

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	EMMA WARD 3
Doc ID	1482780

All Electric Logs Run

ANNULAR HOLE VOLUME LOG 5 CASING
ARRAY COMPENSATED TRUE RESISTIVITY LOG 1
ARRAY COMPENSATED TRUE RESISTIVITY LOG 2
ARRAY COMPENSATED TRUE RESISTIVITY LOG 5
ARRAY RESISTIVITY SPECTRAL DENSITY DUAL SPACED BOREHOLE SONIC QUAD COMBO LOG
BOREHOLE COMPENSATED SONIC LOG
MICROLOG

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	EMMA WARD 3
Doc ID	1482780

Tops

Name	Top	Datum
HEEBNER	4077	.
LANSING	4159	.
KANSAS CITY	4560	..
MARMATON	4715	.
ATOKA	5095	.
MORROW	5148	.
CHESTER LIME	5256	.
CHESTER SAND	5272	.
ST GENEVIEVE	5335	.

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	EMMA WARD 3
Doc ID	1482780

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	5245	5254			MIDDLE MORROW SAND
4	5273	5276			U Chester
4	5278	5280			U Chester
			CIBP Cast Iron Bridge Plug	5310	
4	5315	5318			L Chester
					Frac info attached
4	4570	4573			Swope



1700 S. Country Estates Road
 Liberal, KS 67901
 PH (620)-624-2277/FAX (620) 624-2280

TT: 45

SERVICE ORDER - 1718 19701 L

Date: 8/14/2019

Well Name:

Emma Ward # 3

County - State:

Haskell, Kansas

Type Of Service:

Z-42 Cement Surface Casing

Location:

35-27S-34W

RRC #:

Customer: Merit Energy

Customer's Order #:

Address: sublette.invoices@meritenergy.com
 AFE- 61183

As a consideration, the above named Customer agrees to pay Basic Energy Services in accord with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of invoice. Upon Customer's default in payment of Customers account by such date, Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and attorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.

Basic Energy Services, warrants only title to the products, supplies and materials and that the same are free from defects in workmanship. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Basic Energy Services, liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies, or materials upon their return to Basic Energy Services, is expressly limited to the replacement of such products, supplies or materials or, at Basic Energy Services option, to the allowance to the Customer of credit for the cost of such items. In no event shall Basic Energy Services be liable for special, indirect, punitive or consequential damages.

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
BC118	515	EA	A-Con Blend		
BC101	165	SK	Class C Cement	50.00	25750.00
CC102	299	LB	Celloflake	29.00	4785.00
CC109	1767	LB	Calcium Chloride	4.00	1196.00
CC201	516	LB	Gilsonite	1.00	1767.00
CF253	1	Ea	Guide Shoe - Regular, 8 5/8" (Blue)	1.00	516.00
CF1294	1	Ea	Accu-Seal Float Collar 8 5/8"	380.00	380.00
CF1753	6	Ea	Centralizer, 8 5/8" (Blue)	1050.00	1050.00
CF105	1	Ea	Top Rubber Cement Plug, 8 5/8"	90.00	540.00
ME102	180	MI	Heavy Equipment Mileage	225.00	225.00
CE240	680	SK	Blending & Mixing Service Charge	8.00	1440.00
TM	1923	MI	Ton Mileage	1.40	952.00
CC2	1	HR	Depth Charge, 1001'-2000'	3.00	5769.00
CE504	1	EA	Plug Container Utilization Charge	1500.00	1500.00
ME101	60	MI	Light Vehicle Mileage	250.00	250.00
CE505	1	EA	Cement Densimeter, with chart recorder	5.00	300.00
BE143	1	EA	Supervisor	350.00	350.00
BE144	3	EA	Driver	75.00	75.00
CC131	100	LB	Sugar	35.00	105.00
				5.00	500.00
				Book Total:	\$47,450.00
				Taxes:	
				Disc. Price:	\$16,988.97
Additional 10% Discount as per Agreement on Cement Services				10% Disc	\$1,698.90
				Adjusted Price	\$15,290.07

PUMP TRUCK NUMBER: 38117, 19919
 DRIVER: Jesse Paxton
 AS

THIS JOB WAS SATISFACTORILY COMPLETED YES NO
 OPERATION OF EQUIPMENT WAS SATISFACTORY
 PERFORMANCE OF PERSONEL WAS SATISFACTORY

BASIC ENERGY SERVICES

CUSTOMER OR HIS AGENT

Customer Comments or Concerns:

PRESSURE PUMPING


Job Log

Customer:	Merit Energy	Cement Pump No.:	38117, 19919	Operator TRK No.:	86531 Angel	
Address:	sublette.invoices@meritenergy.com	Ticket #:	1718 19701 L	Bulk TRK No.:	19827 Oscar	14354 Kirby
City, State, Zip:	AFE- 61183		Job Type:	Z-42 Cement Surface Casing		
Service District:	1718 - Liberal, Ks		Well Type:	OIL		
Well Name and No.:	Emma Ward # 3		Well Location:	35-27S-34W	County:	Haskell
					State:	Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-Con	515	3% CC, 1/2# Celloflake, 1# Gilsonite	19827 Oscar	Front	Back
Premium Plus	165	2% CC, 1/4# Celloflake	14354 Kirby	Front	Back
				Front	Back

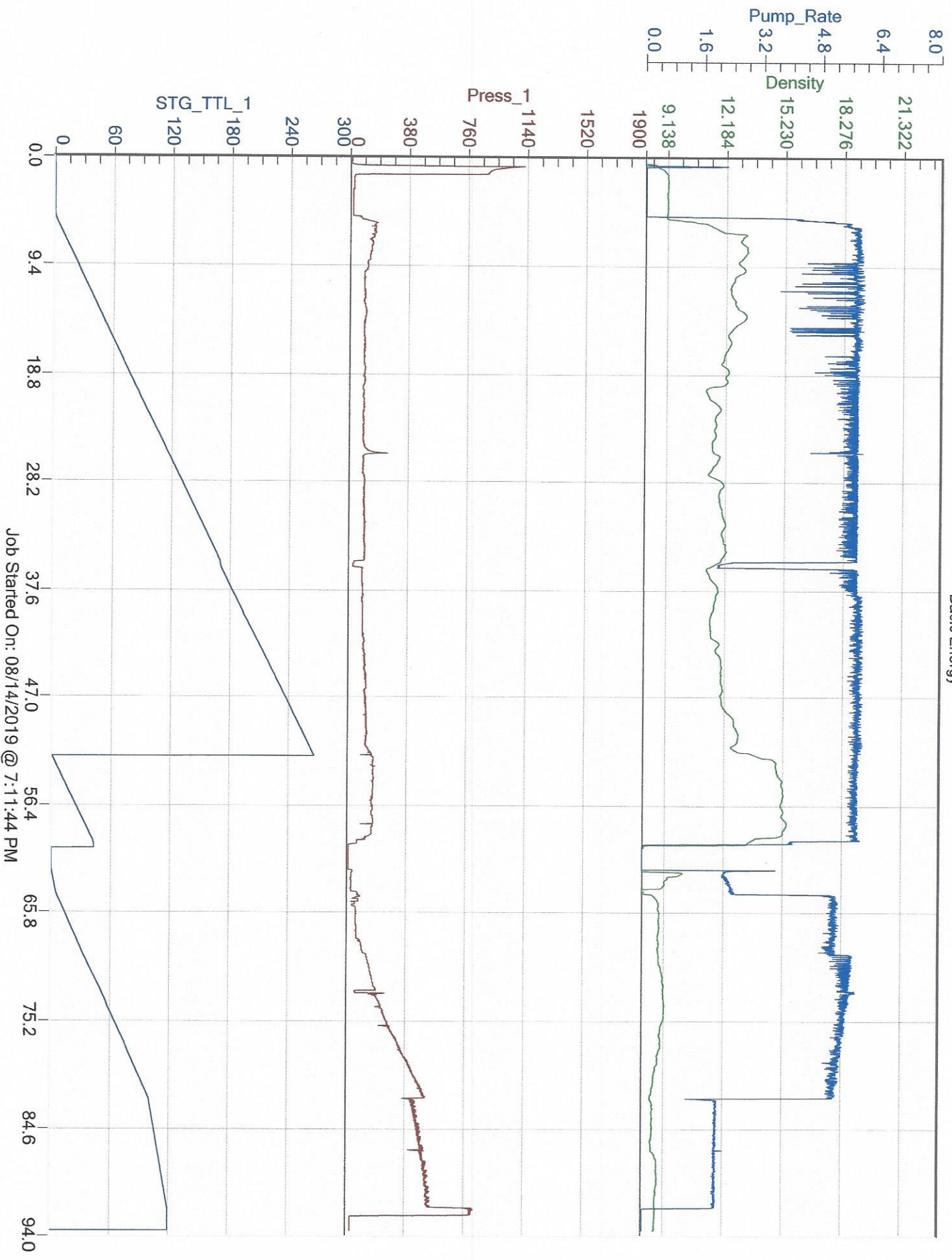
Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.1	2.41	13.9	1241.15	Man Hours:	40
Tail:	14.8	1.34	6.33	221.1	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure(Psi)		Description of Operation and Materials
			T	C	Tubing	Casing	
15:30							On Location
16:00							Safety Meeting
4:30 PM							Rig Up
6:13 PM							Pressure Test To 1500Psi
6:15 PM	5.5	221.4				170	Pump Lead @ 12.1#
19:03	5.5	39.3				170	Switch to Tail @ 14.8#
19:14							Shut Down --- Drop Plug
7:17 PM	5.5	10th50				130	Displacement
	5.5	60				300	
	5.5	80				450	
	2	90				450	
20:15	2	109.1				600	Landed @ 800psi
20:20							Release Back ---- float held
							Job Completed
							Thank You
							100BBL Cement To Pit *****
Size Hole	12.25"	Depth					TYPE
Csg.	8 5/8	Depth	1774		New / Used		Packer
or tbg.		Depth					Retainer
Top Plugs		Type					Perfs

