

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
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
---	--	------------------------------------

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	POP 1-17
Doc ID	1418675

Tops

Name	Top	Datum
Chase	2428	-237
Heebner Shale	4023	-1832
Lansing 'A'	4184	-1993
L/KC 'H'	4341	-2150
KC 'I'	4389	-2198
BKC	4563	-2372
Marmaton	4608	-2417
Miss Chert	4764	-2573
Kinderhook SS	4819	-2628

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: POP #1-17
Location: 1973' FNL & 736' FEL, Sec. 17-T27S-R18W, Kiowa Co., KS.
Licence Number: 15-097-21841-00-00 Region: Wildcat
Spud Date: 6/19/2018 Drilling Completed: 6/27/18
Surface Coordinates: 1973' FNL & 736' FEL, Sec. 17-T27S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2180' K.B. Elevation (ft): 2191'
Logged Interval (ft): 3300' To: 4850' Total Depth (ft): 4850'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3431'; Chemical Gel 3431' to 4850'

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

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 277 S. Maple Dunes Ct.
Wichita, KS. 67235-7500

Cores

None Taken

DSTs

DST #1(Upper K.C. 'I' zone) 4384' - 4400'(Corrected Depths to Log) Test Times 30"-45"-30"-60" IFP Weak Blow built to 4.25", FFP Weak Blow built to 1.5", no Blowback on SI's; REC: 110' MSW(14%M, 86%W) No oil or gas, CI 76,000, Mud 6800; IFP 14-41#, ISIP 1372#, FFP 46-70#, FSIP 1376#, IHP 2324#, FHP 2275#, BHT 122 Deg. F.

DST #2(Cherokee - Reworked Miss.) 4706' - 4765'(Corrected Depths to Log) Test Times 15"-45"-60"-120" IFP Strong Blow BOB/4.5 Min., FFP Strong Blow Immed., no Gas to Surface, no Blowback on SI's; REC: 2343' Gas in Pipe, 10' SGCM(5%G, 95%M), no oil or water; IFP 71-47#, ISIP 974#, FFP 38-50#, FSIP 1388# and building, IHP 2452#, FHP 2355#, BHT 128 Deg. F.

DST #3(Clean Miss Chert) 4766' - 4783'(Corrected Depths to Log) Test Times 15"-45"-60"-120" IFP Strong Blow BOB/5 Min., FFP Strong Blow throughout, no Gas to Surface, no Blowback on SI's; REC: 527' Gas in Pipe, 70' MSW(24%M, 76%W) CI(MudCo Check) 63,200, Mud 7200; IFP 18-29#, ISIP 1365#, FFP 18-66#, FSIP 1404#, IHP 2360#, FHP 2338#, BHT 130 Deg. F.

Comments

6/19/18 MIRU Sterling Drilling Co. Rig #4, Spud at 5:30 PM.; 6/20/18 TD. 652' - Circulating Casing; 6/21/18 Drilling at 1620'; 6/22/18 Drilling at 3220'; 6/23/18 Drilling at 4050'; 6/24/18 TD. 4402' - TOH for DST #1; 6/25/18 Drilling at 4616'; 6/26/18 TD. 4767' - TIH after DST #2; 6/27/18 RTD. 4850' at 5:15 AM., Trip out for Logs- P & A.

Set new 8 5/8"(24#) Surface Casing at 647' KB. with 350 sacks cement(Basic Energy Services). Cement did Circulate. PD. at 7:30 AM. 6/20/18.

Surveys: 0.75 Deg. at 652'(Surface Casing); 0.50 Degree at 3941'(Bit Trip); 1.50 Deg. at 4402'(DST #1); 1.0 Deg. at 4767'(DST #2); 1.50 Deg. at 4850' TD.

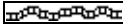



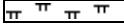
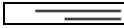
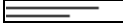

Pipe Strap at 4402'(DST #1): Strap 1.18' Short to the Board, no correction made to the Board.

After review of the Halliburton logs, DST data and sample evaluation, the operator elected to Plug and Abandon the POP #1-17 at RTD. 4850' on 6/27/18 due to lack of commercial amounts of recoverable hydrocarbons.








































































LOG TOPS: Blaine Anhy. 1174(+1017), Chase 2428(-237), Stotler Lmst. 3393(-1202), Howard 3598(-1407), Heebner Shale 4023(-1832), Toronto 4039(-1848), Brown Lmst. 4177(-1986), Lansing 'A' 4184(-1993), L/KC 'H' 4341(-2150), KC 'I' 4389(-2198), Stark Shale 4476(-2285), Hertha 4534(-2343), BKC 4563(2372), Marmaton 4608(-2417), Cherokee Shale 4693(-2502), Reworked Miss. 4744(-2553), Clean Miss. Chert 4764(-2573), Kinderhook Shale 4810(-2619), Kinderhook Sand 4819(-2628).

NOTE: This log was shifted upward by 2' for correlation purposes with the Halliburton Logs.

ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
--	--	--	--	--

ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau	 Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackst
--	--	--	--	--

OTHER SYMBOLS

- POROSITY**
 Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint

- Vuggy
SORTING
 Well
 Moderate
 Poor

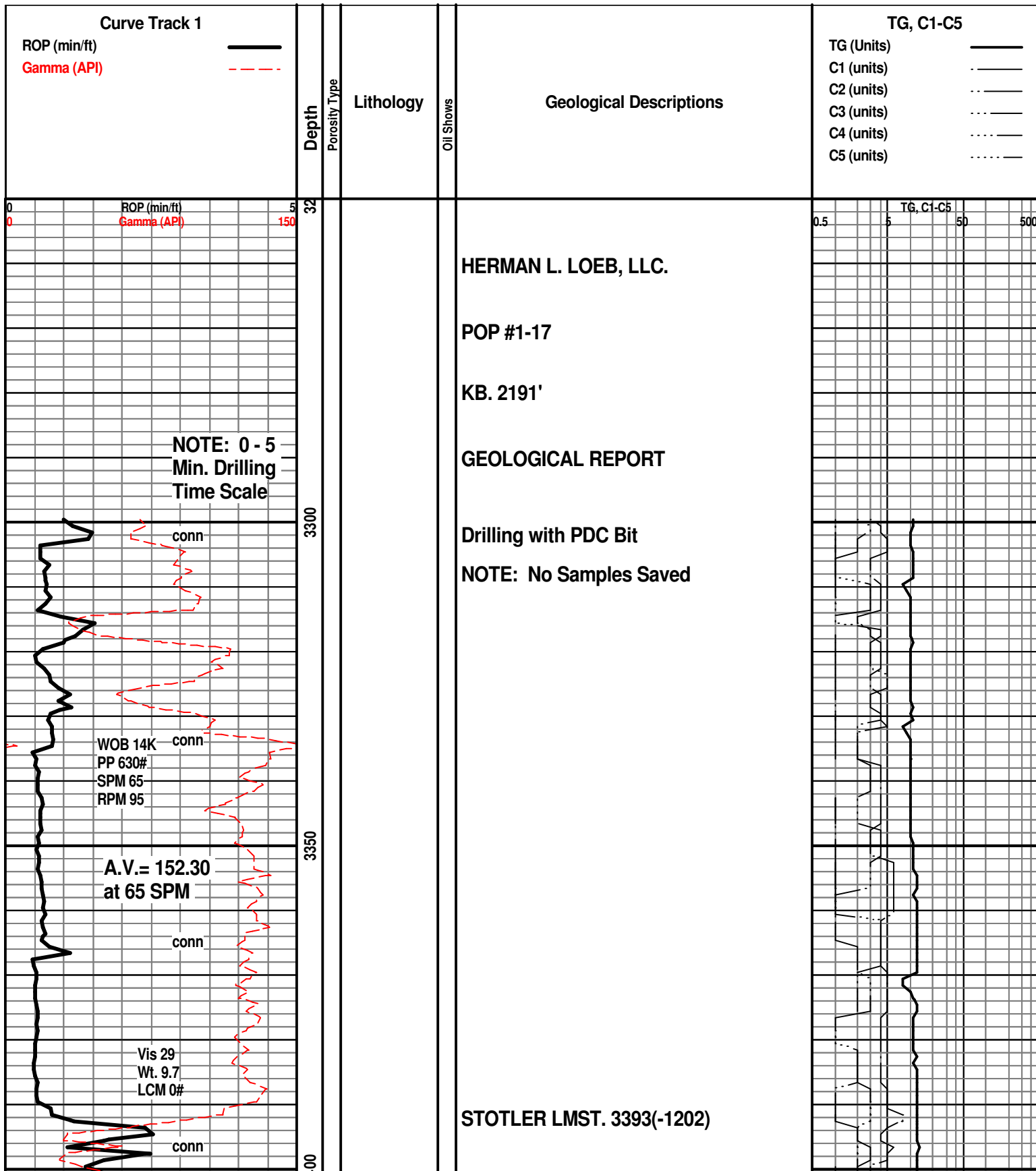
- ROUNDING**
 Rounded
 Subrnd
 Subang
 Angular

- Spotted
 Ques
 Dead

- EVENT**
 Rft
 Sidewall

- OIL SHOW**
 Even

- INTERVAL**
 Core
 Dst



HERMAN L. LOEB, LLC.

