



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1177300
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: _____

1177300

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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ALLIED OIL & GAS SERVICES, LLC 052264

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Liberal, Mo.

DATE <u>07-26-13</u>	SEC. <u>23</u>	TWP. <u>32S</u>	RANGE <u>37W</u>	CALLED OUT	ON LOCATION	JOB START <u>7:00</u>	JOB FINISH <u>10:00 a.m.</u>
LEASE <u>Willis</u>	WELL# <u>23-4</u>	LOCATION <u>Highway 7, Milton, Mo.</u>			COUNTY <u>Shannon</u>	STATE <u>Mo</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>2 1/2" E.C. 7.10</u>			

CONTRACTOR Duke #4
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4" T.D.
 CASING SIZE 8 7/8" DEPTH 1745.56 ft
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX 110 PSI MINIMUM _____
 MEAS. LINE _____ SHOE JOINT 4230 ft
 CEMENT LEFT IN CSG. 4230 ft
 PERFS. _____
 DISPLACEMENT 108.417 BBL

OWNER Palmer Oil Inc
 CEMENT
 AMOUNT ORDERED 425 sk "A" 2% C.C. 2% C.C. 2% C.C.
2% C.C. 2% C.C. 2% C.C.
150 sk "C" 2% C.C.

EQUIPMENT

PUMP TRUCK CEMENTER Robert Green
 # 531-541 HELPER Conor Perin
 BULK TRUCK
 # 563- DRIVER Robert Green
 BULK TRUCK field bin
 # 556 DRIVER

COMMON "A" 425 sk @ <u>17.90</u>	<u>7607.50</u>
POZMIX @ _____	_____
GEL @ _____	_____
CHLORIDE <u>17 sk</u> @ <u>64.00</u>	<u>1,216.00</u>
ASC @ _____	_____
CAPP "C" <u>150 sk</u> @ <u>21.40</u>	<u>3,660.00</u>
NAM <u>771 lb</u> @ <u>3.30</u>	<u>2,636.70</u>
Cap seal <u>8 sk</u> @ <u>37.60</u>	<u>300.80</u>
FL <u>106 lb</u> @ <u>2.97</u>	<u>314.82</u>
<u>29-51</u> <u>30 lb</u> @ <u>17.55</u>	<u>510.40</u>
_____ @ _____	_____
_____ @ _____	_____
_____ @ _____	_____
HANDLING <u>621 (out)</u> @ <u>2.48</u>	<u>1,551.92</u>
MILEAGE <u>137.50 Ton 11</u> @ <u>2.60</u>	<u>3425.50</u>
TOTAL	<u>22,125.24</u>

REMARKS:

Pressure test lines at 2500 PSI. Then pump
11 BBL Flow Space. Mix pump 575 sk
concrete (266 BBL slurry) and displacement with
108.5 BBL H₂O. Pump plug at 1200 PSI
release pressure - flow hold.
50 BBL slurry reculate to pit.
3 plugs done by time
Charge only 1 1/2

SERVICE

DEPTH OF JOB _____	<u>1745.56 ft</u>
PUMP TRUCK CHARGE _____	<u>2,213.75</u>
EXTRA FOOTAGE @ _____	_____
MILEAGE <u>heavy VC 50</u> @ <u>7.70</u>	<u>385.00</u>
MANIFOLD + Gr. head 1 @ <u>272.00</u>	<u>272.00</u>
<u>Light handle 1.50</u> @ <u>440</u>	<u>220.00</u>
<u>In 1 by Hour 1 1/2</u> @ <u>440</u>	<u>660.00</u>
TOTAL	<u>3,753.75</u>

CHARGE TO: Palmer Oil Inc
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>2 1/2"</u>		
<u>Concrete shoe 1</u>	@ <u>250.70</u>	<u>250.70</u>
<u>API float valve 1</u>	@ <u>229.30</u>	<u>229.30</u>
<u>Centralizer 3</u>	@ <u>37.50</u>	<u>112.50</u>
<u>Top handle plug 1</u>	@ <u>76.50</u>	<u>76.50</u>
<u>Conc. bucket 1</u>	@ <u>226.00</u>	<u>226.00</u>
TOTAL		<u>865.50</u>

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) _____
 TOTAL CHARGES 26,774.49
 DISCOUNT _____ IF PAID IN 30 DAYS

PRINTED NAME Robert Green
 SIGNATURE [Signature]

NET = 21,513.70



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

1700 S. Country Estates Rd.
P.O. Box 129
Liberal, Kansas 67905
Phone 620-624-2277

FIELD SERVICE TICKET
1717 03474 A

DATE _____ TICKET NO. _____

DATE OF JOB: 8-3-13 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: American Warrior		LEASE: Willis #23-4 WELL NO.:								
ADDRESS:		COUNTY: Stevens STATE: KS								
CITY: STATE:		SERVICE CREW: E Mendoza, D Beck								
AUTHORIZED BY: J Bennett		JOB TYPE: 742- 500 5/2 Production								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
34726	8						8-3-13			7:00
27462	8									10:00
	2									12:00
	6									1:00
										2:00
						MILES FROM STATION TO WELL: 50 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: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CC105	AA2	sk	200		
CC103	60/410 202	sk	50		
CC113	Gypsum	lb	970		
CC111	5/8"		1107		
CC103	C-15		113		
CC105	C-410		47		
CC201	Gilsonite		1000		
CF1251	5/8" Auto Fill Sleeve	ea	1		
CF1607	Catch Down Plug & Bottle		1		
CF4115	Turbolizers		12		
CF1552	Basket		1		
CF3000	Thread Lock		1		
CC151	Mud-flush	gal	500		
F-101	Heavy Equipment Mileage	mi	100		
CF240	Blending & Mixing Service	sk	250		
E113	Proppant & Bulks Delivery	ton	578		
CF207	Ring Depth: 6000-7000'	ft	1		
CF504	Plug Container	ea	1		

SUB TOTAL # 11049.68

CHEMICAL / ACID DATA:			

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

SERVICE REPRESENTATIVE: <i>[Signature]</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <i>[Signature]</i>
FIELD SERVICE ORDER NO.:	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)