Customer Signature:	Basic Representative:	Angel Echevarria
	Basic Signature:	
	Date of Service:	8/14/2019

EMMA WARD #3

Basic Energy



Job Started On: 08/14/2019 @ 7:11:44 PM



1700 S. County Estates Road
Liberal, KS 67901
PH (620)-624-2277 FAX (620) 624-2280

SERVICE ORDER - 1718 19704 L

Date: 8/18/2019

Well Name: Emma Ward # 3
County - State: Haskell
Location: 35-27S-34W
RRC #: _____

Type Of Service: Z-42 Cement Production Casing
Customer: Merit Energy
Customers Order #: 0

Address: sublette.invoices@meritenergy.com
AFE# 63309

As a consideration, the above named Customer agrees to pay Basic Energy Services in record with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of invoice. Upon Customer's default in payment of Customers account by such date, Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and attorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.
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CODE QTY UOM DESCRIPTION PRICE TOTAL

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
BC133	305	SK	Class C 50/50 Poz	23.50	7167.50
CC113	1542	LB	Gypsum	1.00	1542.00
CC111	1831	LB	Salt	1.00	1831.00
CC102	77	LB	Celloflake	0.50	915.50
CC201	1525	LB	Gilsonite	4.00	308.00
CC105	65	LB	C-41P	1.00	1525.00
CC187	129	LB	C-17	4.00	260.00
CF851	1	Ea	5 1/2" Float Shoe(Blue)	24.00	3096.00
CF951	1	Ea	5 1/2" Float Collar(Blue)	425.00	425.00
CF1751	1	Ea	5 1/2" Float Collar(Blue)	420.00	420.00
CF103	20	Ea	Centrifizer, 5 1/2" (Blue)	80.00	1600.00
CC151	1	Ea	Top Rubber Cement Plug, 5 1/2"	105.00	105.00
C718	26	Gal	Clayplex 650	1.50	750.00
ME102	120	MI	Heavy Equipment Mileage	35.00	910.00
CE240	305	SK	Blending & Mixing Service Charge	8.00	960.00
TM	771	MI	Ton Mileage	1.40	427.00
CC6	1	HR	Depth Charge, 5001-6000'	3.00	2313.00
CE504	1	EA	Plug Container Utilization Charge	2900.00	2900.00
ME101	60	MI	Light Vehicle Mileage	250.00	250.00
CE505	1	EA	Cement Densitometer, with chart recorder	5.00	300.00
BE143	1	Ea	Supervisor	350.00	350.00
BE144	3	Ea	Driver	75.00	75.00
BE144	35.00			105.00	105.00

Book Total:	Taxes:	Disc. Price:	Adjusted Price
\$26,704.00		\$12,897.28	\$11,607.55
		10% Disc:	\$1,289.73

PUMP TRUCK NUMBER: 38117, 19919
DRIVER: Jesse Paxton
BASIC ENERGY SERVICES
THIS JOB WAS SATISFACTORILY COMPLETED
OPERATION OF EQUIPMENT WAS SATISFACTORY
PERFORMANCE OF PERSONNEL WAS SATISFACTORY
YES NO

CUSTOMER OR HIS AGENT

Customer Comments or Concerns:



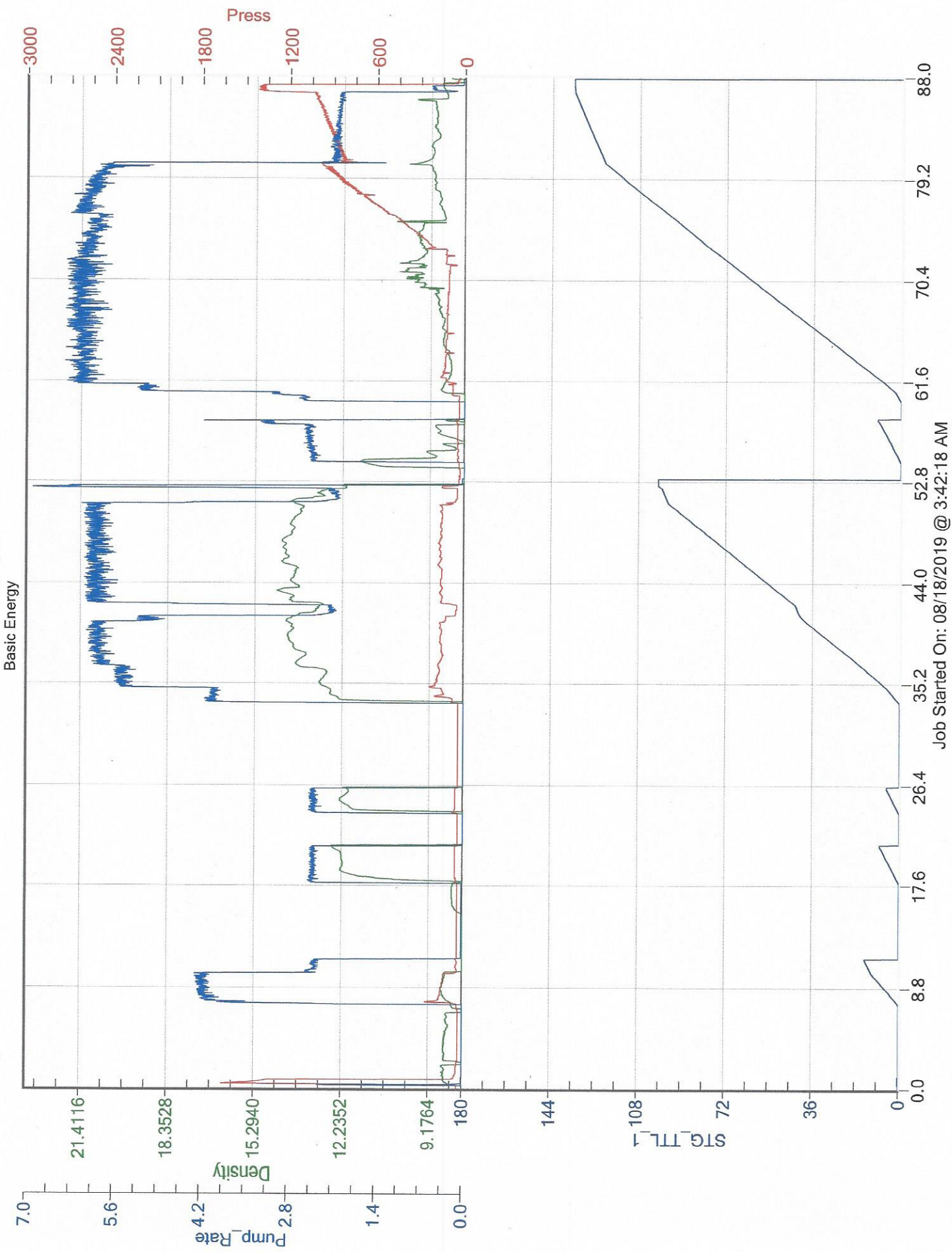
PRESSURE PUMPING

Job Log

Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

Customer:	Merit Energy	Cement Pump No.:	38117, 19919 5Hrs	Operator TRK No.:	86531 Angel
Address:	sublette.invoices@meritenergy.com	Ticket #:	1718 19704 L	Bulk TRK No.:	19827 Jesse
City, State, Zip:	AFE- 61183	Job Type:	Z-42 Cement Production Casing		
Service District:	1718 - Liberal, Ks.	Well Type:	OIL		
Well Name and No.:	Emma Ward # 3	Well Location:	35-27S-34W	County:	Haskell
				State:	Kansas
Type of Cmt	Sacks	Additives	Truck Loaded On		
50/50	50sx	6% GYP, 10% Salt, .5% c-17, 1/4# Defoamer, 5# Gilsontite, 1/4# Cello	19827 Jesse		
50/50	255	6% GYP, 10% Salt, .5% c-17, 1/4# Defoamer, 5# Gilsontite, 1/4# Cello	19827 Jesse		
Tail 1/Tail 2:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel
Tail Stage 1:	13.6	1.57	7.18	1.57	45
Tail Stage 2:				255	# of Men on Job: 4
Time (am/pm)	(BPM)	Volume (BBLs)	Pumps	Pressure (PSI)	Description of Operation and Materials
12:00			T C	Tubing	Casing
12:15					On Location
1:00 AM					Safety Meeting
3:41 AM					Rig Up
3:50 AM	5	13.9	150		Pressure test to 1600psi
4:00	2.5	13.9	Zero		Pump Mud Flush 11.9BBL
4:15	6	71.2	150		Cement Rat Hole And Mouse Hole 50sx
4:37 AM					Pump Tail @ 13.6# 255sx
4:43	6	10th u70	120		Shut Down - Wash To Fit
5:09	2	127.1	1030		Drop Plug - Displacement with 4% KCL
5:15					Land Plug To 1340psi
					Release Back ---- Float Held
					Thank You
					Job Completed
Size Hole	7 7/8"	Depth		TYPE	Plug Container
Csg.	5 1/2" 17#	Depth	5510	New / Used	
Shoe Jt.		Landing Press	772.9		
		Type		Perts	
				Retainer	Depth
					Depth
					CIBP
Basic Representative: Angel Echevarria					
Basic Signature:					
Date of Service: 8/18/2019					

EMMA WARD #3



Upper & Lower Chester were frac twice but were not successful

Frac 1

10,068#s of 20/40 white sand, 423 Mcf of Nitrogen, 178 bbls water.

Frac 2

2,022#s of 20/40 white sand, 675 Mcf of Nitrogen, 452 bbls of water.



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

Well Name: Emma Ward 3
Well Id:
Location: Sec. 35 T27S R34W, Haskell Co., Kansas
License Number: 15-081-22194-0000
Spud Date: August 13th, 2019
Surface Coordinates: SW SW NE NW
Region: Wildcat
Drilling Completed: August 16th 2019

Bottom Hole
Coordinates:
Ground Elevation (ft): 3039' K.B. Elevation (ft): 3049'
Logged Interval (ft): 4000' To: 5529' Total Depth (ft): 5529'
Formation: Chester
Type of Drilling Fluid: Natural Chemical

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

OPERATOR

Company: MERIT ENERGY CO.
Address: 13727 NOEL ROAD, # 1200 Tower 2
DALLAS, TX 75240
Co. Geo: Krystin Robinson


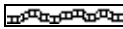
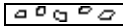

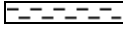



GEOLOGIST





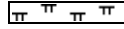

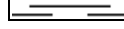
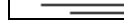
Name: Aaron Suelter
Company: Earth Tech OGL, Inc
Address: PO Box 683
Hooker, Oklahoma 73945
Off: 888-543-8378 Cell: 620-600-0777

SURVEYS

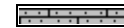





1820' INC 0.2 AZI 102.2
 1951' INC 0.0 AZI 334.2
 2128' INC 0.3 AZI 199.2
 2316' INC 0.2 AZI 215.2
 2473' INC 0.2 AZI 335.2
 2631' INC 0.3 AZI 276.2
 2820' INC 0.5 AZI 274.2
 2986' INC 0.7 AZI 274.2
 3173' INC 0.5 AZI 289.2
 3300' INC 0.5 AZI 288.2
 3487' INC 0.5 AZI 328.2
 3644' INC 0.7 AZI 345.2
 3799' INC 0.6 AZI 337.2
 3986' INC 0.9 AZI 336.2
 4144' INC 1.5 AZI 337
 4175' INC 1.6 AZI 338
 4269' INC 1.4 AZI 337.2
 4363' INC 1.1 AZI 316.2
 4451' INC 0.7 AZI 313.2
 4577' INC 0.8 AZI 294.2
 4671' INC 1.0 AZI 313.2
 4765' INC 0.9 AZI 305.2
 4860' INC 1.0 AZI 293.2
 4960' INC 0.9 AZI 302.2
 5052' INC 0.9 AZI 298.2
 5147' INC 0.7 AZI 304.2
 5242' INC 1.0 AZI 274.2
 5304' INC 1.3 AZI 292.2
 5398' INC 2.0 AZI 319.2
 5491' INC 2.5 AZI 340.2

ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol

	Gyp
	Igne
	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Sltst
	Ss
	Till
	Carb sh
	Dol
	Dtd
	Gry sh

	Sandylms
	Shale
	Sltstn
	Shlyslts
	Sltyslts
	Lms

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlit
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr



- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Silty



- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold



- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang



Angular

OIL SHOWS

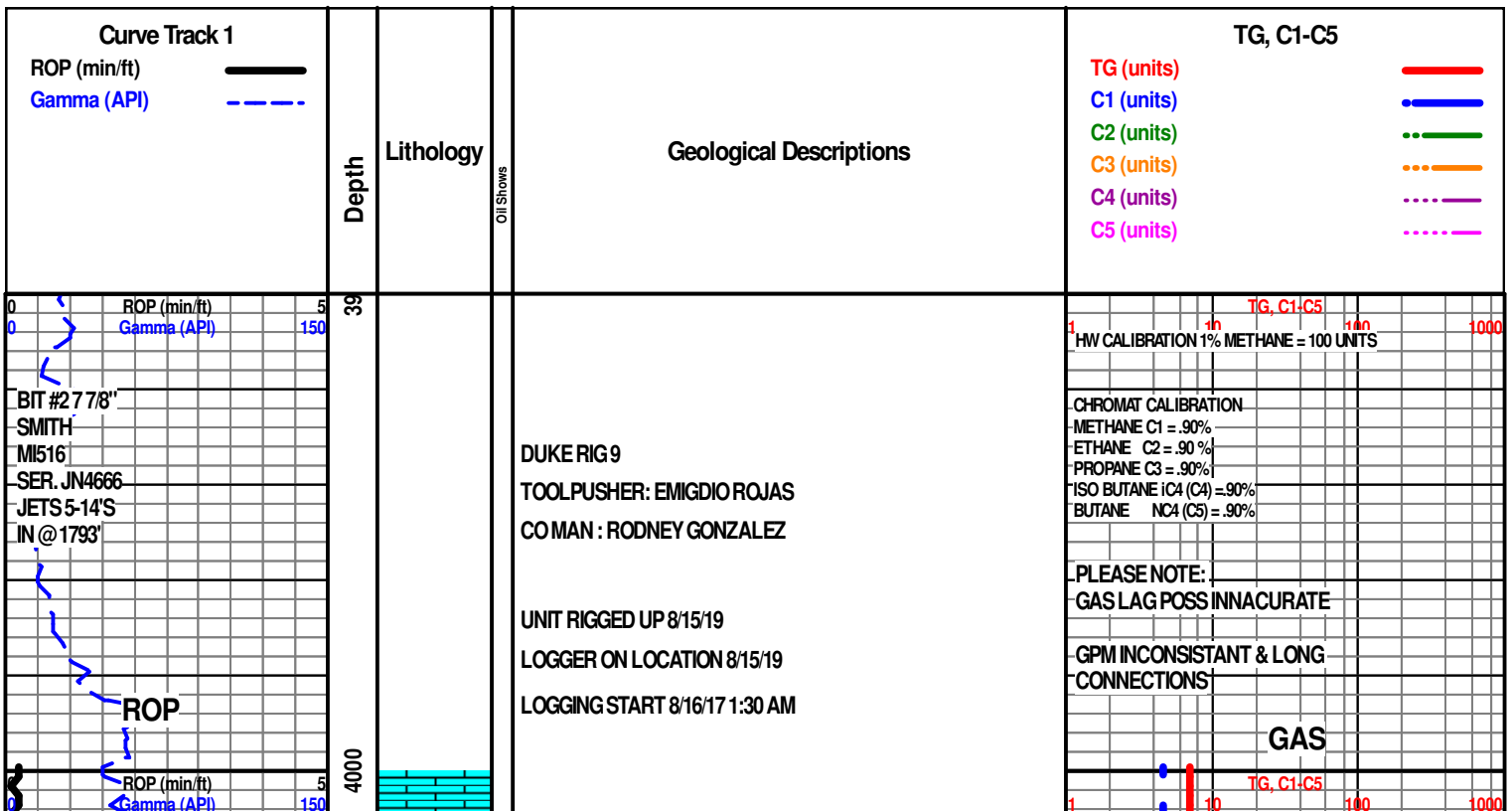
- Even
- Spotted
- Ques
- Dead
- Gas show

