

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) (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	FLORA MEREDITH 2-10
Doc ID	1482826

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
BOREHOLE COMPENSATED SONIC ARRAY LOG
MICROLOG
QUAD COMBO COMPOSITE LOG
SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	FLORA MEREDITH 2-10
Doc ID	1482826

Tops

Name	Top	Datum
CHASE	2644	.
COUNCIL GROVE	2920	.
TOPEKA	3680	.
HEEBNER	4100	.
TORONTO	4126	.
LANSING	4165	.
SWOPE	4650	.
HERTHA	4685	.
MARMATON	4788	.
PAWNEE	4906	.
CHEROKEE	4970	.
ATOKA	5140	.
MORROW	5252	.
CHESTER	5360	.
ST GENEVIEVE	5540	.



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

PRESSURE PUMPING

Job Log

Customer:	Merit Energy	Cement Pump No.:	37223 19572 24HRS	Operator TRK No.:	78868
Address:	sublette.invoices@meritenergy.com	Ticket #:	1718 19547 L	Bulk TRK No.:	30464 37547 Jaime 37712 19883 Kirby
City, State, Zip:	AFE # 64184	Job Type:	Z-42 Cement Surface Casing		
Service District:	1718 - Liberal, Ks.	Well Type:	OIL		
Well Name and No.:	Flora Meredith # 2-10	Well Location:	10-30S-33W	County:	Haskell
				State:	Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-Con Cement	475	3% Calcium Chloride, 1/2# Celloflake, 1# Gilsonite	30464 37547 Jaime	Front	Back
Class C Cement	165	2% Calcium Chloride, 1/4# Celloflake	37712 19883 Kirby	Front	Back
				Front	Back

Tail 1/Tail 2:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel
Tail Stage 1:	12.1	2.41	13.9	1144.75	TT Man Hours: 76
Tail Stage 2:	14.8	1.34	6.33	221.1	# of Men on Job: 3

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
21:45pm							Arrived at location
22:00pm							Spot trucks/Rig up
4:45am							Safety meeting
5:06am					1500		Pressure test lines to 1500psi
5:07am	3	10			80		Pump 10bbls of fresh water spacer
5:11am	5	203			120		Pump 203bbls of lead from 475sks at 12.1lbs
5:55am	4	39			100		Pump 39bbls of tail from 165sks at 14.8lbs
6:12am							Shut down/Drop plug/Wash pump and lines
6:13am							Start displacement of 107bbls with fresh water
6:19am	5	20			110		20bbls gone
6:23am	5	40			170		40bbls gone
6:27am	5	60			240		60bbls gone
6:31am	5	80			390		80bbls gone
6:35am	5	97			490		97bbls gone/Slow down rate
6:38am	3	107			1000		Bump plug/Hold pressure for 5 minutes
6:43am							Release pressure to check if float holds
							Got 100bbls of cement to Surface
							Rig down
							Job Completed
							Thanked company man and rig crew

Size Hole	12 1/4	Depth	1730		TYPE	Float Collar
Size & Wt. Csg.	8 5/8 24#	Depth	1729	New / Used	Float Collar	1685.8
Landing Press 1	500+	Landing Press 2			Retainer	Depth
Shoe Jt.	43.2	Type			Perfs	CIBP

Customer Signature:	Basic Representative:	Victor A. Corona
	Basic Signature:	<i>Victor A. Corona</i>
	Date of Service:	8/7/2019

Pumping Order / Mixture

Client: Merit Energy
Date: 8/6/2019
Job: 8 5/8 Surface

Well Name & No: Flora Meredith 2-10
Location Supervisor: Victor A. Corona
COMPANY REP. Rodney Gonzales

Differential Pressure 1353 psi
Lift Pressure: 500 psi

Recipe

Pressure Test PSI: 1500

MAX PSI: 500

10 BBLs OF FRESH WATER SPACER
203 BBLs LEAD SLURRY YIELD 2.41 12.1LBS 475SKS 13.9G/SK
39 BBLs TAIL SLURRY YIELD 1.34 14.8LBS 165SKS 6.33G/SK

DROP PLUG/WASH PUMP ON TOP OF PLUG

107.0 BBLs OF DISPLACEMENT
97.0 BBLs @ 5 BPM
10.0 BBLs AT 2-3 BPM TO BUMP PLUG

DISP PLUG WITH 107BBLs OF H2O

Cement Callsheet



Company	Merit Energy		Service Point	Liberal, Kansas					
Well Type	Contractor	County	Contact Person	State	Ph #	620-388-3779			
Lease	Flora Meredith	Well #	2-10	Sec	10	Twp	30S	Range	33W

Directions:

Sublette: Jct 83 & 56; West on 56 to CR II; South to CR 210; 1.5 miles east; North to Rig

Job Type	Surface		Casing Size	8 5/8	Thread	8 Rnd	Weight	24
Equipment	1 Pump Truck 2 Bulk Trucks		Tubing/Drill Pipe Size		Thread		Weight	
AFE #:		Hole Size	12 1/4	Packer		Bridge Plug		
		Plug Container	Yes	Squeeze Manifold		Field Bin		

Surface: 8 5/8 FE On Location; Please Take 5 1/2 Float Shoe, Float Collar, And 20 Centralizers

CEMENT DATA					
LEAD 1	Weight PPG	Type			Additives
BC118	12.1	A-Con Cement			3% Calcium Chloride, 1/2# Celloflake, 1# Gilsonite
Sacks	Excess	Yield Ft/sk	Water Gal/sk		
475	130%	2.41	13.90		
TAIL 1	Weight PPG	Type			Additives
BC101	14.80	Class C Cement			2% Calcium Chloride, 1/4 # Celloflake
Sacks	Excess	Yield Ft/sk	Water Gal/sk		
165		1.34	6.33		
LEAD 2	Weight PPG	Type			Additives
Sacks	Excess	Yield Ft/sk	Water Gal/sk		
TAIL 2	Weight PPG	Type			Additives
Sacks	Excess	Yield Ft/sk	Water Gal/sk		
Mouse/Rat	Weight PPG	Type			Additives
Sacks	Excess	Yield Ft/sk	Water Gal/sk		
Plugs	Weight PPG	Type			Additives
Sacks	Excess	Yield Ft/sk	Water Gal/sk		

Float Equipment				
Part #	Quantity	Description	# Used	# Returned
CF253	1	Guide Shoe - Regular, 8 5/8" (Blue)		
CF1453	1	Flapper Type Insert Float Valves. 8 5/8" (Blue)		
CF1753	6	Centralizer, 8 5/8" (Blue)		
CF105	1	Top Rubber Cement Plug, 8 5/8"		

Misc. Chemicals				

Ordered By	Luke Lau	Phone	972-628-1680	Fax		Date of Job	
Call Taken By	Max Ball	Phone	620-675-5025	Email		Time Ready	
Operator or Driver Called	Jose on Bonus Slee +				Call Out Time		

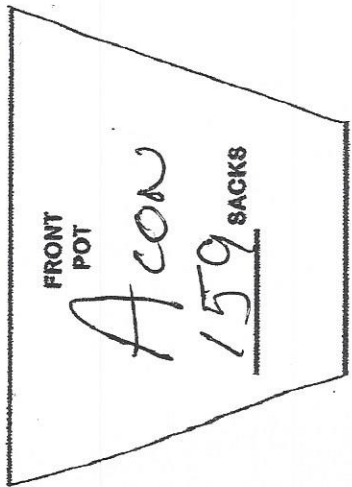
Date PIC Met for the 7th

DATE 8-6-19

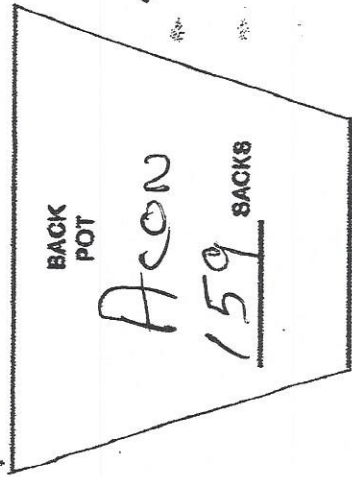
COMPANY
LEASE

Merit
Flora Meredith
Well # 2-10

DIRECTIONS



30464



37547

37712 - 19883

F — B

165 158

tail Acon

ours to Load Truck



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

SERVICE ORDER - 1718 19549 L

Date: 8/12/2019

Well Name: Flora Meredith # 2-10	Location: 10-30S-33W
County - State: Haskell	RRC #:
Type Of Service: Z-42 Cement Production Casing	Customer's Order #: 0

Customer: Merit Energy

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

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
BC133	320	SK	Class C 50/50 Poz	23.50	7520.00
CC113	1614	LB	Gypsum	1.00	1614.00
CC111	1916	LB	Salt	0.50	958.00
CC102	81	LB	Celloflake	4.00	324.00
CC201	1601	LB	Gilsonite	1.00	1601.00
CC105	68	LB	C-41P	4.00	272.00
CC187	135	LB	C-17	24.00	3240.00
CF851	1	Ea	5 1/2" Float Shoe(Blue)	425.00	425.00
CF951	1	Ea	5 1/2" Float Collar(Blue)	420.00	420.00
CF1751	20	Ea	Centralizer, 5 1/2" (Blue)	80.00	1600.00
CF103	1	Ea	Top Rubber Cement Plug, 5 1/2"	105.00	105.00
CC151	500	GAL	Mud Flush	1.50	750.00
C718	26	Gal	Clayplex 650	35.00	910.00
ME102	120	MI	Heavy Equipment Mileage	8.00	960.00
CE240	320	SK	Blending & Mixing Service Charge	1.40	448.00
TM	807	MI	Ton Mileage	3.00	2421.00
CC6	1	HR	Depth Charge, 5001-6000'	2900.00	2900.00
CE504	1	EA	Plug Container Utilization Charge	250.00	250.00
ME101	60	MI	Light Vehicle Mileage	5.00	300.00
CE505	1	EA	Cement Densimeter, with chart recorder	350.00	350.00
BE143	1	Ea	Supervisor	75.00	75.00
		Ea	Driver	35.00	
				Book Total:	\$27,443.00
				Taxes:	
				Disc. Price:	\$13,268.70
Additional 10% Discount as per Agreement on Cement Services				10% Disc	\$1,326.87
				Adjusted Price	\$11,941.83

PUMP TRUCK NUMBER: 37223 19572

DRIVER: *James Torres*
Victor A Corne
 BASIC ENERGY SERVICES

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

CUSTOMER OR HIS AGENT

Customer Comments or Concerns:

Corey Blackshaw
Joe Martinez



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

PRESSURE PUMPING Job Log

Customer:	Merit Energy	Cement Pump No.:	37223 19572 11HRS	Operator TRK No.:	78868	
Address:	sublette.invoices@meritenergy.com	Ticket #:	1718 19549 L	Bulk TRK No.:	14354 19808 Corey	14354 19808
City, State, Zip:	AFE- 64184	Job Type:	Z-42 Cement Production Casing			
Service District:	1718 - Liberal, Ks.	Well Type:	OIL			
Well Name and No.:	Flora Meredith # 2-10	Well Location:	10-30S-33W	County:	Haskell	State: Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
Class C 50/50	320	6% Gypsum, 10% Salt, .5% C-17, 5# Gilsonite, 1/4# Celloflake, 1/4# Defoamer	14354 19808 Corey	Front	Back
			14354 19808	Front	Back
				Front	Back

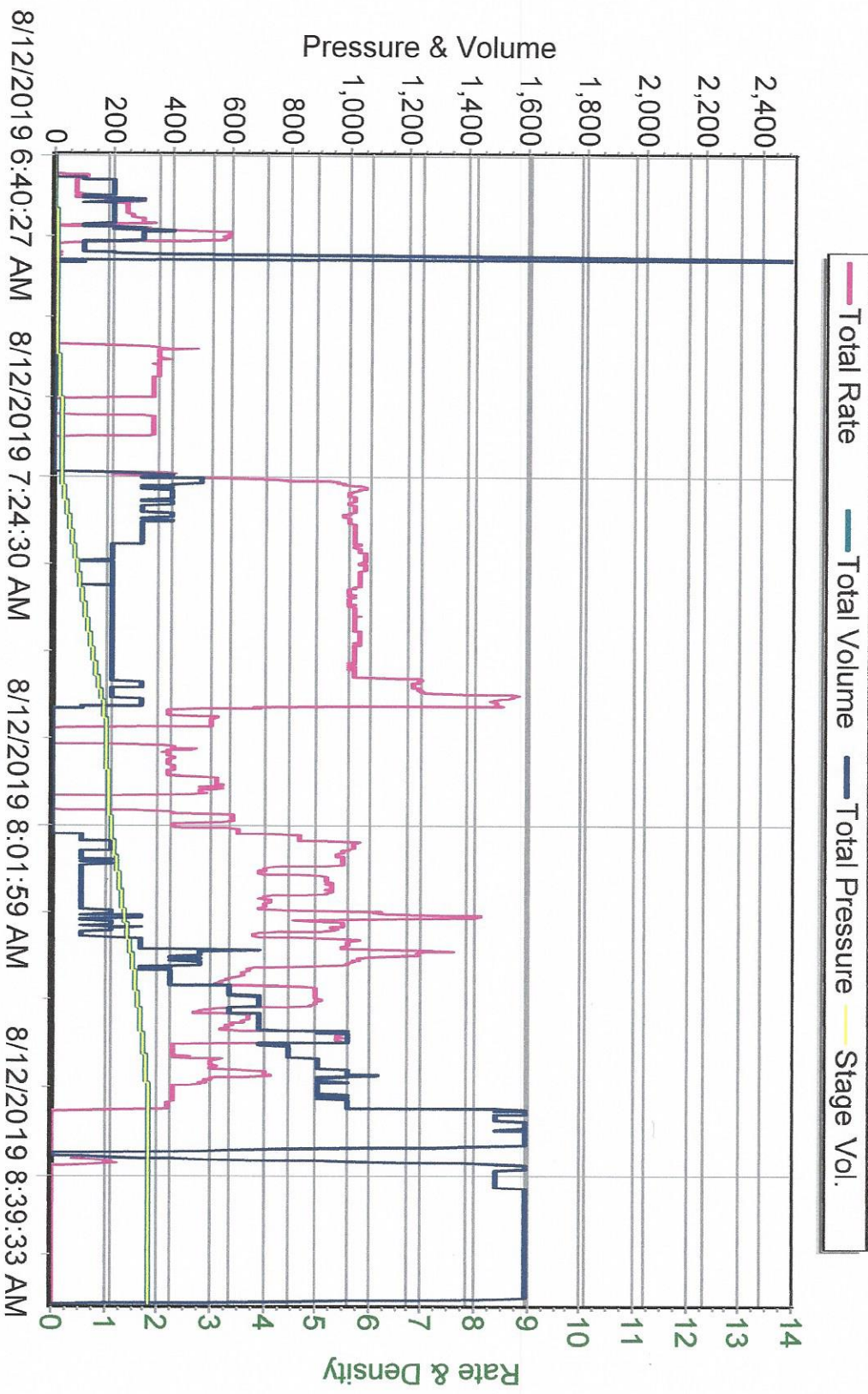
Tail 1/Tail 2:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Tail Stage 1:	13.6	1.57	7.18	502.4	TT Man Hours:	37
Tail Stage 2:					# of Men on Job:	3

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure(Psi)		Description of Operation and Materials
			T	C	Tubing	Casing	
2:30am							Arrived at location
3:00am							Spot trucks/Rig up
6:30am							Safety meeting
6:52am	3	12				80	Pump 12bbls of mud flush spacer (500Gal)
6:59am						2500	Pressure Test lines to 2500psi
7:09am	3	14				zero	Pump 14bbls of cement from 50sks at 13.6lbs to fill Rat and Mouse Hole
7:23am	6	75				300	Pump 75bbls of cement from 270sks at 13.6lbs
7:50am							Shut down/Drop Plug/Wash pump and lines to pit
7:59am							Start displacement of 131bbls with H2O/4%KCL
8:05am	5	20				90	20bbls gone
8:09am	6	40				110	40bbls gone
8:13am	5	60				300	60bbls gone
8:17am	5	80				400	80bbls gone
8:22am	4	100				650	100bbls gone
8:25am	5	110				1000	110bbls gone/Slow down rate
8:30am	3	131				1500	Bump plug/Hold for 5 minutes
8:35am							Release pressure to check if float holds
8:37am						1500	Pressure test casing for 15minutes
							Rig down
							Job Completed
							Thanked company man and rig crew

Size Hole	7 7/8"	Depth	5717		TYPE	Float Collar	
Size & Wt. Csg.	5 1/2" 17#	Depth	5718	New / Used	Float Collar	5675.06	Depth
Landing Press 1	1000+	Landing Press 2			Retainer		Depth
Shoe Jt.	42.94	Type			Perfs		CIBP

Customer Signature:	Basic Representative:	Victor A. Corona
	Basic Signature:	<i>Victor A. Corona</i>
	Date of Service:	8/12/2019

Merit Energy
Flora Meredith 2-10
5 1/2 Production
8/12/2019



Pumping Order / Mixture

Client: Merit Energy
Date: 8/12/2019
Job: 5 1/2 Production

Well Name & No: Flora Meredith 2-10
Location Supervisor: Victor A. Corona
COMPANY REP. Rodney Gonzales

Differential Pressure 791 psi
Lift Pressure: 500 psi

Recipe

Pressure Test PSI: 2500

MAX PSI: 1500

12 BBLs OF MUD FLUSH SPACER

14 BBLs CEMENT R&M YIELD 1.57 13.6 LBS 50SKS 7.18G/SK

75 BBLs TAIL SLURRY YIELD 1.57 13.6 LBS 270SKS 7.18G/SK

DROP PLUG/WASH PUMP ON TO PIT

131.0 BBLs OF DISPLACEMENT

120.0 BBLs @ 5 BPM

11.0 BBLs AT 2-3 BPM TO BUMP PLUG

DISP PLUG WITH 131 BBLs OF H2O/4%KCL



Cement Callsheet

Company		Merit Energy		Service Point		Liberal, Kansas	
Well Type		Contractor		Contact Person		Tyece Davis	
Lease		Flora Meredith		Duke 9		County	
Directions:		Well #		Sec		Twp	
		2-10		10		30S	
Range		State		Ph #		33W	
		Kansas		620-388-3779			

Sublette: Jct 83 & 56; West on 56 to CR II; South to CR 210; 1.5 miles east; North to rig

Job Type	Production	Casing Size	Thread	Weight
Equipment	1 Pump Truck I Bulk Truck	5 1/2	8 Rnd	17
AFE #:	64184	Plug Container	Yes	
		7 7/8		
		Bridge Plug		

CEMENT DATA

LEAD 1	Weight PPG	Type	Addresses
LEAD 1	13.60	Class C 50/50	6% Gypsum, 10% Salt, .5% C-17, 1/4# Defoamer, 5# Gilsontite, 1/4# Celloflake
TAIL 1	Weight PPG	Type	Addresses
TAIL 2	Weight PPG	Type	Addresses
LEAD 2	Weight PPG	Type	Addresses
LEAD 2	30%	Yield PPG	1.57
		Water Galisk	7.18

Sacks	Weight PPG	Type	Addresses
LEAD 1	Weight PPG	Type	Addresses
TAIL 1	Weight PPG	Type	Addresses
TAIL 2	Weight PPG	Type	Addresses
Mouse/Rat	Weight PPG	Type	Addresses
Sacks	Yield PPG	Water Galisk	
Excess	Yield PPG	Water Galisk	
Sacks	Yield PPG	Water Galisk	
Excess	Yield PPG	Water Galisk	
Plugs	Weight PPG	Type	Addresses
Sacks	Yield PPG	Water Galisk	
Excess	Yield PPG	Water Galisk	

Float Equipment

Part #	Quantity	Description	# Used	# Returned
CF851	1	5 1/2" Float Shoe (Blue)		
CF951	1	5 1/2" Float Collar (Blue)		
CF1751	20	Centralizer, 5 1/2" (Blue)		
CF103	1	Top Rubber Cement Plug, 5 1/2"		

Misc. Chemicals

CC151	500	Mud Flush
C718	26	Clayplex 650

Operator or Driver	Called
Ordered By	Phone 972-628-1680 Fax
Call Taken By	Max Ball
Phone	620-675-5025 Email
Time Ready	
Date of Job	
Call Out Time	

