



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1183536
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1183536

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	SAMPSON 3-4
Doc ID	1183536

Tops

Name	Top	Datum
Chase	2459	-230
Heebner Shale	4063	-1834
Toronto	4076	-1847
Lansing 'A'	4226	-1997
K.C. 'I'	4441	-2212
Base K.C.	4626	-2397
Marmaton	4668	-2439
Altamont	4681	-2452
Cherokee Shale	4754	-2525
Miss. Chert	4812	-2583
Kinderhook Shale	4890	-2661
Kinderhook Sand	4918	-2689



BASIC
ENERGY SERVICES

6076
771 Sampson (A)
9420

PAGE 1 of 1	INVOICE NO 1007589	INVOICE DATE 10/18/2013
INVOICE NUMBER 1718 - 91313577		

Pratt (620) 672-1201
HERMAN L LOEB LLC
PO Box: 838
LAWRENCEVILLE
IL US 62439
ATTN: ACCOUNTS PAYABLE

J LEASE NAME Sampson 3-4
O LOCATION
B COUNTY Kiowa
S STATE KS
I JOB DESCRIPTION Cement-New Well Casing/Pi
E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40652138	20920		Net - 30 days	11/17/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 10/15/2013 to 10/15/2013</i>				
0040652138				
171809083A Cement-New Well Casing/Pi 10/15/2013				
Cement 8 5/8 Surface				
A-Con Blend Common	175.00	EA	13.50	2,362.33 T
Common Cmeent	175.00	EA	12.00	2,099.86 T
Celloflake	88.00	EA	2.77	244.18 T
Calcium Chloride	825.00	EA	0.79	649.64 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	168.74	168.74
"8 5/8"" Guide Shoe (Red)"	1.00	EA	412.47	412.47
Flapper Type Insrt Float Vlave 8 5/8"(BI	1.00	EA	209.99	209.99
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.19	111.56
Heavy Equipment Mileage	70.00	MI	5.25	367.48
"Proppant & Bulk Del. Chgs., per ton mil	578.00	EA	1.20	693.55
Depth Charge; 501'-1000'	1.00	EA	899.94	899.94
Blending & Mixing Service Charge	350.00	BAG	1.05	367.48
Plug Container Util. Chg.	1.00	EA	187.49	187.49
"Service:Supervisor; first 8hrs on loc"	1.00	EA	131.24	131.24

PAID
44761
OCT 31 2013

SCANNED

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 TAX INVOICE TOTAL	8,905.95 382.95 9,288.90
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BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 00000 A

DATE _____ TICKET NO. _____

DATE OF JOB <i>10-15-13</i> DISTRICT <i>Pratt KS</i>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:								
CUSTOMER <i>Herman Lob</i>		LEASE <i>Simpson</i> <i>3-4</i>		WELL NO.						
ADDRESS		COUNTY <i>Nowa</i>		STATE <i>KS</i>						
CITY STATE		SERVICE CREW <i>Sullivan, Gray, Jacob</i>								
AUTHORIZED BY		JOB TYPE: <i>CNW 8 1/2 Surface</i>								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
<i>33718-20920</i>	<i>40 mi</i>						<i>10-15-13</i>			<i>5:00</i>
<i>19826-19860</i>	<i>40 mi</i>					ARRIVED AT JOB				<i>8:00</i>
<i>37900</i>						START OPERATION				<i>10:50</i>
						FINISH OPERATION				<i>11:30</i>
						RELEASED				<i>12:19</i>
						MILES FROM STATION TO WELL				<i>35</i>

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 101	A-Lead cont	SK	175		3,150.00
CP 100-C	Compens cont	SK	175		2,800.00
CC 102	colFAK	lb	EE		325.60
CC 109	Calcium chloride	lb	825		866.25
CF 105	TOP Rubber Plug 8 1/8	SA	1		225.00
CF 203	GumDC Plug	SA	1		550.00
CF 1453	Present float	SA	1		280.00
E 100	gumbo rd	mi	35		1487.50
E 101	Hd. cont	mi	20		490.00
E 113	Bulk Delivery	TM	578		924.00
CE 301	Capit Change 0-1000'	SA	1		1,200.00
CE 240	Blowdown-Mixing	SK	350		490.00
CE 504	Plug Cement 40-100'	SA	1		250.00
C 003	Chem Super	SA	1		175.00

SUB TOTAL *8,905.95*

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE <i>R. Sullivan</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____ (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
---	--

FIELD SERVICE ORDER NO. _____

BASIC

energy services, L.P.

TREATMENT REPORT

Customer HERMAN Loop	Lease No.	Date 10-15-13
Lease SAMPSON	Well # 3-4	
Field Order # 5083	Station	County KIOWA
Casing 8 1/2	Depth 610	State KS
Type Job CNW 8 1/2 Surface	Formation	Legal Description 4-28-18

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
8 1/2				Pre Pad		Max		5 Min.
Depth 610	Depth	From	To	Pad		Min		10 Min.
Volume 3.0	Volume	From	To	Frac		Avg		15 Min.
Max Press 300	Max Press	From	To			HHP Used		Annulus Pressure
Well Connection P.C.	Annulus Vol.	From	To	Flush		Gas Volume		Total Load
Plug Depth 560	Packer Depth	From	To					

Customer Representative	Station Manager DAVE SCOTT	Treater Robert Hill
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Service Units	37900	20970	19826	19860	37900				
Driver Names	GRUBBS	JACOBS		Callin					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:45					on loc. left unit
10:35					RUN 14 JTS 8 1/2 24 ccs
10:45					CASING ON BOTTOM
10:50			3	3	Hook up circ
			71	5	it down
	200		37		mix 175 K A.G. cont @ 12, 34 cc
					mix Tank 175 K A.G. cont @ 12, 34 cc
					cont mixed shot down
					Return Plug
				4.5	At Pump
11:30	400		36		plug down
					circ cont callon 8 P.C.
					JOB complete
					Thank you



6076
TII Sampson(A)
9/20

PAGE	CUST NO	INVOICE DATE
1 of 1	1007589	10/28/2013
INVOICE NUMBER		
1717 - 91320814		

Liberal (620) 624-2277
 B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O **ATTN:** ACCOUNTS PAYABLE

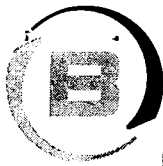
J **LEASE NAME** Sampson #3-4
 O **LOCATION**
 B **COUNTY** Kiowa
 S **STATE** KS
 I **JOB DESCRIPTION** Cement-New Well Casing/Pi
 E **JOB CONTACT**

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40655373	27462		Net - 30 days	11/27/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 10/25/2013 to 10/25/2013				
0040655373				
171704313A Cement-New Well Casing/Pi 10/25/2013 5 1/2" Longstring				
50/50 POZ	250.00	EA	8.25	2,062.50 T
Celloflake	63.00	EA	2.78	174.83 T
Gypsum	1,050.00	EA	0.56	590.63 T
FLA-322	105.00	EA	5.63	590.63 T
Gilsonite	1,500.00	EA	0.50	753.75 T
KCL	566.00	EA	1.13	636.75 T
"Latch Down Plug & Baffle, 5 1/2" (Blu	1.00	EA	300.00	300.00
"Auto Fill Float Shoe 5 1/2" (Blue)"	1.00	EA	270.00	270.00
"Turbolizer, 5 1/2" (Blue)"	12.00	EA	82.50	990.00
"Cement Basket, 5 1/2"	2.00	EA	217.50	435.00
"Cmt Scratchers Cable Type, 5 1/2"	10.00	EA	56.25	562.50
CC-1	6.00	EA	33.00	198.00 T
Mud Flush	1,000.00	EA	0.65	645.00 T
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.19	111.56
Heavy Equipment Mileage	70.00	MI	5.25	367.50
"Proppant & Bulk Del. Chgs., per ton mil	367.50	EA	1.20	441.00
Depth Charge; 5001-6000'	1.00	EA	2,159.99	2,159.99
Blending & Mixing Service Charge	250.00	BAG	1.05	262.50
Plug Container Util. Chg.	1.00	EA	187.50	187.50
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.25	131.25
High Head Charge (Over 6')	1.00	EA	225.00	225.00

PAID
44889
NOV 07 2013
SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	12,095.89
BASIC ENERGY SERVICES,LP	BASIC ENERGY SERVICES,LP	TAX	404.12
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	12,500.01
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASICSM

ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

1700 S. Country Estates Rd.
Liberal, Kansas 67905
Phone 620-624-2277

FIELD SERVICE TICKET
1717 04313 A

DATE _____ TICKET NO. _____

DATE OF JOB 10-25-13 DISTRICT 1717		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:				
CUSTOMER Herman Loeb		LEASE Sampson #3-4		WELL NO.		
ADDRESS		COUNTY Lincoln		STATE KS		
CITY		STATE		SERVICE CREW E Mendoza, Jesse		
AUTHORIZED BY J Bennett TRB		JOB TYPE: 242- 5 1/2" Production				
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED 10-25-13 8:00 AM
34726	6					ARRIVED AT JOB 12:00 PM
27462	6					START OPERATION 6:00 PM
78918	6					FINISH OPERATION 7:15 PM
19860	6					RELEASED 8:00 PM
						MILES FROM STATION TO WELL 35 mi

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: *Michael Polley*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CU104	50/50 Poz	✓ SK	250		2750 00
CU102	Cellulose	✓ LB	63		233 10
CU113	Gypsum	✓	1050		787 50
CU129	FUA-322	✓	105		787 50
CU201	Gilsonite	✓	1500		1005 00
CU00	ECU	✓	566		849 00
CF607	5 1/2" Hatch Down Plug + Balls	✓ ea	1		400 00
CF1251	Auto Fill Float Valve	✓	1		360 00
CF1651	Turbolizer	✓	12		1320 00
CF1901	Basket	✓	2		580 00
CF2001	Scratchers	✓	10		750 00
CE06	CC-1	✓ gal	6		264 00
CE151	Mudflush	✓ gal	1000		860 00
E100	Unit Mileage	✓ mi	35		148 75
E101	Heavy Equipment Mileage	✓ mi	70		490 00
E113	Proppant + Bulk Delivery	✓ cu yd	368		588 00
CE206	Pump Depth 1500-6000'	✓	1		2880 00
CE240	Bending + Mixing Service	✓ SK	200		350 00

SUB TOTAL **12095 89**

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		

SERVICE REPRESENTATIVE <i>Paul Owen</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY <i>Michael Polley</i> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
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FIELD SERVICE ORDER NO.



