

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 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](mailto: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 Beagley 24C

595' FSL & 1180' FWL

65' S & 140' W of S/2 SW Section 24-15S-36W

Logan County, Kansas

API# 15-109-21510-0000

Elevation: GL: 3276', KB: 3281'

Sample Tops			Ref. Well
Anhydrite	2549'	+732	-4
B/Anhydrite	2568'	+713	-5
Stotler	3636'	-355	-23
Heebner	3995'	-714	-17
Toronto	4008'	-727	-2
Lansing	4032'	-751	-5
Muncie Shale	4218'	-937	-17
Stark	4318'	-1037	-17
Hush.	4360'	-1079	-17
BKC	4390'	-1109	-12
Marmaton	4435'	-1154	-13
Altamont	4448'	-1167	-17
Pawnee	4520'	-1239	-9
Myrick	4568'	-1287	-17
Fort Scott	4579'	-1298	-11
Cherokee Shale	4608'	-1327	-12
Johnson	4664'	-1383	-10
Morrow	4742'	-1461	-7
Mississippian	4832'	-1551	-31
RTD	4910'	-1629	



**CONSOLIDATED**  
Oil Well Services, LLC

8607  
8545

TICKET NUMBER 53581  
LOCATION Oakley KS  
FOREMAN Miles Shaw

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

Invoice # 810827 US

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-20-17	7173	Beasley 24C #1	24	15S	36W	Logan
CUSTOMER R. Achiv Exploration			Russell Springs South to Dakota Rd East to rd 220 west 40' to			
MAILING ADDRESS P.O. Box 783188			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY Wichita			STATE KS	ZIP CODE 67278-3188		
			753	Travis W		
			530/T-129	Stetson		

JOB TYPE Surface HOLE SIZE 12.25" HOLE DEPTH 232' CASING SIZE & WEIGHT 8 9/16" 24#  
 CASING DEPTH 232' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.8 SLURRY VOL 1.36 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20'  
 DISPLACEMENT 13.5 bbls DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting and ris up on WW drilling R. Achiv circulate casing mix 16.5 sk Surface blend II Class A cement with 3% Calcium 2% gel displace 13.5 bbls water shut in cement did circulate

Thanks Miles & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1150.00	1150.00
CE0007	45	MILEAGE	7.15	321.75
CE0710	7.76	Ton mutaseculation min	660.00	660.00
CE0871	1055X	Surface blend II	23.00	3795.00
			Sub total	5926.75
			less 20% discount	1778.02
			Subtotal	4148.73
			SALES TAX	212.52
			ESTIMATED TOTAL	4361.25

Ravin 3737

AUTHORIZATION Miles Shaw TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



8001  
8583

TICKET NUMBER 53549  
 LOCATION Oakley, Ks  
 FOREMAN Walt Dunkel

PO Box 884, Chanute, KS 66720  
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT  
 CEMENT

Invoice #810856

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-28-17	7173	Beagley 24C #1	24	15 <sup>s</sup>	36 <sup>w</sup>	Logan
CUSTOMER: <u>Ritchie Exploration</u>			Russell Springs Southon			
MAILING ADDRESS: <u>P.O. Box 783188</u>			2.5 to Dakota			
CITY: <u>Wichita</u>			Bel 6E to			
STATE: <u>Ks</u>			1.5 - LWN			
ZIP CODE: <u>67278-3188</u>			220			

TRUCK #	DRIVER	TRUCK #	DRIVER
731	Cory Davis		
566	Walt Dunkel		

JOB TYPE PTA HOLE SIZE 7 7/8 HOLE DEPTH \_\_\_\_\_ CASING SIZE & WEIGHT \_\_\_\_\_  
 CASING DEPTH \_\_\_\_\_ DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.5 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety Meeting, rig up on WW #10, Plug as Ordered

50 - sks @ 2559'  
 100 - sks @ 1325'      240 sks @ 60 per, 4% Gel, 1/4" Flo Seal  
 50 - sks @ 282'  
 10 sks @ 40'  
 30 sks in RH

Thank You  
 Walt & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
Ceo 451	1	PUMP CHARGE	1,900.00	1,900.00
Ceo 002	4.5	MILEAGE	7.15	321.75
Ceo 710	10.32	Ten mileage Delivery	1.75	812.70
CC 5829	240 sks	Lite-Weight Blend V	16.00	3,840.00
CC 6075	60 #	Flo-Seal	3.00	1,800.00
	1	8 5/8 Wooden Plug	165.00	165.00
				7219.45
		Less 30%		-2165.84
				5053.61
		SALES TAX		234.30
		ESTIMATED TOTAL		5287.98

Ravin 3737  
 AUTHORIZATION Rich [Signature]

TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

# Wellsite Services, LLC

John Goldsmith  
(316) 640-0236

427 Roosevelt St.  
Cheney, KS 67025

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

Well Name: #1 Beagley 24C  
API: 15-109-21510  
Location: 595' FSL & 1,180' FWL, Sec 24-15S-36W, S/2 SW  
License Number: REI #4767  
Spud Date: 7/20/2017  
Surface Coordinates: LAT: 38.7318531  
LONG: -101.2761180  
Bottom Hole Vertical Hole  
Coordinates: 1 Degree Deviation  
Ground Elevation (ft): 3276'  
Logged Interval (ft): 3750' To: RTD  
Formation: Mississippian at RTD  
Type of Drilling Fluid: Chemical

Region: Logan County  
Drilling Completed: 7/28/2017

K.B. Elevation (ft): 3281'  
Total Depth (ft): 4910'

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

### OPERATOR

Company: Ritchie Exploration Inc.  
Address: 8100 E. 22nd St. N. #700  
Wichita, KS 67226  
(316) 691-9500

### GEOLOGIST

Name: John Goldsmith  
Company: Wellsite Services LLC  
Address: 427 Roosevelt St.  
Cheney, KS 67025  
(316) 640-0236

### RIG RECORDS

Contractor: WW Drilling Rig #10  
Pusher: Ricky Hilgers

Collar Tally: 441'

Pump: National K-380  
Liner & Stroke: 6 x 14

### BIT RECORDS

Size:	Type:	Footage:	Condition:	Hours:	Serial #:
12 1/4"	Sm-tooth	0-232'	RR	2.25	RH 6605
7 7/8"	Sm-F27	232'-4910'	New	92.25	RJ 3489

### COMMENTS

Surface Casing: 5 joints of 8 5/8" set @ 232'  
Production Casing: No production casing was set.  
Mud by: MudCo  
DST's by: Trilobite Testing  
Logs by: Halliburton (DIL, CN-CD, ML)  
RTD=4910' LTD=4908'

## FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
B/Anhydrite	2568'	+713	2566'	+711
Stotler	3636'	-355	3634'	-353
Heebner Shale	3995'	-714	3993'	-712
Toronto	4010'	-729	4009'	-728
Lansing	4031'	-750	4029'	-748
Muncie Creek Shale	4218'	-937	4217'	-936
Stark Shale	4318'	-1037	4316'	-1035
Hushpuckney Shale	4360'	-1079	4358'	-1077
Base of KC	4394'	-1113	4392'	-1111
Marmaton	4438'	-1157	4436'	-1155
Altamont	4448'	-1167	4447'	-1166
Pawnee	4520'	-1239	4518'	-1237
Myrick	4568'	-1287	4565'	-1284
Ft Scott	4579'	-1298	4577'	-1296
Cherokee Shale	4608'	-1327	4605'	-1324
Johnson Zone	4670'	-1389	4668'	-1387
Morrow	4742'	-1461	4741'	-1460
Mississippian	4832'	-1551	4831'	-1550
RTD	4910'	-1629		
LTD			4908'	-1627

## DST's






















**DST #1 "Altamont A" 4438'-4470' 7-25-17 30-30-30-30**  
 1st Blw: Wk surf blw dead in 4min (No BB)  
 2nd Blw: No blw, flushed and no blw (No BB)  
 IFP: 18-17# ISIP: 21# FFP: 16-19# FSIP: 22#  
 Hyd: 2242-2175#  
 Rec: 1' Mud.

**DST #2 "Altamont B/C" 4468'-4514' 7-26-17 30-30-30-30**  
 1st Blw: Lght surg on open, then dead (No BB)  
 2nd Blw: No blw, flushed, lght surg, then dead (No BB)  
 IFP: 18-17# ISIP: 24# FFP: 16-18# FSIP: 27#  
 Hyd: 2178-2151#  
 Rec: 1' Mud w/ oil spots in tool.

