

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 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

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:	

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	ARROYO UNIT 22-6
Doc ID	1476484

All Electric Logs Run

Porosity
Microlog
Resisitivity
Sonic



WF

PAGE 1 of 1	CUST NO 1000335	YARD # 1718	INVOICE DATE 08/28/2019
INVOICE NUMBER CC 93038430			

Pratt (620) 672-1201
 B BEREXCO LLC
 I 2020 N BRAMBLEWOOD
 L WICHITA
 L KS US 67206
 T
 O ATTN: VICKY LOVETTE

J LEASE NAME ARROYO UNIT #22-6
 O LOCATION
 B COUNTY STANTON
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41188296			Net - 30 days	09/27/2019

For Service Dates: 08/27/2019 to 08/27/2019

0041188296

171819705L Cement-New Well Casing/Pi 08/27/2019
 CEMENT SURFACE CASING

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
A-Serv Lite	620.00	SK	10.14	6,286.80 T
Class C Cement	150.00	SK	11.31	1,696.50 T
Celloflake	193.00	LB	1.56	301.08 T
Calcium Chloride	1,902.00	LB	0.39	741.78 T
Depth Charge, 1001'-2000'	1.00	HR	585.00	585.00
Plug Container Utilization Charge	1.00	EA	97.50	97.50
Cement Densiometer, with chart recorder	1.00	EA	140.00	140.00
Light Vehicle Mileage	60.00	MI	2.00	120.00
Heavy Equipment Mileage	180.00	MI	3.20	576.00
Ton, Mileage	2,043.00	MI	1.20	2,451.60
Blending & Mixing Service Charge	770.00	SK	0.56	431.20
Guide Shoe - Regular, 8 5/8" (Blue)	1.00	EA	380.00	380.00
Flapper Type Insert Float Valves. 8 5/8"	1.00	EA	280.00	280.00
Top Rubber Cement Plug, 8 5/8"	1.00	EA	225.00	225.00
Centralizer, 3 5/8" (Blue)	4.00	EA	90.00	360.00
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	2.00	EA	35.00	70.00

BCP per b.d

PLEASE REMIT TO: BASIC ENERGY SERVICES, LP PO BOX 841903 DALLAS, TX 75284-1903	SEND OTHER CORRESPONDENCE TO: BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102	SUB TOTAL 14,817.46 TAX 676.96 INVOICE TOTAL 15,494.42
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1700 S. Country Estates Road
 Liberal, KS 67801
 PH (620)-624-2277 FAX (620) 624-2280

SERVICE ORDER - 1718 19705 L

Date: 8-27-19 AE

TT: 80

Well Name: Arroyo Unit # 22-6
 County - State: Stanton, Kansas
 Type Of Service: Z-42 Cement Surface Casing
 Location: SEC:22 - 29S - 41W
 RRC #: 19857-3
 Customer's Order #: 1000335

Customer: ~~Beren Corp~~
Berepco
 Address: 2020 N Bramblewood
 Wichita Ks 672016

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 10% 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
BC119	620	SK ✓	A-Serv Lite	26.00	16120.00
BC101	150	SK ✓	Class C Cement	29.00	4350.00
CC102	193	LB ✓	Celloflake	4.00	772.00
CC109	1902	LB ✓	Calcium Chloride	1.00	1902.00
CC2	1	HR	Depth Charge, 1001'-2000'	1500.00	1500.00
CE504	1	EA	Plug Container Utilization Charge	250.00	250.00
CE505	1	EA	Cement Densimeter, with chart recorder	350.00	350.00
ME101	60	MI	Light Vehicle Mileage	5.00	300.00
ME102	180	MI	Heavy Equipment Mileage	8.00	1440.00
TM	2043	MI	Ton Mileage	3.00	6129.00
CE240	770	SK	Blending & Mixing Service Charge	1.40	1078.00
CF253	1	Ea ✓	Guide Shoe - Regular, 8 5/8" (Blue)	380.00	380.00
CF1453	1	Ea ✓	Flapper Type Insert Float Valves, 8 5/8" (Blue)	280.00	280.00
CF105	1	Ea ✓	Top Rubber Cement Plug, 8 5/8"	225.00	225.00
CF1753	4	Ea ✓	Centralizer, 8 5/8" (Blue)	90.00	360.00
BE143	1	Ea	Supervisor	75.00	75.00
BE144	2	EA	Driver	35.00	70.00
				35581.00	
				Book Total:	395,916.00
				Taxes:	4817.24
				Disc. Price:	\$44,852.46

PUMP TRUCK NUMBER: 19857 3Hrs
 DRIVER: Jamie Torres
 BASIC ENERGY SERVICES

THIS JOB WAS SATISFACTORILY COMPLETED YES NO
 OPERATION OF EQUIPMENT WAS SATISFACTORY YES NO
 PERFORMANCE OF PERSONEL WAS SATISFACTORY YES NO
Bob Thompson
 CUSTOMER OR HIS AGENT

Customer Comments or Concerns:
Jamie Torres, Angel, Oscar, Jose



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

PRESSURE PUMPING

Job Log

Customer:	<i>Berepco</i> Beren Corp	Cement Pump No.:	19857 3Hrs	Operator TRK No.:	86531 Angel
Address:	2020 N Bramblewood	Ticket #:	1718 19705 L	Bulk TRK No.:	14355 Oscar 37712 Oscar
City, State, Zip:	Wichita Ks 672016	Job Type:	Z-42 Cement Surface Casing		
Service District:	1718 - Liberal, Ks	Well Type:	OIL		
Well Name and No.:	Arroyo Unit # 22-6	Well Location:	EC:22 - 29S - 41W	County:	Stanton State: Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
A Serv Lite	620	3%CC, 1/4# Celloflake	14355 Oscar	Front	Back
Premium Plus	150	2% CC, 1/4# Celloflake	37712 Oscar	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.5	1.98	10.77	1227.6	Man Hours:	80
Tail:	14.8	1.34	6.33	201	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure(Psi)		Description of Operation and Materials
			T	C	Tubing	Casing	
19:00							On Location
20:00							Safety Meeting
1:00 AM							Rig Up
1:22 AM							Pressure Test To 1500Psi
1:24 AM		218.8					Pump Lead @ 12.5#
2:12		35.7					Switch to Tail @ 14.8#
2:30							Shut Down & Drop Plug
2:34 AM	6	10thu70				350	Start Displacement
	6	80thu90				500	
2:56	2	108.9				450	Land Plug Too 1000 Psi
							Release Back // Float Held
							Cement To Surface
							Job Completed
							Thank You
55BBL Cement to pit *****							

Size Hole	12.25"	Depth				TYPE	Plug Container
Csg.	8 8/5" 24#	Depth	1754.8'	New / Used		Packer	Depth
Landing psi	359.9psi	Depth				Retainer	Depth
Shoe jt.	42.22'	Type				Perfs	CIBP

Customer Signature:	<i>Bole Thompson</i>	Basic Representative:	Angel Echevarria
		Basic Signature:	<i>[Signature]</i>
		Date of Service:	8/27/2019



SEP 16 2019

WF

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 2	1000335	1718	09/11/2019
INVOICE NUMBER 93046149			

Pratt (620) 672-1201
 B BEREVCO LLC
 I 2020 N BRAMBLEWOOD
 L WICHITA
 L KS US 67206
 T
 O ATTN: VICKEY LOVETTE

J LEASE NAME ARROYO 22-6
 O LOCATION
 B COUNTY STANTON
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41189730	19572		Net - 30 days	10/11/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 09/10/2019 to 09/10/2019</i>				
0041189730				
171819689L Cement-New Well Casing/Pi 09/10/2019 CEMENT 2-STAGE PRODUCTION				
A-Serv-Lite	125.00	SK	9.88	1,235.00 T
AA2 Premium Cement	285.00	SK	7.22	2,057.70 T
A-Serv Lite	420.00	SK	9.88	4,149.60 T
AA2 Premium Cement	50.00	SK	7.41	370.50 T
Computerized Liquid Chemical Additive Un	50.00	HR	10.14	507.00
C-41P	79.00	LB	1.56	123.24 T
Celloflake	149.00	LB	1.56	232.44 T
C-17	158.00	LB	9.36	1,478.88 T
Gypsum	1,575.00	LB	0.39	614.25 T
Gilsonite	1,675.00	LB	0.39	653.25 T
1856 LBS Salt	1.00	LB	371.20	371.20 T
Light Vehicle Mileage	60.00	MI	1.95	117.00
Heavy Equipment Mileage	240.00	MI	3.12	748.80
Ton Mileage	2,502.00	MI	1.17	2,927.34
Blending & Mixing Service Charge	1.00	SK	511.50	511.50
Depth Charge, 5001-6000'	1.00	HR	1,131.00	1,131.00
Additional Stage Charge	1.00	HR	842.40	842.40
Plug Container Utilization Charge	1.00	EA	97.50	97.50
DATA ACQUISITION / STRIP CHART	1.00	LB	136.50	136.50 T
5 1/2" Float Shoe(Blue)	1.00	EA	425.00	425.00
5 1/2" Latch-Down Plug & Assembly (Red)	1.00	EA	850.00	850.00
Two Stage Cement Collar, 5 1/2" (Red)	1.00	EA	6,100.00	6,100.00
5 1/2" Basket (Blue)	3.00	EA	290.00	870.00
Turbolizer, 5 1/2" (Blue)	22.00	EA	110.00	2,420.00



PAGE	CUST NO	YARD #	INVOICE DATE
2 of 2	1000335	1718	09/11/2019
INVOICE NUMBER			
93046149			

Pratt (620) 672-1201
 B BEREXCO LLC
 I 2020 N BRAMBLEWOOD
 L WICHITA
 L KS US 67206
 T
 O ATTN: VICKEY LOVETTE

J LEASE NAME ARROYO 22-6
 O LOCATION
 B COUNTY STANTON
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.		TERMS	DUE DATE
41189730	19572			Net - 30 days	10/11/2019
		QTY	U of M	UNIT PRICE	INVOICE AMOUNT
Service Supervisor Charge		1.00	EA	75.00	75.00
Driver Charge		4.00	EA	35.00	140.00
<p><i>ACP</i></p> <p><i>per bed</i></p>					

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	29,185.10
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	856.69
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	30,041.79
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



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

SERVICE ORDER - 1718 19689 L

Date: 9/10/2019

TMMH 18 hours

Well Name: Arroyo # 22-6
 County - State: Stanton, Kansas
 Type Of Service: Z-42 Cement 2- Stage *Production*
 Customer: Berexco LLC

Location: 22 - 29S - 41W
 RRC #: *19572-28*
 Customer's Order #: *1000335*

Address: 2020 N. Bramblewoos
 Wichita, Kansas 67206-1094

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
BC119	125	SK	A-Serv Lite	26.00	3250.00
BC145	285	SK	AA2 Premium Cement	19.00	5415.00
BC119	420	SK	A-Serv Lite	26.00	10920.00
BC145	50	SK	AA2 Premium Cement	19.00	950.00
BC119	50	SK	A-Serv Lite	26.00	1300.00
CC105	79	LB	C-41P	4.00	316.00
CC102	149	LB	Celloflake	4.00	596.00
CC187	158	LB	C-17	24.00	3792.00
CC113	1575	LB	Gypsum	1.00	1575.00
CC201	1675	LB	Gilsonite	1.00	1675.00
CC111	1856	LB	Salt	0.50	928.00
ME101	60	MI	Light Vehicle Mileage	5.00	300.00
ME102	240	MI	Heavy Equipment Mileage	8.00	1920.00
TM	2502	MI	Ton Mileage	3.00	7506.00
CE240	930	SK	Blending & Mixing Service Charge	1.40	1302.00
CC6	1	HR	Depth Charge, 5001-6000'	2900.00	2900.00
CE409	1	HR	Additional Stage Charge	2160.00	2160.00
CE504	1	EA	Plug Container Utilization Charge	250.00	250.00
CC505	1	EA	Data Acquisition / Strip Chart	350.00	350.00
CF851	1	Ea	5 1/2" Float Shoe (Blue)	425.00	425.00
CF601	1	Ea	5 1/2" Latch Down Plug & Assembly (Red)	850.00	850.00
CF401	1	Ea	Two Stage Cement Collar, 5 1/2" (Red)	6100.00	6100.00
CF1901	3	Ea	5 1/2" Basket (Blue)	290.00	870.00
CF1651	22	Ea	Turbolizer, 5 1/2" (Blue)	110.00	2420.00
BE143	1	Ea	Supervisor	75.00	75.00
BE144	4	EA	Driver	35.00	140.00
				Book Total:	\$58,285.00
				Taxes:	
				Disc. Price:	\$29,185.10