BASICSM
ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer	Herman Loeb	Lease No.		Date	10-25-13
Lease	Sampson	Well #	3-4	Service Receipt	04313
Casing	5/2 15187	County	Kiowa	State	KS
Job Type	241-5/2 Production	Formation		Legal Description	4-28-18

Pipe Data		Perforating Data		Cement Data
Casing size	5/2" 15.5"	Shots/Ft		Lead
Depth	4945'	From	To	Tail in 200 sk 50/50 Poz
Volume	Disp - 117 bbl	From	To	
Max Press	2500 #	From	To	
Well Connection	ID - 4935'	From	To	
Plug Depth	57-16'	Packer Depth	From	To

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
					on loc-site assessment
					spot trucks - rig up
					start csg + fire.
					csg on bottom break circ
					safety meeting (ISA)
					pressure test 3000 #
	200		5	4	pump 5 bbl H ₂ O spacer
	200		24	4	pump 24 bbl mud flush
	200		5	4	pump 5 bbl H ₂ O spacer
	200		48	4	mix + pump 200 sk 50/50 Poz
					@ 14.0 # - 1.35 4 3/4 sk
					wash lines -
	0		0	5	drop latch down plug - disp csg
	1000		107	0	slow rate
7:15	1500		117	0	land plug - float held
					plug rat & mouse holes w/
					50 sk
					job complete

Service Units					
Driver Names					

Customer Representative

Station Manager

Cementer

Taylor Printing, Inc.



DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb LLC**

PO Box 838
Lawrenceville IL 62439

ATTN: George Payne/ Jon Ch

Sampson #3-4

4-28s-18w Kiowa,KS

Start Date: 2013.10.24 @ 05:11:55

End Date: 2013.10.24 @ 14:37:55

Job Ticket #: 52443 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.10.25 @ 14:53:55

Herman L Loeb LLC
4-28s-18w Kiowa,KS
Sampson #3-4
DST # 1
Mississippi
2013.10.24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville IL 62439
 ATTN: George Payne/ Jon Ch

4-28s-18w Kiowa,KS
Sampson #3-4
 Job Ticket: 52443 **DST#: 1**
 Test Start: 2013.10.24 @ 05:11:55

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Straddle (Initial)
 Time Tool Opened: 08:54:25 Tester: Chris Staats
 Time Test Ended: 14:37:55 Unit No: #47
 Interval: **4814.00 ft (KB) To 4842.00 ft (KB) (TVD)** Reference Elevations: 2229.00 ft (KB)
 Total Depth: 4945.00 ft (KB) (TVD) 2218.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

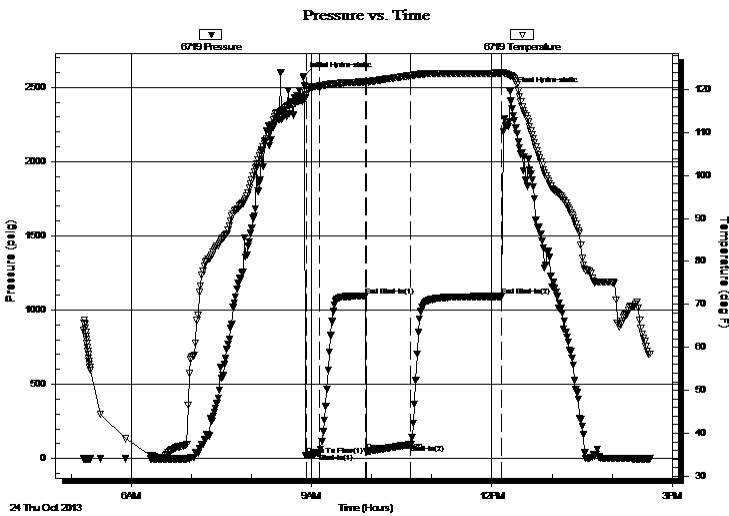
Serial #: 6719

Outside

Press @ Run Depth: 95.72 psig @ 4815.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.24 End Date: 2013.10.24 Last Calib.: 2013.10.24
 Start Time: 05:12:00 End Time: 14:37:55 Time On Btm: 2013.10.24 @ 08:51:40
 Time Off Btm: 2013.10.24 @ 12:18:10

TEST COMMENT: IF: Strong blow BOB 5 min
 IS: No blow back
 FF: Strong blow BOB 4 min
 FS: Weak blow back 1 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2572.91	117.67	Initial Hydro-static
3	20.57	118.78	Open To Flow (1)
17	38.44	120.77	Shut-In(1)
62	1094.89	121.79	End Shut-In(1)
64	46.07	121.65	Open To Flow (2)
108	95.72	123.24	Shut-In(2)
198	1092.57	123.81	End Shut-In(2)
207	2471.19	123.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Clean Oil	0.05
20.00	M,O 10% mud 90% oil	0.10
60.00	G,O,W,M 5% oil 4% water 10% gas 81% mud	0.30
60.00	O,G,M,W 2% oil 5% gas 43% mud 50% water	0.30

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L Loeb LLC

4-28s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Sampson #3-4

Job Ticket: 52443

DST#: 1

ATTN: George Payne/ Jon Ch

Test Start: 2013.10.24 @ 05:11:55

Tool Information

Drill Pipe:	Length: 4495.00 ft	Diameter: 3.80 inches	Volume: 63.05 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 307.00 ft	Diameter: 2.25 inches	Volume: 1.51 bbl	Weight to Pull Loose: 100.00 lb
			<u>Total Volume: 64.56 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4814.00 ft			Final 86000.00 lb
Depth to Bottom Packer:	4945.00 ft			
Interval between Packers:	131.00 ft			
Tool Length:	155.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4791.00	
Shut In Tool	5.00			4796.00	
Hydraulic tool	5.00			4801.00	
Safety Joint	3.00			4804.00	
Packer	5.00			4809.00	24.00 Bottom Of Top Packer
Packer	5.00			4814.00	
Stubb	1.00			4815.00	
Recorder	0.00	6719	Outside	4815.00	
Recorder	0.00	6773	Inside	4815.00	
Perforations	23.00			4838.00	
Blank Off Sub	1.00			4839.00	
Packer - Shale	5.00			4844.00	
Recorder	0.00	8676	Below	4844.00	
Change Over Sub	0.50			4844.50	
Perforations	3.00			4847.50	
Drill Pipe	94.00			4941.50	
Change Over Sub	0.50			4942.00	
Bullnose	3.00			4945.00	131.00 Bottom Packers & Anchor

Total Tool Length: 155.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC

4-28s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Sampson #3-4

Job Ticket: 52443

DST#: 1

ATTN: George Payne/ Jon Ch

Test Start: 2013.10.24 @ 05:11:55

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

50 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
10.00	Clean Oil	0.049
20.00	M,O 10%mud 90%oil	0.098
60.00	G,O,W,M 5%oil 4%w ater 10%gas 81%mud	0.295
60.00	O,G,M,W 2%oil 5%gas 43%mud 50%w ater	0.295

Total Length: 150.00 ft

Total Volume: 0.737 bbl

Num Fluid Samples: 0

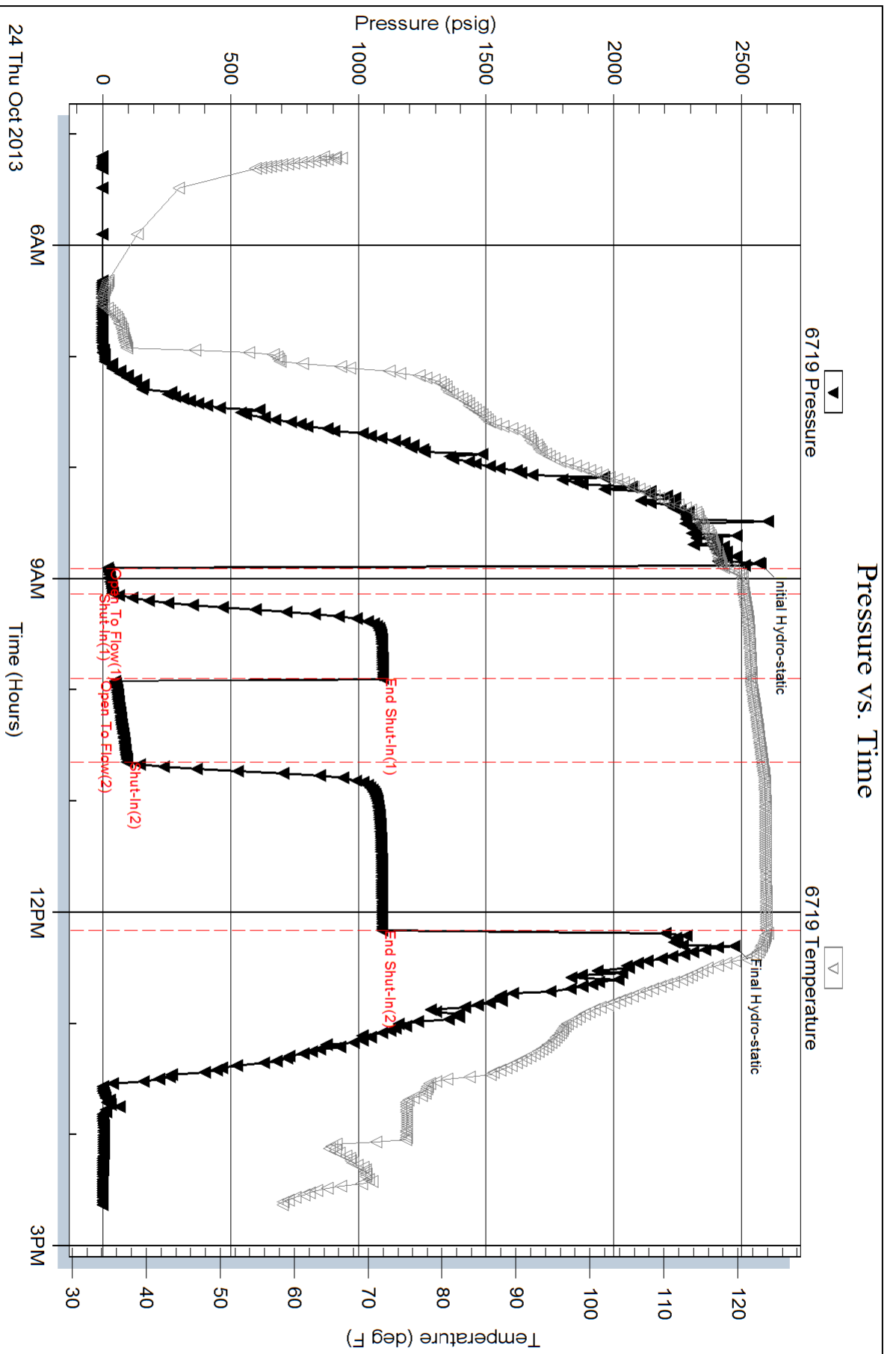
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