DATE

8-11-2019

COMPANY

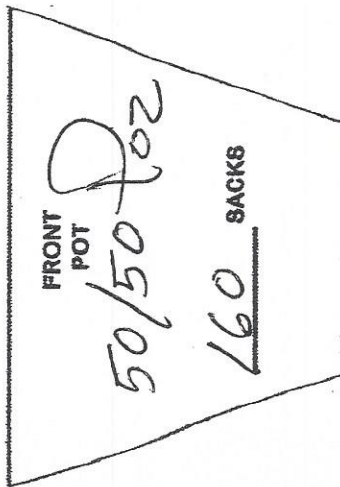
Merit

LEASE

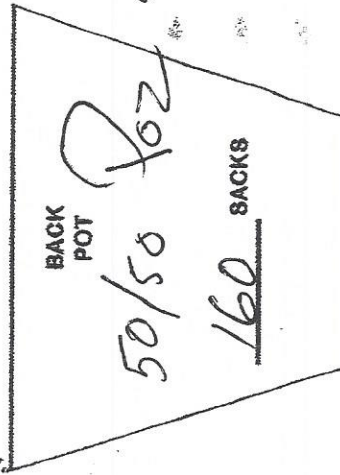
Flora Meredith

Well 2-10

DIRECTIONS



14354



19808

tours to Load Truck 400 Per 200 Pcs

MBC WELL LOGGING LLC

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

Well Name: FLORA MEREDITH 2-10 AFE 63465 DEVIATED MERIT ENERGY CO LLC
 Well Id: API 15-081-22193-01-00
 Location: HASKELL COUNTY, KANSAS USA
 License Number: 32446
 Spud Date: 8-5-19
 Surface Coordinates: 848'fsl- 2589'fwi-SEC 10-T30S-R33W
 Bottom Hole Coordinates: HLS-DIL/SP/GR CNL/CAL/PE/BHV SONIC SFC- GR TO SFC'
 Ground Elevation (ft): 2947
 Logged Interval (ft): 4100 To: 5721
 Formation: ST LOUIS
 Type of Drilling Fluid: MUDCO JUSTIN WHIT ING CELL (620)-214-3630

Region: VICTORY
 Drilling Completed: 8-11-19
 K.B. Elevation (ft): 2959
 Total Depth (ft): Elog

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




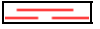
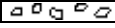










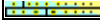



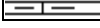



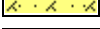




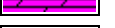



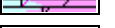



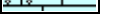


OPERATOR

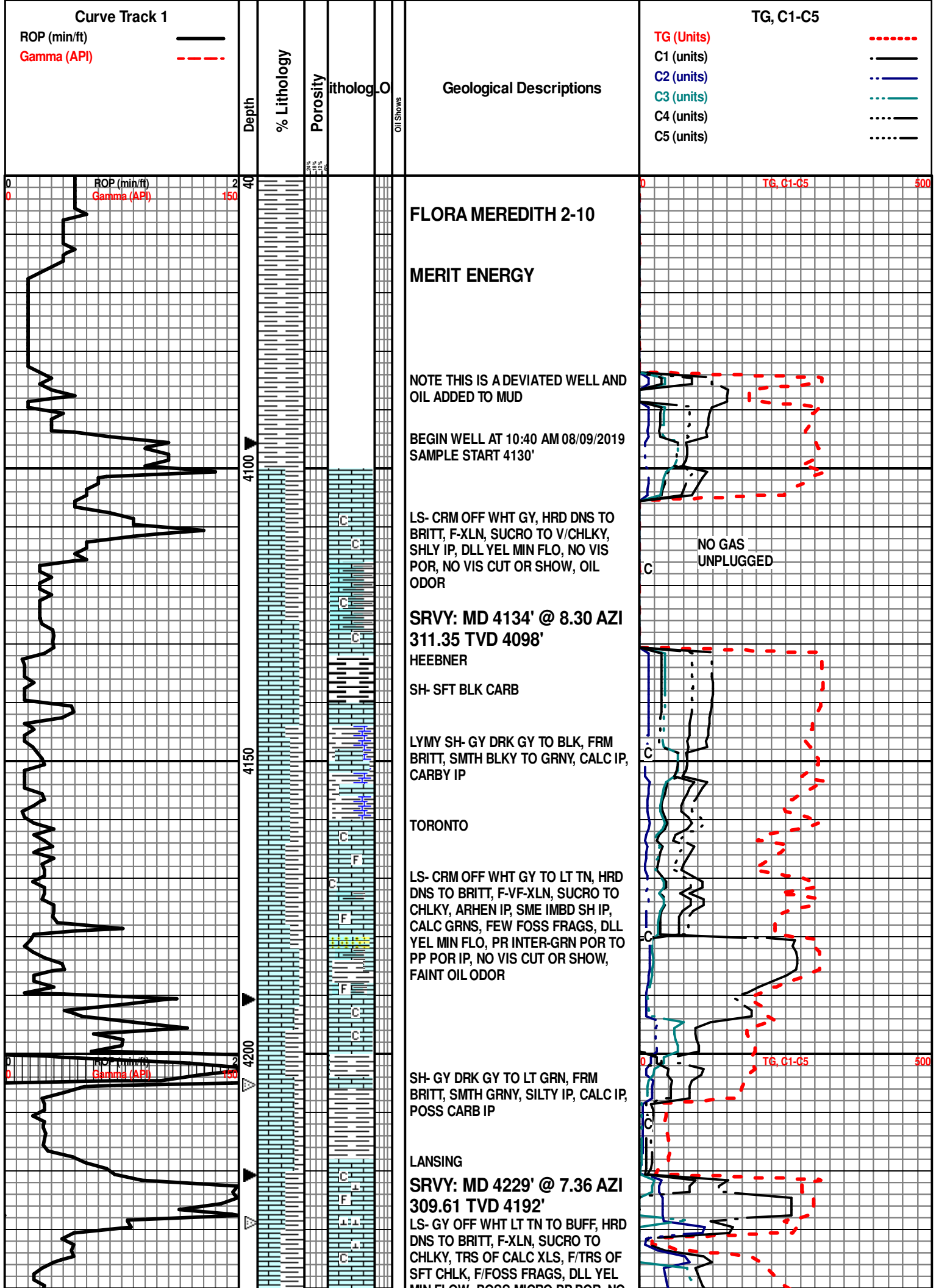
Company: MERIT ENERGY CO LLC
 Address: ATTN MARTIN LANGE GEOLOGY
 13727 NOEL RD STE 1200
 DALLAS, TEXAS 75240

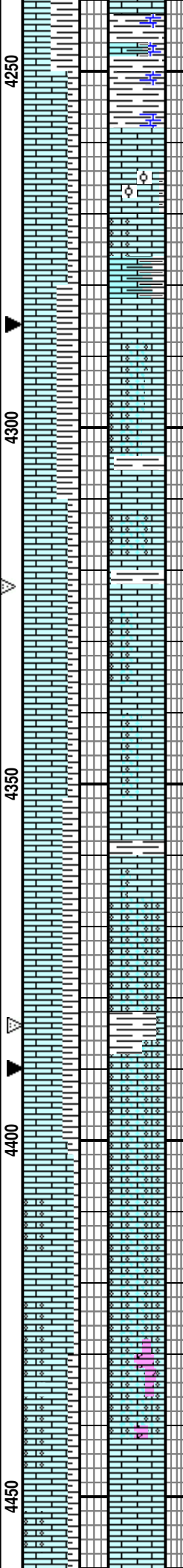
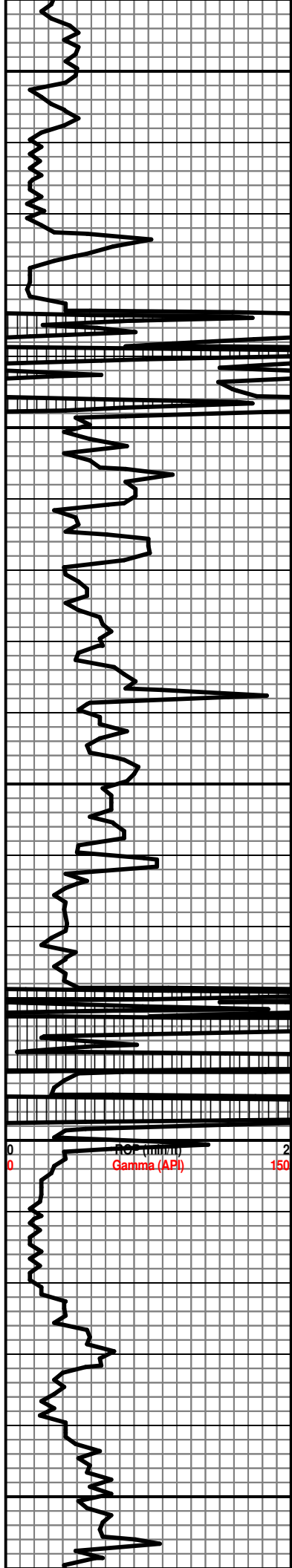
MUDLOGGER

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

ROCK TYPES

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





MIN FLOW, POSS MICRO-PP POR, NO VIS CUT OR SHOW

SH- GY DRK GY, SMTH BLOCK TO GRNY, SILTY TO CALC

LS- GY OFF WHT TO LT TN, HRD DNS TO BRITT, F/VF-XLN, SUB-SUCRO TO CHLKY, TRS OF OOL GY TO BLK PR SORTD, DLL YEL MIN FLO, POSS PR OOLICASTIC POR IP TO NO VIS THRU, NO VIS CUT OR SHOW, NO ODOR

SME LT GRN PRED DK GY SH

LS; SME TN SPARITIC OOLCAS TYO CHLKY OOL & MICRO FOSS, N/O, SME GOLD PRED FAINT GOLD FLOR NSOC

**SRVY 4324 MD DEV 5.76*
346.94AZ TVD 4287.15**

SH BLK DK GY CARBY

LS; DIRTY BRN BUFF, GRITTY CHT INCLUS, SME TN CHT, N/O, SME GOLD FLOR NSOCV

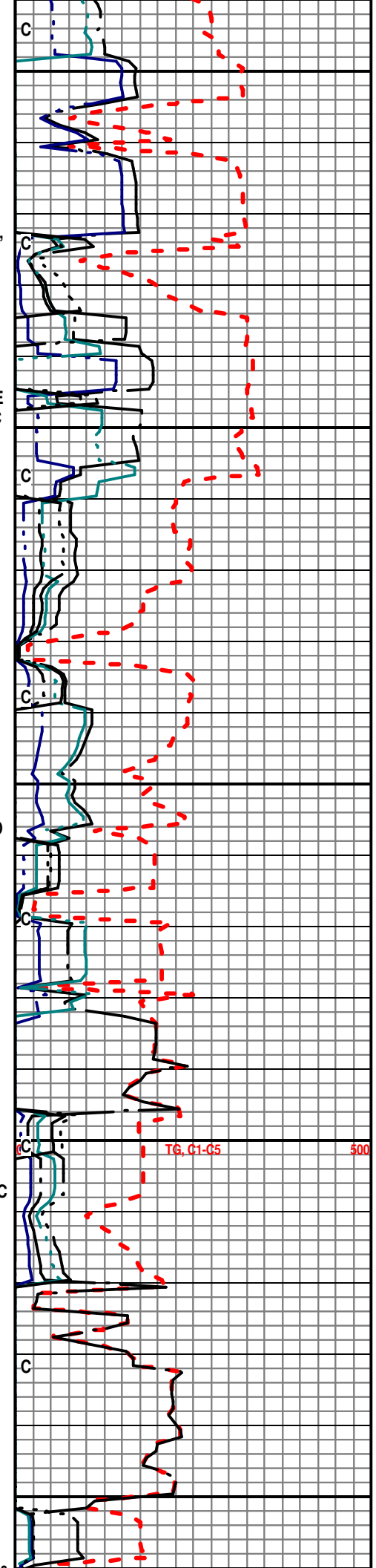
LS; LT BUFF P/SRTD THIN RIM COAT, VF LOWER MED OOLCAS, SME VF OOL, , N/O SCATT YEL MFNSOC NO SHOW