BASIC
ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer <u>Palmer Oil</u>		Lease No.		Date <u>8-3-12</u>	
Lease <u>Willis</u>		Well # <u>23-4</u>		Service Receipt <u>03474</u>	
Casing <u>5 1/2" 17'</u> Depth		County <u>Stevens</u>		State <u>KS</u>	
Job Type <u>242-5 1/2" Production</u>		Formation		Legal Description <u>23-32-37</u>	
Pipe Data			Perforating Data		Cement Data
Casing size <u>5 1/2" 17'</u>	Tubing Size		Shots/Ft		Lead
Depth <u>6520'</u>	Depth		From	To	
Volume <u>Disp- 150 bbl</u>	Volume		From	To	Tail in <u>200 sk</u> <u>AA 2</u>
Max Press <u>3000 #</u>	Max Press		From	To	
Well Connection <u>106510'</u>	Annulus Vol.		From	To	
Plug Depth <u>ST- 22'</u>	Packer Depth		From	To	
Time	Casing Pressure	Tubing Pressure	Bbbs. Pumped	Rate	Service Log
10:00					on loc-site assessment
10:15					spot trucks - rig up
11:30					CSG on botm - break circ
11:45					Safety meeting / ISA
12:00					pressure test @ 3000 #
12:15			13	3	plug rat + mouse holes w/ 50 sk 60/40 Poz @ 13.5'
12:35	200		5	3	pump 5 bbl 11/20 spacer
12:37	200		12	3	pump 12 bbl mud flush
12:42	200		5	3	pump 5 bbl 11/20 spacer
12:45	100		53.4	5	mix & pump 200 sk AA 2 @ 14.8 ppm - 1.51 ft/sk
					Wash lines
1:00	0		0	6	drop latm down plug - disp csg
1:25	900		140	2	slow rate
1:30	1500		150	0	land plug - float held
					job complete
Service Units		<u>31726</u>	<u>27462</u>	<u>19837-1483</u>	
Driver Names		<u>M. New</u>	<u>E. Kaylor</u>	<u>D. Beck</u>	

K. Willis
Customer Representative

J. Bennett
Station Manager

A. Jones
Cementer
Taylor Printing, Inc.



DRILL STEM TEST REPORT

Prepared For: **Palmer Oil Inc.**

PO Box 399
Garden City KS 67845

ATTN: Jeff Lawler

Willis #23-4

23-32-37 Stevens,KS

Start Date: 2013.08.01 @ 16:50:15

End Date: 2013.08.02 @ 01:44:30

Job Ticket #: 53145 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.02 @ 13:09:46



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palmer Oil Inc.

23-32-37 Stevens,KS

PO Box 399
Garden City KS 67845

Willis #23-4

Job Ticket: 53145

DST#: 1

ATTN: Jeff Lawler

Test Start: 2013.08.01 @ 16:50:15

Tool Information

Drill Pipe:	Length: 6132.00 ft	Diameter: 3.80 inches	Volume: 86.02 bbl	Tool Weight: 1500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 110000.0 lb
			<u>Total Volume: 86.93 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	6318.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			6290.00	
Shut In Tool	5.00			6295.00	
Hydraulic tool	5.00			6300.00	
Jars	5.00			6305.00	
Safety Joint	3.00			6308.00	
Packer	5.00			6313.00	29.00 Bottom Of Top Packer
Packer	5.00			6318.00	
Stubb	1.00			6319.00	
Recorder	0.00	8846	Inside	6319.00	
Recorder	0.00	8737	Outside	6319.00	
Perforations	2.00			6321.00	
Change Over Sub	1.00			6322.00	
Drill Pipe	32.00			6354.00	
Change Over Sub	1.00			6355.00	
Bullnose	5.00			6360.00	42.00 Bottom Packers & Anchor

Total Tool Length: 71.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palmer Oil Inc.
PO Box 399
Garden City KS 67845
ATTN: Jeff Lawler

23-32-37 Stevens,KS
Willis #23-4
Job Ticket: 53145 **DST#: 1**
Test Start: 2013.08.01 @ 16:50:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.37 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2700.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	mud 100%m	0.971

Total Length: 190.00 ft Total Volume: 0.971 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Chased tool 10 feet to bottom, Bottom packer had signs of a packer failure

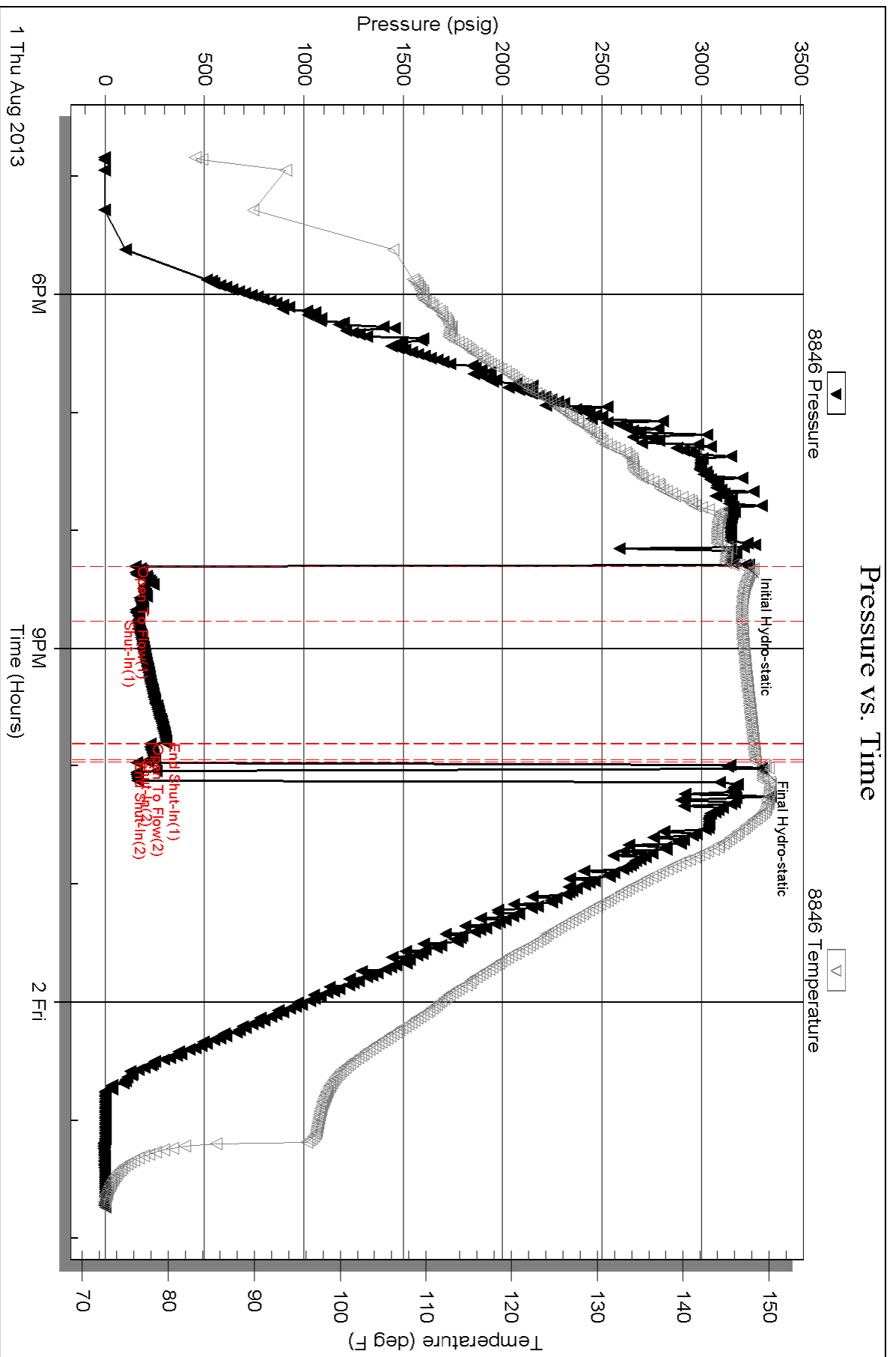
Serial #: 8846

Inside

Palmer Oil Inc.

