

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	WENU 603
Doc ID	1512070

All Electric Logs Run

BOREHOLE COMPENSATED SONIC LOG
BOREHOLE VOLUME CALIPER LOG
COMPENSATED NEUTRON PEL DENSITY MICRO LOG
COMPOSITE LOG
MICROLOG
PHASED INDUCTION SHALLOW FOCUSE SP LOG

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	WENU 603
Doc ID	1512070

Tops

Name	Top	Datum
HEEBNER	4020	.
LANSING	4125	.
SWOPE	4538	.
MARMATON	4697	.
CHEROKEE	4859	.
ATOKA	5035	.
MORROW	5191	.
MORROW LIME	5251	.
TOP WENU	5352	.
CHESTER LIME	5399	.
ST GENEVIEVE	5450	.



BASIC
ENERGY SERVICES

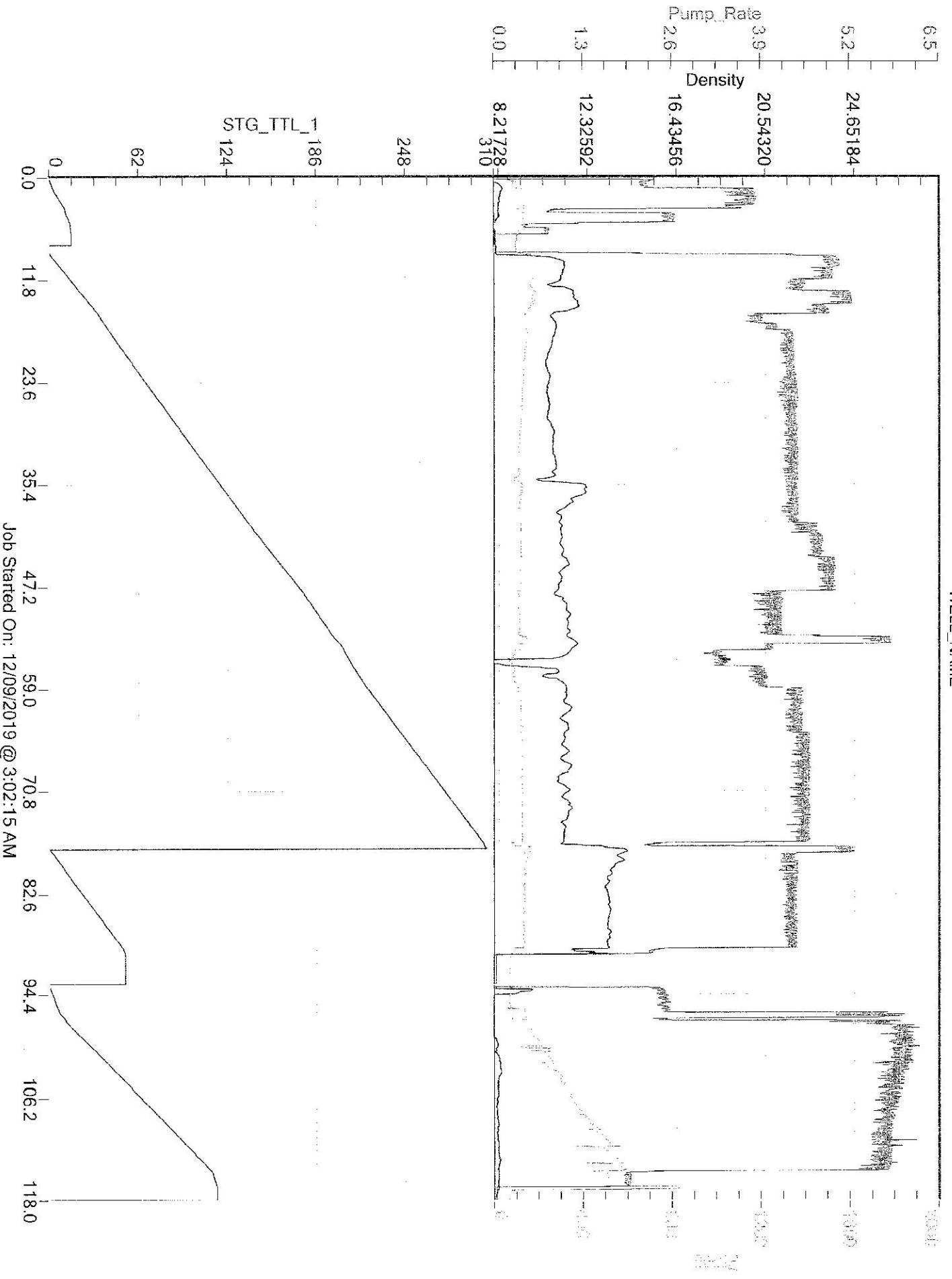
Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country
Estates Road, Liberal KS 67901

Job Log

Customer:	Merit Energy	Cement Pump No.:	38750, 19919 5 Hrs	Operator TRK No.:	78888 Angel	
Address:	sublette.invoives@energy.com	Ticket #:	1718 19718 L	Bulk TRK No.:	70897 ED	14354
City, State, Zip:	PO Box L Sublette Ks 67877	Job Type:	Z-42 Cement Surface Casing			
Service District:	1717, Liberal, ks	Well Type:	OIL			
Well Name and No.:	WENU # 603 AFE #64676 Ref # 603	Well Location:	4-28S-34W	County:	Haskell	State: Kansas

Type of Cmt	Sacks	Additives				Truck Loaded On		
A-con	505	3% CC, 1/2 # Cello, 1# Gilsonite				70897 ED	Front	Back
Premium Plus	165	2% CC, 1/4# CelloFlake				14354	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		1217.05	Man Hours:	50	
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		
2000							On Location	
2015							Safety Meeting	
2045							Rig Up	
0255							Pressure test to 2000 psi	
0300	4					200	Pump Stop Lost 10BBL	
0310	4	216				150	Pump Lead @ 12.1#	
0420	4	39				150	Switch to tail @ 14.8#	
0435							Shut down - Drop Plug	
							Displacement	
	6	20				180		
	5.8	80				480		
0500	2	109.5				600	Land Plug	
0505						900	Release Back --- Float Held	
							Job Completed	
							Thank You	
		110					***** Cement To Sureface *****	
Size Hole	12.25"	Depth					TYPE	
Csg.	8 5/8"	Depth			New / Used		Packer	
or tbg.		Depth					Retainer	
Top Plugs		Type					Perfs	
Customer Signature:						Basic Representative:	Angel Echevarria	
						Basic Signature:		
						Date of Service:	12/9/2019	

CUSTOMER
WELL_NAME



Job Started On: 12/09/2019 @ 3:02:15 AM



HURRICANE SERVICES INC

Customer	Merit Energy	Lease & Well #	WENU #603	Date	12.11.19
Service District	Oakley	County & State	Haskell, KS	Legals S/T/R	Sec 9 - T28S - R34W
Job Type	2 Stage Longstring [®] PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	New Well?	<input type="checkbox"/> YES <input type="checkbox"/> No
Equipment #				Ticket #	ICT2834

Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures			
74	Scott Green	<input type="checkbox"/> Hard hat	<input type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging
230	Jesse Jones	<input type="checkbox"/> H2S Monitor	<input type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection
194 / 254	John Polley	<input type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations
		<input type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input type="checkbox"/> Overhead Hazards	<input type="checkbox"/> Muster Point/Medical Locations
		<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	

Comments

2 Stage Longstring - Float Collar at +/- 5578'; DV tool at +/- 4750'; Cement design per L.L.; Rig to supply mixing water

1st Stage: 500 gal mud flush ahead; 125 sx of Merit blend; circulate 4 hours between stages

