

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](mailto: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	KELLS I 4
Doc ID	1482959

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
SONIC CEMENT BOND LOG
SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	KELLS I 4
Doc ID	1482959

Tops

Name	Top	Datum
HEEBNER	4134	.
LANSING	4218	.
KANSAS CITY	4639	.
MARMATON	4786	.
PAWNEE	4884	.
CHEROKEE	4941	.
ATOKA	5085	.
MORROW	5233	.
CHESTER	5317	.
ST GENEVIEVE	5429	.





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

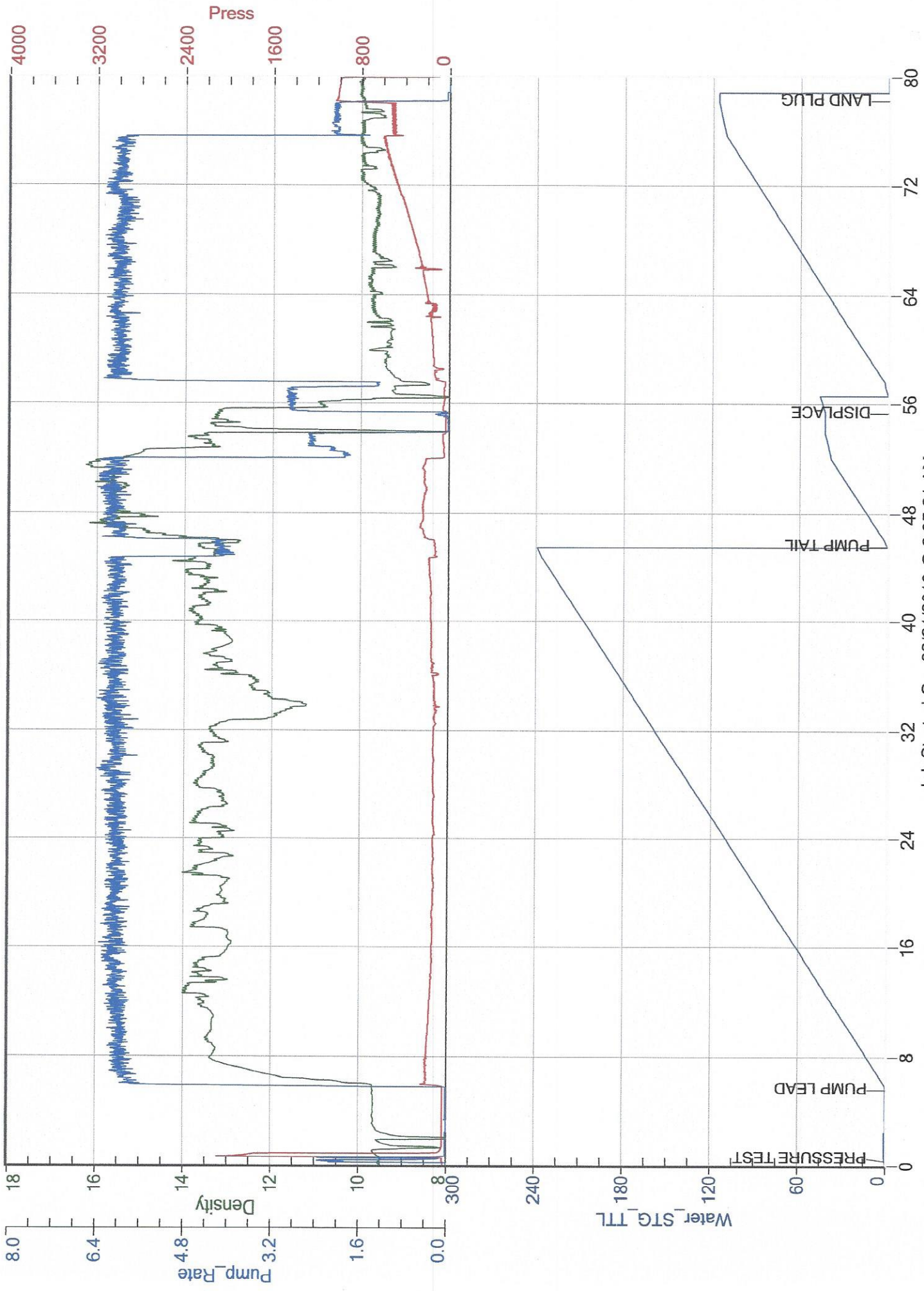
**PRESSURE PUMPING**

**Job Log**

<b>Customer:</b>	Merit Energy		<b>Cement Pump No.:</b>	38117, 19919 Hrs.		<b>Operator TRK No.:</b>	96816		
<b>Address:</b>	gardencity.invoices@meritenergy.com		<b>Ticket #:</b>	1718 19651 L		<b>Bulk TRK No.:</b>	19827, 37725 Kirby	30464, 37547 Oscar	
<b>City, State, Zip:</b>	AFE <del>61483</del> 64239		<b>Job Type:</b>	Z-42 Cement Surface Casing					
<b>Service District:</b>	1718 Liberal, Ks.		<b>Well Type:</b>	OIL					
<b>Well Name and No.:</b>	Kells I #4		<b>Well Location:</b>	32-27S-33W	<b>County:</b>	Haskell	<b>State:</b>	Kansas	
<b>Type of Cmt</b>	<b>Sacks</b>	<b>Additives</b>			<b>Truck Loaded On</b>				
A-Con' Blend	505	3% Calcium Chloride, 1/2# Polyflake, 1# Gilsonite			19827, 37725 Kirby		<b>Front</b>	<b>Back</b>	
Class C	165	2% Calcium Chloride, 1/4# Polyflake			30464, 37547 Oscar		<b>Front</b>	<b>Back</b>	
							Front	Back	
<b>Lead/Tail:</b>	Weight #1 Gal.	Cu/Ft/sk	Water Requirements		CU. FT.	Man Hours / Personnel			
<b>Lead:</b>	12.1	2.41	13.9		1217.05	TT Man Hours:	46.5		
<b>Tail:</b>	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			
22:30							ON LOCATION & SAFETY MEETING		
2:30							RIG UP		
3:15 AM							RIG TO CIRCULATE		
3:24 AM							RIG TO PT		
3:26 AM							PRESSURE TEST TO 2000PSI		
3:31	6	216.7 slurry				190	PUMP LEAD 515 SX @ 12.1#		
4:11	6	39.3 slurry				220	PUMP TAIL 165SX @ 14.8#		
4:19 AM							SHUTDOWN / DROP PLUG		
4:21	6	10				140	DISPLACE		
4:28	6	20				150	CEMENT RETURNS		
	6.1	30				180			
	6	40				220			
	5.9	50				260			
	6	60				320			
	6	70				390			
	6	80				470			
	6.1	90				540			
	6	100				590			
4:41	6	101				600	SLOW RATE TO 2.0BPM @ 520PSI		
	2	110				530			
4:44	2	111.1				530	LAND PLUG / PRESSURE UP TO 1030PSI		
4:46							RELEASE BACK --- FLOAT HELD		
							JOB COMPLETE		
Size Hole	12 1/4"	Depth					TYPE	Plug Container	
Size & Wt. Csg.	8 5/8" 24#	Depth	1790.64'	New / Used			Packer	Depth	
Landing Press.	406psi	Depth					Retainer	Depth	
Shoe Jt.	42.24'	Type					Perfs	CIBP	
Customer Signature:						Basic Representative:		Daniel Beck	
						Basic Signature:		<i>Daniel Beck</i>	
						Date of Service:		8/21/2019	