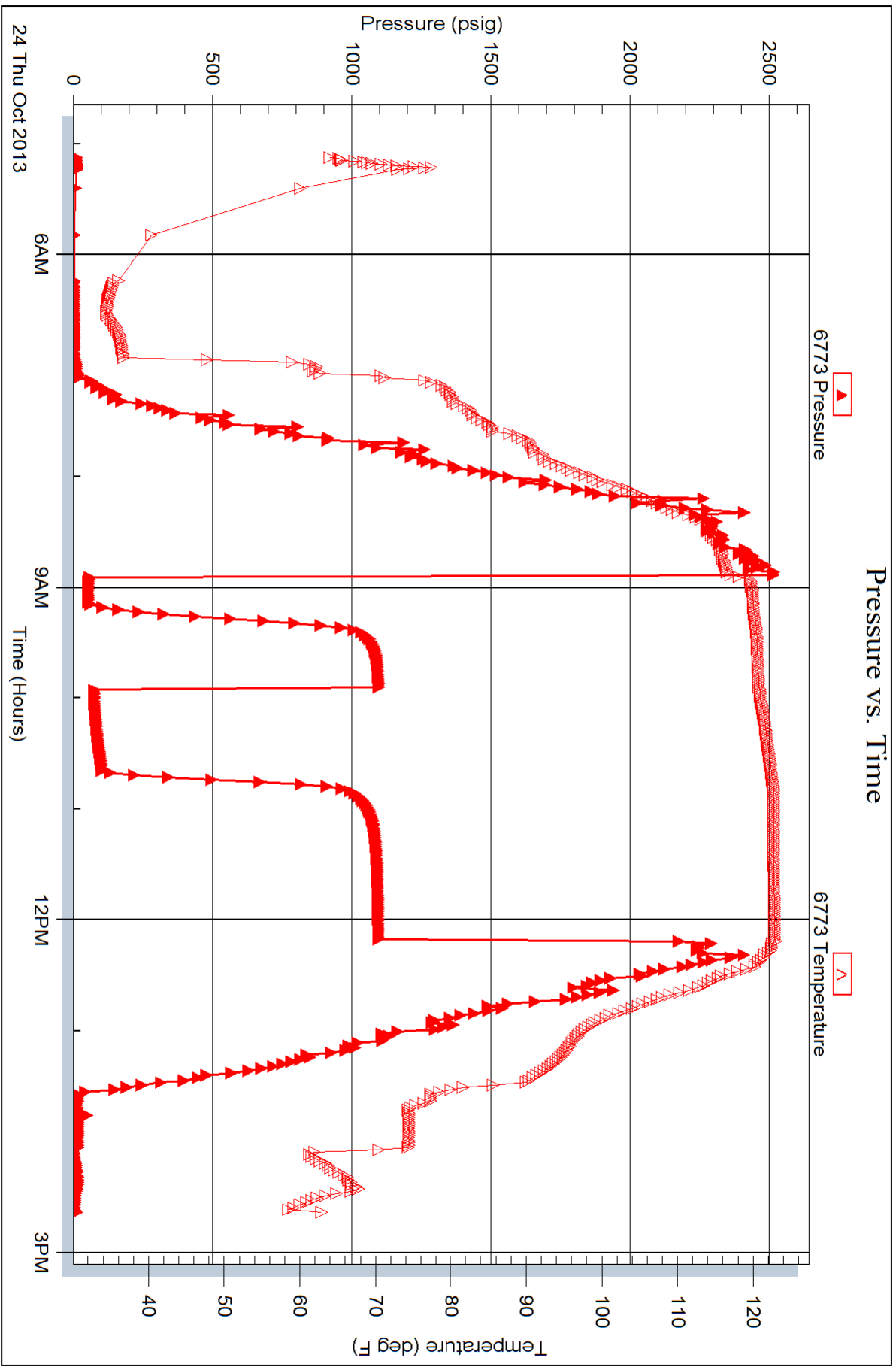
Serial #: 6773

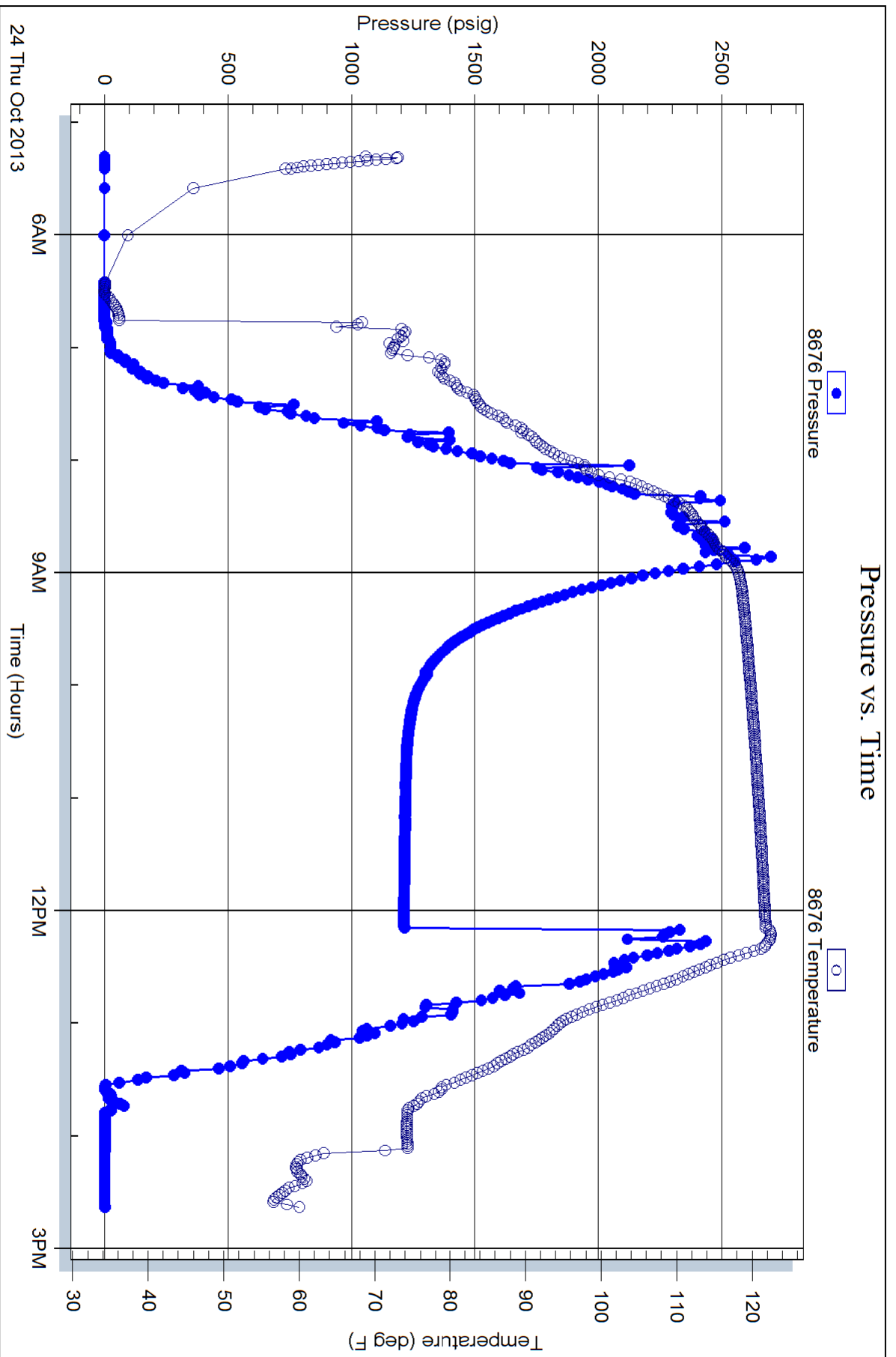
Inside

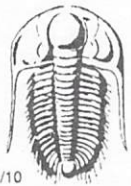
Herrnan L Loeb LLC

Sampson #3-4

DST Test Number: 1







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52443

Well Name & No. Sampson #3-4 Test No. 1 Date 10-24-13
 Company Herman L Loeb LLC Elevation 2229 KB 2218 GL
 Address Po box 838 Lawrenceville IL 62439
 Co. Rep / Geo. George Payne / John Christensen Rig Sterling #2
 Location: Sec. 4 Twp. 28 Rge. 18 Co. Kiowa State KS