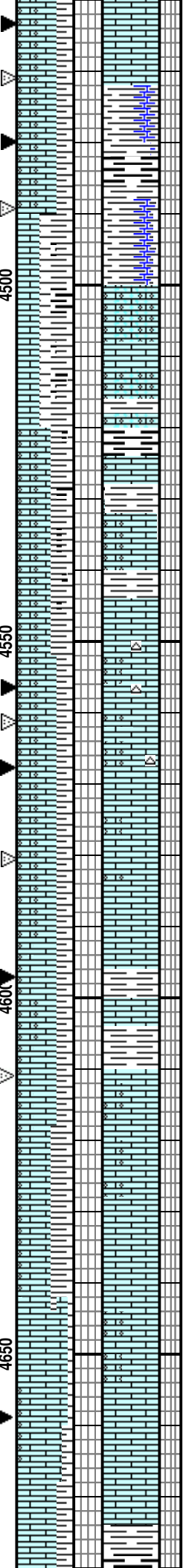
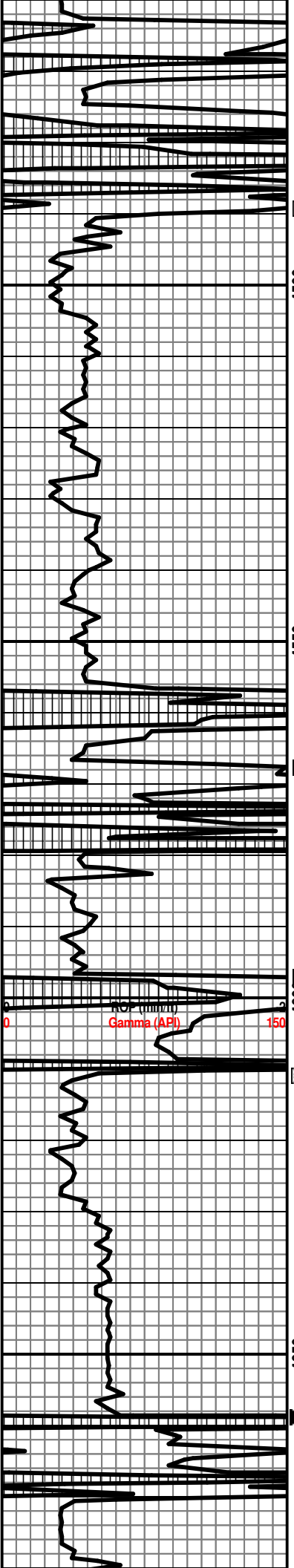
LS; LT BUFF WEATHD APPR, MED OOLCAS, IP SME VF OOL, CHT INCLUS, N/O, SCATT YEL FLOR, NSOC

**SRVY 4418 MD DEV 6.04*
322.20 AZ TVD 4380.65**

LS; BUFF SME SPARRY W/OOL, TR TN CHT W/VF OOL, 70% CRFM WH CHLK, TR LT TN SHDW VF OOL SLI DOLOMITIC, TR LAM BLK SH, N/O WEAK TO STRAW YEL FLOR NSOC

LS; DK TN HD DNS XLN, SHLY, CHLK





EDGES & FRAC FILL, TR IN F-OOL & OOLCAS, N/O. 60% WEAK YEL FLOR NSOC

STARK SH

SH; DULL DK GY BLKY RGH TXT, LMY TR BLK CARB, TR LT GRN BLKY SMO CLAY

LS- CRM OFF WHT LT GY, HRD DNS TO BRITT, F-XLN TO OOL PR SORTD, SUCRO TO V/CHLKY, DLL YEL MIN FLO, POSS PR OOLICASTIC TO PP POR, NO VIS CUT OR SHOW, NO ODOR

HUSH SH

SH- SFT BLK CARB

LS- CRM OFF WHT LT GY TO LT TN, HRD DNS, F-XLN TO SLI OOL IP, CHLKY, DLL YEL MIN FLO, NO VIS CUT OR SHOW, NO DET ODOR

LS- CRM OFF WHT LT GY TO LT TN, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, TRS OF OOL IP PR SORTD, CALC XLS, F/TRS OF OFF WHT CHRT, DLL YEL MIN FLO, POSS PR MICRO-PP POR, NO VIS CUT OR SHOW, NO DET ODOR

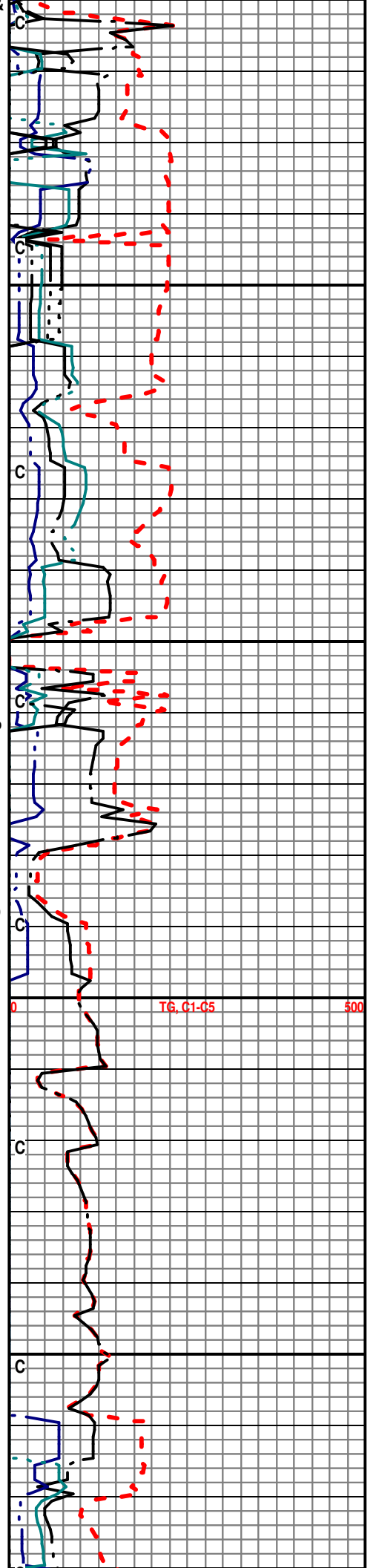
LS- OFF WHT LT GY TO LT TN, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, F/TRS OF OOL, TRS OF CALC XLS, F/TRS OF FOSS FRAGS, DLL YEL TO SPOTTY YEL FLO, NO VIS POR, NO VIS CUT OR SHOW, NO DET ODOR

**SRVY 4606' MD DEV 2.66*
335.18 AZ TVD 4568.07'**

LS- OFF WHT TN TO SLI MOTT, HRD DNS, F/V-XLN, SUCRO TO V/CHLKY, F/TRS OF OOL. F/TRS OF FOSS FRAGS, DLL YEL MIN FLO, POSS PR OOLICAST POR IP, NO VIS CUT OR SHOW, NO ODOR

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

SH- GY DRK GY TO BK FRM SET TO



SRVY 4700' MD DEV 1.5*
319.28 AZ TVD 4662'

LS- CRM TN LT TN TO GY, HRD DNS TO
BRITT, F/V-XLN TO OOL FR SORTD ,
SUCRO TO CHLKY, F/TRS OF FOSS
FRAGS, SPOTTY DLL YEL FLO, WEAK
SLO MILKY BLU FLUSH CUT, NO ODOR

LS; MED TN F OOL, TR OOL IN VF
SUCROSIC CMT, GY FOSS PCES, TR
CHOR, SME PYR, INXRS GY SHLY
FOSS FRGRTL, N/O, DK AMBER FLOR,
NSOC

DK BRN HD DNS GRITTY ERTY LS

SH; DK GY GY BLK, SME BRN
CARBY, LMY TO V/CALC, PYR, MCRO
MICA,

SRVY 4795 MD DEV .62
328.63AZ TVD 4756.97

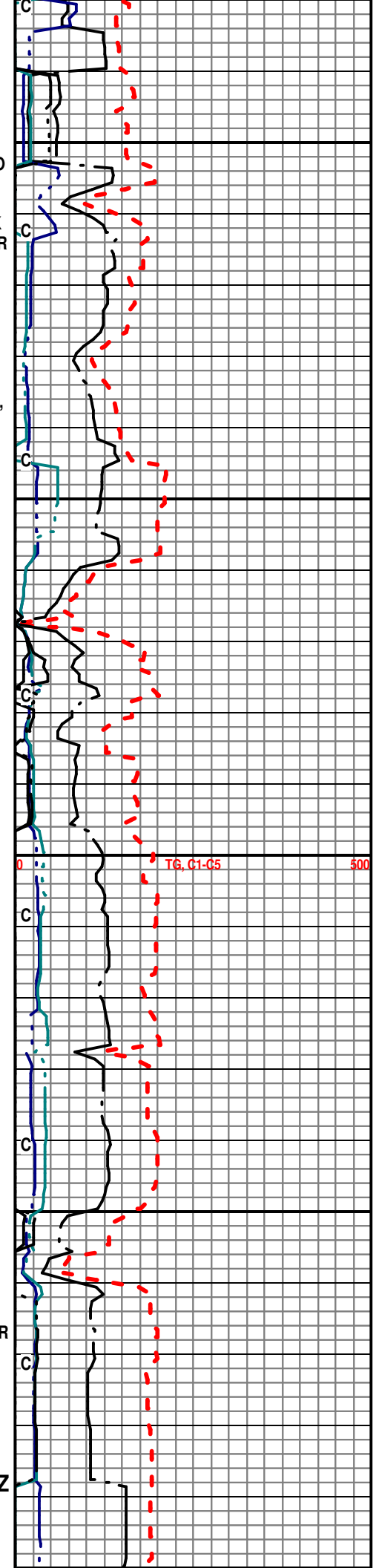
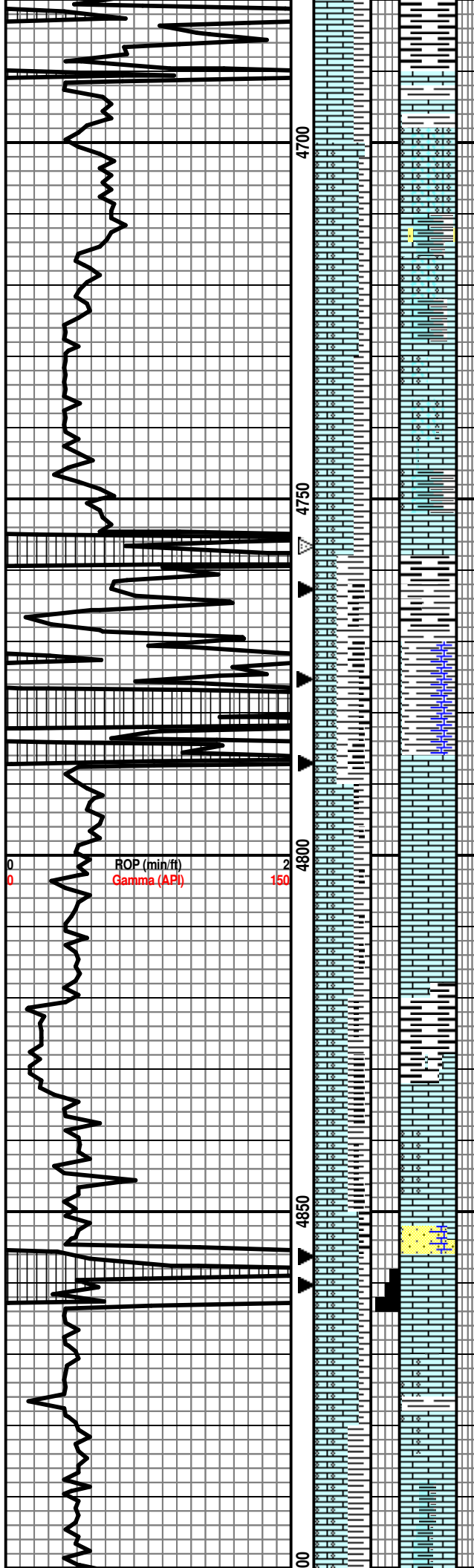
LS; BUFF/TN W/VF ELIP OIDS ME
F-GY PELL, IMBD FOSS FRGS,
INCRFS TO BRN HD DNS XLN W/SILIC
INTRUS, N/O, V/DK GOLD TO PURPL
FLOR NSOC

