KOLAR Document ID: 1465163

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 # 31980
Name: Lotus Operating Company, L.L.C.
Address 1: 100 S MAIN ST, STE 420
Address 2:
City: WICHITA State: KS Zip: 67202 + 3737
Contact Person: Tim Hellman
Phone: (316) 262-1077
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Keith Reavis
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 #:

5/31/2019 — Spud Date or Recompletion Date
6/7/2019 — Date Reached TD
6/8/2019 — Completion Date or Recompletion Date

API No.: 15-151-22492-00-00
Spot Description:
SE - SE - SE - SW Sec. 13 Twp. 29 S. R. 15 ☐ East ☑ West
165 Feet from ☐ North / ☑ South Line of Section
2390 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Pratt
Lease Name: PERKINS Well #: 2
Field Name:
Producing Formation: dry hole
Elevation: Ground: 1995 Kelly Bushing: 2008
Total Vertical Depth: 4955 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 310 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: 14000 ppm Fluid volume: 160 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Lotus Operating Co LLC
Lease Name: Hanwit SWD License #: 3980
Quarter NE Sec. 8 Twp. 29 S. R. 15 ☐ East ☑ West
County: Pratt Permit #: D28967

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: 07/08/2019
☐ **Confidential Release Date:** 07/07/2021
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 07/09/2019

Operator Name: Lotus Operating Company, L.L.C. Lease Name: PERKINS Well #: 2

Sec. 13 Twp. 29 S. R. 15 ☐ East ☑ West County: Pratt

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	
Samples Sent to Geological Survey	☑ Yes	☐ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Surface	12.24	8.625	23	310	poz mix 60/40	225	2% gel, 3% cc

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Lotus Operating Company, L.L.C.
Well Name	PERKINS 2
Doc ID	1465163

All Electric Logs Run

Dual Induction
Frac
Micro
Sonic
Neutron/Density Porosity

Form	ACO1 - Well Completion
Operator	Lotus Operating Company, L.L.C.
Well Name	PERKINS 2
Doc ID	1465163

Tops

Name	Top	Datum
Heebner	3875	-1867
Lansing	4060	-2052
BKC	4438	-2430
Miss	4522	-2514
Viola	4682	-2674
Simp Sh	4819	-2811
Arb	4927	9-291
LTD	4955	-2947

Form	ACO1 - Well Completion
Operator	Lotus Operating Company, L.L.C.
Well Name	PERKINS 2
Doc ID	1465163

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.24	8.625	23	310	poz mix 60/40	225	2% gel, 3% cc

OPERATOR

Company:	Lotus Operating Company, LLC		
Address:	100 S. Main St. Suite 420 Wichita, KS 67202		
Contact Geologist:	Tim Hellman		
Contact Phone Nbr:	316-262-1077		
Well Name:	Perkins #2		
Location:	Sec 13-T29S-R15W		
API:	15-151-22492-0000		
Pool:		Field:	Wildcat
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	Perkins #2		
Surface Location:	Sec 13-T29S-R15W		
Bottom Location:			
API:	15-151-22492-0000		
License Number:	31980		
Spud Date:	5/31/2019	Time:	7:00 PM
Region:	Pratt		
Drilling Completed:	6/7/2019	Time:	12:45 PM
Surface Coordinates:	165' FSL & 2390' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	1995.00ft		
K.B. Elevation:	2008.00ft		
Logged Interval:	3650.00ft	To:	4955.00ft
Total Depth:	4955.00ft		
Formation:	Arbuckle		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-98.91317882
Latitude:	37.5145686
N/S Co-ord:	165' FSL
E/W Co-ord:	2390' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company:	Keith Reavis, Inc.		
Address:	3420 22nd Street Great Bend, KS 67530		
Phone Nbr:	620-617-4091		
Logged By:	KLG #136	Name:	Keith Reavis

CONTRACTOR

Contractor:	Duke Drilling Company		
Rig #:	9		
Rig Type:	mud rotary		
Spud Date:	5/31/2019	Time:	7:00 PM

Spud Date:	5/31/2019	Time:	7:00 PM
TD Date:	6/7/2019	Time:	12:45 PM
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation:	2008.00ft	Ground Elevation:	1995.00ft
K.B. to Ground:	13.00ft		

NOTES

Due to negative drill stem test results and electrical log analysis, the operator elected to plug the Perkins #2 as a dry test.

A Bloodhound gas detection system operated by Bluestem Labs was employed during the drilling of this well. ROP and gas curves were imported into this log from the Bloodhound system. Gamma ray and caliper curves were imported from the electrical log suite.

Samples were saved and will be available for review at the Kansas Geological Survey Sample Library located in Wichita, KS.

Respectfully submitted,
Keith Reavis

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
06/03/2019	3503	Geologist Keith Reavis on location @ 0930 hrs, 3606 ft, drilling ahead, Heebner, Toronto, Douglas
06/04/2019	4162	drilling ahead, Lansing, Dennis, Swope, Hertha, BKC
06/05/2019	4481	show and gas kick in Marmaton warrants test, short trip, ctch, TOH w/bit in w/tools, conduct and complete DST #1, successful test, TIH w/bit, drill Massey, Mississippian, show and kick in Miss warrants test, TOH w/bit
06/06/2019	4557	finish tripping bit, in w/tools, conduct and complete DST #2, successful test, TIH w/bit, resume drilling Miss, Kinderhook, Viola
06/07/2019	4877	drilling ahead, Viola, Simpson, Arbuckle, RTD 4955 ft. @ 1245 hrs, short trip, TOH, rig up and run open hole logs, geologist off loc 2355 hrs

well comparison sheet

	DRILLING WELL Perkins #2 165' FSL 2390' FWL Sec 13-T29S-R15W				COMPARISON WELL Lotus - Perkins #1 330' FSL 1320' FWL Sec 13-T29S-R15W			
	2008 KB				2011 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log
Heebner	3876	-1868	3875	-1867	3868	-1857	-11	-10
Toronto	3896	-1888	3893	-1885	3887	-1876	-12	-9
Douglas	3917	-1909	3914	-1906	3908	-1897	-12	-9
Brown Lime	4046	-2038	4044	-2036	4032	-2021	-17	-15
Lansing	4060	-2052	4060	-2052	4044	-2033	-19	-19
B zone	4089	-2081	4087	-2079	4073	-2062	-19	-17
H zone	4234	-2226	4234	-2226	4216	-2205	-21	-21
Dennis	4323	-2315	4322	-2314	4303	-2292	-23	-22
Stark	4364	-2356	4359	-2351	4345	-2334	-22	-17
Swope	4371	-2363	4365	-2357	4352	-2341	-22	-16
Hertha	4406	-2398	4405	-2397	4390	-2379	-19	-18
BKC	4441	-2433	4438	-2430	4421	-2410	-23	-20
Marmaton	4446	-2438	4449	-2441	4432	-2421	-17	-20
Massey	4500	-2492	4498	-2490	4470	-2459	-33	-31
Cherokee Sh.	4521	-2513	4521	-2513	4496	-2485	-28	-28
Miss. Chert	4522	-2514	4522	-2514	NP			
Kindhk Chert	4646	-2638	4647	-2639	4505	-2494	-144	-145

Kindhk Shale	4657	-2649	4657	-2649	4515	-2504	-145	-145
Viola	4680	-2672	4682	-2674	4540	-2529	-143	-145
Simpson Shale	4845	-2837	4819	-2811	4704	-2693	-144	-118
Simpson Sand	4862	-2854	4860	-2852	4741	-2730	-124	-122
Arbuckle	4925	-2917	4927	-2919	4804	-2793	-124	-126
RTD	4955	-2947	4955	-2947	4842	-2831	-116	-116

Drill Stem Test #1

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Lotus Operating Co

100 s. main st ste 420 wichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65789 **DST#: 1**

Test Start: 2019.06.05 @ 05:57:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:45:45
Time Test Ended: 13:05:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Benny Mulligan
Unit No: 67

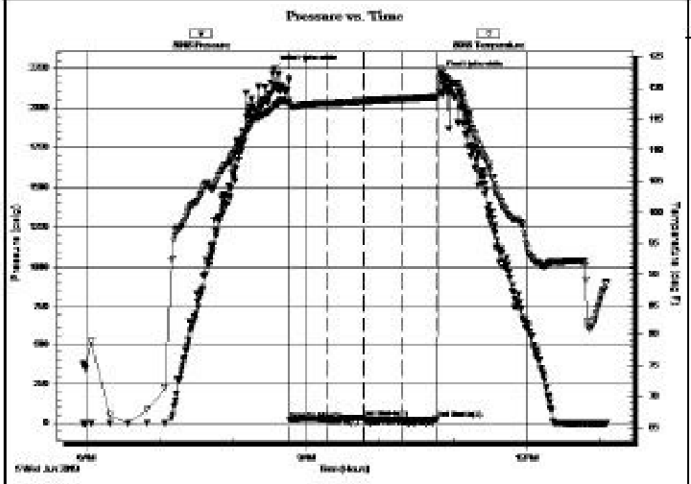
Interval: 4440.00 ft (KB) To 4481.00 ft (KB) (TVD)
Total Depth: 4481.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2008.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8018
Press@RunDepth: 24.68 psig @ ft (KB)
Start Date: 2019.06.05 End Date: 2019.06.05
Start Time: 05:57:05 End Time: 13:04:59

Capacity: 8000.00 psig
Last Calib.: 2019.06.05
Time On Btm: 2019.06.05 @ 08:33:30
Time Off Btm: 2019.06.05 @ 10:49:15