# Merit Energy

Kells I #4



Job Started On: 08/21/2019 @ 3:25:21 AM







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 12HRS	Operator TRK No.:	78868	
Address:	gardencity.invoices@meritenergy.com	Ticket #:	1718 19681 L	Bulk TRK No.:	14354 19808 Corey	14354 19808
City, State, Zip:	AFE # 64239	Job Type:	Z-42 Cement Production Casing			
Service District:	1718-Liberal Ks	Well Type:	OIL			
Well Name and No.:	Kells I #4	Well Location:	32-27S-33W	County:	Haskell	State: Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
Class C 50/50	285	6%Gypsum, 10%Salt, .5%C-17, 1/4#Defoamer, 1/4#Celloflake, 5#Gilsonite	14354 19808 Corey	Front	Back
			14354 19808	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
<b>Lead:</b>	13.6	1.57	7.18	447.45	TT Man Hours:	40
<b>Tail:</b>					# of Men on Job:	3

Time (am/pm)	Volume (BBLs)	Pumps		Pressure(Psi)		Description of Operation and Materials
		T	C	Tubing	Casing	
17:00pm						Arrive at location
18:00pm						Spot trucks/Rig up
19:30pm						Safety meeting
20:00pm					2500	Pressure test lines to 2500psi
20:01pm	3	12			100	Pump 12bbls of mud flush spacer
20:11pm	3	13.9			zero	Pump 13.9bbls of cement from 50sks at 13.6lbs to fill rat and mouse hole
20:25pm	5	65.7			120	Pump 65.7bbls of cement from 235sks at 13.6lbs
20:50pm						Shut down/Drop plug/Wash pump and lines to pit
20:56pm						Start displacement of 129bbls with H2O/4%KCl
21:01pm	5	20			90	20bbls gone
21:05pm	6	40			180	40bbls gone
21:08pm	5	60			100	60bbls gone
21:13pm	5	80			300	80bbls gone
21:17pm	5	100			650	100bbls gone
21:22pm	5	119			950	119bbls gone/Slow down rate
21:26pm	2	129			1650	Bump plug/Hold for 5 minutes
21:31pm						Release pressure to check if float holds
21:33pm					1550	Pressure test casing for 15 minutes with psi
						Rig down
						Job Completed
						Thanked company man and rig crew

Size Hole	7 7/8	Depth	5620		TYPE	Float Collar	
Size & Wt. Csg.	5 1/2 17#	Depth	5619	New / Used	Float Collar	5576.93	Depth
Landing Psi	1000+	Depth			Retainer		Depth
Shoe Joint	42.07	Type			Perfs		CIBP

Customer Signature:	Basic Representative:	Victor A. Corona
	Basic Signature:	<i>Victor A. Corona</i>
	Date of Service:	8/24/2019

# Pumping Order / Mixture

Client: Merit Energy  
Date: 8/24/2019  
Job: 5 1/2 Production

Well Name & No: Kells I #4  
Location Supervisor: Victor A. Corona  
COMPANY REP. Rodney Gonzales

Differential Pressure 718 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**

**65 BBLs TAIL SLURRY YIELD 1.57 13.6 LBS**

**235SKS 7.18G/SK**

**DROP PLUG/WASH PUMP ON TO PIT**

**129.0 BBLs OF DISPLACEMENT**

**119.0 BBLs @ 5 BPM**

**10.0 BBLs AT 2-3 BPM TO BUMP PLUG**

**DISP PLUG WITH 129 BBLs OF H2O/4%KCL**





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

Well Name: Kells I-4  
Well Id:  
Location: Sec. 32 T27S R33W, Haskell Co., Kansas  
License Number: 15-081-22195-0100  
Spud Date: August 19th, 2019  
Surface Coordinates: SW NW SW NW  
Region: Wildcat  
Drilling Completed: August 23rd 2019

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 2994'      K.B. Elevation (ft): 3006'  
Logged Interval (ft): 4100'      To: 5620'      Total Depth (ft): 5620'  
Formation: Morrow, Chester  
Type of Drilling Fluid: Natural Chemical

Printed by WellSight LogViewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### OPERATOR

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


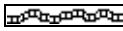
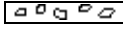
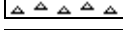
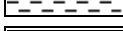


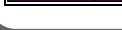
#### GEOLOGIST





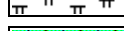

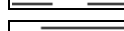

Name: Aaron Suelter  
Company: Earth Tech OGL, Inc  
Address: PO Box 683  
Hooker, Oklahoma 73945  
Off: 888-543-8378 Cell: 620-600-0777

## SURVEYS




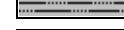
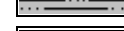

1846' INC 3.6 AZI 303.1  
 1940' INC 0.8 AZI 330.1  
 2036' INC 1.1 AZI 156.7  
 2098' INC 2.7 AZI 152.4  
 2190' INC 4.9 AZI 158.8  
 2285' INC 7.5 AZI 156.5  
 2379' INC 10.0 AZI 159.9  
 2473' INC 11.7 AZI 160.4  
 2568' INC 10.0 AZI 158.3  
 2660' INC 12.1 AZI 158.1  
 2755' INC 12.0 AZI 158.2  
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 2942' INC 11.9 AZI 160.5  
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 3225' INC 10.7 AZI 162.5  
 3320' INC 11.2 AZI 155.7  
 3414' INC 12.6 AZI 149.4  
 3508' INC 11.9 AZI 146.9  
 3601' INC 10.8 AZI 147.5  
 3696' INC 11.8 AZI 148.5  
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 3884' INC 11.7 AZI 149.4  
 3979' INC 11.7 AZI 148.6  
 4073' INC 12.0 AZI 149.7  
 4165' INC 11.4 AZI 149.3  
 4260' INC 11.2 AZI 150.9  
 4354' INC 10.9 AZI 150.5  
 4448' INC 10.4 AZI 150.2  
 4543' INC 10.0 AZI 149.7  
 4637' INC 10.4 AZI 157.5  
 4730' INC 9.8 AZI 159.2  
 4824' INC 9.2 AZI 158.5  
 4918' INC 10.1 AZI 159.6  
 5013' INC 9.5 AZI 157.3  
 5106' INC 10.7 AZI 156.3  
 5200' INC 10.0 AZI 158.5  
 5293' INC 8.4 AZI 156.3  
 5388' INC 7.7 AZI 160.0  
 5482' INC 6.8 AZI 164.5  
 5575' INC 6.6 AZI 164.9

