

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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#1 Schneider Trust 13B

664' FNL & 1,402' FWL
 4' S & 82' E of N/2 NW Section 13-10S-14W
 Osborne County, Kansas
 API# 15-141-20483-0000
 Elevation: GL: 1,997', KB: 2,005'

Sample Tops			Ref. Well
Anhydrite	1178	+827	+23
B/Anhydrite	1214	+791	+19
Stotler	2796	-791	-15
Tarkio	2875	-870	-17
Topeka	2957	-952	-17
Heebner	3215	-1210	-21
Toronto	3240	-1235	-25
Lansing	3268	-1263	-24
Muncie	3411	-1406	-26
Stark	3489	-1484	-27
Hush	3519	-1514	-27
BKC	3550	-1545	-26
Cherokee	3666	-1661	-22
Conglomerate	3704	-1699	-36
Mississippian	3721	-1716	NDE
Viola	3763	-1758	NDE
Simpson	3956	-1951	NDE
Arbuckle	4024	-2019	NDE
RTD	4040	-2035	

GLOBAL OIL FIELD SERVICES, LLC

0013349

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell

DATE <u>4-2-19</u>	SEC. <u>13</u>	TWP. <u>10</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>9:45 PM</u>
LEASE <u>Schneider</u>		WELL# <u>1</u>	LOCATION <u>Russell N TO DE 15 SN 1/2</u>		COUNTY <u>Wagoner</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (CIRCLE ONE)		EQUIPMENT <u>136</u>					

CONTRACTOR WELW RIG 12

TYPE OF JOB SURFACE

HOLE SIZE 12 1/4 T.D.

CASING SIZE 2 3/8 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15

PERFS

DISPLACEMENT 12.7 bbls

EQUIPMENT

PUMP TRUCK # CEMENTER Bill

HELPER Chris

BULK TRUCK # DRIVER

BULK TRUCK # DRIVER

OWNER

CEMENT AMOUNT ORDERED

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

REMARKS:

RANS ITSE red e 220

Cement 150 lb

pump plug w 12.7 bbl water

Cement did cure.

CHARGE TO: Ritchie Expl.

STREET

CITY STATE ZIP

Global Oil Field Services, LLC

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Abu B...

SIGNATURE [Signature]

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

SALES TAX (if Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

GLOBAL OIL FIELD SERVICES, LLC

0013369

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell

DATE <u>4-11-19</u>	SEC. <u>13</u>	TWP. <u>10</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Kidder</u>		WELL # <u>11</u>		LOCATION <u>11</u>		COUNTY <u>Labette</u>	STATE <u>KS</u>
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR W W Drilling #12

TYPE OF JOB Plug

HOLE SIZE 5 1/2" T.D. 4040

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS _____

DISPLACEMENT _____

OWNER _____

CEMENT AMOUNT ORDERED 2905

COMMON @ _____

POZMIX @ _____

GEL @ _____

CHLORIDE @ _____

ASC @ _____

HANDLING @ _____

MILEAGE @ _____

TOTAL _____

EQUIPMENT

PUMP TRUCK CEMENTER Jason

417 HELPER Tom

BULK TRUCK

473 DRIVER DDie

BULK TRUCK

_____ DRIVER _____

REMARKS:

1" - 2992

2" - 2992

3" - 2992

4" - 2992

5" - 2992

6" - 2992

7" - 2992

8" - 2992

9" - 2992

10" - 2992

11" - 2992

12" - 2992

13" - 2992

14" - 2992

15" - 2992

16" - 2992

17" - 2992

18" - 2992

19" - 2992

20" - 2992

21" - 2992

22" - 2992

23" - 2992

24" - 2992

25" - 2992

26" - 2992

27" - 2992

28" - 2992

29" - 2992

30" - 2992

CHARGE TO: Labette

STREET _____

CITY _____ STATE _____ ZIP _____

Global Oil Field Services, LLC

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME _____

SIGNATURE _____

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE @ _____

MILEAGE @ _____

MANIFOLD @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 783188
Wichita, KS 67278

ATTN: Bob Petersen

13-10-14W Osborne,KS

Schneider Trust 13 B #1

Start Date: 2019.04.07 @ 02:17:36

End Date: 2019.04.07 @ 10:40:27

Job Ticket #: 65678 DST #: 1

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

Printed: 2019.04.12 @ 11:48:40

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

13-10-14W Osborne,KS

DST # 1

LKC "A"

2019.04.07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne, KS

ATTN: Bob Petersen

Job Ticket: 65678

DST#: 1

Test Start: 2019.04.07 @ 02:17:36

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:34:12

Time Test Ended: 10:40:27

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3246.00 ft (KB) To 3278.00 ft (KB) (TVD)

Reference Elevations: 2015.00 ft (KB)

Total Depth: 3278.00 ft (KB) (TVD)

2007.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8700 Outside

Press@RunDepth: 43.29 psig @ 3247.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.07 End Date: 2019.04.07

Last Calib.: 2019.04.07

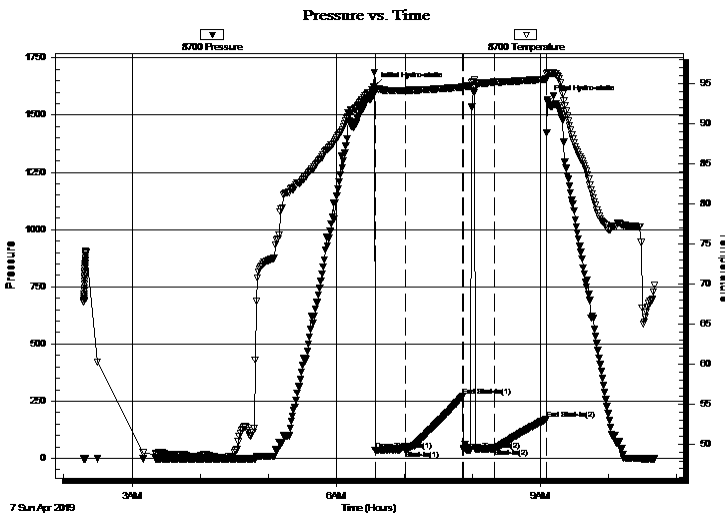
Start Time: 02:17:37 End Time: 10:40:27

Time On Btm: 2019.04.07 @ 06:33:12

Time Off Btm: 2019.04.07 @ 09:06:12

TEST COMMENT: 30- IF- Tool slid 10'. Bled off 2" blow . No blow
45- IS- No blow
30- FF- No blow . Flushed tool. Did surge. No blow
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1624.21	93.97	Initial Hydro-static
1	35.23	94.18	Open To Flow (1)
28	35.61	94.12	Shut-In(1)
78	271.68	94.53	End Shut-In(1)
79	37.32	94.58	Open To Flow (2)
107	43.29	95.19	Shut-In(2)
152	172.53	95.52	End Shut-In(2)
153	1566.77	96.37	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne, KS

ATTN: Bob Petersen

Job Ticket: 65678

DST#: 1

Test Start: 2019.04.07 @ 02:17:36

Tool Information

Drill Pipe:	Length: 3045.00 ft	Diameter: 3.82 inches	Volume: 43.16 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3246.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3219.00	
Shut In Tool	5.00			3224.00	
Hydraulic tool	5.00			3229.00	
Jars	5.00			3234.00	
Safety Joint	3.00			3237.00	
Packer	5.00			3242.00	28.00 Bottom Of Top Packer
Packer	4.00			3246.00	
Stubb	1.00			3247.00	
Recorder	0.00	6771	Inside	3247.00	
Recorder	0.00	8700	Outside	3247.00	
Perforations	28.00			3275.00	
Bullnose	3.00			3278.00	32.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne,KS

Job Ticket: 65678

DST#: 1

ATTN: Bob Petersen

Test Start: 2019.04.07 @ 02:17:36

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

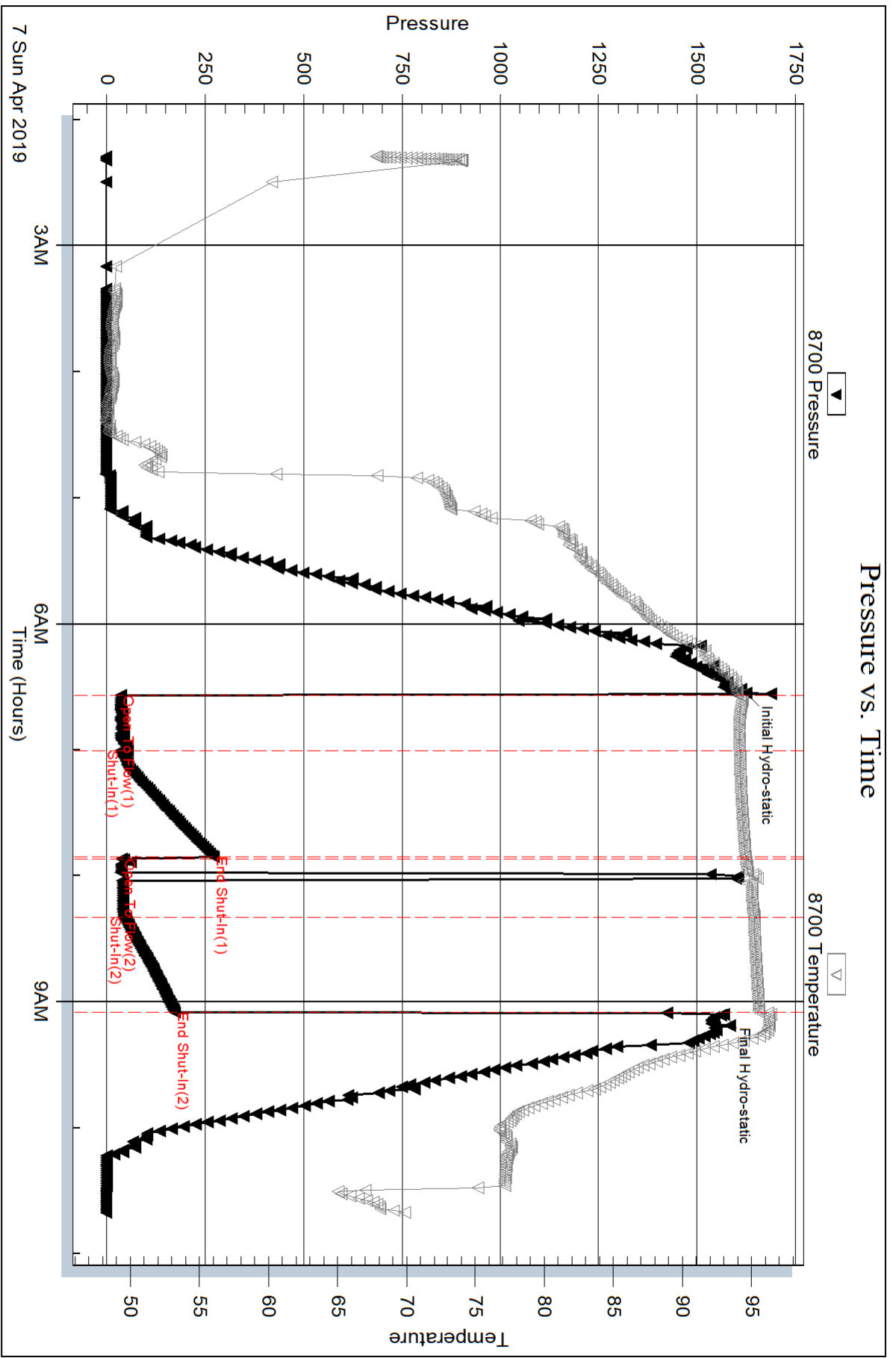
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