2nd Stage: 500 gal mud flush ahead; 140 sx of Merit blend; 20 sx ea. RH & MH

Product/ Service Code	Description	Unit of Measure	Quantity	List Price/Unit	Gross Amount	Item Discount	Net Amount
M000	Heavy Equipment Mileage	mi	120.00				\$408.00
M010	Light Equipment Mileage	mi	120.00				\$204.00
M020	Ton Mileage	tm	1,303.00				\$2,433.98
CC20	Cement Pump - Multi Stage	ea	1.00				\$2,125.00
CP005	Type H Cement	sack	433.00				\$2,470.95
CP011	Fly Ash	sack	160.00				\$1,170.45
CP035	Bentonite Gel	lb	512.00				\$130.56
CP108	Gypsum	lb	1,537.00				\$979.84
CP110	Kol Seal	lb	1,525.00				\$972.19
CP120	Flo-Seal	lb	70.00				\$113.05
CP131	Cement Fluid Loss	lb	128.00				\$897.60
CP125	Defoamer	lb	86.00				\$435.20
CP160	Salt	sack	57.00				\$314.50
CP170	Mud Flush	gal	1,000.00				\$850.00
AF055	Liquid KCL Substitute	gal	5.00				\$127.50
FE125	5 1/2" Centralizer	ea	20.00				\$1,020.00
FE130	5 1/2" Cement Basket	ea	1.00				\$255.00
FE140	5 1/2" Guide Shoe	ea	1.00				\$212.50
FE145	5 1/2" Float Collar - AFU Flapper Type	ea	1.00				\$340.00
FE155	5 1/2" DV Tool - 2 Stage	ea	1.00				\$4,250.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Total Taxable		\$ -	Tax Rate:		Net:	\$ 19,710.31							
Based on this job, how likely is it you would recommend HSI to a colleague?		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.	Sale Tax:	\$ -							
Unlikely	1	2	3	4	5	6	7	8	9	10	Extremely Likely	Total:	\$ 19,710.31

HSI Representative:

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X  **CUSTOMER AUTHORIZATION SIGNATURE**



CEMENT TREATMENT REPORT

Customer:	Merit Energy	Well:	WENU #603	Ticket:	ICT2834
City, State:	Dallas, TX	County:	Haskell, KS	Date:	12.11.19
Field Rep:	Rodney Gonzalas	S-T-R:	Sec 9 - T28S - R34W	Service:	2 Stage Longstring

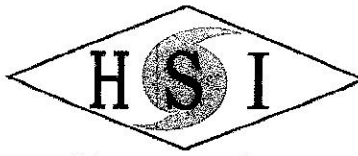
Downhole Information	
Hole Size:	7.875 in
Hole Depth:	5578 ft
Casing Size:	5.5 in
Casing Depth:	5570 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	DV Tool
Depth:	4751 ft
Displacement:	128.1 bbls

Calculated Slurry	
Weight:	13.6 # / sx
Water / Sx:	7.40 gal / sx
Yield:	1.60 ft ³ / sx
Bbls / Ft.:	0.0309
Depth:	5570 ft
Annular Volume:	bbls
Excess:	25%
Total Slurry:	35.6 bbls
Total Sacks:	125 sx

Product	% / #	#
Class H	50.00	5875
Poz	50.00	4625
Gel	2.00	210
C-17	0.50	53
Gypsum	6.00	630
Defoamer	0.25	31
Kol Seal	5.00	625
PhenoSeal	0.25	31
Salt (bww)	10.00	958
Total		13,038

TIME	RATE	PSI	BBLs	REMARKS
6:00				Call out
8:00				Depart
10:00				Arrive on locn
10:10				Start to RIH w/ 5.5" 17ppf J-55 casing
11:00				Make-up DV tool to casing
13:30				Crew on locn
13:35				JSA, discuss moving on, spitting & rigging up equipment
13:40				Move on, spot & rig-up equipment
13:50				Casing @ setting depth
14:05	8.5	350.0		Rig circulate & condition hole
				STAGE 1
14:52	2.2	300.0	5.0	Pump freshwater spacer
14:55		4,000.0		Pressure test
15:00	5.0	430.0	12.0	Pump mudflush spacer
15:03	4.4	400.0	5.0	Pump freshwater spacer
15:10	5.0	370.0	35.6	Mix & pump 125sx cement slurry @ 13.6ppg. Y - 1.6, MR - 7.4g/sk
15:18				Shutdown
15:20				Wash-up pumps & lines / Release 1st stage L/D dart
15:34	4.7	270.0	20.0	Start to displace w/ freshwater
15:38	5.0	300.0		Continue to displace w/ 9.2ppg WBM
15:40	1.0			Slow rate. Mudline broke at camlok fitting on displacement tank
15:50			40.0	Shutdown & repair mudline
15:55	7.0	460.0		Back online
16:07	2.0	150.0	110.0	Slow rate.
16:15		1,060.0	126.0	Bump plug. Final circulating pressure - 400psi
16:18				Bleed off, floats & L/D plug holding, 1/2bbl back.
16:20				Drop opening tool (Bomb)

CREW		UNIT	SUMMARY		
Cementer:	Scott Green	74	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jesse Jones	230	4.48 bpm	735 psi	354 bbls
Bulk #1:	John Polley	194 / 254			
Bulk #2:					



CEMENT TREATMENT REPORT

Customer: Merit Energy	Well: WENU #603	Ticket: ICT2834
City, State: Dallas, TX	County: Haskell, KS	Date: 12.11.19
Field Rep: Rodney Gonzalas	S-T-R: Sec 9 - T28S - R34W	Service: 2 Stage Longstring

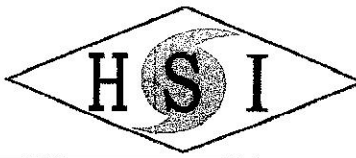
Downhole Information	
Hole Size:	7.875 in
Hole Depth:	5578 ft
Casing Size:	5.5 in
Casing Depth:	5570 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	DV Tool
Depth:	4751 ft
Displacement:	128.1 bbls

Calculated Slurry	
Weight:	13.6 # / sx
Water / Sx:	7.40 gal / sx
Yield:	1.60 ft ³ / sx
Bbls / Ft.:	0.0309
Depth:	4751 ft
Annular Volume:	bbls
Excess:	35%
Total Slurry:	76.4 bbls
Total Sacks:	180 sx

Product	% / #	#
Class H	50.00	8460
Poz	50.00	6660
Gel	2.00	302
C-17	0.50	76
Gypsum	6.00	907
Defoamer	0.25	45
Kol Seal	5.00	900
PhenoSeal	0.25	45
Salt (bww)	10.00	1380
Total		18,775

TIME	RATE	PSI	BBLs	REMARKS
17:00		930.0		Open tool w/ 930psi
17:01	6.0	410.0		Increase rate & confirm tool is open
17:08			25.0	Shutdown & handover to rig
17:10	8.5	360.0		Rig continues to circulate hole
20:20				Rig stop circulating
20:25	3.3	100.0	5.0	Pump freshwater spacer
20:29	4.1	150.0	12.0	Pump mudflush spacer
20:35	4.0	140.0	5.0	Pump freshwater spacer
20:39			5.7	Plug rathole w/ 20sx cement slurry @ 13.6ppg.
20:48			5.7	Plug mousehole w/ 20sx cement slurry @ 13.6ppg.
21:02	5.4	380.0	55.0	Mix & pump 140sx cement slurry @ 13.6ppg. Y - 1.6cuft/sk, MR - 7.4g/sk.
21:15				Shutdown / Release closing plug
21:18	5.0	130.0		Displace w/ freshwater + KCl substitute
21:41	6.0	380.0	100.0	Slow rate to 3bpm
21:43		2,580.0	108.0	Bump plug. Final circulating pressure - 530psi
21:45				Bleed off, tool closed. 1bbl back to tank
21:50				Wash-up pumps & lines
22:00				JSA, discuss rigging down & racking up equipment
22:05				Rig down & rack up equipment
22:25				JSA, discuss journey management
22:30				Depart locn
				Thanks for calling Hurricane Services Inc

CREW		UNIT	SUMMARY		
Cementer:	Scott Green	74	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jesse Jones	230	5.2875 bpm	556 psi	321 bbls
Bulk #1:	John Poiley	194 / 254			
Bulk #2:					



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Customer: Merit Energy	Well: WENU #603	Ticket: ICT2834
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Depth:	ft
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Displacement:	128.1 bbls