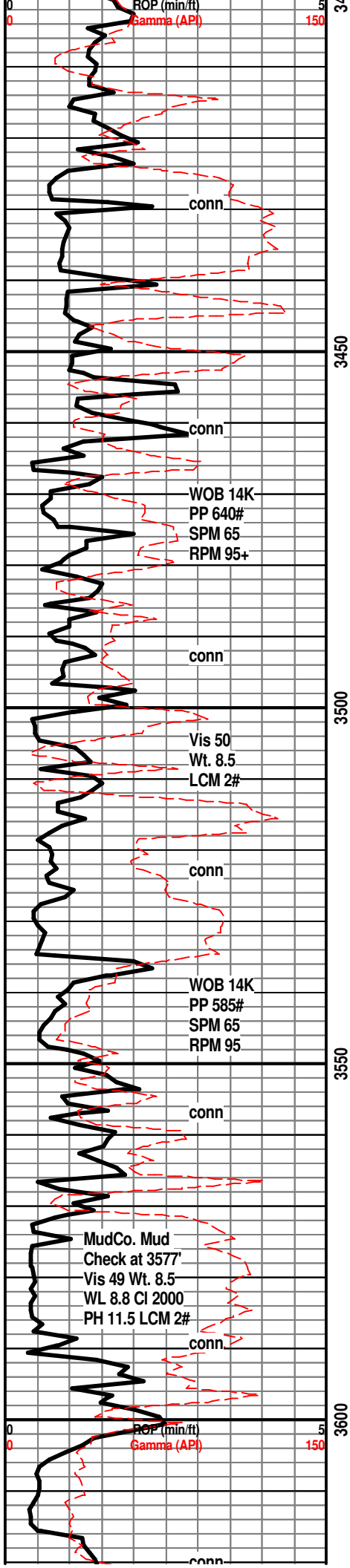
POP #1-17

KB. 2191'

GEOLOGICAL REPORT

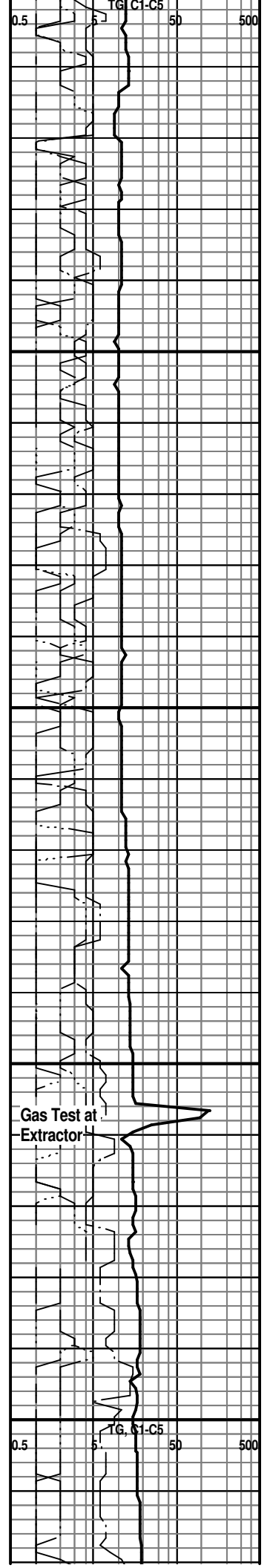
Drilling with PDC Bit

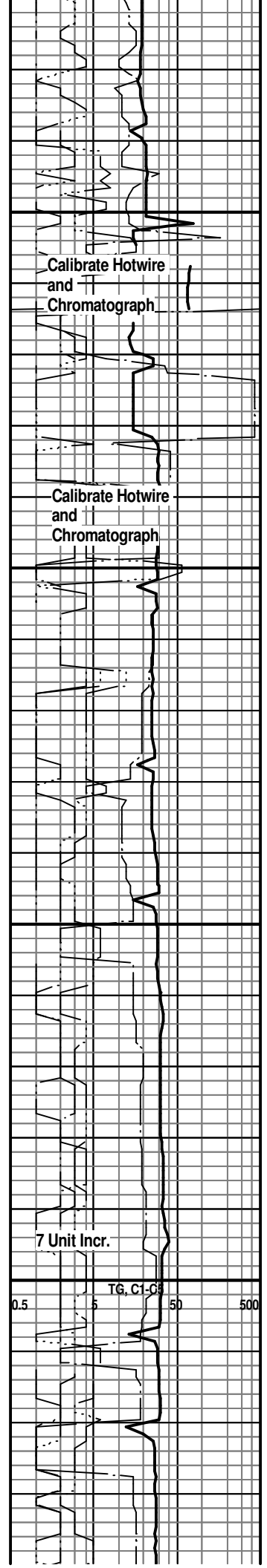
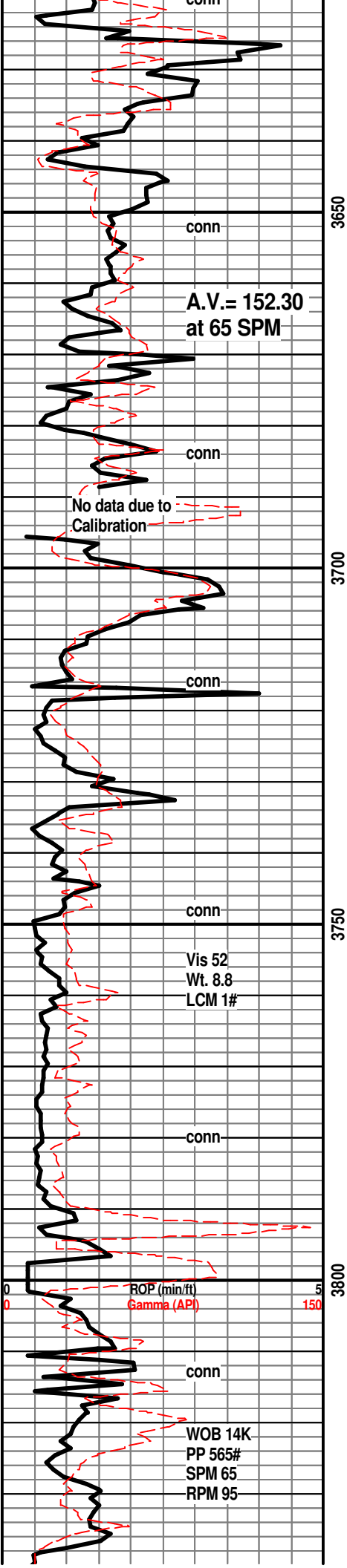
NOTE: No Samples Saved

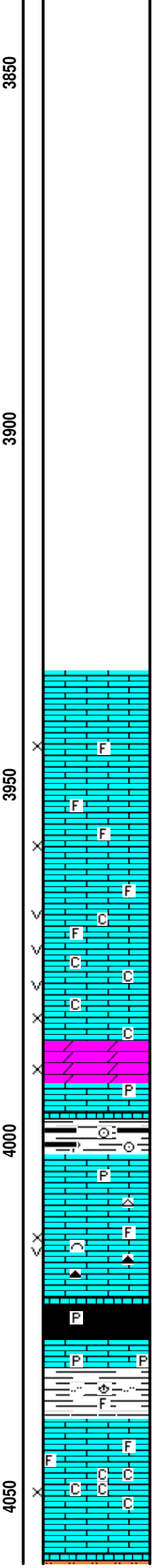
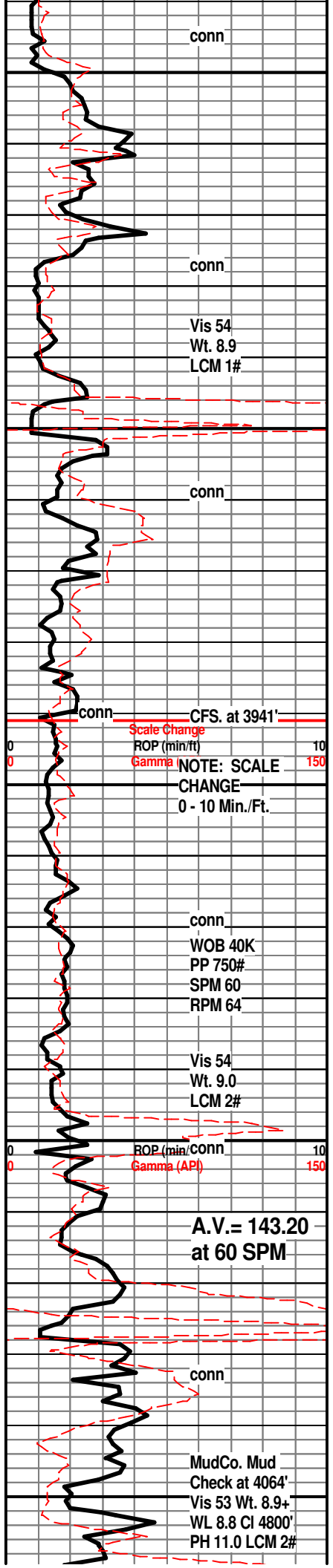


Displace Mud System at 3431'

HOWARD 3598(-1407)







QUEEN HILL SHALE 3896(-1705)

BIT TRIP AT 3941'
Strap Pipe, Survey and Pull PDC Bit
Drilling with Button Bit - Start 10' Wet
and Dry Samples 3950'

LM; tan to lt brn, buff, fxln, foss ip, scat fair vis interxln por, dull to occ lt yel min fluor, no stn or odor, ns.

LM; tan to buff, off wh, f to med xln, scat foss mat, interbdd wh chalk and chalky lmst, occ gd vug por, dull yel min fluor, no stn or odor, ns.

LM; off wh, lt gy, med to cse xln, spar calc, gd interxln and vug por, occ chalky, dull yel fluor, ns.

DOL; lt brn, sucrosic, scat fair interxln por, lt yel min fluor, occ disse. pyr, ns.

SH; dk gy, rare blk, platy, foss ip.

LM; lt gy, lt gy, hd, blocky, rarely pyr, scat gy fresh cht, no fluor, ns.