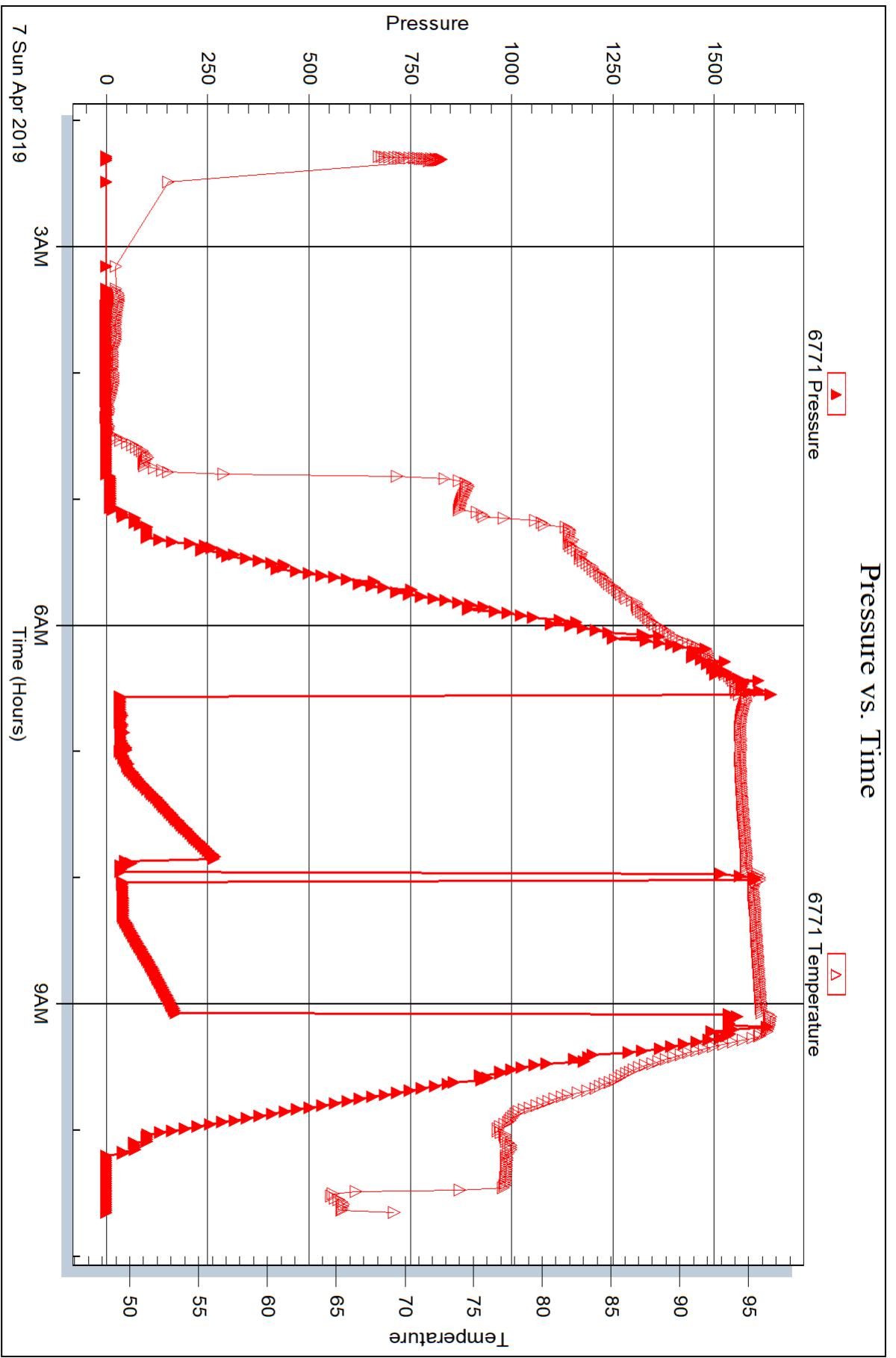
Serial #: 6771

Inside

Ritchie Exploration, Inc.

13-10-14W Osborne, KS

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 65678

Printed: 2019.04.12 @ 11:48:41



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 783188
Wichita, KS 67278

ATTN: Bob Petersen

13-10-14W Osborne,KS

Schneider Trust 13 B #1

Start Date: 2019.04.07 @ 17:15:40

End Date: 2019.04.08 @ 00:23:01

Job Ticket #: 65679 DST #: 2

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

Printed: 2019.04.12 @ 11:48:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 783188
Wichita, KS 67278

ATTN: Bob Petersen

Schneider Trust 13 B #1

13-10-14W Osborne, KS

Job Ticket: 65679

DST#: 2

Test Start: 2019.04.07 @ 17:15:40

GENERAL INFORMATION:

Formation: **LKC "B - C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:52:16

Time Test Ended: 00:23:01

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3276.00 ft (KB) To 3310.00 ft (KB) (TVD)

Reference Elevations: 2015.00 ft (KB)

Total Depth: 3310.00 ft (KB) (TVD)

2007.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: 51.15 psig @ 3277.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.07

End Date:

2019.04.08

Last Calib.:

2019.04.08

Start Time:

17:15:41

End Time:

00:23:01

Time On Btm:

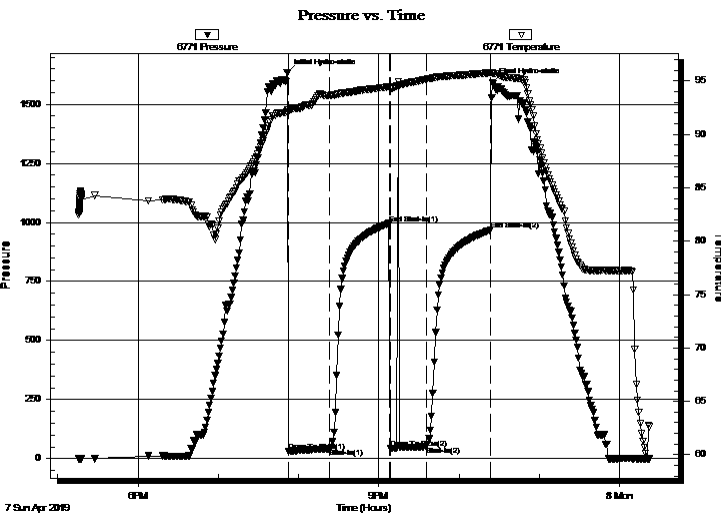
2019.04.07 @ 19:51:46

Time Off Btm:

2019.04.07 @ 22:25:01

TEST COMMENT:

- 30- IF- Intermittent surface blow
- 45- IS- No blow
- 30- FF- No blow . Flushed tool. Did surge. No blow
- 45- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.04	92.33	Initial Hydro-static
1	29.79	92.08	Open To Flow (1)
31	41.64	93.64	Shut-In(1)
76	995.43	94.48	End Shut-In(1)
77	44.78	94.26	Open To Flow (2)
104	51.15	95.17	Shut-In(2)
152	967.17	95.77	End Shut-In(2)
154	1591.43	95.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	M	0.30

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne, KS

ATTN: Bob Petersen

Job Ticket: 65679

DST#: 2

Test Start: 2019.04.07 @ 17:15:40

Tool Information

Drill Pipe:	Length: 3077.00 ft	Diameter: 3.82 inches	Volume: 43.62 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3276.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3249.00	
Shut In Tool	5.00			3254.00	
Hydraulic tool	5.00			3259.00	
Jars	5.00			3264.00	
Safety Joint	3.00			3267.00	
Packer	5.00			3272.00	28.00 Bottom Of Top Packer
Packer	4.00			3276.00	
Stubb	1.00			3277.00	
Recorder	0.00	6771	Inside	3277.00	
Recorder	0.00	8700	Outside	3277.00	
Perforations	30.00			3307.00	
Bullnose	3.00			3310.00	34.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne,KS

Job Ticket: 65679

DST#: 2

ATTN: Bob Petersen

Test Start: 2019.04.07 @ 17:15:40

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	M	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

