No Return

77- No Blow; Pulled tool
78- - -

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic 1916 Test 1050 T-On Location 20:10
 (B) First Initial Flow 22 Jars 250 T-Started 20:14
 (C) First Final Flow 19 Safety Joint 75 T-Open 23:49
 (D) Initial Shut-In 911 Circ Sub _____ T-Pulled 00:44 03/08/2018
 (E) Second Initial Flow 25 Hourly Standby _____ T-Out 02:33
 (F) Second Final Flow 17 Mileage 12027 120 Comments _____
 (G) Final Shut-In ~~1895~~ Sampler _____
 (H) Final Hydrostatic 1895 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 10
 Final Shut-In _____
 Sub Total 1745
 Total 1745
 MP/DST Disc't _____

Approved By _____ Our Representative Spencer J. Stoad Thanks!
 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.

785-259-0051



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63763

Well Name & No. Schwindt #1 Test No. 4 Date 03/18/2018
 Company Carmen Schmitt, Inc. Elevation 2438 KB 2428 GL
 Address PO BOX 47 Great Bend Ks 67530 +0047
 Co. Rep / Geo. Bred Rine Rig Southwind #8
 Location: Sec. 18 Twp 14s Rge. 25w Co. Trego State Ks

Interval Tested 3959' - 3973' Zone Tested LHC 'K'
 Anchor Length 14' Drill Pipe Run 3942' Mud Wt. 9.1
 Top Packer Depth 3954' Drill Collars Run - Vis 51
 Bottom Packer Depth 3959' Wt. Pipe Run - WL 6.8
 Total Depth 3973' Chlorides 5,500 ppm System LCM 2#

Blow Description 7-Weak Blow; Built to 4"
1SD - No Return
77 - Fair Blow; BOB in 23 mins
7SD - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>55'</u>	<u>HOCM</u>	<u>25</u>	<u>75</u>	<u>75</u>	<u>75</u>
<u>25'</u>	<u>210</u>	<u>10</u>	<u>90</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 80' BHT _____ Gravity 39° API RW - @ _____ F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1944</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>11:28</u>
(B) First Initial Flow <u>24</u>	<input type="checkbox"/> Jars <u>250</u>	T-Started <u>11:31</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>14:32</u>
(D) Initial Shut-In <u>733</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>17:47</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:51</u>
(F) Second Final Flow <u>49</u>	<input checked="" type="checkbox"/> Mileage <u>120 R 7x2</u> 240	Comments <u>loaded tools</u>
(G) Final Shut-In <u>728</u>	<input type="checkbox"/> Sampler _____	<u>03/20/2018 @ 5:45</u>
(H) Final Hydrostatic <u>1922</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 90

Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1865

Sub Total _____
 Total 1865
 MP/DST Disc'l _____

Approved By _____ Our Representative Spencer J. Jacob Thanks!
 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.

785-259-0056



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
3/20/2018	27205

BILL TO
Carmen Schmitt, Inc. P. O. Box 47 915 Harrison Great Bend, KS 67530-0047

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1	Schwindt	Gove	Southwind Drillin...	Oil	Development	Cement Top-Bott...	Jonathan
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				60	Miles	5.00	300.00
579D	Pump Charge - Two-Stage & Top To Bottom LongString				1	Job	1,800.00	1,800.00
290	D-Air				7	Gallon(s)	42.00	294.00T
281	Mud Flush				500	Gallon(s)	1.50	750.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00T
402-5	5 1/2" Centralizer				12	Each	70.00	840.00T
403-5	5 1/2" Cement Basket				3	Each	275.00	825.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	250.00	250.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	325.00	325.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
330	Swift Multi-Density Standard (MIDCON II)				450	Sacks	16.25	7,312.50T
325	Standard Cement				150	Sacks	13.00	1,950.00T
284	Calseal				7	Sack(s)	35.00	245.00T
283	Salt				800	Lb(s)	0.20	160.00T
285	CFR-1				70	Lb(s)	4.50	315.00T
276	Flocele				150	Lb(s)	2.50	375.00T
581D	Service Charge Cement				600	Sacks	1.75	1,050.00
583D	Drayage				1,512.65	Ton Miles	0.85	1,285.75
	Subtotal							18,327.25
	Sales Tax Gove County						8.50%	1,180.78

710/43
19448.0001
Well Site
Cement Long String

We Appreciate Your Business!

Total

\$19,508.03



CHARGE TO: Carmen Schmitt, Inc.
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET 27205

PAGE 1 OF 2

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

WELL/PROJECT NO. #1
 LEASE Schwindt
 COUNTY/PARISH Gove
 STATE KS
 CITY
 DATE 03/20/18
 OWNER

TICKET TYPE SERVICE SALES
 CONTRACTOR South Wind Drilling
 RIG NAME/NO. #8
 SHIPPED VIA LT
 DELIVERED TO Location
 ORDER NO.

WELL TYPE Oil
 WELL CATEGORY Development
 JOB PURPOSE Cement Top to Bottom Long String
 WELL PERMIT NO.
 WELL LOCATION

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			UM		UM	
575		1			MILEAGE #113	60	mi	5	00	300 00
579		1			Pump Charge - Top to Bottom Long String	1	EA	1800	00	1800 00
290		1			D-Air	7	gal	42	00	294 00
281		1			Mud Flush	500	gal	1	50	750 00
221		1			Liquid KCL	2	gal	25	00	50 00
402		1			Centralizer	12	EA 5 1/2"	70	00	840 00
403		1			Cement Basket	3	EA	275	00	825 00
406		1			Latch Down Plug + Baffle	1	EA	250	00	250 00
407		1			Insert Float Shoe w/ Auto Pill	1	EA	325	00	325 00
419		1			Rotating Head Rental	1	EA	200	00	200 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 Curtis Herbman
 DATE SIGNED TIME SIGNED A.M. 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	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				PAGE TOTAL
WE UNDERSTOOD AND MET YOUR NEEDS?				Page 2
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				12693 25
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				18,327 25
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		Gove TAX
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL
				1180 78
				19508 03

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!