LM; tan to lt brn, foss ip w/fair interxln w/occ p-p por, dull to lt yel min fluor, no stn, scat gy to dk brn cht, ns.

HEEBNER SHALE 4023(-1832)

SH; blk, carb, gassy, blocky, pyr ip.

LM; med to dk brn, hd, micritic, occ pyr

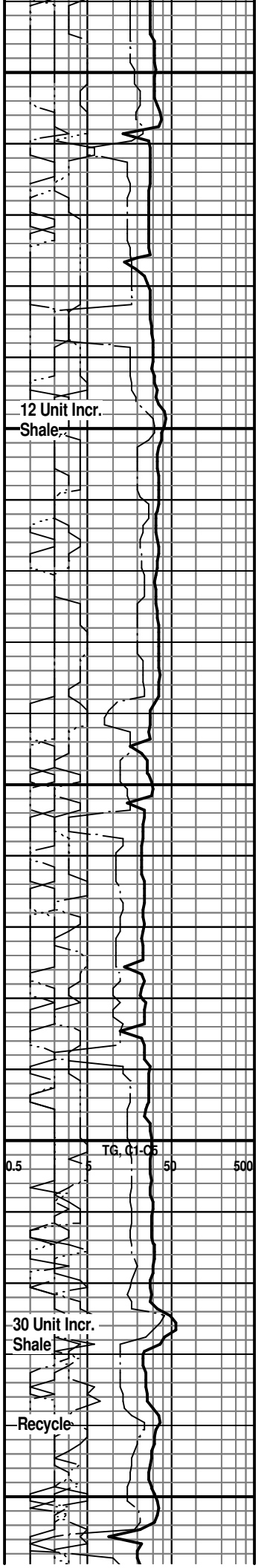
SH; lt gy, gy grn, silty ip, occ foss

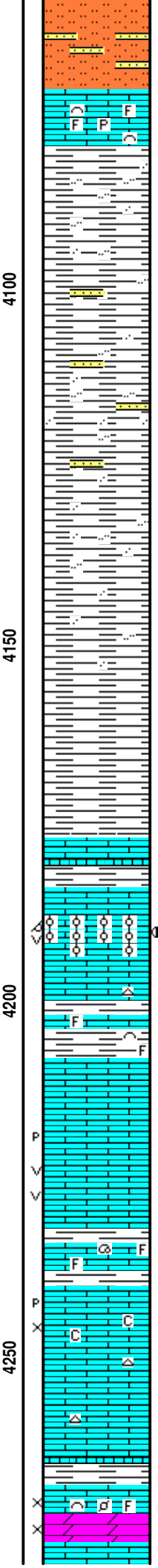
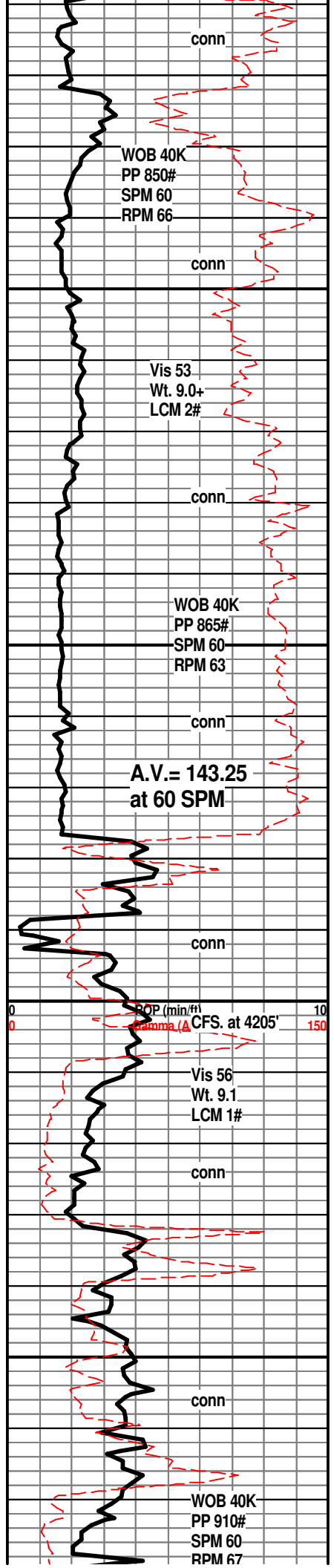
TORONTO 4039(-1848)

LM; tan to buff, cream, off wh, fxln, foss ip, scat soft chalk and chalky mtx, no fluor, tite

LM; off wh, buff, fxln, much soft chalk and chalky mtx, fair interxln por, no fluor, no stn or odor, no gas kick

DOUGLAS SHALE 4059(-1868)





SLTST; lt gy, rare grn, soft, occ mica, interbdd vf gr tite qtz ss

LM; med gy to med brn, foss, tite, dull yel min fluor, rarely pyr, ns.

SH; lt to med gy, platy, silty to sandy

SH; lt to med gy, platy, interbdd vf gr qtz ss strngs, occ mica, no clean ss dev.

SH; lt to med gy, platy, silty to sandy, mica ip.

SH; most med gy, platy, smooth, rarely silty

BROWN LMST. 4177(-1986)

LM; med to dk brn, v. hd, micritic, tite

LANSING 'A' 4184(-1993)

LM; lt to med brn, oolitic, med size molds, gd oomoldic por, rare vug por, scat lt yel fluor, rare very spotted lt brn oil stn, rare gas bubbles, v. faint odor, most barren porosity, poor show

LM; lt brn, fxln w/scat foss mat, tite, ns.

LANSING 'B' 4208(-2017)

LM; tan to cream, buff, f to med xln, most dense, no vis por, no fluor, no gas kick, ns.

LM; lt gy, lt gy brn, fxln w/fair to occ gd p-p and small vug por, dull yel min fluor only, no vis stn, no odor, no gas kick

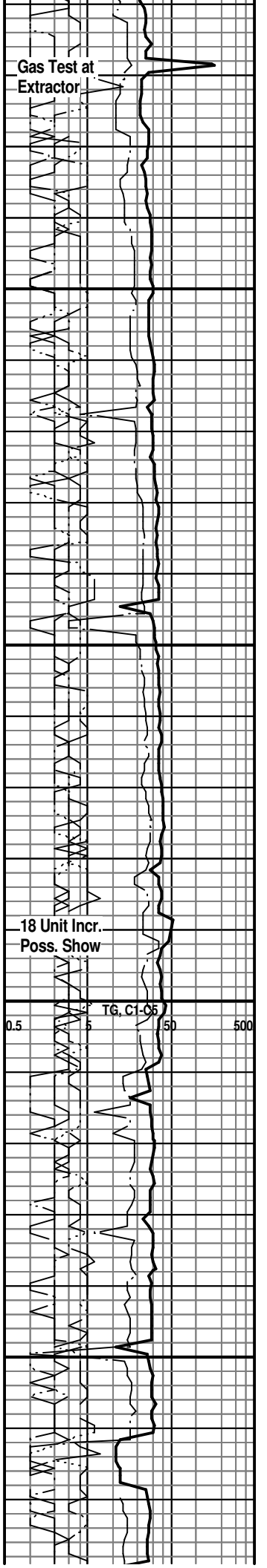
LM; med to dk brn, blocky, hd, scat well cem foss mat, occ med yel fluor, no vis stn, ns.

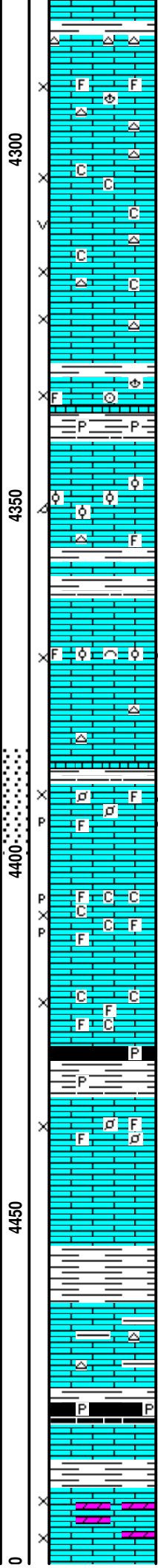
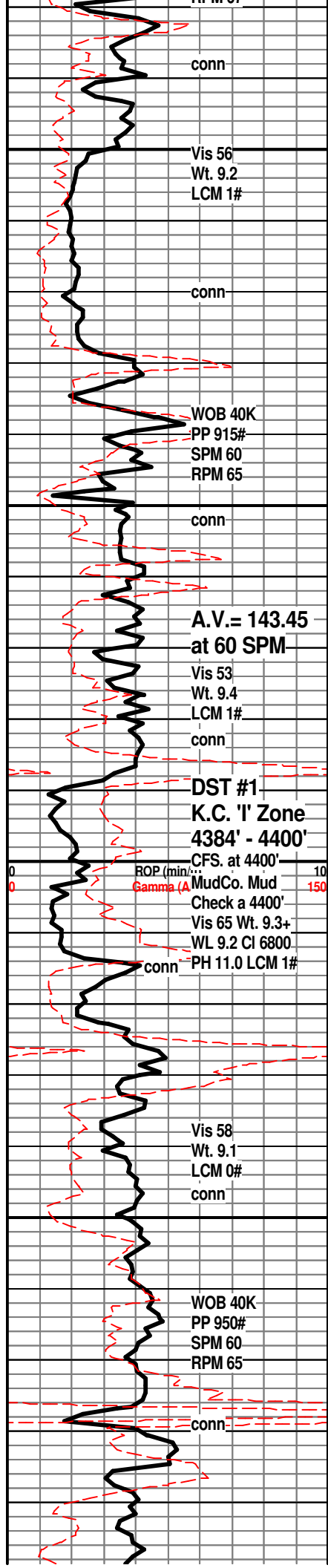
LM; tan to cream, lt brn, fxln, some soft w/fair interxln and p-p por, minor chalky mtx, occ lt yel min fluor, no stn or odor, ns.