## ROCK TYPES

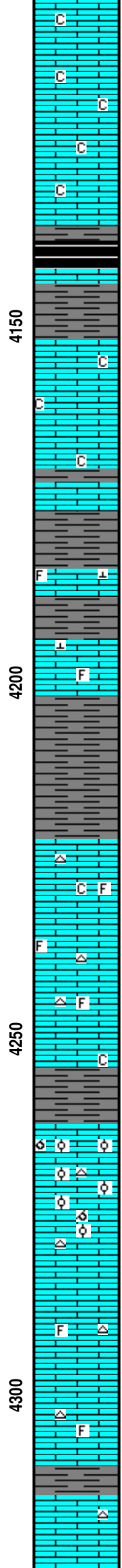
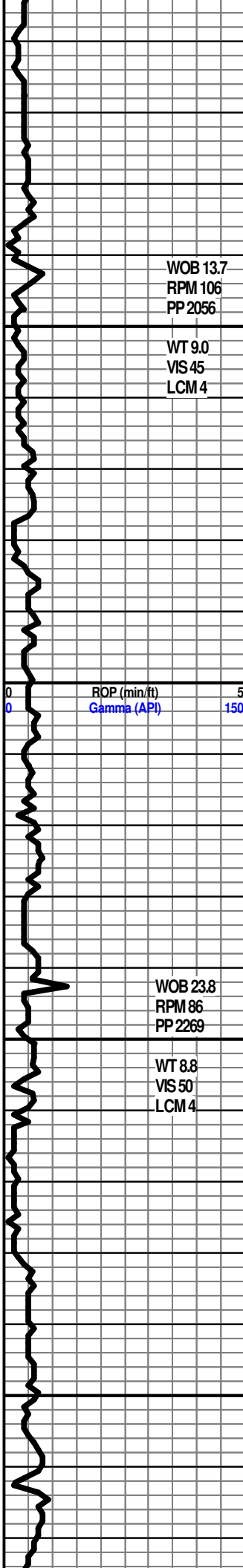
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	Salt
	Shale
	Shcol

	Shgy
	Sltst
	Ss
	Till
	Carb sh
	Dol
	Dtd
	Gry sh

	Sandylms
	Shale
	Sltstn
	Shlyslts
	Sltyslts
	Lms





LS- OFF WHT CRM TO LT TN, HD DNS TO V/ BRIT, FN XLN CHLKY MTRX, S-SUCRO IP,ABDT SFT WHT CHLK IN TRAY,NO VIS FLO, NO VIS POR, NO VIS SHOW

**HEEBNER 4136'MD 4097'TVD -1091'SS**  
SH- DK BRWN TO BLCK, SFT BLCK, SMTH TXT, CARB

WOB 13.7  
RPM 106  
PP 2056

WT 9.0  
VIS 45  
LCM 4

**TORONTO 4152'MD 4113'TVD -1107'SS**

LS- CRM TO LT TN, HD FRM TO V/ BRIT, FN XLN SUCRO MTRX, S-CHLKY, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM LT TN TO GRY IP, HD DNS TO BRIT, FN XLN SUCRO MTRX, RE-XLN IP, S-CHLKY, SLI TR IMBD FOSS FRG, SLI TR IMBD CALC XLS IP, LT YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

ROP (min/ft)  
Gamma (API)

SH- LT GRN BRWN LT GRY TO GRYMOTT IP, FRM BLKY, SLTY TXT

**LANSING 4222'MD 4182'TVD -1176'SS**

LS- CRM TO LT TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR IMBD FOSS FRG IP, OFF WHT TO LT TN CHRT SCAT IN TRAY, TR SFT WHT CHLK IN TRAY, DUL YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

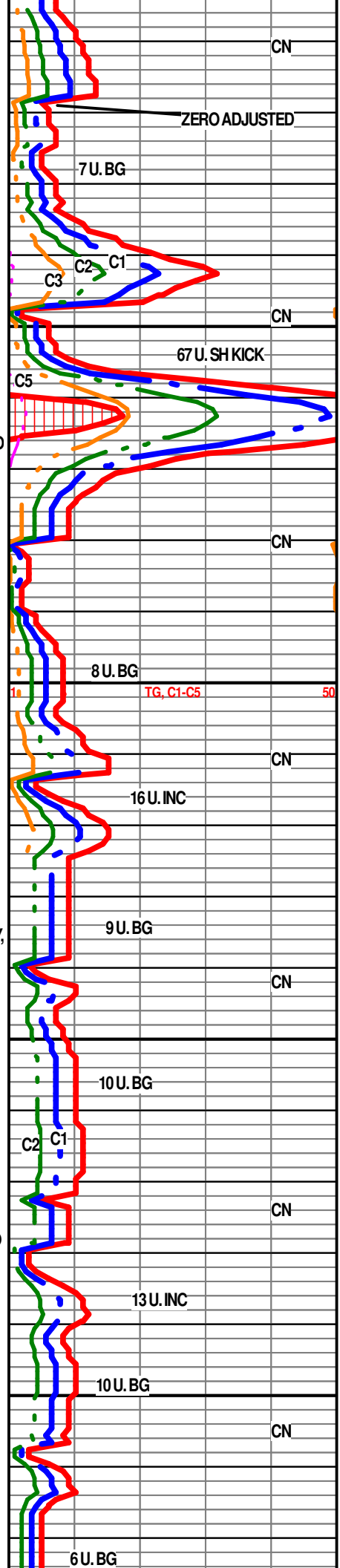
WOB 23.8  
RPM 86  
PP 2269

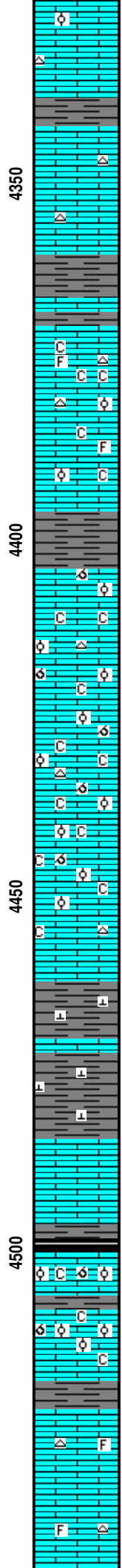
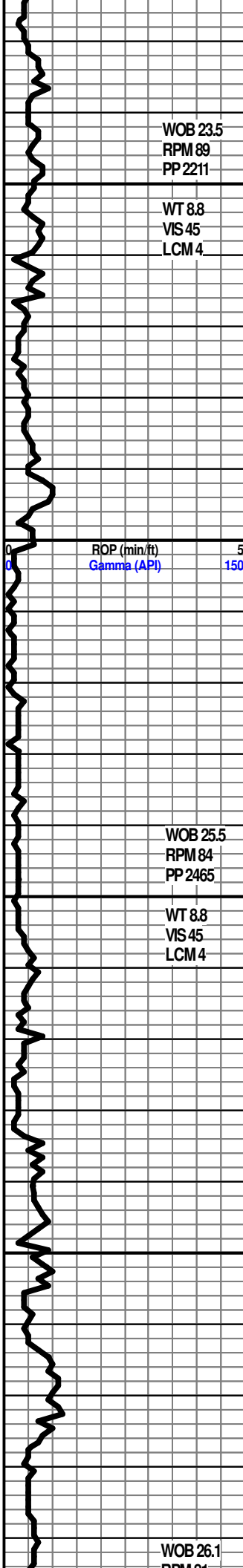
WT 8.8  
VIS 50  
LCM 4