TEST COMMENT: IF-30- built to 1"
ISI-30- no blow back
FF-30- dead
FSI-30- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2246.00	117.04	Initial Hydro-static
13	24.49	117.08	Open To Flow (1)
43	28.61	117.54	Shut-In(1)
73	38.45	117.86	End Shut-In(1)
74	23.36	117.87	Open To Flow (2)
105	24.68	118.25	Shut-In(2)
134	29.51	118.58	End Shut-In(2)
136	2207.82	123.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100% M	0.01

Gas Rates

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

Drill Stem Test #2

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Lotus Operating Co

100 s. main st ste 420 wichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65790 **DST#: 2**

Test Start: 2019.06.06 @ 00:27:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:33:00
Time Test Ended: 08:28:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Benny Mulligan
Unit No: 67

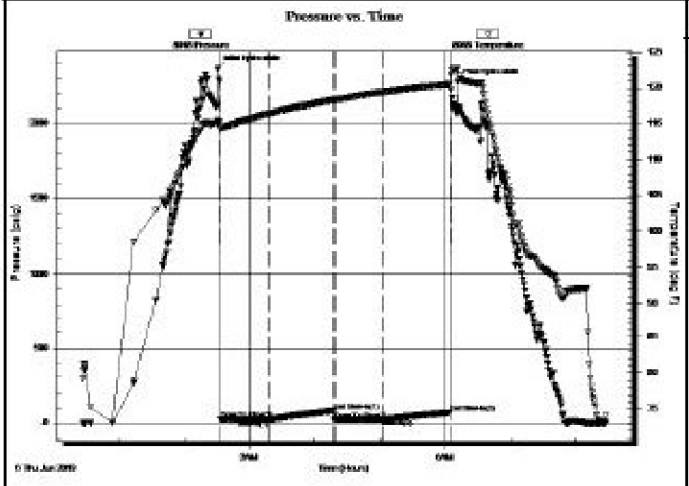
Interval: 4511.00 ft (KB) To 4557.00 ft (KB) (TVD)
Total Depth: 4557.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2006.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8018 **Inside**
Press@RunDepth: 25.61 psig @ 4512.00 ft (KB)
Start Date: 2019.06.06 End Date: 2019.06.06
Start Time: 00:27:05 End Time: 08:28:14

Capacity: 8000.00 psig
Last Calib.: 2019.06.06
Time On Btm: 2019.06.06 @ 02:30:45
Time Off Btm: 2019.06.06 @ 06:11:45

TEST COMMENT: IF-45- built to 2"
ISI-60- no blow back
FF-45- built to 1"
FSI-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2361.19	115.38	Initial Hydro-static
3	24.77	114.21	Open To Flow (1)
48	23.62	116.41	Shut-In(1)
107	82.98	118.31	End Shut-In(1)
108	20.97	118.32	Open To Flow (2)
151	25.61	119.39	Shut-In(2)
214	70.98	120.52	End Shut-In(2)
221	2272.00	122.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	O.S.M. 100%M	0.02

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcfd)

ROCK TYPES

Cht, Cht vari, Dolprim, Dolsec, Lmst fw<7, Lmst fw7>, shale, grn, shale, gry, Carbon Sh, shale, red, Ss, Sltst

ACCESSORIES

MINERAL
- Argillaceous
- Chert, dark
- Dolomitic
- Heavy, dark minerals
- Mineral Crystals

FOSSIL
- Bioclastic or Fragmental
- Coral
- Fossils < 20%
- Oolite
- Pellets

STRINGER
- Limestone
- Sandstone
- Siltstone
- green shale
- red shale

TEXTURE
- C Chalky
- L Lithogr

Silty
Chert White
Mica
carb shale

OTHER SYMBOLS

Oil Show
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- Gas

DST
- DST Int
- DST alt
- Core
- tail pipe

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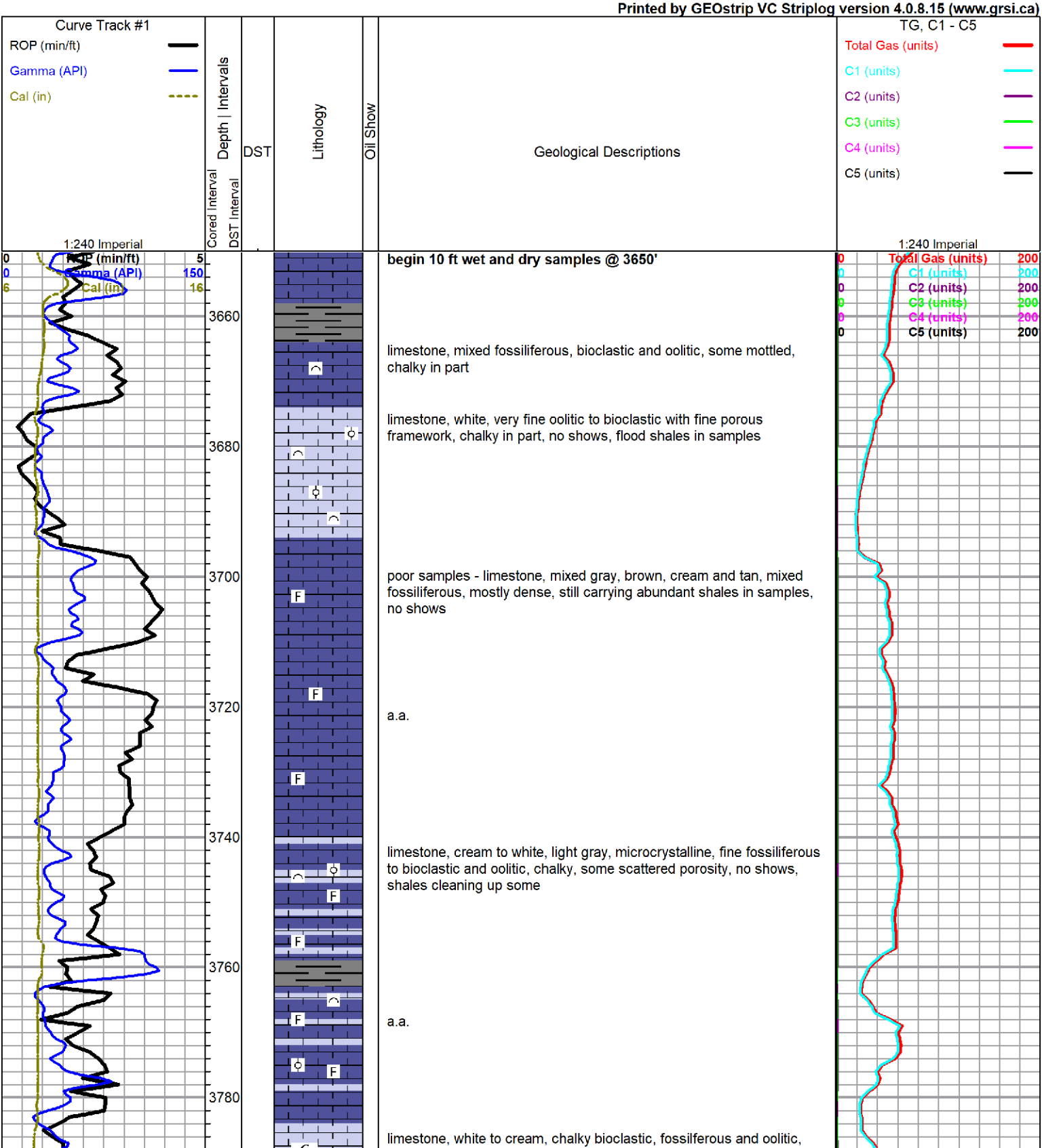
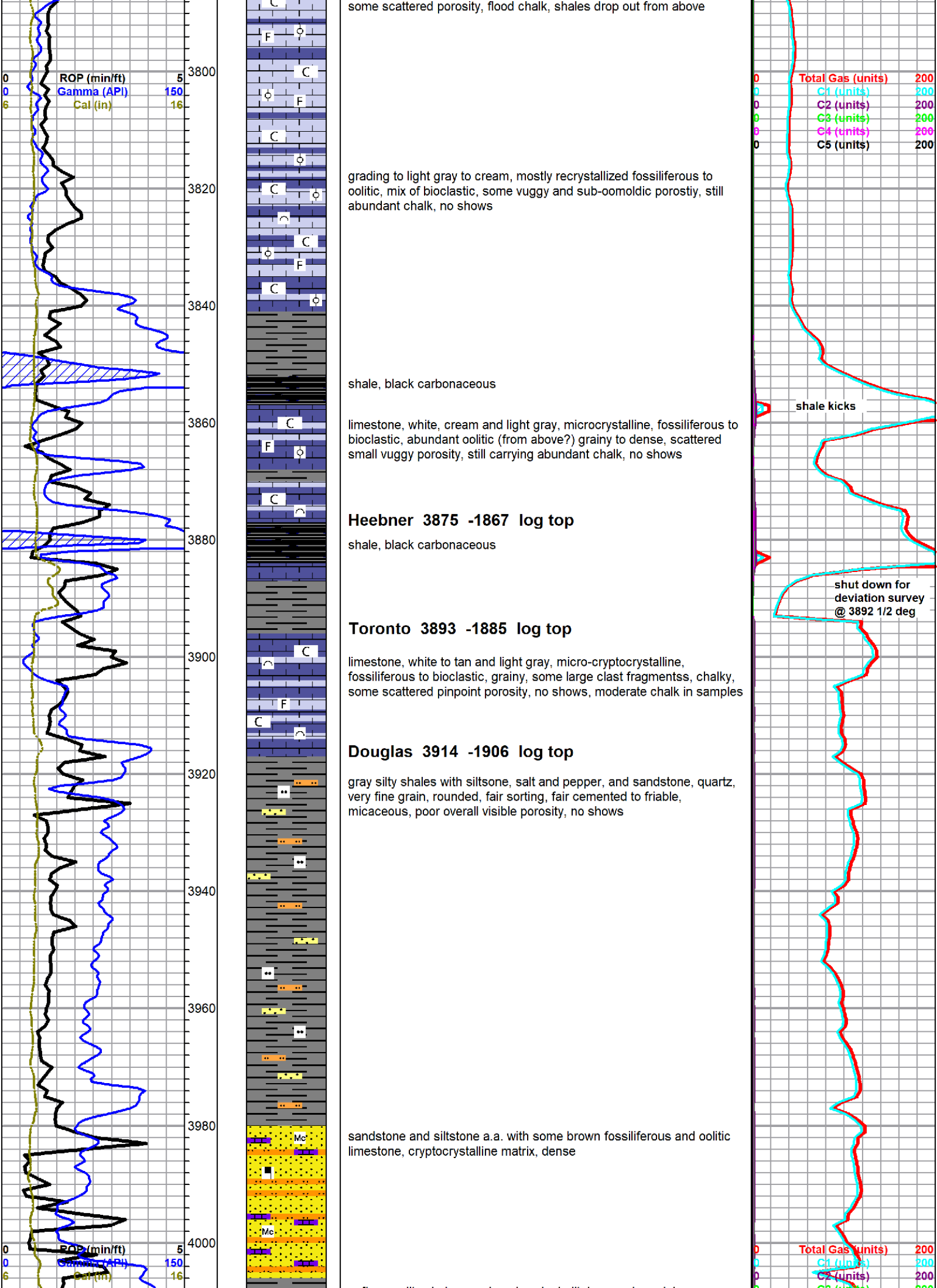