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

TICKET CONTINUATION

TICKET No. 27205

CUSTOMER *Carmen Schmitt, Inc* WELL *Schwindt #1* DATE *03/20/18* PAGE *2* OF *2*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY	U/M	QTY	U/M		
330		2				Swift Multi Density Standard	450	SKS	4479	lbs	16.35	7312.50
325		2				Standard Cement	150	SKS	15725	lbs	13.00	1950.00
284		2				Calscal	7	SKS	700	lbs	35.00	245.00
283		2				Salt	800	lbs			0.20	160.00
285		2				CFR-1	70	lbs			4.50	315.00
276		2				Flacele	150	lbs			2.50	375.00
581		2				SERVICE CHARGE <i>Cement</i>			600	SKS	1.75	1050.00
583		2				MILEAGE CHARGE	60,506	TOTAL WEIGHT	50	LOADED MILES	1512.65	1285.75

CONTINUATION TOTAL **12,693.25**

JOB LOG

SWIFT Services, Inc.

DATE 03/20/18 PAGE NO. 1
 TICKET NO. 27205

CUSTOMER Carmen Schmitt WELL NO. #7 LEASE Schwindt JOB TYPE Top to Btm Longstring

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1615							On location w/Float Equipment, Rig laying down Drill pipe 5 1/2 x 14" Casing RTD - 4370 LTD - 4367 Insert - 4313.59 Basket 1, 32, 57 - Bottom of Joint Cent - 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 58, 59
	1915							Start Running Casing / Float Equipment
	2130							Break Circulation on Bottom
	2230							Hook up to Swift
		2 1/2	8					Plug Rathole w/ 30 SKS
		2 1/2	5					Plug Mousehole w/ 15 SKS
	2246	4	12			400		Pump Mud Flush
	2250	5	20			450		Pump KCl Spacer
	2255	6				450		Start SMD Cement
	2330	5	220			400		Finish SMD Cement
	2335	3 1/2				300		Start EA-2 Cement, Mix at 15.6"
	2350	3 1/2	36			Vac		Finish EA-2 Cement
	2355					Vac		Drop Plug, Wash out Pump & Lines
	0005	8				400		Start Displacement
	0014	7	65			500		Catch Cmt
	0020	6	105			1100		Fin Displacement Lift PSI 1100 Land PSI 1700
	0025							Release, Dry
	0030							Wash up truck
	0045							Rack up
	0050							Job Complete
								Thanks Jon, Austin, Kirby, Isaac
								Circulated Cement to Surface 30 SKS to pit.



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

Well Name: Schwindt #1 - Carmen Schmitt, Inc.
API: 15-195-23043-00-00
Location: W2-NW-NW-NE, Section 18-14S-25W
License Number: 6569
Spud Date: March 12, 2018
Surface Coordinates: 330'FNL & 2600'FEL,
of Section
Bottom Hole Vertical Wellbore
Coordinates:
Ground Elevation (ft): 2428 Ft.
Logged Interval (ft): 3500 Ft. To: 4370 Ft. Total Depth (ft): RTD 4370 Ft. LTD 4367 Ft.
Formation: Mississippian at Total Depth
Type of Drilling Fluid: Chemical

Region: Trego County, Kansas
Drilling Completed: March 20, 2018
Results: Production Casing Set
Field: NA

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

Operator

Company: Carmen Schmitt, Inc.
Address: PO Box 47
Great Bend, Kansas 67530-0047

Geologist

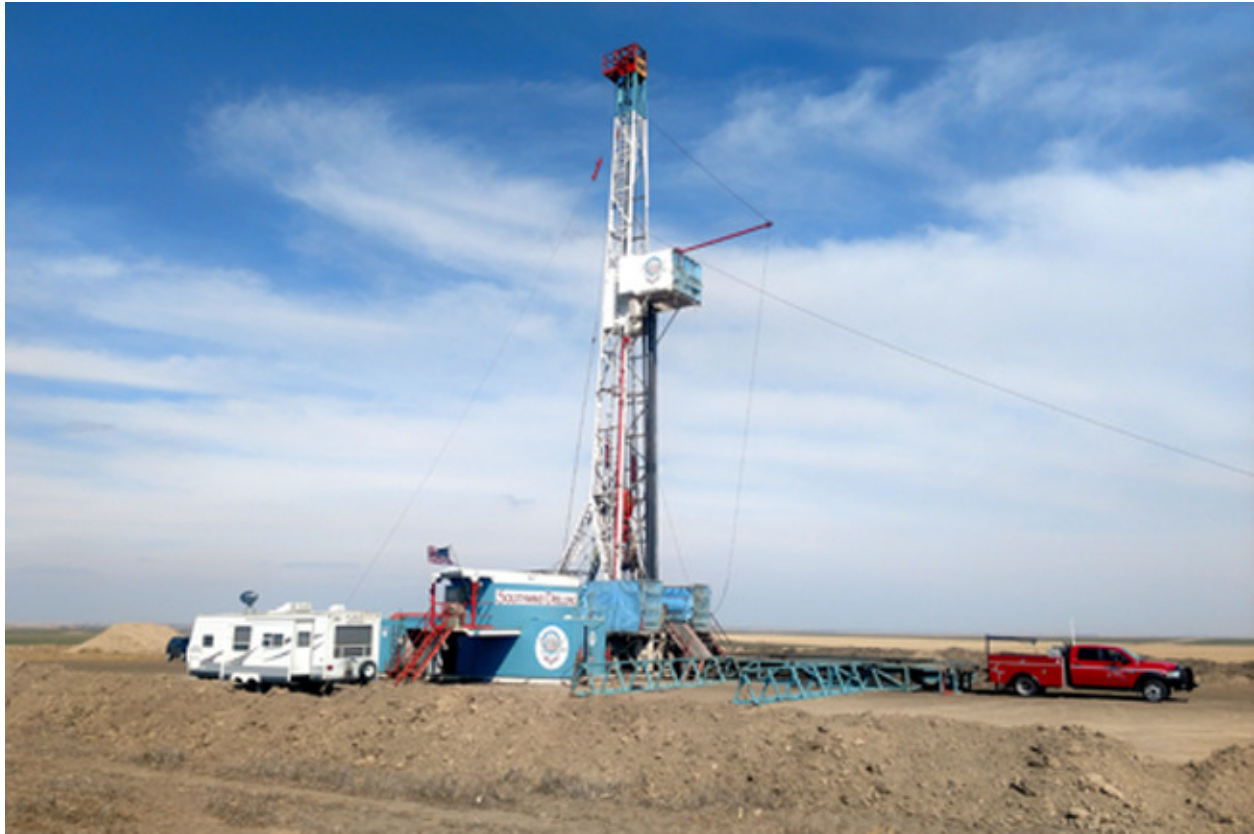
Name: M. Bradford Rine
Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647
Address: 100 South Main, Suite #415
Wichita, Kansas 67202

Remarks

Based on sample observations, drill stem test results, and electric log evaluation, it was the decision of the Operator, to set production casing on the "Schwindt #1", on March 20, 2018.