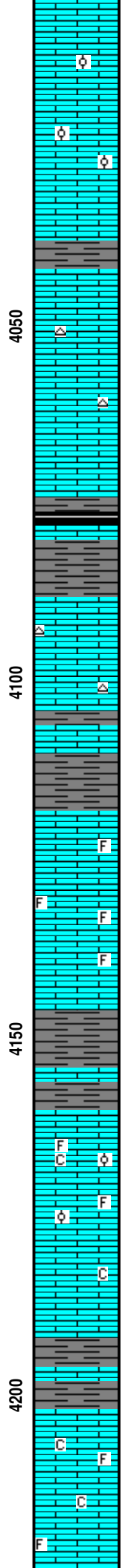
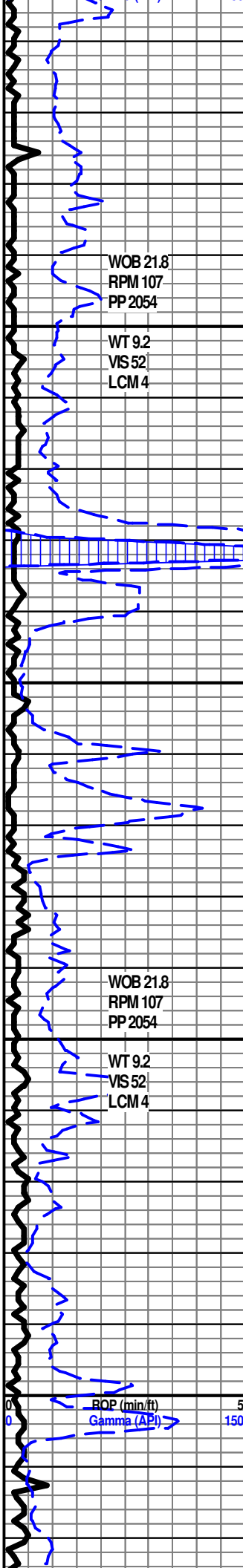
INTERVALS

- Core
- Dst
- Dst

EVENTS

- Rft
- Sidewall





LS- CRM TO LT TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR SCAT IMBD OOL IP, NO VIS FLO, PR INTR OOL POR IP, NO VIS SHOW

LS- CRM LT TN TO TN, V/ HD DNS TO BRIT, V/FN TO FN XLN SUCRO MTRX, TN TO WHT CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

HEEBNER 4077' -1028'SS

SH- BLK, SFT, CARB

LS- LT TN TO TO DK TN, HD DNS TO BRIT IP, V/FN TO FN XLN SUCRO MTRX, TN TO DK TN CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

TORONTO 4104' -1055'SS

SH- BRWN TO DK GRY, FRM BLKY, SMTH TO SLTY TXT

LS- LT TN TO TN, HD DNS TO V/BRT, FN TO MD XLN RE-XLN MTRX, S-SUCRO, ABDT IMBD FOSS FRG SCAT THRU, BRT YEL FLO IN 50%, TR PR INTR XLN POR IP, TR PR INTR FOSS POR IP, NO VIS SHOW

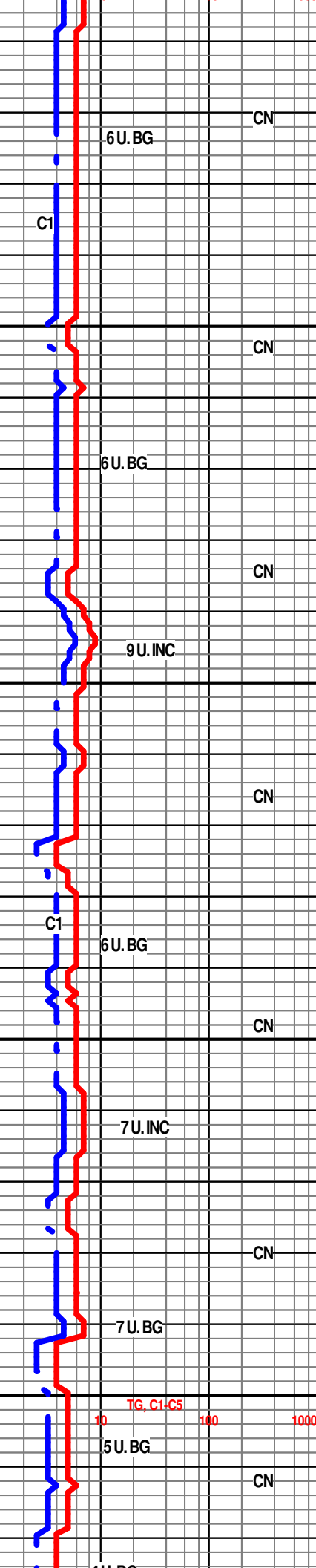
LANSING 4160' -1111'SS

E-LOG LANSING 4158' -1108SS

LS- CRM LT TN TO TR GRY, HD DNS TO V/BRIT IP, MD XLN RE-XLN MTRX, S-CHLKY IP, SCAT IMBD FOSS FRG IP, SCAT IMBD OOL IP, BRT YEL FLO IN 40%, V/PR INTR XLN POR IP, NO VIS CUT OR SHOW

SH- GRY TO DK GRY, FRM BLKY, SLTY TXT

LS- LT TN TO TN, HD DNS TO FRM TO SFT BRIT, V/SUCRO MTRX, S-CHLKY IP, TR IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 25%,



CN

CN

CN

CN

CN

CN

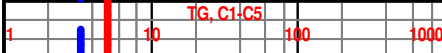
CN

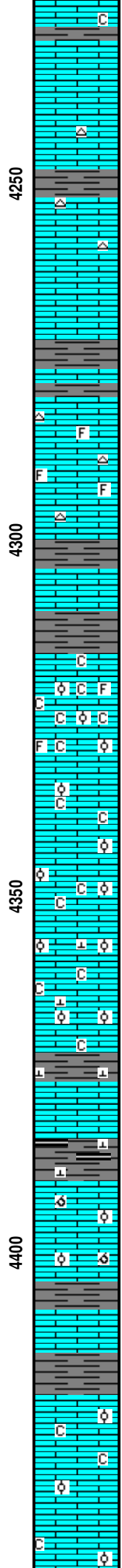
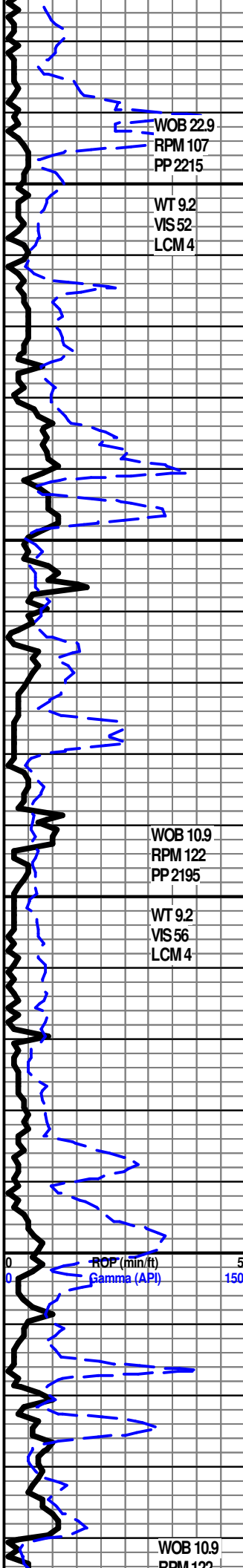
CN