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Water / Sx:	7.40 gal / sx
Yield:	1.60 ft ³ / sx
Bbls / Ft.:	0.0309
Depth:	4751 ft
Annular Volume:	bbls
Excess:	35%
Total Slurry:	76.4 bbls
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Product	% / #	#
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Poz	50.00	6660
Gel	2.00	302
C-17	0.50	76
Gypsum	6.00	907
Defoamer	0.25	45
Koi Seal	5.00	900
PhenoSeal	0.25	45
Salt (bww)	10.00	1380
Total		18,775

TIME	RATE	PSI	BBLs	REMARKS
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17:01	6.0	410.0		Increase rate & confirm tool is open
17:08			25.0	Shutdown & handover to rig
17:10	8.5	360.0		Rig continues to circulate hole
20:20				Rig stop circulating
				STAGE 2
20:25	3.3	100.0	5.0	Pump freshwater spacer
20:29	4.1	150.0	12.0	Pump mudflush spacer
20:35	4.0	140.0	5.0	Pump freshwater spacer
20:39			5.7	Plug rathole w/ 20sx cement slurry @ 13.6ppg.
20:48			5.7	Plug mousehole w/ 20sx cement slurry @ 13.6ppg.
21:02	5.4	380.0	55.0	Mix & pump 140sx cement slurry @ 13.6ppg. Y - 1.6cuf/sk, MR - 7.4g/sk.
21:15				Shutdown / Release closing plug
21:18	5.0	130.0		Displace w/ freshwater + KCl substitute
21:41	6.0	380.0	100.0	Slow rate to 3bpm
21:43		2,580.0	108.0	Bump plug. Final circulating pressure - 530psi
21:45				Bleed off, tool closed. 1bbl back to tank
21:50				Wash-up pumps & lines
22:00				JSA, discuss rigging down & racking up equipment
22:05				Rig down & rack up equipment
22:25				JSA, discuss journey management
22:30				Depart locn
				Thanks for calling Hurricane Services Inc

CREW		UNIT	SUMMARY		
Cementer:	Scott Green	74	Average Rate	Average Pressure	Total Fluid
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Bulk #1:	John Polley	194 / 254			
Bulk #2:					

MBC WELL LOGGING LLC

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

Well Name: WENU 603 AFE: 64676 MERIT ENERGY CO LLC
 Well Id: API 15-081-22212-00-00
 Location: HASKELL COUNTY, KANSAS USA
 License Number: 32446
 Spud Date: 12/08/2019
 Surface Coordinates: SHL 2003'fel- 2018'fml-SEC 04-T28S-R34W
 LAT: 37.640494 LONG: -101.467990
 Bottom Hole Coordinates: HLS-DIL/SP/GR CNL/CAL/PE/BHV SONIC SFC- GR TO SFC'
 Ground Elevation (ft): 3079' K.B. Elevation (ft): 3091'
 Logged Interval (ft): 4000' To: 5578' Total Depth (ft): ELOG:
 Formation: MORROW
 Type of Drilling Fluid: MUDCO JUSTIN WHITING CELL (620)-214-3630
 Region: EUBANK NORTH
 Drilling Completed: 12/11/2019

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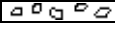


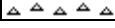
















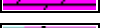

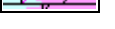

OPERATOR

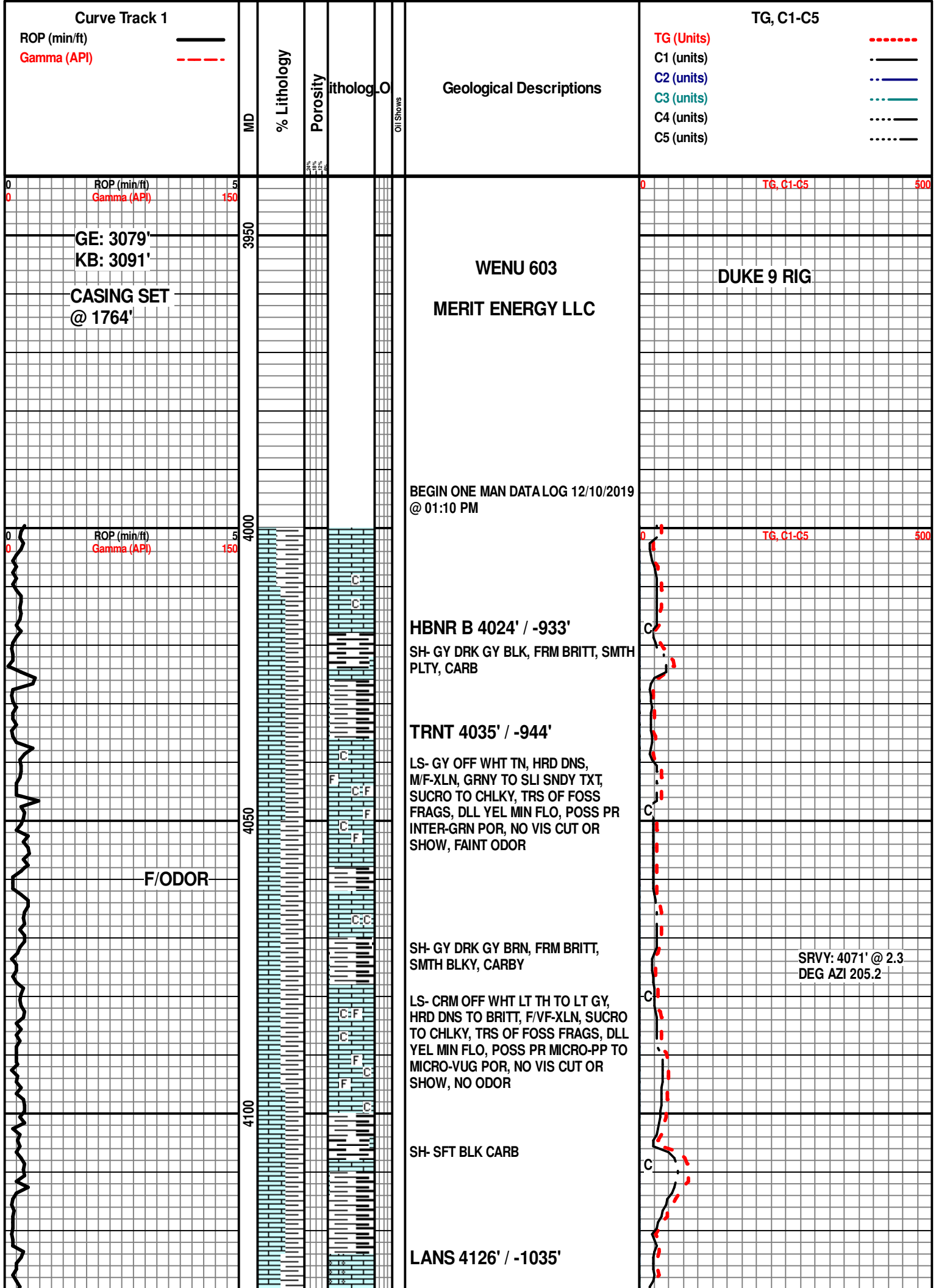
Company: MERIT ENERGY CO LLC
 Address: ATTN KRYSTIN ROBINSON GEOLOGY
 13727 NOEL RD STE 1200
 DALLAS, TEXAS 75240