LS- CRM TO LT TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, ABDT IMBD OOL THRU, ABDT OOLCST THRU, TR FRSTY TO LT TN CHRT IN TRAY, DUL YEL FLO IN 50%, FR OOLCST POR SCAT THRU, TR PR TO FR VUG POR IP, PR INTR OOL POR IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO GRY IP, HD DNS TO BRIT IP, FN TO MD XLN RE-XLN MTRX, S-SUCRO, TR IMBD FOSS FRG IP, TR FRSTY TO LT TN CHRT IN TRAY, TR SFT WHT CHLK IN TRAY, DULL YEL FLO IN 30%, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM TO LT TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR IMBD OOL THRU, ABDT OOLCST THRU, TR FRSTY TO LT TN CHRT IN TRAY, TR SFT WHT CHLK IN TRAY, DULL YEL FLO IN 30%, NO VIS POR, NO VIS SHOW





SUCRO MTRX, TR IMBD OOL IP, TR CLR TO FRSTY CHRT IN TRAY, BRT YEL FLO IN 25%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, S-CHLKY, TR CLR TO FRSTY CHRT IN TRAY, NO VIS FLO, PR INTR XLN POR IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO TN IP, HD DNS TO V/ BRIT, FN XLN CHLKY MTRX, S-SUCRO, IMBD FOSS FRG IP, IMBD OOL IP, ABDT SFT WHT CHLK THRU, SLI TR OFF WHT CHRT IN TRAY, BRT YEL FLO IN 30%, PR INTR FOSS POR IP, NO VIS CUT OR SHOW

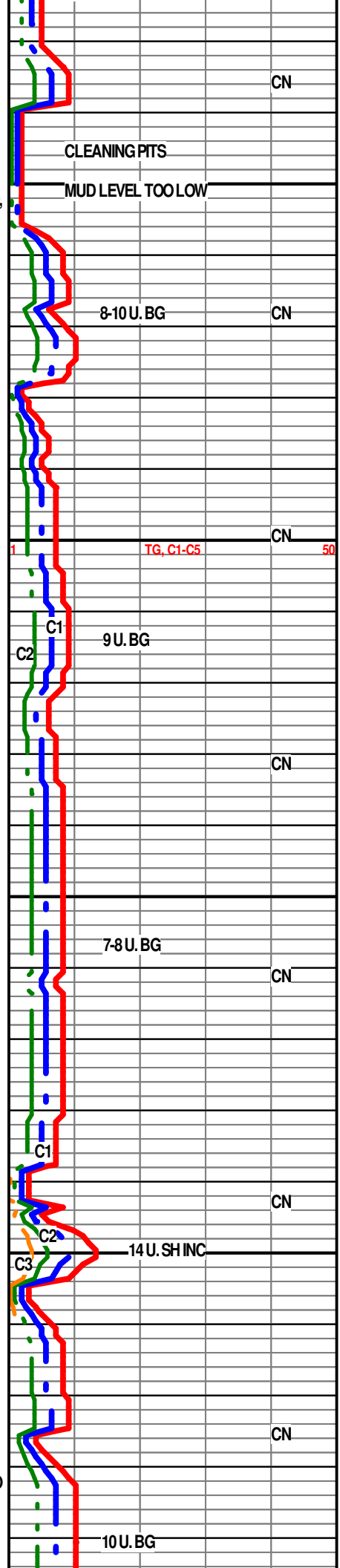
LS- LT TN TO TN, HD DNS, V/FN T FN XLN SUCRO MTRX, S-CHLKY IP, V/ABDT IMBD OOL THRU, OOLCST SCAT THRU, ABDT SFT WHT CHLK IN TRAY, TR LT TN CHRT IN TRAY, BRT YEL FLO IN 15%, PR TO FR OOLCST POR SCAT THRU, PR INTR OOL POR IP, NO VIS CUT OR SHOW

SH- LT GRY GRYT TO LT TN, FRM BLKY, SLTY TXT, CALC THRU

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

LS- LT TN TN TO GRY IP, HD DNS TO TR BRIT, V/FN TO FN XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD OOL IP, TR OOLCST IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 10%, PR INTR OOL POR IP, PR OOLCST POR SCAT IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO TN, HD DNS TO BRIT, FN TO MD XLN SUCRO MTRX, RE-XLN IP, TR S-CHLKY, IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, TR OFF WHT TO LT TN CHRT IN TRAY, DUL YEL FLO IN 25%, PR INTR XLN POR SCAT THRU, NO VIS CUT OR SHOW



WOB 23.5  
RPM 89  
PP 2211

WT 8.8  
VIS 45  
LCM 4

ROP (min/ft) 5  
Gamma (API) 150

WOB 25.5  
RPM 84  
PP 2465

WT 8.8  
VIS 45  
LCM 4

WOB 26.1  
RPM 84  
PP 2465

CLEANING PITS

MUD LEVEL TOO LOW

8-10 U. BG

9 U. BG

7-8 U. BG

14 U. SH INC

10 U. BG

CN

CN

CN

CN

CN

CN

CN

TG, C1-C5

1

C1

C2

C1

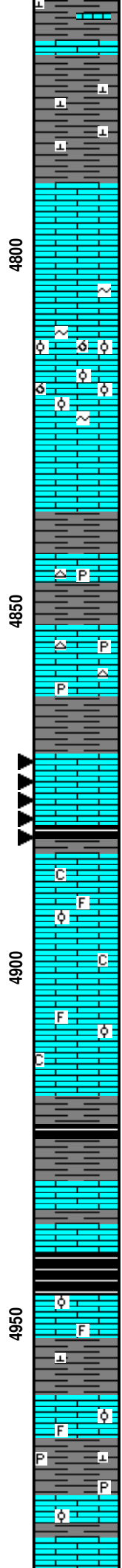
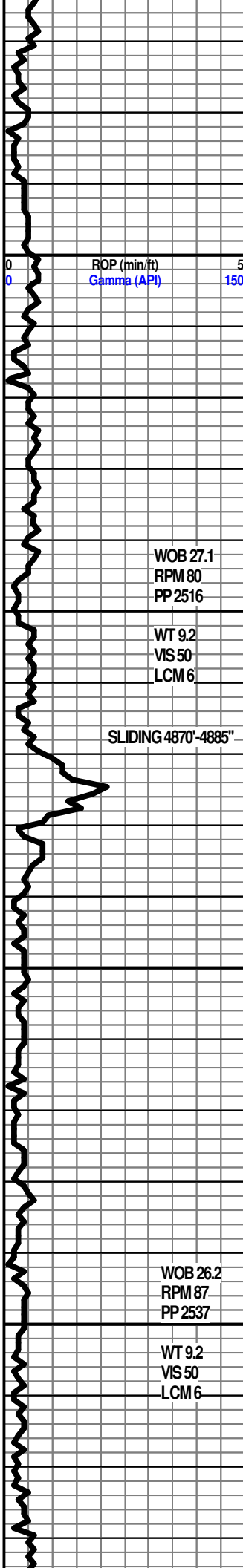
C2