some scattered porosity, flood chalk, shales drop out from above

grading to light gray to cream, mostly recrystallized fossiliferous to oolitic, mix of bioclastic, some vuggy and sub-oomoldic porostiy, still abundant chalk, no shows

shale, black carbonaceous

limestone, white, cream and light gray, microcrystalline, fossiliferous to bioclastic, abundant oolitic (from above?) grainy to dense, scattered small vuggy porosity, still carrying abundant chalk, no shows

Heebner 3875 -1867 log top

shale, black carbonaceous

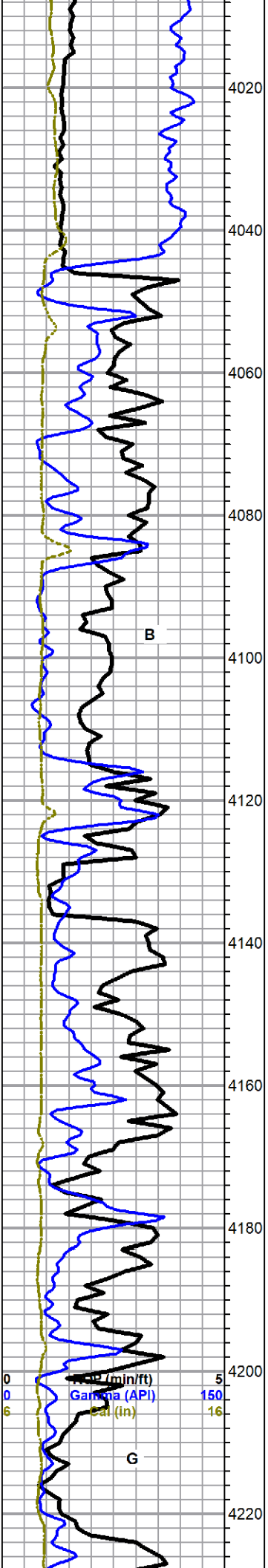
Toronto 3893 -1885 log top

limestone, white to tan and light gray, micro-cryptocrystalline, fossiliferous to bioclastic, grainy, some large clast fragmentss, chalky, some scattered pinpoint porosity, no shows, moderate chalk in samples

Douglas 3914 -1906 log top

gray silty shales with siltsone, salt and pepper, and sandstone, quartz, very fine grain, rounded, fair sorting, fair cemented to friable, micaceous, poor overall visible porosity, no shows

sandstone and siltstone a.a. with some brown fossiliferous and oolitic limestone, cryptocrystalline matrix, dense



soft gray silty shale, carrying abundant siltstone and sandstone a.a.

Brown Lime 4044 -2036 log top

limestone, brown to gray, cryptocrystalline, dense fossiliferous and oolitic, no visible porosity, no shows

Lansing 4060 -2052 log top

limestone, gray, light gray to cream, micro-cryptocrystalline, fossiliferous to pelletal, mottled pelletal, some secondary calcite, dense to chalky, poor visible porosity, no shows, trace chert

limestone, cream to white and light gray, crystalline (micro) to fossiliferous to oolitic-pelletal, some intercrystalline and interclast porosity, no shows, abundant chalk

limestone, brown, cryptocrystalline, dense fossiliferous to oolitic, no shows

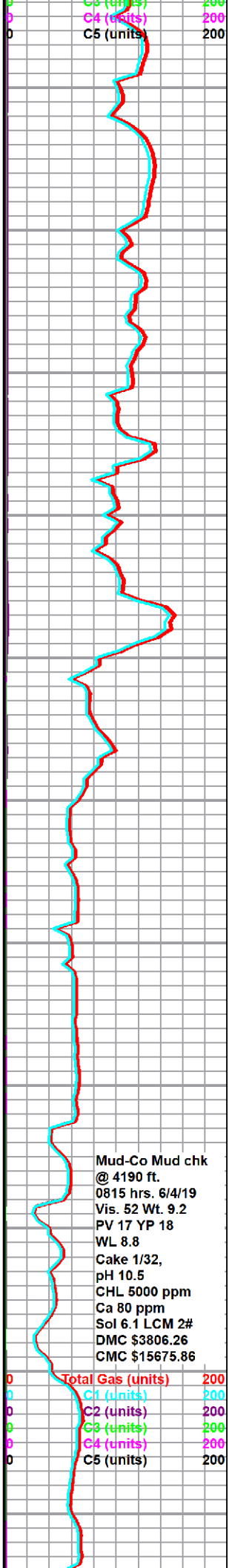
limestone, white to cream, oolitic, fine, some recrystallized, abundant interoolite calcite, grainy, poor visible porosity, no shows

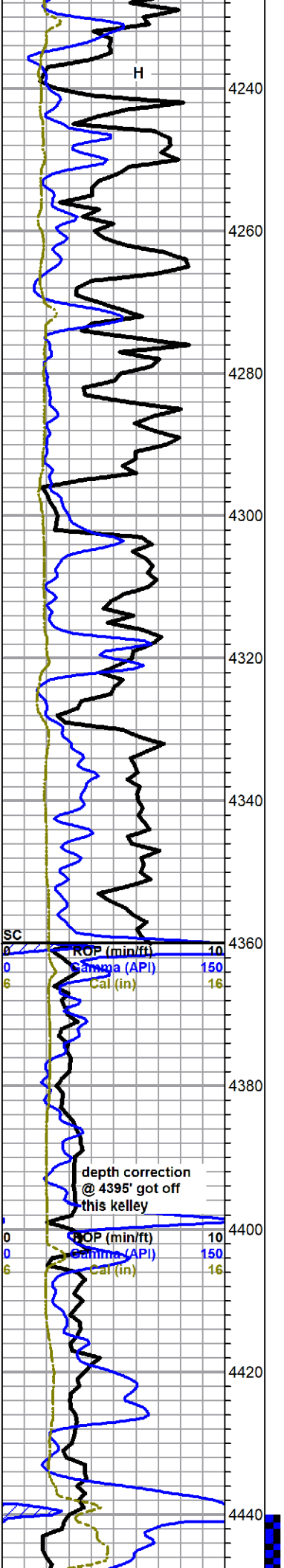
limestone, mixed gray, some brown, oolitc to fossiliferous, some grainy, mostly dense, cherty in part, poor visible porosity, no shows

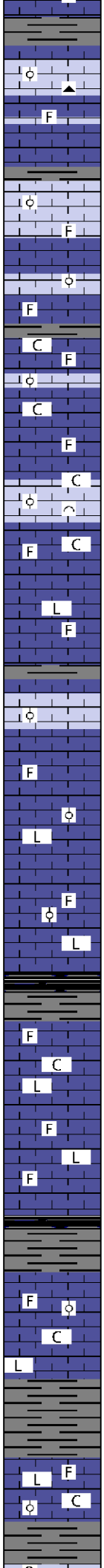
limestones, mixed grays, tan and brown, mixed oolitic, pelletal and fossiliferous, crypto-microcrystalline, dense, with some very weathered chalky, poor visible porosity, no shows

a.a.

limestone, cream, very fine oolitic to weathered bioclastic, chalky, few scattered vugs, mostly poor visible porosity, abundant chalk with gray fossiliferous cherts, no shows







oolitic limestone a.a.

mixed fossiliferous limestones, some lithographic limestone, gray fossiliferous cherts a.a.

limestone, cream to light gray, very fine oolitic, dense to chalky, poor visible porosity, fine gray cherts, no shows

limestones, mixed gray to tan and cream oolitic, with grainy fossiliferous, some scattered porosity, no shows

grades to limestone, cream to light gray, cryptocrystalline, fossiliferous to sub-lithographic, chalky in part, some scattered oolitic to sub-oomoldic, mostly dense, no shows, moderate chalk

limestones a.a., increasing chalk, traces fine oolitic to bioclastic, recrystallized, chalky in part with poor visible porosity, no shows

a.a.