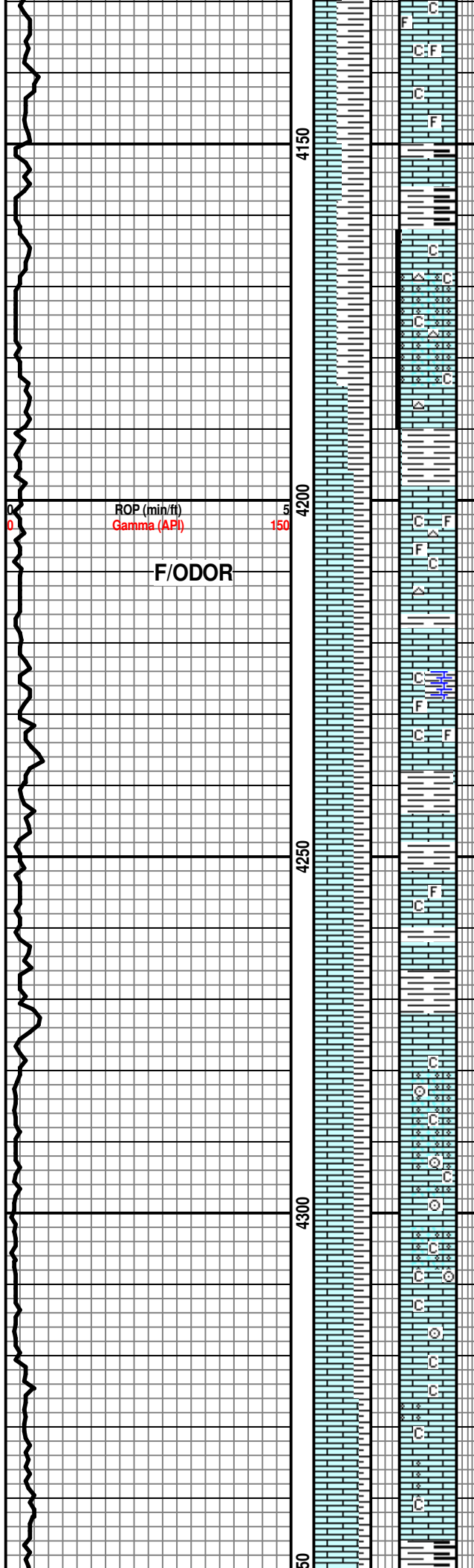
MUDLOGGER

Name: AUSTIN GARNER//TROY FOWLER
 Company: MBC WELL LOGGING LLC
 Address: 21156 RD 22
 MEADE, KANSAS 67864

ROCK TYPES

	Anhy		Ls & ooids		Sndy sh		Stgensndy-arkos
	Brec		Oolitic ls -1		Sltst-1		Sndy ool ls
	Cht		Stgensndy-arkos		Sltly-shale		Sndy-ls-1
	Coal		New ls-1		Lmy ss-1		Calc shale
	Congl		Carby shale		Arkosic snd		Granitewash
	Shly dolomite		Lmy carby sh-3		Ss		Ls shly-b
	Chty sndy shly dol		Carb sh		Grn sh strk		Poor sortd ss
	New symbol		Gyp		Grn mott gy sh		Snd-ls-sh
	Dolo new		Sltst		Lmy sh-2		
	New dolomite 20		Salt		Shale-1		
	Newdolo ls 2		Sndy sh--red		Red sh-1		





LS- OFF TN LT GY, HRD DNS, F/VF-XLN, SUCRO TO CHLKY, TRS OF FOSS FRAGS, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

LS- GY OFF WHT TN, HRD DNS TO BRITT, F-XLN TO M/F-OOL PR SORTD, CHLKY, CRS GRN OOL, F/TRS OF TN GY CHRT, TRS OF CALC-XLS, TRS OF FOSS FRAGS, DLL YEL MIN FLO, FR/PR OOLICASTIC TO VUG POR, FST YEL-GRN FLUSH CUT, FAINT ODOR

LS- GY OFF WHT, HRD DNS, F/VF-XLN, SUCRO TO CHLKY, FTRS OF GY CHRT, SME OOL IN CHRT, PALE DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

LS- OFF WHT LT TN TO GY, HRD DNS, F-XLN, SUCRO TO CHLKY, TRS OF FOSS FRAG, SME QRTX-XLS, SHLY IP DISS, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO DET ODOR

SH- GY DRK GY TO BLK, FRM BRITT, SMTH BLKY TO GRNY IP, SME CALC IP

LS- CRM OFF WHT LT TN GY TO BUFF. HRD DNS TO BRITT, F/VF-XLN M/F-OOL PR SORTD, SUCRO TO V/CHLKY, TRS OF SFT OFF WHT CHLK, F/TS OF CRINOIDS, TRS OF CALC GRNS, F-TRS OF QTRZ-XLS, DLL YEL MIN FLO THRU, PR/FR OOLICASTIC TO MICRO VUG POR IP, NO VIS CUT OR SHOW

LS- GY OFF WHT LT TN TO BUFF, HRD DNS TO BRITT, F-XLN, TRS OF GY CHRT, TRS OF SCATT OOL, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

SRVY: 4160' @ 2.5
DEG AZI 204.2

TG, C1-C5 500

SRVY: 4253' @ 2.7
DEG AZI 203.2

SRVY: 4347' @ 2.9

F/ODOR

SH- GY DRK GY TO BLK, FRM BRITT, SMTH BLKY TO GRNY, CAL TO CARB

391 UN SH GAS CN SRVY

SH- GY DRK GY TO BLK, CARBY, CALC IP

LS- OFF WHT TN TO GY TO MOTT, HRD DNS TO SLI BRITT, F/VF-XLN, CHLKY, SHLY IP, F/TRS OF TN CHRT, DLL YEL FLO, NO VIS POR, NO VIS CUT OR SHOW

TG, C1-C5 500

ODOR

LS- CRM OFF WHT TO MOTT, HRD DNS, F/VF-XLN, CHLKY, F/TRS OF TN OFF WHT CHRT, F/TRS OF OOL, DLL PALE YEL FLO, NO VIS POR, NO VIS CUT OR SHOW. FR ODOR

LS- OFF WHT GY LT TN, HRD DNS, F-XLN, SUCRO TO CHLKY, TRS OF LT GY CHRT, TRS OF FOSS FRAGS, DLL PALE YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, F/ODOR

SRVY: 4439' @ 3.1 DEG AZI 217.2

ODOR

LS- TN GY OFF WHT, HRD DNS, F-XLN TO M/F-OOL GRNS PR SORTD, CHLKY, TRS TO TN CHRT SME W/ OOL, SME SHADOW OOL IP, TT, DLL YEL FLO, PR OOLICASTIC POR, NO VIS CUT OR SHOW, F/ODOR

LS- TN GY OFF WHT TO MOTT, HRD DNS TO BRITT, F-XLN, SUB-SUCRO TO CHLKY, TRS OF OOL SME SHADOW, TRS OF TN CHRT SME W/ OOL, TRS OF FOSS FRAGS, DLL YEL MIN FLO, PR OOLICAST POR, NO VIS CUT OR SHOW, F/ODOR

STARK 4518' / -1427'