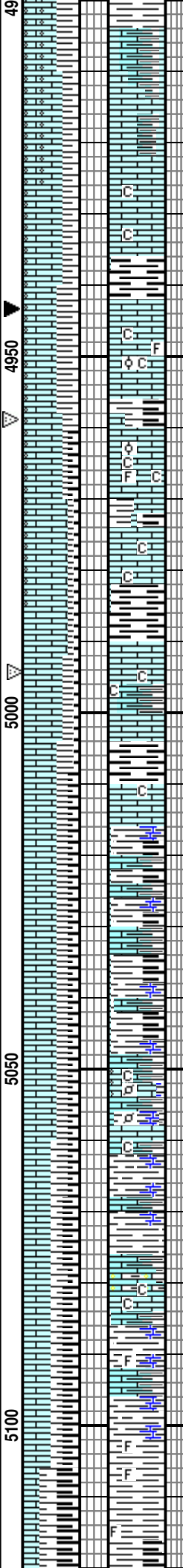
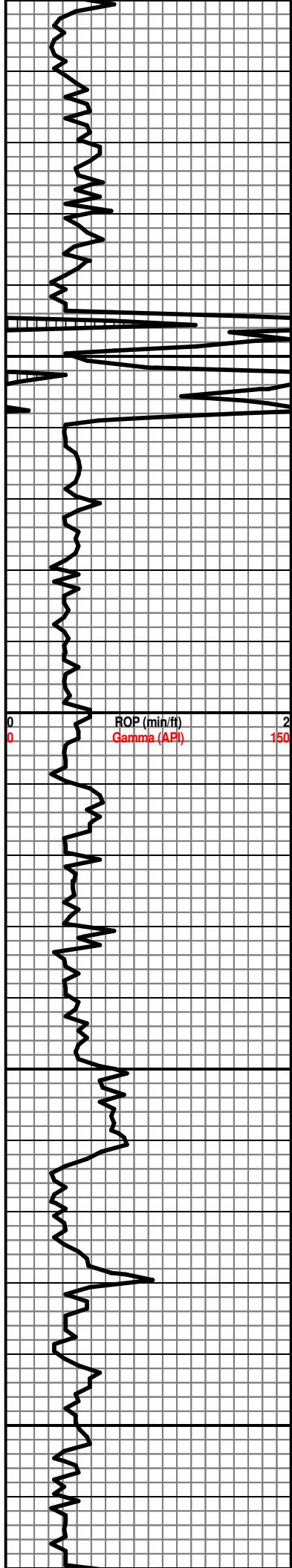
SH; GY DK GY BLKY, CALC TO LMY
SME GY BRN SFT CARBY, PYR MICA

TR LT GY VF GR MED TT LMY SS
W/PYR, NO SHOW

LS; TN FRAC HD XLN W.LAM CHLK
W/VF OOL, ABSDT CRM WH CHLK, TR
GY VF F W/GY TO TN OIDS, TR
WEATHDS APPR CRINOIDAL, HAS
M-PYR, N/O, YEL FLOR NSOC

SRVY 4889' MD DEV 0.42 AZ
315.78 TVD 4850.97'





LS; DK TN CRM FRAC XLN-CHLKY, SME FOSS FRGRTL, & OOL, TR DK BRN HEAVY RIM COATED SLI ELIP OOL, INCRS DK GY BRN HD DNS VF XLN SHLY LS, SME YEL FLOR, N/O NSOC

SH- SFT BK CARB

LS- OFF WHT LT GY DRK GY TO MOTT IP, HRD DNS TO BRITT, F/VF TO CRYPTO-XLN, SUCRO TO CHLKY, TRS OF FOSS FRAGS, F/TRS OF SHADOW OOL, SPOTTY YEL TO V/DLL YEL MIN FLO THRU, NO VIS POR, NO VIS CUT OR SHOW

CHEROKEE

SH- SFT DRK GY BK CARB, SILTY IP

SRVY 4983' MD DEV 0.91 AZ 102.26 TVD 4944.97'

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

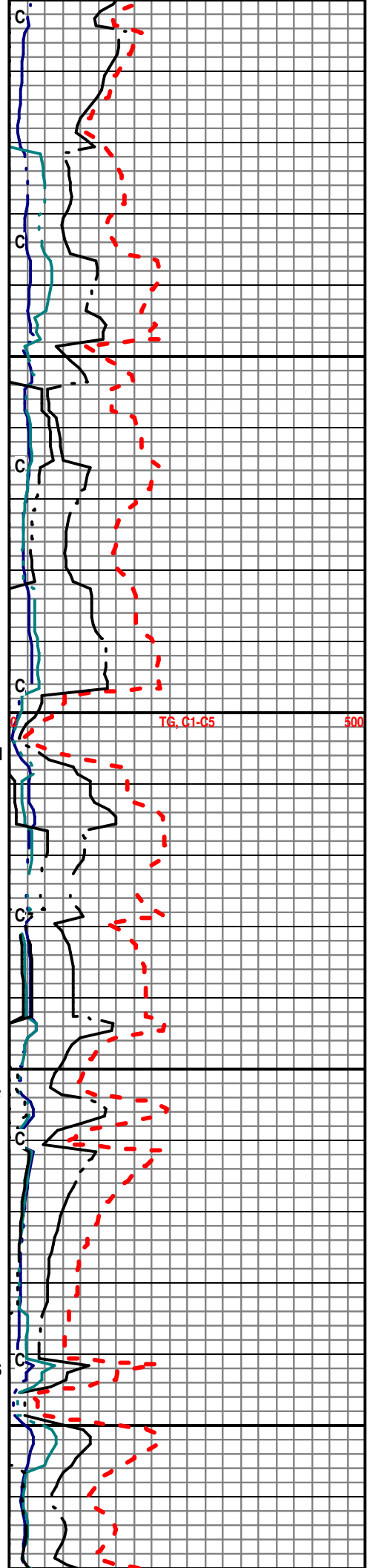
SHLY LS- OFF WHT GY DRK GY TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY, LAMN GY BLK SH IP, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

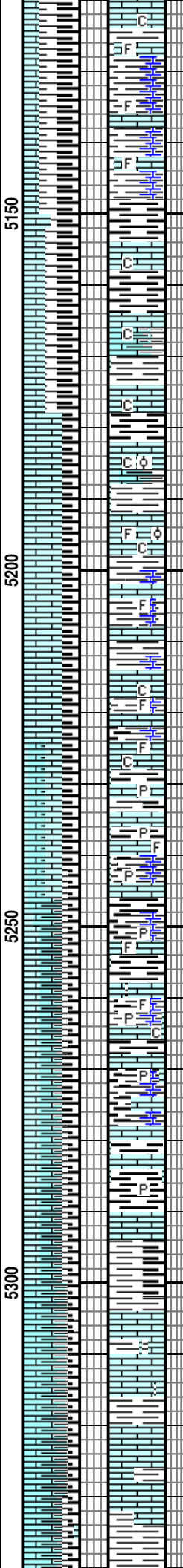
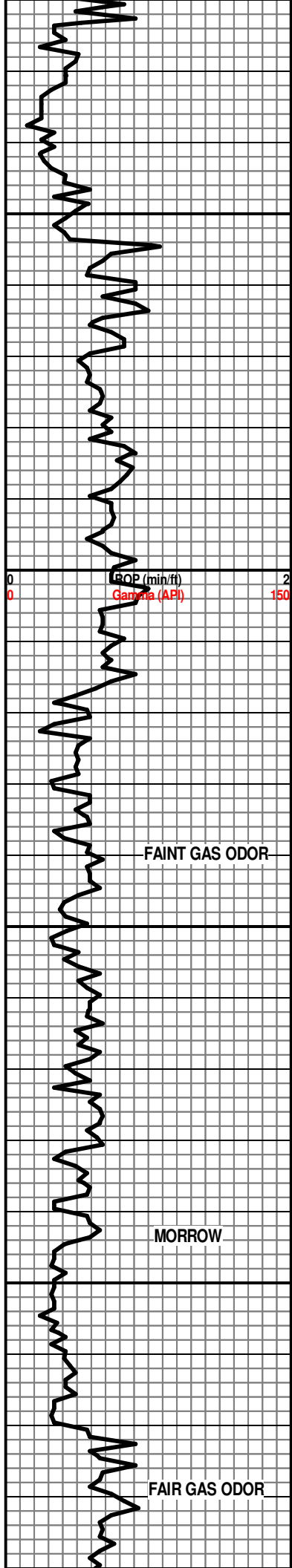
SHLY LS- GY DRK GY TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY, TRS OF OIDS TO PELL, DLL YEL MIN, TRS OF FOSS FRAGS, DLL YEL MIN FLO, NO VIS CUT OR SHOW

SRVY 5076' MD DEV 0.74 AZ 108.98 TVD 5037.96'