## ROCK TYPES

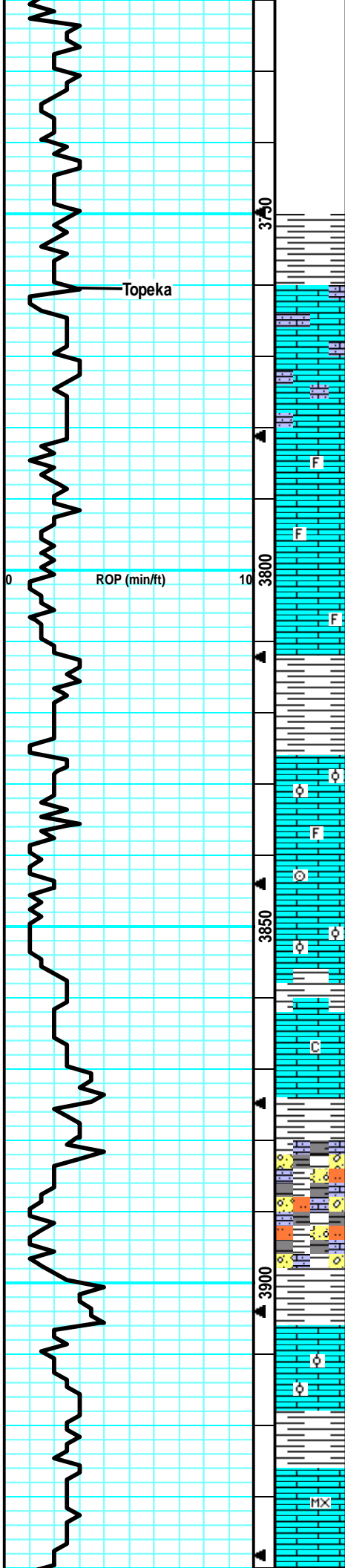
 Anhy	 Dol	 Slst	 Sandylms
 Cht	 Lmst	 Ss	 Shaly ls
 Congl	 Shale	 Carb sh	

## ACCESSORIES

<b>EVENTS</b>	 Foram	<b>MINERAL</b>	 Chalky
 Circ	 Fossil	 Calc	 CrsxlIn
 Conn	 Gastro	 Chtdk	 FinexIn
	 Oolite	 Chtlt	 MicroxIn
<b>FOSSIL</b>	 Ostra	 Glau	
 Brach	 Fuss	 Pyr	
 Bryozoa	 Oolcast	 Sil	
 Crin			



<p>Drilling Time</p> <p>ROP (min/ft) ———</p>	<p>Depth</p>	<p>Lithology</p>	<p>CFS Point</p>	<p>Oil Shows</p>	<p>Geological Descriptions</p>	<p>Remarks</p>
	<p>2550</p> <p>3600</p>			<p><b>Morning Report/Activity</b></p> <p>July 20, 2017: Spud 2:30pm</p> <p>7/21/17: drlg @ 863'</p> <p>7/22/18: drly @ 3000'</p> <p>7/23/17: drlg @ 3855'</p> <p>7/24/17: drlg @ 4160'</p> <p>7/25/17: DST #1 (Altamont "A")</p> <p>7/26/17: DST #2 (Altamont "B/C")</p> <p>7/27/17: drlg @ 4657'</p> <p>7/28/17: RTD = 4910'</p>	<p>Survey @ 232' = 1/2 Degree</p> <p><b>Anhydrite @ 2549' (+732)</b></p>	<p><b>B/Anhydrite @ 2568' (+713)</b></p> <p>MudCo Check #2 @ 3098'</p> <p>07/22/17 @ 8:30am</p> <p>Wt: 9.5 Vis: 30</p> <p>pH: 7.0 Fil: n/c</p> <p>Chir: 68K LCM: 2#</p>
	<p>3600</p> <p>3650</p> <p>3700</p>			<p><b>DT begins @ 3600' on 7/23/17</b></p>	<p><b>Stotler @ 3636' (-355)</b></p>	
	<p>3700</p> <p>4000</p>					



**Samples caught @ 3750' on 7/23/17**

SH: gry/brn, silty, mostly soft, v fw LS: gry, slght mott, fn xln, tr-nvp, no odr, ns.

LS: tan/gry, slght mott, fn xln, many dense, fw sand grns, tr-nvp, no cup odr, ns.

LS: crm/lt gry, sing, fn xln, fw foss, frags, mostly brittle, fw sub-chlky, tr-nvp, no cup odr, ns.

LS: crm/lt tan, sing, fn xln, v fw foss frags, mostly britl, sub-chlky, tr-nvp, no cup odr, ns.

SH: drk gry/gry, silty, sm v soft, fissile

LS: lt tan/gry, slght mott, fn xln, fw ool, many brittle, tr-nvp, fw SH: gry, silty, soft, no odr, ns.

LS: gry/tan, slght mott, fn xln, fw foss frags, mostly dense, firm, tr-nvp, no cup odr, ns.

LS: tan/gry, mott in prt, fn xln, foss w/ crin/frags, sm firm, tr-nvp, no cup odr, ns.

LS: tan, slght mott, fn xln, fw ool, mostly brittle, sub-chlky, fw pcs w/ scat vug por, no cup odr, ns.

LS: lt gry/tan, sing, fn xln, mostly dense, sm brittle, sub-chky in prt, tr-nvp, no cup odr, ns.

LS: crm/lt tan, sing, fn xln, dense, mostly brittle, sub-chlky in prt, tr-nvp, no cup odr, ns.

LS: gry, mott, fn xln, sandy/flakey, mealy, brittle, sm friabl, tr-nvp, sm SH: gry/brn, silty, fw drk gry, no cup odr, ns.

SH: gry/drk gry, silty, soft, fw SlStn: lt brn, gritty, friable, v soft, no odr, no sho.

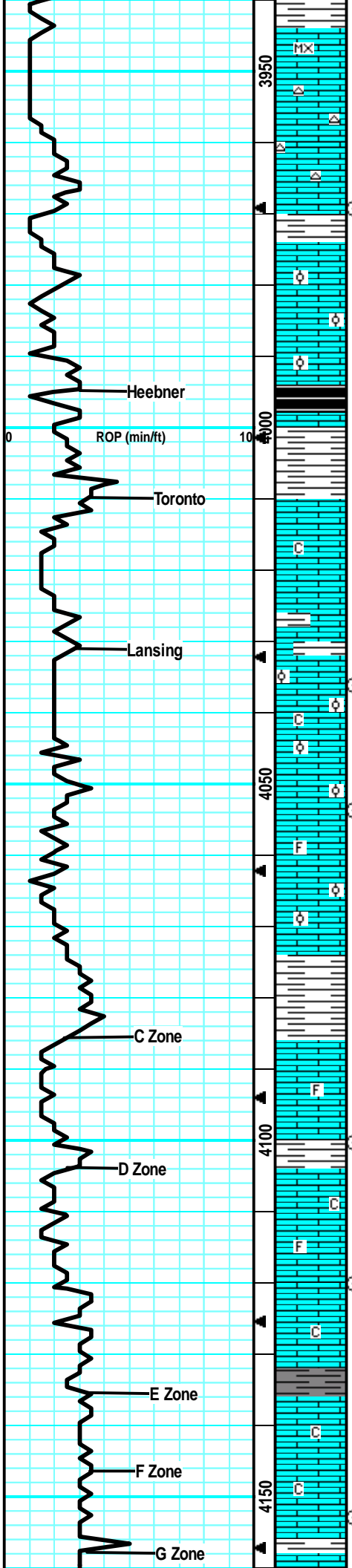
LS: tan/lt tan, slght mott, fn xln, sm ool, fw brittle, fw pcs w/ pr oolcast por, fw pcs w/ drk min stns, no cup odr, ns.

SH: gry/brn, silty, soft, fw LS: tan/lt gry, sing, fn xln, dense, firm, tr-nvp, no cup odr, ns.

LS: lt gry/lt tan, sing, micro-fn xln, dense, sm brittle, fw foss, sm cherty, tr-nvp, no cup odr, ns.

**Topeka @ 3760' (-479)**

MudCo Check #3 @ 3930'  
 07/23/17 @ 9:30am  
 Wt: 8.9 Vis: 64  
 pH: 11.5 Filt: 6.4  
 Chr: 3.5K LCM: 1#



SH: brn, silty, soft.

LS: lt tan/lt tan, mostly sing, micro-fn xln, v fw flakey, mostly dense, tr-nvp, no cup odr, ns.

LS: gry/lt tan, sing, fn xln, mostly dense, fw flakey, tr-nvp, no cup odr, ns.

LS: tan/lt tan, sing, fn xln, mostly brit, sub-chlky, tr-nvp, fw Chert: wht/opaq, sharp, no odr, ns.

LS: gry, slight mott, fn xln, dense, firm, tr-nvp, svrl SH: gry/drk gry, silty, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, fw ool, mostly brittle, fw scat vug por, no cup odr, ns.

LS: gry/tan, mott, fn xln, fw foss frags, mostly brittle, tr-nvp, fw SH: blk, silty, carb, no cup odr, ns.

LS: gry, mott, fn xln, many foss, sm brit, tr-nvp, fw SH: blk, silty, carb, fw gry, soft, no cup odr, ns.

LS: tan, slight mott, fn xln, dense, sm brittle, pr intxln por in sm, spttd lght brn stns, dul yel fluor, v sml sphr of oil on brk, no cup odr.

LS: gry/lt tan, mostly sing, fn xln, many brittle, fw sub-chlky, tr-nvp, no cup odr, ns.

LS: gry/lt tan, sing, fn xln, many dense, sm brittle, fw pcs w/ scat vug por, no cup odr, ns.

LS: lt tan, sing, fn xln, mostly dense, sub-chlky, sm brittle, tr-nvp, fw pcs pur chl, no cup odr, ns.

LS: tan/lt tan, slight mott, many v ool, sm brittle, sm gd intool/vug por, fw pcs w/ pr brn stns, wk fluor, nsfo, no cup odr.

LS: lt tan, sing, fn xln, fw foss frags, mostly dense, many brittle, chlky, tr-nvp, svrl pcs pur chl, no odr, ns.

Much of the same LS, inflex fw LS: gry, mott, ool, brittle, tr-? intool por, no odr, ns.

LS: tan, mostly sing, fn xln, v fw foss, mostly dense, brittle, sub-chlky, tr-nvp, svrl pcs pur chl, fw Chert: wht/gry, foss, no cup odr, ns.

LS: tan/lt gry, fw slight mott, fn xln, sm foss/ool, many brittle, cpl pcs w/ gd intfoss/intool por, svrl pcs pur chl, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, fw foss, sm dense, sm flakey, tr intfoss por in fw, no cup odr, ns.