PUMP TRUCK NUMBER: 37223 19572

DRIVER: *Gregal Echevarria*
Victor A. Corne
 BASIC ENERGY SERVICES

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

Jose Martinez
 CUSTOMER OR HIS AGENT

JB ALS

Customer Comments or Concerns:
Kerby Harp
Osac Chance / Jose Martinez



BASIC
ENERGY SERVICES

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

PRESSURE PUMPING

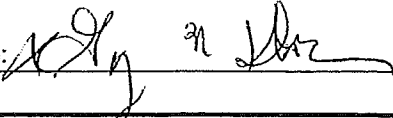

Job Log

Customer:	Berexco LLC	Cement Pump No.:	37223 19572 28HRS	Operator TRK No.:	78868
Address:	2020 N. Bramblewoos	Ticket #:	1718 19689 L	Bulk TRK No.:	19827 37725 Oscar 37712 19883 Kirby
City, State, Zip:	Wichita, Kansas 67206-1094	Job Type:	Z-42 Cement 2- Stage		
Service District:	1718-Liberal Ks	Well Type:	NEW		
Well Name and No.:	Arroyo # 22-6	Well Location:	22 - 29S - 41W	County:	Stanton State: Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
A Serv Lite	125	.25pps Celloflake	19827 37725 Oscar	Front	Back
AA-2 Premium Cement	285	10% Gypseal, 10% Salt, 5pps Gilsonite, .25pps Defoamer	37712 19883 Kirby	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.6	1.89	10.29	236.25	TT Man Hours:	118
Tail:	14.8	1.51	6.65	430.35	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
17:30pm							Arrived at location
23:00pm							Spot trucks/Rig up
2:45am							Safety meeting
3:06am					2500		Pressure test lines to 2500psi
3:09am	3	10			300		Pump 10bbls of fresh water spacer
3:13am	6	42			500		Pump 42bbls of lead from 125sks at 12.6lbs
3:23am	6	76			300		Pump 76bbls of tail from 285sks at 14.8lbs
3:55am							Shut down/Drop plug/Wash pump and lines to pit
4:00am							Start dispalcement of 135.8bbls (60bbls with water/las 75.8bbls with mud)
4:03am	8	20			500		20bbls gone water
4:05am	10	40			600		40bbls gone water
4:08am	8	60			300		60bbla gone water
4:11am	10	80			1200		80bbls gone mud
4:13am	8	100			1000		100bbls gone mud
4:16am	6	120			600		120bbls gone mud
4:18am	5	135			2000		Bump plug/Hold for 3 minutes
4:21am							Release pressure to check if float holds
4:25am					950		Drop opening tool and open dv tool
							Wait for 4 hours to start second stage
Size Hole	7 7/8	Depth	5750			TYPE	
Size & Wt. Csg.	5 1/2 15.5#	Depth	5750	New / Used		Latch Down	5707 Depth
Landing Psi	500psi	Depth				DV Tool	3205 Depth
Shoe Joint	43	Type				Perfs	CIBP

Customer Signature: 	Basic Representative:	Victor A. Corona
	Basic Signature:	
	Date of Service:	9/10/2019



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

PRESSURE PUMPING

Job Log

Customer:	Berexco LLC	Cement Pump No.:	37223 19572 28HRS	Operator TRK No.:	78868
Address:		Ticket #:	1718 19689 L	Bulk TRK No.:	19827 37725 Oscar 37712 19883 Kirby
City, State, Zip:		Job Type:	Z-42 Cement 2- Stage		
Service District:	1718-Liberal	Well Type:	NEW		
Well Name and No.:	Arroyo # 22-6	Well Location:	22 - 29S - 41W	County:	Stanton
				State:	Kansas

Type of Cmt	Sacks	Additives	Truck Loaded On		
A Serv Lite	420	.25pps Celloflake	19827 37725 Oscar	Front	Back
AA-2 Premium Cement	50	10% Gypseal, 10% Salt, 5pps Gilsonite, .25pps Defoamer	37712 19883 Kirby	Front	Back
A Serv Lite	50	.25pps Celloflake		Front	Back

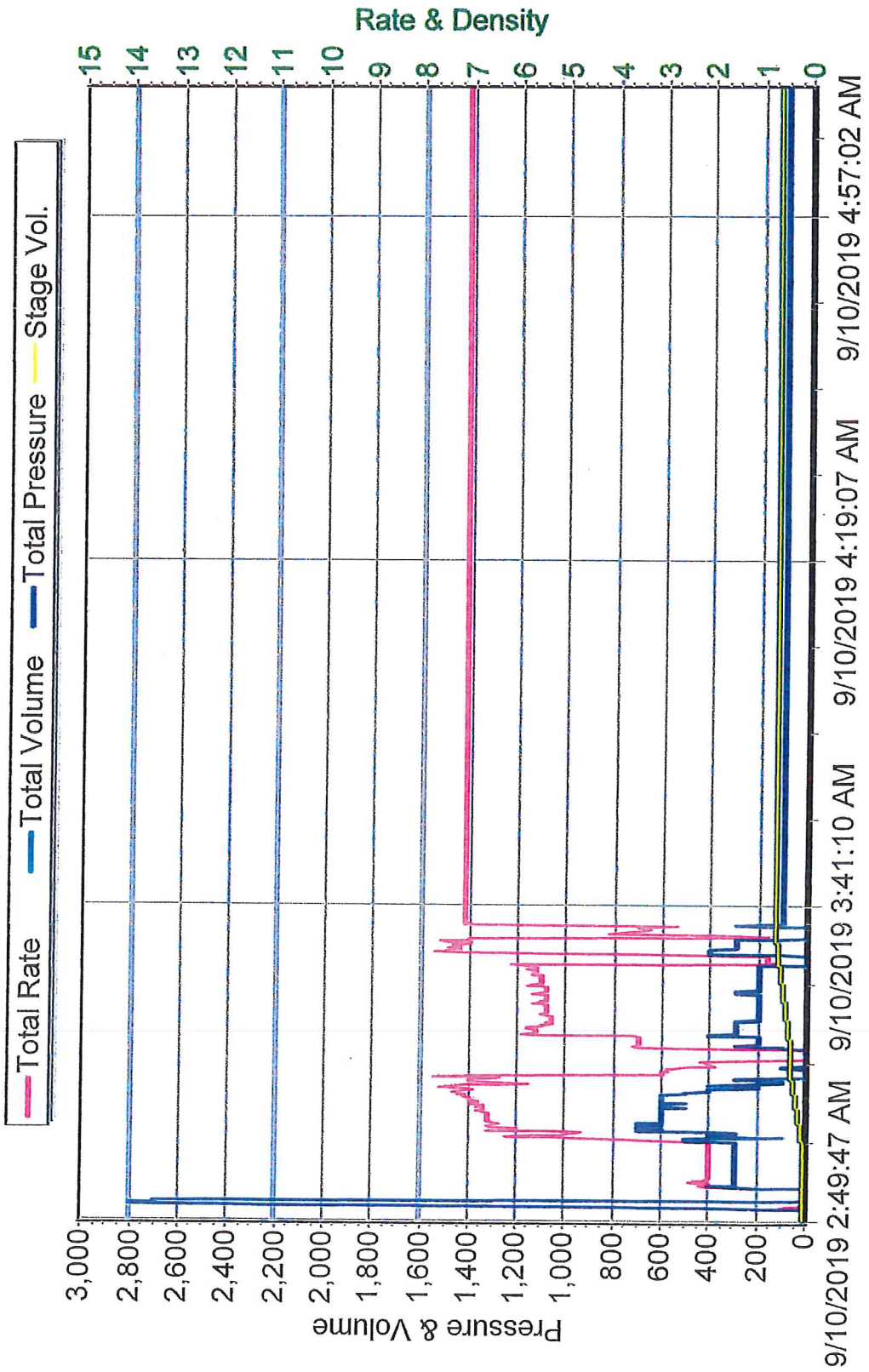
Lead/Tail:	Weight #1 Gal.	Yield	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.6	1.89	10.29	793.8	TT Man Hours:	118
Tail:	14.8	1.51	6.65	75.5	# of Men on Job:	4

Time (am/pm)	BPM	Volume (BBLS)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
							Start Pumping 2nd Stage
							Safety meeting
9:07am	3	16.8				zero	Pump 16.8bbbs from 50sks for rat and mose Hole at 12.6lbs
9:19am	7	141.3				300	Pump 141.3bbbs of lead from 420sksk at 12.6lbs
9:41am	7	13.4				300	Pump 13.4bbbs of tail from 50sks at 14.8lbs
9:45am							Shut down/Drop plug/Wash pump an lines
9:53am							Start Displacement of 76bbbs with fresh water
9:57am	8	20				400	20bbbs gone
9:59am	8	40				700	40bbbs gone
10:02am	7	60				1000	60bbbs gone
10:03am	4	66				900	66bbbs gone/Slow down rate
10:06am	2	76				1820	Bump plug/Hold for 3 minutes
10:09am							Release pressure to check if float holds
							Rig down
							Job completed
							Thanked company man and rig crew

Size Hole	7 7/8	Depth	5750		TYPE	DV Tool	
Size & Wt. Csg.	5 1/2 15.5#	Depth	5750	New / Used	DV Tool	3205	Depth
Landing psi	1000+	Depth	0		Retainer		Depth
Top Plugs		Type			Perfs		CIBP

Customer Signature:		Basic Representative:	Victor A. Corona
		Basic Signature:	
		Date of Service:	9/10/2019

Berexco LLC
Arroyo 22-6/1st stage
5 1/2 Production
9/10/2019





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

Well Name: Arroyo Unit # 22-6
Well Id:
Location: Sec 22 T29S R41, STANTON County, Kansas
License Number: 15-187-21344-00
Spud Date: Aug. 23, 2019
Surface Coordinates: 1440' Fnl & 1440' Fwl
Region: ARROYO
Drilling Completed: Sept. 08, 2019

Bottom Hole
Coordinates:
Ground Elevation (ft): 3385' K.B. Elevation (ft): 3397'
Logged Interval (ft): 3500' To: 5750' Total Depth (ft): 5750'
Formation: Morrow Chester
Type of Drilling Fluid: Natural Chemical

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

OPERATOR

Company: BEREXCO LLC
Address: 2020 N. BRAMBLEWOOD
WICHITA, KANSAS 67206
CO.ENG.: MR. EVAN MAYHEW

GEOLOGIST

Name: Edwin W. Grieves
Company: Grieves and Company
Address: PO Box 3125
Edmond, Oklahoma 73083-3125

CIRC POINTS

CIRC POINTS

1. 4350' 2. 4754' BIT TRIP 3. 5040' 4. 5400' 5. 5430'
6. 5450' 7. 5460' 8. 5470' 9. 5486' 10. 5506' 11. 5530'
12. 5560' 13 5750'