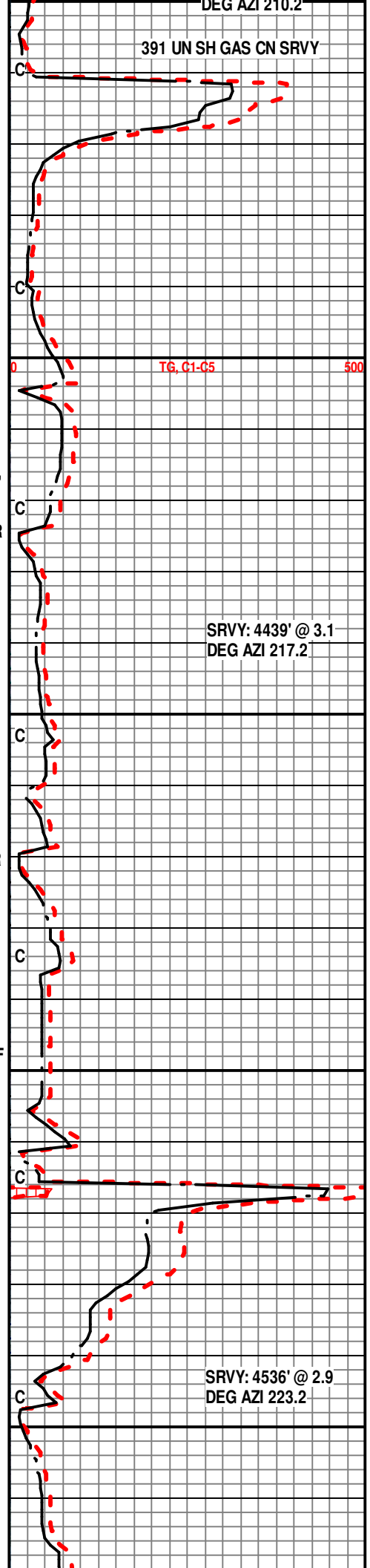
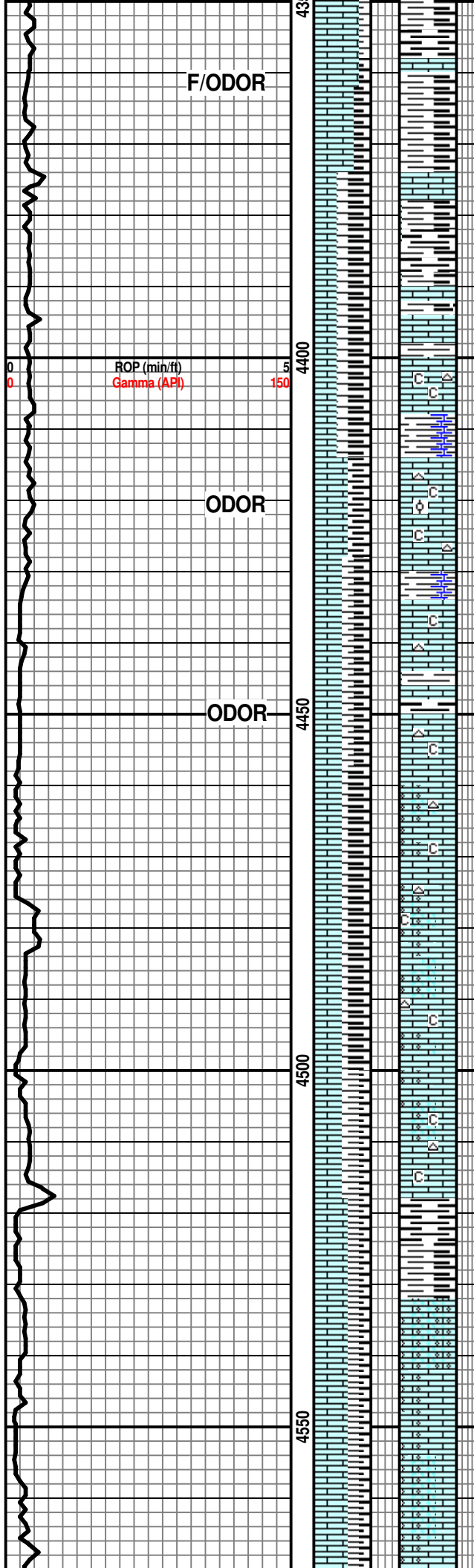
SH- DRK GY BLK, CARBY

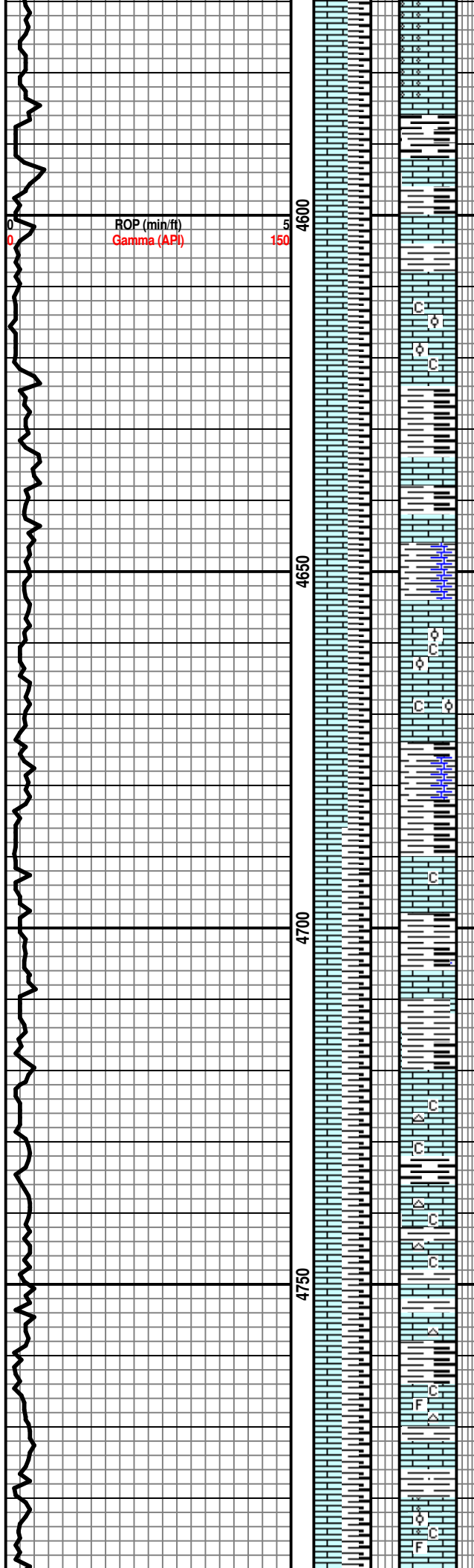
SWOPE 4532' / -1441'

LS- GY OFF WHT TO TN, HRD DNS TO BRITT, F-XLN TO M/F TO MICRO-OOL GRNS PR/FR SORTD, CHLKY, V/DLL YEL FLO, PR/FR OOLICASTIC TO MICRO VUG POR, NO VIS CUT OR SHOW, F/ODOR

SRVY: 4536' @ 2.9 DEG AZI 223.2

LS- CRM OFF WHT LT TN, HRD BRITT, F-XLN TO F/VF-MICRO OOL GRNS FR SORTD IN CHLKY MTX, ABNDT CHLK, YEL TO SPOTTY BRITE YEL FLO,





POSS PR INTER-OOL POR, NO VIS CUT OR SHOW, F/ODOR

HUSH SH 4587' / -1496'

SH- SFT TO FRM BLK CARBY SH

LS- TN GY OFF WHT TO MOTT, HRD DNS TO BRITT, F/VF-XLN, SUB-SUCRO TO CHLKY, TRS OF SHADOW OOL, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, F/ODOR

SH- GY DRK GY GRN TO BLK, FRM BRITT TO SFT IP, SMTH TO GRNY, SILTY IP, CALC W/ FOSS FRAGS, CARBY

SHLY LS- GY BRN, GRNY TXT, IMBD TO DISS GY DRK GY SH, CARBY

LS- GY OFF WHT TN, HRD DNS TO BRITT, F-XLN, CHLKY, SHLY IP, TRS OF OOL, TRS OF FOSS FRAGS, V/DLL PALE YEL FLO, NO VIS POR, NO VIS CUT OR SHOW, F/ODOR

SILTY SH- GY DRK GY GRN TO BRN, FRM BRITT TO SFT, SMTH GRNY, CARBY

MARM 4692' / -1601'

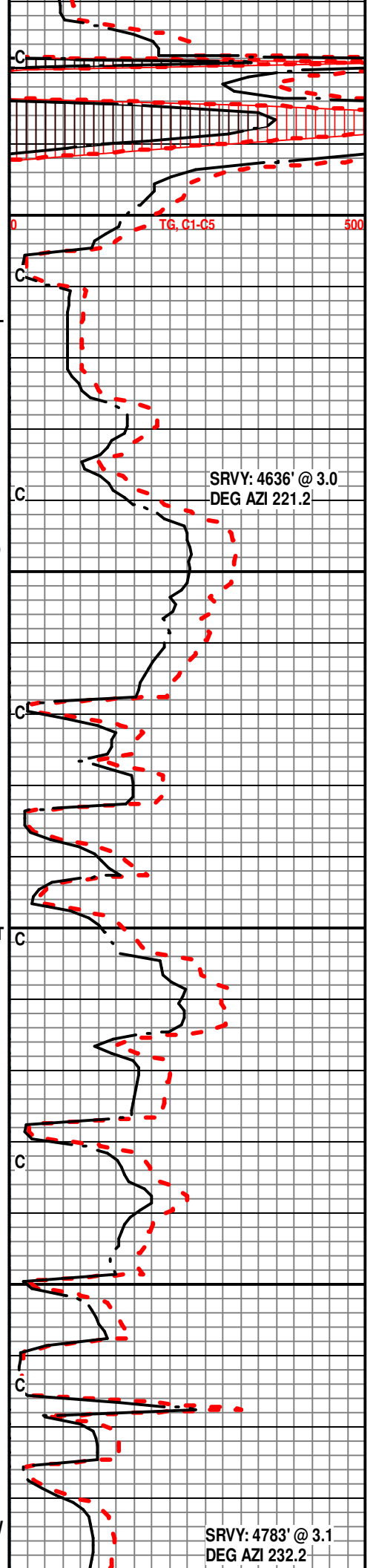
LS- GY OFF WHT TN, HRD DNS TO BRITT, F-XLN, CHLKY, SME SHADO OOL, GY TN CHRT, DLL YEL MIN FLO, POSS PR MICRO-PP PR IP, NO VIS CUT OR SHOW, F/ODOR