LS: tan, sing, fn xln, dense, brittle, chlky, tr-nvp, svrl pcs pur chl, fw SH: gry/grn, silty, no odr, ns.

LS: tan/lt gry, slight mott, fn xln, sm foss, sm brittle, sub-chlky in prt, tr-nvp, svrl pcs pur chl, no cup odr, ns.

LS: tan/lt gry, slight mott, fn xln, fw brittle, sub-chlky in prt, tr-nvp, fw pcs pur chl, no odr, ns.

LS: tan/lt gry, sing, fn xln, mostly dns, fw flakey, sub-chlky in prt, tr-nvp, fw SH: gry, silty, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, fw flakey, many brittle, chlky, fw flakey like, tr-nvp, fw pcs pur chl, fw SH: gry/blu, silty, soft, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, micro-fn xln, dense, brittle, chlky, tr-nvp, sm pur chl, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, fw foss, fw ool, mostly dense, sm brittle, tr-nvp, fw Chert: gry/wht, foss, fw

**Short Trip 35 Stands... Pulled very Tight!**

CFS @ 3969' (30"/60")

**Heebner @ 3995' (-714)**

**Toronto @ 4010' (-729)**

**Lansing @ 4031' (-750)**

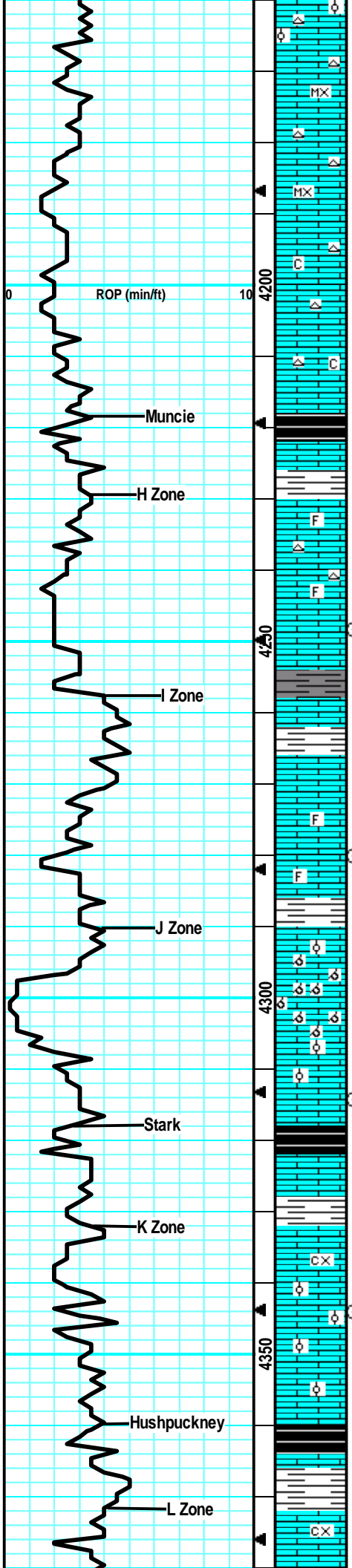
CFS @ 4036' (30"/60")

CFS @ 4054' (30"/60")

CFS @ 4100' (30"/60")

CFS @ 4120' (30"/60")

CFS @ 4153' (30"/60")



SH: gry/brn, silty, no odr, ns.

LS: gry/tan, sing, fn xln, mostly dense, fw brittle, many firm, tr-nvp, fw pcs pur chlk, no odr, ns.

LS: tan/lt gry, sing, micro-fn xln, dense, sm brittle, chlky in prt, svrl pcs pur chlk, no odr, ns.

Much of the same as above, fw SH: gry, silty, med crush, no odr, ns.

LS: tan/lt gry, sing, fn xln, dense, sm brittle, sm chlky, tr-nvp, fw pcs pur chlk, no cup odr, ns.

LS: tan, sing, fn xln, mostly dense, many brittle, chlky, tr-nvp, fw pcs pur chlk, fw Chert: wht, foss, sharp, no cup odr, ns.

SH: blk, silty, carb, no odr, ns.

LS: gry/tan, slight mott, fn xln, fw foss frags, sm firm, tr-nvp, fw pcs w/ drk min stns, no fluor/cut, fw SH: gry/drk gry, silty, no odr, ns.

LS: tan/lt tan, slight mott, fn xln, v fw sml foss, many dense, sm firm, sub-chlky in a fw, tr-nvp, no cup odr, ns.

LS: tan/lt gry, slight mott, fn xln, sm foss in prt, many dense, tr-nvp, fw Chert: wht/opaq, foss, sharp, no odr, ns.

LS: gry/lt tan, sing, fn xln, mostly dense, sub-chlky, fw flakey, tr-nvp, fw SH: drk gry/gry, silty, no cup odr, ns.

LS: gry/lt brn, slight mott, fn xln, dense, firm, 3 pcs w/ patchy stns on edge, wk fluor, v sml sphr of oil on brk, no cup odr.

LS: tan/gry, slight mott, fn xln, sm foss in prt, dense, sm firm, fw flakey, tr-nvp, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, fw foss, many dense, sm flakey, tr-nvp, fw SH: gry, silty, no cup odr, ns.

LS: gry/tan, mott in prt, fn xln, many foss, fw ool, many mealy, sub-chlky, tr-nvp, fw SH: gry/brn, silty, no cup odr, ns.

LS: gry/crm, mott, fn xln, profus ool, many brittle, mostly v gd oolcast por, fw ool/tight, no cup odr, ns.

60" Smpl: had much less oolcast LS and much more dense, flakey, sub-chlky, tr-nvp.

LS: gry/lt tan, slight mott, fn xln, many foss, many dense, sm brittle, tr-nvp, svrl SH: blk, carb, silty soft, no cup odr, ns.

SH: blk/gry, silty, soft, many carb, fw LS: gry, slight mott, fn xln, fw foss, sub-chlky, tr-nvp, no odr, ns.

LS: gry/lt brn, mott, fn-crs xln, foss w/ brach/crin, firm, sm flakey, tr-nvp, fw SH: gry, silty, no cup odr, ns.

LS: gry/tan, mott, fn xln, foss in prt, sm ool, many firm, sm brittle, tr-nvp, fw pcs pur chlk, no cup odr, ns.

LS: gry/tan, mott, fn xln, sm ool, svrl dense, sm firm, sub-chlky in prt, tr-nvp, fw SH: blk, silty, carb, no cup odr, ns.

LS: drk gry/tan, slight mott in prt, fn xln, mostly dense, many flakey, sub-chlky in fw, tr-nvp, svrl SH: blk, silty, carb, no cup odr, ns.

LS: gry, mott, fn-crs xln, sm foss, many flakey/mealy, sub-chlky, firm, tr-nvp, no cup odr, ns.

**Muncie @ 4218' (-937)**

MudCo Check #4 @ 4220'  
 07/24/17 @ 10:00am  
 Wt: 9.0 Vis: 61  
 pH: 11.0 Filt: 6.4  
 Chir: 3.4K LCM: 1#

CFS @ 4248'  
 (30"/60")

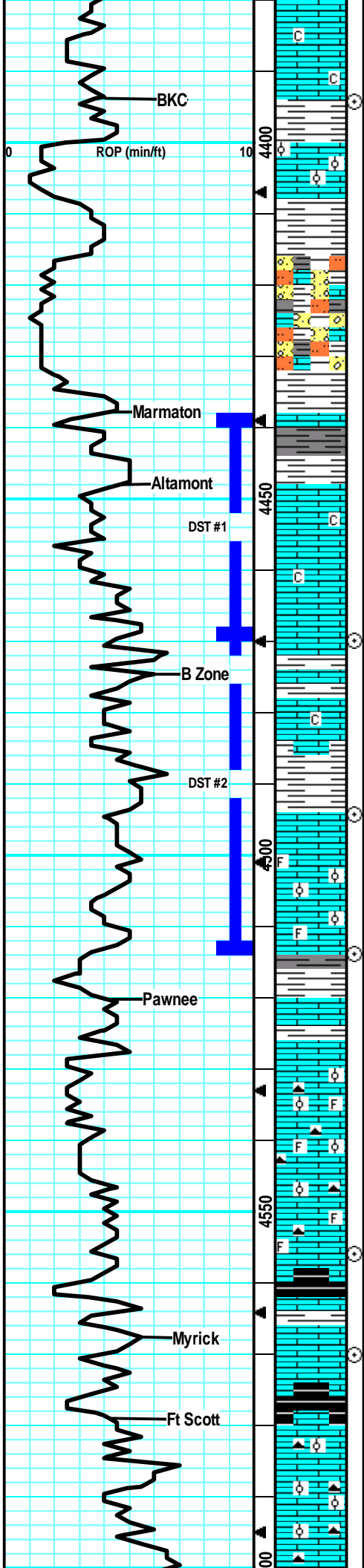
CFS @ 4280'  
 (30"/60")

CFS @ 4314'  
 (30"/60")

**Stark @ 4318' (-1037)**

CFS @ 4344'  
 (30"/60")

**Hushpuckney @ 4360' (-1079)**



LS: gry/tan, sing, fn xln, mostly dense, sub-chlky, sm brittle, fw pcs pur chl, fw SH: gry/brn, silty, no cup odr, ns.

LS: gry/tan, slght mott, fn xln, many foss, sm dense, many brittle, sub-chlky, tr-nvp, w SH: drk gry/gry, silty, no cup odr, ns.