Daily Drilling Progress

Daily 7 AM Depths Reports

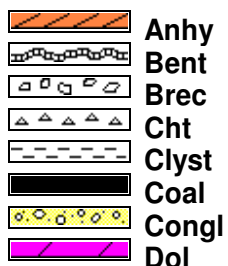
1. 8-29-2019 2765' DRILLING
2. 8-30-2019 3152' STUCK
3. 8-31-2019 3269' DRILLING
4. 9-01-2019 3785' DRILLING
5. 9-02-2019 4175' DRILLING
6. 9-03-2019 4453' DRILLING
7. 9-04-2019 4754' BIT TRIP
8. 9-05-2019 4972' DRILLING
9. 9-06-2019 5350' DRILLING
10. 9-07-2019 5470' BIT TRIP
11. 9-08-2019 5635' DRILLING

DATE	DEPTH	WT	VIS	PV	YP	GS	PH	WL	CAKE	CHLDR	CALCIUM	LCM
29-Aug	2779	9.2	34	4	8	3 18	7	N/C	-	2000	HVY	1
30-Aug	3170	9.3	31	-	-	-	7	N/C	-	900	HVY	1
30-Aug	3238	9.3	33	-	-	-	7	N/C	-	800	HVY	3
31-Aug	3269	9.1	35	4	8	3 18	7	N/C	-	800	HVY	1
1-Sep	3806	8.8	45	15	14	12 32	11	7.2	1	500	20	3
2-Sep	4208	9.1	59	17	21	14 38	11	7.2	1	500	20	6
3-Sep	4486	9.3	64	18	22	14 39	10	7.2	1	600	20	10
4-Sep	4754	9.5	73	18	22	15 38	10	7.2	2	1000	20	6
5-Sep	4992	9.2	64	18	19	17 40	9.5	6.8	1	1000	30	8
6-Sep	5370	9.2	57	17	21	14 39	9.5	8	1	800	40	12
7-Sep	5471	9.3	51	16	19	14 36	10	8	1	800	40	10
8-Sep	5648	9.3	61	18	22	15 41	10	7.2	1	800	40	10

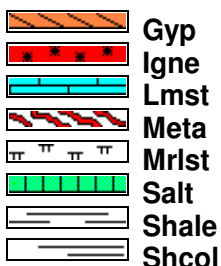
Formation Tops

	SAMPLE	E- LOG TOPS
HEEBNER		
BS. HEEBNER	3643' -246'	3650' -253'
TORONTO	3663' -266'	3668' -271'
LANSING	3706' -309'	3718' -321'
KANSAS CITY "A"	4116' -729'	4132' -735'
BKC	4274' -877'	4276' -879'
MARMATON	4306' -909'	4312' -915'
PAWNEE	4462' -1065'	4464' -1067'
FT. SCOTT	4481' -1084'	4484' -1087'
CHEROKEE	4502' -1105'	4502' -1105'
ATOKA	4706' -1309'	4706' -1309'
MORROW FM.	4979' -1582'	4982' -1585'
MID MORROW	5308' -1911'	
ST. GEN.	5531' -2134'	5522' -2125'
ST. LOUIS	5556' -2159'	5556' -2159'
ST. LOUIS "C"	5601' -2204'	
RTD	5750'	5740'

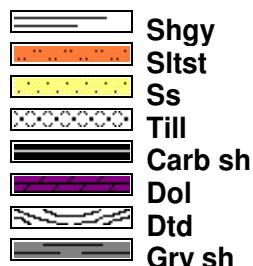
ROCK TYPES



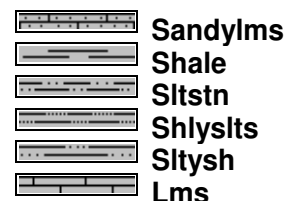
Anhy
Bent
Brec
Cht
Clyst
Coal
Congl
Dol



Gyp
Igne
Lmst
Meta
Mrlst
Salt
Shale
Shcol



Shgy
Sltst
Ss
Till
Carb sh
Dol
Dtd
Gry sh



Sandylms
Shale
Sltstn
Shlyslts
Sitysh
Lms

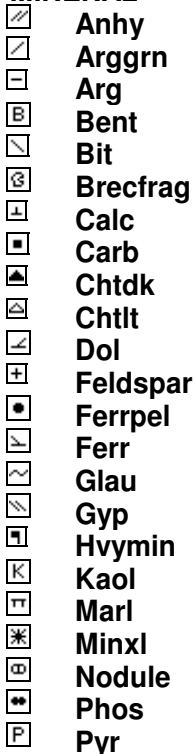
ACCESSORIES

FOSSIL



Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom
Fuss
Oomold

MINERAL

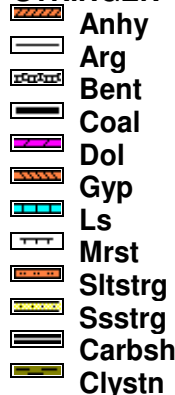


Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr



Salt
Sandy
Silt
Sil
Sulphur
Tuff
Chlorite
Dol
Sand
Sltly

STRINGER

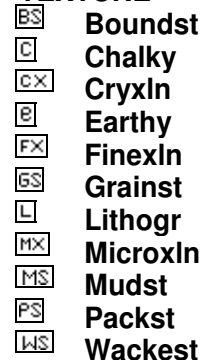


Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Sltstrg
Ssstrg
Carbsh
Clystn



Dol
Grysh
Gryslt
Lms
Sandylms
Sh
Sltstn

TEXTURE



Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OTHER SYMBOLS

INTERVALS



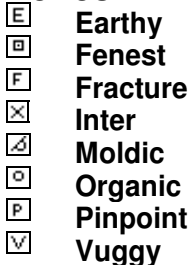
Core
Dst
Dst

EVENTS



Rft
Sidewall

POROSITY TYPE



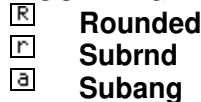
Earthy
Fenest
Fracture
Inter
Moldic
Organic
Pinpoint
Vuggy

SORTING



Well
Moderate
Poor

ROUNDING



Rounded
Subrnd
Subang

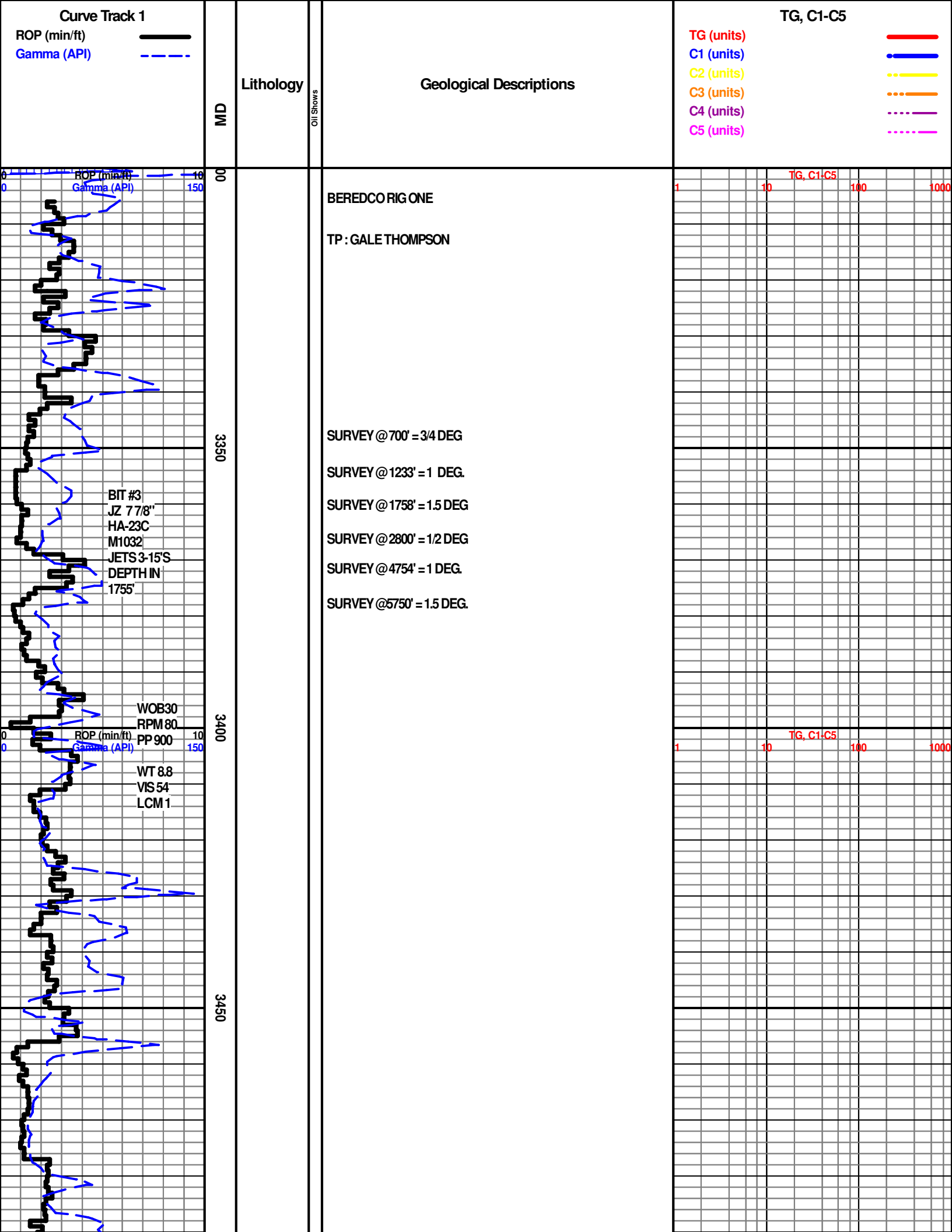


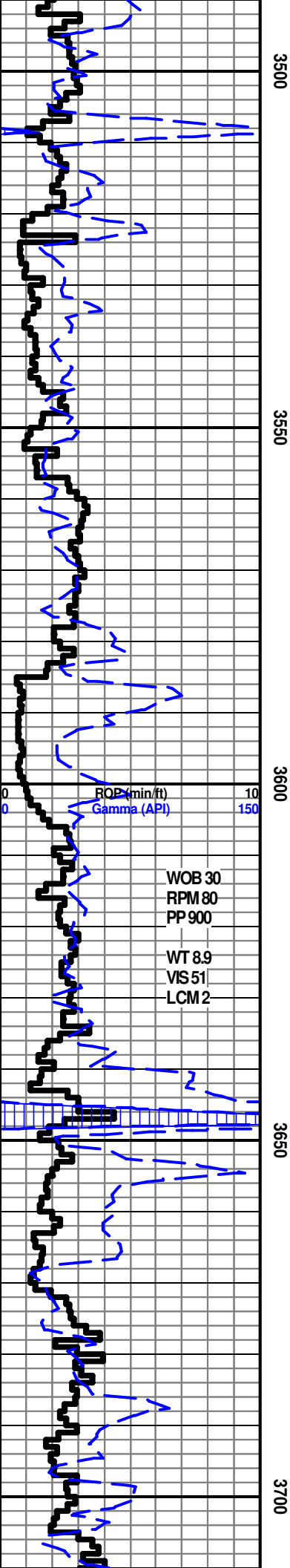
Angular

OIL SHOWS



Even
Spotted
Ques
Dead
Gas show





START SAMPLES @ 3500'

3500-3556' LS- GRAY TO GRYSH TAN, SHLY IP, CRYPTO-V/V/FN-XLN, SUB SUCRO TO SUCRO AND PCKSTN, DLL YEL SLUOR IP, ABDT POOR MICRO PPOR IP'S

3556'-3585' LS- LT TO MED GRY-SHLY, CRYPTO-V/V/FN-XLN, SUB SUCRO AND PCKSTN GRADING TO SH & MED TO DK GRY, NO FLUOR, NO VIS POR