Respectfully submitted,
M. Bradford Rine, geologist

Carmen Schmitt, Inc.
"Schwindt #1"
Section 18-14S-25W, Trego County, Kansas



Drilling Information

Rig: Southwind Drlg, Rig #8

Pump: Emsco D-375 6x14

Drawworks: RMI #550

Collars: 490' 2-1/4x 6-1/4

Drillpipe: 4-1/2" 16.6# XH

Toolpusher: Bill Sanders

Mud: Mudco (Gary Schmidtberger)

Gas Detector: None

Drill Stem Tests: Trilobite (Spencer Staab)

E-Logs: Pioneer (J. Henrickson)

Water: Harvey Lease Irrigation Well

Office: Carmen Schmitt

Field: Curtis Hitchmann

Daily Drilling Status

Date: **Operations/Depth/Comments**
 03-12-18 **MIRT, RU, Spud @ 0'**
 03-13-18 **Drilling Out @ 224'**
 03-14-18 **Drilling @ 1816'**
 03-15-18 **Drilling @ 3065'**
 03-16-18 **Drilling @ 3770'**
 03-17-18 **Trip Out of Hole with DST 2 @ 3895'**
 03-18-18 **Drilling @ 3950'**
 03-19-18 **Drilling @ 4075'**
 03-20-18 **Trip Out of Hole for Logs @ 4370'**
 03-21-18 **Cement Job Completed at 12:30 am**

	Results: Oil Well			(Well A) Oil Well	(Well B) Oil Well	(Well C) D&A						
	Carmen Schmitt, Inc.			Carmen Schmitt, Inc.	Carmen Schmitt, Inc.	F&M Oil Co.						
	Schwindt #1			WP Unit #4-7	Lipp Harvey #1-12	Lipp "A" #1						
	330'FNL & 2600' FEL			775'FWL & 1690'FWL	330'FSL & 2450'FSL	C-NW-SE						
Sec. 18-14S-25W			Sec. 07-14S-15W	Sec. 12-14S-26W	Sec. 18-14S-25W							
	KB	2438		KB	2435	KB	2464	KB	2412	Well A	Well B	Well C
Formations	Sample	E-Log	Datum	E-Log	Datum	E-Log	Datum	E-Log	Datum	Comparison(s)		
Anhydrite	1906	1903	535	1888	547	1924	540	1891	521	-12	-5	14
B/Anhydrite	1942	1939	499	1926	509	1963	501	1927	485	-10	-2	14
Tarkio	3294	3289	-851	3280	-845	3318	-854	3285	-873	-6	3	22
Heebner Sh.	3681	3677	-1239	3668	-1233	3706	-1242	3675	-1263	-6	3	24
Toronto	3702	3697	-1259	3688	-1253	3726	-1262	3698	-1286	-6	3	27
Lansing	3720	3715	-1277	3708	-1273	3744	-1280	3719	-1307	-4	3	30
Muncie Creek Sh.	3865	3864	-1426	3852	-1417	3892	-1428	3868	-1456	-9	2	30
Stark Sh.	3943	3943	-1505	3934	-1499	3974	-1510	3949	-1537	-6	5	32
B/Kansas City	4002	3998	-1560	3988	-1553	4028	-1564	4002	-1590	-7	4	30
Marmaton	4046	4038	-1600	4034	-1599	4074	-1610	4050	-1638	-1	10	38
Altamont	4067	4064	-1626	4056	-1621	4096	-1632	4071	-1659	-5	6	33
Pawnee	4151	4147	-1709	4136	-1701	4174	-1710	4153	-1741	-8	1	32
Ft. Scott	4212	4208	-1770	4198	-1763	4236	-1772	4216	-1804	-7	2	34
Cherokee Sh.	4237	4233	-1795	4221	-1786	4261	-1797	4242	-1830	-9	2	35
Mississippian	4308	4308	-1870	4279	-1844	4344	-1880	4302	-1890	-26	10	20
Total Depth	4370	4367	-1929	4360	-1925	4340	-1876	4605	-2193	-4	-53	264

Casing Record, Bit Record, Deviation Surveys

CASING:

Conductor: None

Surface: Ran 5 jts, 8-5/8", 23# new casing. Set @ 223'. (Copeland) Cement with 185sx 60/40 poz, 3%CC, 2% gel. Cement did circulate. Plug down at 10:45 pm, on March 12, 2018.

Production: Ran 104 joints 5 1/2", 14# Casing. Tally @ 4356', Set @ 4354'. (Swift) Cement with 555 sx of SMD, EA2, 30 sx in rat hole, 15 sx in mousehole, 30sx circulated by Swift, job complete @ 12:45 am on 03/21/18.