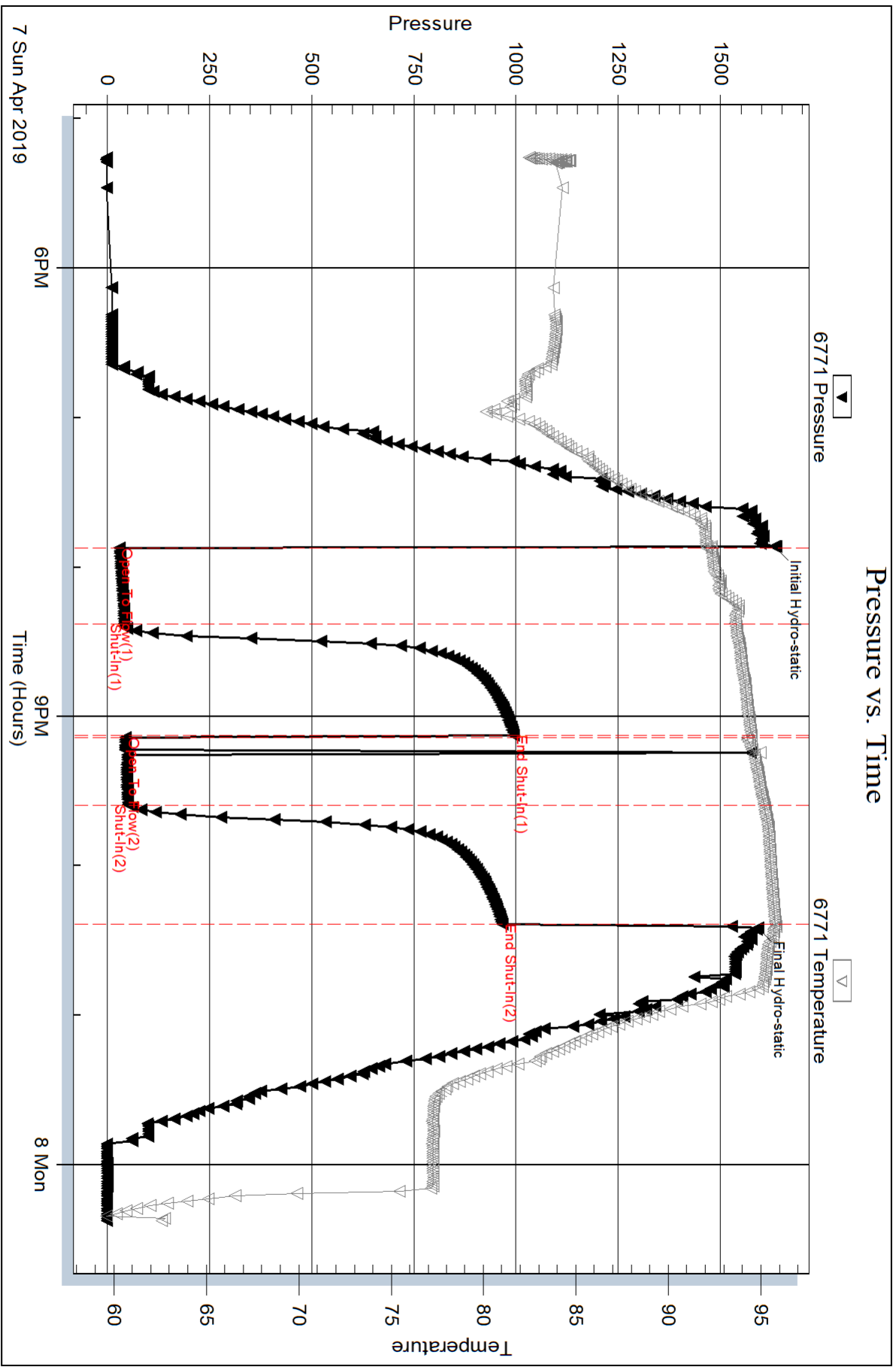
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

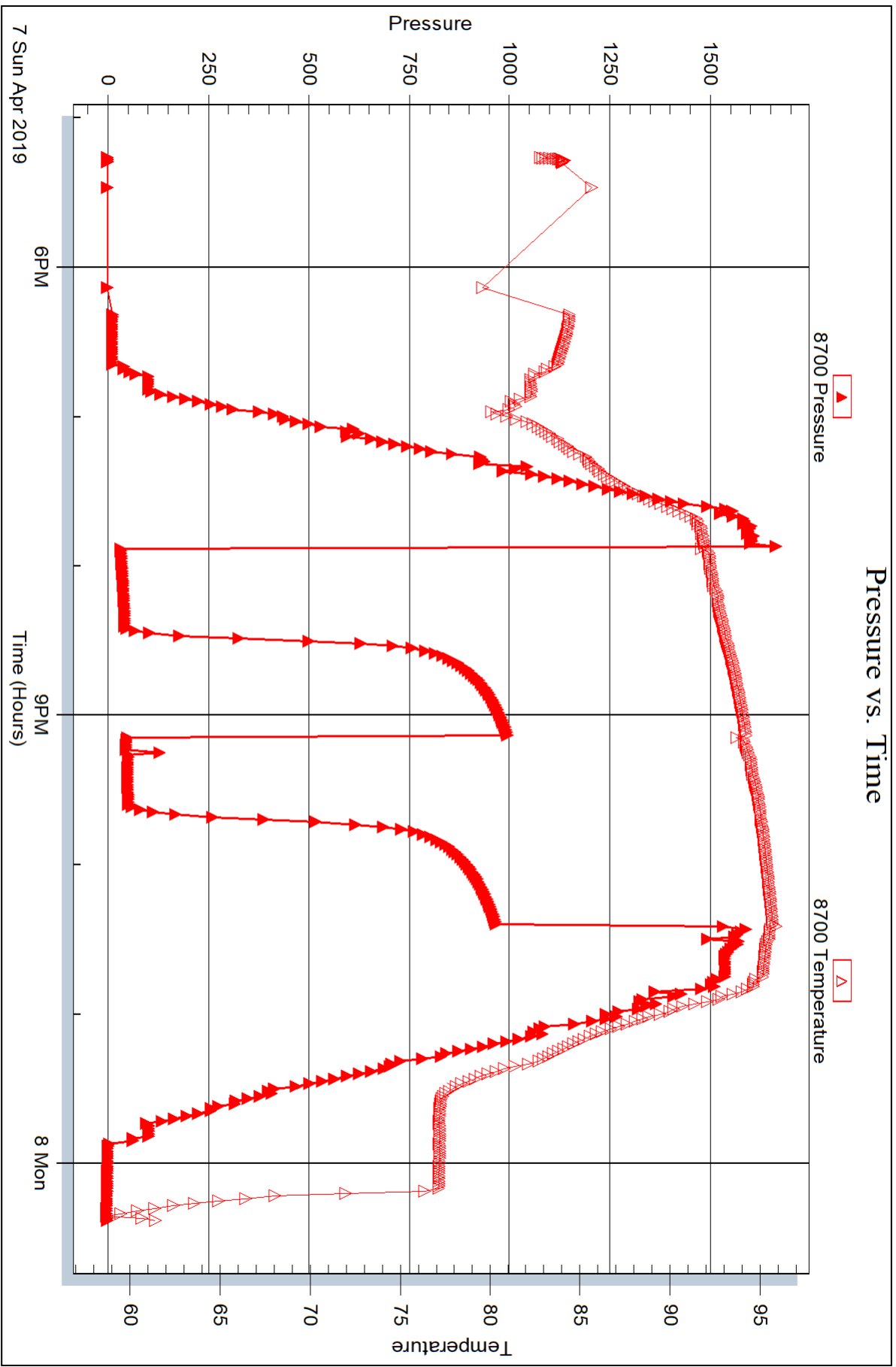


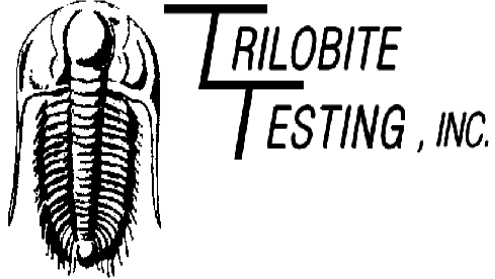
Serial #: 8700

Outside Ritchie Exploration, Inc.

13-10-14W Osborne, KS

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 783188
Wichita, KS 67278

ATTN: Bob Petersen

13-10-14W Osborne,KS

Schneider Trust 13 B #1

Start Date: 2019.04.08 @ 06:10:26

End Date: 2019.04.08 @ 12:32:17

Job Ticket #: 65680 DST #: 3

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

Printed: 2019.04.12 @ 11:47:32

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

13-10-14W Osborne,KS

DST # 3

LKC "D"

2019.04.08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 783188
Wichita, KS 67278

ATTN: Bob Petersen

Schneider Trust 13 B #1

13-10-14W Osborne, KS

Job Ticket: 65680

DST#: 3

Test Start: 2019.04.08 @ 06:10:26

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:29:17

Time Test Ended: 12:32:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3307.00 ft (KB) To 3325.00 ft (KB) (TVD)

Reference Elevations: 2015.00 ft (KB)

Total Depth: 3325.00 ft (KB) (TVD)

2007.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700 Outside

Press@RunDepth: 24.47 psig @ 3308.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.08 End Date: 2019.04.08

Last Calib.: 2019.04.08

Start Time: 06:10:27 End Time: 12:32:17

Time On Btm: 2019.04.08 @ 08:29:02

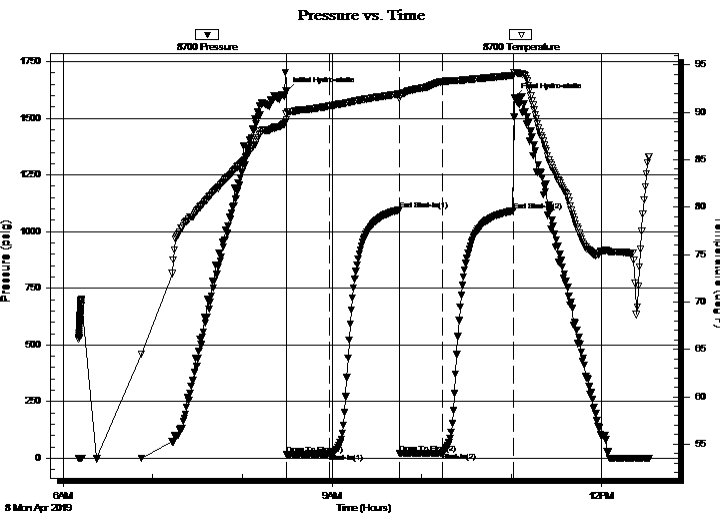
Time Off Btm: 2019.04.08 @ 11:02:02

TEST COMMENT: 30- IF- Surface blow died 6 mins

45- IS- No blow

30- FF- No blow

45- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1619.38	89.82	Initial Hydro-static
1	17.48	89.27	Open To Flow (1)
30	19.88	90.68	Shut-In(1)
76	1095.53	91.95	End Shut-In(1)
76	21.89	91.45	Open To Flow (2)
105	24.47	93.24	Shut-In(2)
152	1092.05	93.92	End Shut-In(2)
153	1589.97	94.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne, KS