Interval Tested 4814 - 4842 Zone Tested MISS
 Anchor Length 28' Drill Pipe Run 4495 Mud Wt. 9.0
 Top Packer Depth 4809 Drill Collars Run 307 Vis 53
 Bottom Packer Depth 4814 Wt. Pipe Run 0 WL 9.8
 Total Depth 4945 Chlorides 61500 ppm System LCM 1#

Blow Description IF: Strong blow BOBSmth
ISI: NO blow back
FF: Strong blow BOD 4 min
FST: weak blow back 1 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
10'	Clean oil				
20'	M, O		90		10
60'	G, O, W, M	10	5	4	81
60'	O, G, M, W	5	2	50	43
	1280' GIP				

Rec Total 150' BHT 125' Gravity - API RW 18 @ 54 °F Chlorides 50,000 ppm

(A) Initial Hydrostatic 2572 Test 1250 T-On Location 4:35
 (B) First Initial Flow 20 Jars _____ T-Started 5:11
 (C) First Final Flow 38 Safety Joint 75 T-Open 8:54
 (D) Initial Shut-In 1094 Circ Sub _____ T-Pulled 12:10
 (E) Second Initial Flow 46 Hourly Standby _____ T-Out 14:25
 (F) Second Final Flow 95 Mileage 80 miles 124
 (G) Final Shut-In 1092 Sampler _____
 (H) Final Hydrostatic 2471 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 2049
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 2049

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Sampson #3-4
Location: 1740' FNL & 430' FWL, Sec. 4-T28S-R18W, Kiowa County, KS.
Licence Number: 15-097-21770-00-00 Region: Einsel Field
Spud Date: 10/14/13 Drilling Completed: 10/23/2013
Surface Coordinates: 1740' FNL & 430' FWL, Sec. 4-T28S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2218' K.B. Elevation (ft): 2229'
Logged Interval (ft): 3400' To: 4945' Total Depth (ft): 4945'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3198'; Chemical Gel 3198' to 4945'
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 9002 W. Silver Hollow St.
Wichita, KS. 67205-8856

Cores

Devilbliss Coring Services cored Mississippian Chert interval from 4813' to 4871'(58' overall) as follows:

First CORE from 4813' - 4845' Cut 32.0', Recovered 31.0', lost bottom 1.0' from jammed core barrel after connection.

Second CORE from 4845' - 4871', Cut 26'.0', Recovered 26.0'. Core barrel jammed at 4871'.

DSTs

DST #1(Straddle Test after Logs - Miss. Chert) 4814' - 4842' Test Times 15"-45"-45"-90" IFP Strong Blow BOB/5 Min., FFP Strong Blow BOB/4 Min., no Gas to Surface, 1.5" Blowback on FSI; REC: 1280' Gas in Pipe, 10' Clean Gassy Oil, 20' MO(90%O, 10%M), 60' G&OCWM(10%G, 5%O, 4%W, 81%M), 60' G&OCMW(5%G, 2%O, 50%W, 43%M) CI 50,000, Mud CI 6500; IFP 20-38#, ISIP 1094#, FFP 46-95#, FSIP 1092#, IHP 2572#, FHP 2471#, BHT 125 Deg. F.

Comments

10/14/13 MIRU Sterling Drilling Rig #2, Spud at 7:30 PM.; 10/15/13 Drilling at 563'; 10/16/13 Drilling at 1235'; 10/17/13 Drilling at 2561'; 10/18/13 Drilling at 3310'; 10/19/13 Drilling at 3950'; 10/20/13 Drilling at 4444'; 10/21/13 TD. 4728' - Bit Trip; 10/22/13 TD. 4813' - Reaming to bottom for Coring Miss. Chert; 10/23/13 TD. 4871' - Finished Coring, Laydown Second Miss. core; 10/24/13 RTD. 4945', LTD. 4945' - Make up DST tool for DST #1; 10/25/13 Cementing Production Casing.

Set new 8 5/8"(24#) Surface Casing at 604' with 350 sx. Cement(Basic Energy Services). Cement Did Circulate. PD. at 11:30 AM. on 10/15/13.

Set new 5 1/2"(15.5#) Production Casing at 4940' w/200 sx. of "Loeb Blend" cement(Basic Energy Services). PD. 7:15 AM. 10/25/13.

Surveys: 0.25 Deg. at 610'(Surface Casing); 0.75 Deg. at 4728'(Bit Trip); 0.75 Deg. at 4813'(Core Point); 1 Deg. at 4945' RTD.

Bit Trip at 4728' to wipe/clean hole prior to coring Miss. Chert. Hole was very tight bottom 18 Stands, then free.

Pipe Strap at 4728'(Bit Trip): Strap 1.74' Long to the Board, no correction made to the Board.


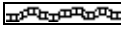
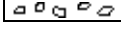
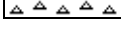
After review of the Halliburton Logs, DST #1, favorable structural position and indications of commercially recoverable hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Miss. Chert.

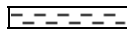



NOTE: Prior to Abandonment of the Sampson #3-4, the Marmaton Altamont zone from 4684' - 4688' should be perforated and tested. There was a 60 Unit Gas kick with Recycle observed in this zone.





LOG TOPS: Blaine 1150(+1079), Chase 2459(-230), Stotler Lmst. 3423(-1194), Howard 3627(-1398), Heebner Shale 4063(-1834), Toronto 4076(-1847), Brown Lmst. 4220(-1991), Lansing 'A' 4226(-1997), K.C. 'I' 4441(-2212), Stark Shale 4528(-2299), Hertha 4591(-2362), Base Kansas City 4626(-2397), Marmaton 4668(-2439), Altamont 4681(-2452), Cherokee Shale 4754(-2525), Miss. Chert 4812(-2583), Kinderhook Shale 4890(-2661), Kinderhook Sand 4918(-2689).

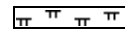

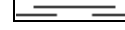
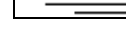
NOTE: This log was shifted upward by 1' to 2' for correlation purposes with the Halliburton Logs.

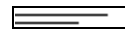


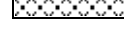
ROCK TYPES

	Anhy
	Bent
	Brec
	Cht

	Clyst
	Coal
	Congl
	Dol

	Gyp
	Igne
	Lmst
	Meta

	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Sltst
	Ss
	Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau

- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

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

- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst

- Siltstrg
- Ssstrg

TEXTURE

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

OTHER SYMBOLS

POROSITY

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

- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

- Spotted
- Ques
- Dead

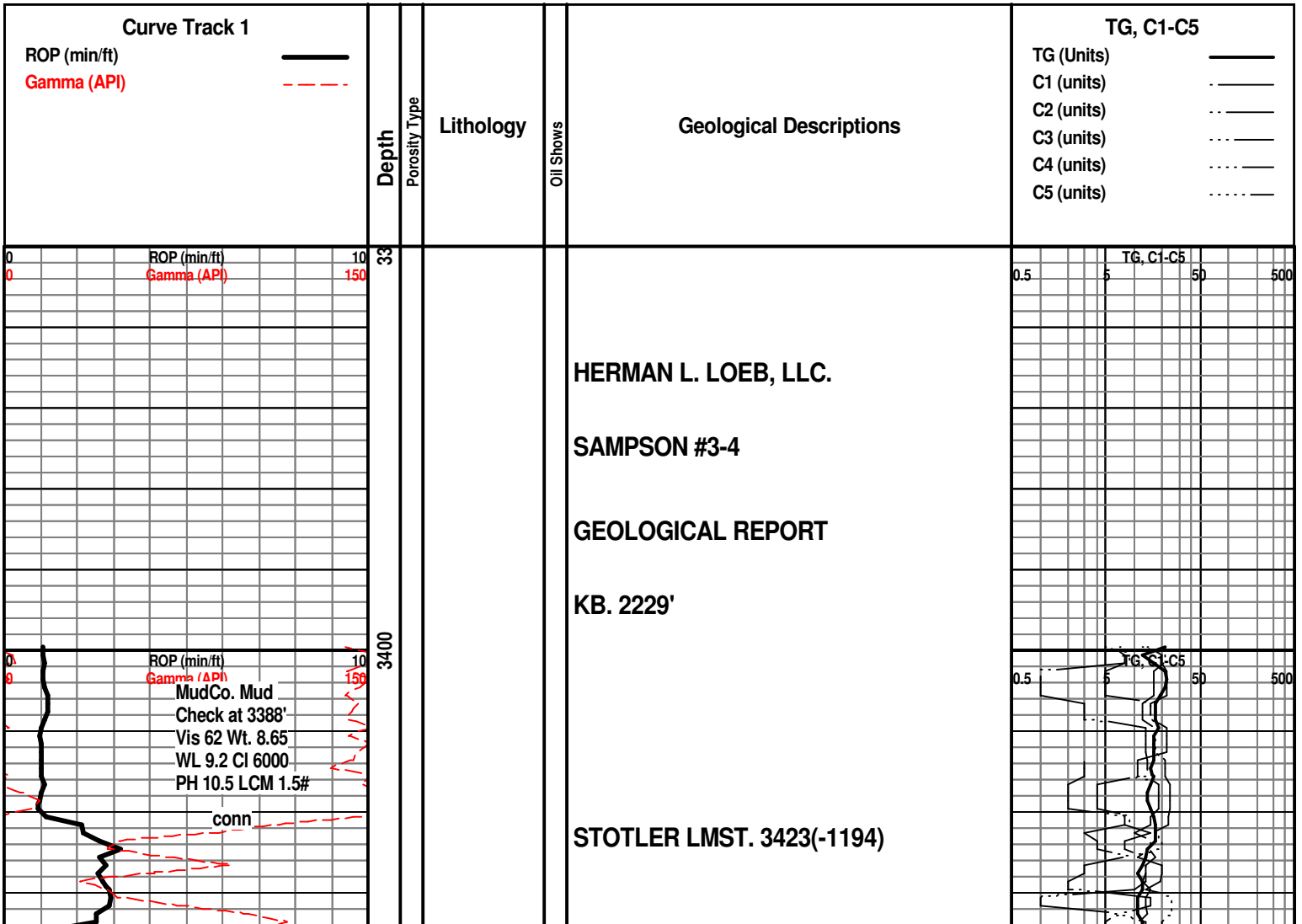
- Spotted
- Ques
- Dead

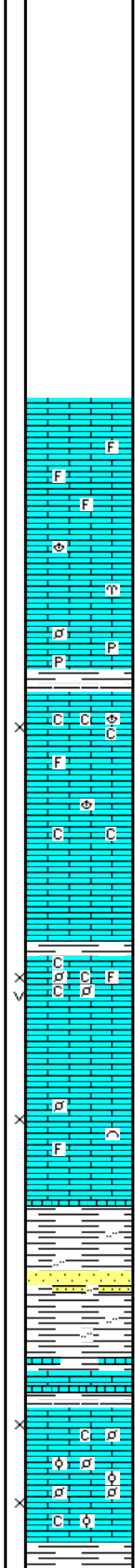
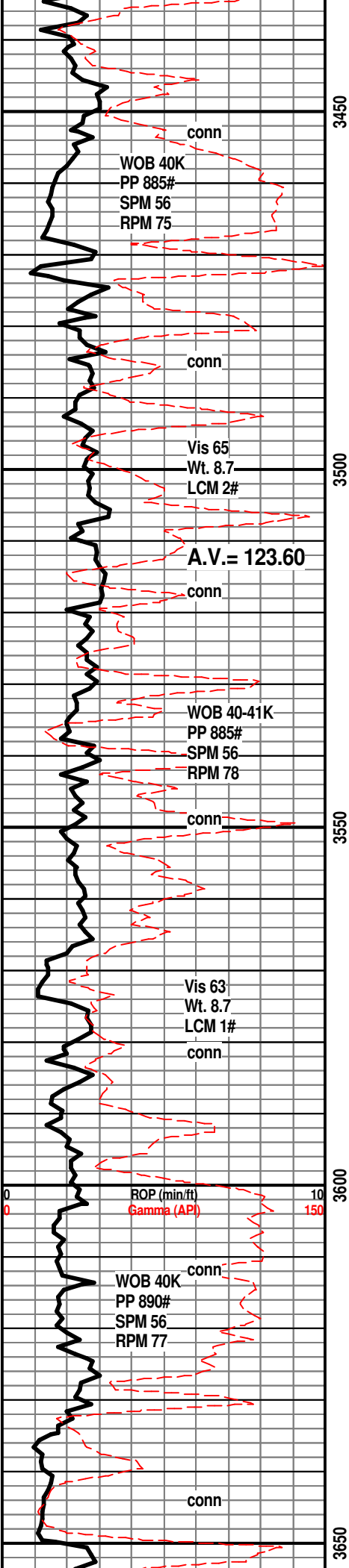
INTERVAL

- Core
- Dst

EVENT

- Rft
- Sidewall





10' Samples Start at 3500'

LM; off wh, tan, f to med xln, scat well cem foss mat, most dense, scat dull yel min fluor, ns.

LM; lt to med brn, occ gy brn, foss ip, most well cem, blocky, scat pyr, no vis por, ns.

SH; med gy, platy, smooth

LM; off wh, tan, buff, fxln w/minor soft chalk and chalky mtx, trc poor interxln por, dull to lt yel min fluor, foss ip, no stn, ns.

LM; med to dk brn, dense, blocky, tite

LM; wh, off wh, f to med xln, scat foss mat, fair interxln w/some vug por, scat chalky mtx, lt yel min fluor, no stn or odor, no gas kick, ns.

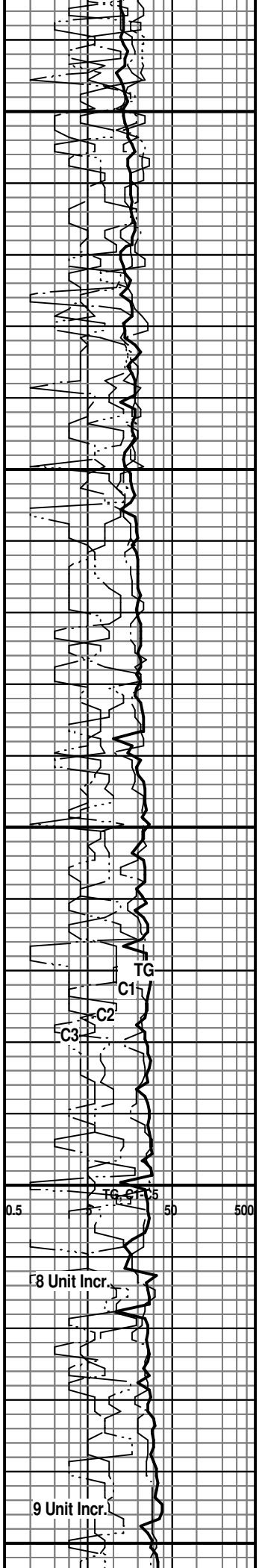
LM; off wh to tan, lt brn, scat foss mat, some loosely cem, poor to fair interpart por, no fluor, no stn, ns.

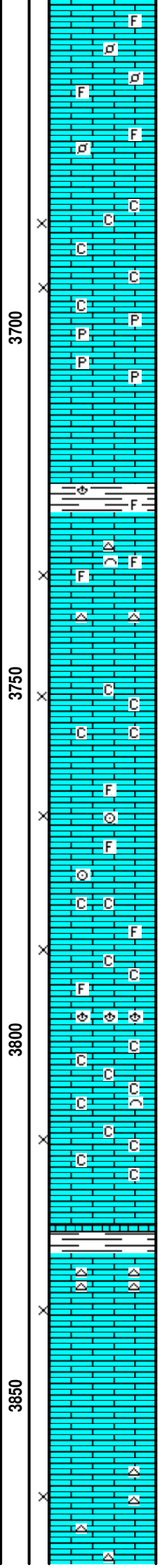
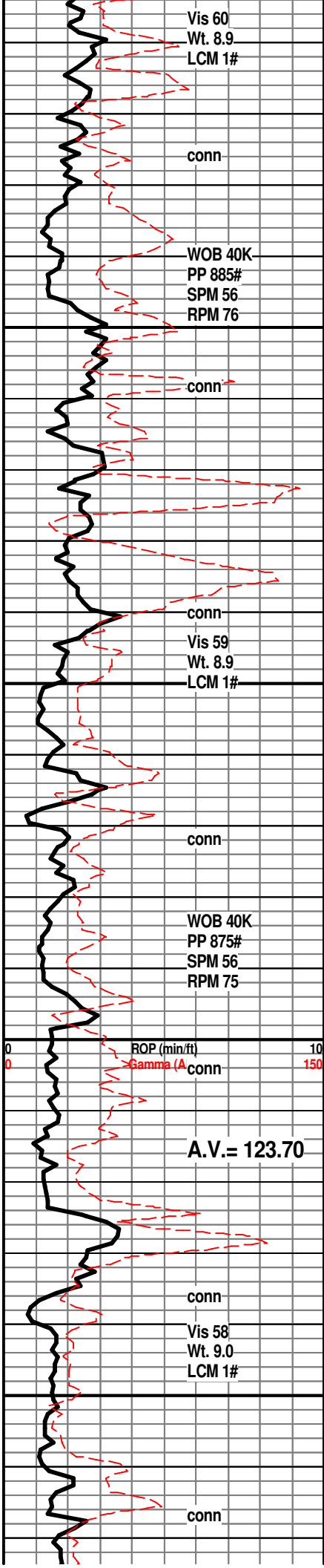
SH; med gy, gy grn, firm, occ silty, interbdd hd f gr qtz ss strngs.

HOWARD 3627(-1398)

LM; off wh, wh, tan, fxln w/scat foss pellets and oolites, fair to gd interxln por, minor chalky mtx, lt yel fluor, no stn or odor, ns.

SH; dk gy, platy





LM; tan to lt brn, some gy brn, scat well cem foss mat, most dense, blocky, no vis por, ns.

LM; off wh, tan, f to med xln, some sucrosic text, soft ip w/scat chalky mtx, fair scat interxln por, no fluor, ns.

LM; tan to lt brn, hd, scat pyr, tite

LM; tan to off wh, lt gy brn, fxln, poor to no vis por, most dense, blocky

SH; med to dk gy, platy, foss ip.

LM; wh, off wh, buff, foss w/scat fair interpart por, cherty ip, dull yel to no fluor, no gas kick, ns.

LM; tan, buff, med xln to gran text, fair to gd interxln por, occ chalky mtx, no fluor, ns.