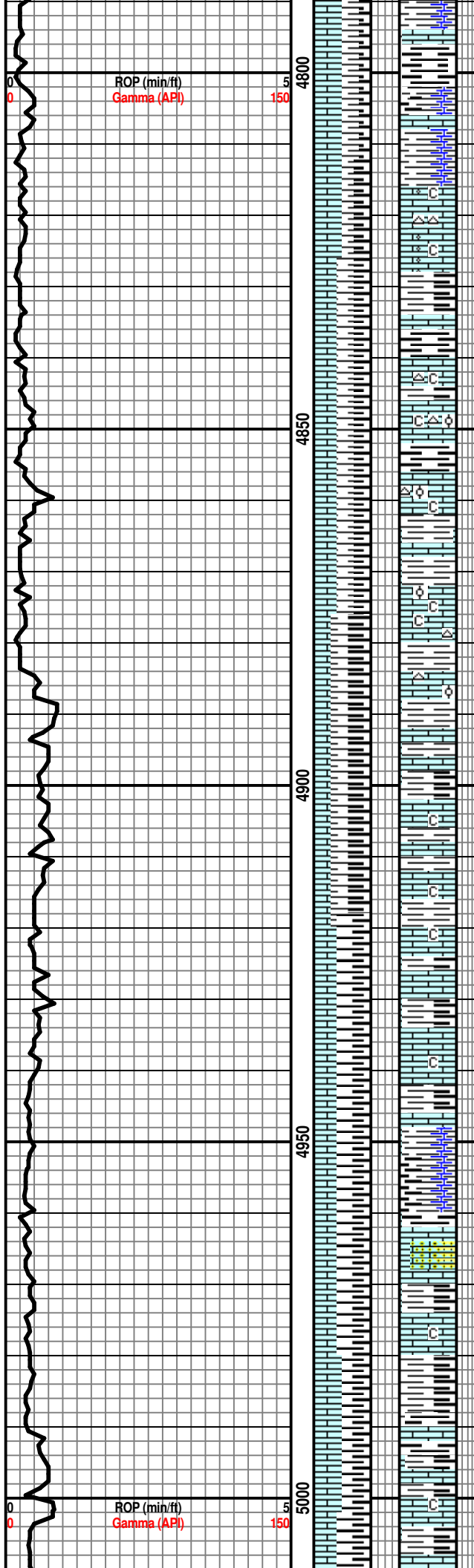
SH- GY DRK GY BRN, FRM BRITT, SILTY, CALC IP, POSS CARB IP

LS- TN GY OFF WHT TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY, GRNY TXT IP, TRS OF GY CHRT, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

SH- GY DRK GY TO BLK, FRM BRITT, BLKY GRNY, CARBY

LS- GY OFF WHT TO MOTT, HRD BRITT, FV-XLN, CHLKY, SME OOL IP, FOSS FRAGS, DLL YEL MIN FLO, POSS PR MICRO-PP POR, NO VIS CUT OR SHOW





SH- SFT BLK CARB

LS- OFF WHT TN GY, HRD DNS TO BRITT, F-XLN, CHLKY, TRS OF OOL SME SHADOW, TRS OF TN GY CHRT, DLL YEL MIN FLO, POSS PR MICRO-VUG POR, NO VIS CUT OR SHOW, NO ODOR

CHRK 4836' / -1745'

SH- BLK CARB

LS-CRM OFF WHT TN GY TO MOTT, HRD BRITT, F/VF-XLN, SUCRO TO CHLKY, F/TRS OF OOL, TRS OF LET GY CHRT, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

LS- WHT TN GY, HRD DNS TO BRITT, F/VF-XLN, SUCRO TO CHLKY, TRS OF GY TN CHRT, TRS OF SHADOW OOL, SHLY IP DISS GY BLK SH, V/DLL GLD YEL FLO, NO VIS POR, NO VIS CUT OR SHOW

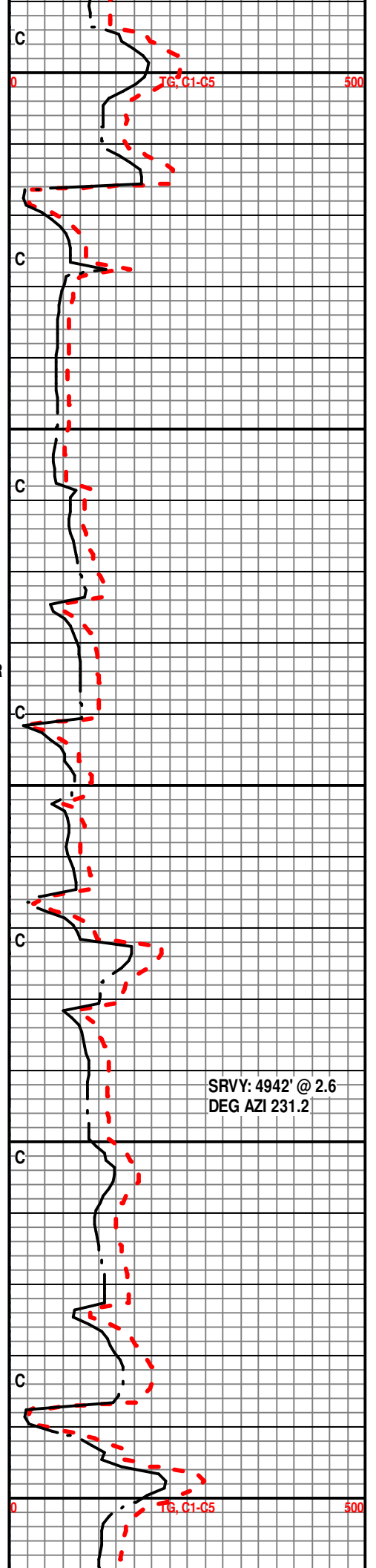
LS- GY TN OFF WHT, HRD DNS TO BRITT, F/VF-XLN, SUCRO TO CHLKY, TRS OF TN CHRT, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

LS- GY TN OFF WHT TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY, V/DLL PALE YEL FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

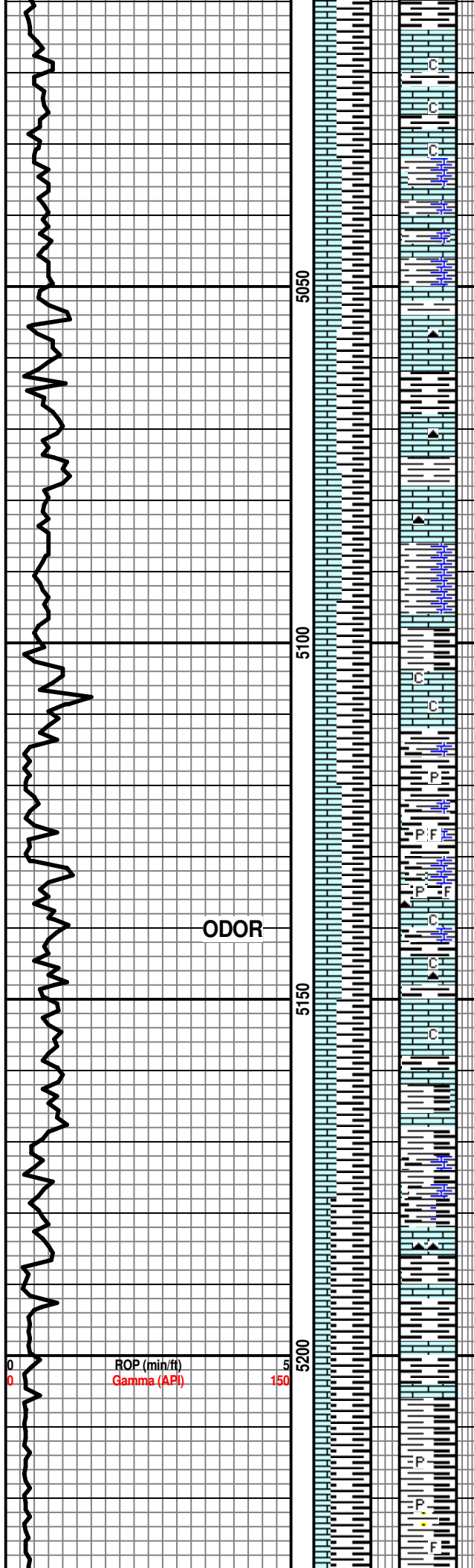
LYMY SH- GY OFF WHT, HRD BRITT, VF-XLN, CHLKY/CALC, CARBY

LS- TN BUFF, HRD DNS, F/VF-XLN TO F-CALC GRNS, SLI AREN, DLL YEL MIN FLO, POSS PR INTER-GRN POR, NO VIS CUT OR SHOW, NO ODOR