3585-3606' LS- LS- LT GRY TO GRYSH TAN, V/V/FN-XLN, SUB SUCRO TO V/ SUCRO, DLL YEL FLUOR, NO CUT ABDT PR TO FR MICRO PP POR & INTER-XLN POR

3606-3636' LS-LT GRY TO GRYSH TAN, CRYPTO-XLN TO PCKSTN TO SUB LITHO, TRS DLL YEL FLUOR, NO CUT , NO VIS POR

BASE HEEBNER 3643' -246'

SH- BLK SFT CARB

3643-3648' LS-LT GRY TO GRYSH TAN, CRYPTO-XLN TO PCKSTN TO SUB LITHO, TRS DLL YEL FLUOR, NO CUT , NO VIS POR

3648-3663' SH- LT GRY TO LT GREEN, SOFT MUSHY WHEN WET

TORONTO 3663' -266'

3663'-3672' LS- LT GRY TO TANISH GRY, V/V/FN-XLN, SUB SUCRO TO SUCRO, DLL YEL TO YEL FLUOR, NO CUT, ABDT PR FR TO TRS GD MICRO PP POR TO INTER-XLN POR

3672' 3687' LS-TANISH GRY -CRYPTO-XLN PCKSTN NO SHOW

3687-3705' SH- MED TO DK GRY-V/ TO EXTREMELY CALC GRADING SHLY LMS, V/DK GRY TO BLK

LANSING 3706' - 309'

STARTED GAS AFTER DISPLACE DUE TO OIL IN MUD SYSTEM

CHROMAT OFF DUE TO HEAVIES

100 U. SH GAS

42 U.

ERRATIC BG W/ HEAVIES



CN

CN

CN

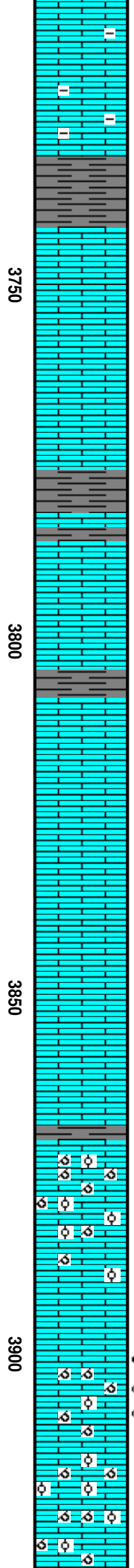
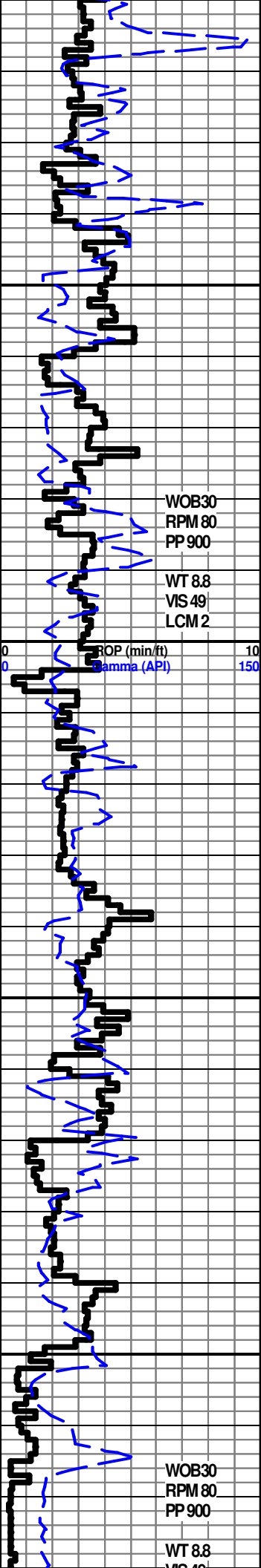
CN

CN

CN

3500
3550
3600
3650
3700

WOB 30
RPM 80
PP 900
WT 8.9
VIS 51
LCM 2



3705'-3733' LS- MED TO DRK GY, CRYPTO-XLN, SLITO V/ SHLY PCKSTN , NO VIS SHOW

3733'-3742' SH- MED TO DK GRY-V/ TO EXTREMLYCALC GRADING SHLY LMS, V/DK GRY

3742'- 3760' LS- GRYSIHTAN TO TAN, CRYPTO-XLN TO TRS SUB SUCRO, PCKSTN, NO VIS SHOW

3760'-3767' LS- LT GRY V/V/FN-XLN, SUB SUCRO TO SUCRO, DLL YEL FLUOR, NO CUT, ABDT PR TO FR TO GOOD MICRO PP & POSS INTER-XLN POR

3767'- 3775' LS- GRYSIHTAN TO TAN, CRYPTO-XLN TO TRS SUB SUCRO, PCKSTN, NO VIS SHOW

3775'-3785' SH MED TO DK GRY-V/TO EXTREMLY,GRDING TO SHLY LSTNS

3885-3804' LS- GRYSIHTAN TO TAN, CRYPTO-XLN, PCKSTN, NO VIS SHOW

3804'-3807' SH- MED TO V/ DK GRY- CALC

3807'-3834' LS- TRS MED GRY TO SHLY & TAN TO GRYISH TAN CRYPTO-V/V/F-XLN, SUB CHLKY, SUB SUCRO & PCKSTN, DLL LT YEL FLUOR , NO CUT NO POR

3834'- 3844' LS- MED GRY TO SHLY & TAN , CRYPTO-XLN, PCKSTN TO SUBLITHO , NS

3844'- 3852' LS- LT GRY TO TAN, CRYPTO-V/V/FN-XLN , SUB SUCRO TO SUCRO & PCKSTN, DLL LT YEL FLUOR, NO CUT, ABDT PR FR MICRO PP TO INTER-XLN POR

3852'-3858' LS- LT TO MED GRY , CRYPTO TO V/V/FN-XLN, SUB SUCRO & PCKSTN, NO SHOW ,NO POR

3858-3861 -SIMILAR TO 3877-3889'

3861-3870' LS SIMILAR TO 3852' -3858'

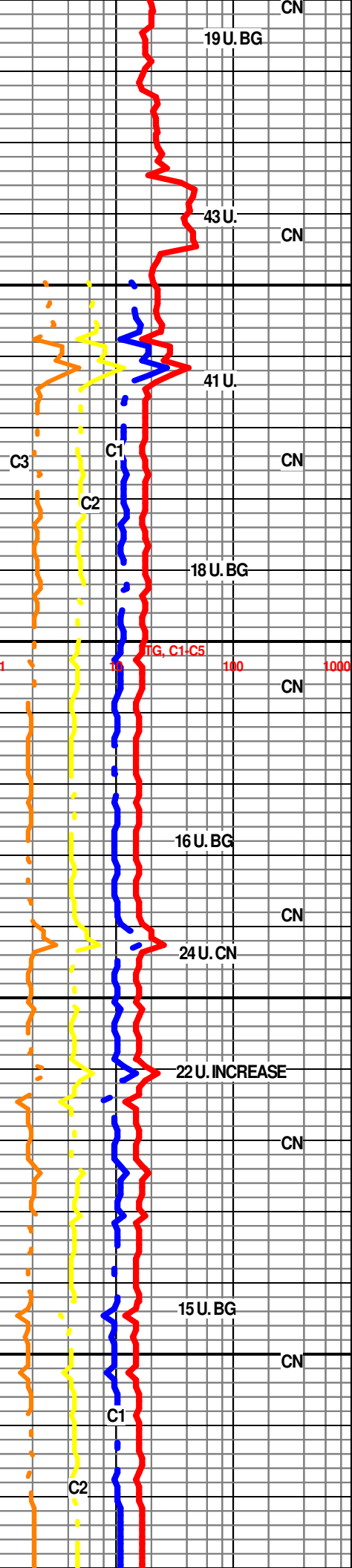
LANSING "E" 3870' -473'

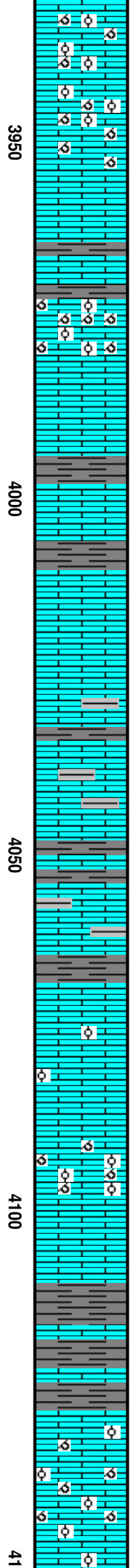
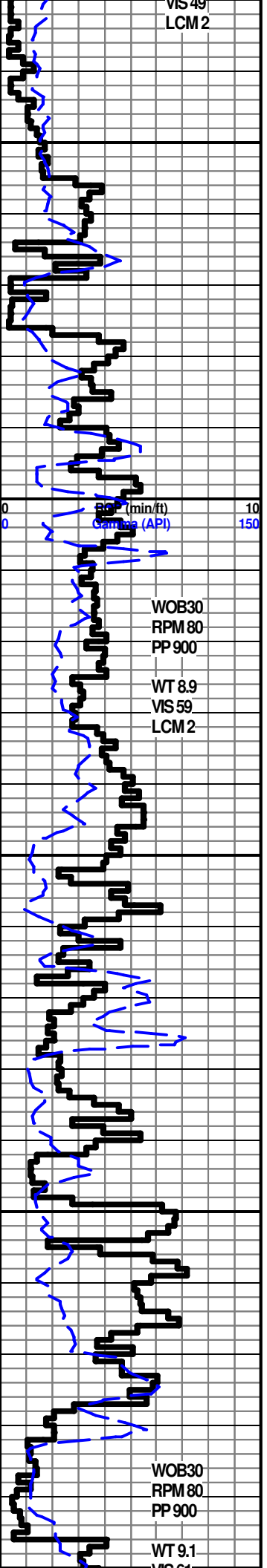
3870-3889' LS- EXTRMY ABDT WHT TO CRM CHLK ,TANTO GRYISH TAN CRYPTO-V/V/FN-XL, V/ OOLICASTIC TO V/ OOLITIC MTRX, SUB SUCRO, DLL YEL FLUOR, NO CUT, V/ ABDT PR GD TO EXCEL OOLICSTIC MICRO PP POR, BECOMING LESS OOLICAST

LANSING "F" 3899' -502'

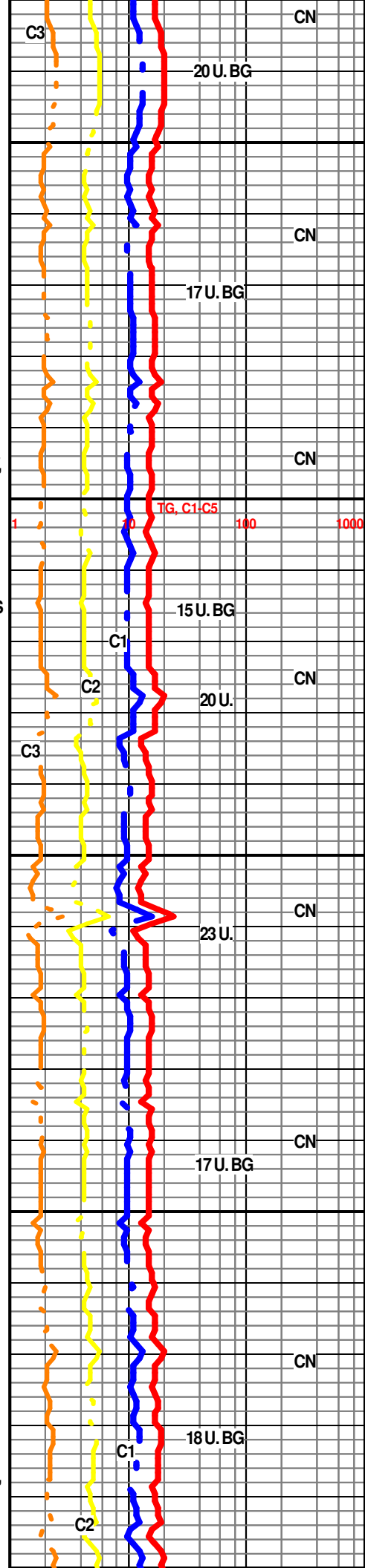
3899' -3910' TOP TEN' LS- HVY TRS SPOTTD BRN TO EVEN OIL STN, EXTRMLY OOLICSTIC TO EXTREMLY OOLITIC, TRS WHT TO CRM CHLK, GLDN YEL FLUOR, FLSHTO GD STRM CUTS IP, ABDT PR FR TO EXCEL OOLICASTIC POR, QUEST PERM