Wells #23-4

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 53145

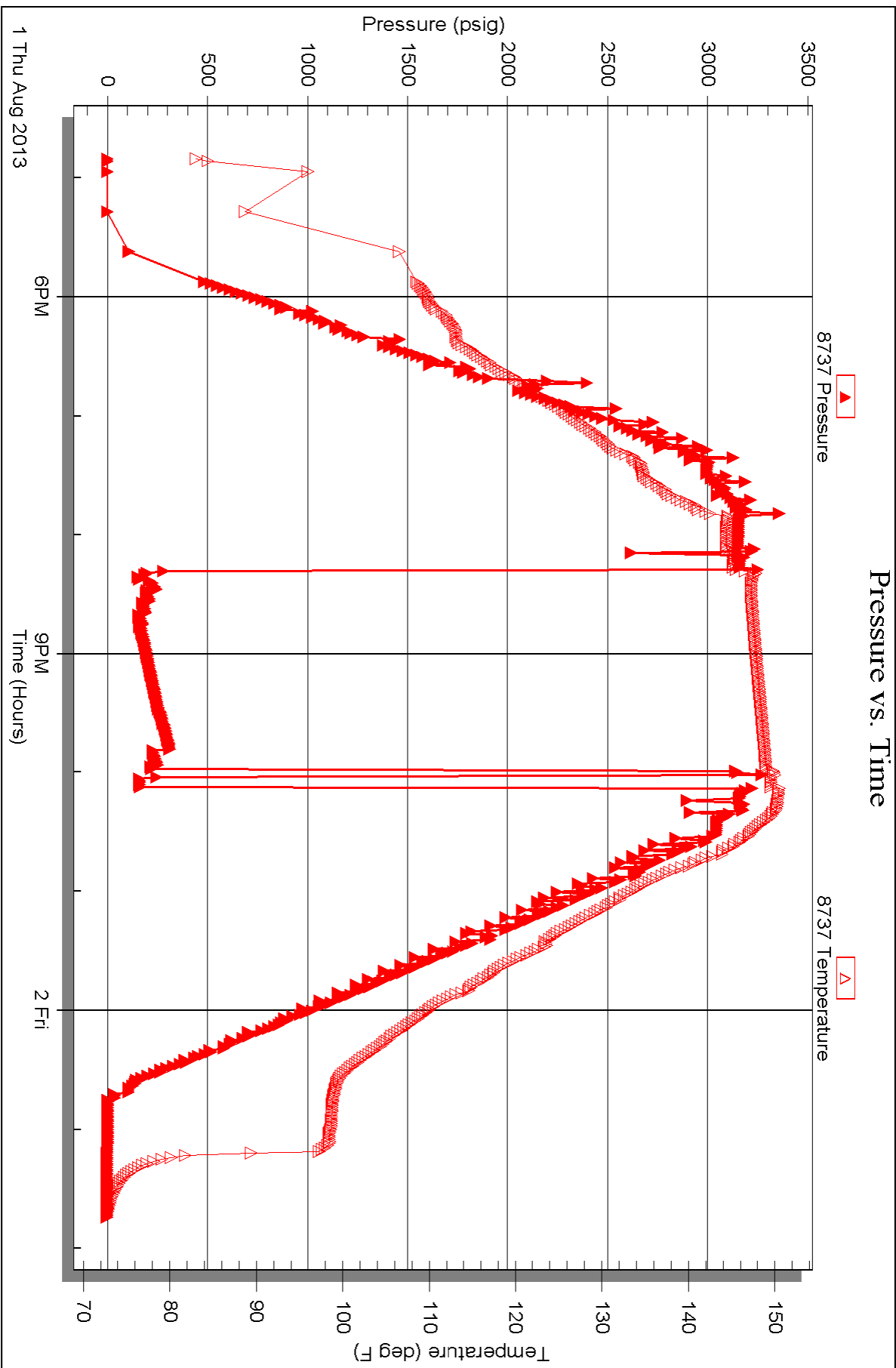
Printed: 2013.08.02 @ 13:09:49

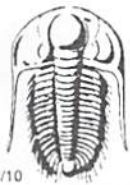
Serial #: 8737

Outside Palmer Oil Inc.

Wells #23-4

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53145

Well Name & No. Willis # 23-4 Test No. 1 Date 8-1-13
 Company Palmer Oil Inc Elevation 3128 KB 3116 GL
 Address 3116 N. Cummings Rd P.O. Box 399 Garden City KS 67845
 Co. Rep / Geo. Jeff Lawler Rig Duke #9
 Location: Sec. 23 Twp. 32 Rge. 37 Co. Stevens State KS

Interval Tested 6318-6340 Zone Tested St. Louis
 Anchor Length 42 Drill Pipe Run 6132 Mud Wt. 9.4
 Top Packer Depth 6314 Drill Collars Run 186 Vis 61
 Bottom Packer Depth 6318 Wt. Pipe Run Ø WL 8.4
 Total Depth 6360 Chlorides 2700 ppm System LCM 4
 Blow Description IF: Built to 1" Died to 1/2"
IS: NO Return Blow
FF: No Blow - Flusted tool - Pulled.
FS: _____

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</u>	<u>MUD</u>				<u>100%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 190 BHT 150 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>3220</u>	<input checked="" type="checkbox"/> Test <u>1450.00/-</u>	T-On Location <u>13:30</u>
(B) First Initial Flow <u>151</u>	<input checked="" type="checkbox"/> Jars <u>250.00</u>	T-Started <u>16:50</u>
(C) First Final Flow <u>177 177</u>	<input checked="" type="checkbox"/> Safety Joint <u>75.00</u>	T-Open <u>20:17</u>
(D) Initial Shut-In <u>308</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>22:30</u>
(E) Second Initial Flow <u>226</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>01:44</u>
(F) Second Final Flow <u>249</u>	<input checked="" type="checkbox"/> Mileage <u>230RT 356.50/-</u>	Comments <u>Chase tool 10'</u>
(G) Final Shut-In <u>217</u>	<input type="checkbox"/> Sampler	<u>to BOTTOM - BOTTOM</u>
(H) Final Hydrostatic <u>3304 3198</u>	<input type="checkbox"/> Straddle	<u>Packer has signs of failure</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>20</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>2131.50</u>
	Sub Total <u>#2131.50/-</u>	MP/DST Disc't


Approved By _____ Our Representative Mike Roberts

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.