BITS:

No.	Size	Make	Model	Depth In	Depth Out	Hours
1	12-1/4	JZ	RT	0	224	3.00
2	7-7/8	Varel	HE29H	224	4370	84.50

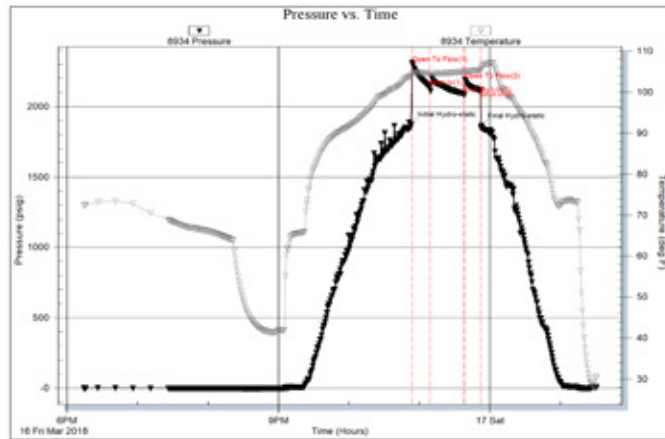
DEVIATION SURVEYS:

Deviation:	Depth:	Deviation:	Depth:
0.75*	224'	0.50*	4370'
0.50*	3895'		

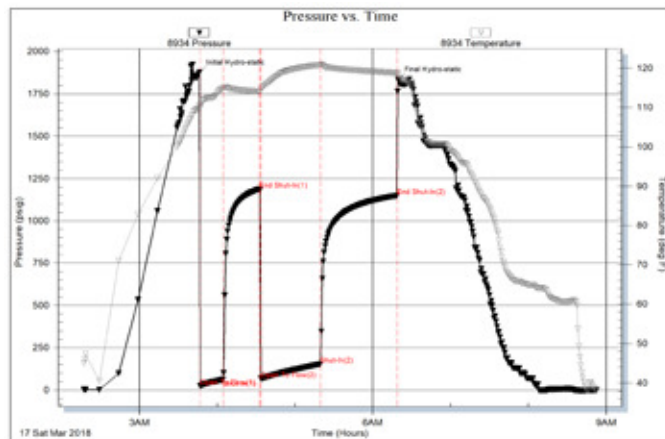
PIPE STRAPS:

Difference:	Depth:
0.48'	3948'

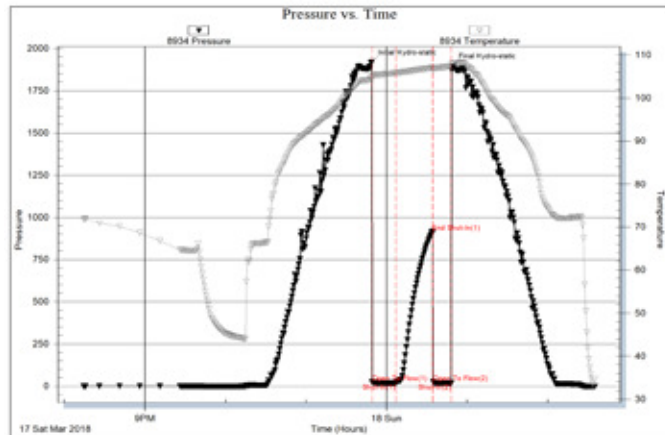
DST #1: 3862-3895 (LKC H)
Times: 15-30-10-out*
Initial Open: Wk Blow, built to 1" i.b.
Final Open: None
Rec: 3' mud
IHP: 1893 FHP: 1863
IFP: 2309-2141 FFP: 2192-2115
ISIP: 2092 FSIP: NA
BHT: 105°F
*** (Test Invalid, Totally Plugged)**



DST #2: 3862-3895 (LKC H)
Times: 15-30-45-60
Initial Open: Stg Blow, b.o.b. 8 min
Final Open: Stg Blow, b.o.b. 13 min
Rec: 300' Total Fluid
120' MCW: 90%w 10%m
60' SliGWOCM: 10%g 03%o 02%w 85%m
120' GCO: 15%g 85%o
IHP: 1876 FHP: 1835
IFP: 23-62 FFP: 67-152
ISIP: 1187 FSIP: 1149
BHT: 118°F



DST #3: 3920-3948 (LKC J)
Times: 15-30-10-out
Initial Open: Wk Blow, built to 3/4" i.b.
Final Open: No Blow
Rec: 5' mud
IHP: 1916 FHP: 1895
IFP: 22-19 FFP: 25-17
ISIP: 914 FSIP: NA
BHT: 108°F



DST #4: 3959-3973 (LKC K)

Times: 15-30-60-90

Initial Open: Weak Blow, built to 4" i.b.

Final Open: Stg Blow, built to b.o.b. 23 min.

Rec: 80' Total Fluid

55' OCM: 25%o 75%m

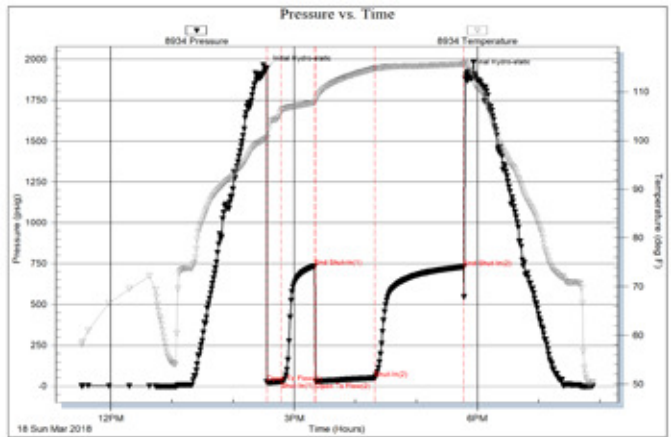
25'GCO: 10%g 90%o

IHP: 1944 FFP: 1922

IFP: 24-28 FFP: 27-49

ISIP: 733 FSIP: 728

BHT: 115°F



Rock Types

	Congl granite wash		Bent		Dol		Salt		Till
	dol ls limey		Brec		Gyp		Shale		Siltysh
	New symbol		Cht		Igne		Shcol		Shlysiltst
	Dolom ls limey		Clyst		Lmst		Shgy		Sandyls
	New symbol		Black shale/coal		Meta		Siltst		
	Anhy		Congl		Mrlst		Ss		