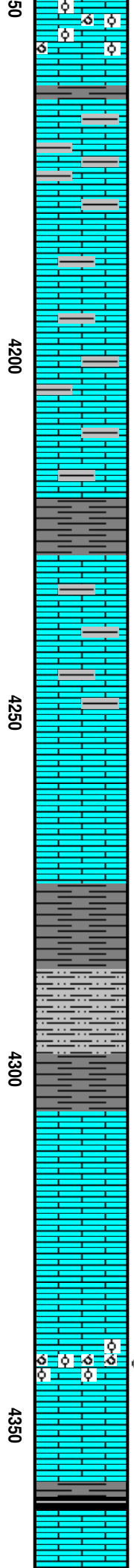
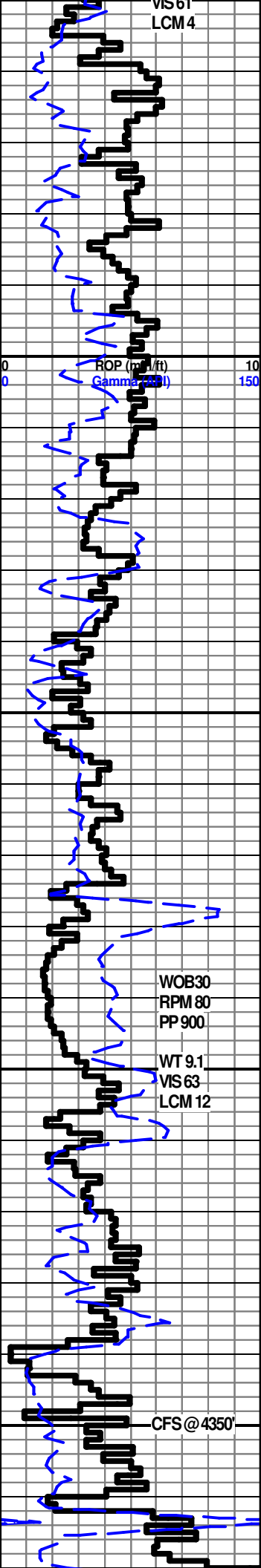
3910'-3955' LS- EXTREMLY OOLICASTIC TO EXTREMLY OOLITIC, UNY TRM TO CRM CHLK, SUB SUCRO PCKSTN, YEL TO





HVY TRS WHI TO CRM CHLK, SUB SUCRO PCKSTN, YEL TO GLDN YEL FLUOR, NO CUT, V ABDT PR FR TO EXCEL OOLICASTIC POR, QUEST PERM
 3955-3964' LS-LR GRY TO TAN, CRTYPTO-XLN, PCKSTN, NO VIS POR, NO SHOW
 3964'-3966' LS-SIMILAR TO 3899'3955'
 3966'-3969' LS-SIMILAR TO 3955'-3964'
LANSING "G" 3964' -567'
 3964-3977' LS SIMILAR TO 3910'- 3955' NS
 3977- 3997' LS- TAN TO LT MED GRY-SHLY, CRYPTO-XLN, PCKSTN SUB LITHO, GRDNG IP'S TO CALC SHALES NO SHOW, NO VIS POR
LANSING "H" 3997' -600'
 3997-4007- LS- TAN ,CRYPTO-XLN , PCKSTN TO SUB LITHO, NS
 4007-4052' LS- LT TO MED GRY- SLI TO EXTRMLY SHLY GRADING TO CALC SHALES, TAN CRYPTO-XLN PCKSTN SUB LITHO, NS
 4052-4071' SH- MED TO DK GRY, V/ TO EXTEMLY CALC GRADING TO SHLY LIMES
LANSING "I" 4071' -674'
 4071- 4084' LS- GRYSHTAN TO TAN, CRYPTO-VV/FN-XLN, PHANTOM OOLITES, SUB SUCRO TO SUCTRO, DLL YEL FLUOR, NO CUT, ABDT PR TO FR MICRO PP & INTER-XLN POR, NS
 4084-4092' LS- LT TO MED GRY, CRYPTO-XLN, PCKSTN TO SUB LITHOGRAPHIC, NS
 4092-4099' LS TAN ,CRYPTO-VV/FN-XLN, OOLICASTIC & OR OOLITIC MTRX, SUB SUCRO, NO SHOW, GD TO EXCEL OOLICASTIC POR
 4099-4109' LS LT GRY TO TAN CRYPTO-XLN PCKSTN SUB LITHO, NO SHOW
KANSAS CITY "A" 4116' -729'
 4109-4127' SH MED TO DK GRY W/ INTERBED LS LT GRY CRYPTO-XLN PCKSTN TR SUB LTHO, NO SHOW NO POR
 4127-4246' LS GRYTAN, V/ OOLICASTIC & OR V/ OOLITIC MTRX, SUB SUCRO TR PCKSTN, DLL YEL FLUOR, NO CUT, ABDT PR TO GD EXCEL OOLICASTIC POR, PROB NO PERM





4146-4263' LS SIMILAR TO 4127-4146 W/ DECREASE IN OOLICASTIC INCREASE IN BIG OOLITES, ABDT PR TO FR OOLICASTIC POR, NO SHOW

4163-4164' SH - V/ DK GRY

KANSAS CITY "B" 4164' - 767'

4164'-4220' LS- LT TO MED DK GRY- SLI TO EXTRMLY SHLY, GRDNG TO CALC SHALES GRY & TAN, PCKSTNT TO SUB LITHO, NO POR, NS

4220-4228' SH- MED TO V/ DK GRY, SLI TO V/ CALC

KANSAS CITY "C" 4228' - 831'

4228' - 4256' LS- LT TO MED DK GRY- SLI TO EXTRMLY SHLY, GRDNG TO CALC SHALES GRY & TAN, PCKSTNT TO SUB LITHO, NO POR, NS

4256-4274' LS- GRYSHTAN TO TAN, CRYPTO-XLN TO PCKSTN & SUB LITHO, DLL YEL MIN FLO, NO VIS POR, NO SHOW

BKC 4274' - 877'

4274-4286' SH- MED TO V/ DK GRY VERY TO EXTRMLY CALC GRADING TO SHLY LIMES

4286-4298' SILTST- LT GRY CLAY FILLED SLI TO FRLY CALC, NO VIS POR

4298' - 4306' SH- SH- MED TO V/ DK GRY VERY TO EXTRMLY CALC GRADING TO SHLY LS

MARMATON 4306' - 909'

4306' - 4338' LS- TRS WHT TO CRM- CHLK & LT GRY TO TAN CRYPTO-XLN, PCKSTN TO SUB LITHO, NO POR, NS

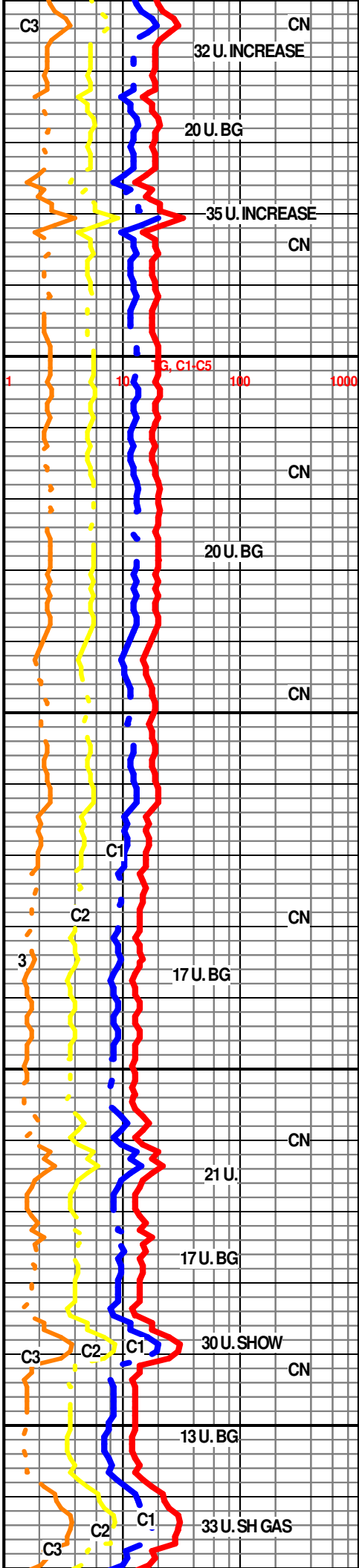
MARMATON "B" 4338' - 941'

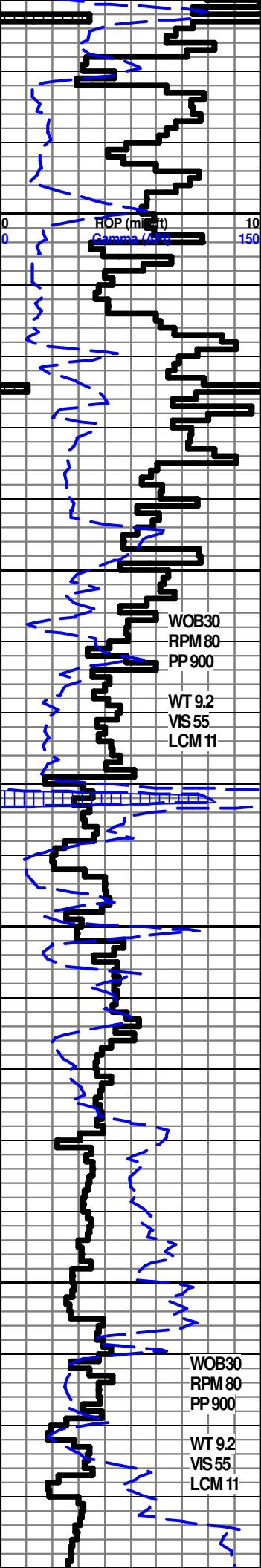
4338'-4344' LS- TAN TO GRYSHTAN W/ SPTTD DK TAN OIL STN, V/ OOLICASTIC & OR V/ OOLITIC MTRX, SUB SUCRO & PCKSTN, DLL GLD TO GLDN YEL FLUOR, FAINT STRM CUTS, ABDT PR TO EXCEL POR, QUEST PERM

4344' - 4359' LS- LT GRY TO TAN, CRYPTO-XLN PCKSTN TO SUB LITHO, NO VIS POR, NO SHOW

4359-4362' SH- BLK SFT CARB

4362' 4369' LS- LT GRY TO TAN, CRYPTO-XLN TO PCKSTN TO SUB LITHO, NO VIS POR, NO SHOW





SUB LITHO, NO VIS POR, NS

4369' 4378' LS- LT GRY TO TAN , CRYPTO-XLN TO PCKSTN W/
ABDT SHALE INCLUSIONS V/DK GY, NO SHOW

4378-4382' SH- MED TO V/DK GY

4382' - 4417' LS- GRYISH TO TAN , CRYPTO-XLN PCKSTN SUB
LITHO, TRS CHERT GRY TAN OPQUE, NO VIS POR, NO VIS
SHOW

SH- MED TO DK GRY CALC IP TO BLK SFT CARB

4424' - 4462' LS- MED TO DK GRY V/ SHLY TAN
CRYPTO-V/FN-XLN SUB SUCRO SUB LITHO TRS GRY TAN
CHERT, THIN INTERBEDS SH LT TO MED GRY, NO VIS POR, NO
VIS SHOW