Dennis 4322 -2314 log top

limestone, light gray, fine oolitic, poor framework and poor visible porosity, no shows

limestone, recrystallized oolitic to fossiliferous, fairly dense with cryptocrystalline matrix, with limestone, light gray, dense compact lithographic, some chalk, no shows

Stark 4359 -2351 log top

Swope 4365 -2357 log top

limestone, variable gray, cream and white, cryptocrystalline, lithographic and fossiliferous mix, trace cherts, some chalk, no shows

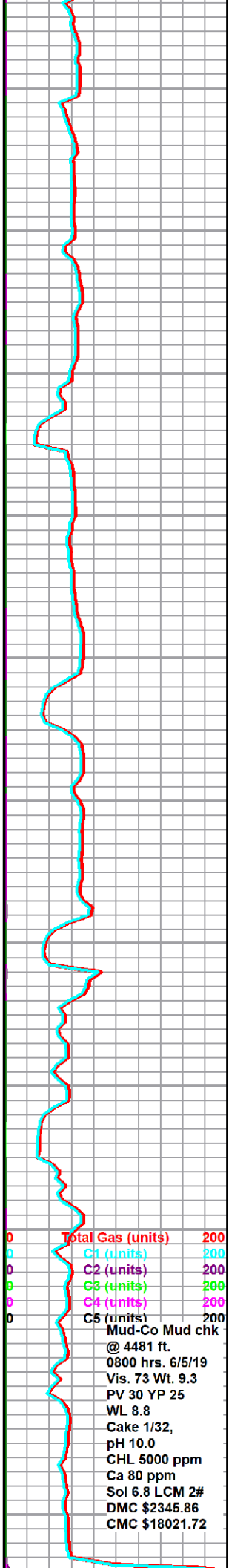
Hertha 4405 -2397

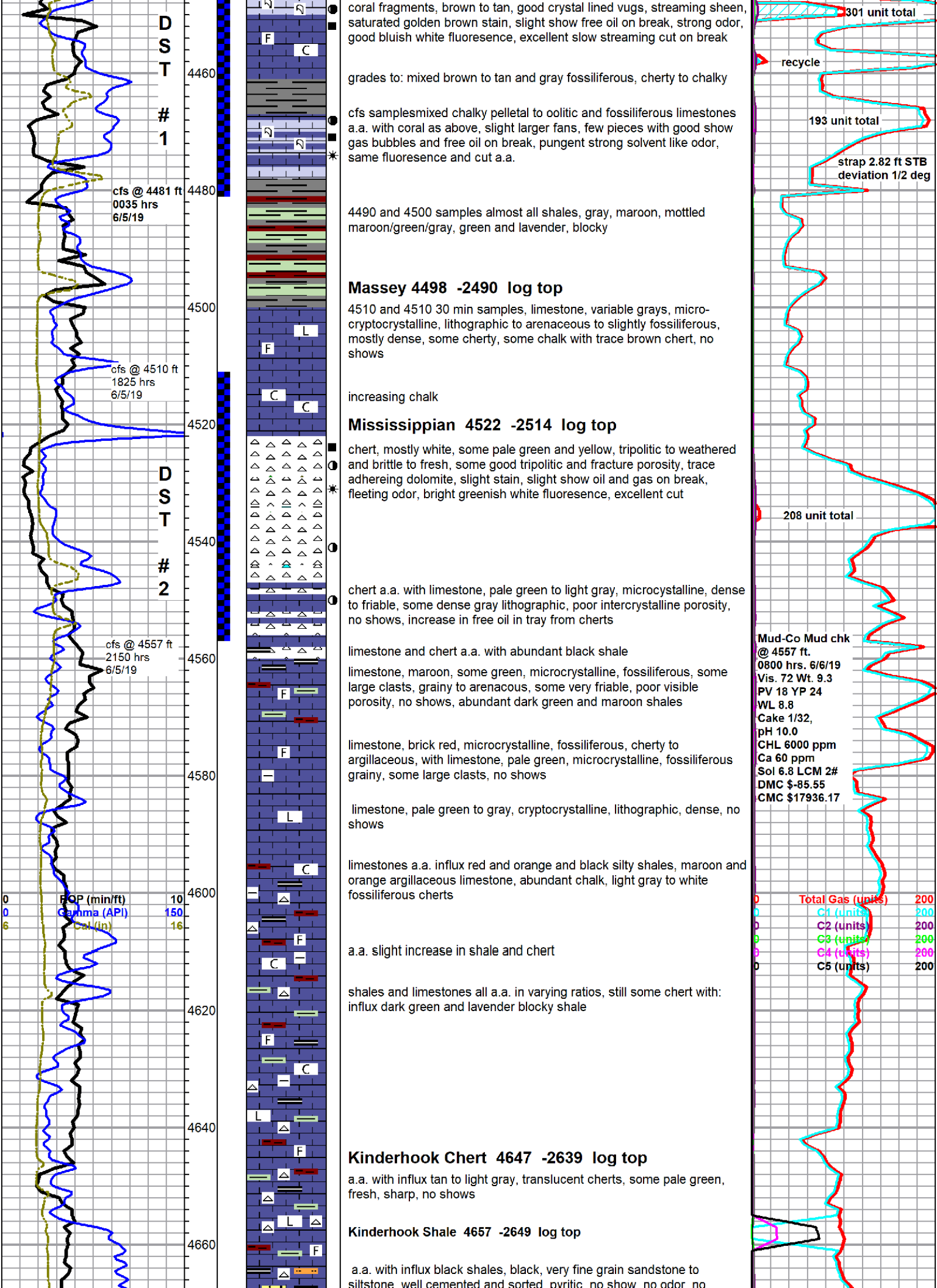
limestone, mixed gray, brown and tan, mostly cryptocrystalline, fossiliferous to oolitic to lithographic, chalky to cherty, moderate chalk, no shows