WELL COMPARISON SHEET

FORMATION	WILLIS #23-4				WILLIS #23-2				WILLIS #23-4				PELAJO #23-1				UPC #23-1											
	3128		3116		3125		3137		3133																			
	LOGTOPS	SAMPLETOPS	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.											
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM										
HEEBNER					4152	-1036					4178	-1053					4175	-1038					4510	-1377				
LANSING					4283	-1167					4300	-1163					4271	-1138										
MARMATON	4985	-1857	4983	-1855	4962	-1846	- 11	- 9	4950	-1825	- 32	- 30	4947	-1810	- 45	- 48	4940	-1807	- 50	- 48								
CHEROKEE	5147	-2019	5145	-2017	5123	-2007	- 12	- 10	5140	-2015	- 4	- 2	5148	-2011	- 6													
ATOKA																												
MORROW	5659	-2531	5652	-2524	5630	-2514	- 17	- 10	5603	-2478	- 53	- 46	5620	-2483	- 41	- 25	5632	-2499	- 32	- 25								
ST. GENEVIEVE	6169	-3041	6180	-3052	6160	-3044	+ 3	- 8																				
ST. LOUIS	6325	-3197	6324	-3196	6300	-3184	- 13	- 12																				
ST. LOUIS 'B'	6373	-3245																										
RTD			6520	-3392	6500	-3384		- 8	6500	-3375		- 17	6500	-3363		- 29	6500	-3367		- 25								
LTD	6522	-3394																										

DST #1 ST. LOUIS 6318' - 6360'



DRILL STEM TEST REPORT

Palmer Oil Inc. **23-32-37 Stevens Co. KS**

3116 N Cummings Rd **Willis 23-4**
P.O. Box 399 Job Ticket: 53145 **DST#: 1**
Garden City KS 67845 Test Start: 2013.08.01 @ 16:50:15
ATTN: Jeff Lawler

GENERAL INFORMATION:

Formation: **St. Louis**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:18:15
Time Test Ended: 01:44:30

Interval: **6318.00 ft (KB) To 6360.00 ft (KB) (TVD)**
Total Depth: 6360.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 65

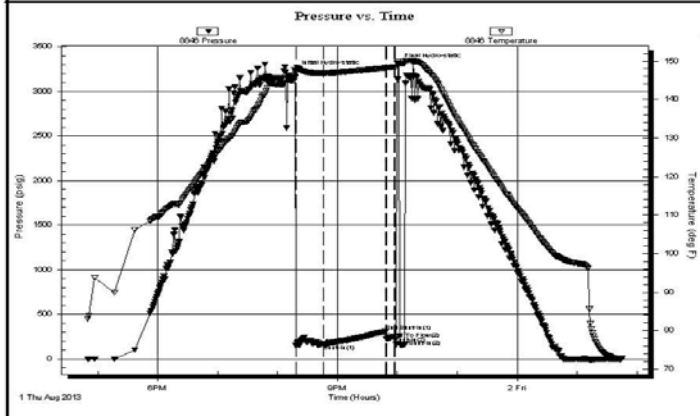
Reference Elevations: 3128.00 ft (KB)
3116.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8846 Inside

Press@RunDepth: 249.08 psig @ 6319.00 ft (KB)
Start Date: 2013.08.01 End Date: 2013.08.02
Start Time: 16:50:15 End Time: 01:44:30

Capacity: 8000.00 psig
Last Calib.: 2013.08.02
Time On Btm: 2013.08.01 @ 20:17:30
Time Off Btm: 2013.08.01 @ 22:00:45

TEST COMMENT: IF: Built to 1" blow died to 1/2" blow
IS: No return blow
FF: No blow --flushed tool--No blow pulled test
FS:



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3220.34	146.56	Initial Hydro-static
1	151.92	147.50	Open To Flow (1)
29	162.36	146.86	Shut-In(1)
91	308.09	148.21	End Shut-In(1)
92	226.67	148.21	Open To Flow (2)
100	249.08	148.40	Shut-In(2)
101	217.79	148.43	End Shut-In(2)
104	3304.09	149.89	Final Hydro-static

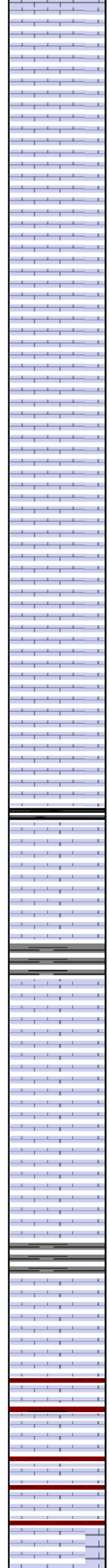
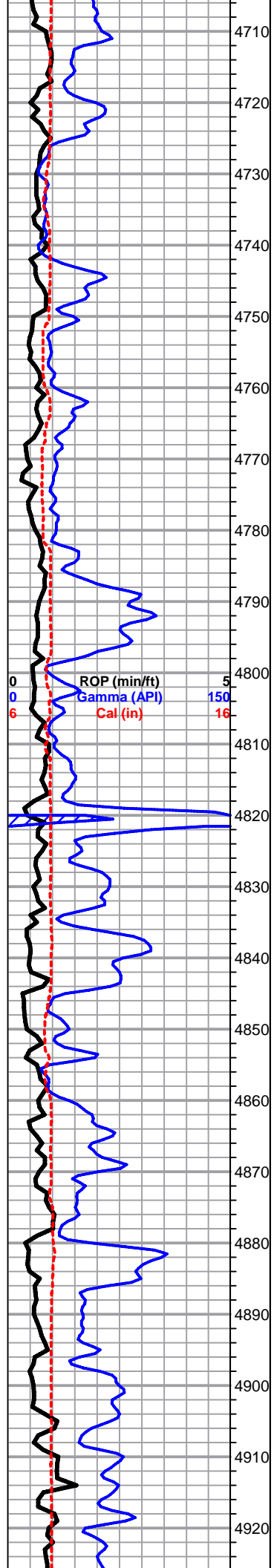
Recovery		
Length (ft)	Description	Volume (bbl)
190.00	mud 100% m	0.97

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

4710
4720
4730
4740
4750
4760
4770
4780
4790
4800
4810
4820
4830
4840
4850
4860
4870
4880
4890
4900
4910
4920

ROP (min/ft) 5
Gamma (API) 150
Cal (in) 16

0
0
6



Lm- Lt Gray, Vf-Fn Grn, grainy siltstone, well cemented, soft & calcareous, no vis. porosity

Lm- Lt Gray Cream, Fn Grn FXLN, mostly fn grn mud supported matrix, chalky cementation, sl fsl, some FXLN sl bioclastic, poor porosity, soft

Lm- Off White, Fn Grn FXLN, soft & chalky, fsl, some w/ sctrd micro XLN porosity & secondary micro ppt porosity, poorly developed, some soft white chalk

Lm- Cream Off White, FXLN Vf Grn, vry chalky & soft, much soft white chalk pcs, sl oolitic, poorly developed w/ minimal cementation & crumbly, hvy mottling