PAWNEE 4462' -1065'

4462'-4479' LS- CRM TO TAN, CRYPTO- VV/FN-XLN, TRS SUB
CHLK TO SUB SUCRO, PCKSTN & SUB LITHO. TRS LT GRY TO
OPQUE CHERT, NO SHOW

4479-4481' SH- BLK SFT CARB

FT.SCOTT 4481' - 1084'

4481-4498' LS RS WHT TO CRM CHLK TO LT GRY TO TAN
CRYPTO-VV/FN-XLN .SUB SUCRO & PCKSTN TRS TAN OPQUE
CHERT, HVY TR PR TO FR MICRO PP & INTER-XLN POR, NS

4498-4502' SH- V/ DK GRY TO BLK SFT CARB

4502-4512' LS- LT TO MED GRY TAN, CRYPTO-VV/FN-XLN, TRS
OOLITIC, SUB SUCRO, TRS LT GRY OPQUE CHERT, NS

CHEROKEE 4502' -1105'

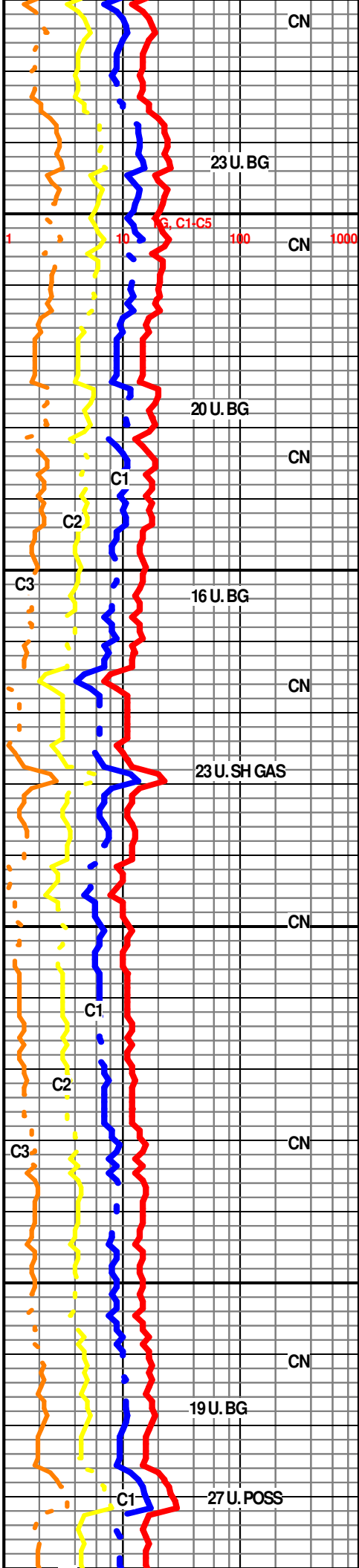
4512-4529' LS- LT GRY TAN TO MED GRY, SIL TO EXTRMLY SHLY
OR SILTY GRDNG TO CALC SILTST, NS

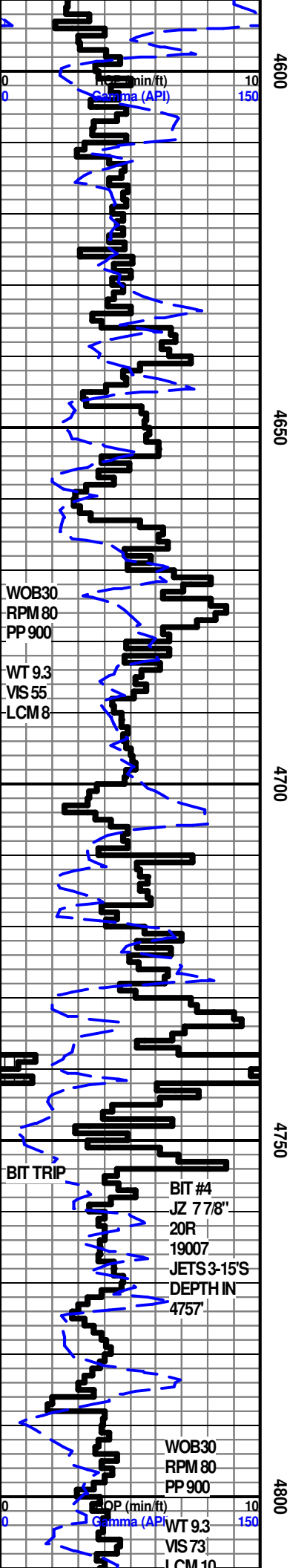
4529-4554' SH- MED TO DK GRY GRDNG TO SHLY LS

4554'- 4569' LS- GRYISH TAN TO TAN, CRYPTO-VV/FN-XLN,
PCKSTN TO SUB LITHO, TRS OOLITES, NO VIS POR, NS

4569'-4580' LS- LT TO MED GRY TAN, CRYPTO-XLN SUB SUCRO
PCKSTN SUB LITHO, TRS OOLITES DLL YEL FLUOR, NO CUT,
TRS PR MICRO PP POR, NS

4580-4592' SH- BLK SFT CARB LOOKING





4592'-4632' LS- INTERBED & GRADATIONAL, MED TO V/DK GRY, V/ TO EXTREMELY SHLY TO CALC SHALES, SILTY IP NO VIS POR, NO VIS CUTS & LS- CRYPTO-V/V/FN-XLN SUB SUCRO SUB LITHO TR TO HVY TRS OOLITES DLL YEL FLUOR IP, NO CUTS, NO VIS POR, NS

4636' - 4700' LS- MED TO V/DK GY-CRYPTO-VV/FN-XLN SUBSUCRO PCKSTN, NO VIS POR, NS

2.LS- GRYSH TAN TO TAN CRYPTO-XLN SUB SUCRO PCK DTN, SUB LITH, NO VIS POR, NO VIS SHOW

3. SH- MED TO V/DK GRY SLI TO V/ CALC IP 7 SLI TO EXTRMLY SILTY IP GRADING TO SILTST, NS

4700-4706 SH- MED TO V/DK GRY TO BLK SFT CARB

ATOKA 4706' - 1309'

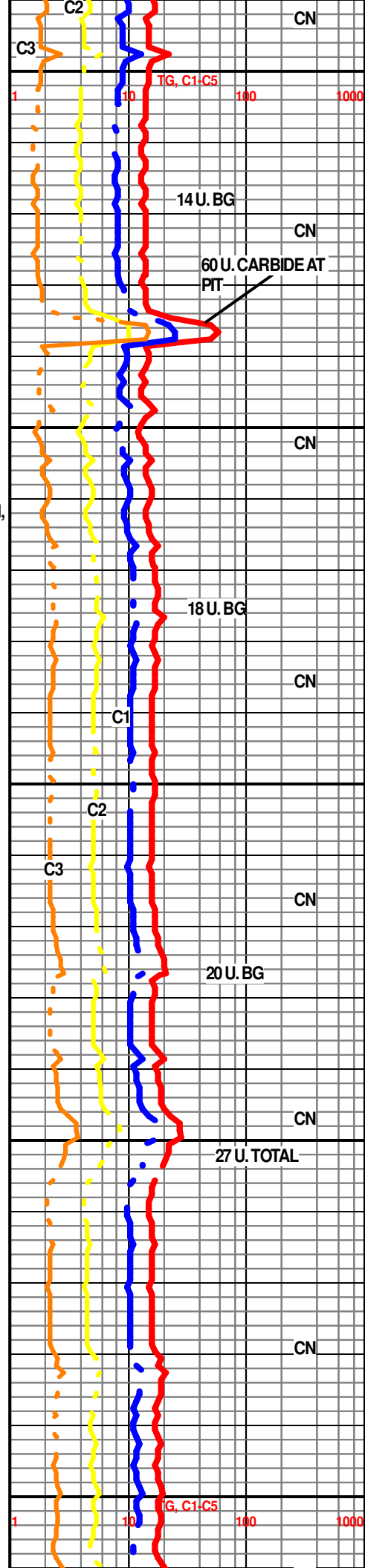
4706-4717 LS-GRYSHTAN -CRYPTO -XLN PCKSTN TO SUB LITHO, DLL YEL FLUOR, NO CUT , NO VIS POT, NS

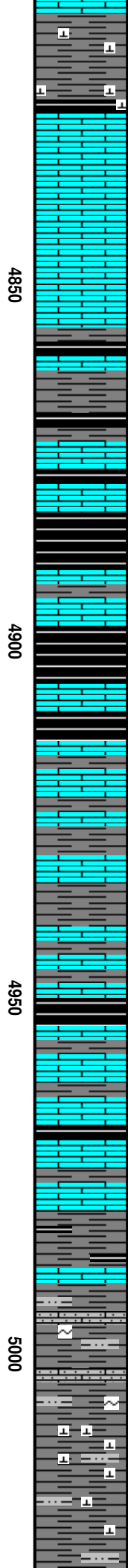
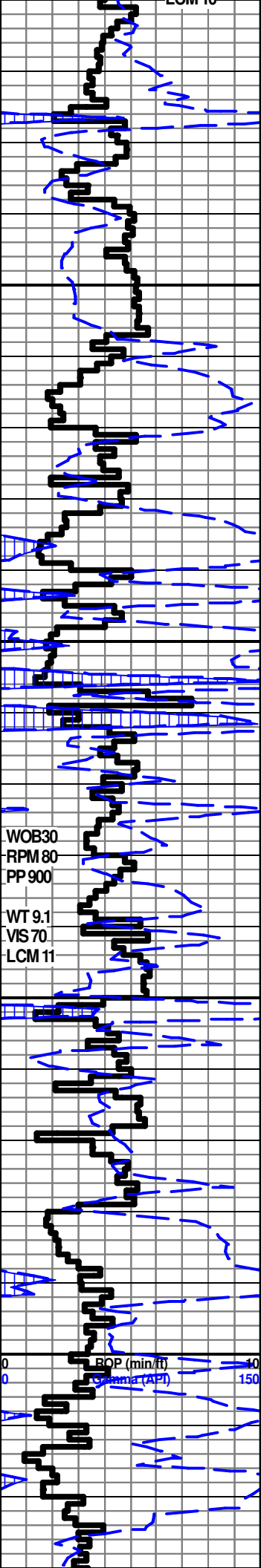
4717 - 4754'- LS- V/DK GRYSHTAN -CRYPTO -XLN PCKSTN TO SUB LITHO, DLL YEL FLUOR, NO CUT , NO VIS POT, NS- TRS CHERT TAN GRY OPQUE

4754'- 4782' LS- V/DK GRYCRYPTO-XLN PCKSTN TO SUB LITHO, TRS TAN OPQUE GRY CHERT , NO FLUOR, NO VIS POR, NO VIS SHOW

4782-4788' SH- MED TO V/DK GY CALC TO BLK SFT CARB

4788-4813 LS-LT GY-SHLY IP TO TAN, CRYPTO-VV/FN-XLN SUB SUCRO PCKSTN & LITHO, TRS OOLITIC, DLL YEL FLUOR, NO CUT , NO VIS POR, NS





4813-4827' SH- MED TO DK GRY V TO EXTRMLY CAL, GRDNG TO SHLY LS, DK GY TO BLK CARB

4827-4833' LS- SIMILAR TO 4838'-4857'