CN

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LS- CRM TO LT TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, SCAT TN TO OFF WHT CHRT IN TRAY, BRT YEL FLO IN 20%, DUL YEL FLO IN 10%, NO VIS POR, NO VIS SHOW

LS- TN DK TN TO BRWN, HD DNS, V/FN TO CRYTO XLN, SUCRO IP, IMBD FOSS FRG IP, LT TN TO TN CHRT SCAT IN TRAY, BRT YEL FLO IN 40%, TR PR INTR FOSS POR IP, NO VIS SHOW

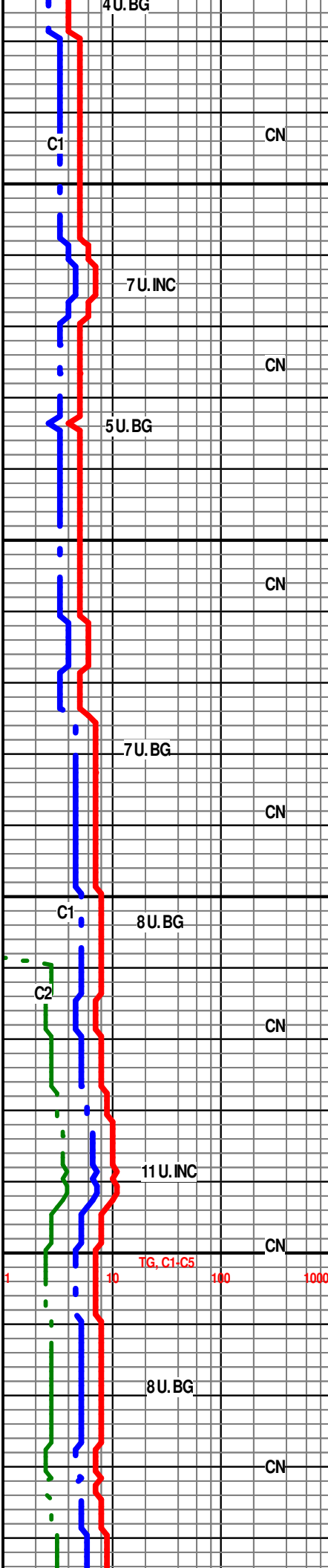
LS- CRM LT TN TO TN, HD DNS TO V/ BRIT, V/FN TO FN XLN SUCRO MTRX, S-CHLKY, SCAT IMBD OOL IP, TR IMBD FOSS FRG IP, V/ABDT SFT WHT CHLK IN TRAY, BRT YEL FLO IN 50%, PR INTR OOL POR IP, PR MICRO PPO IP, NO VIS SHOW

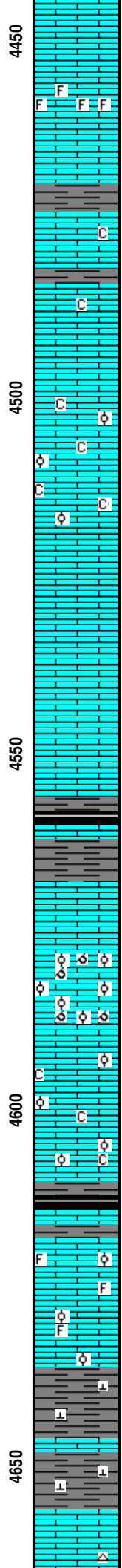
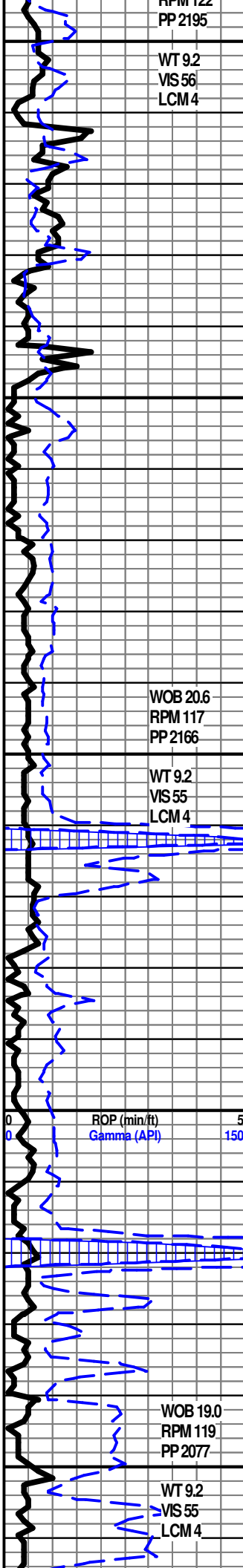
LS- OFF WHT CRM TO LT TN, HD DNS TO V/ BRIT, FN TO MD XLN SUCRO MTRX, CHLKY IP, IMBD OOL IP, IMBD CALC XLS IP, ABDT SFT WHT CHLK IN TRAY, BRT YEL FLO IN 30%, PR TO FR INTR XLN POR IP, PR INTR OOL POR IP, NO VIS SHOW

SH- GRY DK GRY TO BLCK IP, SFT BLKY, SILTY TXT, CARB IP, CALC IP

LS- LT TN TO TN, V/HD DNS TO BRIT IP, V/FN TO FN XLN MTRX, S-SUCRO, TR S-CHLKY, SCAT IMBD OOL IP, SLI TR OOLCST IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 30%, PR OOLCST POR IP, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/FN TO FN XLN MTRX S-SUCRO, TR RE-XLN IP, IMBD OOL IP, TR SFT WHT CHLK IN TRAY, BRT YEL FLO IN 60%, NO VIS POR, NO VIS SHOW





LS- LT TN TO TN, HD DNS, FN TO CRS XLN RE-XLN MTRX, S-SUCRO, ABTD IMBD FOSS FRG SCAT THRU, DUL YEL FLO IN 35%, PR TO FR INTR XLN POR, PR TO FR INTR FOSS POR IP, NO VIS CUT OR SHOW

LS- LT TN TO TN, HD DNS FN TO MD XLN RE-XLN MTRX, S-SUCRO, IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 40%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

LS- TN TO DK TN, HD DNS TO BRIT IP, FN XLN MTRX, SCAT IMBD OOL IP, SFT WHT CHLK SCAT IN TRAY, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

LS- TN DK TN TO BRWN IP, HD DNS TO BRIT, FN XLN MTRX, S-SUCRO, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

STARK 4557' -1508'SS
E-LOG STARK 4560' -1509'SS
 SH- BLCK, SFT, CARB

SWOPE 4568' -1519'SS
E-LOG SWOPE 4569' -1518'SS

4578'-4582' LS- TN TO TR DK TN (DUE TO OIL STN), HD DNS TO TR BRIT, V/FN TO FN SUCRO MTRX, ABTD IMBD OOL THRU, OOLCST SCAT THRU, BRT YEL GLD FLO IN 35%, PR TO FR OOLCST POR SCAT THRU, TR PR INTR OOL POR IP, FR FLSH CUT IN 30%, FR SLW STRM IN 30%, PR RING CUT ON DISH