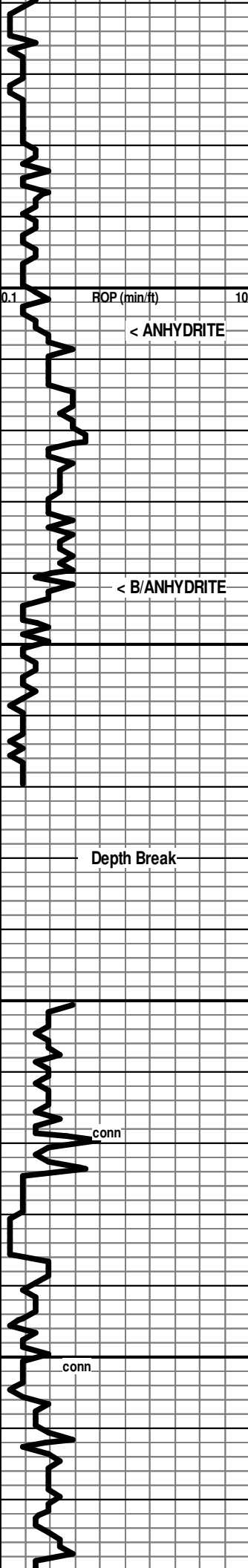
Accessories

MINERAL		Gyp	FOSSIL		Ostra		Siltstrg
	Anhy		Hvymin		Pelec		Ssstrg
	Arggrn		Kaol		Pellet	TEXTURE	
	Arg		Marl		Pisolite		Boundst
	Bent		Minxl		Plant		Chalky
	Bit		Nodule		Strom		Cryxln
	Brecfrag		Phos	STRINGER			Earthy
	Calc		Pyr		Anhy		Finexln
	Carb		Salt		Shale		Grainst
	Chtdk		Sandy		Bent		Lithogr
	Chtlt		Silt		Coal		Microxln
	Dol		Sil		Dol		Mudst
	Feldspar		Sulphur		Gyp		Packst
	Ferrpel		Tuff		Ls		Wackest
	Ferr				Mrst		
	Glau						

Other Symbols

OIL SHOW		Even		Dead	INTERVAL
	Oil & gas show		Spotted		Gas
	Gas show		Trace or questionable		Core
					Dst

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">ROP (min/ft)</div> <div style="width: 50px; height: 10px; background-color: black;"></div> </div>				
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0.1</div> <div style="margin-right: 10px;">ROP (min/ft)</div> <div style="margin-right: 10px;">10</div> </div>	1800			
	50			



1900

ROP (min/ft)

< ANHYDRITE

< B/ANHYDRITE

50

Depth Break

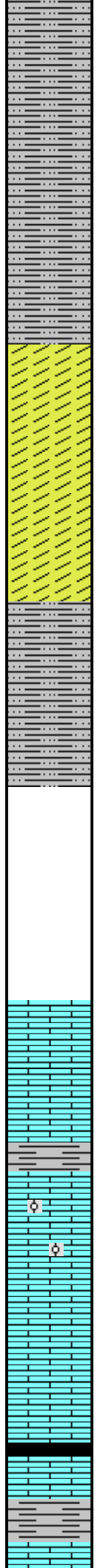
xxxxxxxx

3500

conn

3550

conn



← 1906 (+532)

Anhydrite Interval based on drill time only!

← 1942 (+496)

* Displace & Mudup @ 3297 ft!

* No shows observed where no symbol posted in column 4, along with no show description stated in description column 5 or 6!

Ls wh-cr-tan-gy,fn xln, dns, foss in pt

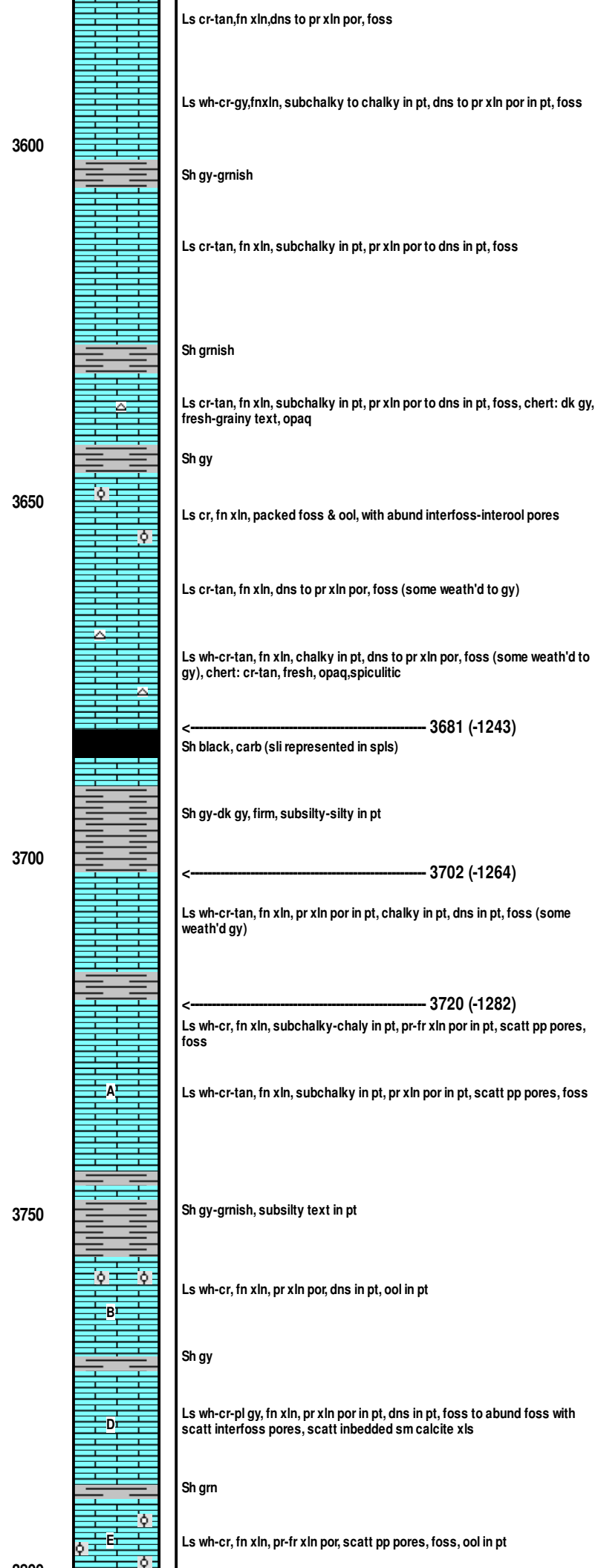
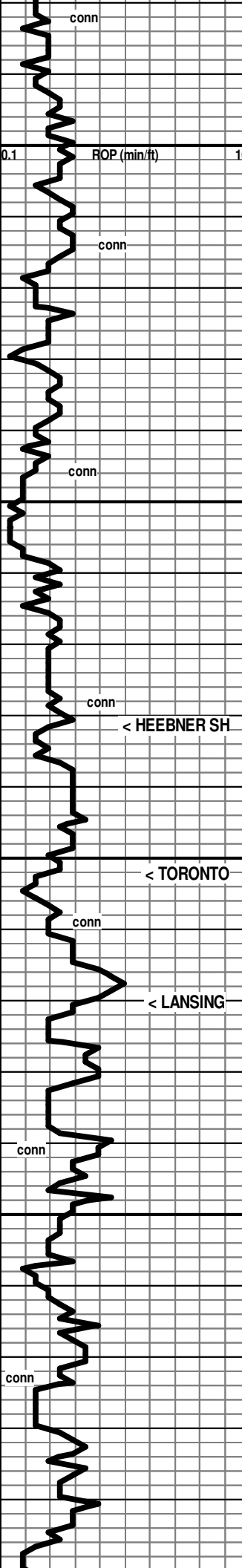
Sh gy-dk gy