4833-4838' LS- GRYTAN W/ SPTTD BRN OIL STN, SUB SUCRO, SUCRO PCKSTN, CRYPTO-XLN, NO FLO TR PR MICRO PP POR, FAINT STRMNG CUTS

4857- 4870' SH - MED TO V/ DK GY TO BLKSFT CARB CALC IP

4770-4782' LS- LT TO V/ DK GY SLI TO EXTRMLY SHLY SUB CHLKY & SHLY PCKSTN TO CALC SHLES. NOPOR, NO VIS FLO OR CUT

4880-4907' SH- BLK SFT CARB TO MED TO DK GY CALC IP

4909-4912' SH- BLK SFT CARB

4912'-4950' LS- GRYISH TAN TO TAN CRYPTO-VV/FN-XLN TR SUB SUCRO PCKSTN TR SUB LITHO SLI TO EXTRMY SHLY IP, NO CUT, NO VIS POR, NS

4950-4953' SH- BLK SFT CARB

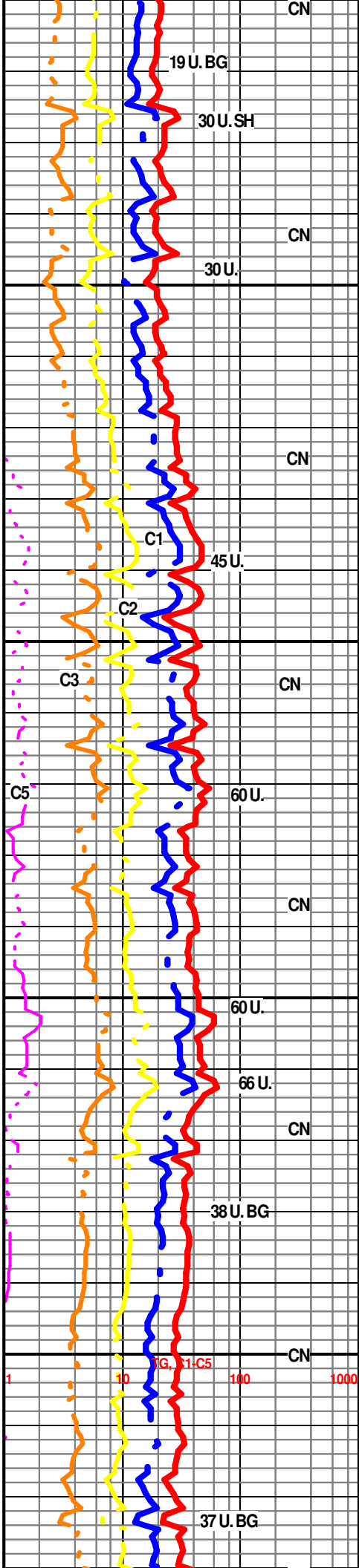
4953-4980' INTERBEDD LS- GRYISH TAN TO TAN CRYPTO-VV/FN-XLN TR SUB SUCRO PCKSTN TR SUB LITHO SLI TO EXTRMY SHLY IP, NO CUT, NO VIS POR, NS

MORROW 4979' -1582'

4979- 5006' INTERBEDD LS & SH SIMILAR TO 4953-4980' W/ TRS LT GY SUCRO TO CRYPTO-XLN TO V/ QRTZ SANDY & SILTY, TR GLAUC, LT YEL FLO, NO VIS POR, NS

5006-5034' SH- MED TO DK GRY, V/ TO EXTRMLY CALC & SLTI V/ SILTY IP

5034-5040' SH - MED TO V/ DK GRY, SLI TO FRLY CALC IP, SLI TR LT GREEN SH



WOB30
RPM 80
PP 900

WT 9.1
VIS 70
LCM 11

BOP (min/ft) 40
Gamma (API) 150

4850

4900

4950

5000

CN

CN

CN

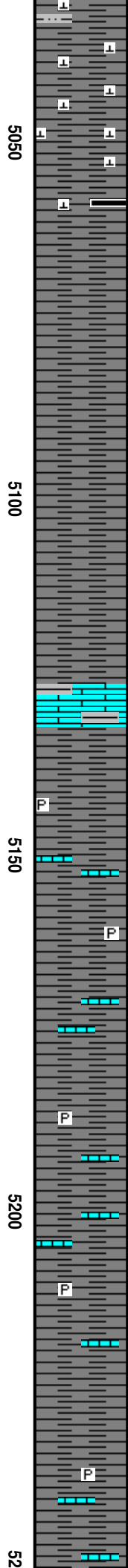
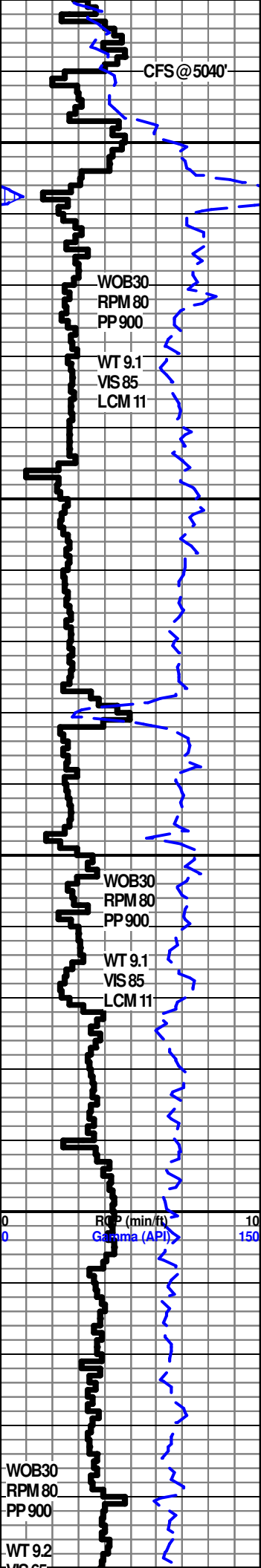
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LT GREEN SH

5040-5047' SH- V/DK GRY TO BLK CARB LOOKING

5047-5054' SH - MED TO V/ DK GRY, SLI TO FRLY CALC IP, SLI TR LT GREEN SH

5054-5057' SH- V/ DK GRY TO BLK SLI CALC

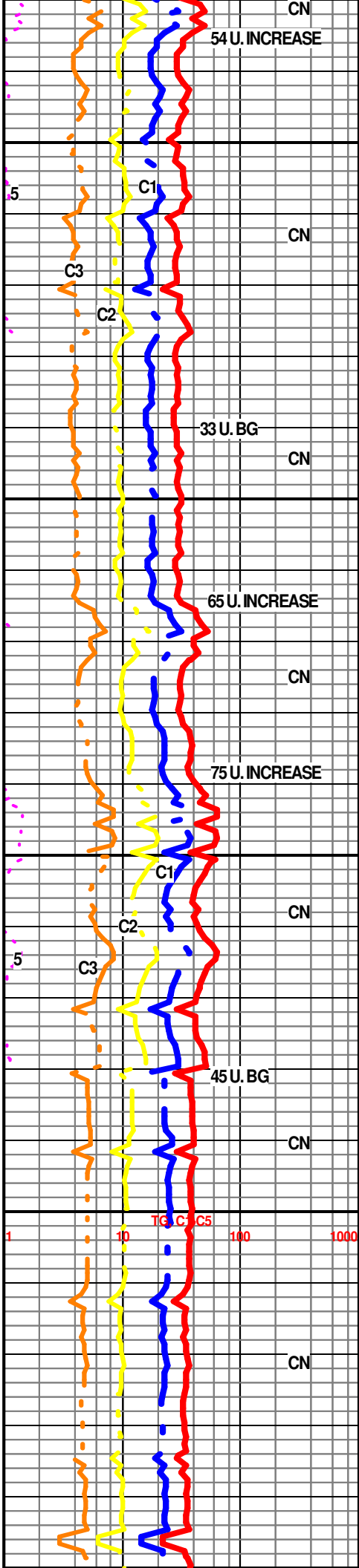
5057-5061' SH- V/ DK GRY TO BLK CALC IP, TR COAL

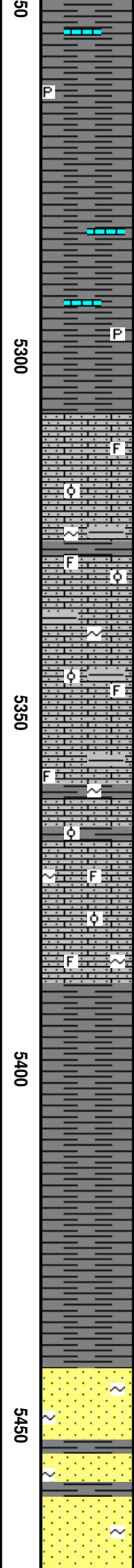
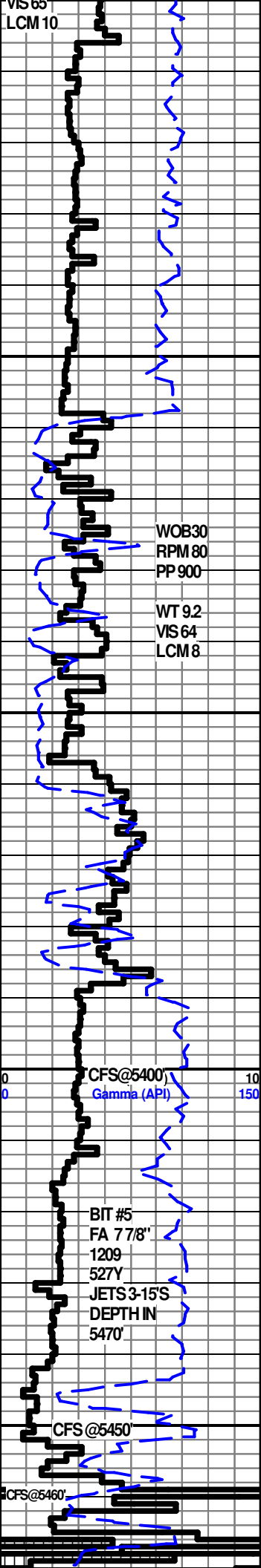
5061 - 5127' SH- MED TO V/ DK GRY TO BLK CARB LOOKING

5127- 5132' LS- FRGMNTD LT GRY TAN, SHLY, MOTTLED IP, VV/FN TO MED GRNS WELL CMNT, DLL YEL FLO, NO CUT , NO VIS POR, NS

5132-5256' SH- MED DK GRY- SFT W/ SILKY LSTER TO DK GRY SPLNTERY IP, TRS SCATTERED PYR, SCATTERED LAMINATIONS LS TAN CRYPTO-XLN SUB SUCRO, DLL YEL FLO, NO CUT, NO VIS POR, NS

5132-5256' SH- MED DK GRY- SFT W/ SILKY LSTER TO DK GRY SPLNTERY IP, TRS SCATTERED PYR, SCATTERED LAMINATIONS LS TAN CRYPTO-XLN SUB SUCRO, DLL YEL FLO, NO CUT, NO VIS POR, NS





5256' - 5308' SH- W/ LS LAMINATIONS SIMILAR TO 5132'-5236 W/ LESS MED GRY & MORE DK GRY TO V/ DK GRY

MID MORROW LS 5308' - 1911'

5308' - 5358' QURTZ & FRAGMENTED LS - 0-100% QURTZ GRAINS & LM GRAINS, QURTZ LT GRY V/VFN TO FN GRNS W/ TRS MED TO COARSE GRAINS ANG TO TR SUB RND, POOR SORT, / FRGMENTD LM V/FN TO COARSE W/ LM GRAINS & TR FOSS FRGS, TRS OOLITES, TR DLL YEL TO TO YEL FLO, W/ FAINT STRMING TO MILKY CUTS, NO VIS POR, W/ PROB INTERBED SH SCAT, TR SCAT GLAUC