LYMY SHS- ALTERNATING GY DRK GY SH W/ GY TN CHLKY SH, CARBY



SRVY: 4942' @ 2.6
DEG AZI 231.2



LS- GY TN BRN, HRD DNS BRITT,
F/VF-XLN, CHLKY, IMBD TO DISS GY
BLK SH IP SME CARB, F/TRS OF TN
CHRT, V/DLL YEL MIN FLO, NO VIS
POR, NO VIS CUT OR SHOW

LS- TN GY OFF WHT TO MOTT, HRD
DNS, F/VF-XLN, SLI CHLKY, TRS OF GY
TN CHRT, V/DLL YEL MIN FLO, NO VIS
POR, NO VIS CUT OR SHOW

LS- TN GY OFF WHT, HRD DNS BRITT,
F-XLN, CHLKY, TRS OF GY TN BRN
CHRT, V/DLL YEL MIN FLO, NO VIS
POR, NO VIS CUT OR SHOW

LS- OFF WHT TN GY DRK GY, HRD
BRITT, F-XLN, CHLKY, TRS OF TN
CHRT, SHLY IP, DLL YEL MIN FLO, NO
VIS POR OR SHOW, NO ODOR

SH- GY DRK GY TO BLK, CARBY, TRS
OF PYR, CALC IP, FOSS FRAGS

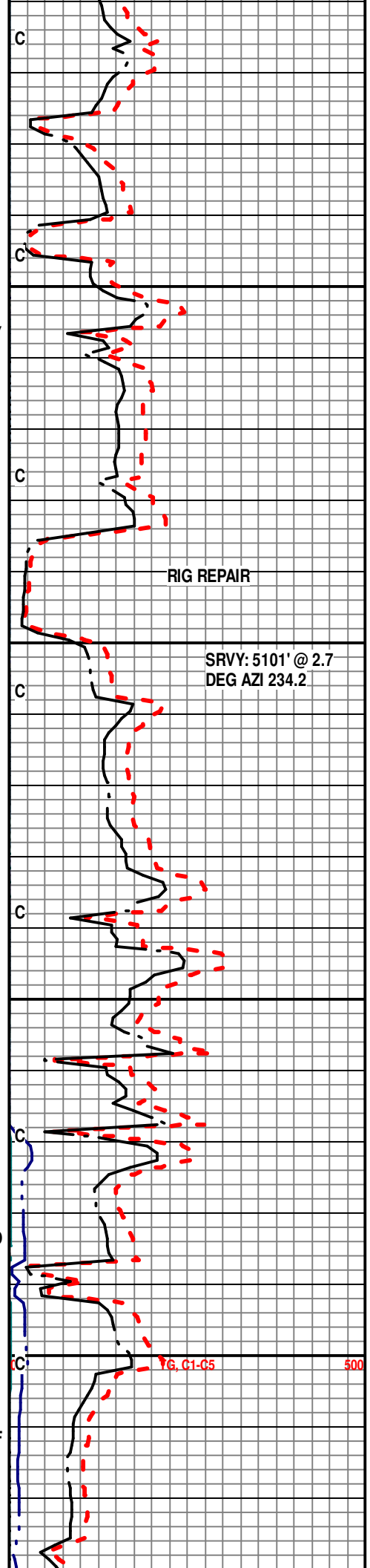
LS- OFF WHT TN GY TO MOTT, HRD
BRITT, F-XLN, SUB-SUCRO TO CHLKY,
TRS OF TN CHRT, DLL YEL MIN FLO,
NO VIS POR, NO VIS CUT OR SHOW

SH- GY DRK GY TO BLK, CARBY

DIRTY GY OPAQ CHRT BLK SPECKLED

SH- BLK FISSLE FRM BRITT, CARB
MORROW 5199' / -2108'

SH- BLK FRM FISSLE, CALC IP, TRS OF
PYR



RIG REPAIR

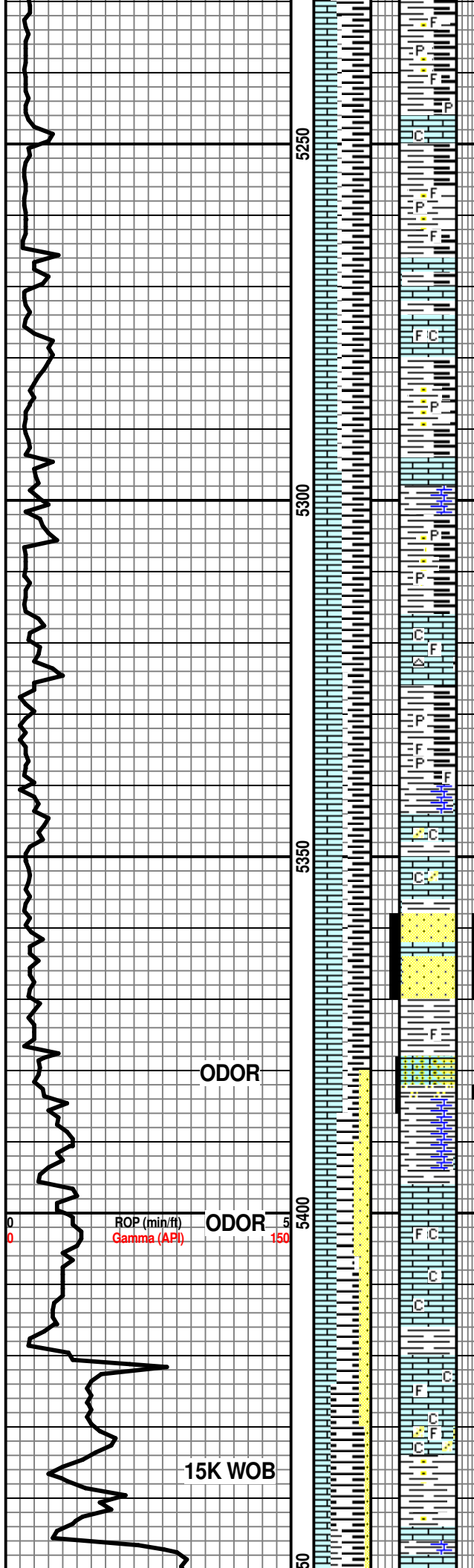
SRVY: 5101' @ 2.7
DEG AZI 234.2

FG, C1-C5

500

ROP (min/ft)
Gamma (API)

5
150



SH- GY DRK GY TO BLK, CARB, CALC, FOSS FRAGS, PYR

LS- CRM GY TN, HRD BRITT, F-XLN, CHLKY, FOSS FRAGS, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

LS- OFF WHT TN GY TO MOTT, HRD DNS BRITT, M/F-XLN, CHLKY, SILTY, FOSS FRAGS, SHLY, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

SH- GY DRK GY GRNISH, FRM BRITT SFT, SILTY CALC, PYR

SH- GY DRK GY TO BLK, SILTY TO CALC, PYR

LS- CRM OFF WHT LT TN TO GY, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, TRS OF FOSS FRAGS, TRS OF GY TN CHRT, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

LS- GY OFF WHT TN TO MOTT, HRD DNS BRITT, F-VF-XLN, SUCRO TO CHLKY, SNDY TO SHLY IP, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