Lm- Buff, Fn Grn, soft & crumbly, chalky, vry hvy mottling, some w/ interbedded crinoids

Sh- Black, soft, fissile, carbonaceous

Lm- Ivory Cream, FXLN, dense, vry well cemented, few pcs of sl cherty ls w/ micro XLN porosity, sl fsl

Lm- Cream Lt Gray, FXLN, sl oolitic, poorly developed, min. vis. porosity w/ soft gray siltstone

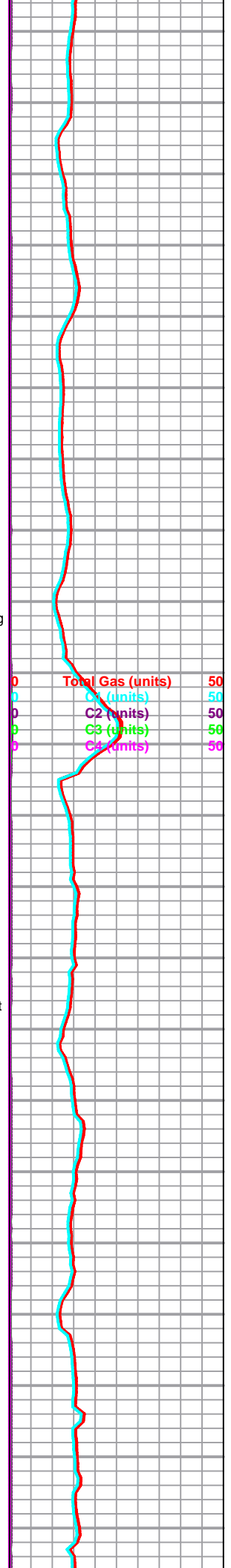
Lm- Cream Dove Gray, F-Med XLN Vf Grn, fsl & sl oolitic w/ rare oomoldic minimal skeletal dissolution, poorly dev. w/ micro XLN porosity, few w/ sctrd secondary recrystallization veins, much calcareous siltstone

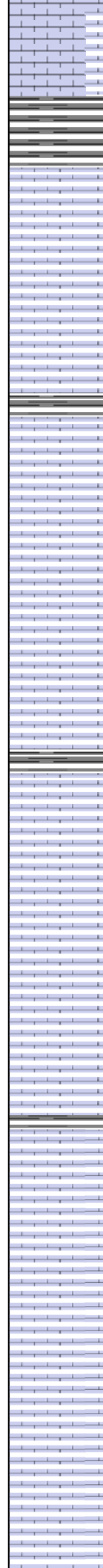
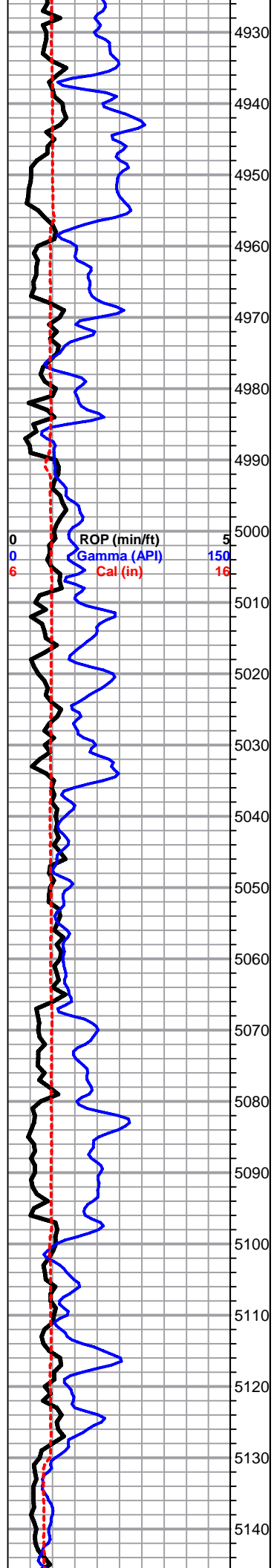
Lm- Tan Cream, FXLN, oolitic/oomoldic w/ partial skeletal dissolution, poorly dev w/ no intervugular connectivity, some sandy dove gray lime/shale

Lm- White Off White, Fn Grn, soft, vry chalky, sctrd mottling, poor intersial porosity, crumbly Sh- Gray Maroon, gritty & calcareous, gritty & earthy maroon pcs

Lm- Lt Gray, Fn Grn, mud supported, sctrd mottling, soft & crumbly, gritty & grainy, poorly dev. w/ minimal vis. porosity, sl trashy

Total Gas (units) 50
C1 (units) 50
C2 (units) 50
C3 (units) 50
C4 (units) 50





Lm- Cream Tan, FXLN, dense, sl fsl, loosely to well cemented, sctrd XLN porosity, some pcs w/ secondary recrystallization porosity, sctrd mottling

Lm- Lt Gray Buff, FXLN, dense, brittle, sl fsl, sl trashy, sctrd XLN porosity, some calcareous & chalky

Sh- Gray, silty, sl calcareous

MARMATON 4983' (-1855) E-LOG 4985' (-1857) Lm- Lt Gray, FXLN, gritty & grainy, dense, well cemented, no vis. porosity

Lm- White Ivory, FXLN Fn Grn, mostly soft mud supported matrix, chalky in part, loosely cemented & crumbley, some oolitic / sl oomoldic, poorly dev. w/ sctrd micro XLN porosity, all barren

Lm- White Off White, FXLN, clean, few sl fsl, most w/ XLN porosity, poorly dev. & barren

Lm- A/A w/ gritty & silty lt gray shale

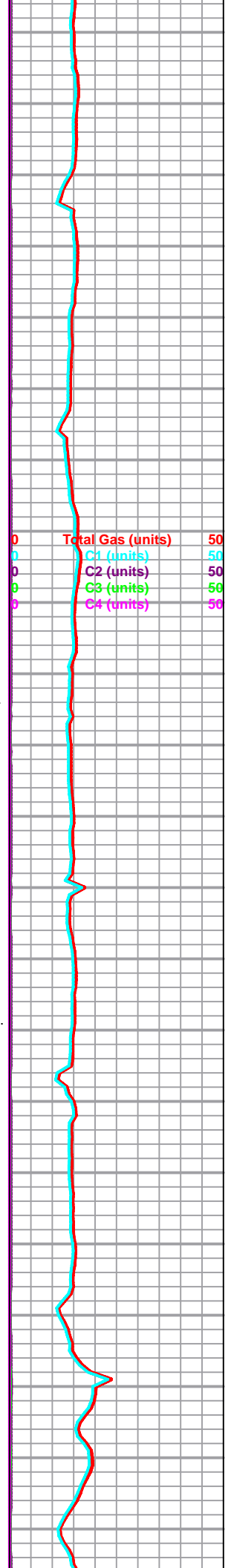
Lm- Gray, F-Med Grn, loosely cementend, gritty & grainy, poor intergranular vis. porosity, sl trashy