LS: gry, slght mott, fn xln, v fw foss, fw ool, fw lrg inclus, v brittle, gd intxln por, fw SH: gry/brn, silty, no cup odr, ns.

LS: gry/tan, mostly sing, fn xln, v fw foss, mostly dense, sm firm, v fw w/ fr intxln por, v fw SH: gry, silty, med crush, no odr, ns.

SH: gry/brn/grn, silty, soft, fw SlStn: lt gry, gritty, friabl, v soft, fw LS: gry/lt brn, mott, fn xln, flakey, tr-nvp, no odr, ns.

SH: gry/drk gry/brn, silty, soft, fw SlStn: lt gry/grn, v soft, gritty, friable, fw LS: gry, slght mott, fn xln, flakey, tr-nvp, no cup odr, ns.

SH: gry/drk gry/brn, silty, soft, fw SlStn: lt gry, gritty, fw LS: gry/lt tan, sing, fn xln, dense, sub-chlky, tr-nvp, no cup odr, ns.

LS: tan, slght mott, fn xln, dense, firm, fw pcs w lrg inclus, sub-chlky, tr-nvp, fw SH: gry/brn, silty, no odr, ns.

LS: gry/lt tan, sing, fn xln, dense, sub-chlky, fw brit, tr-pr intxln in v fw pcs, 2 pcs w/ patchy drk stns, dul yel fluor, ssfo on brk, no cup odr.

LS: lt gry/tan, sing, fn xln, mostly dense, sub-chlky, sm brit, many firm, tr-nvp, fw pcs pur chl, no cup odr, ns.

LS: gry/tan, slght mott, fn xln, mostly dense, sub-chlky, many flakey/mealy, tr-nvp, svrl SH: gry/brn, silty, sm soft, no odr, ns.

LS: tan/gry, mostly sing, fn xln, fw foss frags, mostly dense, sub-chlky, sm firm, tr-nvp, svrl SH: gry/brn, silty, med crush, no cup odr, ns.

SH: gry/brn, silty, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, mostly dense, sub-chlky, fw firm, tr-np, no clup odr, ns.

LS: tan/gry, sing, fn xln, mostly dense, sm firm, fw flakey/mealy, sub-chlky in prt, tr-nvp, no cup odr, ns.

LS: tan/lt brn, mott, fn xln, profus foss/ool, dense mtrx, firm, tr-nvp, fw Chert: wht/tan, foss/ool, sharp, no cup odr, ns.

SH: gry/drk gry/brn, silty, soft, fw LS: gry/lt brn, dense, firm, sm flakey/mealy, tr-nvp, no cup odr, ns.

SH: gry/blk, fw carb, svrl LS: gry, slght mott, fn xln, fw foss, sub-chlky, sm flakey, tr-nvp, no cup odr, ns.

LS: gry/lt brn, mott, fn-crs xln, v foss/ool, many flakey, mostly firm, tr-pr intxln por in fw, sm Chert: gry/wht, foss, sharp, fw pcs w/ lght brn spts, no fluor/cut, no cup odr, nsfo.

LS: gry/tan, mott, fn-crs xln, profus foss/ool, mostly flakey/mealy, sm firm, tr-pr intxln, sm intfoss por, fw SH: gry, silty, fw Chert: gry/wht, foss, no cup odr, ns.

LS: gry, mott, fn-crs xln, v foss, mostly flakey/mealy, sm firm, tr-nvp, no cup odr, ns.

SH: blk, med crush, carb, sm drk gry, silty, soft

LS: gry, slght mott, fn xln, many flakey/mealy, sub-chlky in prt, fw w/ pr intxln por, fw pcs w/ spttd lght brn stns, ? fluor, no sfo, no cup odr.

LS: gry, slght mott, fn xln, mostly dense, sm flakey, sub-chlky, in prt, tr-nvp, svrl SH: blk, silty, many carb, no cup odr, ns.

LS: tan/gry, mott, fn xln, many ool, sm firm, sm dense, grainy in prt, tr-nvp, fw SH: blk, silty, carb, no cup odr, ns.

LS: gry/tan, mott, fn xln, profus ool, sm dense/firm, many flakey, tr-nvp, sm Chert: gry/wht, ool, sharp, no cup odr, ns.

**BKC @ 4394' (-1113)**

DST #1 "Altamont A" 4438'-4470'  
 7-25-17 30-30-30-30  
 1st Blw: Wk surf blw dead in 4min (No BB)  
 2nd Blw: No blw, flushed and no blw (No BB)  
 IFP: 18-17# ISIP: 21# FFP: 16-19# FSIP: 22#  
 Hyd: 2242-2175#  
 Rec: 1' Mud.

**Marmaton @ 4438' (-1157)**

**Altamont @ 4448' (-1167)**

**Pipe Strap = 1.27 Short**

Survey @ 4470' = 1 Degree

**CFS @ 4470' (30"/60")**

MudCo Check #5 @ 4470'  
 07/25/17 @ 9:00am  
 Wt: 9.2 Vis: 58  
 pH: 10.5 Filt: 8.0  
 Chlr: 5.0K LCM: 1#

**CFS @ 4494' (30"/60")**

MudCo Check #6 @ 4513'  
 07/26/17 @ 9:10am  
 Wt: 9.1 Vis: 50  
 pH: 10.0 Filt: 7.2  
 Chlr: 5.5K LCM: 1#

**CFS @ 4514' (30"/60")**

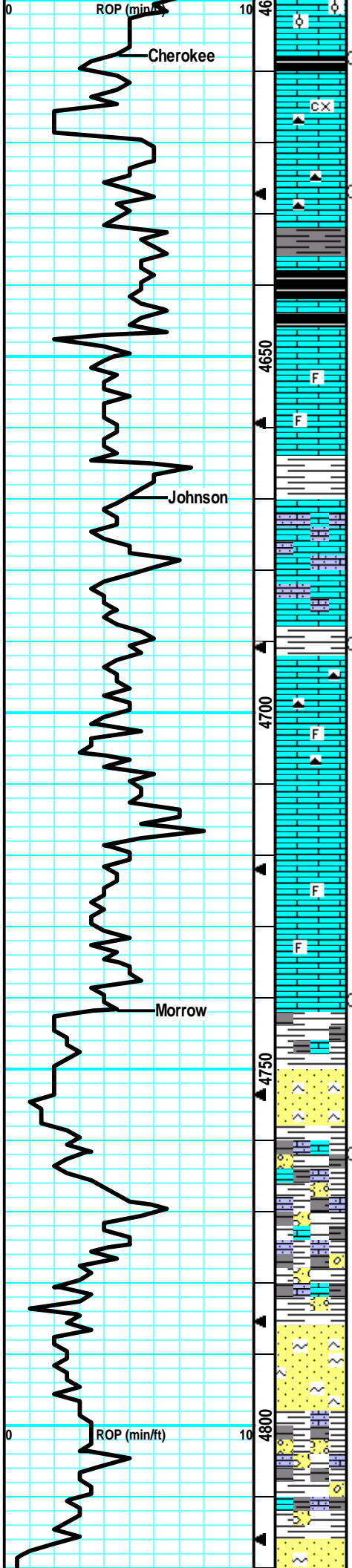
**Pawnee @ 4520' (-1239)**

DST #2 "Altamont B/C" 4468'-4514' 7-26-17  
 30-30-30-30  
 1st Blw: Lght surg on open, then dead (No BB)  
 2nd Blw: No blw, flushed, lght surg, then dead (No BB)  
 IFP: 18-17# ISIP: 24# FFP: 16-18# FSIP: 27#  
 Hyd: 2178-2151#  
 Rec: 1' Mud w/ oil spots in tool.

**CFS @ 4556' (30"/60")**

**Myrick @ 4568' (-1287)**

**Ft Scott @ 4579' (-1298)**



cup odr, no.

LS: gry/lt brn, mott, fn xln, ool, sm flakey, many firm, tr-nvp, no cup odr, ns.

LS: tan/lt gry, mott in prt, fn-crs xln, foss, chlky, brittle, flakey/mealy, soft, tr-nvp, fw SH: gry/drk gry/blk, silty, soft, sm carb, no cup odr, ns.

LS: tan/lt gry, slight mott, fn xln, fw foss, many dense, sm brittle, sub-chlky, tr-nvp, fw Chert: wht/gry, foss, sharp, no cup odr, ns.

LS: gry/drk gry, sing, fn xln, mostly dense, sub-chlky, sm firm, tr-nvp, sm SH: drk gry, silty, soft, no cup odr, ns.

LS: gry/lt brn, slight mott, fn xln, mostly dense, many firm, svrl flakey/mealy, tr-nvp, sm SH: drk gry, silty, soft, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, fw foss, sm lrg inclus, dense, firm, flakey/mealy, tr-nvp, sm SH: drk gry/blk, silty, fw carb, no odr, ns.

LS: gry/tan, slight mott, fn xln, mostly dense, many firm, fw sub-chlky in prt, tr-nvp, fw SH: drk gry, silty, no cup odr, ns.

LS: gry/tan, mott in prt, fn xln, many firm, sm dense, sandy/grainy in prt, tr-nvp, no cup odr, ns.

LS: gry/tan, mott in prt, fn xln, v fw sandy/grainy, firm, sm flakey/mealy, tr-nvp, v fw SH: gry, silty, soft, no odr, ns.

LS: gry/lt brn, mott in prt, fn xln, mostly firm, sm dense, flakey/mealy, fw sandy/grny, tr-nvp, fw SH: gry, silty, med crush, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, sm foss, mostly dense, firm, flakey/mealy, tr-nvp, fw Chert: gry/brn, foss, sharp, fw SH: blk, silty, carb, no odr, ns.