ATTN: Bob Petersen

Job Ticket: 65680

DST#: 3

Test Start: 2019.04.08 @ 06:10:26

Tool Information

Drill Pipe:	Length: 3108.00 ft	Diameter: 3.82 inches	Volume: 44.06 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3307.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3280.00	
Shut In Tool	5.00			3285.00	
Hydraulic tool	5.00			3290.00	
Jars	5.00			3295.00	
Safety Joint	3.00			3298.00	
Packer	5.00			3303.00	28.00 Bottom Of Top Packer
Packer	4.00			3307.00	
Stubb	1.00			3308.00	
Recorder	0.00	6771	Inside	3308.00	
Recorder	0.00	8700	Outside	3308.00	
Perforations	14.00			3322.00	
Bullnose	3.00			3325.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Schneider Trust 13 B #1

PO Box 783188
Wichita, KS 67278

13-10-14W Osborne,KS

Job Ticket: 65680

DST#: 3

ATTN: Bob Petersen

Test Start: 2019.04.08 @ 06:10:26

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

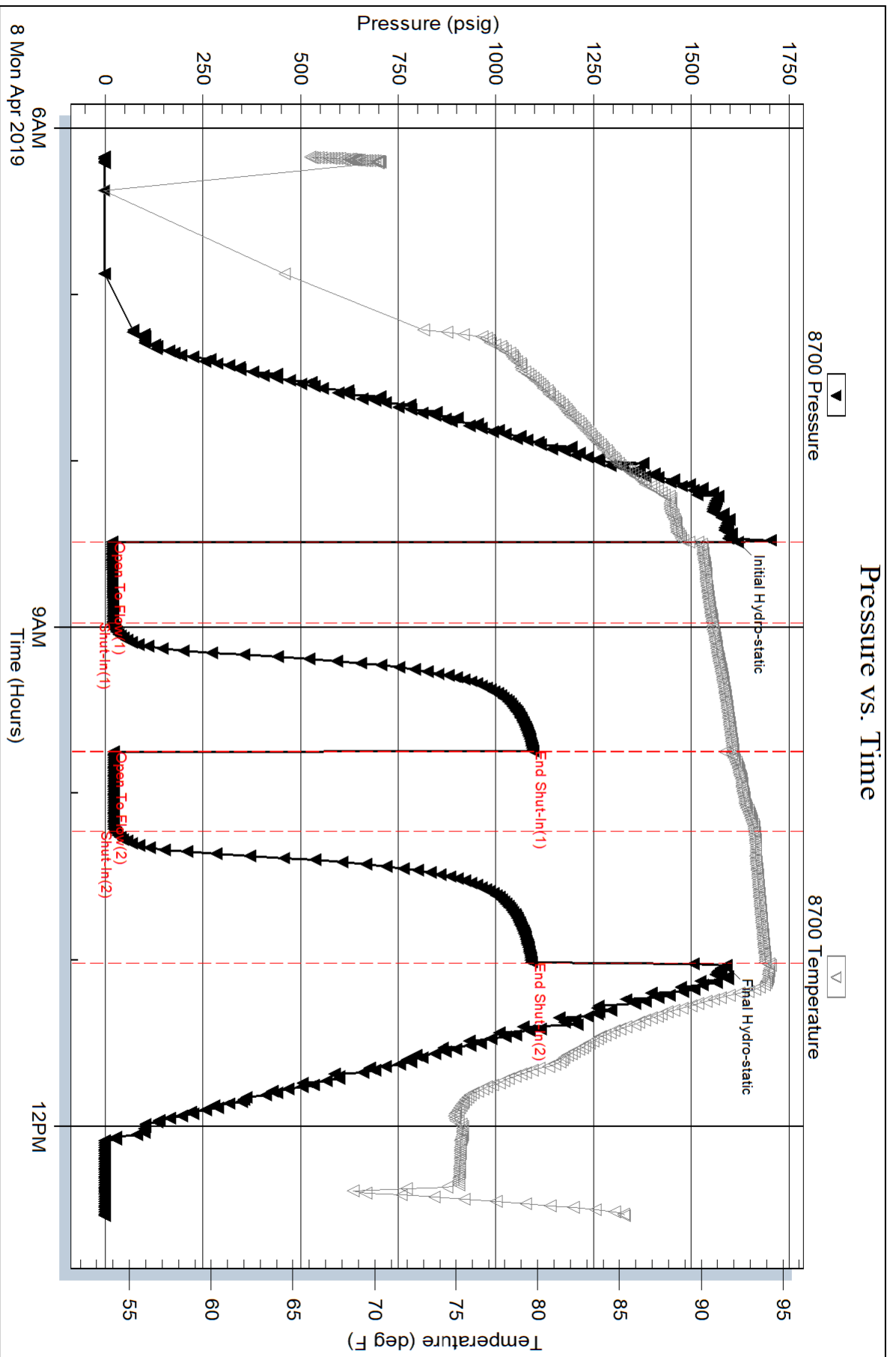
Num Gas Bombs: 0

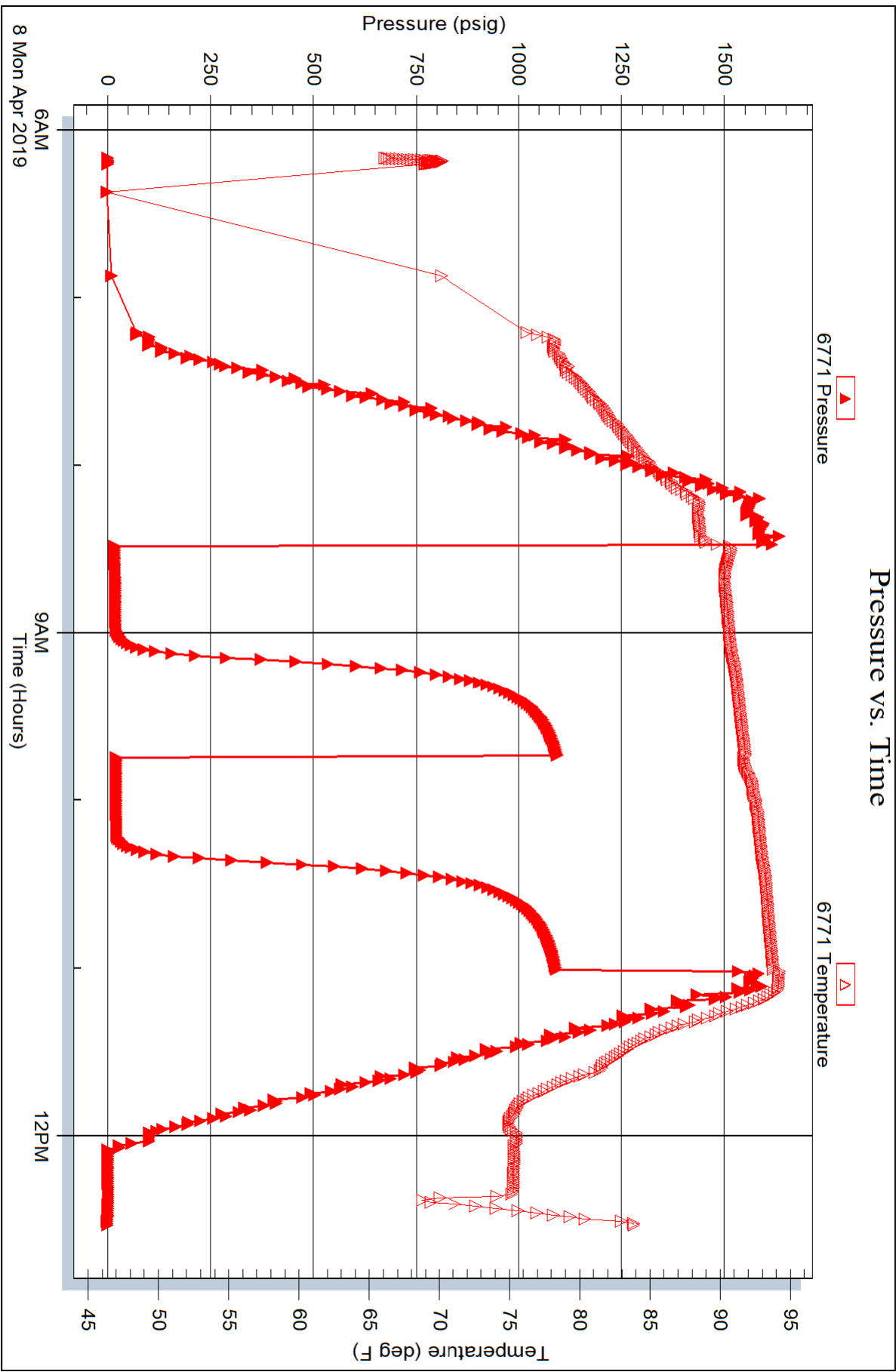
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





6AM
8 Mon Apr 2019

9AM
Time (Hours)

12PM



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65678**

Well Name & No. Schneider Trust 13B #1 Test No. 1 Date 4/7/19
 Company Ritchie Exploration, Inc. Elevation 2015 KB 2007 GL
 Address 8100 E. 22nd St. N. #700, PO Box 783188 Wichita, KS 67278
 Co. Rep / Geo. Bob Petersen Rig WW 12
 Location: Sec. 13 Twp 10 S Rge. 14 W Co. Osborne State KS

Interval Tested 3246-3278 Zone Tested LKC "A"
 Anchor Length 32' Drill Pipe Run 3045 Mud Wt. 8.8
 Top Packer Depth 3241 Drill Collars Run 186 Vls 54
 Bottom Packer Depth 3246 Wt. Pipe Run _____ WL 6.0
 Total Depth 3278 Chlorides 1600 ppm System LCM 2#
 Blow Description IF- Tool stld 10' Bkd off 2' blow No blow
1st- No blow
PF- No blow. Flusted tool. Did surge. No blow
Fst- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>M</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 96° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1624</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>0135</u>
(B) First Initial Flow <u>35</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0217</u>
(C) First Final Flow <u>36</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0633</u>
(D) Initial Shut-In <u>272</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0903</u>
(E) Second Initial Flow <u>37</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1040</u>
(F) Second Final Flow <u>43</u>	<input checked="" type="checkbox"/> Mileage <u>96 RT</u> 96	Comments _____
(G) Final Shut-In <u>173</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1567</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1621</u>
	Sub Total <u>1621</u>	MP/DST Disc't _____