LM; tan to lt brn, most dense - micritic, rare off wh to lt gy cht, tite, ns.

LM; off wh, highly foss, occ interpart por, ns.

DOL; tan to buff, sucrosic text, fair interxln por, dull yel min fluor, no stn or odor, ns.





LM; lt to med brn, hd, blocky, scat lt gy to lt brn occ foss cht, no vis por, ns.

LM; tan to lt brn, highly foss ip, fair interpart por, bcm dense, scat wh cht, no fluor, ns.

LM; off wh, buff, wh, fxln, much soft chalk and chalky mtx, fair interxln w/occ vug por, dull yel min flour, no vis stn, no odor, no gas kick

LM; off wh, tan, f to med xln, occ cse spar calc xtals, interbdd wh cht, fair interxln por, no stn or odor, ns.

LM; med brn, foss ip, trc poor interpart por, ns.

SH; med gy, platy, occ pyr
LANSING/KC 'H' 4341(-2150)

LM; lt brn, foss - partly oolitic, poorly dev. oomoldic por, most well cem, dull to occ lt yel fluor, no stn or odor, no gas kick

LM; lt brn, most dense, scat gy cht, tite

SH; med gy, grn, platy

LM; tan to lt brn, foss - oolitic, abnt foss mat with oolites, weakly cem - fair interpart por, med yel fluor, SSFO, gd odor when crushed, fair to gd cut, few gas bubbles

LM; lt to med brn, most dense - micritic, hd, scat gy cht, no vis por, ns.

K.C. 'I' ZONE 4389(-2198)

LM; off wh, buff, foss w/fair interpart w/scat p-p por, spotted to occ even lt brn oil stn, med/occ brite yel fluor, SSFO, gd odor, fair to gd cut

DST #1: Kansas City 'I' 4384' - 4400'
Corrected Depths to Log

LM; off wh, tan, fxln, scat gd p-p and occ interxln por, foss ip, chalky mtx ip, dull yel fluor, no vis stn, no odor, no gas kick

LM; tan to off wh, buff, foss to occ fxln, scat poor interxln/poor interpart por, minor amt of chalk and chalky mtx, no fluor, no stn/odor, ns.

SH; dk gy, blk, platy, occ pyr

K.C. 'J' ZONE 4433(-2244)

LM; tan to lt brn, buff, foss w/scat small pellets and foss hash, most tite, poor interpart por, no fluor, no stn or odor, ns.

LM; med brn, some gritty text, hd, no vis por, ns.

SH; med gy, occ gy grn, platy, calc

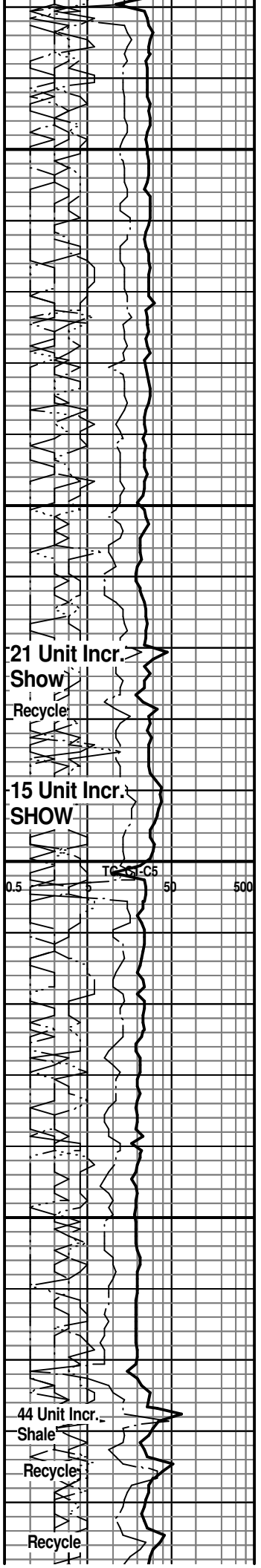
LM; med brn, gy brn, argil ip, dense, no vis por, scat off wh to opaque cht, tite

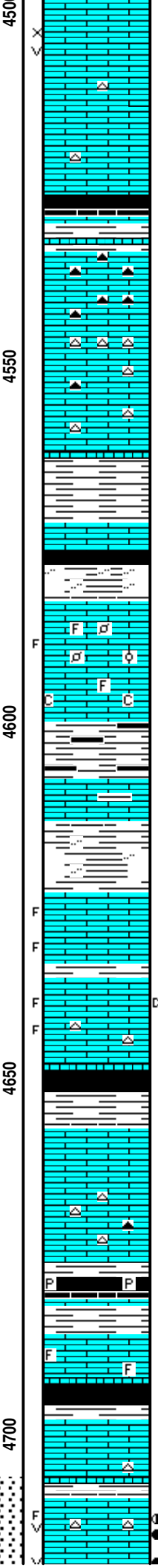
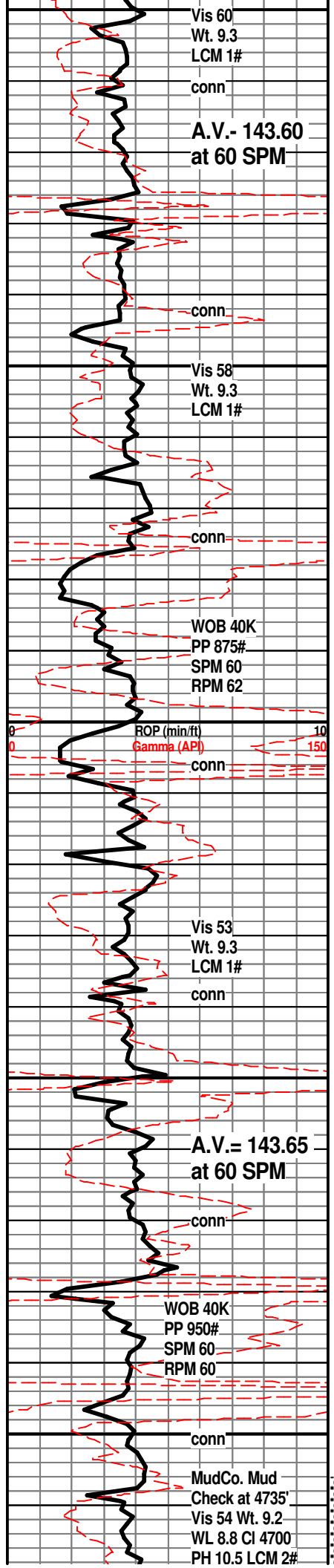
STARK SHALE 4476(-2285)

SH; blk, carb, blocky, scat pyr

SWOPE 4488(-2297)

LM; off wh, buff, fxln w/abnt spar calc xtals, some sucrosic text, partly dolomitic, much med yel min flour, fair interxln por, no vis stn, no odor, ns.





LM; tan to cream, buff, f to med xln, scat fair interxln w/occ vug por, dull yel fluor, no vis stn, no odor, ns.

LM; lt to med brn, hd, blocky, most micritic, rare gy cht, tite

SH; blk, carb ip, trc gas, blocky

HERTHA 4534(-2343)
LM; med brn, blocky, abnt dk brn to blk cht, hd, no vis por, ns.

LM; lt to med brn, fxln to micritic, scat amber to org cht, hd, no fluor, no stn or odor, ns.

LM; med brn, hd, blocky, rarely cherty, most micritic, tite

BASE KANSAS CITY 4563(-2372)
SH; med gy, grn, firm

SH; dk grn, blk, some varic, silty ip, fairly soft

PLEASANTON 4583(-2392)
LM; tan to lt brn, buff, fxln w/scat foss mat, small pellets and ooids, well cem, dull yel min fluor, trc fracs, no stn or odor, ns.

LM; lt brn, buff, wh, med xln ip, some chalky mtz, no vis por, ns.

SH; varic, platy, some blk

MARMATON 4608(-2417)
LM; lt brn, lt gy brn, dense, micritic, occ grn tint - partly argil, ns.

SH; varic, gy, grn, rust red, platy, occ silty

LM; lt brn, tan, fxln w/scat spar calc, occ fracs w/calc, med yel min fluor, no vis stn, no odor, no gas kick

LM; tan to lt brn, most dense - micritic, occ fracs w/blk - dk brn residual oil stn and gilsonite, no live shows, dull yel fluor, no gas kick, scat brn to amber cht

SH; blk, med gy, carb ip.

PAWNEE 4657(-2466)
LM; tan to lt brn, dense, micritic, blocky, no vis por, no fluor, ns.

LM; lt brn, most dense - micritic, scat brn to occ amber cht, no vis por, no fluor, ns.