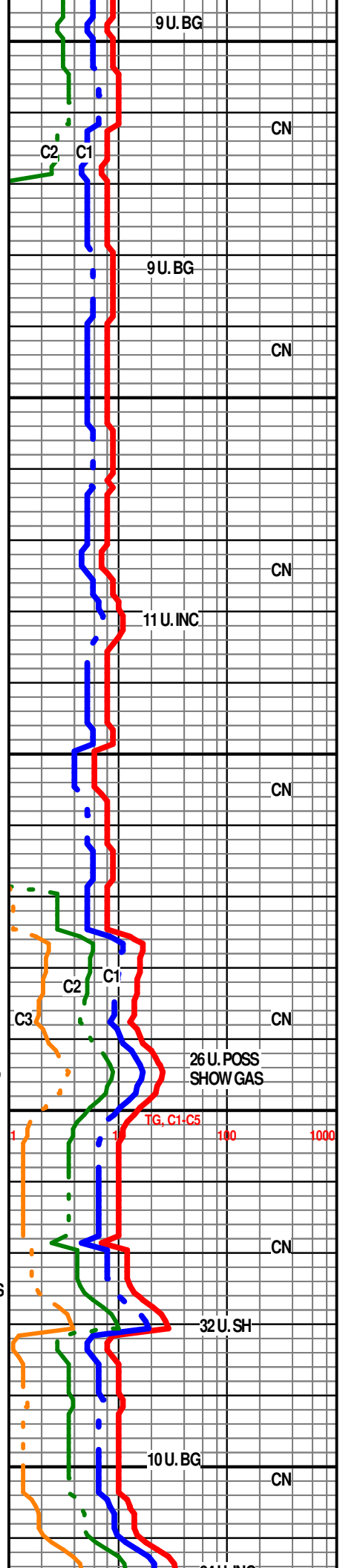
LS- CRM LT TN TO TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, S-CHLKY, SCAT IMBD OOL THRU, SFT WHT CHLK IN TRAY, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

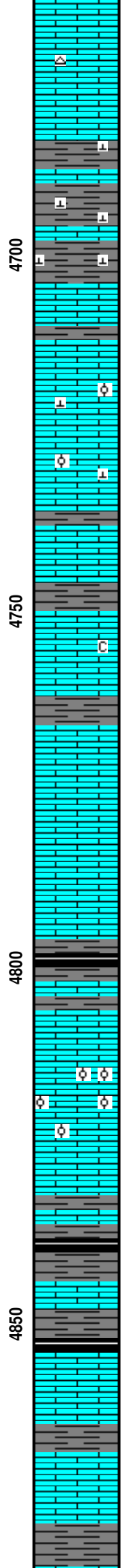
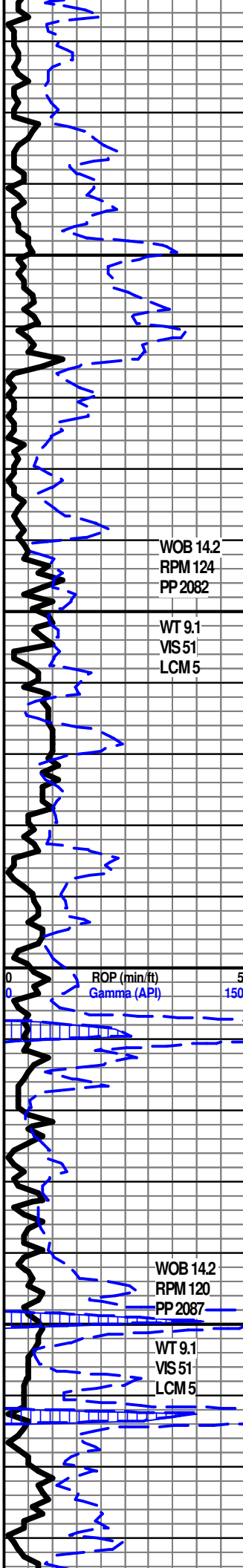
HUSHPUCKNEY 4611' -1562'SS

SH- BLCK, SFT, CARB
E-LOG HUSH 4618' -1567'SS

LS- TN TO DK TN, HD DNS TO TR BRIT, V/FN TO CRYPTO XLN, IMBD FOSS FRG IP, IMBD OOL IP, BRT YEL FLO IP, PR INTR FOSS POR IP, NO VIS CUT OR SHOW

SH- GRV TO DK GRV, FRM BLKY, SMTH TO SLTY TXT, V/ CALC THRU





LS- LT TN TO TN, HD DNS, VFN TO FN XLN MTRX, S-SUCRO IP, TR FRSTY TO TN CRT IN TRAY, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

SH- DK GRY TO DK BRWN IP, FRM BLKY, SMTH TXT, CALC THRU

MARMATON 4710' -1661'SS
E-LOG MARMATON 4715' -1664'SS
 LS- LT TN TO TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, RE-XLN IP, TR IMBD OOL IP, SLI TR IMBD CALC XLS IP, DUL YEL FLO IN 25%, NO VIS POR, NO VIS CUT OR SHOW

SH- GRY TO GRN, FRM BLKY, SMTH TXT

LS- CRM LT TN TO TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR RE-XLN IP, TR S-CHLKY, BRT YEL FLO IN 15%, NO VIS POR, NO VIS SHOW

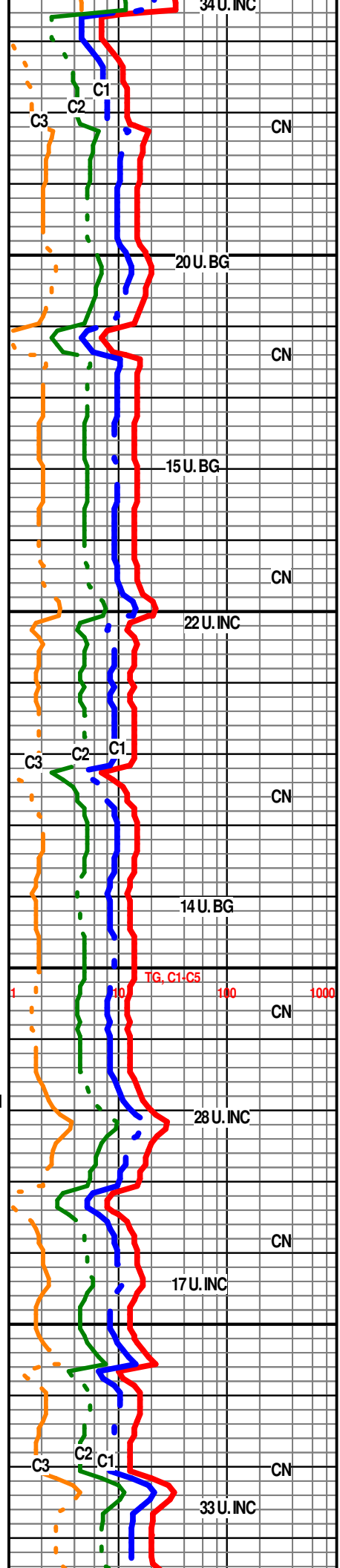
LS- CRM LT TN TN TO TR BRWN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR RE-XLN IP, BRT YEL FLO IN 15%, NO VIS POR, NO VIS SHOW

PAWNEE 4797' -1750'SS
 SH- BLCK, SFT, SPLNTY, CARB

LS- OFF WHT CRM TO LT TN, HD TO FRM TO BRIT, FN XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 30%, PR INTR OOLPOR IP,

SH- BLCK, SFT, CARB

CHEROKEE 4851' -1802'SS
E-LOG CHEROKEE 4862' -1811'SS
 LS- TN DK TN TO BRWN, HD DNS, FN XLN SUCRO MTRX, TR IMBD FOSS FRG IP, BRT YEL FLO IN 30%, NO VIS POR, NO VIS SHOW



WOB 14.2
RPM 124
PP 2082

WT 9.1
VIS 51
LCM 5

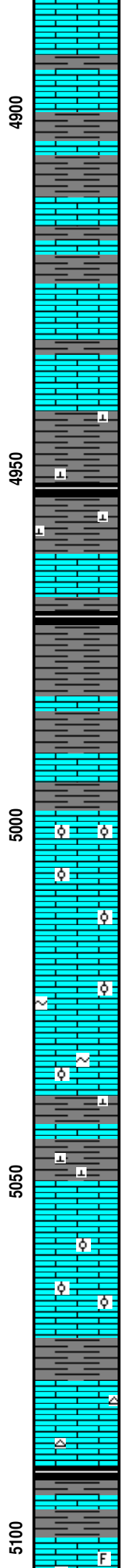
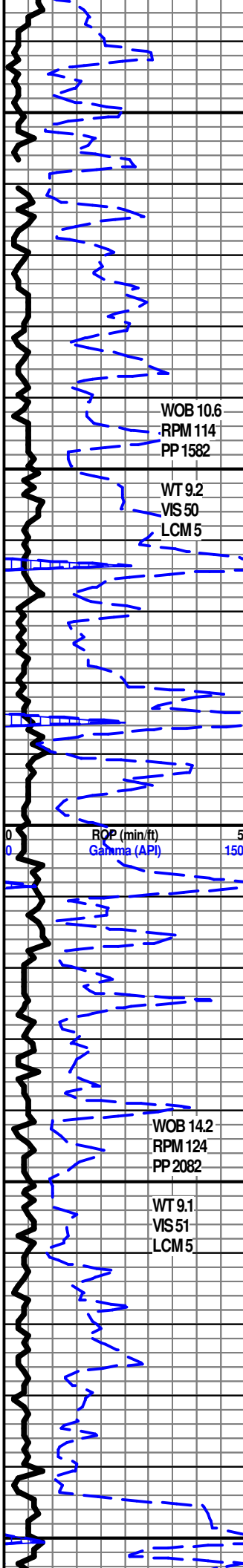
ROP (min/ft)
Gamma (API)