Approved By _____ Our Representative Brennan Lonsdale

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65679**

Well Name & No. Schneider Trust 13 B #1 Test No. 2 Date 4/9/19
 Company Ritchie Exploration, Inc. Elevation 2015 KB 2007 GL
 Address 8100 E. 22nd St. N. #700, PO Box 783188 Wichita, KS 67278
 Co. Rep / Geo. Bob Petersen Rig WW 12
 Location: Sec. 13 Twp 10 S Rge. 14 W Co. Osborne State KS

Interval Tested 3276-3310 Zone Tested LSC "B+C"
 Anchor Length 34' Drill Pipe Run 3077 Mud Wt. 9.0
 Top Packer Depth 3271 Drill Collars Run 186 Vis 57
 Bottom Packer Depth 3276 Wt. Pipe Run ~ WL 6.8
 Total Depth 3310 Chlorides 1900 ppm System LCM 2[#]
 Blow Description IF-Intermittent surface blow
ISI-No blow
FF-No blow. Flushed tool. Did surge. No blow
FSS-No blow

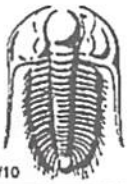
Rec	Feet of	%gas	%oil	%water	%mud
60	M				

Rec Total 60' BHT 96° Gravity ~ API RW ~ @ ~ °F Chlorides ~ ppm

(A) Initial Hydrostatic <u>1632</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1656</u>
(B) First Initial Flow <u>30</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1716</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1953</u>
(D) Initial Shut-In <u>995</u>	<input type="checkbox"/> Circ Sub <u>~</u>	T-Pulled <u>2223</u>
(E) Second Initial Flow <u>45</u>	<input type="checkbox"/> Hourly Standby <u>~</u>	T-Out <u>4/8</u> <u>0024</u>
(F) Second Final Flow <u>51</u>	<input checked="" type="checkbox"/> Mileage <u>96 RT</u> 96	Comments <u>~</u>
(G) Final Shut-In <u>967</u>	<input type="checkbox"/> Sampler <u>~</u>	
(H) Final Hydrostatic <u>1591</u>	<input type="checkbox"/> Straddle <u>~</u>	
	<input type="checkbox"/> Shale Packer <u>~</u>	<input type="checkbox"/> EM Tool <u>~</u>
	<input type="checkbox"/> Extra Packer <u>~</u>	<input type="checkbox"/> Ruined Shale Packer <u>~</u>
Initial Open <u>30</u>	<input type="checkbox"/> Extra Recorder <u>~</u>	<input type="checkbox"/> Ruined Packer <u>~</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Day Standby <u>~</u>	<input type="checkbox"/> Extra Copies <u>~</u>
Final Flow <u>30</u>	<input type="checkbox"/> Accessibility <u>~</u>	Sub Total <u>0</u>
Final Shut-In <u>45</u>	Sub Total <u>1621</u>	Total <u>1621</u>

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65680

Well Name & No. Schneider Trust 13 B #1 Test No. 3 Date 4/8/19
 Company Bitchie Explorations, Inc. Elevation 2015 KB 2007 GL
 Address 8100 E. 22nd St. N. #700 PO Box 283188 Wichita, KS 67278
 Co. Rep / Geo. Bob Petersen Rig WW 12
 Location: Sec. 13 Twp 10 S Rge. 14 W Co. Osborne State KS

Interval Tested 3307-3325 Zone Tested LRC "D"
 Anchor Length 18' Drill Pipe Run 3108 Mud Wt. 9.0
 Top Packer Depth 3302 Drill Collars Run 186 Vis 57
 Bottom Packer Depth 3307 Wt. Pipe Run WL 6.8
 Total Depth 3325 Chlorides 1,900 ppm System LCM 2nd

Blow Description IF - Surface blow died 6mins
ISF - No blow
FF - No blow
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5' BHT 94° Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>1619</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>0550</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0610</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0828</u>
(D) Initial Shut-In <u>1096</u>	<input type="checkbox"/> Circ Sub <u> </u>	T-Pulled <u>1058</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>1232</u>
(F) Second Final Flow <u>24</u>	<input checked="" type="checkbox"/> Mileage <u>96 RT</u> 192	Comments <u>Tools loaded</u>
(G) Final Shut-In <u>1092</u>	<input type="checkbox"/> Sampler <u> </u>	<u>4/11 @ 1100</u>
(H) Final Hydrostatic <u>1590</u>	<input type="checkbox"/> Straddle <u> </u>	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> EM Tool <u> </u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
	<input type="checkbox"/> Accessibility <u> </u>	Sub Total <u>0</u>
	Sub Total <u>1717</u>	Total <u>1717</u>
		MP/DST Disc't <u> </u>

Approved By Our Representative Brannan Longdale

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GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

RITCHIE EXPLORATION, INC.

**#1 SCHNIEDER TRUST 13B
13-10-14W
664' FNL & 1402' FWL
OSBORNE COUNTY, KANSAS
API: 15-141-20483-00-00
X: 1762401.93 Y:312861.16 (NAD KS-N)**

**DRILLING CONTR.: WW RIG #12
SPUD:04-02-2019 COMP: 04-11-2019
MUD UP: 2500' TYPE MUD: CHEM.
DRILL TIME: 2500' to RTD
RTD: 4048' LTD:4038'
SAMPLES SAVED: 2700' to RTD
GEOLOGIST: ROBERT J. PETERSEN**

ELEVATION

KB: 2005'
GL: 1997'
LOG MEASURED
FROM: KB

SURFACE CASING

23# 8 5/8" SET @ 220'
Cem. W/ 150 SX

PRODUCTION CASING

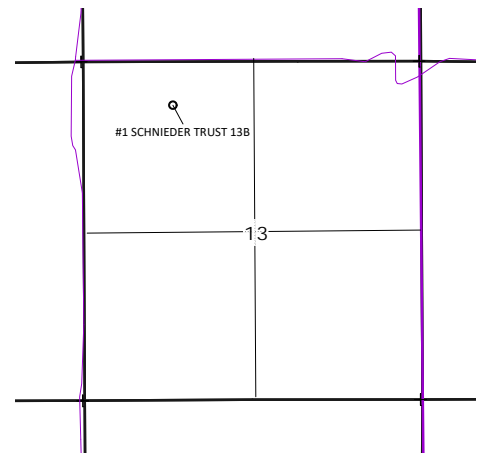
D & A

WELL LOG SURVEYS

DUAL INDUCTION
COMPENSATED NEUTRON
MICRORESISTIVITY
SONIC

FORMATION NAME	E-LOG		SAMPLE		STRUCT. POSITION	
	TOP	DATUM	TOP	DATUM	A	B
ANHYDRITE	1177	+828	1185	+820	+24	+5
BASE ANHY.	1214	+791	1219	+786	+19	+2
TOPEKA	2950	-945	2957	-952	-10	-21
HEEBNER	3206	-1201	3215	-1210	-12	-28
TORONTO	3229	-1224	3240	-1235	-14	-29
LANSING	3262	-1257	3269	-1264	-18	-31
STARK	3481	-1476	3489	-1484	-19	-39
HUSH	3511	-1506	3519	-1514	-19	-39
BKC	3542	-1537	3550	-1545	-18	-39
CHEROKEE	3673	-1668	3679	-1674	-29	-55
MISS	3713	-1708	3721	-1716	N/A	0
MAQ	3749	-1744	3763	-1758	N/A	N/A
VIOLA	3847	-1842	3848	-1843	N/A	-111
SIMPSON SH	3968	-1963	3960	-1955	N/A	-164
ARB	4018	-2013	4024	-2019	N/A	-149

LOCATION MAP



REFERENCE WELL

REF. WELL A
DOUBLE ACE OIL CO.
MEYER #1 B
990' FSL & 2310' FEL
10-10-14W

REF. WELL B
MURFIN
#1 PAMELA
1100' FNL & 1200' FEL
16-10-14W

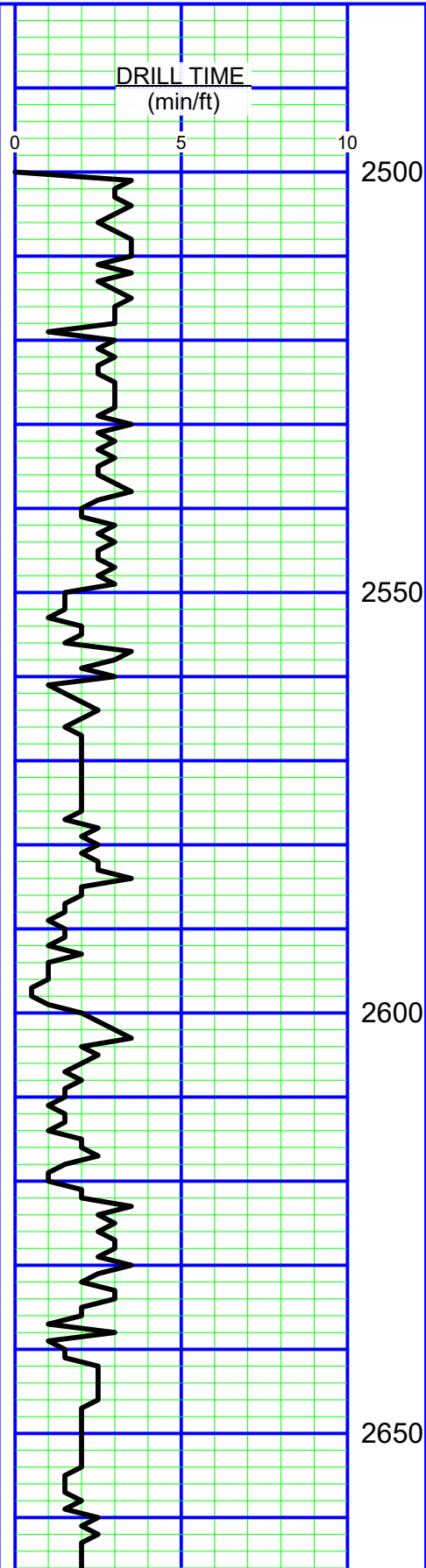
DAILY REPORT @7:00 A.M.