C3

50







SH- GRY TO TN, HD TO FRM BLKY, SLTY TO GRNYTXT, V/ CALC THRU, INTRBD LT TN TO TN LSIP

**MARM 4789' MD 4740' TVD -1734' SS**

4813'-4815' LS- CRM TO LT TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, ABTD IMBD OOL SCAT IP, OOLCST IP, IMBD GLAUC SCAT IP, BRT YEL GLD FLO IN 20%, PR INTR OOL POR IP, PR OOLCST POR IP, NO FLSH CUT, WK GSSY SLW STRM, PR RNG CUT ON DISH, FNT OIL ODOR

LS- TN TO GRY, HD DNS, V/FN TO CRYPTO XLN, RE-XLN IP, IMBD PYR CLSTR IP, TR CLR TO TN CHRT IN TRAY, BRT YEL FLO IN 20%, NO VIS POR, NO VIS CUT OR SHOW

**PAWNEE 4880' MD 4827' TVD -1821' SS**

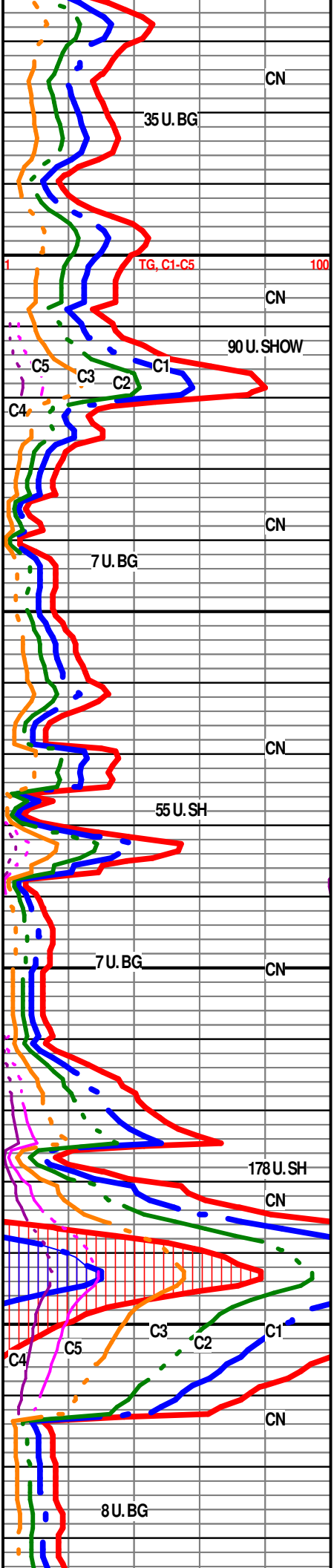
SH- DK GRY TO BLCK, FRM BLKY, SILTYTXT, CARB

LS- CRM LT TN TO GRY IP, HD DNS TO BRIT, FN XLN SUCRO MTRX, SCAT IMBD OOL IP, TR IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, DUL YEL FLO IN 10%, PR INTR OOL POR IP, NO VIS CUT OR SHOW

**CHEROKEE 4939' MD 4886' TVD -1880' SS**

SH- DK GRY TO BLCK, FRM BLKY, SLTYTXT, CARB

LS & SH INTERBD- LS- LT TN TO TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, S-CHLKY IP, IMBD OOL SCAT IP, TR IMBD FOSS FRG IP, DUL YEL FLO IN 25%, NO VIS POR, NO VIS CUT OR SHOW, SH- GRY DK GRY TO DK BRWN, FRM BLKY, SLTY TXT, CARB THRU, TR IMBD DISS PYR IP



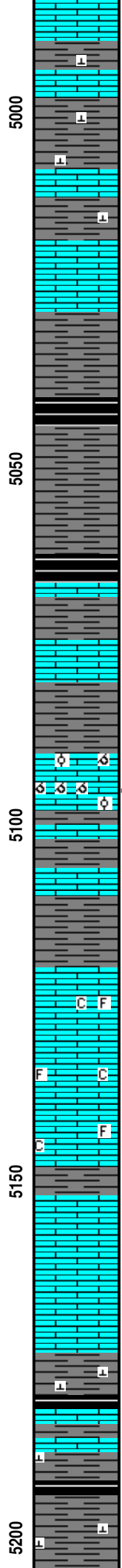
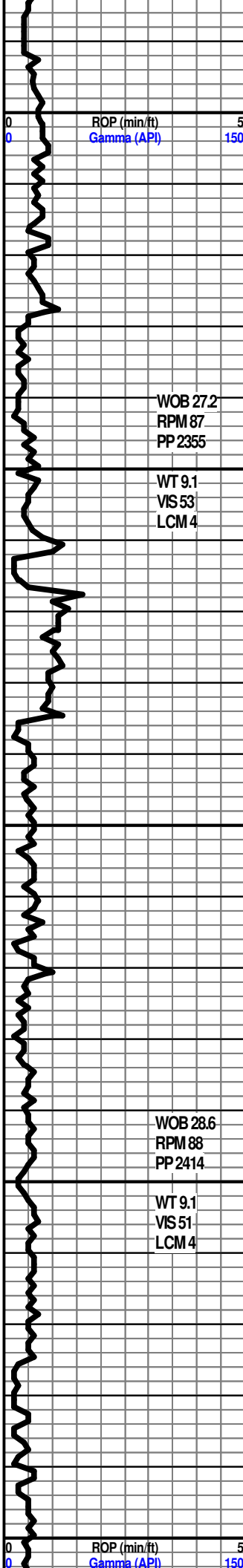
WOB 27.1  
RPM 80  
PP 2516

WT 9.2  
VIS 50  
LCM 6

SLIDING 4870'-4885''

WOB 26.2  
RPM 87  
PP 2537

WT 9.2  
VIS 50  
LCM 6



LS & SH INTERBD- LS- LT TN TN TO GRY IP, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR IMBD TN CHRT, TN CHRT FREE IN TRAY, DUL YEL FLO IN 15%, PR MICRO PP POR IP, NO VIS CUT OR SHOW, SH- LT GRY TO GRY, FRM BLKY, SLTY TXT, CALC THRU