WOB 14.2
RPM 120
PP 2087

WT 9.1
VIS 51
LCM 5

TG, C1-C5
100 1000

33 U. INC



LS- LT TN TO TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, S-CHLKY, TR IMBD OOL IP, SLI TR SFT WHT CHLK IN TRAY, DUL YEL FLO IN 25%, NO VIS POR, NO VIS SHOW

SH- GRY DK GRY TO DK BRWN, FRM BLKY, SILTY TXT

LS- TN TO DK TN, V/HD DNS TO BRIT IP, V/FN TO CRYPTO XLN, S-SUCRO IP, TR IMBD FOSS FRG IP, DUL YEL FLO IN 20%, PR INTR XLN POR IP, NO VIS SHOW

SH- DK GRY TO BLCK, FRM BLKY, SLTYTXT, CALC IP

SH- DK GRY TO BLCK, FRM BLKY, SLTYTXT, CALC IP

LS- LT TN TN TO DK TN, HD DNS TO BRIT IP, V/FN TO MD XLN RE-XLN MTRX, S-SUCRO, TR IMBD OOL IP, BRT YEL FLO IN 20%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

LS- TN DK TN TO BRWN IP, HD DNS TO TR BRIT, V/FN TO CRYPTO XLN IP, S-SUCRO, TR S-CHLKY, TR IMBD GLAUC IP, SLI TR IMBD OOL IP, DUL YEL FLO IN 15%

SH- GRY DK GRY TO BRWN, FRM BLKY, SLTY TO SMTH TXT, CALC IP

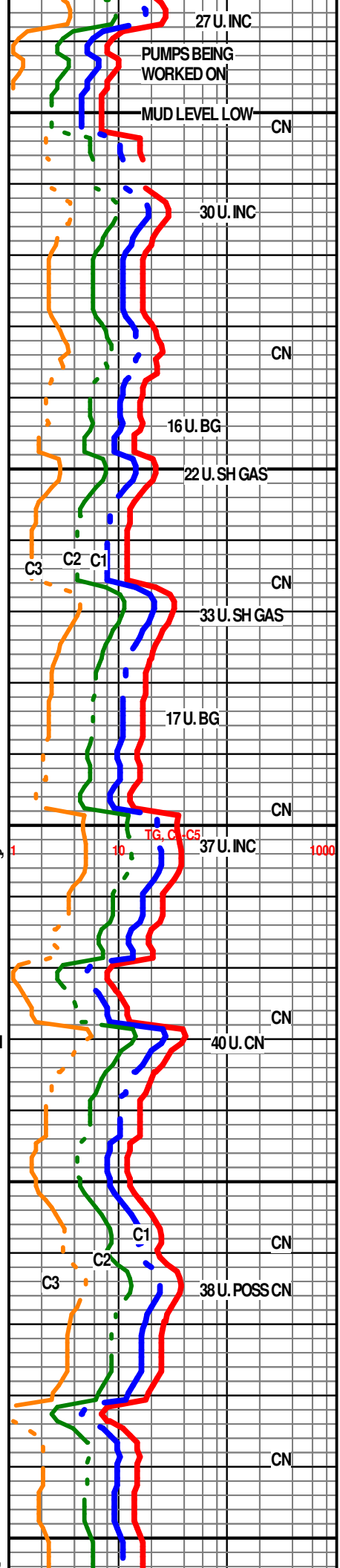
LS- LT TN TO TN, HD DNS TO BRIT IP, V/FN TO FN XLN MTRX, RE-XLN IP, SLI TR OOL IP, DUL YEL FLO IN 15%, NO VIS POR, NO VIS CUT OR SHOW

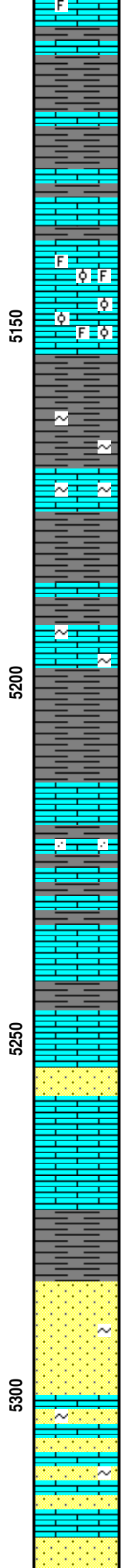
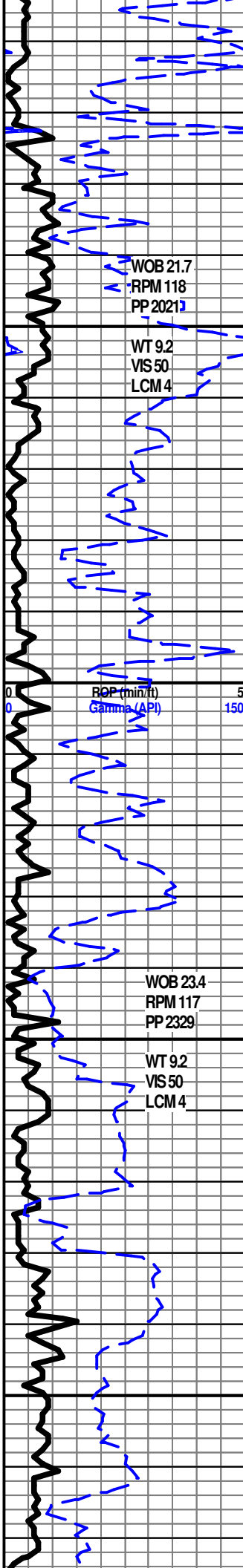
LS- LT TN TO TN, HD DNS TO BRIT IP, V/FN TO FN XLN MTRX, RE-XLN IP, TR OFF WHT TO CRM CHRT IN TRAY, DUL YEL FLO IN 15%, NO VIS POR, NO VIS CUT OR SHOW

E-LOG ATOKA 5095' -2044'SS

SH- DK GRY DK BRWN TO BLCK, FRM TO SFT BLKY, CARB IP, SILTY TXT

LS- LT TN TO DK TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX,





RE-XLN IP, IMBD FOSS FRG IP, DUL YEL FLO IN 10%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

SH- GRY DK GRY TO TR BLCK, FRM BLKY, SMTH TO SILTY TXT

LS- LT TN TN DK TN TO GRY MOTT, HD DNS TO V/BRIT IP, FN XLN SUCRO MTRX, RE-XLN IP, ABDT IMBD OOL IP, IMBD FOSS FRG IP, BRT YEL FLO IN 5%, PR INTR OOL POR IP, NO VIS CUT OR SHOW

E-LOG MORROW 5148' -2097'SS
MORROW 5155' -2106'SS

SH- GRY DK GRY DK BRWN TO GRN, FRM BLKY, SMTH TO SLTY TXT, TR IMBD GLAUC IP

LS- CRM TO LT TN, HD DNS TO BRIT, TR IMBD FOSS FRG IP, SLI TR IMBD GLAUC, TR LMNT GRN SH ON ONE FACES, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRY DK GRY GRN TO LIT GRN, FRM BLKY, SMTH TXT

5224'-5225' LS - CRM LT TN TO BRWN (POSS OIL STN), HD DNS, FN XLN MTRX, ABDT IMBD FN TO MD LS GRNS, TR IMBD FN QRTZ GRS IP, DUL YEL GLD FLO IN 10%, TT TO PR INTR GRN POR SCAT THRU, NO FLSH CUT, V/PR SLW STRM CUT, NO ODOR