Ls wh-cr, fn xln, chalky in pt, pr xln por in pt, foss

Ls wh-ct-tan, fn xln, pr xln por, scatt pp pores, ool & oom in pt, foss

Ls cr-tan-gy, vfn-fn xln, dns to pr xln por, foss

Sh gy-dk gy-black, carb in pt



Ls cr-tan,fn xln,dns to pr xln por, foss

Ls wh-cr-gy,fnxln, subchalky to chalky in pt, dns to pr xln por in pt, foss

3600

Sh gy-grnish

Ls cr-tan, fn xln, subchalky in pt, pr xln por to dns in pt, foss

Sh grnish

Ls cr-tan, fn xln, subchalky in pt, pr xln por to dns in pt, foss, chert: dk gy, fresh-grainy text, opaq

Sh gy

3650

Ls cr, fn xln, packed foss & ool, with abund interfoss-interool pores

Ls cr-tan, fn xln, dns to pr xln por, foss (some weath'd to gy)

Ls wh-cr-tan, fn xln, chalky in pt, dns to pr xln por, foss (some weath'd to gy), chert: cr-tan, fresh, opaq,spiculitic

< HEEBNER SH

← 3681 (-1243)

Sh black, carb (sli represented in spls)

Sh gy-dk gy, firm, subsilty-silty in pt

3700

< TORONTO

← 3702 (-1264)

Ls wh-cr-tan, fn xln, pr xln por in pt, chalky in pt, dns in pt, foss (some weath'd gy)

< LANSING

← 3720 (-1282)

Ls wh-cr, fn xln, subchalky-chaly in pt, pr-fr xln por in pt, scatt pp pores, foss

A

Ls wh-cr-tan, fn xln, subchalky in pt, pr xln por in pt, scatt pp pores, foss

Sh gy-grnish, subsilty text in pt

3750

Ls wh-cr, fn xln, pr xln por, dns in pt, ool in pt

B

Sh gy

Ls wh-cr-pl gy, fn xln, pr xln por in pt, dns in pt, foss to abund foss with scatt interfoss pores, scatt inbedded sm calcite xls

D

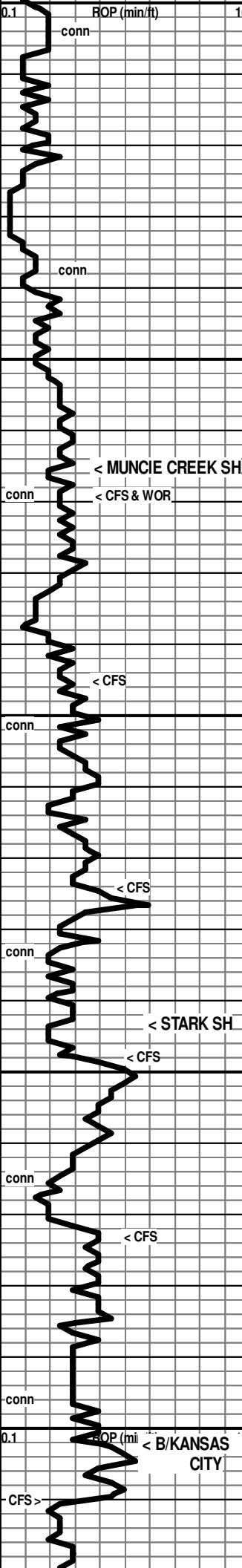
Sh grn

E

Ls wh-cr, fn xln, pr-fr xln por, scatt pp pores, foss, ool in pt

7:00 AM, March 16, 2018

Mud Check, Drlg @ 3793':
 Vis Wt WL LCM PV YP
 62 8.9 7.2 2 15 21



WOB 35k
RPM 90
PP 1100
SPM 60

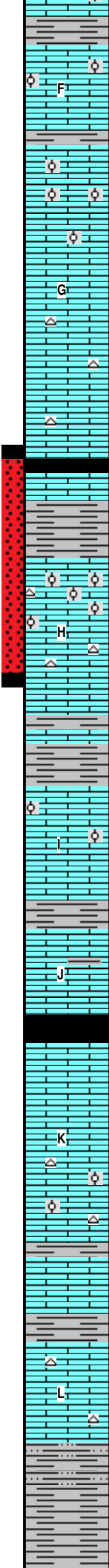
3800

3850

3900

3950

4000



Sh gy-grnsh gy

Ls cr, fn xln, prxln por in pt, scatt pp pores and interool pores, foss, ool

Ls cr, fn xln, pr xln por, scatt sm vugs, abund foss, abund ool & oom

Ls cr-tan, vfn-fn xln, dns to pr xln por, foss, chert: fresh, wh, foss

Ls cr-tan-gy, vfn-fn xln, dns, foss in pt

← 3865 (-1427) →
Sh dk gy-black, carb in pt

Sh gy-grn, subsilty mic text in pt

Ls cr, fn xln, pr-fr xln por abund pp pores & sm vugs, ool & foss, scatt oom, chert: fresh tosll grainy text, wh-cr, spic, opaq
[No Odor, few pcs with dull fluor, a few pcs with a mod show of dk brn NVL oil & dk brn FO, most porous pcs barren]