Lm- A/A w/ buff FXLN, dense, sl fsl, well cemented & poorly dev. w/ sctrd XLN porosity

Lm- Cream Off White, FXLN, loosely cemented & crumbly, some sl fsl, poor vis. porosity to sctrd XLN porosity

Lm- Buff Tan, VF-FXLN, dense, vry well cemented, sub-lithographic, poorly dev. w/ minimal vis. porosity, tight

Lm- Tan Buff, Fn Grn, sub-sucrosic, gritty, sl sandy, loosely cemented & poorly dev., some sl chalky and soft



CHEROKEE SHALE 5145' (-2017) E-LOG 5147' (-2019) Sh- Black, fissile, carbonaceous

Lm- Cream Tan, VF-FXLN, dense, vry well cemented, tight w/o vis. porosity, sl cherty

Lm- Dove Gray Cream, Fn Grn, mud supported matrix, sl sandy & gritty, well cemented w/ poor intergranular vis. porosity, some chalky in part & soft

Lm- White Off White, Vf-Fn Grn, soft, chalky, loosely cemented & crumbly

Lm- Drk Gray, Fn Grn, dense gritty siltstone

Lm- A/A, mostly well cemented & tight, some loosely cemented & limey

Lm- A/A w/ some pcs of FXLN w/ bioclasts, sctrd micro XLN & XLN porosity

Lm- Drk Gray, Fn Grn, gritty & well cemented, tight w/o vis. porosity

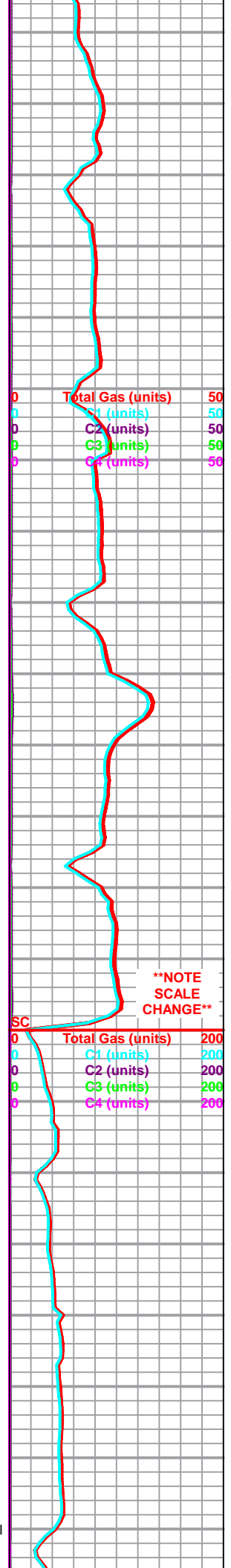
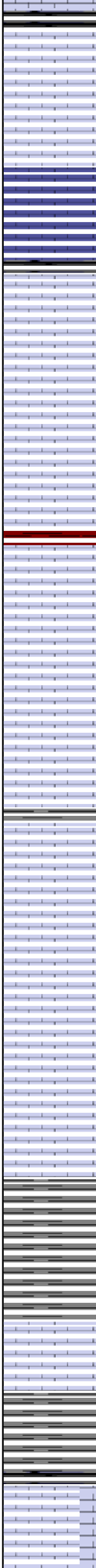
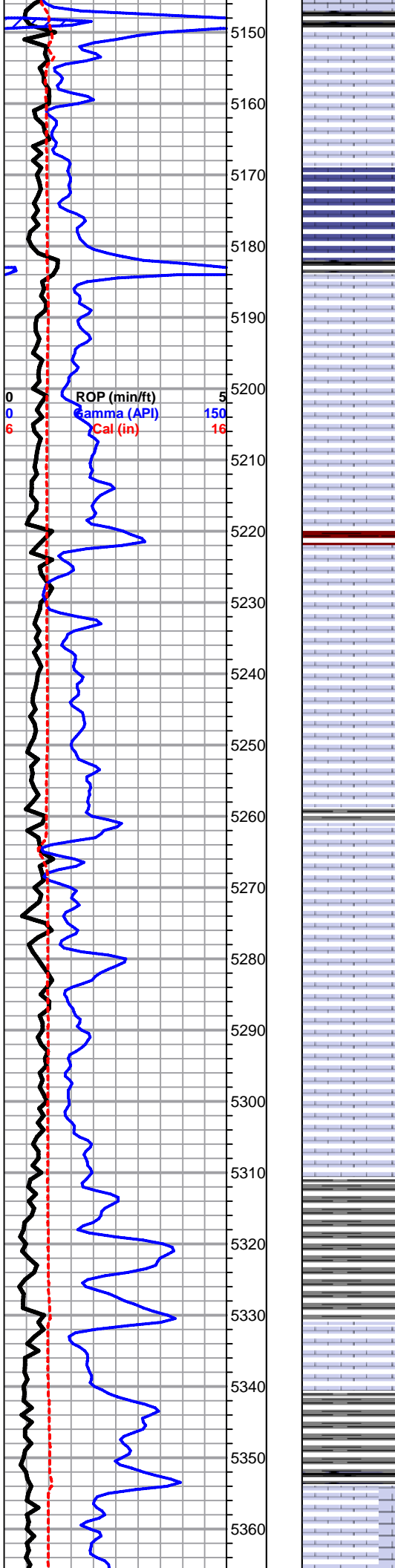
Sh- Drk Gray, silty & dense, gritty, few chips of lt gray sl sandy lime, Chert-Ivory, gritty sl dolomitic chert w/ micro pyrite inclusions

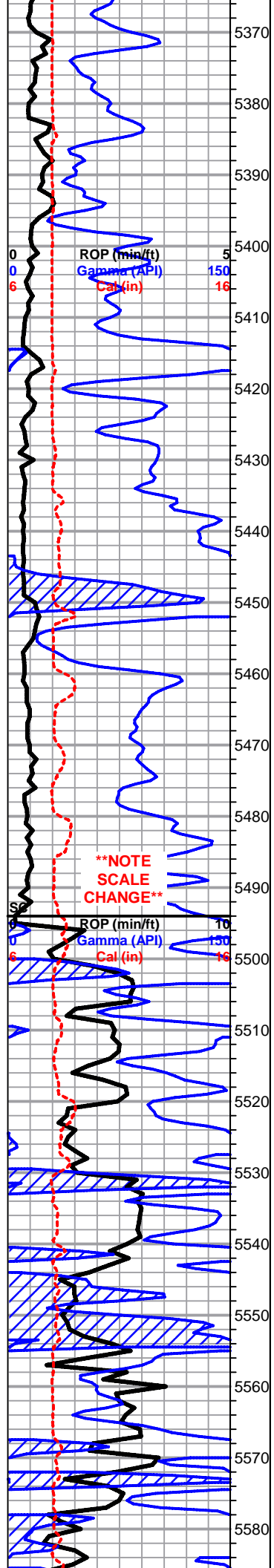
Sh- A/A Lm- Lt Gray, Fn Grn, dense, gritty, sl calcareous, siltstone w/o vis. porosity, mostly well cemented