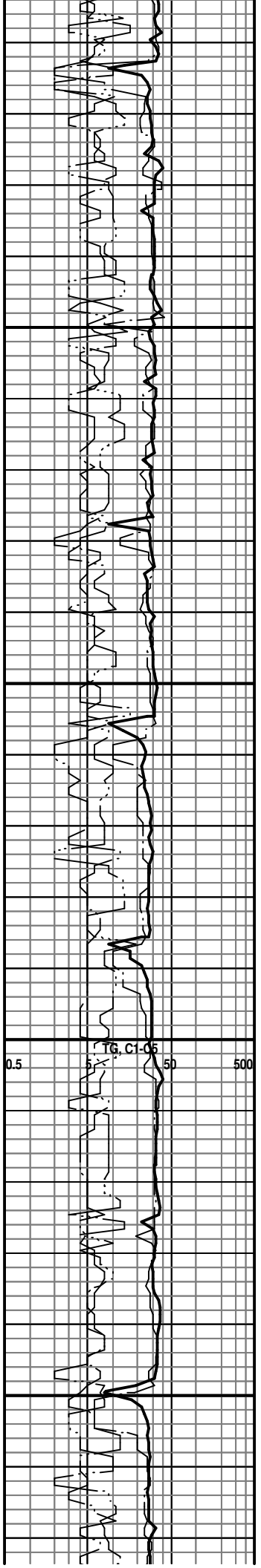
LM; tan to off wh, buff, foss ip w/occ crin stems, fair interpart por in some, scat chalky mtx, no fluor, ns.

LM; off wh, wh, tan, fxln w/rare foss mat, much soft chalk and chalky mtx, poor interxln por, no fluor, ns.

LM; tan to lt brn, hd, blocky, scat off wh to gy occ foss cht, tite

LM; tan to cream, buff, med xln to gran text, gd interxln w/scat p-p por, scat cse spar calc xtals, lt yel fluor, no stn or odor, no gas kick, ns.

LM; tan to buff, lt brn, f to med xln, fair scat interxln por, interbdd off wh to lt gy cht, no fluor, ns.



WOB 40K
PP 885#
SPM 56
RPM 75

conn

conn

Vis 55
Wt. 9.1
LCM 1#

conn

WOB 40K
PP 895#
SPM 56
RPM 75

conn

ROP (min/ft)
Gamma (API)

conn

Vis 53
Wt. 9.2
LCM 1#

A.V. = 123.70
conn

WOB 40K
PP 890#
SPM 56
RPM 75

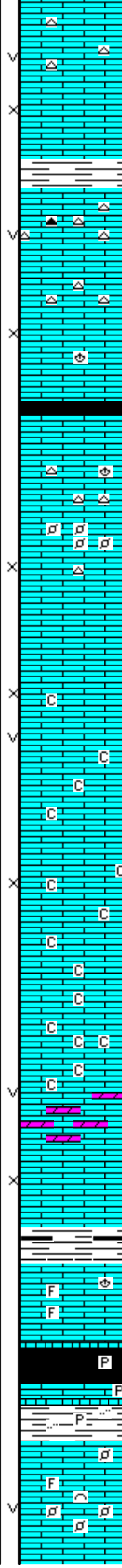
conn

3900

3950

4000

4050



LM; tan to buff, fxln, poor interxln w/rare vug por, minor gy to wh cht, no fluor, ns.

SH; med gy, platy

LM; tan to off wh, med to cse xln, spar calc xtals, cherty ip, gd interxln w/occ vug por, lt yel min fluor, no gas kick, ns.

LM; tan to buff, fxln w/rare poor interxln por, foss w/scat bracs, most tite, no fluor, ns.

LM; tan to off wh, buff, foss w/interbdd finely pelletal lmst, poor interpart por, scat off wh cht, no fluor, ns.

LM; off wh, lt gy, f to med xln, scat p-p and occ vug por, minor chalky mtz, dull yel/blue fluor, no stn or odor, ns.

LM; off wh, tan, f to med xln, fair interxln w/scat small vug por, chalky mtz, dull yel to no fluor, ns.

LM; off wh, buff, f to med xln, scat sucrosic text, interbdd dolomitic lmst, fair to occ gd interxln w/vug por, lt to occ med yel min fluor, no stn, ns.

LM; off wh, buff, cse xln, gd interxln por, dul yel min fluor, ns.

SH; dk gy, trc blk, platy

LM; tan to lt brn, buff, foss ip, most well cem, interbdd med xln off wh partly chalky lm, dull yel fluor, no stn, ns.

HEEBNER SHALE 4063(-1834)

SH; blk, carb ip, platy, trc pyr

LM; med to dk brn, dense, pyr ip.

SH; grn, occ pyr, silty ip.

TORONTO 4076(-1847)

LM; tan to lt brn, foss ip, hd, well cem, ns.

LM; off wh, cream, f to med xln, foss ip, scat fair vug por, lt/med yel min fluor, no stn or odor, no gas kick

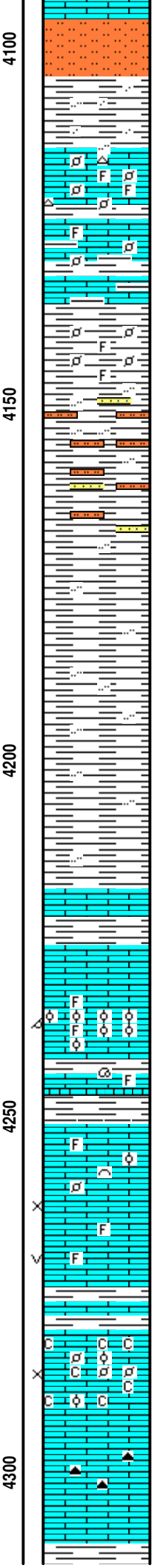
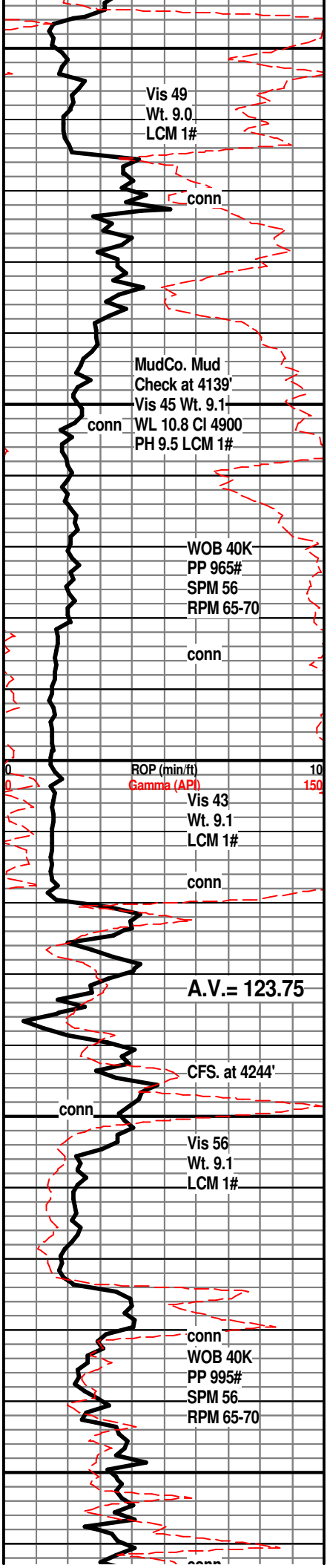
T.G. Ct. 5 50 500

Change Extractor Filter

Gas Test at Extractor

22 Unit Incr. Shale

Recycle



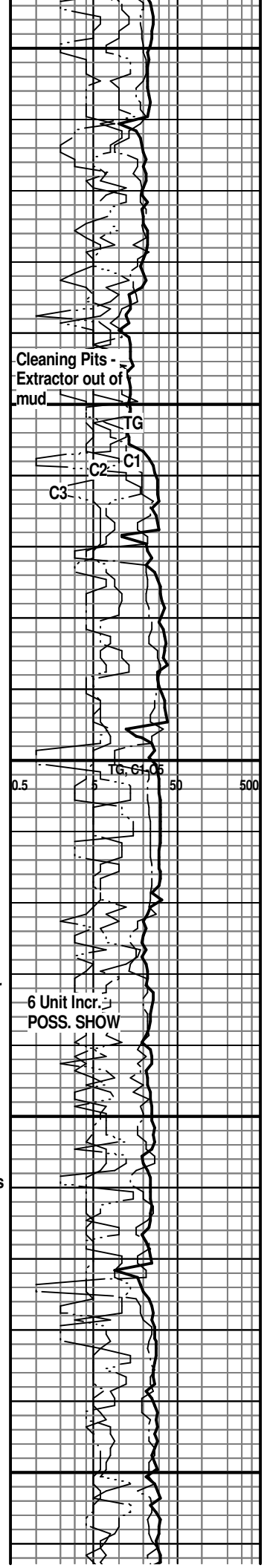
DOUGLAS SHALE 4096(-1867)
 SLTST; lt gy, mica, sandy ip, firm
 SH; lt gy, silty to sandy, platy
 LM; lt to med brn, highly foss, finely pelletal, cherty ip, dense, scat lt yel min fluor
 LM; med/dk brn, foss, some argil, tite
 SH; lt gy, gy grn, foss ip, calc, firm
 SH; lt gy, silty w/interbdd mica sltst and hd vf gr ss strngs.
 SH; lt to med gy, firm, silty ip.
 SH; med gy, smooth, occ silty