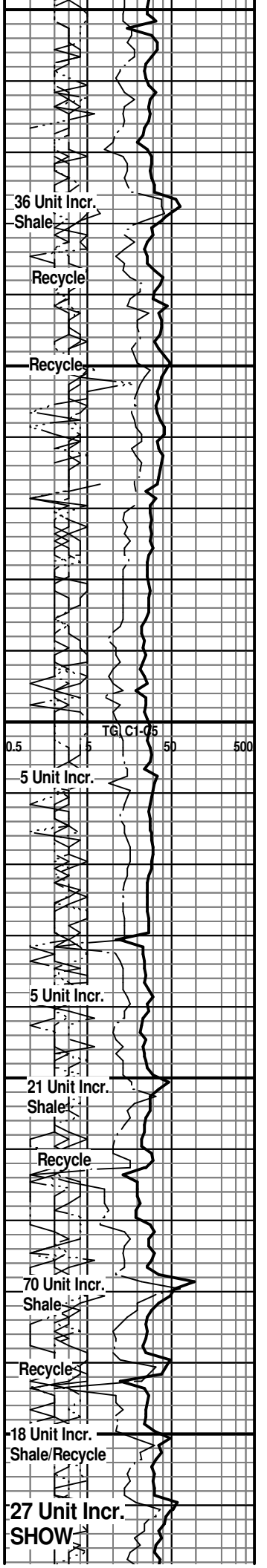
SH; blk, blocky, gassy, occ pyr

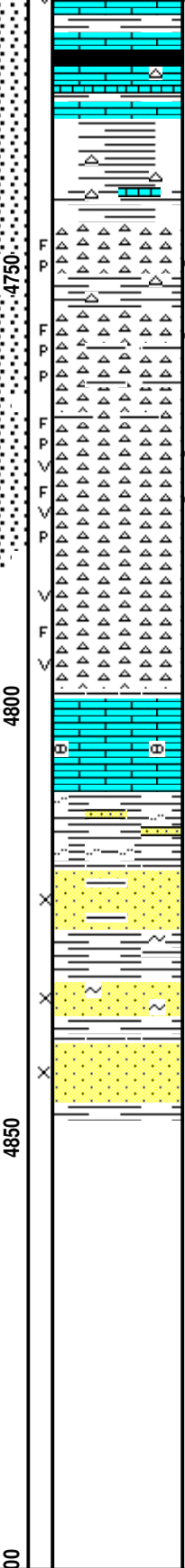
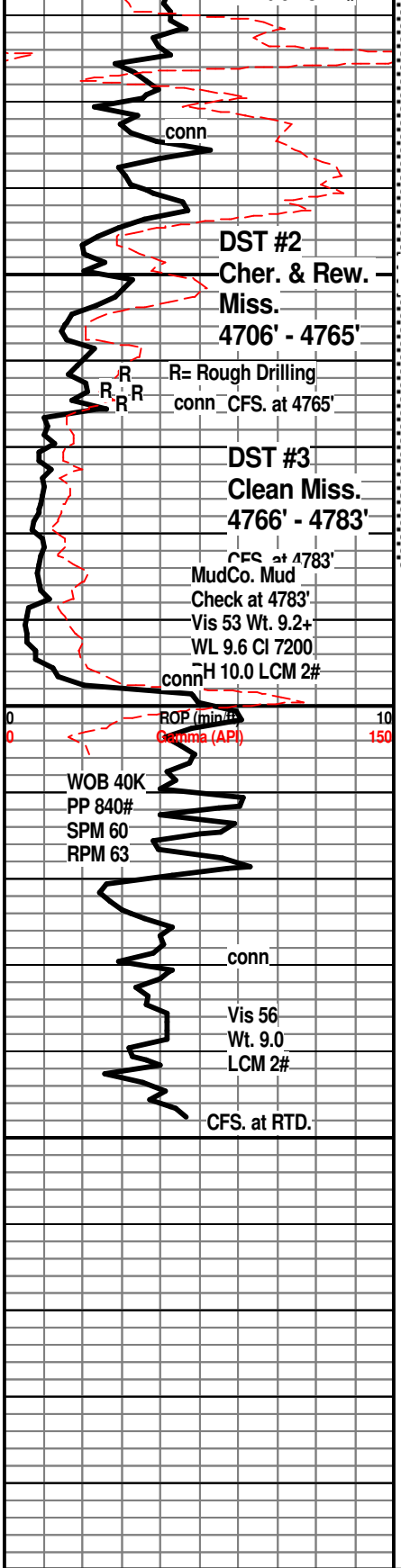
LM; lt to med brn, rare foss, most dense - micritic, no vis por, no fluor, ns.

CHEROKEE SHALE 4693(-2502)
SH; blk, dk gy, platy

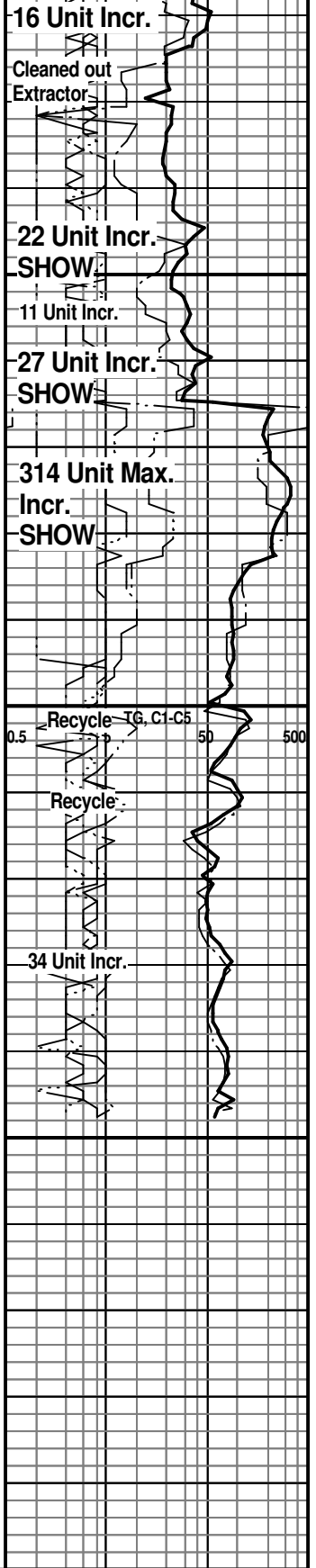
LM; med brn, hd, most micritic, blocky, rare brn cht, no vis por, no fluor, ns.

LM; tan to lt brn, fxln, scat dk brn to blk live oil stn, scat vug por, few fracs, lt yel fluor, poss. faint odor, gd cut, also cht w/fracs and oil stn





LM; lt brn, 10ss ip, scat med to dk brn even oil stn, brite yel fluor, faint odor, gd cut, SSFO
 SH; blk, carb ip, thinly bdd
 LM; lt to med brn, hd, few pcs w/blk dead oil stn/gils, some cht w/fracs and dead oil also
BASE OF CHER. LMST 4732(-2541)
 SH; varic, some weathered cht, lmst
REWORKED MISS. 4744(-2553)
 CHT; brn, wh, varic, fresh and tripolitic, much blk tar/gils, some med brn spotted oil stn in trip cht, few gas bubbles, faint odor
 CHT; wh/off wh, most fresh, fracs, some trip cht w/live med brn spotted oil stn, stn on frac faces, scat p-p por, lt yel fluor, v. faint odor
CLEAN MISS. CHERT 4764(-2573)
 CHT; wh, off wh, fresh and trip, much spotted to even lt/med brn oil stn, gd hydrocarbon odor, much brite yel fluor, SFO, few gas bubbles, fracs w/occ gd p-p and scat lrg vug por, fair/occ gd cut
DST #3: Clean Miss. 4766' - 4783'
Corrected Depths to Log
 CHT; wh to off wh, most fresh, porc, most barren of shows, rare edge stn on frac faces,, no odor, rare lt yel fluor, scat small vug por
 LM; red, red brn, oxidized ip, some cse xln, also dk grn hd partly nodular tite lmst.
KINDERHOOK SHALE 4810(-2619)
 SH; med gy, gy grn, silty ip, some grn waxy sh, platy, interbdd vf to f gr ss strngs
KINDERHOOK SAND 4819(-2628)
 SS; wh, pale grn, vf to f gr qtz, clusters, some tite, fair to gd intergran por, rare glau, some argil ss, no fluor, no stn or odor, ns.
 SS; wh, pale grn, glau ip, some hd - qtzitic, most w/fair intergran por, no fluor, no stn or odor, no sample shows
 SS; clr, wh, f gr qtz, cleaner than above, most fri, clusters, gd intergran por, no stn/odor, ns.
RTD. 4850' at 5:15 AM. 6/27/18
LTD. 4848'
Halliburton "Triple Combo" ACRT, NEU/DEN and Microlog
NOTE: This log was shifted upward by 2' for correlation purposes with the Halliburton logs.





PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	06/21/2018
INVOICE NUMBER			
92737860			

Pratt (620) 672-1201
 B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Pop 1-17
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

6076 6720 POP

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41115140	19843		Net - 30 days	07/21/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 06/20/2018 to 06/20/2018				
0041115140				
171816587A Cement-New Well Casing/Pi 06/20/2018 Cement/Surface				
A-Con' Blend	175.00	EA	10.84	1,896.93 T
60/40 POZ	175.00	EA	7.23	1,264.62 T
Celloflake	88.00	EA	2.23	196.08 T
Calcium Chloride	948.00	EA	0.63	599.43 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	135.49	135.49
"Guide Shoe - Regular, 8 5/8"" (Blue)"	1.00	EA	228.84	228.84
"Baffle Plate Alum., 8 5/8"" (Blue)"	1.00	EA	102.37	102.37
"Unit Mileage Chg (PU, cars one way)"	40.00	MI	2.71	108.40
Heavy Equipment Mileage	80.00	MI	4.52	361.32
632---Propp & Bulk Del Chgs per ton mil	1.00	EA	950.94	950.94
Depth Charge; 501'-1000'	1.00	EA	722.64	722.64
Blending & Mixing Service Charge	350.00	BAG	0.84	295.08
Plug Container Util. Chg.	1.00	EA	150.55	150.55
"Service Supervisor, first 8 hrs on loc.	1.00	EA	105.38	105.38

PAID
 53569
 JUL 10 2018
 SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	7,118.07
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	296.78
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	7,414.85
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