E-LOG CHESTER LIME 5255' -2205'

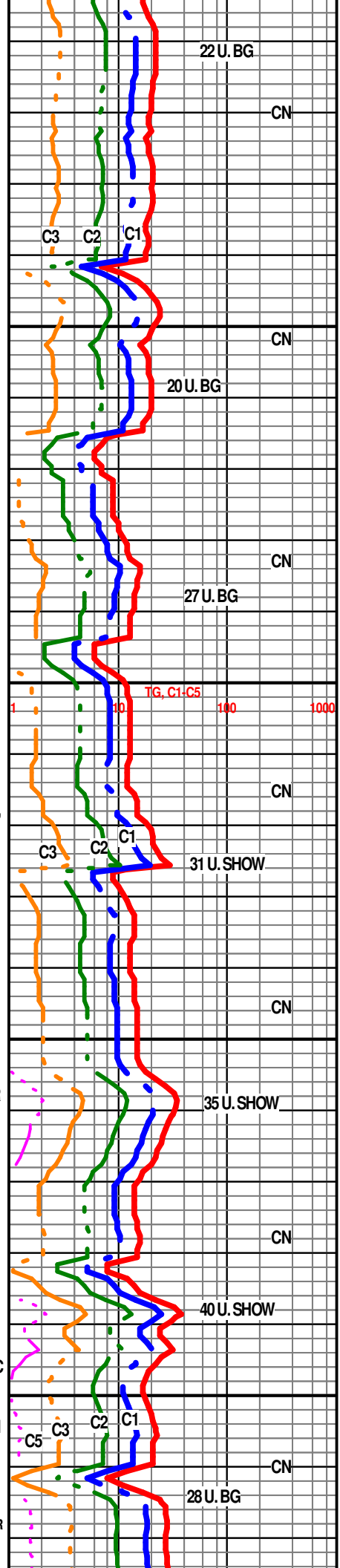
5255'-5257' SS- DK TN TO BRWN (DUE TO OIL STN THRU), HD TT, ABDT V/FN TO FN ANG TO S-ANG QRTZ GRNS THRU, WLL SRT, SIL TO HVYTR CALC CMNT, DUL YEL GLD FLO IN 70%, PR TO TR FR INTR GRN POR SCAT THRU, PR TO FR FLSH CUT, FR SLW STRM THRU, NO OIL ODOR

SH- LT GRY GRY TO DK GRY, FRM SPLNTY TO SFT GMMY IP, V/SLTY TXT

CHESTER 5282' -2233'SS

SS- TN TO DK TN (DUE TO OIL STN IN 60%) LOS IN 5%, HD TT TO V/ FRI, ABDT FN TO TR MD S-ANG TO S-RND QRTZ GRNS, FR TO WLL SRT, SIL TO SLI CALC CMNT, V/ SLI TR IMBD GLAUC IP, DUL YEL GLD FLO IN 60%, PR TO FR TO TR GD INTR GRN POR SCAT THRU, FR TO GD FLSH CUT IN 60%, GD TO V/GD MLKY BLU SLW STRM, WK OIL ODOR, V/GD RING CUT ON DISH

SS- DK TN TO DK BRWN (DUE TO OIL STN IN 40%) HD TO FRI IP, ABDT FN S-ANG TO ANG QRTZ GRNS, FR TO WLL SRT, SIL TO CALC CMNT, V/ SLI TR GLAUC IP, LT TN TO TN LS IN TRAY, DUL YEL GLD FLO IN 25%, PR TO FR INTR GRN POR SCAT THRU, PR FLSH CUT, FR TO GD SLWS STRM IN 25%, PR RING CUT ON DISH, NO OIL ODOR



E- LOG ST GEN 5334' -1811'SS

SS- LT GRY LT TN TO DK TN (DUE TO OIL STN IN 50%, FRM TO V/FRI, ABDT FN TO SM S-ANG TO ANG GRNS THRU, FR SRT, SIL TO CALC CMNT, DUL YEL GLD FLO IN 40%, PR TO FR INTR GRN POR IP, FR FLSH CUT IN 30%, FR TO GD SLW STRM IN 30%, FR RNG CUT, NO OIL ODOR

WOB 15.0
RPM 83
PP 2140

WT 9.0
VIS 55
LCM 6

5350

ST GEN 5351' -2302'SS

LS- OFF WHT TO LT GRY, HD DNS TO FRI IP, V/FN TO FN XLN SUCRO MTRX, S-CHLKY, ABDT IMBD MICRO OOL, ABDT IMBD VV/FN QRTZ GRNS THRU, BRT YEL FLO IN 20%, PR TO FR INTR GRN OR SCAT THRU, NO VIS CUT OR SHOW

WOB 25.0
RPM 100
PP 1880

WT 9.1
VIS 52
LCM 6

5400

SH- LT GRY TO LT GREEN- FRM BLKY SMOOTH TXT SLI TR GRNY TXT IP

ROP (min/ft)
Gamma (API)

5450

ST LOUIS 5426' -2377'SS

LS- CRM LT TN THS BRITT TO DNS IP, MED-XLN RE-XLN MTRX, V/S-CHLKY IP IMBD SCAT MICRO OOL IP, SME WHT TRANSLCNT CHERT, SLI TR DLL YEL MIN FLO IP TO NO FLO, NO VIS SHOW OR CUT

WOB 25.0
RPM 100
PP 1880

WT 9.1
VIS 52
LCM 6

5500

LS- CRM LT TN OFF WHT , HD BRITT TO SFT IP, MED-XLN TO SUCRO S-CHLKY TO CHLKY, IMBD SMLL MICRO OOL, WHT TN TRANSLCNT W/ TR IMBD DISS PYR IP, CHERT SCAT THRU, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN OFF WHT , HD BRITT TO SFT IP, MED-XLN TO SUCRO S-CHLKY TO CHLKY, IMBD SMLL MICRO OOL, WHT TN TRANSLCNT W/ TR IMBD DISS PYR IP, CHERT SCAT THRU, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

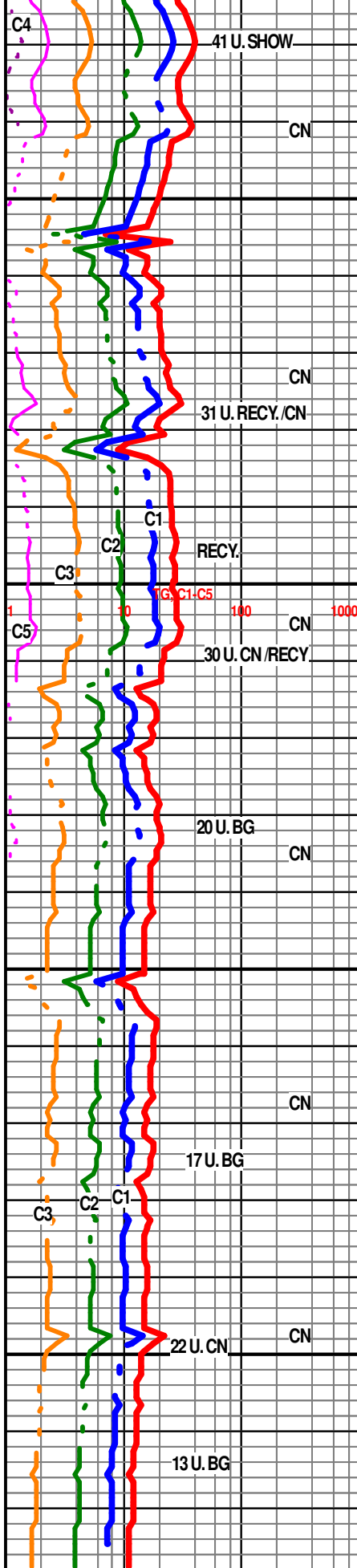
RTD @ 10:38 PM AUG 16TH 2019

CTCH

SHORT TRIP

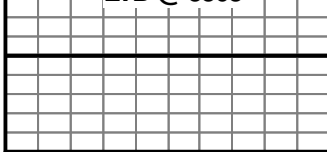
RTD @ 5529'

LTD @ 5503'

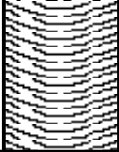


RTD @ 5529'

SAMPLES WILL BE DELIVERED TO KGS



5550



CTCH
TOFL

THANK YOU FOR CHOOSING EARTH TECH

AARON SUELTER