SS- TN GY, TT TO FRI, M/F TO VF-QRTZ GRNS PR/FR SORTD, RND SUB ANG, SILC TO CALC CMNT, RX TO ACID, IMB TO DISS SH, TRS OF FOSS FRAGS, PALE YEL TO DLL YEL FLO, FR INTER-GRN POR, FAST MILKYBLUE FLUSH TO STREAM CUT, FR ODOR, TRS OF OIL STAINS UPPER IS CLEANER THAN LOWER W/SH

SNDY LS TO SH- GY DRK GY, FRI SS, CALC/CHLKY, F-GRNS, DLL YEL FLO, PR INTER-GRN POR, WEAK MILKY BLU TO SLO STREAM CUT, ODOR

LS- TN GY OFF WHT MOTT, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, TRS OF FOSS FRAGS, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

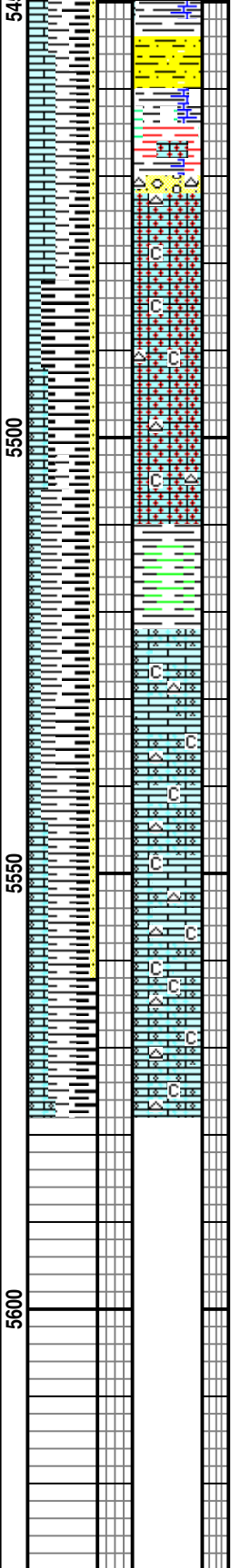
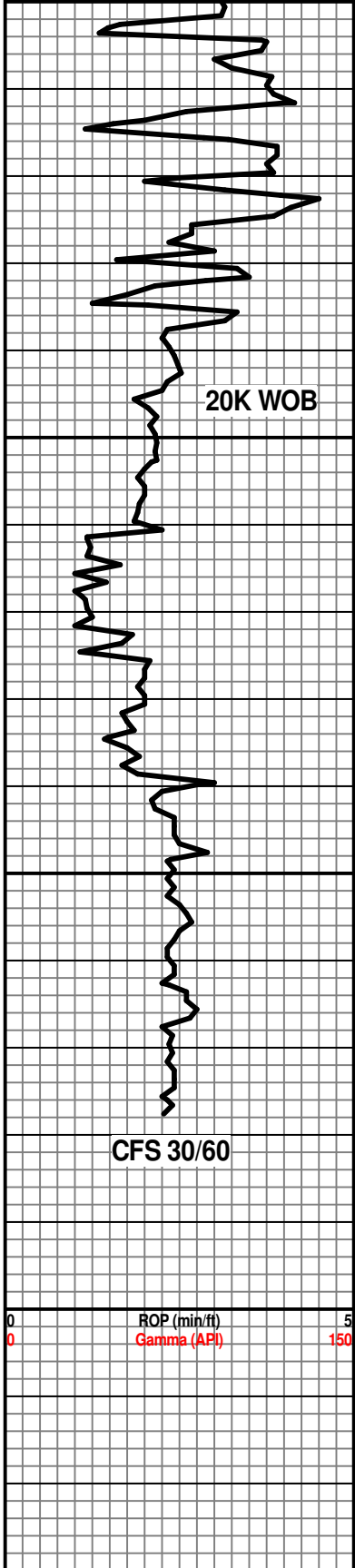
LS- TN GY OFF WHT MOTT, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, SNDY IP, FOSS FRAGS, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

SH- GRNISH GY SILTY, SFT

SRVY: 5258' @ 2.3 DEG AZI 234.2

TG, C1-C5 500

SRVY: 5415' @ 2.0 DEG AZI 227.2



SLTSTN- REDDISH BRN, FRM BRITT,
VVF-GRNS,
SAMPLE QUALITY IS POOR- GROUND
UP AND CAVINGS
RUBBLE ZONE WITH MISC CHRT SHLS
FOSS FRAGS & ERODED MISS

ST GEN 5475' / -2384'

OOL LS- CRM OFF WHT TN TO LT GY
HRD DNS TO BRITT, F/VF-MICRO-OOL
GRNS, CHLKY, PALE GLD YEL
MUSTRD FLO, PR INTER-GRN POR, NO
VIS CUT OR SHOW, NO DET ODOR

POOR SAMPLES

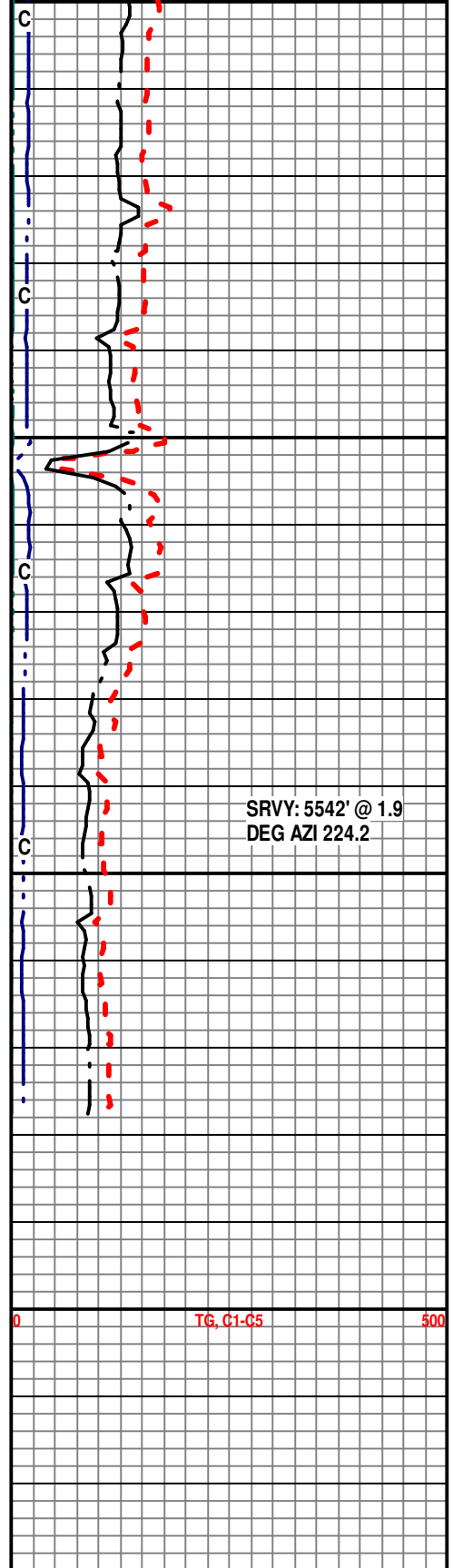
SH- GY GRN, SOAPY TXT, SPLNTY,
PYR

ST LOUIS 5522' / -2431'

OOL LS- TN OFF WHT GY TO MOTT,
HRD DNS TO BRITT, MICRO TO
MD/F-GRN OOL PR SORTD, CHLKY, LS
CONTENT 50%, TRS OF GY OFF WHT
TN SEMI OPAQ CHRTS SME W. INCL,
DLL GLD MUST FLO, POSS PR
INTR-GRN POR IP, NO VIS CUT OR
SHOW NO ODOR

OOL LS- TN OFF WHT GY TO MOTT,
HRD DNS TO BRITT, MICRO TO
MD/F-GRN OOL PR SORTD, LS
CONTENT 20%, CHLKY, TRS OF GY
OFF WHT TN SEMI OPAQ CHRTS, DLL
PALE YEL TO BLUSH FLO, POSS
PR/FR INTR-GRN POR, NO VIS CUT OR
SHOW NO ODOR

RTD 5578' @ 12:49 PM 12/11/2019



SRVY: 5542' @ 1.9
DEG AZI 224.2