Customer <i>Herman Koeb</i>	Lease No.	Date <i>6/20/2018</i>
Lease <i>POP</i>	Well # <i>1-17</i>	
Field Order # <i>16387</i>	Station	Casing <i>8 5/8</i>
Type Job <i>2421 8 5/8 Surface</i>	Formation <i>TD-652</i>	Legal Description <i>17-275-18W</i>
	Depth <i>647</i>	County <i>Nowe</i>
		State <i>KS</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>8 5/8</i>				Pre Pad	Max		5 Min.	
Depth <i>647</i>	Depth	From	To	Pad	Min		10 Min.	
Volume <i>412</i>	Volume	From	To	Frac	Avg		15 Min.	
Max Press <i>500</i>	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection	Annulus Vol.	From	To	Flush <i>Water</i>	Gas Volume		Total Load	
Plug Depth <i>605</i>	Packer Depth	From	To					

Customer Representative <i>Lenny Selass</i>	Station Manager <i>Justin Westerman</i>	Treater <i>Darin Franklin</i>
---	---	-------------------------------

Service Units	<i>92911</i>	<i>84981</i>	<i>19843</i>	<i>19903</i>	<i>73768</i>				
Driver Names	<i>Darin</i>	<i>Ed</i>	<i>Ed</i>	<i>Deuce</i>	<i>Deuce</i>				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>2:45pm</i>					<i>On location / safety meeting</i>
					<i>175SK A-Con Blank Cement, 3% Calcium Chloride, 0.25 pps Cellulose</i>
					<i>12.0 pps, 2.47 v. 12, 14.49 water</i>
					<i>175SK 60/40 Poz. 3% Calcium Chloride</i>
					<i>0.25 pps Cellulose</i>
					<i>14.8 pps, 1.21 v. 12, 5.18 water</i>
<i>7:00pm</i>	<i>200</i>		<i>3</i>		
	<i>200</i>		<i>77</i>	<i>5</i>	<i>Pump 3 bbls water</i>
	<i>200</i>		<i>38</i>	<i>5</i>	<i>mix 175SK test cement</i>
				<i>5</i>	<i>mix 175SK test cement</i>
					<i>Shut down</i>
					<i>Release Plug</i>
	<i>200</i>		<i>0</i>	<i>3</i>	<i>Static displacement</i>
<i>7:35pm</i>	<i>500</i>		<i>39</i>	<i>3</i>	<i>Bump Plug</i>
					<i>Shut in</i>
					<i>Cement did circulate</i>
<i>7:45pm</i>					<i>Job complete / Drive away</i>
					<i>Thank you!!!</i>

19
3



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	06/29/2018
INVOICE NUMBER			
92745441			

Pratt (620) 672-1201
 B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Pop 1-17
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

6076 - 6420 - Pop

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41116837	19843		Net - 30 days	07/29/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 06/27/2018 to 06/27/2018				
0041116837				
171817026A Cement-New Well Casing/Pi 06/27/2018 Cement/PTA				
60/40 POZ	210.00	EA	7.23	1,517.54 T
Cement Gel	362.00	EA	0.15	54.50 T
"Unit Mileage Chg (PU, cars one way)"	40.00	MI	2.71	108.40
Heavy Equipment Mileage	80.00	MI	4.52	361.32
Proppant & Bulk Del. Chgs., per ton mil	362.00	EA	1.51	544.99
Depth Charge; 1001'-2000'	1.00	EA	903.30	903.30
Blending & Mixing Service Charge	210.00	BAG	0.84	177.05
"Service Supervisor, first 8 hrs on loc.	1.00	EA	105.10	105.10

PAID
93684
JUL 17 2018

SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	3,772.20
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	117.90
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	3,890.10
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

BASIC

energy services, L.P.

TREATMENT REPORT

Customer <i>Hecman Loch</i>	Lease No.	Date <i>6-27-18</i>
Lease <i>PDP</i>	Well # <i>1-17</i>	
Field Order #	Station <i>Pratt Kansas</i>	Casing
Type Job <i>PTA 241</i>	Depth	County <i>Kiowa</i>
	Formation	State <i>KS</i>
		Legal Description <i>17-27-16W</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad		Max		5 Min.
Volume	Volume	From	To	Pad		Min		10 Min.
Max Press	Max Press	From	To	Frac		Avg		15 Min.
Well Connection	Annulus Vol.	From	To			HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush		Gas Volume		Total Load

Customer Representative <i>Larry Salgado</i>	Station Manager	Treater <i>Fernando Cardenas</i>
Service Units <i>75668 89480 21010 19902 73768</i>		
Driver Names <i>Fernando Kevan Kevan Devin Devin</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>19:00</i>					<i>Arrived on location / connected to well</i>
<i>19:15</i>					<i>Spot in trucks & Rinse</i>
					<i>210 Sbls Gellupoz 4" frac</i>
					<i>used 1.43, water 6.92, 13.400L</i>
<i>20:03</i>		<i>200</i>	<i>15</i>	<i>5</i>	<i>Pump H2O ahead</i>
<i>20:06</i>		<i>300</i>	<i>12.7</i>	<i>5</i>	<i>Mix 50% at 12.5 gpm @ 1190'</i>
<i>20:09</i>		<i>200</i>	<i>13.5</i>	<i>5</i>	<i>Pump H2O ahead</i>
<i>20:39</i>		<i>100</i>	<i>15</i>	<i>5</i>	<i>Pump H2O ahead</i>
<i>20:41</i>		<i>100</i>	<i>12.7</i>	<i>15</i>	<i>Mix 50% at 13.4 gpm @ 1190'</i>
<i>20:45</i>		<i>100</i>	<i>6.4</i>	<i>5</i>	<i>Pump H2O ahead</i>
<i>20:54</i>		<i>50</i>	<i>5</i>	<i>4</i>	<i>Pump H2O ahead</i>
<i>20:55</i>		<i>50</i>	<i>10</i>	<i>4</i>	<i>Mix 40% at 13.4 gpm @ 1190'</i>
<i>20:58</i>			<i>4</i>		<i>Pump H2O ahead</i>
<i>21:17</i>		<i>0</i>	<i>35</i>	<i>3</i>	<i>Mix 20% at 13.4 gpm Plug 60'</i>
<i>21:24</i>		<i>0</i>	<i>7</i>	<i>3</i>	<i>Plug back in with 30% at 13.4 gpm</i>
<i>22:00</i>		<i>0</i>	<i>5</i>	<i>3</i>	<i>Plug in place with 30% at 13.4 gpm</i>
<i>22:10</i>					<i>P.A. Down, Leave location</i>
					<i>Thank you!!</i>
					<i>Fernando Cardenas</i>



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L Loeb
PO Box 839
Lawrenceville, IL 62439
ATTN: Jon Christensen

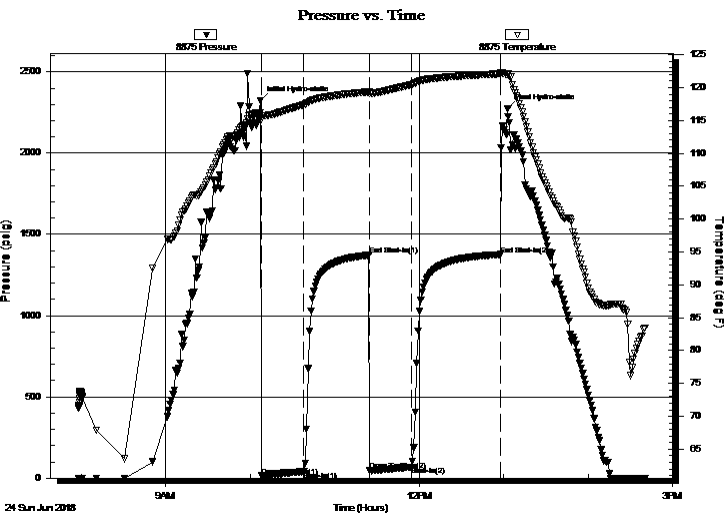
17-27S-18W Kiowa
Pop 1-17
Job Ticket: 63979 **DST#: 1**
Test Start: 2018.06.24 @ 07:58:11

GENERAL INFORMATION:

Formation: **KC "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:07:58
Time Test Ended: 14:40:13
Interval: 4386.00 ft (KB) To 4402.00 ft (KB) (TVD)
Total Depth: 4402.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74
Reference Elevations: 2191.00 ft (KB)
2180.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8875 Inside
Press@RunDepth: 70.11 psig @ 4387.00 ft (KB) Capacity: psig
Start Date: 2018.06.24 End Date: 2018.06.24 Last Calib.: 2018.06.24
Start Time: 07:58:12 End Time: 14:40:13 Time On Btm: 2018.06.24 @ 10:07:13
Time Off Btm: 2018.06.24 @ 13:02:58

TEST COMMENT: IF: Weak Blow , Built to 4.25 inch
IS: No Blow Back
FF: Weak Blow , Built to 1.5 inch
FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2324.42	116.22	Initial Hydro-static
1	14.00	115.20	Open To Flow (1)
31	40.83	117.41	Shut-In(1)
78	1371.96	119.32	End Shut-In(1)
78	45.92	119.06	Open To Flow (2)
108	70.11	120.44	Shut-In(2)
171	1376.05	122.12	End Shut-In(2)
176	2274.56	122.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	SMCW 14%M 86%W	0.54

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb
PO Box 839
Lawrenceville, IL 62439
ATTN: Jon Christensen

17-27S-18W Kiowa
Pop 1-17
Job Ticket: 63979 **DST#: 1**
Test Start: 2018.06.24 @ 07:58:11