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

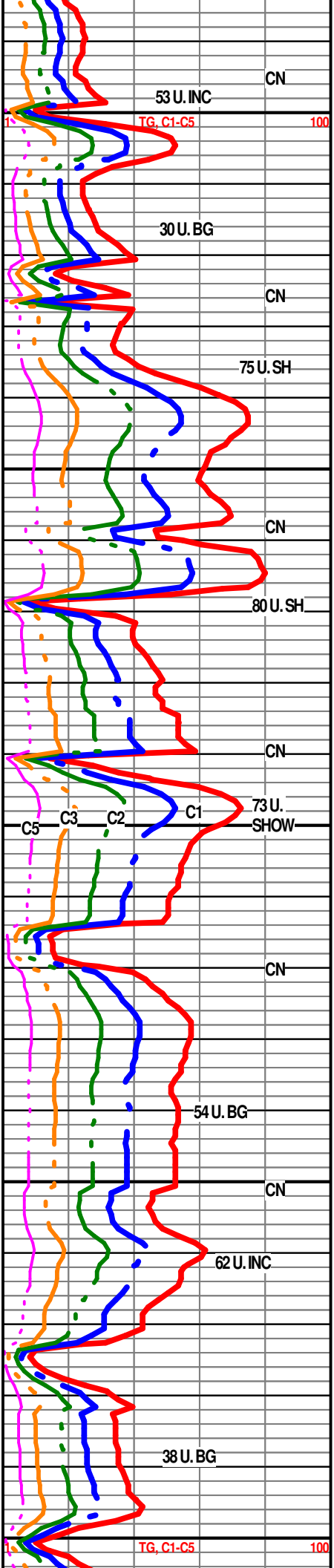
5095'-5097' LS- CRM LT TN TO TN (DUE TO OIL STN IP), HD DNS TO BRIT, FN TO MD XLN SUCRO MTRX, RE-XLN IP, OOLCST SCAT THRU, TR IMBD OOL IP, BRT YEL GLD FLO IN 30%, PR TO FR INTR GRN POR IP, FR TO GD OOLCST POR IP, PR MICRO PP POR IP, PR TO FR FLSH CUT IN 25%, FR TO TR GD MLKY BLU SLW STRM IN 30%, FR RNG CUT ON DISH, FLTING OIL ODOR

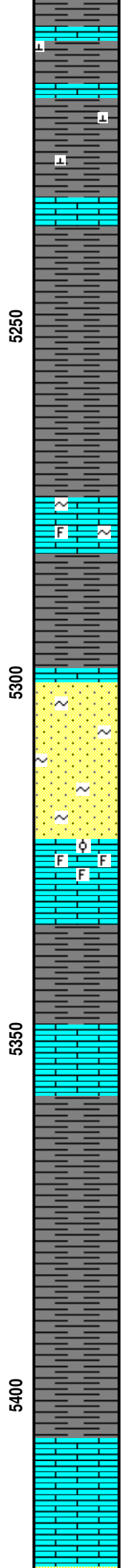
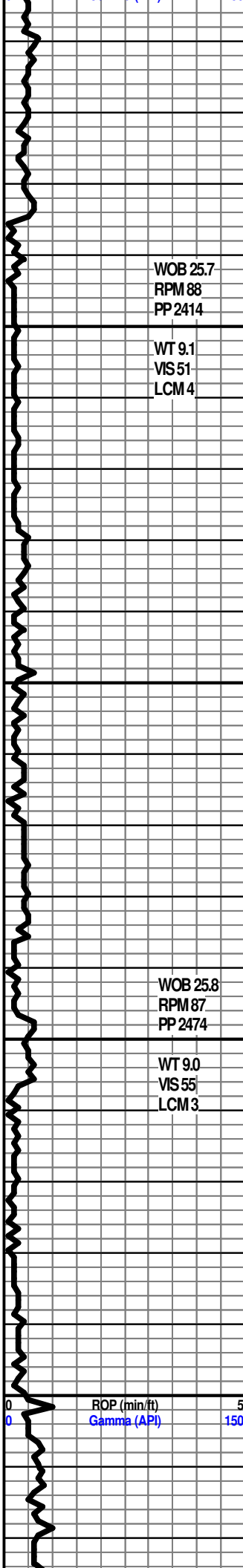
LS- CRM LT TN TO TN, HD DNS TO V/ BRIT, FN XLN SUCRO MTRX, S-CHLKY, TR IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, DUL YEL FLO IN 10%, PR INTR FOSS PR IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO GRY, HD DNS TO BRIT IP, V/FN TO CRYPTO XLN, RE-XLN IP, S-CHLKY IP, BRT YEL FLO IN 15%, NO VIS POR, NO VIS CUT OR SHOW

ATOKA 5175' MD 5118' TVD -2112' SS

SH- GRY DK GRY TO TR BLCK, FRM BLKY, SMTH TO SLTY TXT, V/CALC THRU





**MORROW 5232'MD 5175'TVD -2169'SS**

SH- GRY BRWN TO GRN, FRM BLKY TO SPLNTY, SMTH TXT, TR IMBD DISS PYR IP, SLI TR IMBD GLAUC IP

5273'-5277' LS- CRM LT TN TO TN (DUE TO OIL STN IN 10%), HD DNS TO BRIT, FN XLN SUCROMTRX, RE-XLN IP, IMBD GLAUC IP, TR IMBD FOSS FRG IP DUL YEL GLD FLO IN 10%, PR INTR XLN POR IP, PR INTR FOSS POR IP, NO FLSH CUT, WK MLKY BLU SLW STRM IN 10%, PR RING CUT ON DISH, NO ODOR