04/02/2019 MIRU/SPUD
04/03/2019 291' WOC
04/04/2019 1891' DRILLING
04/05/2019 2581' DRILLING
04/06/2019 2987' DRILLING

REMARKS

THE OPERATOR PLUGGED AND ABONDED THIS WELL

04/07/2019 3278' DST #1
04/08/2019 3325' DST #3
04/09/2019 3521' CFS
04/10/2019 3855' DRILLING
04/11/2019 3940' LOGGING



MUDCO MUD CHECK 2610'
VIS 61/WT 8.6/WL 6.0?LCM 3#
CHLORIDES 1,900 PPM

THE DRILL TIME DEPTHS ARE 7 TO 9' DEEPER THAN THE LOG TOPS.
STRAP 3.12' SHORT TO BOARD.
LOGGED SURFACE PIPE WAS 4' SHORT OF DRILLER DEPTH.

SAMPLES START AT 2700'

2700 LS; Cream/pink, fine crystalline, chalky + SH; Gray, sandy SD; Gray, mic (2700)
SH; Red/gray, silty-sandy + LS; Gray, dense, arg, chalky, cherty (2710)
SD; Gray/blue-gray, fine to medium, sub angular, sub rounded, poorly sorted, calc, mic (2720)

LS; Tan/dense, foss, chalky + SH; Dark gray (2730)

SD; Gray, fine grained, well-cem, ang (2740)

LS; Cream/lt gray, very fine crystalline, foss, chalky (2740)

LS; Cream/lt gray, very fine crystalline to dense, foss, cherty + SH; Gray + SD; Gray, mic (2750)

2750 LS; Cream, very fine crystalline, foss, sub chalky + SH; Black, earthy (2760)

LS; Gray, dense, arg, sl foss, cherty (orange/white-sharp) + SH; Gray, dense (2770)

LS; Cream/tan/brown, very fine crystalline to dense, foss, chalky, poor moldic por (barren)(2780)+ SD; Lt gray, very fine grained, ang, friable (2790)

SD; Lt gray, very fine grained, calc, + LS; Cream/gray, very fine crystalline to dense, foss, chalky (2800)

2800 LS; Cream/tan/brown, dense, hard, foss w/chalky + SH; Dark gray/green (2810)

LS; Cream/tan, very fine crystalline, sl foss, chalky + SH; Gray, sandy, tr pyrite (2820)

LS; Tan, fine to med crystalline, foss + SH; Red/gray (2830)

LS; Gray, very fine crystalline, to dense, sl foss, arg + SH; Gray (2840) w/tr dead stain (2850)

SH; Gray/dark gray (2850)

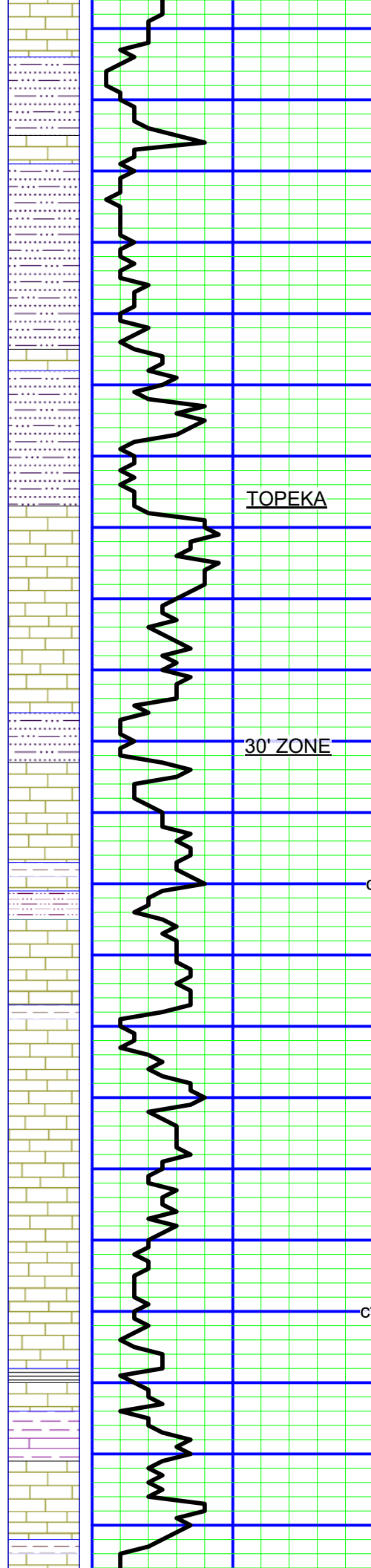
2850 LS; Tan/gray, fine crystalline, foss (2860)

LS; Cream/gray, fine crystalline, foss, mottled, chalky + SH; Gray (2870)

SH; Gray, soft (2880)

LS; Tan, fine crystalline to dense, tr sp calc, sl mottled, chalky (2880)

LS; Pink/tan/gray, very fine crystalline, foss, chalky + SH; Gray, silty (2890-2900)



SH; Gray/dark gray, silty+ SD; Gray, fine grained, angular, friable (2910)

2900

SH; Gray +SD; Gray/dark gray, fine grained, tr LS; Gray, dense, chalky (2920)

SD; Gray, fine to med, subangular, friable, sl glauc (2930)

SH; Gray, soft + SD; Gray, fine grained, micaceous, silty w/tr LS;; Gray, dense, arg, chalky (2940)

LS; Cream, very fine crystalline, sl foss/w tr chert inclusions, (2950-2960)

2950

SH; Gray, silty-sandy (2960-2970)

TOPEKA

LS; Cream/tan, fine crystalline, tr dead stain, no vis por (2980)

LS; Tan/gray, dens, tr dead stain, no vis por (2990-3000)

30' ZONE

SH; Gray, silty, sl sdy (3000) + SD; Gray, silty, angular, friable (3010)

3000

LS; Cream, fine crystalline, sl dolo/sl foss, sub chalky, tr dead stain/dull fl (3010)

LS; Cream/gray, mottled in part, fine crystalline, foss, sl dol, chalky, tr ppt dead flake from crushed sample (3010/20")

LS; Cream/tan/gray, very fine crystalline, sl foss, sub chalky, cherty (tan/angular) (3010/40")

cfs

LS; Gray w/cream mottle, fine crystalline w/tr coarse, dense, arg in part + SH; Gray, silty (3020)

MUDCO MUD CHECK 3010'
VIS 54/WT 8.8/WL 6.0/LCM 2#
CHLORIDES 1600 PPM

LS; Gray, dense, chalky, sl fuss + Chert; Gray, ang-blocky, sl pyritic, tr dull fl (3030)

SH; Dark gray/brown (3030)

LS; Cream/gray, dense, tr sp calc w/dull fl, mottled, sl foss, chalky, mealy, arg in part (3030)

3050

SH; Dark gray (3050)

LS; Cream/gray/tan, mottle, fine crystalline to dense, chalky-mealy, cherty (blocky-black/tan) tr dead stain on mealy chalk (3050)

LS; Cream/gray mottle, fine crystalline to dense, foss, chalky, tr dead stain, nsfo w/ppt dead oil flakes from crushed sample, faint pungent odor agitated cup, dull fl (3060)

LS; Gray, dense, arg, sl foss, chalky-mealy + SH; Black/gray, blocky (3070)

LS; Cream/gray/tan, very fine crystalline to dense, foss, chalky, tr poor ppt por (barren) cherty (black-blocky) + LS; Gray, dense, hard, arg (3071/30")

cfs

LS; Tan/gray, fine crystalline to dense, sl dolo, foss, chalky-mealy, tr ppt dead oil stain (3080)

LS; Gray, fine crystalline to dense, ool/foss, chalky (3090)

SH; Black, carb (3090)

LS; Tan/gray, dense, foss, mottled, hard, cherty (blocky-gray/tan) +SH; Gray/pale green gray, soft (3100)

SH; Gray, silty-sandy (3110)

3100

LS; Cream/tan/white, fine crystalline to dense, foss in part, chalky (3110)

LS; Cream/tan/white, fine crystalline to dense, ool/foss, chalky (soft) (3113/20")

cfs

LS; Cream/gray, mottled in part, fine crystalline to dense, foss, chalky-mealy (3120)

LS; Cream/tan, very fine crystalline w/coarse crystalline frac regrowth, foss, chalky, mealy (3140)

SH; Gray (3140)

LS; Cream/gray, fine crystalline, foss-granular, chalky, tr spot red brown min stain (3140-3150)

SH; Black (3150-3160)

3150

LS; Cream/tan/brown, fine crystalline, foss, chalky-mealy + SH; Gray, silty-sandy (3160)

LS; Cream/gray/tan, mottle, fine crystalline to dense, very foss, chalky (3170)

LS; Tan/gray, very fine crystalline, sl foss, sub chalky, cherty (white-angular) + SH; Black (3180)

SH; Gray (3190)

LS; Cream/gray, dense, foss, chalky, blocky w/tr dead oil flakes, no vis por (3190)

LS; Gray, sl mottled, very fine crystalline, foss, subgranular in part, chalky (3200)

3200

LS; Tan, fine crystalline, foss subgranular, chalky, tr dead oil stain (3210)

LS; Tan, fine crystalline, dolo, sl cherty, chalky, cherty, tr dead stain (3210) + LS; Cream, fine crystalline w/poor moldic por w/dead stain (3220)

HEEBNER

SH; Black, carb (3230)

LS; Tan/gray, dense (3230)

SH; Gray, silty, gummy (3240) SH; Red/gray, sandy (3250)

TORONTO

LS; Cream/white, very fine crystalline, chalky (3250)

LS; Cream/lt gray, fine to med crystalline, foss, chalky (3260)

3250

SH; Red, chalky, gummy (3270)