Ls cr-tan, fn xln, dns, foss, cherty

Sh gy-grn-grnsh gy, silty-mic text in pt

Ls wh-cr-tan, fn xln, chalky in pt, mostly dns, Rr patches of pr xln por, scatt patches & marbling of transl calcite fill, foss, Rr ool

Sh gy-dk gy-blk-grn, subsilty/submic text in pt

Ls wh-cr-pl gy, fn xln, some subchalky, much dns, scatt patches & pcs with pr xln por, foss to abund foss

Show Descr. →
← 3943 (-1505) →
Sh black, carb

Ls wh-cr-tan-pl gy, vfn-fn xln, dns, some subchalky, foss

Ls wh-cr, fn xln, mostly dns to pr xln por, Rr pcs with pp pores & fr- xln por, some chalky, foss to abund foss, ool in Rr pt, chert: fresh to grainy, tan, subtransl-subop, spic
[Fnt Odor, Abund dull-mod fluor, Mod am't pcs with trace-sli shows of gassy brn FO, few pcs with fr shows of dk brn NVL oil, some tan oil film, spotty-patchy stn]

Ls wh-cr, fn xln, dns, foss in pt

Sh gy-dk gy-grnsh gy, firm, silty in pt, foss in pt

Ls wh-cr-tan-gy, vfn-fn xln, mostly dns & hard, some chalky & softer, foss in pt, chert: fresh, wh-cr, foss, opaq

← 4002 (-1564) →

Sh gy-dk gy-blk, dk grn-pl grn, some dk reddish, calc in pt, silty in pt, firm in pt

Chl Hd pH Solids
5700 Nil 11.0 3.3

DST #1: 3862-3895 (LKC H)
Times: 15-30-10-out*
Initial Open: Wk Blow, built to 1" i.b.
Final Open: None
Rec: 3' mud
IHP: 1893 FHP: 1863
IFP: 2309-2141 FFP: 2192-2115
ISIP: 2092 FSIP: NA
BHT: 105°F
*(Test Invalid, Totally Plugged)

DST #2: 3862-3895 (LKC H)
Times: 15-30-45-60
Initial Open: Stg Blow, b.o.b. 8 min
Final Open: Stg Blow, b.o.b. 13 min
Rec: 300' Total Fluid
120' MCW: 90%w 10%
60' SIIGWOCM: 10%g 03%o 02%w 85%
120' GCO: 15%g 85%
IHP: 1876 FHP: 1835
IFP: 23-62 FFP: 67-152
ISIP: 1187 FSIP: 1149
BHT: 118°F

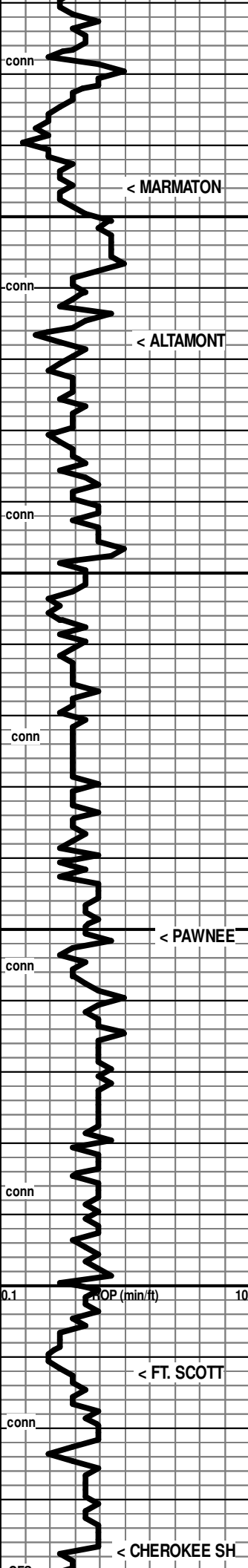
7:00 AM, March 17, 2018
Mud Check, TOOH/DST2 @ 3895':
Vis Wt WL LCM PV YP
53 8.9 6.8 2 16 24
Chl Hd pH Solids
5900 Tr 11.0 4.0

DST #3: 3920-3948 (LKC J)
Times: 15-30-10-out
Initial Open: Wk Blow, built to 3/4" i.b.
Final Open: No Blow
Rec: 5' mud
IHP: 1916 FHP: 1895
IFP: 22-19 FFP: 25-17
ISIP: 914 FSIP: NA
BHT: 108°F

[No Odor, scatt dull patchy fluor, few pcs per tray spotty-patchy Brn Stn, with mostly trace-sli show Brn FO on crush, a few pcs with Fr- show of brn gassy FO on crush, a few patches of blk resid stn]

7:00 AM, March 18, 2018
Pipe Strap @ 3948'.48' long!
Mud Check, Drlg @ 3964':
Vis Wt WL LCM PV YP
51 9.1 6.8 2 12 20
Chl Hd pH Solids
5500 tr 11.0 5.4

DST #4: 3959-3973 (LKC K)
Times: 15-30-60-90
Initial Open: Weak Blow, built to 4" i.b.
Final Open: Stg Blow, built to b.o.b. 23 min.
Rec: 80' Total Fluid
55' OCM: 25%o 75%
25' GCO: 10%g 90%
IHP: 1944 FFP: 1922
IFP: 24-28 FFP: 27-49
ISIP: 733 FSIP: 728
BHT: 115°F



4050

4100

4150

4200

Ls wh-cr-tan-gy, vfn-fn xln, subchalky in pt, mostly dns, scatt embedded transl calcite patches sli foss in pt

Sh gy-grmish-reddish, mostly mushy and calc, some subfirm (Washes pl gy)

← 4046 (-1608)

Ls cr-tan, fn xln, chalky in pt, packed ool & foss (mostly well cem with scatt interool-interfoss pores) Some red shale fill of pores-likely at shale contact above

Sh gy-grmish-reddish, silty in pt to shaley siltstone

← 4067 (-1629)

Ls wh-cr-tan, fn xln, chalky in pt, packed ool in pt, well-cem to to chalky cem to some interool pores

Ls wh-cr-tan, vfn-fn xln, mostly dns & hard, some chalky & softer, chert: fresh, cr-tan, spic

Ls cr-tan, vfn xln, dns

Ls cr, vfn-fn xln, subchalky in pt, mostly dns, cherty, [possible scant resid stn of edges of a few pcs or shale contacts?]