Mud and Cushion Information

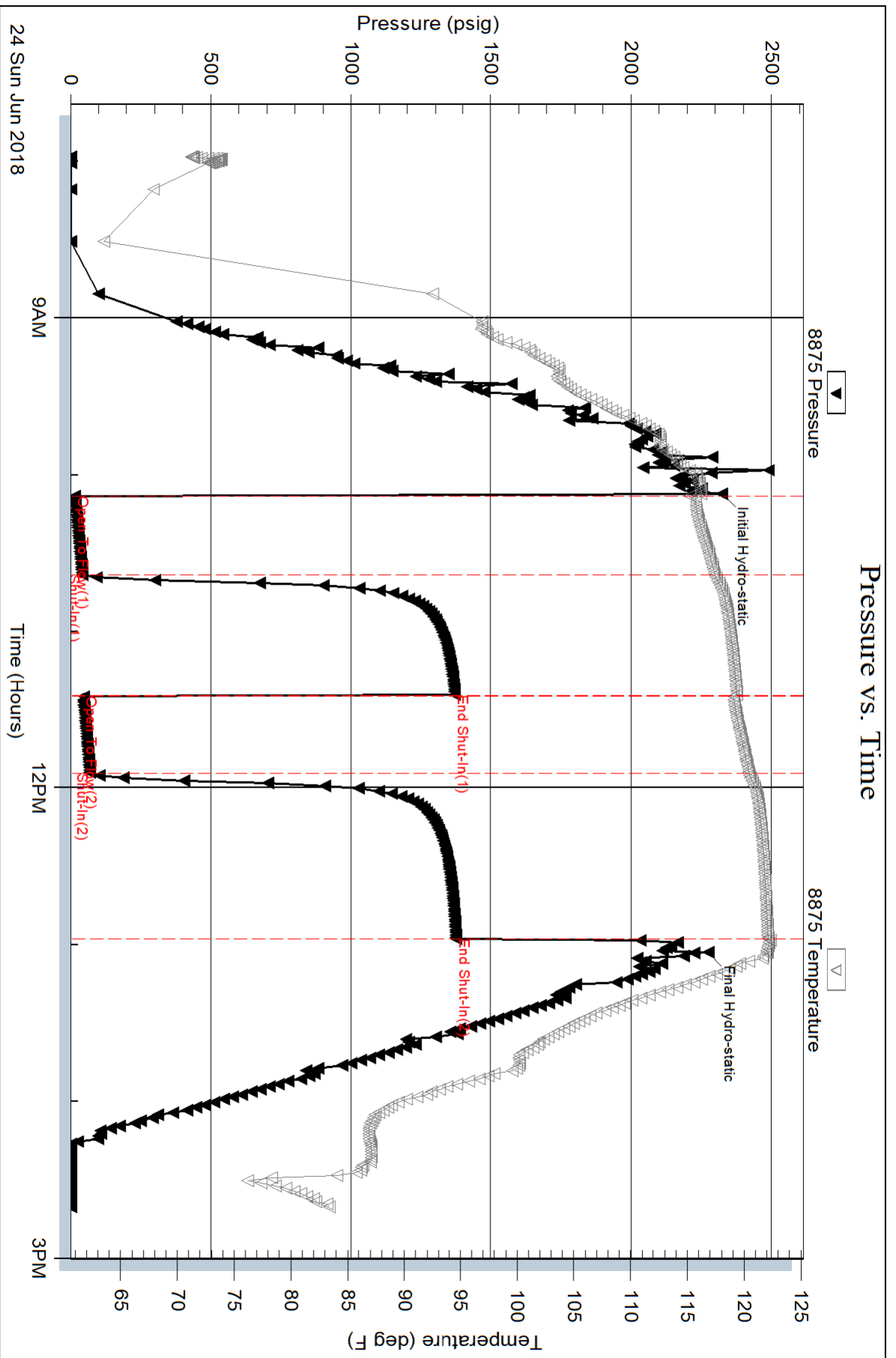
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	76000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 0.02 inches			

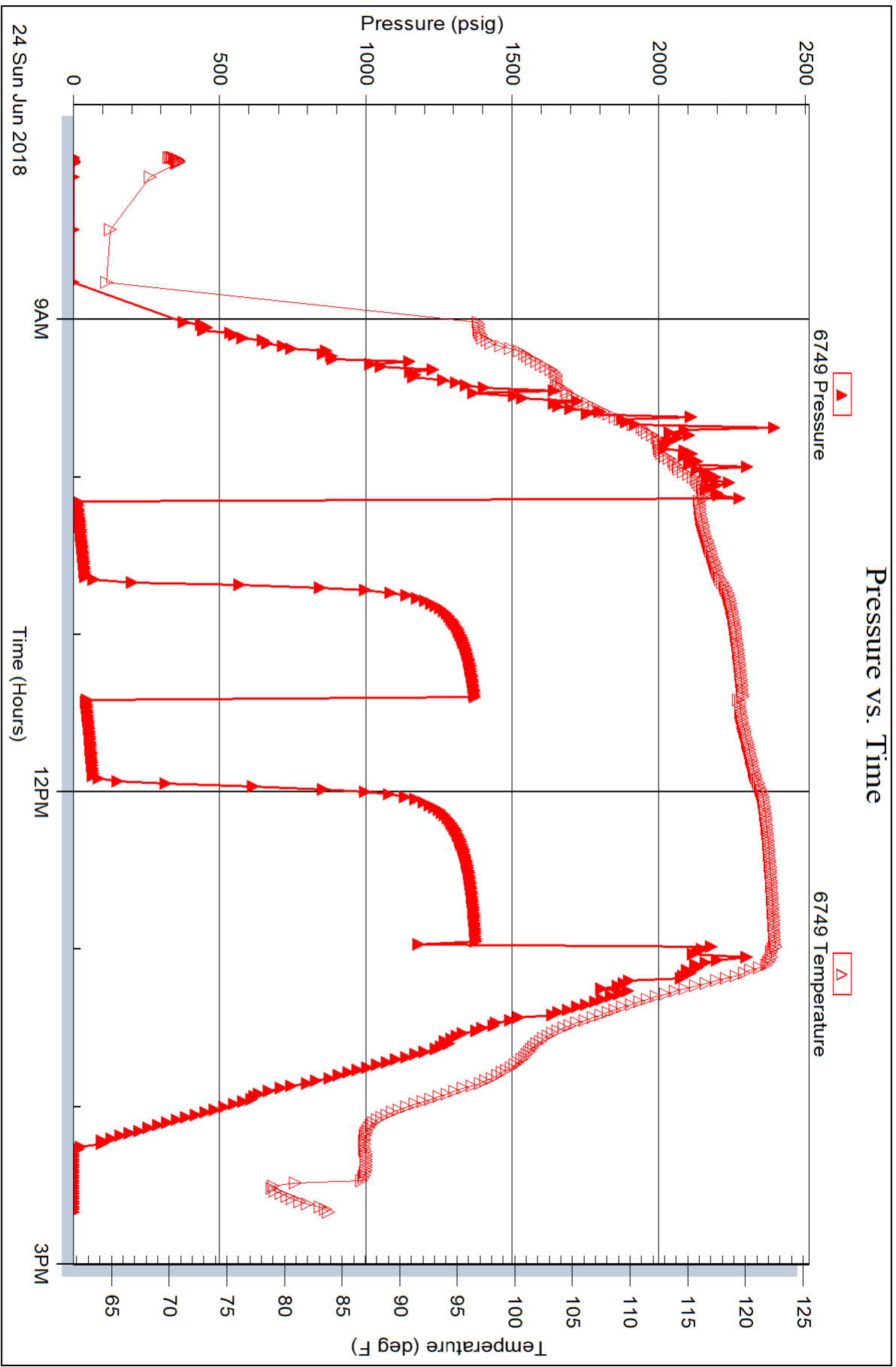
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	SMCW 14%M 86%W	0.541

Total Length: 110.00 ft Total Volume: 0.541 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW was .09 @ 80 degrees







**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb
PO Box 839
Lawrenceville, IL 62439
ATTN: Jon Christensen

17-27S-18W Kiowa
Pop 1-17
Job Ticket: 63980 **DST#: 2**
Test Start: 2018.06.25 @ 22:32:05

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4700.00 ppm			
Filter Cake: 0.02 inches			