DST #1
3236-3678'
30-45-30-45"
IF: TOOL SLID
(NO BLOW AFTER
BLED OFF 2" BLOW)
FF: NONE-FLUSHED TOOL
NO HELP
RECOVERED: 30' MUD
SIP: 272-173#
FP: 35-36/37-43#
HP: 1624-1567#
BHT: 96F

MUDCO MUD CHECK 3278"
VIS 57/WT 9.0/WL 6.8/LCM 2#
CHLORIDES 1900 PPM

LANSING

LS; Tan/brown, fine crystalline w/some coarse, foss w/fair to good moldic por, sfo (streaming), odor w/lt brown even sat on dry (3278)

LS; Cream/lt gray, fine crystalline, sl foss, chalky, w/tr edge ppt moldic por, ssfo (3278/20")

SH; Gray, silty (3278/40")

STRAP @ 3278' 3.12' SHORT

LS; Gray/tan, mottled, fine crystalline to dense, chalky, foss, tr edge stain on dry + tr SH; Black (3295)

LS; Cream/gray, fine crystalline, ool/foss, chalky (3295/20")

SH; Gray, sandy (3295/20")

DST #2
3276-3310'
30-45-30-45"
(TOOL SLID 5')
IF: INTERMITTANT SURF. BLOW
FF: NO BLOW
NO BLOW ON SHUT-INS
RECOVERED: 60' MUD
SIP: 995-967#
FP: 30-42/45-51#
HP: 1632-1591#
BHT: 96F

cfs

cfs

C ZONE

DST #2

3300

LS; Cream/white, fine crystalline w/coarse regrowth, oolitic/sl foss, chalky, w/sharp chert, good moldic/fair intercrystalline por, sfo (amber to brown), faint odor, light to medium sat on dry (3310)

LS; Cream/lt gray, fine crystalline, foss, chalky, cherty (tan/brown-sharp), tr poor moldic por, decrease sfo (3310/20-40")

(sample box empty @60")

SH; Red/gray (3320)

LS; Tan/brown/gray, mottled, fine crystalline to dens, chalky (3320-3325)

LS; Cream/white, fine crystalline, oolitic-granular, foss in part, chalky, chert (gray/angular) w/fair to good moldic por, odor, sfo, light even amber stain on dry (3325/20-40")

LS; Tan, fine crystalline, ool/foss, cherty (tan/gray and to blocky), chalky (3325/40-60")

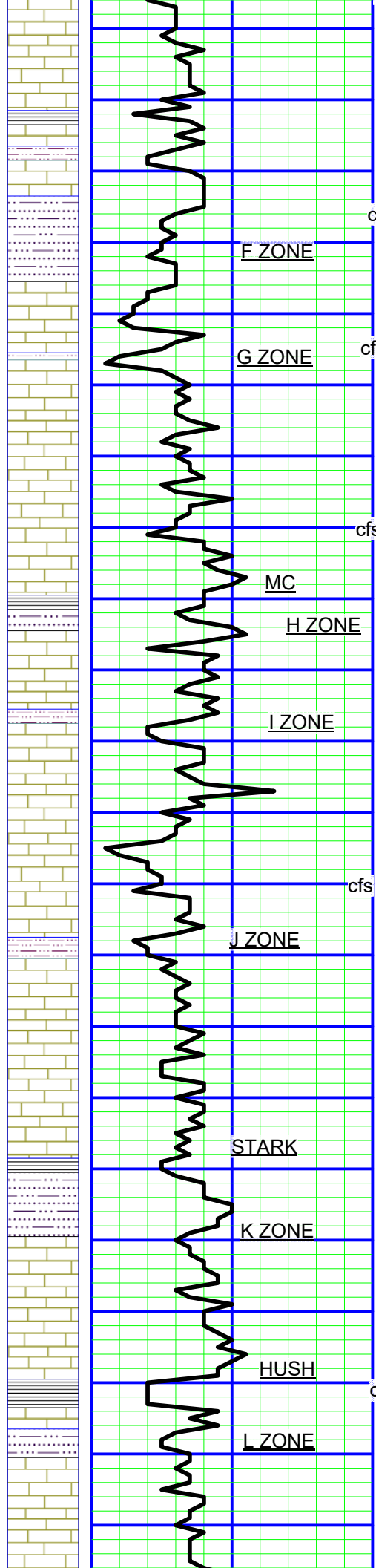
DST #3
3307-3325'
30-45-30-45"
IF: SURF. DIED IN 6 MIN
FF: NONE
NO BLOW ON SHUT-INS
RECOVERED: 5' MUD
SIP: 10-6-1082@
FP: 17-20/22-24#
HP: 1619-1590#
BHT: 94F

cfs

cfs

D ZONE

DST #3



LS; Cream/white, fine crystalline, sl foss, chalky (3340)

SH; Black (3350)

LS; Lt gray, fine crystalline, sl foss, cherty (3350)

3350

LS; Cream, fine crystalline, foss/ool, chalky, soft, tr light patchy dull fl, quest stain, nsfo (3355/20")

LS; Cream/gray, fine crystalline, foss, chalky, cherty + SH; Gray, silty (3355/40"-3360)

cfs

F ZONE

SH; Gray, silty (3370)

LS; Cream/tan, fine crystalline, ool, gran, chalky (3375)

LS; Cream fine crystalline, ool, chalky(soft-white) (3375/20")+ chert (3375/40")

G ZONE

cfs

LS; Cream/white, fine crystalline, oolitic, granular w/fair oomoldic por (barren), chalky (3390)

LS; Cream/lr gray. Very fine crystalline, foss, chalky (3400)

LS; Lt gray/gray, very fine crystalline, foss, chalky, cherty (black/angular) (3400/20")

cfs 3400

MC

LS; Cream/tan, fine crystalline to dense, foss, chalky, cherty (3410)

H ZONE

SH; Black (3420)

LS; Cream/white, very fine crystalline, foss/ool, chalky (3430)

I ZONE

LS; Cream/gray/tan, very fine crystalline, foss, chalky, cherty (3440)

LS; Cream/lr gray, very fine crystalline to dense, sl foss, chalk (3450)

cfs 3450

LS; Cream/lr gray fine crystalline, foss, chalky, tr coarse crystalline regrowth (3450/20")

J ZONE

LS; Tan/lr brown, very fine crystalline, foss, sub chalky (3460)

SH; Dark gray/red (3470)

LS; Cream/tan, very fine crystalline to dense (hard), foss, chalky (3470)

LS; Tan/brown, very fine crystalline to dense (hard), foss, chalky, trace dark residual dead stain, nsfo, tr red shale impurity + SH; Dark gray/red (3480)

LS; Lt gray, very fine crystalline to dense, foss, sub chalky (3490)

STARK

SH; Black (3500)

SH; Gray, sandy (3510)

K ZONE

3500

LS; Tan/gray, fine crystalline, foss, chalky, tr ppt residual dead stain, nsfo (3510)

LS; Tan/brown/gray, mottled, very fine crystalline, foss, chalky, cherty (angular/tl/brown/foss)(3520)increase chert, trace black shale (3520/20")

HUSH

cfs

SH; Black (3530)

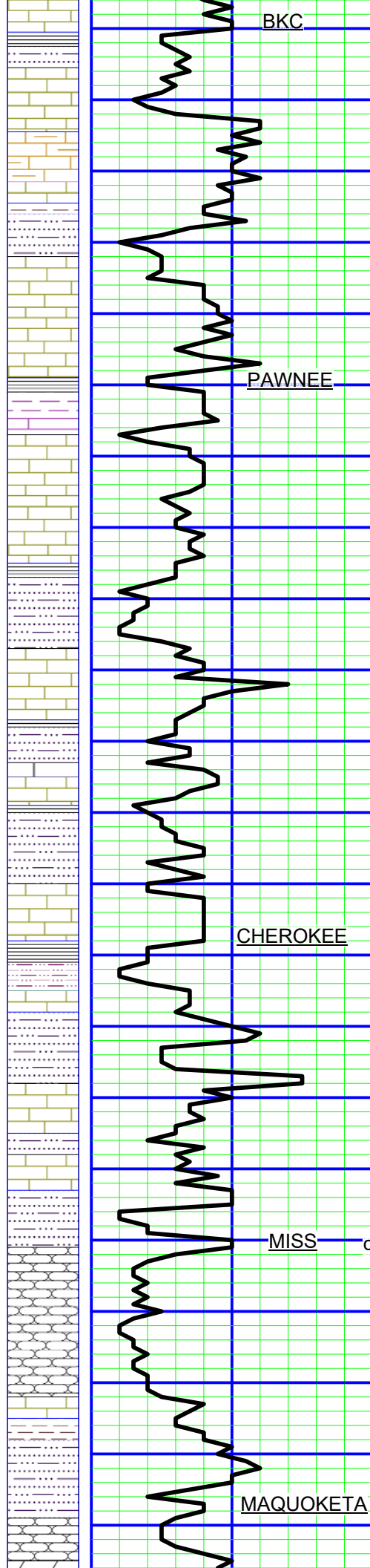
L ZONE

LS; Cream/gray, very fine crystalline, foss, sub chalky (3530)

SH; Gray, silty-sandy (3540)

LS; Cream/gray, fine crystalline to dense, foss, chalky, cherty (3550)

MUDCO MUD CHECK 3544'
VIS 48/WL 9.4/WL 7.8/LCM 1#
CHLORIDES 1,900 PPM



BKC

3550

SH; Gray, silty (3560)
 LS; Tan/cream, fine crystalline, ool + SS; Cream, fine grained, ang, hard (3570)
 SH; Red/gray, sandy + LS; Cream/tan, fine crystalline, cherty (sandy texture), chalky (3580)
 SH; Red/gray, sandy w/hard calc concretions + LS; Brown/gray, dense. Blocky + SH; Gray, blocky (3590)
 LS; Cream/gray, dense, foss w/some red shale discoloration + SH; Red/green-gray, sandy (3600)

PAWNEE

3600

LS; Cream/white, fine crystalline, foss, chalky + SH; Red/gray, soft, blocky (3610)
 LS; Cream/gray, fine crystalline, blocky, chalky + SH; Red/gray (3620)
 SH; Red/gray, calc, sandy + LS; Cream/white, fine crystalline, chalky (3630)
 LS; Cream, fine crystalline, chalky, sandy + SH; Red/gray (3640)
 SH; Dark gray/red + LS; Cream/gray, very fine crystalline, foss, chalky (3650)
 LS; Cream/gray, very fine crystalline to dense, ool, yellow min stain + SH; Red (3660)