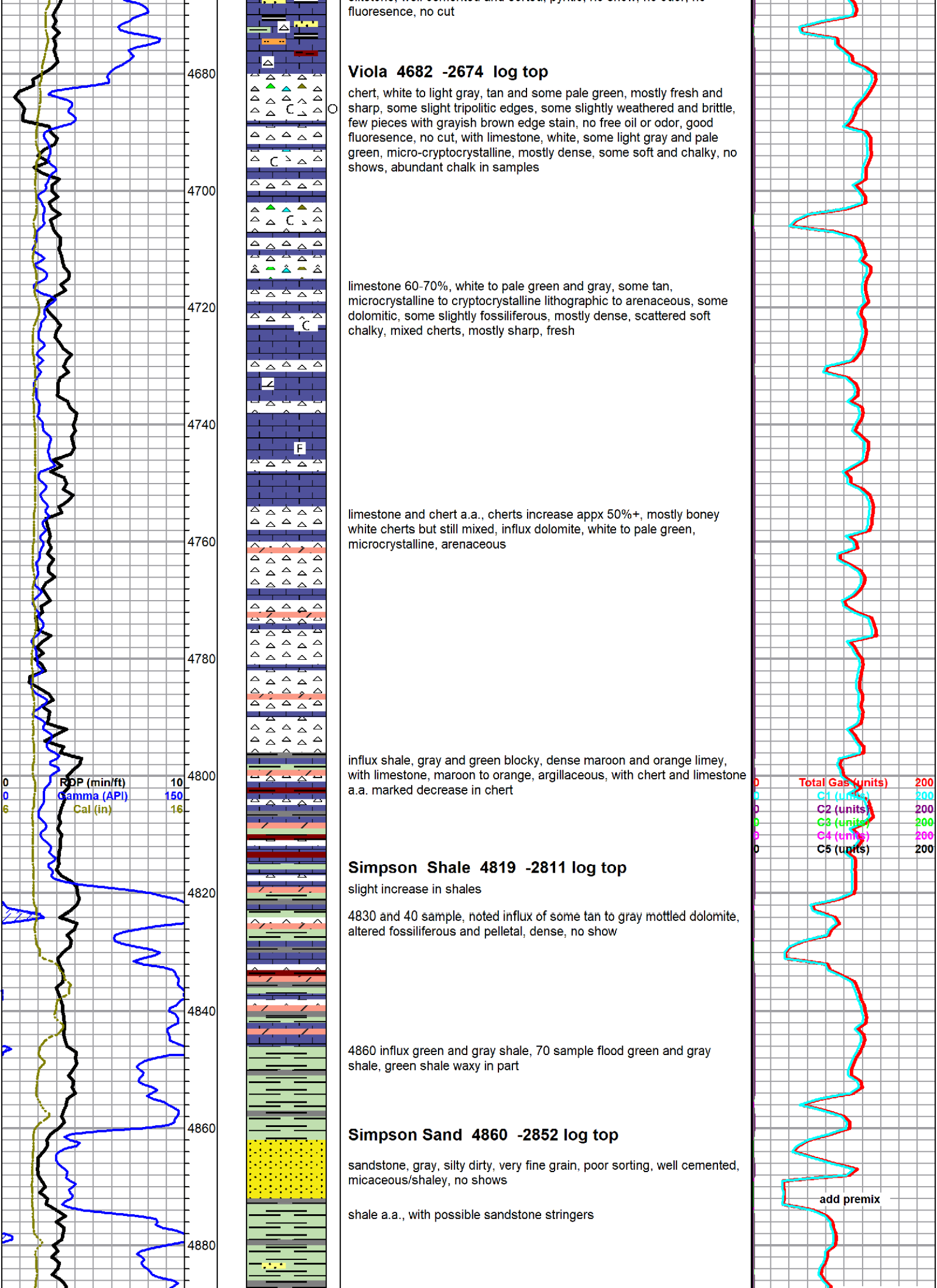
a.a

Base KC 4438 -2430 log top

Marmaton 4449 -2441 log top




DST #1
DST #2
cfs @ 4481 ft
0035 hrs
6/5/19
cfs @ 4510 ft
1825 hrs
6/5/19
cfs @ 4557 ft
2150 hrs
6/5/19
4460
4480
4500
4520
4540
4560
4580
4600
4620
4640
4660
0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16
coral fragments, brown to tan, good crystal lined vugs, streaming sheen, saturated golden brown stain, slight show free oil on break, strong odor, good bluish white fluoresence, excellent slow streaming cut on break
grades to: mixed brown to tan and gray fossiliferous, cherty to chalky
cfs samplesmixed chalky pelletal to oolitic and fossiliferous limestones a.a. with coral as above, slight larger fans, few pieces with good show gas bubbles and free oil on break, pungent strong solvent like odor, same fluoresence and cut a.a.
4490 and 4500 samples almost all shales, gray, maroon, mottled maroon/green/gray, green and lavender, blocky
Massey 4498 -2490 log top
4510 and 4510 30 min samples, limestone, variable grays, micro-cryptocrystalline, lithographic to arenaceous to slightly fossiliferous, mostly dense, some cherty, some chalk with trace brown chert, no shows
increasing chalk
Mississippian 4522 -2514 log top
chert, mostly white, some pale green and yellow, tripolitic to weathered and brittle to fresh, some good tripolitic and fracture porosity, trace adhereing dolomite, slight stain, slight show oil and gas on break, fleeting odor, bright greenish white fluoresence, excellent cut
chert a.a. with limestone, pale green to light gray, microcystalline, dense to friable, some dense gray lithographic, poor intercrystalline porosity, no shows, increase in free oil in tray from cherts
limestone and chert a.a. with abundant black shale
limestone, maroon, some green, microcrystalline, fossiliferous, some large clasts, grainy to arenacous, some very friable, poor visible porosity, no shows, abundant dark green and maroon shales
limestone, brick red, microcrystalline, fossiliferous, cherty to argillaceous, with limestone, pale green, microcrystalline, fossiliferous grainy, some large clasts, no shows
limestone, pale green to gray, cryptocrystalline, lithographic, dense, no shows
limestones a.a. influx red and orange and black silty shales, maroon and orange argillaceous limestone, abundant chalk, light gray to white fossiliferous cherts
a.a. slight increase in shale and chert
shales and limestones all a.a. in varying ratios, still some chert with: influx dark green and lavender blocky shale
Kinderhook Chert 4647 -2639 log top
a.a. with influx tan to light gray, translucent cherts, some pale green, fresh, sharp, no shows
Kinderhook Shale 4657 -2649 log top
a.a. with influx black shales, black, very fine grain sandstone to
301 unit total
recycle
193 unit total
strap 2.82 ft STB
deviation 1/2 deg
208 unit total
Mud-Co Mud chk
@ 4557 ft.
0800 hrs. 6/6/19
Vis. 72 Wt. 9.3
PV 18 YP 24
WL 8.8
Cake 1/32,
pH 10.0
CHL 6000 ppm
Ca 60 ppm
Sol 6.8 LCM 2#
DMC $-85.55
CMC $17936.17
0 Total Gas (units) 200
0 C1 (units) 200
0 C2 (units) 200
0 C3 (units) 200
0 C4 (units) 200
0 C5 (units) 200



fluoresence, no cut

Viola 4682 -2674 log top

chert, white to light gray, tan and some pale green, mostly fresh and sharp, some slight tripolitic edges, some slightly weathered and brittle, few pieces with grayish brown edge stain, no free oil or odor, good fluoresence, no cut, with limestone, white, some light gray and pale green, micro-cryptocrystalline, mostly dense, some soft and chalky, no shows, abundant chalk in samples

limestone 60-70%, white to pale green and gray, some tan, microcrystalline to cryptocrystalline lithographic to arenaceous, some dolomitic, some slightly fossiliferous, mostly dense, scattered soft chalky, mixed cherts, mostly sharp, fresh

limestone and chert a.a., cherts increase appx 50%+, mostly boney white cherts but still mixed, influx dolomite, white to pale green, microcrystalline, arenaceous

influx shale, gray and green blocky, dense maroon and orange limey, with limestone, maroon to orange, argillaceous, with chert and limestone a.a. marked decrease in chert

Simpson Shale 4819 -2811 log top

slight increase in shales

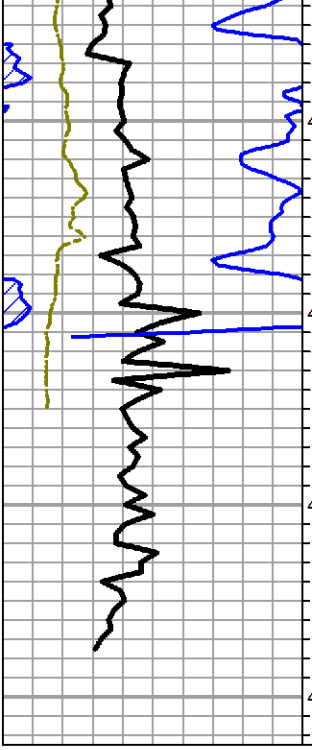
4830 and 40 sample, noted influx of some tan to gray mottled dolomite, altered fossiliferous and pelletal, dense, no show

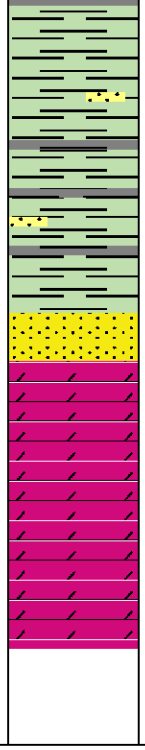
4860 influx green and gray shale, 70 sample flood green and gray shale, green shale waxy in part

Simpson Sand 4860 -2852 log top

sandstone, gray, silty dirty, very fine grain, poor sorting, well cemented, micaceous/shaley, no shows

shale a.a., with possible sandstone stringers





a.a.

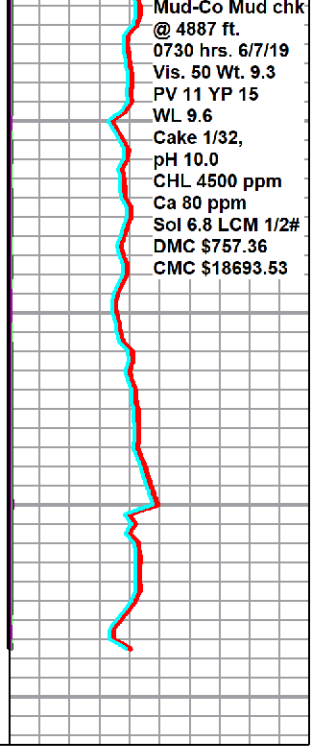
4930 sample - sandstone, white, very fine to fine grain, well rounded and sorted, well cemented, dolomitic, no visible porosity, no shows

Arbuckle 4927 -2919 log top

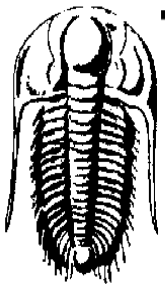
4940 sample - dolomite, light gray to cream, microcrystalline, sub-rhombic, sandy, no visible porosity, dense, no shows

dolomite, light gray to gray, microcrystalline, rhombic to sub-sucrosic and lithograhic, some slightly chalky, no shows

Rotary TD 4955 ft @ 1245 hrs 6/7/19
ELI Wireling TD 4955'



Mud-Co Mud chk @ 4887 ft. 0730 hrs. 6/7/19
Vis. 50 Wt. 9.3
PV 11 YP 15
WL 9.6
Cake 1/32,
pH 10.0
CHL 4500 ppm
Ca 80 ppm
Sol 6.8 LCM 1/2#
DMC $757.36
CMC $18693.53



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Lotus Operating Co**

100 s. main st ste 420 wichita ks 67202+3737

ATTN: Keith Reavis

Perkins #2

13-29s-15w

Start Date: 2019.06.06 @ 00:27:00

End Date: 2019.06.06 @ 08:28:15

Job Ticket #: 65790 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.06.06 @ 18:02:37

DRILL STEM TEST REPORT

Lotus Operating Co

100 s. main st ste 420 w ichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65790 **DST#: 2**

Test Start: 2019.06.06 @ 00:27:00

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:33:00
Time Test Ended: 08:28:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Benny Mulligan
Unit No: 67

Interval: 4511.00 ft (KB) To 4557.00 ft (KB) (TVD)
Total Depth: 4557.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

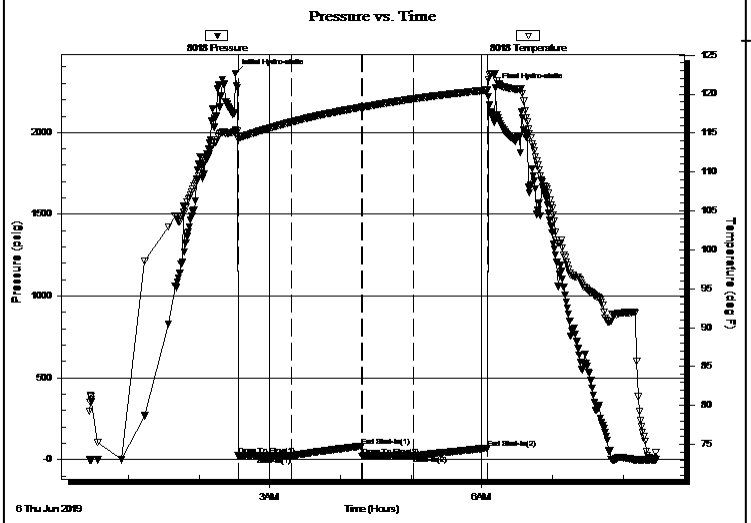
Reference Elevations: 2008.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8018 **Inside**

Press@RunDepth: 25.61 psig @ 4512.00 ft (KB)
Start Date: 2019.06.06 End Date: 2019.06.06
Start Time: 00:27:05 End Time: 08:28:14

Capacity: 8000.00 psig
Last Calib.: 2019.06.06
Time On Btm: 2019.06.06 @ 02:30:45
Time Off Btm: 2019.06.06 @ 06:11:45