LS- GY OFF WHT TN TO MOTT, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, AHREN TO SLI SANDY IP, F/TRS OF OOL IN CHLKY MTX, LAMN GY DRK GY SH IP, DLL YEL FLO, POSS INTER-GRN POR IP, NO VIS CUT OR SHOW, NO ODOR

SH- GY DRK GY BLK TO BRN, FRM BRITT TO SFT, SMTH BLKY GRNY, TRS OF FOSS FRAGS MOP SHELLS, FISSLE, CARB





SH- GY DRK GY BLK TO BRN, FRM BRITT TO SFT, SMTH BLKY GRNY, CALC IP TO LS LENS, TRS OF FOSS FRAGS

SH- BLK CARB, FRM FISSLE

SRVY 5171' MD DEV 0.36 AZ 106.97 TVD 5132.95'

LS- CRM OFF WHT LT TN TO LT GY, HRD DNS TO BRITT, F/V-XLN, SUCRO TO V/CHLKY, TRS OF FOSS FRAGS, F/TRS OF OOL, DLL YEL MIN FLO, POSS PR MICRO-PP POR, NO VIS CUT OR SHOW,

SHLY LS- GY DRK GY OFF WHT TN TO MOTT, HRD BRITT, F-XLN, CHLKY IP, TRS OF FOSS FRAGS, LAMN TO DISS GY TO BLK SH, SPOTTY DLL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, FAINT GASSY ODOR, TRSHY POSS WEATHERD

CARBY LYMY SH- DRK GY TO BLK MOTT, INTERBD CHLKY LS, SME PYR IP

SRVY 5266' MD DEV 0.34 AZ 120.40 TVD 5227.95'

LS- GY OFF WHT LT BUF, FRM BRITT VF-XLN TO GRNY. CHLKY W/IMBD CARB, SME PELL, DLL YEL MIN FLO IP, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR, TRSHY

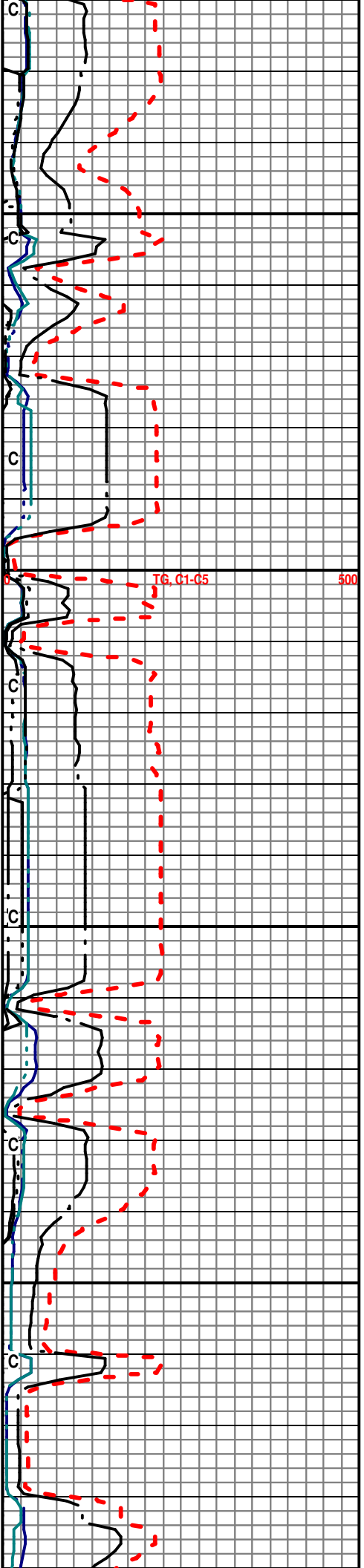
MORROW

SH- BLK CARB, FRM BRITT, BLKY SME PYR

MORROW

LS- DRK GY TN TO MOTT, HRD BRITT, VF-XLN, SUB-CHLKY, V/DLL MUSTARD YEL FLO, FAST MILKY BLU STREAM TO FLUSH CUT, FAIR ROTTEN EGG ODOR

LS; GYTN FOSS FRGRTL CHOR, SHLY GLAU, DIRTY TRASHY W/CARB MATL, TR LT GRN FRI SS VF GR, CHOR GLAU, SHLY NFSOC SCATT DULL DK YEL



GAPI (API)

FAINT GAS ODOR

MORROW

FAIR GAS ODOR

T6, C1-C5

500

FLOOR NSOC NO FREE OIL

SRVY 5361' MD DEV 0.04 AZ
120.40 TVD 5322.95'

DK GY CALC SLTY SNDY SH, &
DIRFTY GY CALC SS, GLAU, PYR,
MICA, N/O BLK FLOR NSOC NO FREE
OIL

SS; TR (1) MED BRN OVERALL, VF GR
MUSHY SS, WHEAT SRAW YEL FLOR,
SME GAS BUBLS, FAINT ODOR,
—PRED OFF WH VF GR, MUSH OPAQ-
SS, GLAU MICA, FLASH MED THICK
STRMG MILKY CUT

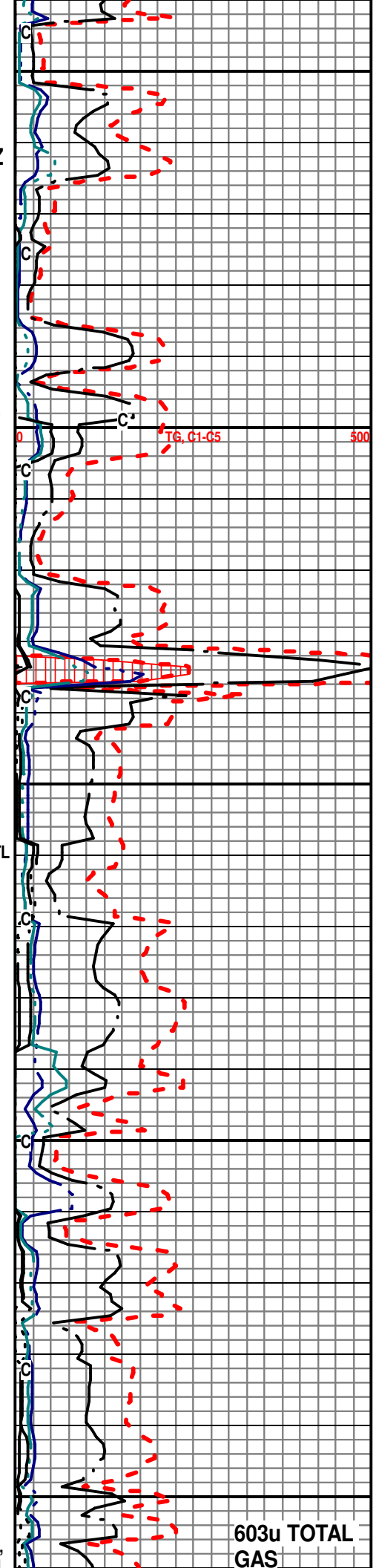
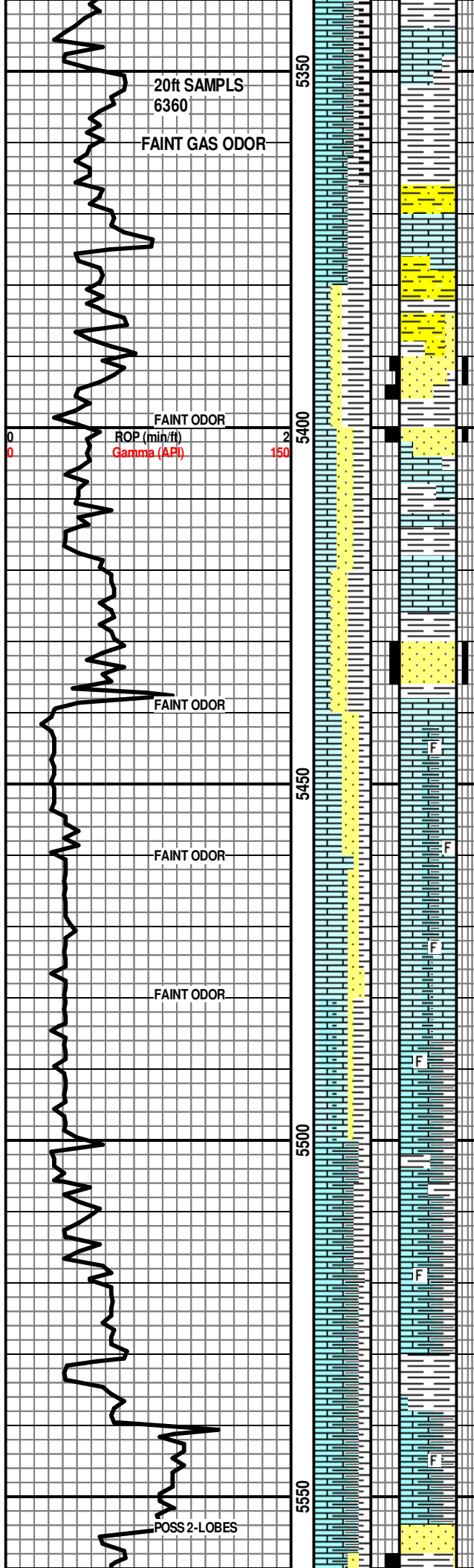
SS; LT NT OPAQ, VF GR SME LT BRN
VF GR AA, OVERALL BRN STNG,
FAIR/ODOR, MED YEL FLOR, FLASH
MILKY STRM CUT