LS: tan/gry, slight mott, fn xln, mostly dense, flakey/mealy, firm, tr-nvp, fw pcs w/ drk min stns, no fluor/cut, no cup odr, ns.

LS: drk gry/tan, mott, fn xln, sm foss, dense, sm v firm, flakey/mealy in prt, tr-nvp, fw Chert: foss, sharp, fw SH: drk gry/blk, silty, fw carb, no cup odr, ns.

LS: drk gry/tan, mott, fn xln, sm foss in prt, fn xln, v firm, many flakey/mealy, tr-nvp, fw pcs w/ drk min stns, no fluor/cut, fw Chert: gry/tan, foss, sharp, no cup odr, ns.

SH: gry/grn/yel, wthrd, silty, med crush, LS: gry/tan, mott in prt, fn xln, firm, flakey/mealy, tr-nvp, no cup odr, ns.

SH: gry/brn/yel/grn, silty, med crush, fw SS: lt brn, fn grn, arg, silty, dirty, fw LS: gry, flakey, tr-nvp, no cup odr, ns.

SH: gry/yel/grn, wthrd, silty, soft, fw LS: gry, mott, fn-crs xln, sandy/grny, sm frabl, tr-nvp, no cup odr, ns.

SS: grn/blu, fn-crs grn, pr sort, sm firm, arg, glauc, fw lrg qrtz grns, tr-nvp, svrl SH: gry/grn/brn, silty, no cup odr, ns.

SS: gry/blu, fn-crs grn, pr sort, sm brit, many firm, arg/drity, glauc, sil cem, tr-pr intgrn por in v fw, abund SH: gry/grn, silty, soft, no cup odr, ns.

SS: grn/blu, fr-crs grn, pr sort, arg, sil cem, sm brittle, fw friable, glauc, tr-nvp, abund SH: gry/grn, silty, soft, fw waxy, no cup odr, ns.

SH: gry/blu/grn, silty, soft, fw waxy, fw yel/wthrd, v fw pr srt, arg, SS like desc above.

SH: gry/grn/brn, silty, soft, fw waxy, fw LS: gry, slight mott, fn xln, flakey, tr-nvp, no odr, ns.

SS: crm/lt tan, sing, fn xln, wl sort, brit, friab, silc cem.

CFS @ 4608'  
(30"/60")

**Cherokee @ 4608' (-1327)**

CFS @ 4627'  
(30"/60")

**Johnson @ 4670' (-1389)**

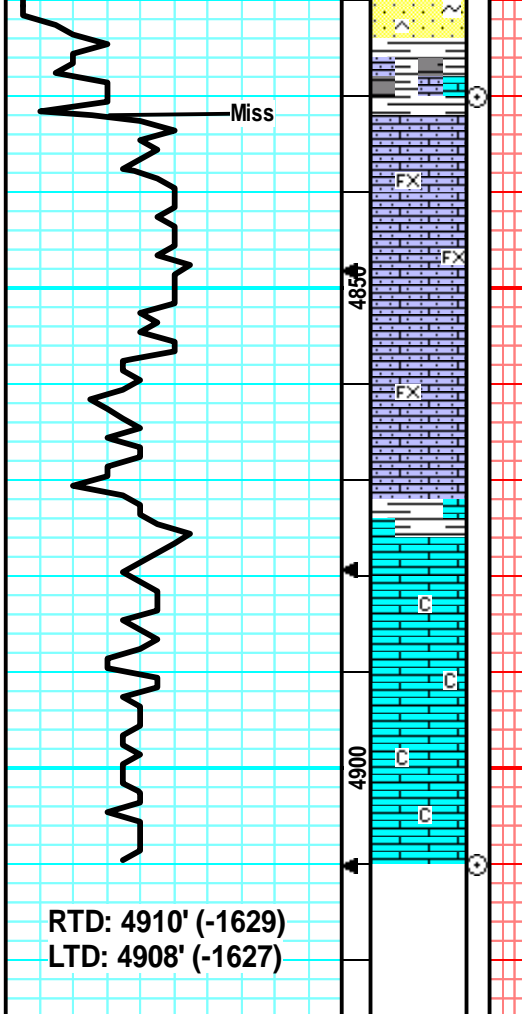
CFS @ 4690'  
(30"/60")

MudCo Check #7 @ 4690'  
07/27/17 @ 9:30am  
Wt: 9.1 Vis: 59  
pH: 10.0 Fil: 8.8  
Chr: 6.5K LCM: 1#

CFS @ 4740'  
(30"/60")

**Morrow @ 4742' (-1461)**

CFS @ 4762'  
(30"/60")



fr intgrn por, glauc in prt, abund SH: gry/grn, silty, soft, no cup odr, no fluor/cut, ns.  
 SH: gry/grn/brn, silty, soft, sm waxy, no cup odr, ns.

LS: crm/lt tan, sandy/gritty, sub-chlky, brittle, sm friable, tr-nvp, abund SH: gry/grn, silty, sm fissile, no cup odr, ns.

LS: crm/lt tan, sandy/gritty, sub-chlky, brittle, in prt, tr-nvp, abund SH: gry/grn, silty, no cup odr, ns.

LS: crm/lt gry, sandy/gritty, sub-chlky, sm brittle, fw friable, tr-nvp, abund SH: gry/grn, silty, soft, no cup odr, ns.

LS: lt gry/tan, slight mott, fn xln, many flakey/mealy, sub-chlky, tr-nvp, fw LS: crm, sandy/gritty, brittle, friab, tr-nvp, no odr, ns.

LS: tan/lt gry, slight mott, fn xln, v fw sandy/grtty, fn xln, sm brittle, flakey/mealy, tr-nvp, chlky in prt, no cup odr, ns.

CFS @ 4830'  
 (30"/60")  
**Miss @ 4832' (-1551)**

MudCo Check #8 @ 4910'  
 07/28/17 @ 9:00am  
 Wt: 9.2 Vis: 59  
 pH: 10.5 Filt: 8.0  
 Chlr: 6.0K LCM: 2#

**CFS @ 4910'**  
**(30"/60")**

Survey @ 4910' = 1 Degree

RTD: 4910' (-1629)  
 LTD: 4908' (-1627)



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188

ATTN: John Goldsmith

### **Beagly 24C #1**

#### **24-15S-36W Logan,KS**

Start Date: 2017.07.25 @ 12:27:00

End Date: 2017.07.25 @ 18:26:00

Job Ticket #: 62628                      DST #: 1

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

Printed: 2017.07.28 @ 16:12:29





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**24-15S-36W Logan, KS**

**Beagly 24C #1**

Job Ticket: 62628

**DST#: 1**

Test Start: 2017.07.25 @ 12:27:00

## GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:29:30

Time Test Ended: 18:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

**Interval: 4438.00 ft (KB) To 4470.00 ft (KB) (TVD)**

Total Depth: 4470.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3281.00 ft (KB)

3276.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8354 Inside**

Press@RunDepth: 19.08 psig @ 4439.00 ft (KB)

Start Date: 2017.07.25

End Date:

2017.07.25

Start Time: 12:27:05

End Time:

18:25:59

Capacity: 8000.00 psig

Last Calib.: 2017.07.25

Time On Btm: 2017.07.25 @ 14:29:00

Time Off Btm: 2017.07.25 @ 16:32:00

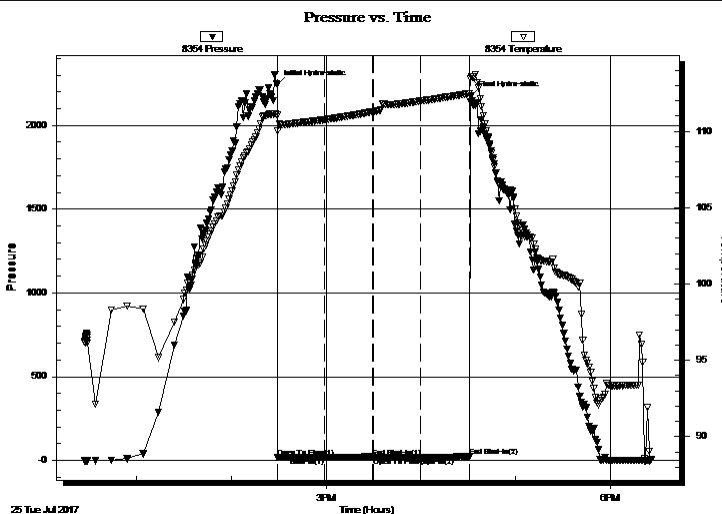
**TEST COMMENT:** IFP 30 Minutes Weak surface blow died in 4 minutes

ISI 30 Minutes No blow back

FFP 30 Minutes No blow / Flush tool no help

FSI 30 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.96	111.06	Initial Hydro-static
1	18.27	110.03	Open To Flow (1)
30	17.11	110.75	Shut-In(1)
60	21.72	111.27	End Shut-In(1)
61	16.25	111.29	Open To Flow (2)
91	19.08	111.98	Shut-In(2)
122	22.25	112.46	End Shut-In(2)
123	2175.61	113.57	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**24-15S-36W Logan, KS**

**Beagly 24C #1**

Job Ticket: 62628

**DST#: 1**

Test Start: 2017.07.25 @ 12:27:00

## GENERAL INFORMATION:

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Deviated: No Whipstock: ft (KB)

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Reference Elevations: 3281.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3276.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8960 Outside**

Press@RunDepth: 22.30 psig @ 4440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.25 End Date: 2017.07.25