Interbedded Sh & Lm benches A/A w/ more drk gray shale

Sh- Black, soft, fissile, carbonaceous

Lm- Cream Off White, Fn Grn FXLN, all loosely cemented & crumbley, FXLN sl fsl & poorly dev. w/ sctrd XLN porosity, all barren w/ sl sctrd mottling





Lm- Tan, FXLN, sl fsl, poorly dev. & sl trashy w/ sctrd XLN porosity, some chalky in part

Lm- A/A w/ more chalky mud supported matrix, soft & loosely cemented, some sandy gray shale

Sh- Black Drk Gray, silty, soft, carbonaceous, some sandy lime

Sh- Black Drk Gray, abundant A/A (>80% of tray), silty & sl calcareous

Sh- A/A, semi-slaty

Sh- A/A w/ interbedded Tan VF-FXLN Ls, tight & brittle cherty ls, some w/ fsl casts, minimal vis. - sctrd micro XLN porosity

****BIT TRIP @ 5498' STRAP + 4.26', SURVEY 1 dgr.****

Lm- Tan, FXLN, dense & vry well cemented, sl fsl, sctrd to dense XLN porosity

Sh- Drk & Lt Gray Black, soft & silty, some calcareous, few pcs of sandy shale/lime

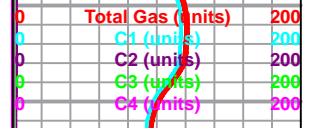
Sh- Black Gray, A/A w/ vry dense & well compacted gritty carbonaceous pcs, few pcs of soft calcareous lm green

Sh- Black, abundant gritty carbonaceous pcs, Lm- Tan, VFXLN, dense, vry well cemented cherty ls w/o vis. porosity

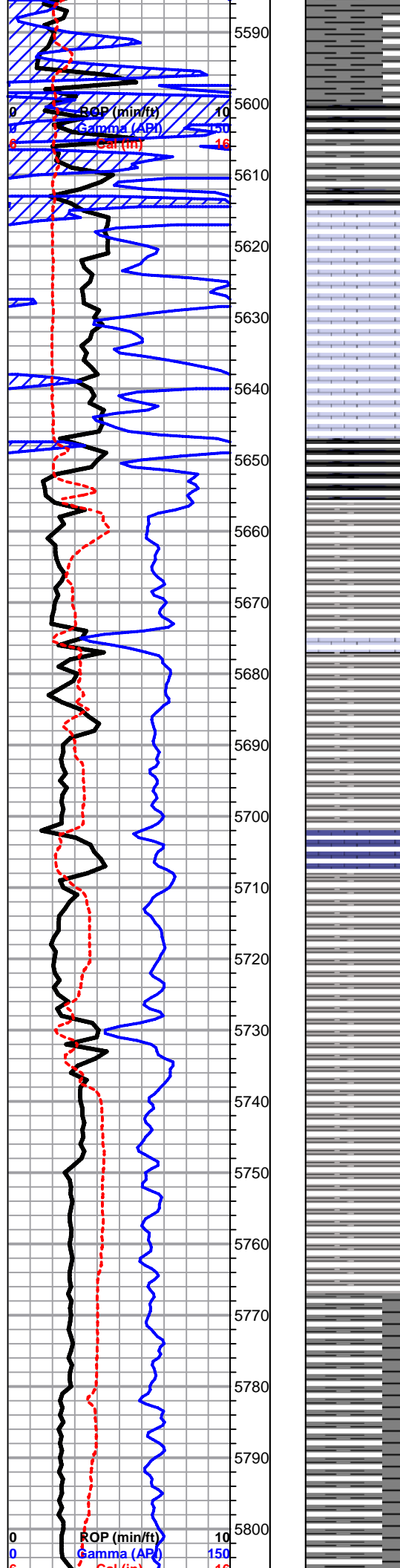
Lm- Cream Tan, FXLN, dense, well cemented & poorly dev., sl fsl w/ few bioclasts, sctrd XLN porosity, some sl trashy

Lm- Cream Tan, Vf-Fn Grn, dense, vry well cemented, tight, lithographic, no vis. porosity

Sh- Black Drk & Lt Gray, dense, vry well compacted, waxy thin pcs



TRIP GAS SPIKE



Sh- Black Drk & Lt Gray, dense, vry well compacted, waxy thin pcs, carbonaceous, silty, sl calcareous & soft, sl sandy lime

Sh- Black, dense, soft, fissile & carbonaceous

Lm- Brown, VFXLN, dense tight cherty ls w/o vis. porosity, few pcs w/ interbedded chlorite & pyrite inclusions

Lm- Tan Brown, VFXLN, dense cherty ls w/o vis. porosity, some sub-cryptocrystalline

Lm- Cream Off White, Vf-Fn Grn, dense, soft & loosely cemented, chalky w/ no vis. to poor intergranular vis., w/ much soft white chalk, vry clean

MORROW 5652' (-2524) E-LOG 5659' (-2531) Sh- Black, gritty & soft, many waxy dense & blocky pcs, carbonaceous

Sh- Black, soft, platy, vry organic rich, sl micaceous, pyritic, carbonaceous

Lm- Tan Cream, VFXLN Vf Grn, thin interbedded lenses, mix of tight cherty ls w/o vis. porosity & chalky, loosely cemented & crumbley w/ poor vis. intergranular porosity

Sh- Black, thin waxy, dense & vry well compcated thin slivers

Lm- White Off White, Vf Grn, soft & dense, loosely cemented mud supported matrix, chalky, no vis. porosity

Sh- Black Gray, fissile, soft & carbonaceous, sl calcareous, waxy & soft, sl pebbly

Sh- Gray, soft & silty, some gray wash & semi-gummy clumps

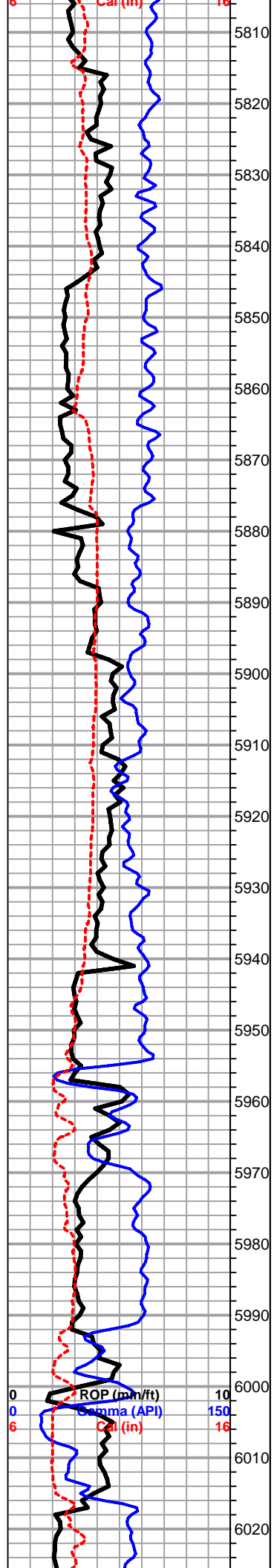
Sh- Drk Gray Black, soft & sl silty, some dense thin slivers, fissile & carbonaceous