LS; WH VF SUCROSIC FOSS FRGMTL
TO TN HD DNS FOSS COMNLGD
W/CHLK, CHOR, MFNSOC

LS; LT GY, MOUSE GY HD XLN SHLY
TO SFT ERTY NO SHOW

LS; GY MOUSE GY HD SHLY XLN TO
SFT ERTY CARB MATL, FREE PYR
CLSTRS

SS; CLEAR WH VF TO UPPER VF GR,
BRN OVER-ALL STNG, APPRS S-ANG,
TR FRI BRD HD TT, GOOD ODOR VFI



603u TOTAL
GAS

GOOD ODOR

W/THIN, FINE MD T, GOOD OODR, TEL
FLOOR, FLASH STRMG MILKY CUT
"WET",

ST GEN 5566
MD

ST GEN 5566 MD

LS; WH OFF WH VF AREN, TR SHDW
VF OOL, MICRO BLK SPKS, SME CRM
CHLKY N/O, DK PURPL FLOR NSOC

LS; WH OFF WH CRM IP, AREN W/VF
TN OOL PELL, PURPL FLOR NSOC N/O

LS; OFF WH P/SRTD ELIP F & LWR
MED OOL, COATED, SPR CMTD,
INCRS CHLKY PURPL FLOR NSOC N/O

LS; CRM CHLKY F-OOL COATED
PURPL FLOR NSOC N/O INCRS AREN

LS; LT TN SPAR CMTD F-OOL, THIN
COAT, LAM BLK CARB MATL, FAINT
GOLD PRED PURPL FLOR NSOC N/O
INCRS AREN W/CHOR

LS; LT CRM TN VF AREN & OOL, SME
TN HD DNS XLN NO SHOW

THANKS FOR USING
MBC WELL LOGGING
AUSTIN & MARLA GARNER
& TROY FOWLER

ROP (mm) 250
Gamma (API) 150

INCRS WOB

RTD 5721
CFS>>>

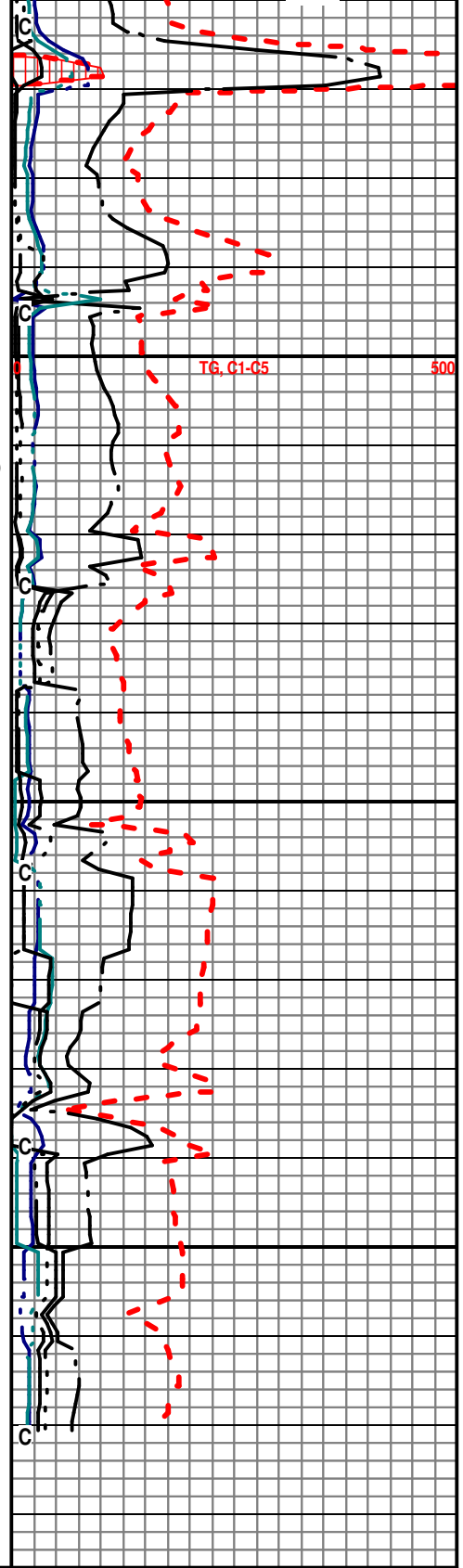
5600

5650

5700

T6, C1-C5

500





Merit Energy

Haskell Co., KS

Flora Meredith 2-10

Flora Meredith 2-10

Flora Meredith 2-10

Design: Flora Meredith 2-10

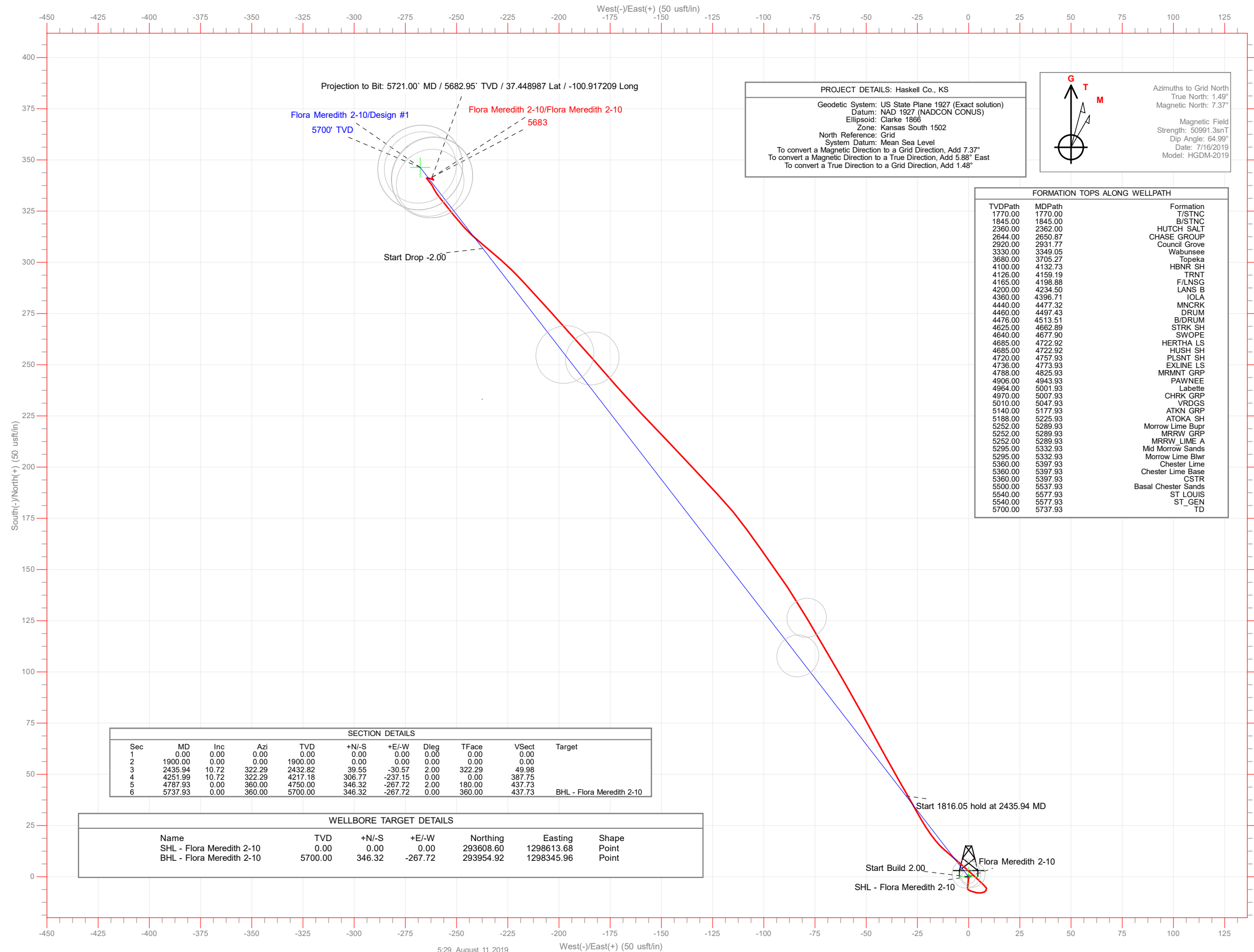
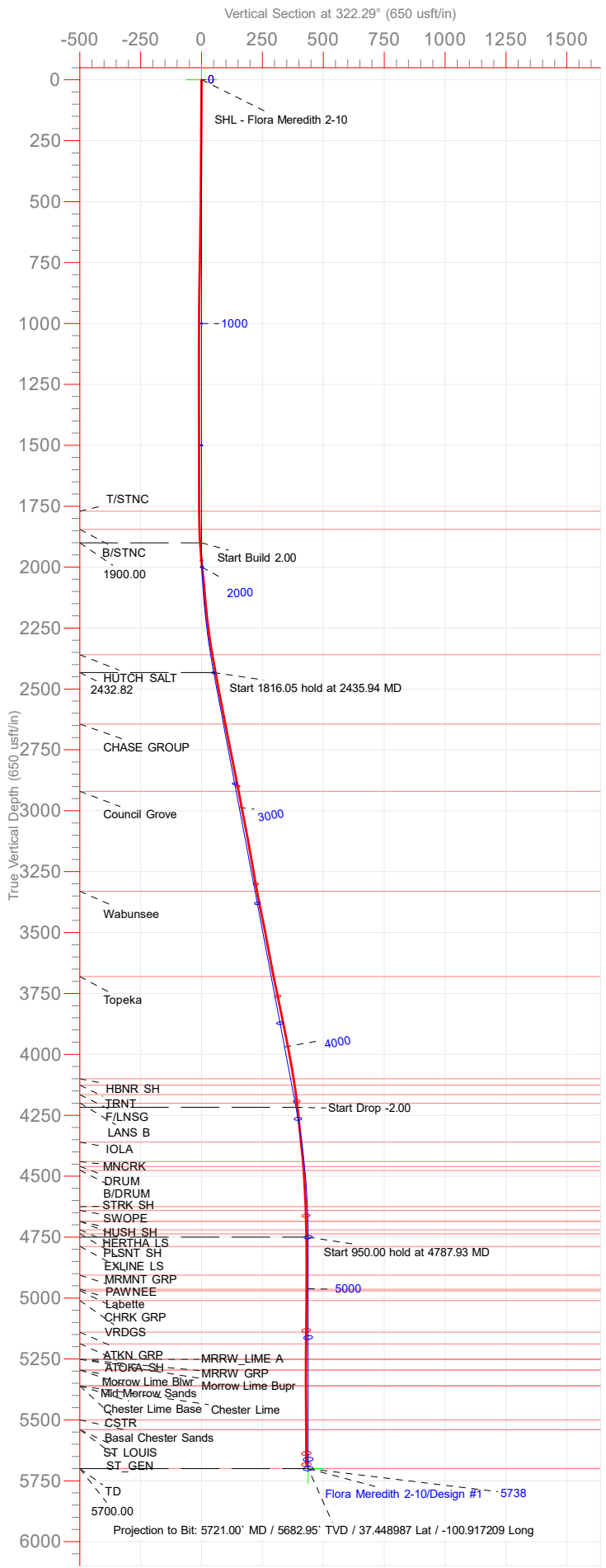
Standard Survey Report

11 August, 2019

gyro/data

A thick red horizontal bar located at the bottom of the page, underlining the 'gyro/data' logo.