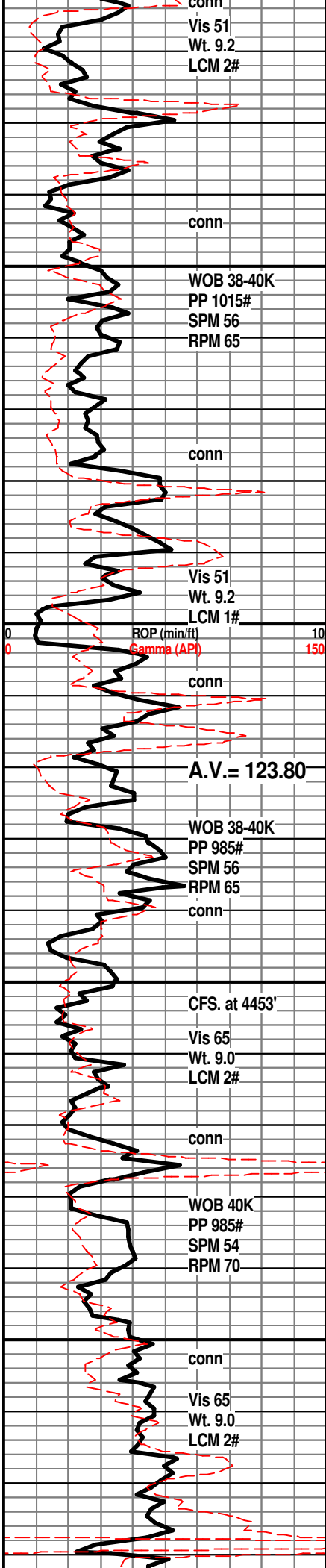
BROWN LMST. 4220(-1991)
 LM; med to dk brn, foss ip, tite

LANSING 'A' 4226(-1997)
 LM; tan to lt brn, foss - oolitic, scat med size molds, fair oomoldic por, v.spotted lt brn oil stn, faint/fleeting odor, quest. gas bubbles, med yel fluor, no F.O., poor show

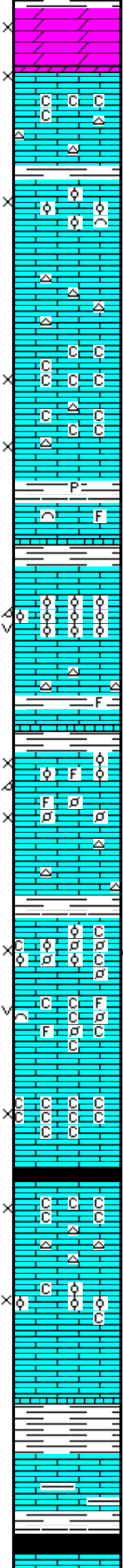
SH; med gy, foss ip, platy

LANSING 'B' 4251(-2022)
 LM; tan to lt brn, buff, foss w/scat pellets and hash, most well cem, dull yel min fluor, no stn or odor, no gas kick
 LM; lt gy, hd, foss ip, scat fair vug por, no fluor, no stn or gas kick, ns.
 LM; off wh, buff, tan, foss w/scat small pellets and oolites, much soft chalky and chalky mtx, poor to fair interpart por, no fluor, ns.
 LM; lt to med brn, hd, micritic, cherty ip w/med gy and amber cht, tite
 SH; med gv to grn, platy





4350
4400
4450
4500



DOL; off wh, buff, sucrosic, fair interxn por, bcm lmy w/interbdd tan to buff fxln lmst, scat chalk and chalky mtx, dull to lt yel min fluor, no stn or odor, no gas kick

LM; lt to med brn, hd, occ gy/tan cht, tite

LM; off wh, tan, buff, med xln to gran text, foss ip w/trc oolitic lmst, fair to gd interxn por, spotted lt yel fluor, no stn or odor, ns.

LM; tan to off wh, buff, fxln w/scat off wh to wh fresh cht, dull yel fluor, no stn or odor, ns.

LM; wh, off wh, f to med xln, fair interxn por, much soft chalky and chalky mtx, rare off wh cht, no fluor, ns.

SH; med gy grn, platy, pyr ip.

LM; med to dk brn, foss, dense

LANSING/KC. 'H' 4392(-2163)
LM; tan to lt brn, oolitic, small to med size molds, gd oomoldic w/scat vug por, lt yel min fluor, no stn or odor, no gas kick, barren

LM; lt to med brn, cherty ip, tite

LM; tan to lt brn, foss - finely pelletal, scat oolitic lmst(some poss. from above zone), lt yel fluor, no stn or odor, ns.

LM; tan to buff, cream, foss w/scat small pellets, poor interpart por, off wh to tan chert, no fluor, ns.

KANSAS CITY 'I' 4441(-2212)
LM; tan to cream, buff, finely pelletal, scat small ooids, fair interpart por, trc v. light brn spotted stn, no odor, no cut, some chalky mtx

LM; tan to cream, off wh, med xln w/cse foss frags, scat small vug por, chalky mtx ip, no stn or odor, ns.

LM; wh, off wh, med xln, poor to fair interxn por, very chalky, much pure soft chalk, no fluor, no stn, ns.

SH; dk gy - blk, fiss

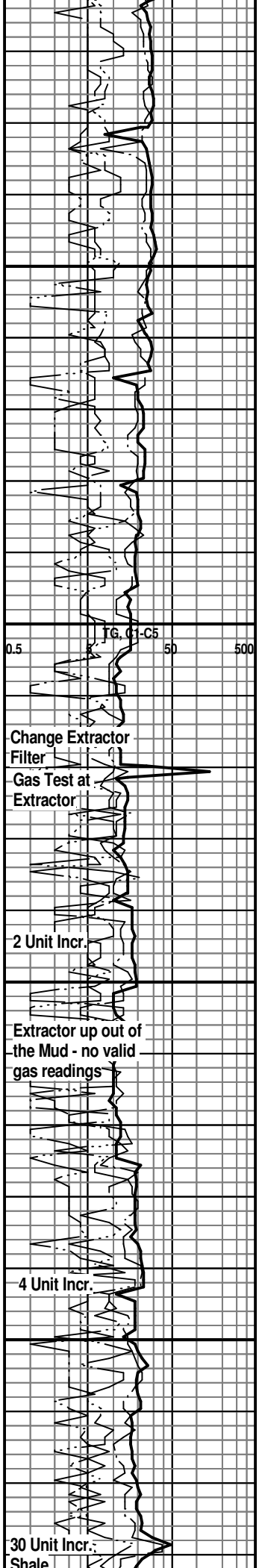
KANSAS CITY 'J' 4478(-2249)
LM; tan to off wh, buff, f to med xln, fair interxn por, chalky - soft mtx, no fluor, no stn, ns.

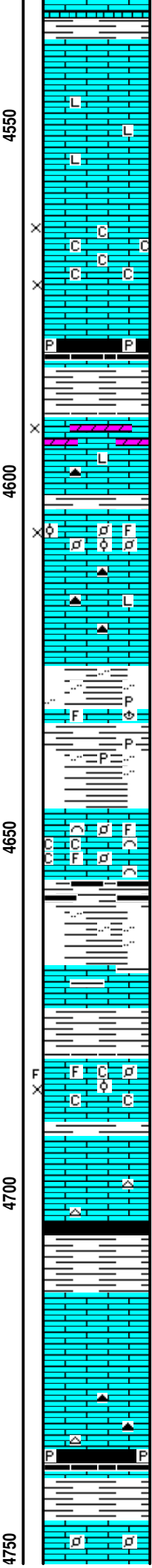
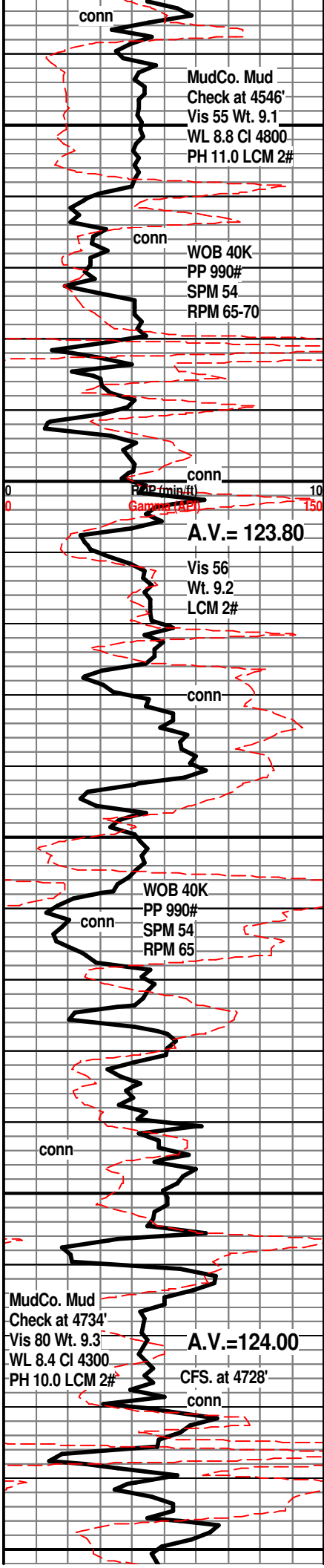
LM; tan to buff, cream, f to med xln, poor to fair interxn por, occ foss w/interbdd oolitic lmst, minor chalky mtx, ns.

SH; med gy, gy brn, lmy w/interbdd argil lmst

LM; lt to med gy, occ gy brn, dense, some argil, no vis por, ns.

STARK SHALE 4528(-2299)
SH; blk, carb ip, sev. gas bubbles





SWOPE 4538(-2309)

LM; med brn, dense, blocky, tite
LM; tan to cream, buff, most micritic, blocky, med yel min fluor, scat med xln spar calc, interbdd hd litho lmst, no vis por, no stn, ns.

LM; tan to lt brn, f to occ med xln, spar calc xtals, poor to fair vis interxln por, chalky w/much soft chalky mtx, lt yel min fluor, no stn or odor

SH; blk, carb ip, scat pyr

HERTHA 4591(-2362)

LM; tan to buff, fxln to sucrosic text, partly dolomitic, gd interxln por, med yel min fluor, no stn or odor, quest. gas bubbles

LM; lt brn, v. foss - oolitic and pelletal, scat fair interpart por, occ foss gy cht, no fluor, ns.