Last Calib.: 2017.07.25

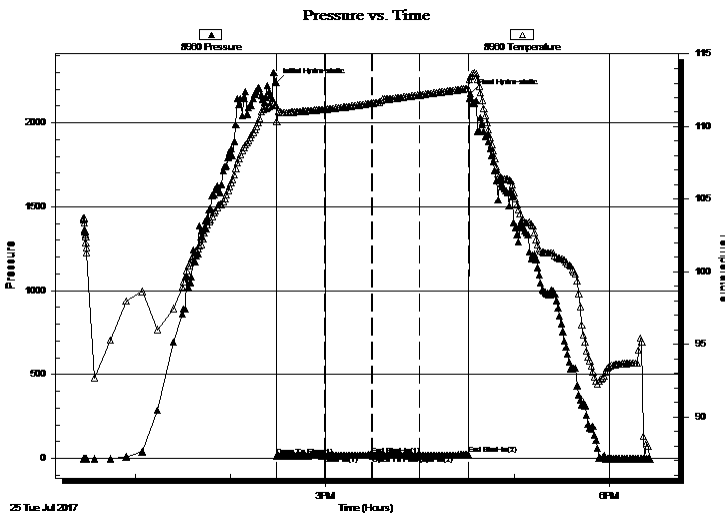
Start Time: 12:27:05 End Time: 18:25:59

Time On Btm: 2017.07.25 @ 14:29:00

Time Off Btm: 2017.07.25 @ 16:32:00

**TEST COMMENT:** IFP 30 Minutes Weak surface blow died in 4 minutes  
ISI 30 Minutes No blow back  
FFP 30 Minutes No blow / Flush tool no help  
FSI 30 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2241.23	111.45	Initial Hydro-static
1	15.88	110.32	Open To Flow (1)
31	16.71	111.19	Shut-In(1)
60	21.68	111.60	End Shut-In(1)
61	16.26	111.61	Open To Flow (2)
91	18.13	112.18	Shut-In(2)
122	22.30	112.63	End Shut-In(2)
123	2174.44	113.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**24-15S-36W Logan,KS**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**Beagly 24C #1**

Job Ticket: 62628

**DST#: 1**

Test Start: 2017.07.25 @ 12:27:00

## Tool Information

Drill Pipe:	Length: 4296.00 ft	Diameter: 3.80 inches	Volume: 60.26 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4438.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	59.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4416.00	
Hydraulic tool	5.00			4421.00	
Jars	5.00			4426.00	
Safety Joint	2.00			4428.00	
Top Packer	5.00			4433.00	
Packer	5.00			4438.00	27.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4439.00	
Recorder	1.00	8960	Outside	4440.00	
Anchor	27.00			4467.00	
Bullnose	3.00			4470.00	32.00 Anchor Tool
<b>Total Tool Length:</b>	<b>59.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**24-15S-36W Logan,KS**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**Beagly 24C #1**

Job Ticket: 62628

**DST#: 1**

Test Start: 2017.07.25 @ 12:27:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 7.99 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

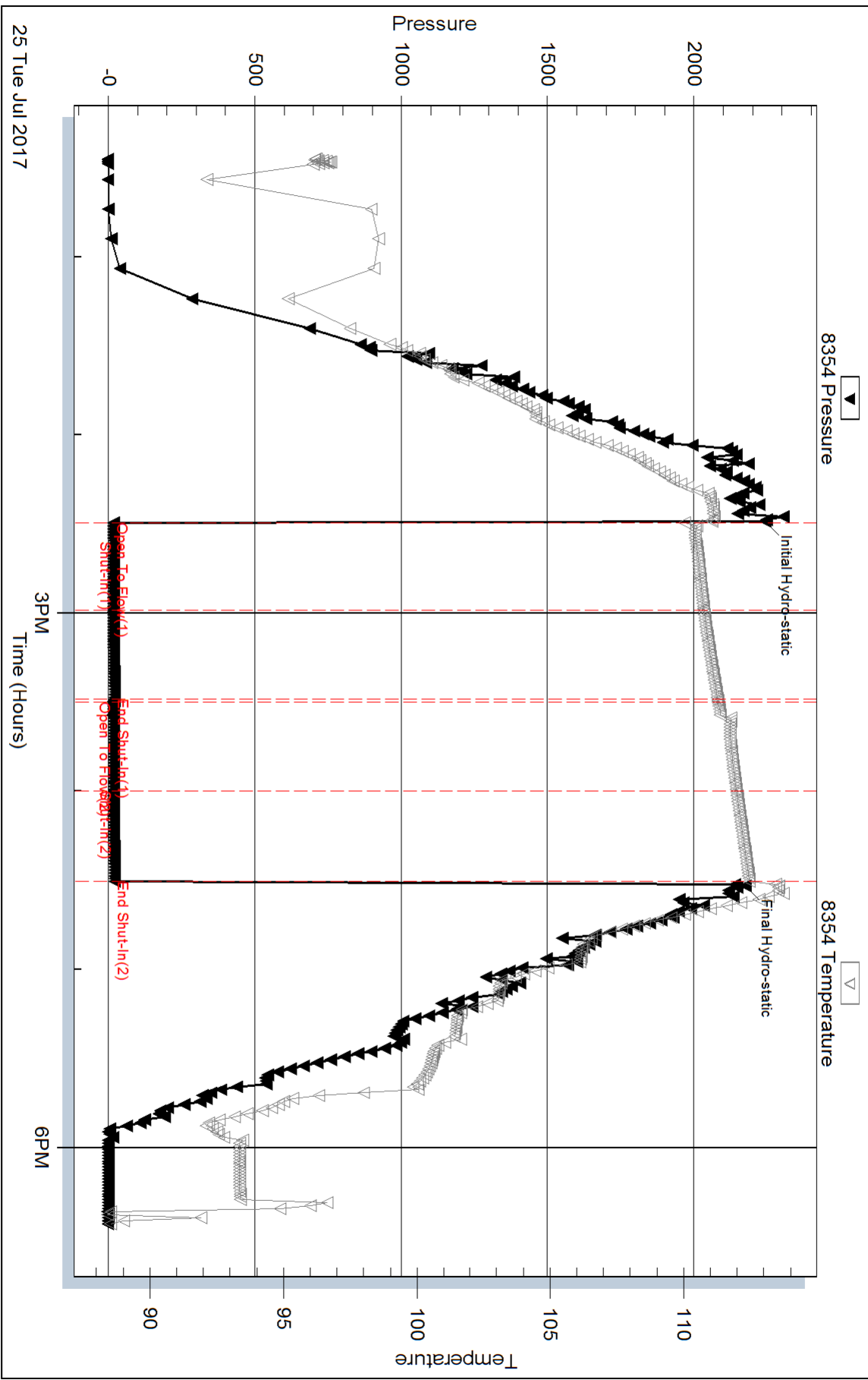
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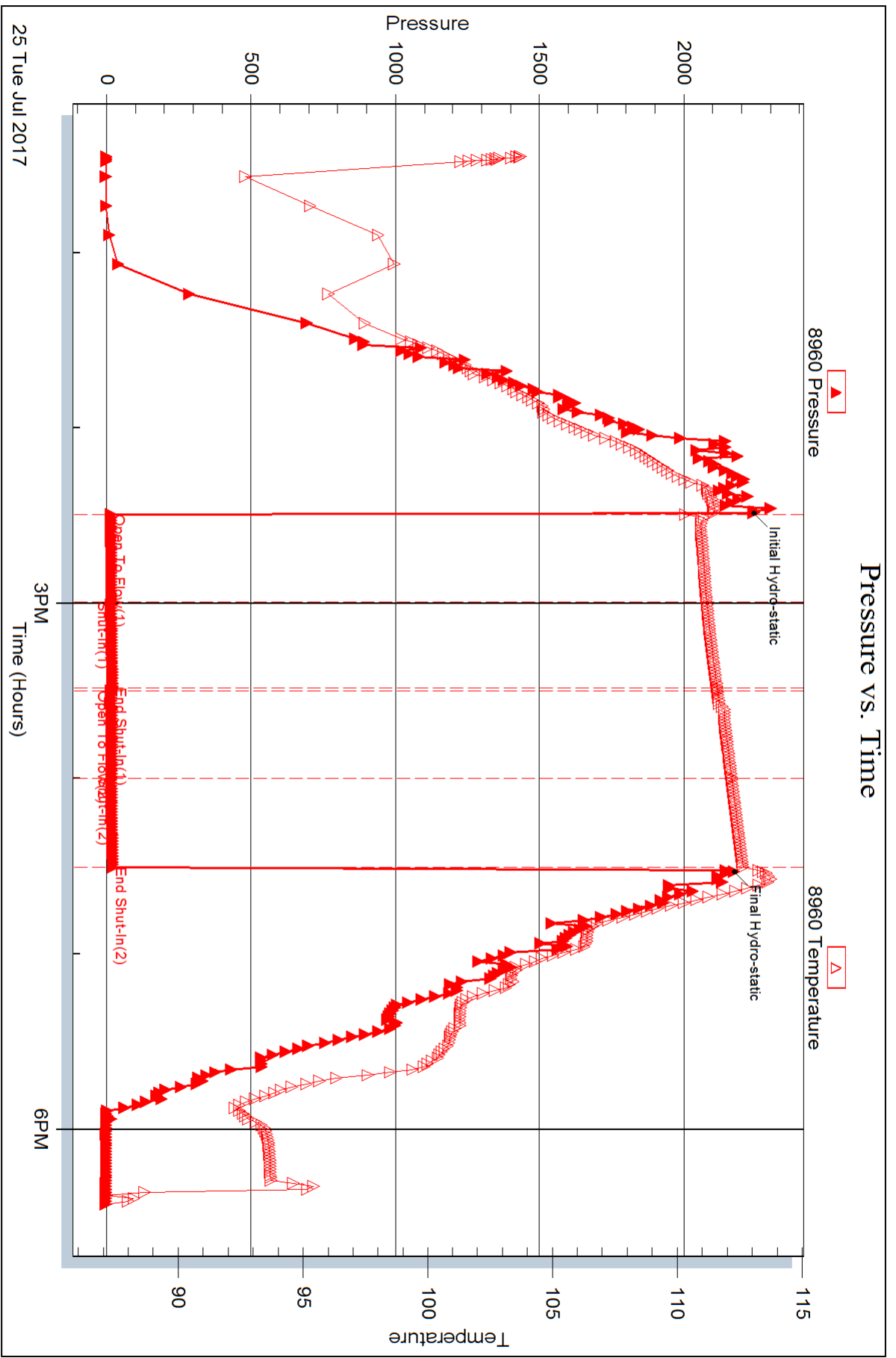
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188