5357-5388' QURTZ & FRGMNTD LS SIMILAR TO 5308' TO 5388' PREDOM FRAGMENTED LS

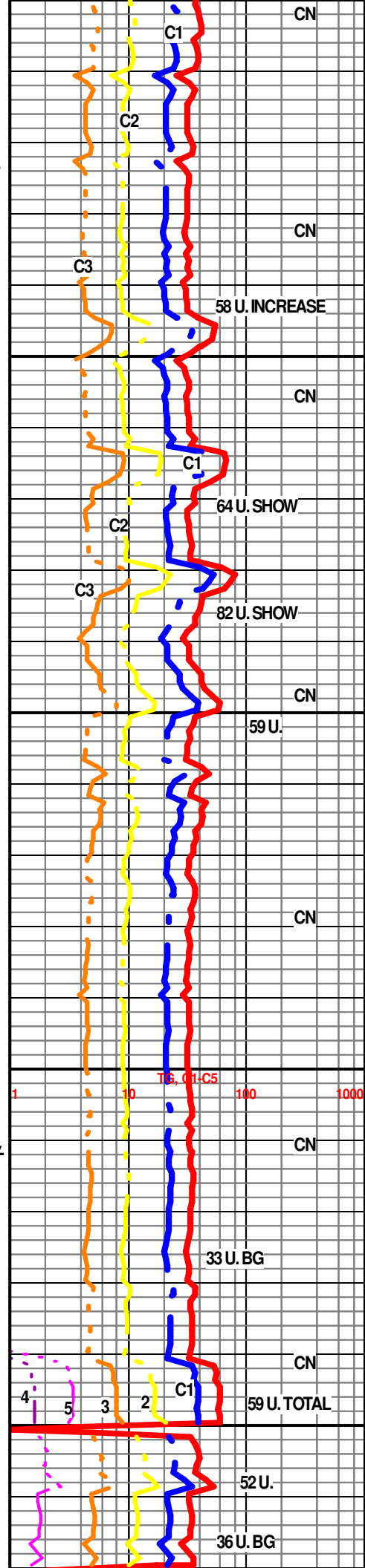
5388-5441' SH-MED GRYSFT SILKY LUSTER & DK TO V/DK GRY- HD SPLNTY

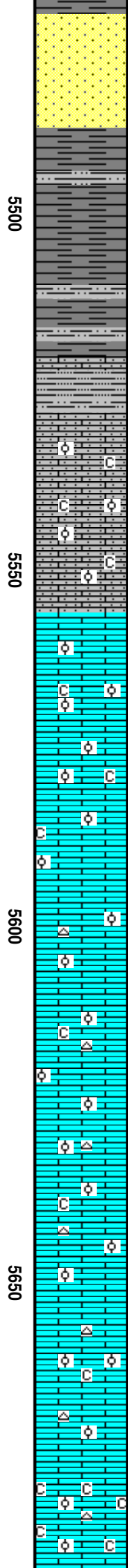
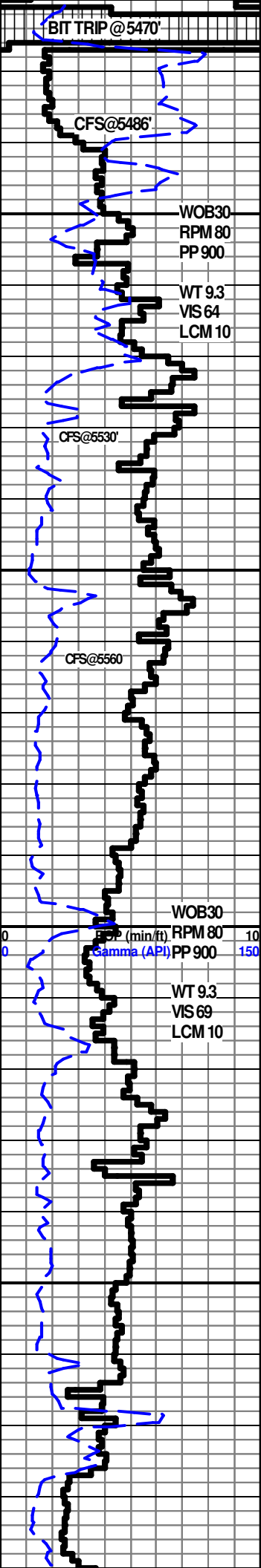
K "1" SAND 5442' - 2045'

5442' - 5458' SS-QURTZ LT GY TO LT GREEN, V/VFN-FN GRN, ANG, POOR SORT, ABDT LOOSE QURTZ GRAINS FN MED TO COARSE GRAINS, TR SUB RND, TRS GLAUC, CLR TO TR YEL FRSTY GRNS, ABDT PR TO FR INTER-GRN POR IN CLSTRS, GOOD STRM CUTS IN CLUSTERS

K "2" SAND 5458' - 2061'

5458- 5477' SS- QURTZ SIMILAR TO 5442- 5458, V/VFN TO FN





GRN W/ TRS MED COARSE, SIMILAR SHOW POOR VISIBL INTER-GRN POR, ABDT LOOSE QURTZ GRNS IN TRAY, TRS SUB RND GRNS IP

5477-5487' SS- QURTZ A BDT LOOSE GRAINS, VV/FN TO FN TRS MED GRAIN ANG TO V/WELL RND, POSS SH MED GRY SILKY LUSTER, DK GRY TO SPLNTRY, NO CUT

5587-5500' SH MED TO DK GY SILKY LUSTER IPTO V/ DK GRY, SPLNTRY TRS SILTST LT GRY LT GREEN CLAY FILLED

55500-5520' SH W/ TRS SILTST SIMILAR TO 5487-5500' SAMPLE ABOVE

5520-5531' LS- SIMILAR TO 5531-5556' W/ HVY TRS FN TO COARSE QURTZ GRNS, ANG TO WELL ROUNDED, CLR TO FRSTY, NS

ST. GEN 5531' - 2134'

5531-5556' LS- LT GY TO TAN, CRYPTO-VV/FN-XLN, EXTRMLY MICRO OOLITIC & SLI QURTZ SNDY, V/FN-GRN ANG, TR SUB CHLKY, DLL LT YEL FLO, NO CUT, NO VIS POR, NS

ST. LOUIS 5556' - 2159'

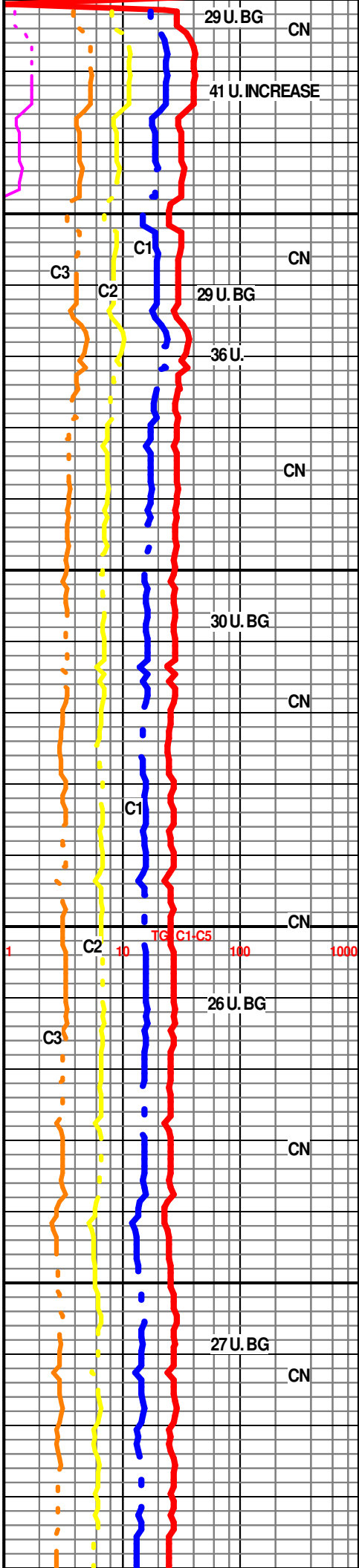
5556- 5689' LS- SLI TRS WHT CRM CHLK W/ CHLKY OOLITES IP, TAN GRY CRYPTO-VV/FN-XLN EXTRMLY OOLITIC, MICRO OOLITES TO MED OOLITES, SUB SUCRO, PCKSTN, DLL LT YEL FLO, NO CUT, NO VIS POR

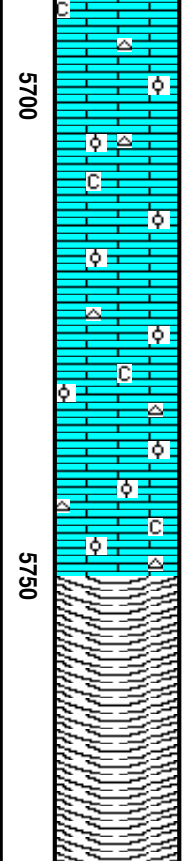
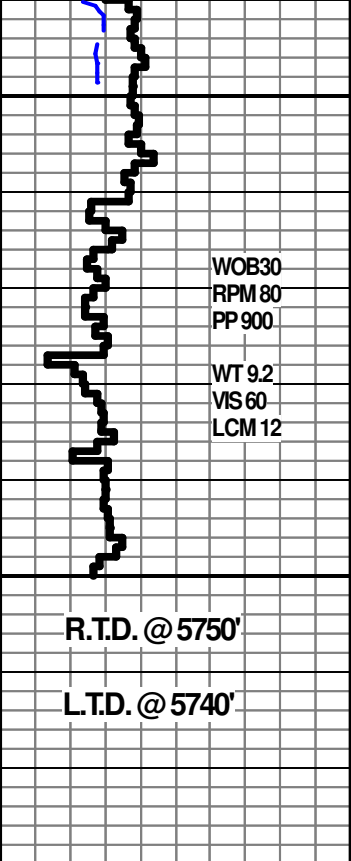
ST LOUIS "C" 5601' -2204'

5601-5616' LS- WHT TO CRM LT TN TN - V/ OOLITIC SMLL TO LRG OOLITES, FREE OOLITES, SUB SUCRO SUB CHLK, TR PCKSTN CRYPTO-XLN IP, TRS WHT TAN OPQUE CHRT, DLL LT YEL FLUOR, NO VIS POR, NO CUT

5616-5677' LS CRM TO TAN EXTREMELY OOLITIC MTRX, SUB SUCRO SUB CHLKY CRYPTO-VV/F-XLN, TRS CRM TN OPQUE CHERT, DLL LT YEL FLO, NO CUT, NO VS POR, NO VIS SHOW

5677' -5690' LS- EXTRMLY CHLKY WHT TO CRM W/ CHLK OOLITES IP'S, CRM TO TAN CRYPTO-VV/FN-XLN EXTRMLY OOLITIC, SM TO LRG, SUB CHLK, SUB SUCRO PCKSTN, DLL YEL FLO, NO CUT, EXCEL MICRO PPPOR, , NS, TRS TAN OPQUE





CHERT

5690-5711' LS- SIMILAR TO 5616-5687'

5711-5750' LS- ABDT WHT TO CRM CHLK W/ CHLKY OOLITES & TAN CRYPTO-VV/FN-XLN , EXTRMLY OOLITIC SMILL TO LRG OOLITES SUB CHLK SUB SUCRO , DLL YEL FLO, NO CUT , NO VIS POR, SLI TRS CHERT GRYPQQUE

R.T.D @ 2:30 PM SEPT. 08, 2019

CFS/ SHORT TRIP

CTCH/ DROP SURVEY

TOFL/ FINISH LOGGING AT 6:00AM SEPT. 9TH 2019