3650

LS; Cream/gray, fine crystalline, chalky, sandy, dull fl (calcite) + SH; Gray (3670)
 LS; Cream fine to coarse crystalline, sl foss, chalky + SH; Red/gray, sandy (3680)

CHEROKEE

3700

LS; Cream/white, fine crystalline, oolitic, tr shale inclusion/dicoloration, cherty + SH; Green-gray/red (3690)
 LS; Cream/white, fine crystalline, ool/cherty + SH; Red/gray, sandy (3700)
 LS; Cream, white, fine crystalline, chalky, cherty +SH Red/gray, sandy W/tr SD; Cleae, coarse, well-rounded, hard w/shaley in part (3710)
 SH; Red, sandy + SH; Olive, LS; Cream, fine crystalline, chalky (3720)
 SH; Red/gray/tan, blocky + SD; Gray, fine to med, poorly sorted, shaley, tr clean friable, cluster + varicolored chert (3720/20")

MISS

cfs

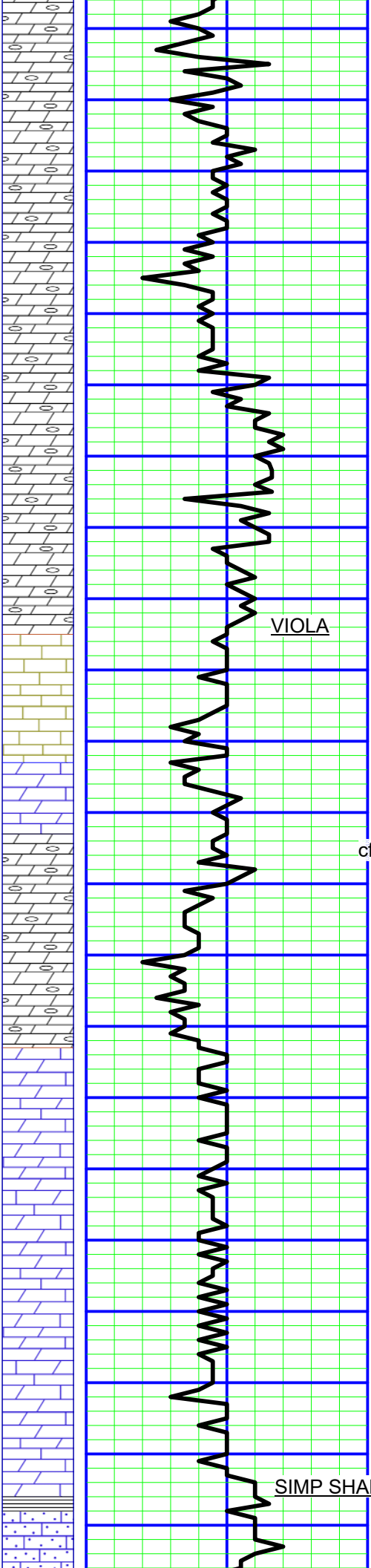
LS; Cream/white, fine crystalline + SD; Olive/gray (3720/40") +SH; Red, sand (3730)
 SH; Red/maroon, sandy w/hard nodule + weathered chert (3735)
 Chert; Tan/white, angular to blocky + LS; Tan/cream, dense, ool (3735/20") Chert'; White/orange, blocky, trip/oid w/tr coarse sand, dull fl (3735/40")

Chert; Tan/yellow, blocky + SH; Red/gray +LS; Lt gray, very fine crystalline (3750)

3750

MAQUOKETA

Chert; Tan/white, blocky + SH; Maroon/gray (3770)



Chert; Tan/brown, blocky, foss, foss Dolo ; White, dense + SH; Black/maroon (3780)

Dolo; Cream/red, fine crystalline + Chert; Red/yellow, angular (3790)

Dolo; Gray, dense, chalky + Chert; Gray/yellow, blocky + SH; Purple/gray (3800)

3800 Dolo; Cream/red/yellow, dense + SH; Red/gray + Chert; Purple/gray (3810)

Dolo; Purp/gray/red, crypto to dense, shaley red/purple/gray, sandy Chert; Gray, sl speck, blocky (3820)

Dolo; Gray /w purple shale disc, fine crystalline, tr grap + Chert; Yellow/cream + SH; Purple/red, sandy (3830)

Dolo; Gray, fine crystalline, foss in part, + LS; Cream, dense, Chert; Yellow, SH; Gray/lit brown (3840)

LS; Cream/gray, dense + Chert; White/yellow, ang to blocky (3850)

3850 LS; Cream, dense w/red shale discoloration (3860)

MUDCO MUD CHECK 3865'
VIS 60+/WT 9.4 /WL 7.8/ LCM 2#
CHLORIDES 2,000 PPM

LS; Lt gray/cream, dense +Chert; Yellow, tr LS; Cream, sandy (3870)

SH; Dark gray (3870)

Dolo; Cream, coarse crystalline, chalky tr Dolo; Gray, dense + SH; Black (3880)

Dolo; Cream/lit gray, coarse crystalline, chalky, Cherty-Orange. Oolitic (3885)

Dolo; Cream, fine to med crystalline, chalky, sl foss, Chert; white +SH; Gray/green, waxy (3885/20")

cfs Dolo; Cream, coarse crystalline, chalky, Chert; Tan, grap (3885/40")

LS; Cream, fine crystalline to dense, dolo, foss, sub chalky + SH; Red/gray (3890)

LS; Cream, fine crystalline, dolo, sandy + Chert; White, sharp (3900)

3900 Dolo; Cream/tan, fine crystalline to dense, chalky + Chert; White, blocky (3910)

Dolo; Cream, fine crystalline w/red shale impurity + LS; Cream, dense, dolo +Chert; Brown, white/gray, blocky, sl speck + SH; Red/gray (3920)

Dolo; Gray, fine crystalline, foss, (grap) + LS; Cream, dense, dolo w/red shale discoloration + SH; Red, blocky (3930)

LS; Cream/gray, fine crystalline, cherty (blue-gray-ang) dolo w/tr red shale disc (3940)

LS; Cream/tan, fine crystalline to dense, foss, chalky, cherty, tr quest stain, dull fl, nso (3950)

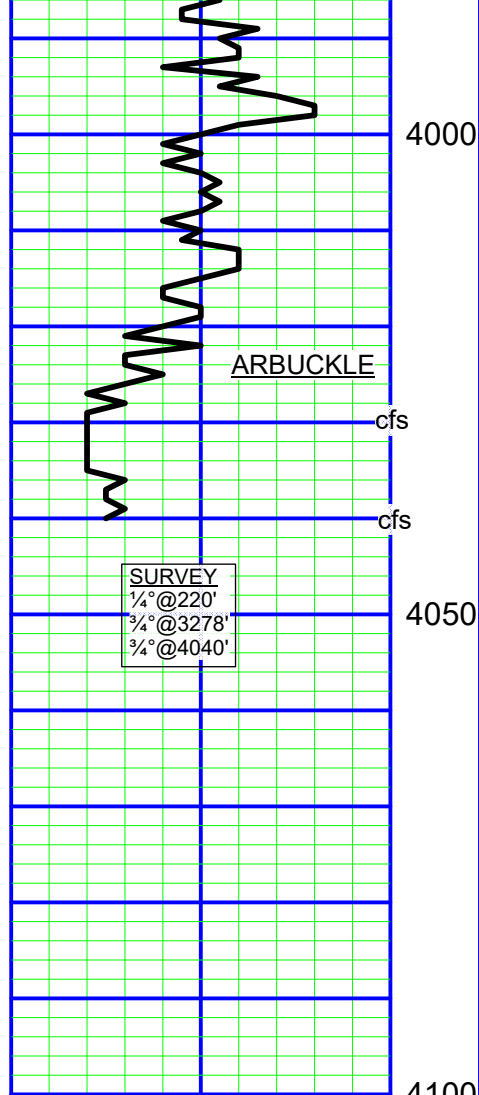
3950 LS; Gray, fine crystalline to dense, foss, sub chalky, dolo +SH; Red, cherty, blocky w/some ool imbedded in shale +Chert; red/yellow, blocky (3960)

LS; Gray, fine crystalline to dense, foss, dolo, cherty + SH; Black (3970)

LS; Gray, fine crystalline, foss, sandy + SD; Gray, fine grained, subangular to sub rounded, hard w/black shale clast, tr Sh; Red (3980)

SIMP SHALE

SH; Black + SD; Gray, fine grained, sub rounded, calc w/black shale (3990)



SD; Gray/cream. Coarse, calc, chalky, trace black shale frag + SH; Green (4000)

4000 SH; Gray + SD; Gray/orange, coarse, calc, chalky + SS; Gray, very fine grained, hard + LS; Gray w/black fossil mottle, fine crystalline (4010)

SD; Gray/orange, shaley in part, hard, fine to coarse, well rounded + SH; Red/gray (4020)

SH; Gray, foss/SH; Red, calc w/hem nods, SD; Clear/gray, coarse, well-rounded (4030)

Dolo; Tan, fine to coarse crystalline, chalky + SH; Olive black (4030/20")

Dolo; Tan, coarse crystalline, chalky, good vug por (barren) (4040)

Dolo; Tan, med to coarse crystalline, chalky, good vug por (barren) (4040/20') + SH; Pale green (4040/40")

SURVEY
1/4" @ 220'
3/4" @ 3278'
3/4" @ 4040'

4050

4100

Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 346-337-6211
<http://kcc.ks.gov/>

Dwight D. Keen, Chair
Shari Feist Albrecht, Commissioner
Susan K. Duffy, Commissioner

Laura Kelly, Governor

August 01, 2019

Peter Fiorini
Ritchie Exploration, Inc.
8100 E 22ND ST N # 700
PO BOX 783188
WICHITA, KS 67278-3188

Re: ACO-1
API 15-141-20483-00-00
SCHNEIDER TRUST 13B 1
NW/4 Sec.13-10S-14W
Osborne County, Kansas

Dear Peter Fiorini:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 04/02/2019 and the ACO-1 was received on August 01, 2019 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department