**CHESTER 5298'MD 5240'TVD -5234'SS**

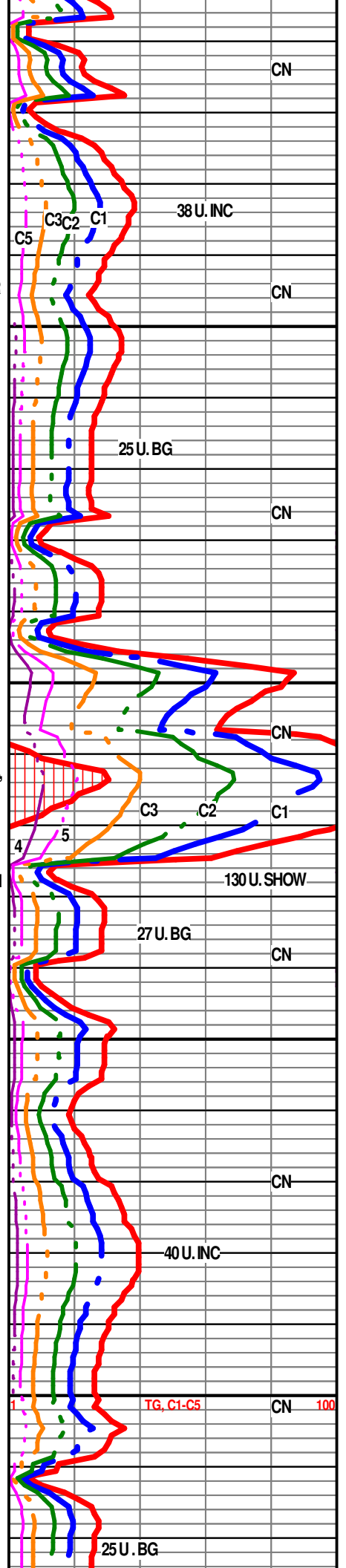
SS- CLR TN TO BRWN (DUE TO EVEN OIL STN THRU) LOS IN 5%, HD TO FRI, ABDT VFN TO FN S-ANG TO ANG QRTZ GRNS, WLL SRT, SIL TO CALC CMNT IP, IMBD GLAUC THRU, DUL YEL GLD FLO IN 60%, FR TO GD INTR GRN POR THRU, FR TO GD FLSH CUT IN 50%, V/GD TO EXCL MLKY BLU SLW STRM IN 60%, GD RING CUT ON DISH, FR OIL ODOR

LS- CRM LT TN TO TN (DUE TO OIL STN IN 35%, HD DNS TO BRIT, IMBD FOSS FRG THRU, IMBD OOL IP, DUL YEL GLD FLO IN 10%, PR INTR XLN POR IP, PR INTR FOSS PR IP, POSS FRCT POR, PR FLSH CUT IN 30%, PR TO FR MLKY BLU SLW STRM IN 30%, FR RING CUT ON DISH, WK OIL ODOR

SH- LT GRY LT GRN TO GRY, FRM BLKY, SMTH TO SILTYTXT

SH- LT GRY LT GRN BRWN TO GRY, FRM BLKY, SMTH TO SILTY TXT

SS- TN TO BRWN (DUE TO OIL STN) HD DNS TO BRIT, ABDT FN S-RND TO S-ANG QRTZ GRNS THRU, WLL SRT, CALC CMNT, DUL YEL GLD FLO THRU, PR INTR GRN POR THRU, PR FLSH CUT, PR TO FR MLKY BLU SLW STRM, GD RING CUT ON DISH,



NO OIL ODOR

### ST GEN 5429'MD 5370'TVD -2364'

LS- OFF WHT CRM TO LT TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, S-CHLKY, ABDT V/V/FN QRTZ GRNS THRU, DUL YEL FLO IN 30%, PR INTR GRN POR THRU, NO VIS CUT OR SHOW

LS- CRM TO LT TN, HD DNS TO V/ BRIT IP, FN XLN SUCRO MTRX, S-CHLKY, TR IMBD FOSS FRG IP, TR IMBD GLAUC IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO V/ BRIT IP, FN XLN SUCRO MTRX, S-CHLKY, TR IMBD FOSS FRG IP, IMBD OOL IP, TR IMBD GLAUC IP, IMBD SM QRTZ GRNS THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO V/ BRIT IP, FN XLN SUCRO MTRX, S-CHLKY, IMBD OOL IP, TR IMBD GLAUC IP, IMBD SM QRTZ GRNS THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

R.T.D @5620' 4:00 PM 8/23/19

- CTCH
- SHORT TRIP
- CTCH
- TOFL
- HALIBURTON

WOB 16.7  
RPM 77  
PP 2321

WT 9.2  
VIS 50  
LCM 4

WOB 27.1  
RPM 91  
PP 2487

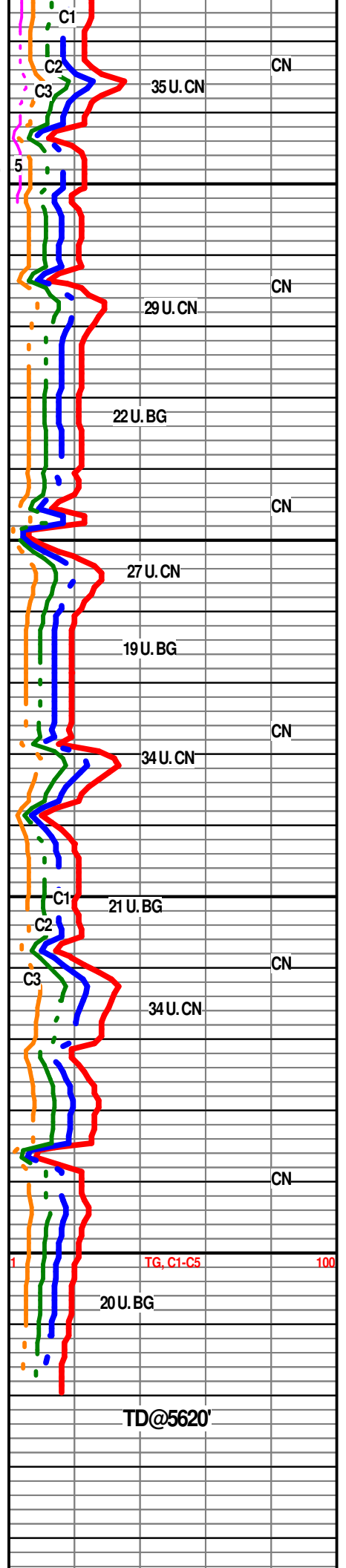
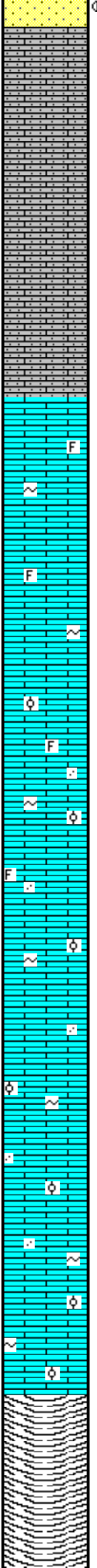
WT 9.2  
VIS 50  
LCM 4

ROP (min/ft)  
Gamma (API)

TD@5620'

LTD@

5450  
5500  
5550  
5600



TD@5620'



MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	DX (ft)	DY (ft)	X (ft)	Y (ft)	TVD Seismic (ft)
0	0	0	0	0	0	1287609	370867.1	-6
311	1.1	210	310.9809	-1.49265	-2.58534	1287607	370864.5	304.9809
498	0.9	206.2	497.9523	-3.03854	-5.45757	1287606	370861.7	491.9523
684	0.7	198.2	683.9341	-4.03835	-7.84761	1287605	370859.3	677.9341
843	0	336.2	842.9302	-4.34171	-8.77028	1287604	370858.3	836.9302
1000	0.7	324.2	999.9263	-4.90271	-7.99244	1287604	370859.1	993.9263
1157	1.4	298.2	1156.9	-7.15402	-6.30825	1287601	370860.8	1150.9
1314	1.1	358.2	1313.868	-8.89171	-3.89558	1287600	370863.2	1307.868
1470	1.6	284.2	1469.835	-11.0502	-1.86452	1287598	370865.3	1463.835
1628	2.3	297.2	1627.743	-16.0086	0.125804	1287593	370867.2	1621.743
1765	2.2	302.2	1764.637	-20.6787	2.783615	1287588	370869.9	1758.637
1846	3.6	303.16	1845.532	-24.1233	5.003168	1287584	370872.1	1839.532
1940	0.86	330.13	1939.453	-26.9458	7.229573	1287582	370874.3	1933.453
2036	1.11	156.79	2035.448	-26.9381	6.999693	1287582	370874.1	2029.448
2098	2.77	152.47	2097.411	-26.009	5.119138	1287583	370872.2	2091.411
2190	4.98	158.52	2189.195	-23.5189	-0.56873	1287585	370866.6	2183.195
2285	7.59	156.86	2283.616	-19.5428	-10.1766	1287589	370856.9	2277.616
2379	10.02	159.99	2376.502	-14.3042	-23.5711	1287594	370843.5	2370.502
2473	11.75	160.45	2468.807	-8.30266	-40.2757	1287600	370826.8	2462.807
2568	10.04	158.31	2562.092	-2.00479	-57.087	1287607	370810	2556.092
2660	12.16	158.11	2652.365	4.572335	-73.5315	1287613	370793.6	2646.365
2755	12.01	158.25	2745.26	11.96521	-91.9959	1287621	370775.1	2739.26
2848	11.74	159.74	2836.27	18.82699	-109.859	1287627	370757.3	2830.27
2942	11.92	160.53	2928.273	25.37422	-127.983	1287634	370739.1	2922.273
3036	11.47	158.98	3020.322	31.96237	-145.86	1287641	370721.3	3014.322
3131	11.36	160.41	3113.443	38.48749	-163.492	1287647	370703.6	3107.443
3225	10.7	162.55	3205.706	44.20836	-180.539	1287653	370686.6	3199.706
3320	11.27	155.74	3298.969	50.66753	-197.416	1287659	370669.7	3292.969
3414	12.67	149.42	3390.927	59.68691	-214.667	1287668	370652.5	3384.927
3508	11.9	146.97	3482.774	70.21431	-231.667	1287679	370635.5	3476.774
3601	10.88	147.57	3573.941	80.14788	-247.115	1287689	370620	3567.941
3696	11.84	148.56	3667.079	90.03975	-262.998	1287699	370604.1	3661.079
3791	11.63	150.51	3760.094	99.83716	-279.648	1287708	370587.5	3754.094
3884	11.79	149.04	3851.159	109.3395	-295.955	1287718	370571.2	3845.159
3979	11.75	148.6	3944.161	119.3721	-312.534	1287728	370554.6	3938.161
4073	12.01	149.74	4036.148	129.2871	-329.151	1287738	370538	4030.148
4165	11.49	149.38	4126.22	138.7777	-345.304	1287747	370521.8	4120.22
4260	11.24	150.95	4219.357	148.0928	-361.541	1287757	370505.6	4213.357
4354	10.99	150.59	4311.594	156.9411	-377.355	1287766	370489.8	4305.594
4448	10.41	150.28	4403.959	165.5513	-392.536	1287774	370474.6	4397.959
4543	10.08	149.75	4497.444	173.9945	-407.171	1287783	370459.9	4491.444
4637	10.46	157.59	4589.943	181.392	-422.166	1287790	370445	4583.943
4730	9.87	159.31	4681.483	187.4266	-437.427	1287796	370429.7	4675.483
4824	9.29	158.59	4774.172	193.0427	-452.028	1287802	370415.1	4768.172

4918	10.12	159.64	4866.826	198.6857	-466.835	1287807	370400.3	4860.826
5013	9.57	157.32	4960.427	204.6345	-481.946	1287813	370385.2	4954.427
5106	10.75	156.39	5051.967	211.0894	-497.027	1287820	370370.1	5045.967
5200	10.04	158.53	5144.424	217.5996	-512.685	1287826	370354.4	5138.424
5293	8.41	156.33	5236.218	223.2975	-526.459	1287832	370340.7	5230.218
5388	7.72	160.04	5330.279	228.2648	-538.819	1287837	370328.3	5324.279
5482	6.83	164.51	5423.522	231.9129	-550.14	1287840	370317	5417.522
5575	6.68	164.93	5515.876	234.7962	-560.692	1287843	370306.4	5509.876



Subsea (ft)	Segment Length	Segment Inclination	Offset	Original Azimuth (deg)	Original DX (ft)	Original DY (ft)
3006	0	0	0			
2695.019	311	0.55	2.99			
2508.048	187	0.99946	6.25			
2322.066	186	0.79808	8.83			
2163.07	159	0.35	9.79			
2006.074	157	0.35	9.38			
1849.1	157	1.02612	9.54			
1692.132	157	1.08517	9.71			
1536.165	156	1.08867	11.21			
1378.257	158	1.93788	16.01			
1241.363	137	2.24786	20.87			
1160.468	81	2.8999	24.64			
1066.547	94	2.19195	27.9			
970.5518	96	0.13728	27.83			
908.5894	62	1.93887	26.51			
816.8049	92	3.87005	23.53			
722.384	95	6.28438	22.03			
629.4983	94	8.80183	27.57			
537.1931	94	10.88493	41.12			
443.9084	95	10.89315	57.12			
353.6348	92	11.1	73.67			
260.7402	95	12.085	92.77			
169.7305	93	11.87403	111.46			
77.72705	94	11.82973	130.47			
-14.3215	94	11.69396	149.32			
-107.443	95	11.41413	167.96			
-199.706	94	11.02813	185.87			
-292.969	95	10.96609	203.81			
-384.927	94	11.95239	222.81			
-476.774	94	12.28229	242.07			
-567.941	93	11.38985	259.79			
-661.079	95	11.35958	277.98			
-754.094	95	11.73335	296.94			
-845.159	93	11.70905	315.51			
-938.161	95	11.7699	334.56			
-1030.15	94	11.87944	353.63			
-1120.22	92	11.74996	372.15			
-1213.36	95	11.36398	390.7			
-1305.59	94	11.11493	408.69			
-1397.96	94	10.69996	426.02			
-1491.44	95	10.24488	442.79			
-1583.94	94	10.24647	459.49			
-1675.48	93	10.16388	475.89			
-1768.17	94	9.57979	491.52			

-1860.83	94	9.70462	507.36
-1954.43	95	9.84302	523.59
-2045.97	93	10.15968	539.99
-2138.42	94	10.39322	556.95
-2230.22	93	9.22334	571.86
-2324.28	95	8.06083	585.18
-2417.52	94	7.26954	597.02
-2509.88	93	6.75495	607.87