ATTN: John Goldsmith

### **Beagly 24C #1**

#### **24-15S-36W Logan,KS**

Start Date: 2017.07.26 @ 05:49:00

End Date: 2017.07.26 @ 11:35:30

Job Ticket #: 62629                      DST #: 2

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

Printed: 2017.07.28 @ 16:11:18



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 8100 E 22nd St N #700  
 Box 783188  
 Wichita, KS 67278+3188  
 ATTN: John Goldsmith

**24-15S-36W Logan, KS**

**Beagly 24C #1**

Job Ticket: 62629

**DST#: 2**

Test Start: 2017.07.26 @ 05:49:00

## GENERAL INFORMATION:

Formation: **Altamont B - C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:46:00  
 Time Test Ended: 11:35:30  
 Interval: **4468.00 ft (KB) To 4514.00 ft (KB) (TVD)**  
 Total Depth: 4514.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 3281.00 ft (KB)  
 3276.00 ft (CF)  
 KB to GR/CF: 5.00 ft

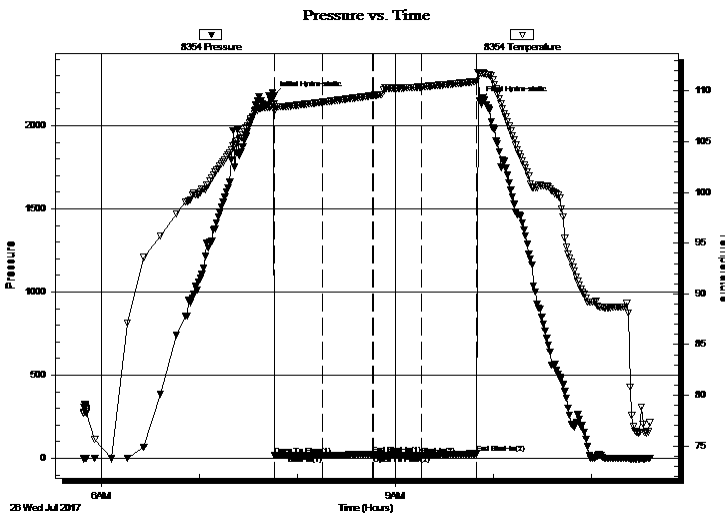
**Serial #: 8354**

**Inside**

Press@RunDepth: 18.38 psig @ 4469.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.07.26 End Date: 2017.07.26 Last Calib.: 2017.07.26  
 Start Time: 05:49:05 End Time: 11:35:29 Time On Btm: 2017.07.26 @ 07:45:30  
 Time Off Btm: 2017.07.26 @ 09:51:30

**TEST COMMENT:** IFP 30 Minutes Light surge at open then dead  
 ISI 30 Minutes No blow back  
 FFP 30 Minutes No blow / Flush tool Light surge then dead  
 FSI 30 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2178.80	108.78	Initial Hydro-static
1	18.26	108.01	Open To Flow (1)
30	17.20	108.91	Shut-In(1)
61	24.80	109.56	End Shut-In(1)
61	16.06	109.57	Open To Flow (2)
91	18.38	110.42	Shut-In(2)
124	27.97	110.95	End Shut-In(2)
126	2151.12	111.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / light oil spots in tool/ Mud 100%	0.00

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc  
 8100 E 22nd St N #700  
 Box 783188  
 Wichita, KS 67278+3188  
 ATTN: John Goldsmith

**24-15S-36W Logan, KS**

**Beagly 24C #1**

Job Ticket: 62629

**DST#: 2**

Test Start: 2017.07.26 @ 05:49:00

## GENERAL INFORMATION:

Formation: **Altamont B - C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:46:00  
 Time Test Ended: 11:35:30  
 Interval: **4468.00 ft (KB) To 4514.00 ft (KB) (TVD)**  
 Total Depth: 4514.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 3281.00 ft (KB)  
 3276.00 ft (CF)  
 KB to GR/CF: 5.00 ft

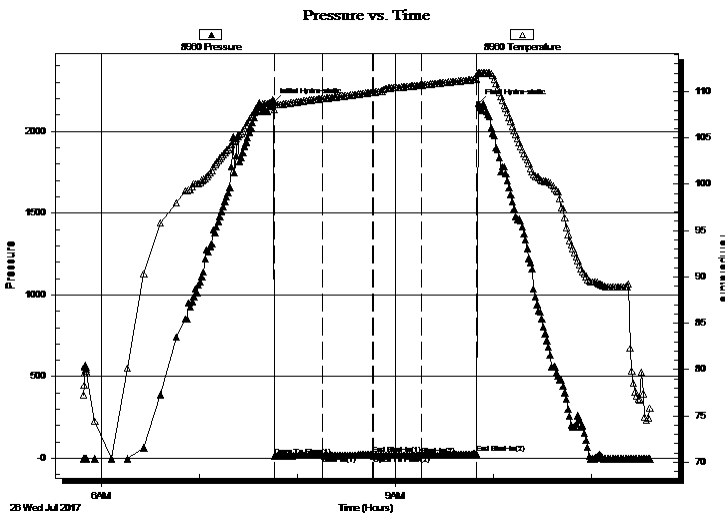
**Serial #: 8960**

**Outside**

Press@RunDepth: 28.26 psig @ 4470.00 ft (KB)  
 Start Date: 2017.07.26 End Date: 2017.07.26  
 Start Time: 05:49:05 End Time: 11:35:29  
 Capacity: 8000.00 psig  
 Last Calib.: 2017.07.26  
 Time On Btm: 2017.07.26 @ 07:45:30  
 Time Off Btm: 2017.07.26 @ 09:51:00

**TEST COMMENT:** IFP 30 Minutes Light surge at open then dead  
 ISI 30 Minutes No blow back  
 FFP 30 Minutes No blow / Flush tool Light surge then dead  
 FSI 30 Minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2176.25	108.97	Initial Hydro-static
1	15.61	108.05	Open To Flow (1)
30	17.14	109.25	Shut-In(1)
61	24.11	109.93	End Shut-In(1)
61	16.27	109.93	Open To Flow (2)
91	18.05	110.71	Shut-In(2)
124	28.26	111.34	End Shut-In(2)
126	2168.89	111.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / light oil spots in tool/ Mud 100%	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration Inc

**24-15S-36W Logan,KS**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**Beagly 24C #1**

Job Ticket: 62629

**DST#: 2**

Test Start: 2017.07.26 @ 05:49:00

## Tool Information

Drill Pipe:	Length: 4326.00 ft	Diameter: 3.80 inches	Volume: 60.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 61.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4468.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.27 ft			
Tool Length:	74.27 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4445.00	
Hydraulic tool	5.00			4450.00	
Jars	6.00			4456.00	
Safety Joint	2.00			4458.00	
Top Packer	5.00			4463.00	
Packer	5.00			4468.00	28.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4469.00	
Recorder	1.00	8960	Outside	4470.00	
Anchor	8.00			4478.00	
Change Over Sub	1.00			4479.00	
Drill Pipe	31.27			4510.27	
Change Over Sub	1.00			4511.27	
Bullnose	3.00			4514.27	46.27 Anchor Tool

**Total Tool Length: 74.27**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc

**24-15S-36W Logan,KS**

8100 E 22nd St N #700  
Box 783188  
Wichita, KS 67278+3188  
ATTN: John Goldsmith

**Beagly 24C #1**

Job Ticket: 62629

**DST#: 2**

Test Start: 2017.07.26 @ 05:49:00

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w / light oil spots in tool/ Mud 100%	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