TEST COMMENT: IF-45- built to 2"
ISI-60- no blow back
FF-45- built to 1"
FSI-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2361.19	115.38	Initial Hydro-static
3	24.77	114.21	Open To Flow (1)
48	23.62	116.41	Shut-In(1)
107	82.98	118.31	End Shut-In(1)
108	20.97	118.32	Open To Flow (2)
151	25.61	119.39	Shut-In(2)
214	70.98	120.52	End Shut-In(2)
221	2272.00	122.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	O.S.M. 100%M	0.02

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Lotus Operating Co

100 s. main st ste 420 w ichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65790 **DST#: 2**

Test Start: 2019.06.06 @ 00:27:00

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:	73.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	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
5.00	O.S.M. 100%M	0.025

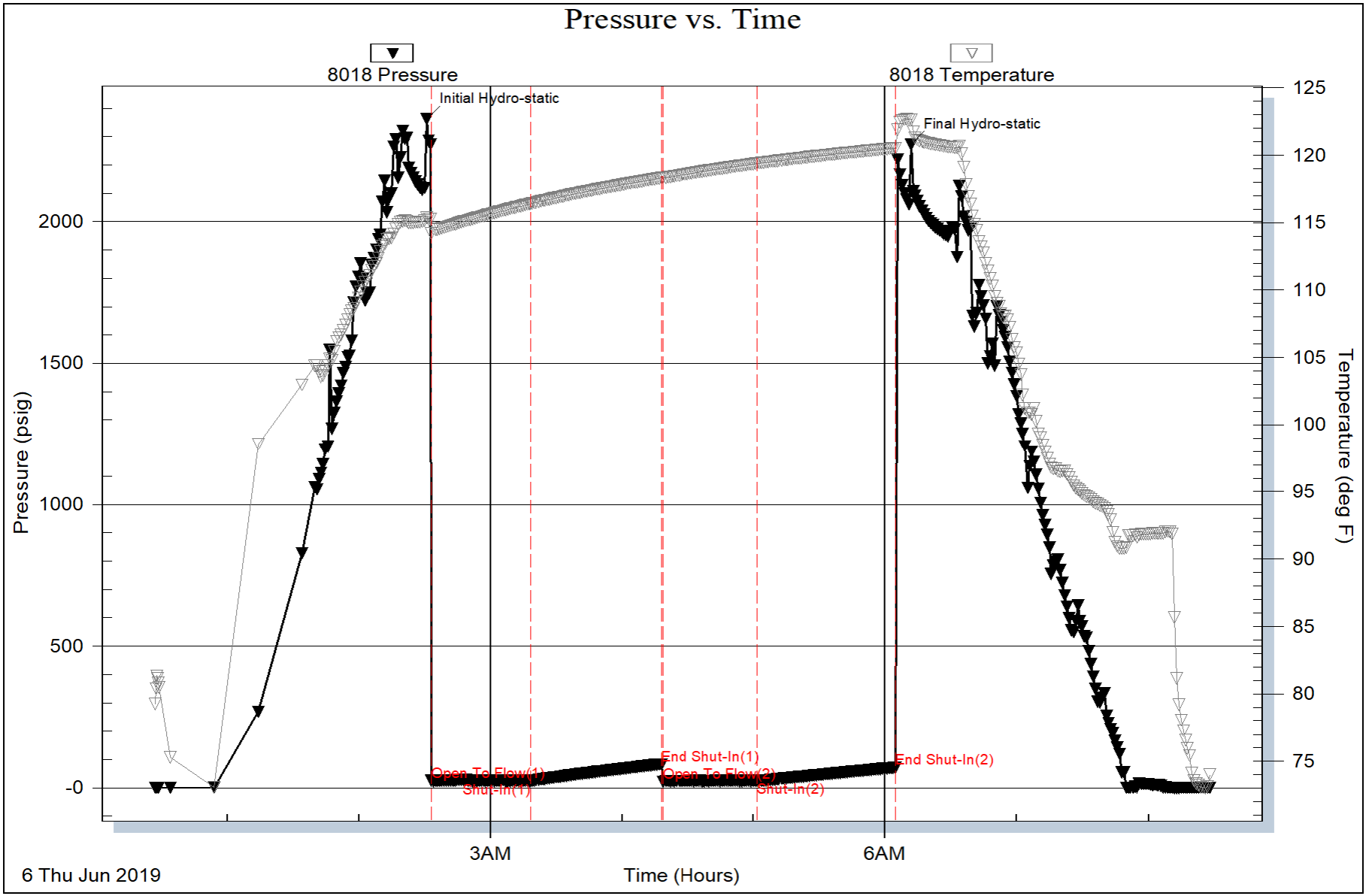
Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

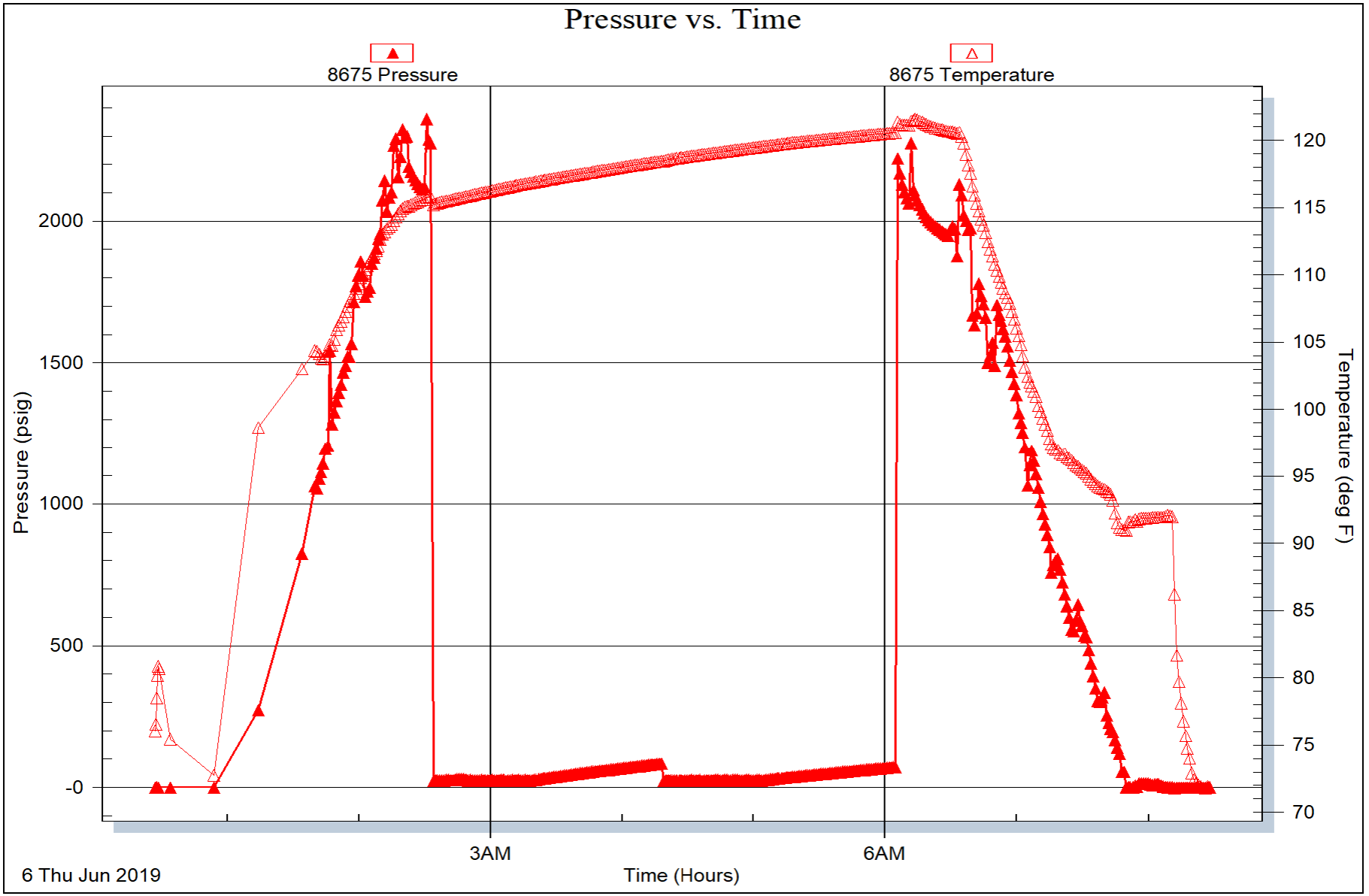
Recovery Comments:

Serial #: 8018 **Inside** Lotus Operating Co Perkins #2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65790 Printed: 2019.06.06 @ 18:02:38

Serial #: 8675 Lotus Operating Co Perkins #2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65790 Printed: 2019.06.06 @ 18:02:38

DRILL STEM TEST REPORT

Prepared For: **Lotus Operating Co**

100 s. main st ste 420 wichita ks 67202+3737

ATTN: Keith Reavis

Perkins #2

13-29s-15w

Start Date: 2019.06.05 @ 05:57:00

End Date: 2019.06.05 @ 13:05:00

Job Ticket #: 65789 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.06.05 @ 14:38:57

DRILL STEM TEST REPORT

Lotus Operating Co

100 s. main st ste 420 w ichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65789 **DST#: 1**

Test Start: 2019.06.05 @ 05:57:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:45:45
Time Test Ended: 13:05:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Benny Mulligan
Unit No: 67

Interval: 4440.00 ft (KB) To 4481.00 ft (KB) (TVD)
Total Depth: 4481.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