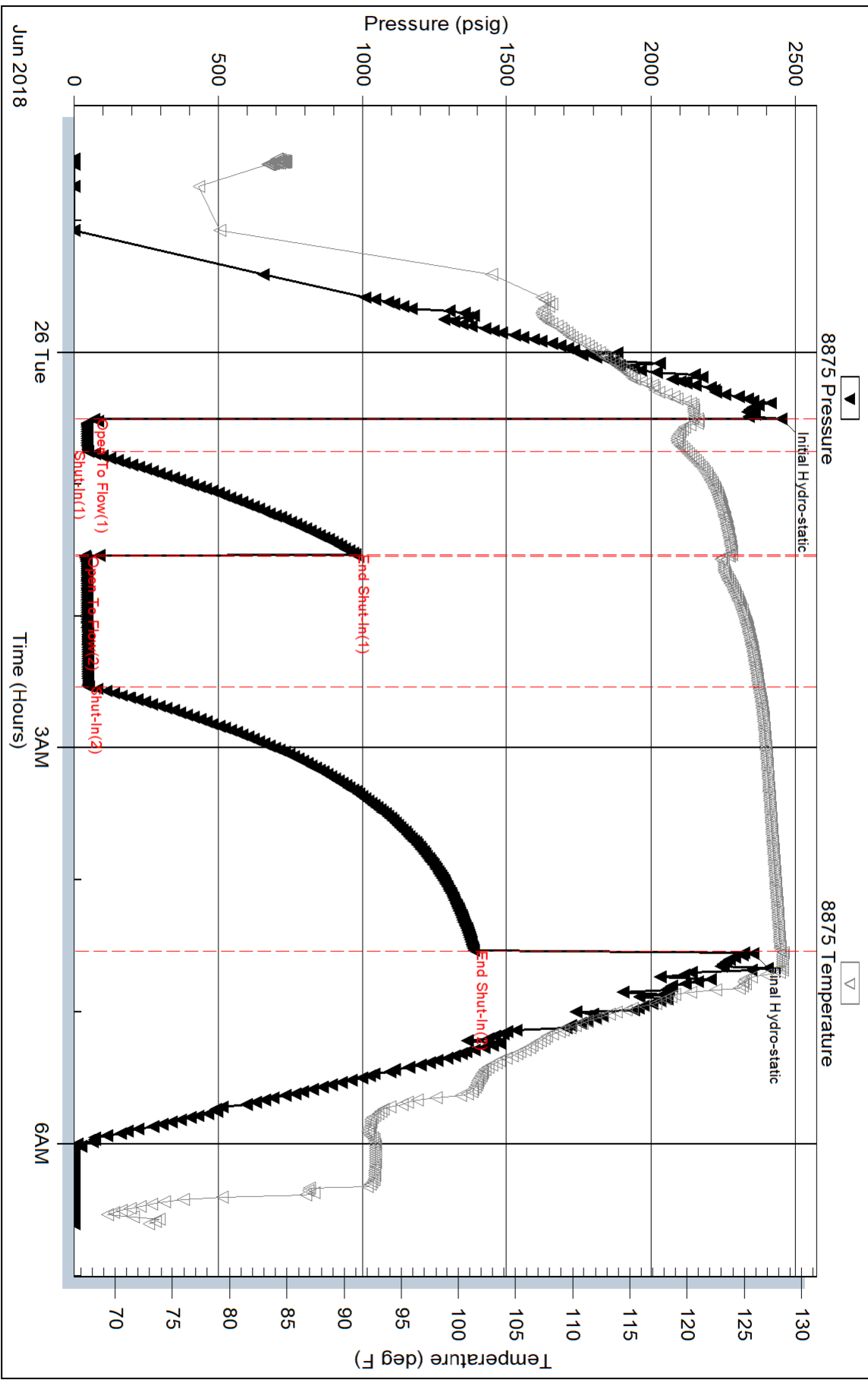
Recovery Information

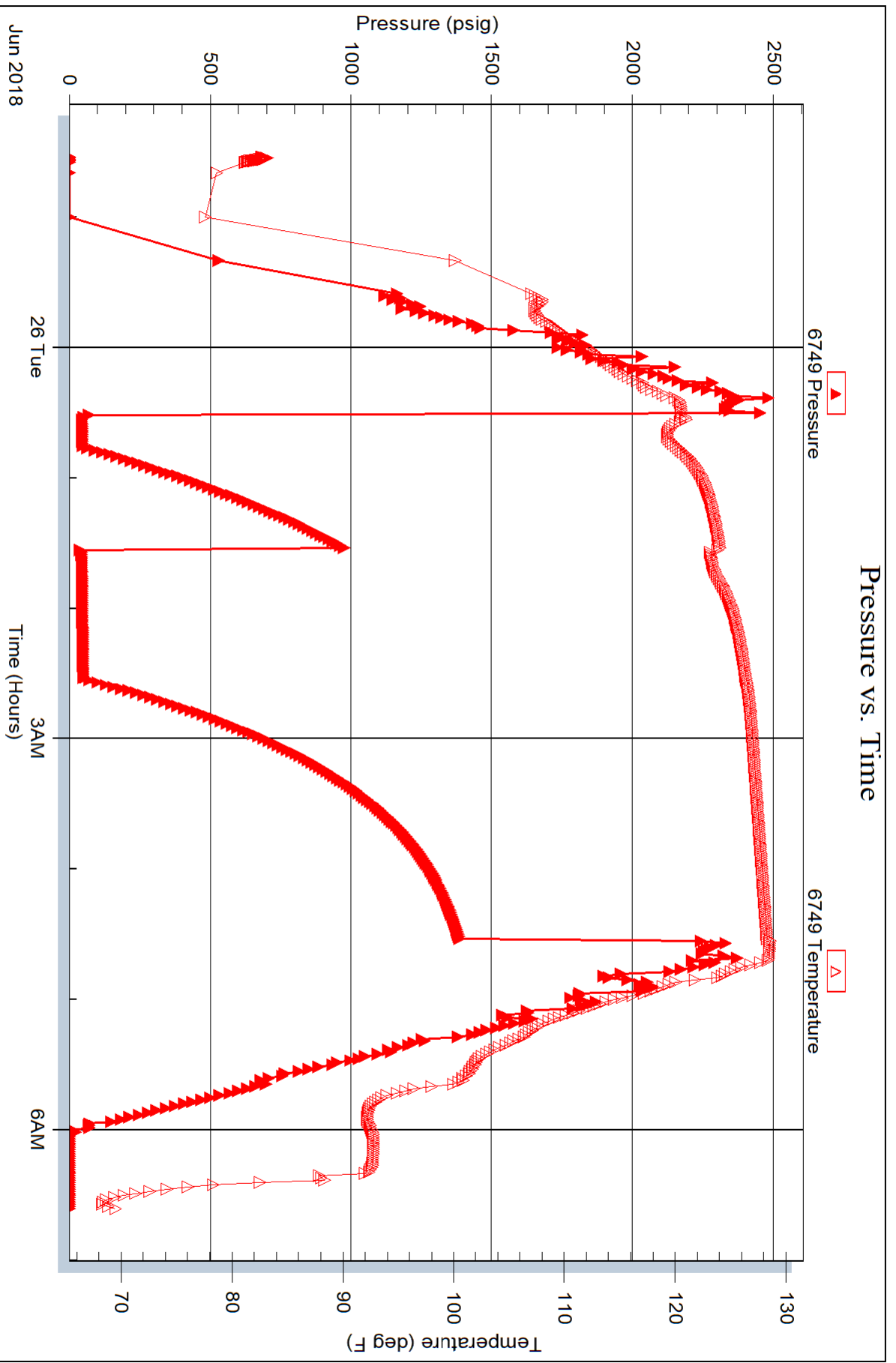
Recovery Table

Length ft	Description	Volume bbl
0.00	2343 GIP	0.000
10.00	SGCM 5%G 95%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb
 PO Box 839
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

17-27S-18W Kiowa
Pop 1-17
 Job Ticket: 63981 **DST#: 3**
 Test Start: 2018.06.26 @ 13:50:04

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:24:36
 Time Test Ended: 22:32:06
 Interval: **4768.00 ft (KB) To 4785.00 ft (KB) (TVD)**
 Total Depth: 4785.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 2191.00 ft (KB)
 2180.00 ft (CF)
 KB to GR/CF: 11.00 ft

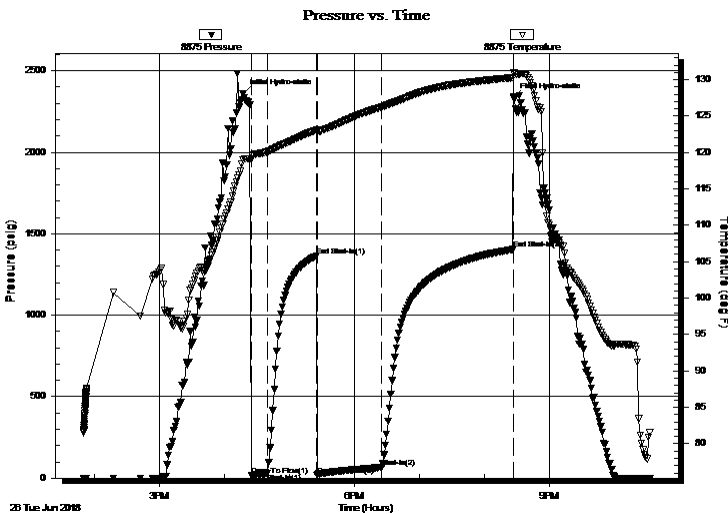
Serial #: 8875

Inside

Press@RunDepth: 65.94 psig @ 4769.00 ft (KB) Capacity: psig
 Start Date: 2018.06.26 End Date: 2018.06.26 Last Calib.: 2018.06.26
 Start Time: 13:50:05 End Time: 22:32:06 Time On Btm: 2018.06.26 @ 16:17:06
 Time Off Btm: 2018.06.26 @ 20:26:51

TEST COMMENT: IF: Strong Blow , BOB in 6 minutes, Built to 25.5 inches
 IS: No Blow Back
 FF: Strong Blow , BOB in 30 seconds, Built to 51 inches
 FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2359.73	118.93	Initial Hydro-static
8	17.87	119.00	Open To Flow (1)
23	28.93	120.09	Shut-In(1)
68	1364.65	123.05	End Shut-In(1)
69	18.08	122.84	Open To Flow (2)
128	65.94	126.24	Shut-In(2)
249	1404.37	130.31	End Shut-In(2)
250	2337.83	130.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	527 GIP	0.00
70.00	MCW 24%M 76%W	0.34

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb
PO Box 839
Lawrenceville, IL 62439
ATTN: Jon Christensen

17-27S-18W Kiowa
Pop 1-17
Job Ticket: 63981 **DST#: 3**
Test Start: 2018.06.26 @ 13:50:04

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:	48000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4700.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	527 GIP	0.000
70.00	MCW 24%M 76%W	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW was .14 @ 79 degrees

Pressure vs. Time