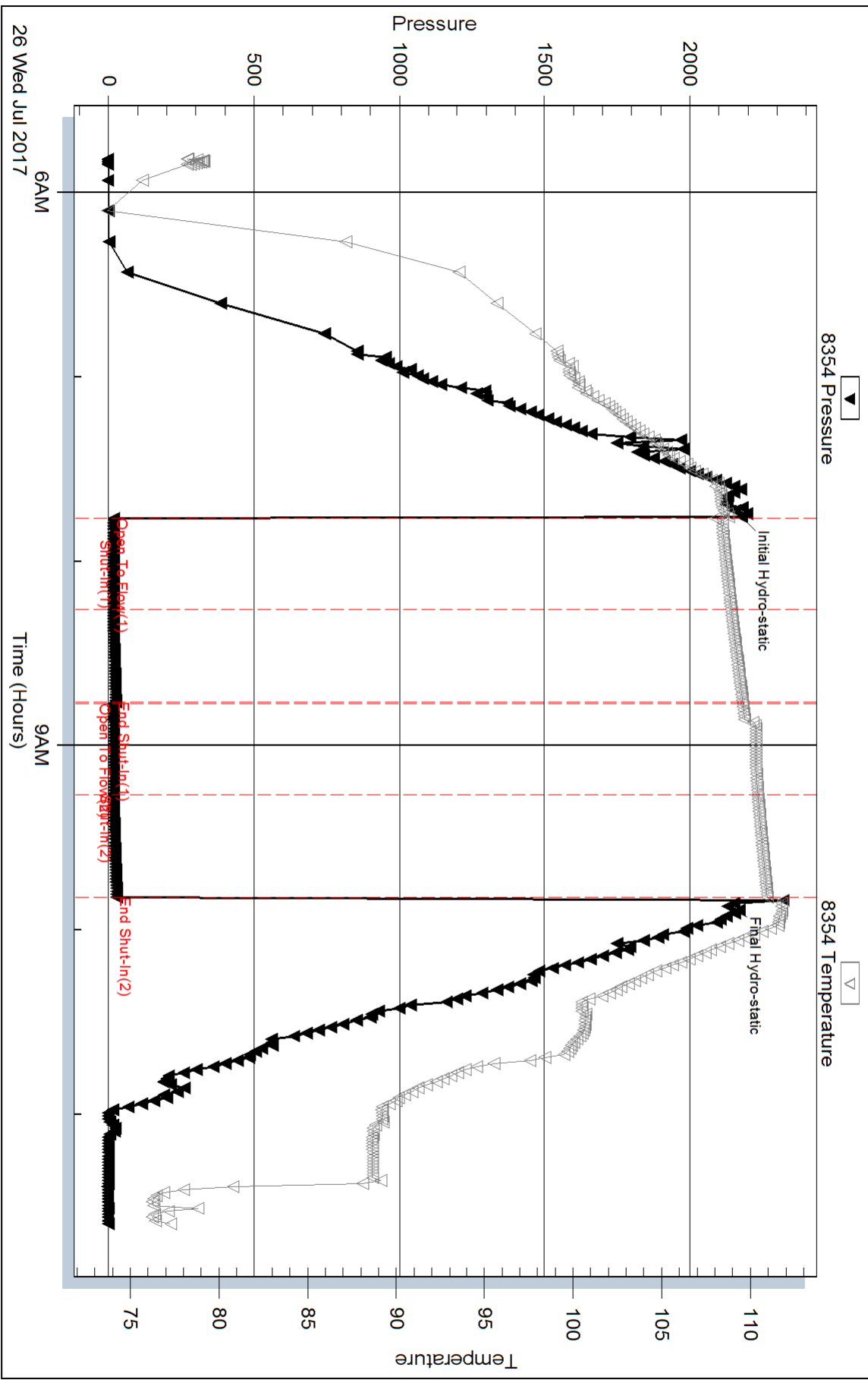
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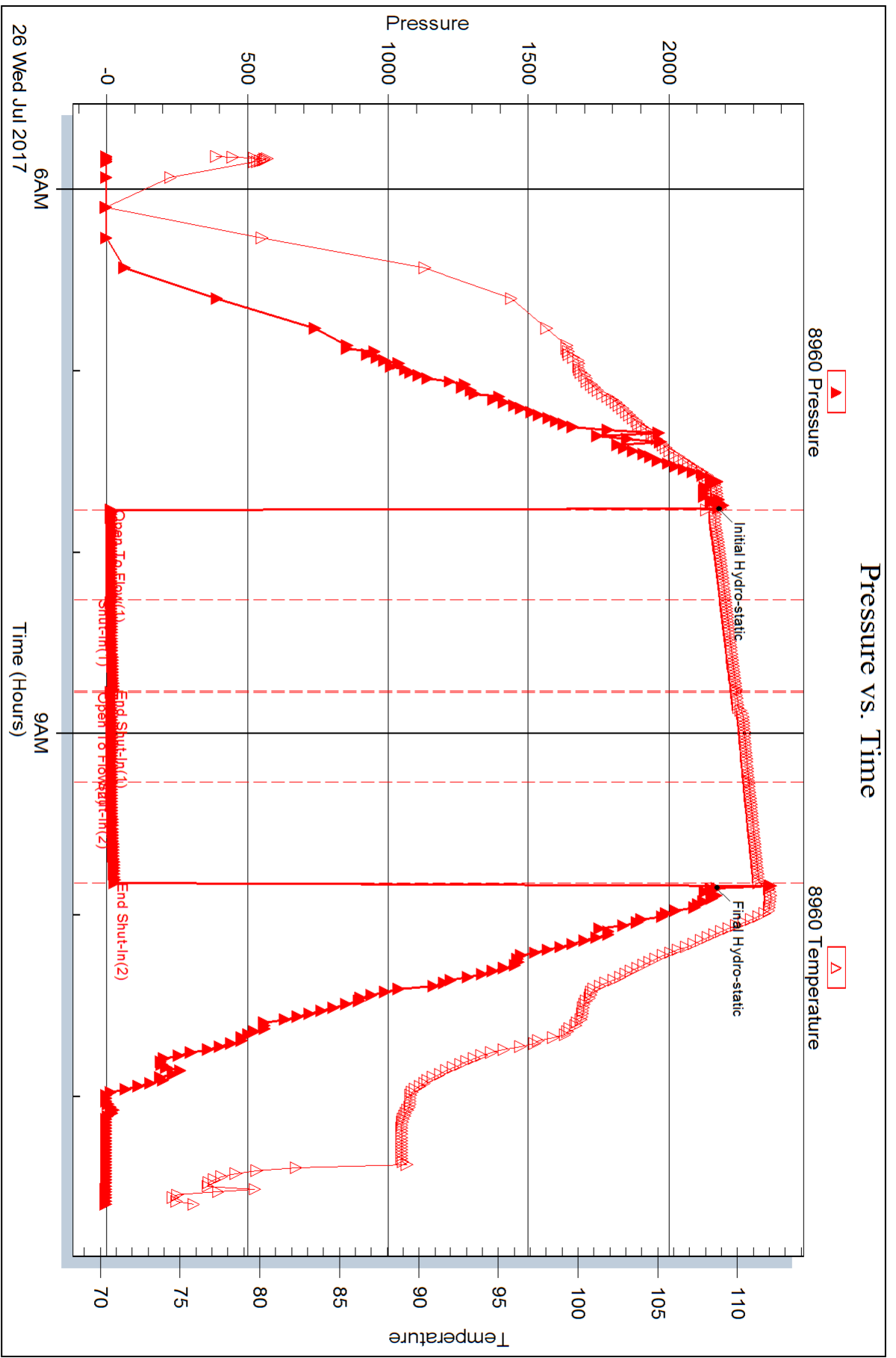
Laboratory Name:

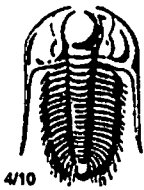
Laboratory Location:

Recovery Comments:

### Pressure vs. Time







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62628

Well Name & No. Begly 24C #1 Test No. 1 Date 25 Jun 17  
 Company Ritchie Exploration Inc. Elevation 3281 KB 3276 GL  
 Address 8100 E 22nd St N #700 Box 783188 Wichita, KS 67278+3188  
 Co. Rep / Geo. John Goldsmith Rig WW Rig 10  
 Location: Sec. 24 Twp. 15S Rge. 36W Co. Logan State KS

Interval Tested 4438-4470 Zone Tested Altamont A  
 Anchor Length 32 Drill Pipe Run 4296 Mud Wt. 9.2  
 Top Packer Depth 4433 Drill Collars Run 120 Vis 58  
 Bottom Packer Depth 4438 Wt. Pipe Run - WL 8.0  
 Total Depth 4470 Chlorides 5000 ppm System LCM 1#

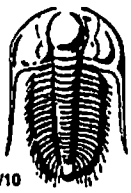
Blow Description I.F. Weak surface blow died in 4 minutes  
I.S.E No blow back  
F.E No blow / Flush tool no help  
F.S.I No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</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 1 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2242</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:30 am</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:27 pm</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:30 pm</u>
(D) Initial Shut-In <u>21</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>4:30 pm</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>6:30 pm</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> 58.50	Comments _____
(G) Final Shut-In <u>22</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2175</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1533.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1533.50</u>	

Approved By [Signature] Our Representative [Signature]  
 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 opinions 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. 62629

Well Name & No. Beagly 24C #1 Test No. 2 Date 26 JUL 17  
 Company Ritchie Exploration Elevation 3281 KB 3276 GL  
 Address 8100 E 22nd St #700 Box 783118 Wichita KS 67278+3188  
 Co. Rep / Geo. John Goldsmith Rig WWRig 10  
 Location: Sec. 24 Twp. 153 Rge. 36W Co. Logan State KS

Interval Tested 4468-4514 Zone Tested Altamont B4C  
 Anchor Length 46 Drill Pipe Run 4326 Mud Wt. 9.2  
 Top Packer Depth 4463 Drill Collars Run 120 Vis 58  
 Bottom Packer Depth 4468 Wt. Pipe Run - WL 8.0  
 Total Depth 4514 Chlorides 5000 ppm System LCM 1#

Blow Description I.F. Light surge at open then dead  
F.S.I. No blow back  
F.F. No blow / Flush tool light surge then dead  
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud w/oil spots in tool</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 111 Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2178</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:56 am</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:49 am</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>7:45 am</u>
(D) Initial Shut-In <u>24</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>9:45 am</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:35 am</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> <u>117</u>	Comments <u>loaded tools 7/28 15:30</u>
(G) Final Shut-In <u>27</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2151</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1592</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1592</u>	

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements of 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.