LM; med to dk brn, gy brn, hd, micritic to litho ip, scat amber cht, tite

BASE KANSAS CITY 4626(-2397)

SH; varic, grn, brn, gy, maroon, silty ip, occ pyr, interbdd tite foss lmst.

PLEASANTON 4646(-2417)

LM; off wh, tan, pale grn, cse xln w/foss frags, weaky cem - fair interpart por in some, minor soft chalky mtx, lt yel fluor, no stn or odor, no gas kick

SH; varic, grn, gy, maroon, silty, flakey

MARMATON 4668(-2439)

LM; tan to lt gy grn, hd, blocky, argil ip, tite

ALTAMONT 4681(-2452)

LM; tan to cream, off wh, fxln w/scat foss mat, rare small oolites/pellets, partly chalky mtx, no poor interpart por, trc brite yel edge fluor - poss. frags, no odor, no vis oil stn, no cut

LM; lt brn, dense, scat blk dead gilsonite/tar on few pcs, no vis por, v. dull yel fluor, looks tite, rare tan to opaque cht

SH; dk gy, gy grn, some blk, platy

PAWNEE 4714(-2485)

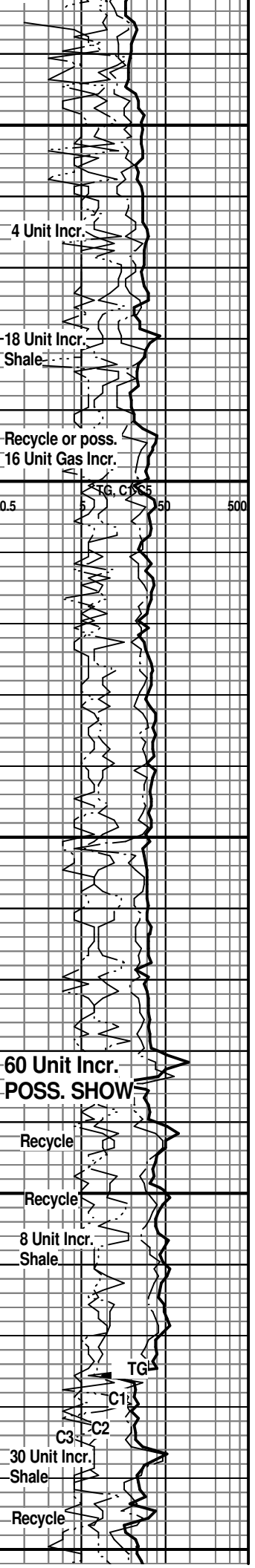
LM; tan to cream, lt brn, micritic, no vis por, dull yel min fluor, no stn or odor, ns.

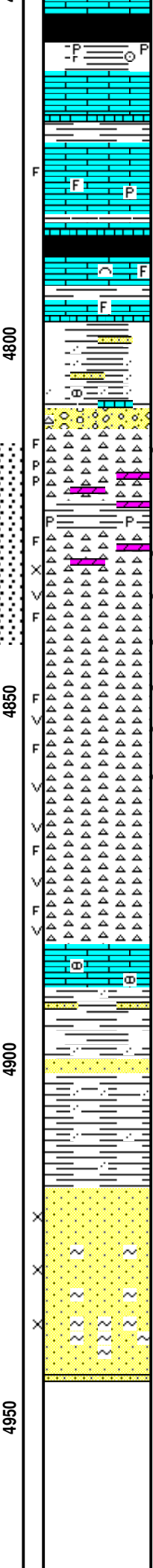
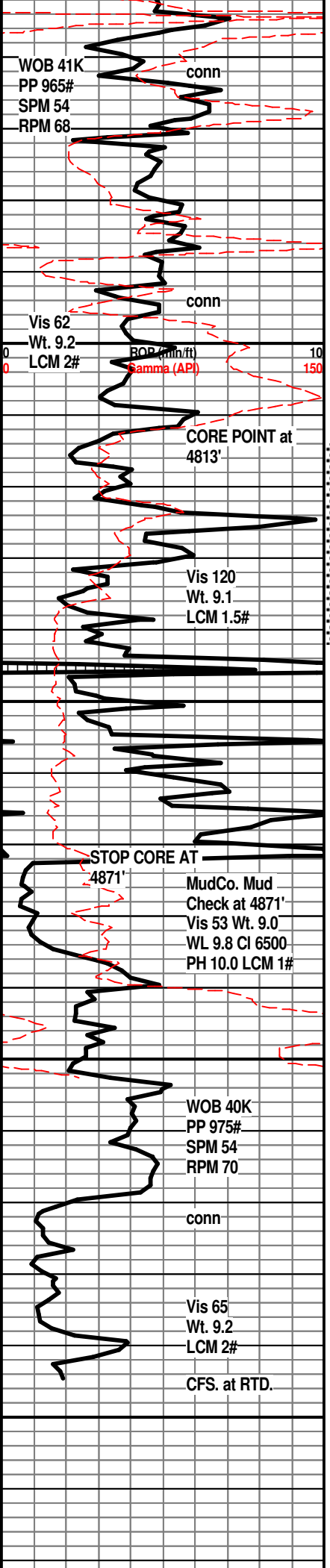
BIT TRIP AT 4728' - Run Junk Basket

LM; lt brn, foss ip, most dense, scat tan/amber cht, no vis por, no fluor, ns.

SH; blk, carb ip, scat pyr

LM; tan, lt brn, foss - finely pelletal ip, well cem, hd, some micritic, dull yel min fluor, no vis stn, no odor





CHEROKEE SHALE 4754(-2525)

SH; blk, grn, gy grn, foss ip, platy

LM; lt brn, buff, micritic, blocky, lt yel min fluor, no vis por, no stn, ns.

LM; tan to lt brn, micritic, scat fracs w/spar calc on faces, some healed fracs, occ blk tar/gils in fracs, dull to lt yel fluor, no live shows, no odor

SH; dk gy - blk, pyr ip.

LM; tan to cream, buff, fxln w/scat foss mat, most well cem, rare blk tar/gils stn, no live shows, no odor, scat med yel fluor, no apparent gas kick, trc sandy lmst that looks tite

SH; varic, grn, maroon, yel, brn, sandy w/med gr qtz gr in shale, trc weathered nodular lmst

MISS. UNCONFORMITY 4812(-2583)

CHT; off wh, wh, trip and fresh, fracs w/fair p-p (trip) por, fair gas/oil odor, fresh cht w/occ blk tar/gils, med yel fluor, spotted med brn stn, some grn gritty dolomitic cht

SH; varic, much grn, pyr ip.

CHT; wh, opaque, grn, some grainy text dolomitic cht w/gd interxln por, fracs, spotted/ even med brn stn, fair oil/gas odor, few pcs. w/GSFO, med/brite yel fluor, sev. cse qtz xtals w/trc vug por and med brn stn, rare bld gas

First CORE from 4813' - 4845', Core Barrel jammed at 4845', Cut 32', Rec. 31.0'

CHT; wh, off wh, fresh and trip, sev. fracs vis w/some vug por, fair odor, scat med/brite yel fluor, SSFO and gas bubbles

CHT; wh, off wh, rare tan, most fresh, scat vug por w/lt brn live oil stn, trc F.O. and gas

Second Core from 4845' - 4871', Core Barrel jammed at 4871', Cut 26', Rec. 26'

CHT; wh, off wh, fresh, fracs w/ vug por, rare lt brn in vugs and fracs, porc, most barren of show, rare lt yel fluor, no odor

KINDERHOOK SHALE 4890(-2661)

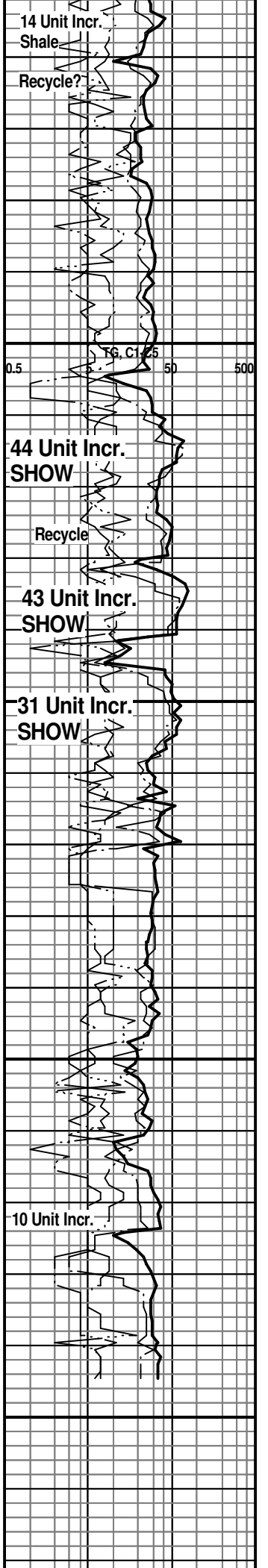
SH; grn, gy grn, red/brn, some varic sh, interbdd pale grn of off wh vf to f gr qtz ss strngs, interbdd sandy sh

SH; med gy grn, firm, sandy ip.

KINDERHOOK SAND 4918(-2689)

SS; off wh, clr, all f gr qtz, clusters, most fri w/fair to gd intergran por, calc, rare grn glau inclusions, no fluor, no stn or odor, ns.

SS; clr, off wh, pale grn, f to rarely med gr, qtz, clusters, glau ip w/poss. chlorite incl, interbdd hd qtzitic tite ss, no fluor, no stn or odor, ns.



RTD. 4945' at 3:50 PM. 10/23/13

LTD. 4945'

Halliburton DIL, NEU/DEN w/PE.

Microlog, MRIL

NOTE: This log was shifted upward by 1' to 2' for correlation purposes with the Halliburton Logs.

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