Notice: Section Lines and Hardlines are estimates only and are subject to customer approval



PROJECT DETAILS: Haskell Co., KS
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Kansas South 1502
North Reference: Grid
System Datum: Mean Sea Level
To convert a Magnetic Direction to a Grid Direction, Add 7.37°
To convert a Magnetic Direction to a True Direction, Add 5.88° East
To convert a True Direction to a Grid Direction, Add 1.48°

Azimuths to Grid North
True North: 1.49°
Magnetic North: 7.37°
Magnetic Field
Strength: 50991.3nT
Dip Angle: 64.99°
Date: 7/16/2019
Model: HGDM-2019

FORMATION TOPS ALONG WELLPATH

TVDPath	MDPath	Formation
1770.00	1770.00	T/STNC
1845.00	1845.00	B/STNC
2360.00	2362.00	HUTCH SALT
2644.00	2650.87	CHASE GROUP
2920.00	2931.77	Council Grove
3330.00	3349.05	Wabunsee
3680.00	3705.27	Topeka
4100.00	4132.73	HBNR SH
4126.00	4159.19	TRNT
4165.00	4198.88	FLNSG
4200.00	4234.50	LANS B
4360.00	4396.71	IOLA
4440.00	4477.32	MNCRK
4460.00	4497.43	DRUM
4476.00	4513.51	B/DRUM
4625.00	4662.89	STRK SH
4640.00	4677.90	SWOPE
4685.00	4722.92	HERTHA LS
4685.00	4722.92	HUSH SH
4720.00	4757.93	PLSNT SH
4736.00	4773.93	EXLINE LS
4788.00	4825.93	MRMNT GRP
4906.00	4943.93	PAWNEE
4984.00	5001.93	Labette
4970.00	5007.93	CHRK GRP
5010.00	5047.93	VRDGS
5140.00	5177.93	ATKN GRP
5188.00	5225.93	ATOKA SH
5252.00	5289.93	Morrow Lime Bupr
5252.00	5289.93	MRRW GRP
5252.00	5289.93	MRRW_LIME A
5295.00	5332.93	Mid Morrow Sands
5295.00	5332.93	Morrow Lime Blwr
5360.00	5397.93	Chester Lime
5360.00	5397.93	Chester Lime Base
5360.00	5397.93	CSTR
5500.00	5537.93	Basal Chester Sands
5540.00	5577.93	ST LOUIS
5540.00	5577.93	ST_GEN
5700.00	5737.93	TD

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	D/leg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	
3	2435.94	10.72	322.29	2432.82	39.55	-30.57	2.00	322.29	49.98	
4	4251.99	10.72	322.29	4217.18	306.77	-237.15	0.00	0.00	387.75	
5	4787.93	0.00	360.00	4750.00	346.32	-267.72	2.00	180.00	437.73	
6	5737.93	0.00	360.00	5700.00	346.32	-267.72	0.00	360.00	437.73	BHL - Flora Meredith 2-10

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
SHL - Flora Meredith 2-10	0.00	0.00	0.00	293608.60	1298613.68	Point
BHL - Flora Meredith 2-10	5700.00	346.32	-267.72	293954.92	1298345.96	Point

Company:	Merit Energy	Local Co-ordinate Reference:	Well Flora Meredith 2-10
Project:	Haskell Co., KS	TVD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Site:	Flora Meredith 2-10	MD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Well:	Flora Meredith 2-10	North Reference:	Grid
Wellbore:	Flora Meredith 2-10	Survey Calculation Method:	Minimum Curvature
Design:	Flora Meredith 2-10	Database:	Gyrodata NWDB

Project	Haskell Co., KS		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site	Flora Meredith 2-10				
Site Position:		Northing:	293,608.60 usft	Latitude:	37.448068
From:	Map	Easting:	1,298,613.68 usft	Longitude:	-100.916277
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.48 °

Well	Flora Meredith 2-10					
Well Position	+N/-S	0.00 usft	Northing:	293,608.60 usft	Latitude:	37.448068
	+E/-W	0.00 usft	Easting:	1,298,613.68 usft	Longitude:	-100.916277
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,947.20 usft

Wellbore	Flora Meredith 2-10				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HGDM-2019	7/16/2019	5.88	64.99	50,991.27

Design	Flora Meredith 2-10				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	322.29	

Survey Program	Date	8/11/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
405.00	5,721.00	Survey #1 (Flora Meredith 2-10)	MWD+HDGM+AX	OWSG MWD + HDGM + Axial Correction

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL - Flora Meredith 2-10										
405.00	1.00	184.10	404.98	-3.53	-0.25	-2.63	0.25	0.25	0.00	
526.00	0.70	197.10	525.97	-5.28	-0.55	-3.85	0.29	-0.25	10.74	
684.00	1.30	114.10	683.95	-6.94	0.81	-5.98	0.89	0.38	-52.53	
842.00	1.10	95.10	841.91	-7.81	3.95	-8.59	0.28	-0.13	-12.03	
966.00	0.80	91.10	965.90	-7.93	6.00	-9.94	0.25	-0.24	-3.23	
1,125.00	0.60	50.10	1,124.89	-7.42	7.75	-10.61	0.33	-0.13	-25.79	
1,282.00	0.10	41.10	1,281.88	-6.79	8.47	-10.55	0.32	-0.32	-5.73	

Company:	Merit Energy	Local Co-ordinate Reference:	Well Flora Meredith 2-10
Project:	Haskell Co., KS	TVD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Site:	Flora Meredith 2-10	MD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Well:	Flora Meredith 2-10	North Reference:	Grid
Wellbore:	Flora Meredith 2-10	Survey Calculation Method:	Minimum Curvature
Design:	Flora Meredith 2-10	Database:	Gyrodata NWDB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,783.00	0.20	1.63	1,782.88	-5.58	8.79	-9.79	0.03	0.02	-7.88	
1,878.00	2.76	315.86	1,877.84	-3.77	7.20	-7.39	2.76	2.69	-48.18	
1,973.00	5.92	311.53	1,972.56	1.12	1.94	-0.30	3.34	3.33	-4.56	
2,067.00	5.64	311.32	2,066.08	7.38	-5.16	9.00	0.30	-0.30	-0.22	
2,161.00	5.29	310.70	2,159.65	13.26	-11.92	17.78	0.38	-0.37	-0.66	
2,254.00	7.29	324.72	2,252.09	20.87	-18.58	27.87	2.70	2.15	15.08	
2,347.00	9.15	331.39	2,344.14	32.18	-25.53	41.07	2.24	2.00	7.17	
2,441.00	10.72	329.71	2,436.72	46.29	-33.51	57.12	1.70	1.67	-1.79	
2,535.00	11.40	331.51	2,528.98	62.00	-42.35	74.96	0.81	0.72	1.91	
2,630.00	11.67	331.20	2,622.06	78.68	-51.46	93.72	0.29	0.28	-0.33	
2,723.00	11.27	330.21	2,713.20	94.81	-60.51	112.01	0.48	-0.43	-1.06	
2,818.00	11.15	329.29	2,806.39	110.76	-69.81	130.32	0.23	-0.13	-0.97	
2,913.00	10.92	329.81	2,899.63	126.43	-79.03	148.36	0.26	-0.24	0.55	
3,007.00	10.67	326.01	2,991.97	141.35	-88.37	165.87	0.80	-0.27	-4.04	
3,101.00	10.54	324.19	3,084.36	155.53	-98.27	183.15	0.38	-0.14	-1.94	
3,133.00	10.66	324.67	3,115.82	160.32	-101.69	189.03	0.47	0.37	1.50	
3,194.00	10.41	324.16	3,175.79	169.39	-108.18	200.18	0.44	-0.41	-0.84	
3,321.00	10.10	316.56	3,300.77	186.78	-122.55	222.73	1.09	-0.24	-5.98	
3,415.00	11.33	317.22	3,393.13	199.54	-134.49	240.13	1.31	1.31	0.70	
3,510.00	11.39	316.38	3,486.26	213.18	-147.30	258.75	0.19	0.06	-0.88	
3,604.00	10.75	316.10	3,578.52	226.22	-159.79	276.70	0.68	-0.68	-0.30	
3,697.00	11.14	319.47	3,669.82	239.30	-171.64	294.30	0.81	0.42	3.62	
3,790.00	11.58	318.11	3,761.00	253.07	-183.71	312.58	0.55	0.47	-1.46	
3,854.00	11.58	318.35	3,823.70	262.66	-192.27	325.39	0.08	0.00	0.37	
3,947.00	11.30	318.04	3,914.85	276.41	-204.56	343.79	0.31	-0.30	-0.33	
4,040.00	11.34	316.98	4,006.04	289.87	-216.89	361.98	0.23	0.04	-1.14	
4,134.00	8.30	311.35	4,098.66	301.11	-228.29	377.85	3.39	-3.23	-5.99	
4,229.00	7.36	309.61	4,192.77	309.52	-238.13	390.52	1.02	-0.99	-1.83	
4,324.00	5.76	316.94	4,287.15	316.88	-246.07	401.20	1.90	-1.68	7.72	
4,418.00	6.04	322.20	4,380.65	324.23	-252.32	410.85	0.65	0.30	5.60	
4,513.00	4.43	320.10	4,475.25	331.00	-257.74	419.51	1.71	-1.69	-2.21	
4,606.00	2.66	335.18	4,568.07	335.71	-260.95	425.20	2.14	-1.90	16.22	
4,700.00	1.85	319.28	4,662.00	338.84	-262.86	428.85	1.08	-0.86	-16.91	
4,795.00	0.62	328.63	4,756.97	340.44	-264.12	430.89	1.31	-1.29	9.84	
4,889.00	0.42	315.78	4,850.97	341.13	-264.63	431.74	0.25	-0.21	-13.67	
4,983.00	0.91	102.26	4,944.97	341.21	-264.14	431.51	1.36	0.52	155.83	
5,076.00	0.74	108.98	5,037.96	340.86	-262.85	430.44	0.21	-0.18	7.23	
5,171.00	0.36	106.97	5,132.95	340.58	-261.99	429.68	0.40	-0.40	-2.12	
5,266.00	0.34	120.41	5,227.95	340.35	-261.46	429.18	0.09	-0.02	14.15	
5,361.00	0.04	94.23	5,322.95	340.20	-261.18	428.89	0.32	-0.32	-27.56	
5,455.00	0.30	314.00	5,416.95	340.37	-261.33	429.12	0.35	0.28	-149.18	
5,550.00	0.31	335.88	5,511.95	340.78	-261.61	429.61	0.12	0.01	23.03	

Company:	Merit Energy	Local Co-ordinate Reference:	Well Flora Meredith 2-10
Project:	Haskell Co., KS	TVD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Site:	Flora Meredith 2-10	MD Reference:	RKB @ 2959.20usft (Duke 9 (GE 2947.2 + 12 = 2959.2))
Well:	Flora Meredith 2-10	North Reference:	Grid
Wellbore:	Flora Meredith 2-10	Survey Calculation Method:	Minimum Curvature
Design:	Flora Meredith 2-10	Database:	Gyrodata NWDB

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,676.00	0.26	332.79	5,637.95	341.34	-261.88	430.22	0.04	-0.04	-2.45	
5,721.00	0.26	332.79	5,682.95	341.52	-261.97	430.42	0.00	0.00	0.00	
Projection to Bit: 5721.00` MD / 5682.95` TVD / 37.448987 Lat / -100.917209 Long - BHL - Flora Meredith 2-10										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,721.00	5,682.95	341.52	-261.97	Projection to Bit: 5721.00` MD / 5682.95` TVD / 37.448987 Lat / -100.9`	