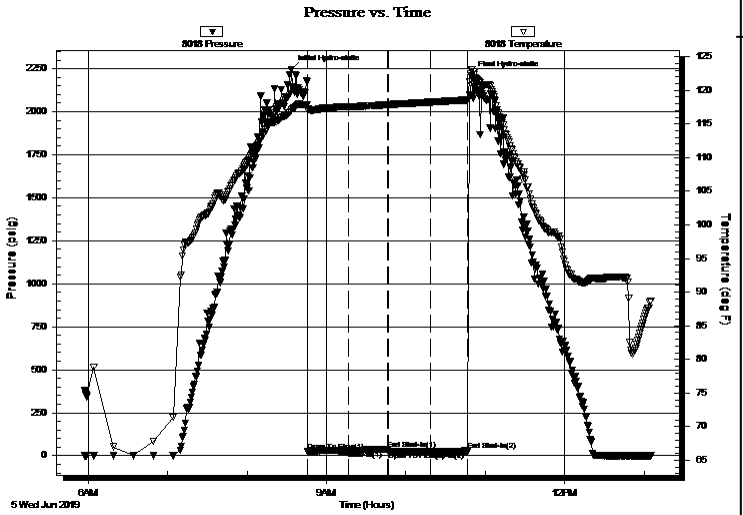
Reference Elevations: 2008.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8018

Press@RunDepth: 24.68 psig @ ft (KB)
Start Date: 2019.06.05 End Date: 2019.06.05
Start Time: 05:57:05 End Time: 13:04:59

Capacity: 8000.00 psig
Last Calib.: 2019.06.05
Time On Btm: 2019.06.05 @ 08:33:30
Time Off Btm: 2019.06.05 @ 10:49:15

TEST COMMENT: IF-30- built to 1"
ISI-30- no blow back
FF-30- dead
FSI-30- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2246.00	117.04	Initial Hydro-static
13	24.49	117.08	Open To Flow (1)
43	28.61	117.54	Shut-In(1)
73	38.45	117.86	End Shut-In(1)
74	23.36	117.87	Open To Flow (2)
105	24.68	118.25	Shut-In(2)
134	29.51	118.58	End Shut-In(2)
136	2207.82	123.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100% M	0.01

Gas Rates

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

DRILL STEM TEST REPORT

Lotus Operating Co

100 s. main st ste 420 w ichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65789 **DST#: 1**

Test Start: 2019.06.05 @ 05:57:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:45:45
Time Test Ended: 13:05:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Benny Mulligan
Unit No: 67

Interval: 4440.00 ft (KB) To 4481.00 ft (KB) (TVD)
Total Depth: 4481.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

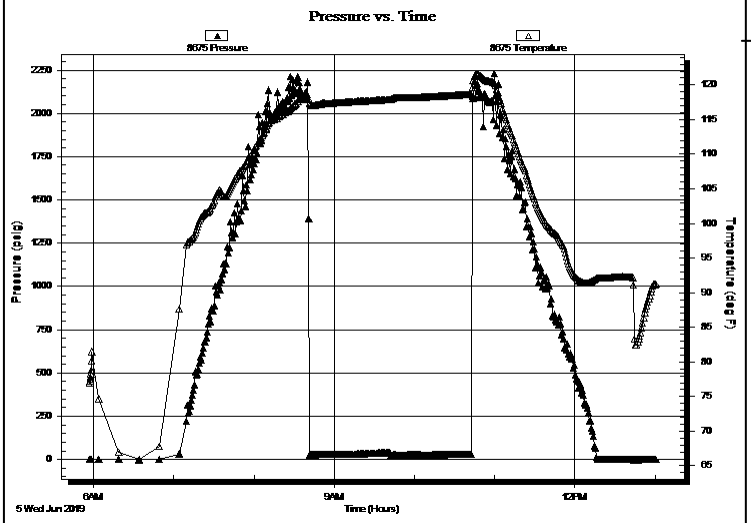
Reference Elevations: 2008.00 ft (KB)
1996.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8675

Press@RunDepth: psig @ ft (KB)
Start Date: 2019.06.05 End Date: 2019.06.05
Start Time: 05:57:05 End Time: 13:00:29

Capacity: 8000.00 psig
Last Calib.: 2019.06.05
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-30- built to 1"
ISI-30- no blow back
FF-30- dead
FSI-30- no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud 100% M	0.01

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Lotus Operating Co

100 s. main st ste 420 w ichita ks 67202+3737

ATTN: Keith Reavis

13-29s-15w

Perkins #2

Job Ticket: 65789 **DST#: 1**

Test Start: 2019.06.05 @ 05:57:00

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:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	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
3.00	Mud 100% M	0.015

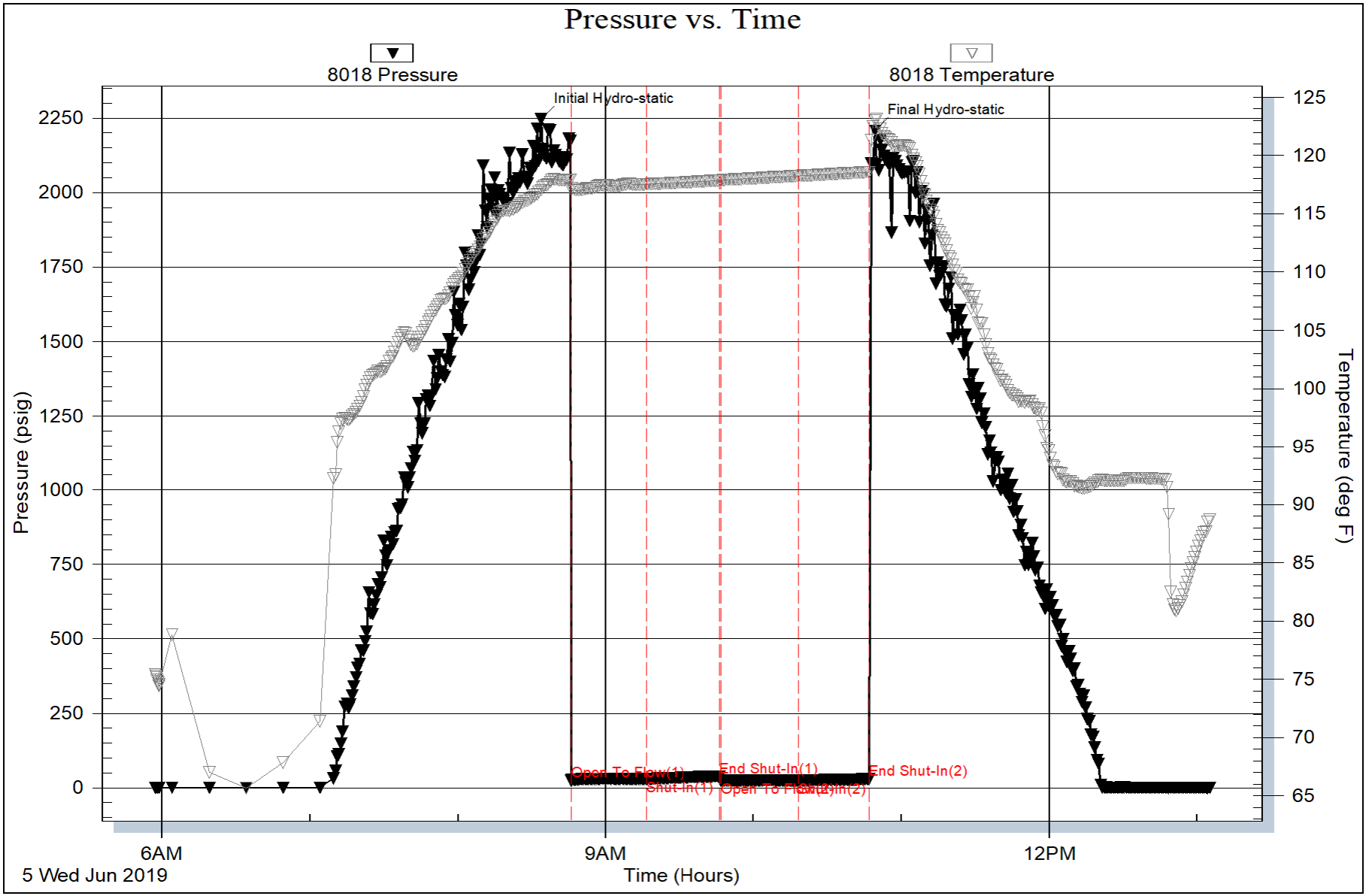
Total Length: 3.00 ft Total Volume: 0.015 bbl

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

Laboratory Name: Laboratory Location:

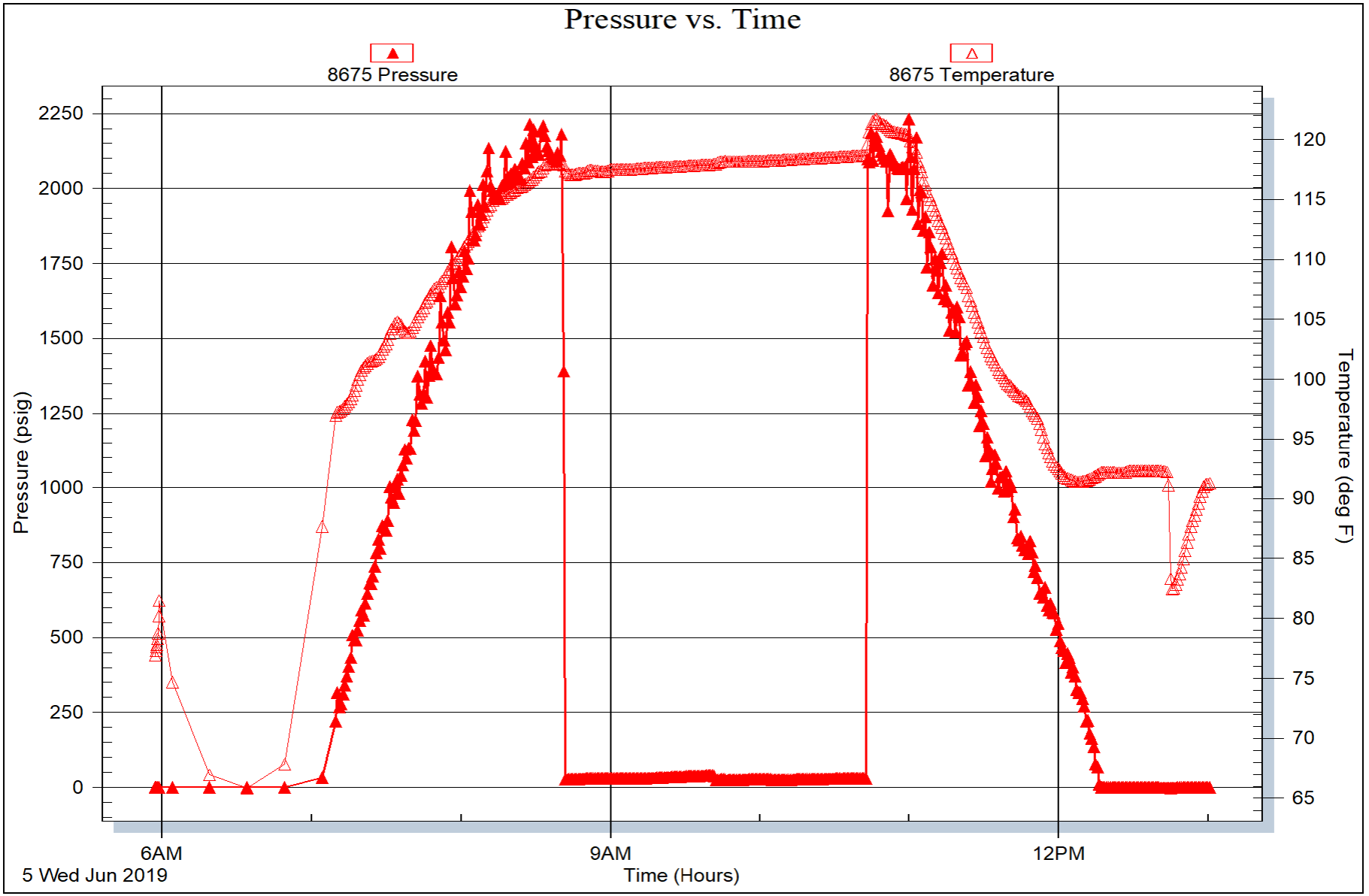
Recovery Comments:

Serial #: 8018 | Lotus Operating Co | Perkins #2 | DST Test Number: 1



Trilobite Testing, Inc | Ref. No: 65789 | Printed: 2019.06.05 @ 14:38:58

Serial #: 8675 | Lotus Operating Co | Perkins #2 | DST Test Number: 1



Trilobite Testing, Inc | Ref. No: 65789 | Printed: 2019.06.05 @ 14:38:58

Quality Well Service, Inc.

PO Box 468
Pratt, KS 67124

Invoice

Date	Invoice #
6/3/2019	C-2044

Bill To
Lotus Operating Co. LLC 100 S. Main, STE. 420 Wichita, KS 67202

P.O. No.	Terms	Lease Name
		Perkins #2

Description	Qty	Rate	Amount
Common	135	15.50	2,092.50
Poz	90	9.50	855.00
Gel	4	22.00	88.00
Calcium	7	60.00	420.00
Flo-Seal	112.5	3.70	416.25
SFC 0-500'	1	600.00	600.00
Handling	236	2.10	495.60
.08 * sacks * miles	4,720	0.08	377.60
Service Supervisor	1	150.00	150.00
LMV	20	3.75	75.00
Heavy Equipment Mileage	40	8.00	320.00
Customer Discount		-1,177.99	-1,177.99
Discount Expires after30 days from the date of the invoice		0.00	0.00
Perkins #2 Pratt Co.			

Thank You for your business!

Subtotal	$4,711.96
Sales Tax (8.25%)	$0.00
Total	$4,711.96

QUALITY WELL SERVICE, INC.

7129

Federal Tax I.D. # 481187368
Home Office 30060 N. Hwy 281, Pratt, KS 67124
Mailing Address P.O. Box 468

Office 620-727-3410
Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
FEB-1-19	13	29S	15W	PRATT	KS		

Lease PERKINS | Well No. #2 | Location Coats 4W N into

Contractor	Duke Drlg Rig #9	Owner	
Type Job	8 5/8 Surface	To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Hole Size 12 1/4	T.D. 313		
Csg. 8 5/8 23#	Depth 310.87	Charge To	LOTUS OPERATING Co. Inc
Tbg. Size	Depth	Street	
Tool	Depth	City	State
Cement Left in Csg. 20	Shoe Joint 20	The above was done to satisfaction and supervision of owner agent or contractor.	
Meas Line	Displace 13.6	Cement Amount Ordered	225 sx 60/40 2% Gel 3% CC 1/2# CF

EQUIPMENT

	No.		
Pumptrk 8	No.	TJ	
Bulktrk 10	No.	JAKE	
Bulktrk	No.		
Pickup	No.		

Item	Amount	
Common	135	
Poz. Mix	90	
Gel.	4	
Calcium	7	
Hulls		
Salt		
Flowseal	112.5	
Kol-Seal		
Mud CLR 48		
CFL-117 or CD110 CAF 38		
Sand		
Handling	236	
Mileage	20/4720	
FLOAT EQUIPMENT		
Guide Shoe		
Centralizer		
Baskets		
AFU Inserts		
Float Shoe		
Latch Down		
SERVICES		
LMV	20	
Pumptrk Charge	SFC 1	
Mileage	40	
Tax		
Discount		
Total Charge		

JOB SERVICES & REMARKS

Rat Hole
Mouse Hole
Centralizers
Baskets
D/V or Port Collar

Run 7 jts 8 5/8 23# csg set @ 310.87
START CSG CSG on Bottom Hookup to CSG.
BREAK circ w/rig
START Pumping 5 Bbls H2O
START Mix & Pump 225 sx 60/40
2% Gel 3% CC 1/2# PS @ 14.7#/gal
START DISP
Pump 13.6 Bbl total
Close Valve on csg
Good circ thru JOB
circ cmt to pit

Thank you!
Please Call Again
TODD TJ JAKE

X Signature [signature]

Taylor Printing, Inc.

AP Copy

Quality Well Service, Inc.

PO Box 468
Pratt, KS 67124

Invoice

Date	Invoice #
6/10/2019	C-2046

RECEIVED
JUN 11 20..

Bill To
Lotus Operating Co. LLC 100 S. Main, STE. 420 Wichita, KS 67202

P.O. No.	Terms	Lease Name
		Perkins #2

Description	Qty	Rate	Amount
Common	132	15.50	2,046.00T
Poz	88	9.50	836.00T
Gel	800	0.22	176.00T
Plug	1	950.00	950.00T
Handling	228	2.10	478.80T
.08 * sacks * miles	4,560	0.08	364.80T
Service Supervisor	1	150.00	150.00T
LMV	20	3.75	75.00T
Heavy Equipment Mileage	40	8.00	320.00T
Customer Discount		-1,349.15	-1,349.15
Discount Expires after30 days from the date of the invoice		0.00	0.00

Perkins #2
Pratt Co.

GL# 9247
DESC. plugging cement, #2
WELL # Perkin

ENTERED
JUN 17 2019

less 81.56 for tax

Thank You for your business!

possible tax exempt / call Quality

Subtotal	$4,047.45
Sales Tax (8.25%)	$333.91
Total	~~$4,381.36~~

42 99.80

QUALITY WELL SERVICE, INC. 7132

Federal Tax I.D. # 481187368
Home Office 30060 N. Hwy 281, Pratt, KS 67124
Mailing Address P.O. Box 468
Office 620-727-3410 **Rich's Cell 620-727-3409**
Fax 620-672-3663 **Brady's Cell 620-727-6964**

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 6-8-19	13	29S	15W	PRATT	KS		

Lease PERKINS Well No. 2 Location Coats KS 4 W into

Contractor Duke Drlg Rig #9
Type Job PTA
Hole Size 7 7/8 T.D.
Csg. Depth
Tbg. Size 4 1/2 OP Depth
Tool Depth
Cement Left in Csg. Shoe Joint
Meas Line Displace

Owner
To Quality Well Service, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Charge To LOTUS OPERATING CO. LLC
Street
City State
The above was done to satisfaction and supervision of owner agent or contractor.
Cement Amount Ordered 220 sx 60/40 4% GEL

EQUIPMENT

Pumptrk 8	No.	T5	
Bulktrk 10	No.	Duke	
Bulktrk	No.		
Pickup	No.		

JOB SERVICES & REMARKS

Rat Hole 30 sx
Mouse Hole 20 sx
Centralizers
Baskets
D/V or Port Collar
1st Plug @ 4925 50 sx 60/40 4% Gel
Pump H2O
Mix & Pump 50 sx 60/40 4% Gel
Disp H2O
Disp Rig mud
2nd Plug @ 3300' 30 sx 60/40 4% Gel
Pump H2O
Mix + Pump 30 sx 60/40 4% Gel
Disp H2O
3rd @ 360' 30 sx 60/40 4% Gel
Pump H2O
Mix + Pump 50 sx 60/40 4% Gel
Disp H2O
4th Plug 60' 20 sx 60/40 4% Gel
Mix + Pump 20 sx 60/40 4% Gel
20 sx Rat Hole 20 sx Mouse Hole
X Signature Christian Rojas

Common	132
Poz. Mix	88
Gel.	9
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	223
Mileage	20 / 4560

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	SERVICE SUP 1 EA
	LMV 20
Pumptrk Charge	PTA
Mileage	40
Tax	
Discount	
Total Charge	

Taylor Printing, Inc.