Ls wh-cr-tan-gy, vfn-fn xln, mostly dns & hard, some subchalky to chalky, some subgrainy text

Ls cr-gy, vfn-fn xln, grainy text in pt, dns with scatt wh chalky edges

Sh gy-black, calc in pt

← 4151 (-1713)

Ls wh-cr-tan-pl gy, vfn-fn xln, mostly dns, some subchalky to chalky and softer, subgrainy text in pt,

Ls cr-tan, vfn-fn xln, dns

Ls cr-tan-gy, vfn-fn xln, dns, grainy text in pt, scatt wh chalky edges

Sh dk gy-black, carb (abund in 4220' spl)

← 4212 (-1774)

Ls cr-tan-gy, vfn-fn xln, mostly dns, some chalky, foss

Sh gy
Ls wh-r-tan, vfn-fn xln, mostly dns & firm, some softer & chalky, foss, chert: fresh, cr-tan, spic

[No Odor, 2-pcs chalky-vpr xln por with trace of spots of dull fluor and trace of spotty stn with trace of tan FO on crush]

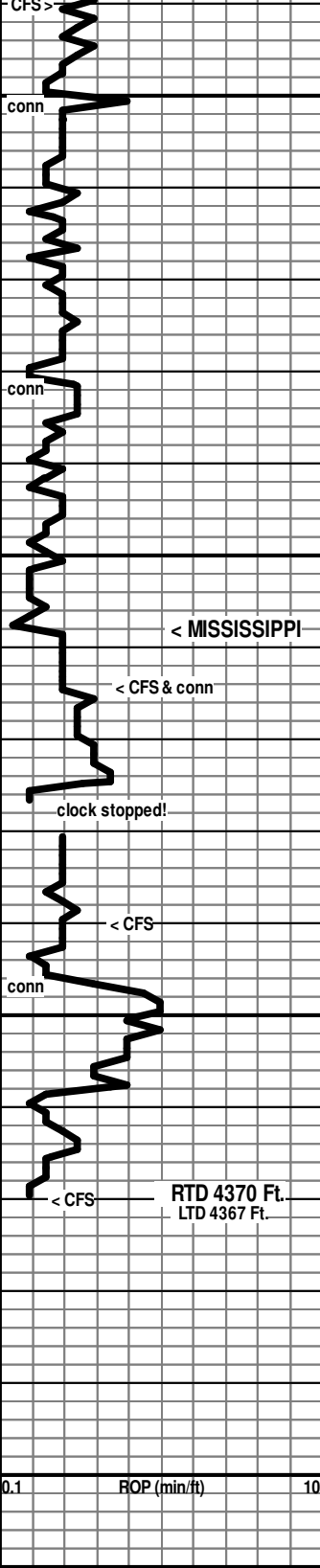
← 4237 (-1799)

Sh black carb

7:00 AM, March 19, 2018

Mud Check, Drlg @ 4091':

Vis	Wt	WL	LCM	PV	YP
55	9.2	7.2	2	14	21
Chl	Hd	pH	Solids		
5500	tr	10.5	6.1		

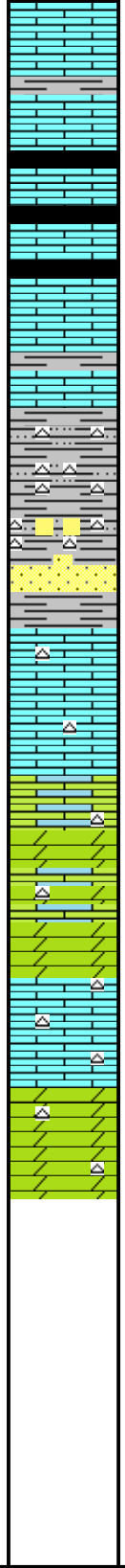


4250

4300

4350

4400



Sh black, carb

Ls wh-cr-tan, fn xln, mostly dns, some chalky, foss in pt

Sh gy-dk gy

Ls wh-cr-tan, fn xln, mostly dns, some chalky, foss in pt

Sh black, carb

Ls wh-cr-tan, fn xln, mostly dns, some subchalky, foss in pt

Sh black, carb

Ls wh-cr-tan, fn xln, mostly dns, some subchalky, foss in pt

Sh black, carb

Ls wh-cr-tan, fn xln, mostly dns, some subchalky, foss in pt

Ls wh-cr-tan-gy, fn xln, mostly dns, some subchalky, foss in pt

Sh red-gy-grn-purple-yell, silty to sdy in pt, earthy in pt, abund chert: fresh, cr-tan-pl yell, foss in pt-ool in pt, subtransl-subop, some Sd clusters, fn gm, gd sort, subrd-subanglr, wh-glassy, cem in pt, gd intergrnlr por in pt, pr-gd fri,

Sd clusters, fn gm, gd sort, subrd-subanglr, wh-glassy, cem in pt, gd intergrnlr por in pt, pr-gd fri

< MISSISSIPPI

< CFS & conn

4308 (-1870)

Ls wh-cr, fn xln, dns with scatt chalky pcs and patches, some grainy text, chert: fresh, cr-tan, foss in pt

4330' spl: mix of shales, sds, cherts & Ls as above

Dol Ls to Limey Dol, wh-cr, fn-md xln, subrhombic blacky text, foss, pr-fr-gd crush

4350' spl: 80% Dol & Limey Dol, wh-cr-pl gmish tint, fn-md xln, some subsucrosic-sucr, some subrhombic, cherty, pr-fr xln por in pt, foss in pt; 20% various colored shales as above

Ls wh-r-tan, fn xln, mostly dns, some chalky, abund chert: fresh, glassy-orange-cr, spic in pt, transl-subtr

Dol wh-cr-pl gy, fn xln, sucrosic, pr-fr xln por, scatt sdy, scatt gm glauc patches, scatt pp pores, abund fresh chert

4370 Ft. RTD, Reached at 1:50 AM, March 20, 2018!