Sh- A/A w/ increasing amount of black shale & silty calcareous lt gray pcs

Sh- Black Drk & Lt Gray, thin slivers, carbonaceous, soft & silty mix, some calcareous

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200



Sh- A/A w/ increasing amount of drk gray slivers

Sh- A/A w/ few pcs of earthy brick red

Sh- Black Drk Gray, abundant amount of thin carbonaceous slivers & drk gray slivers

Sh- A/A w/ few lt gray gummy argillaceous clumps

Sh- A/A w/ increasing amount of silty soft calcareous lt gray pcs

Sh- Thin slivers, black carbonaceous & drk gray, semi-waxy, soft & silty lt gray pcs

Sh- A/A

****SAMPLES STILL CONTAMINATED W/ MUCH DARK SHALE****

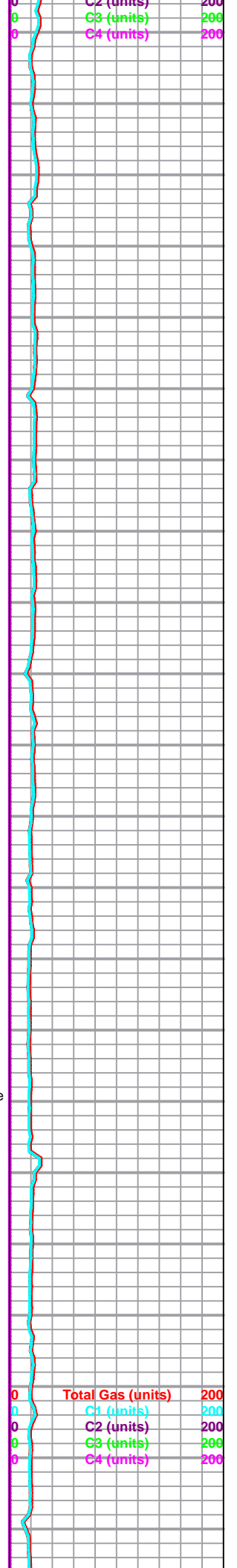
Lm- Tan Cream, Med-Crs XLN, unconsolidated & sl trashy, speckled w/ chlorite inclusions, weathered appearance w/ sctrd recrystallization, XLN porosity

Lm- Cream, Med-Crs XLN, unconsolidated bio-clastic w/ interbedded black oolites, high-energy w/ fsl fragments

Ss- Clear, Med Grn, consolidated & sub-rounded, loosely cemented & friable, chlorite & pyrite inclusions, NS

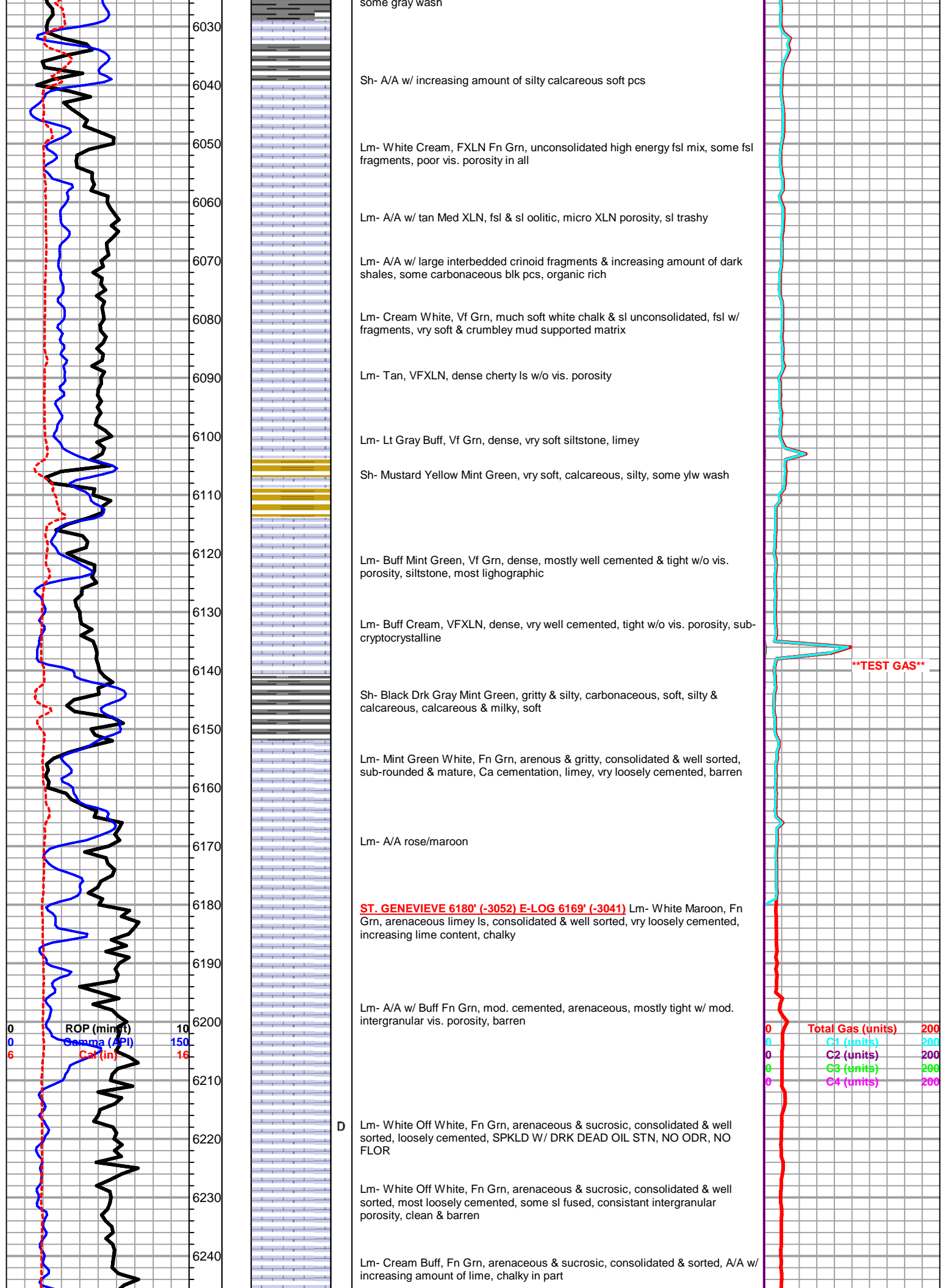
Lm- Cream Off White, F-Crs XLN, unconsolidated A/A, bioclastic w/ fsl fragments, few vry clean pcs of mud supported matrix w/o vis. porosity

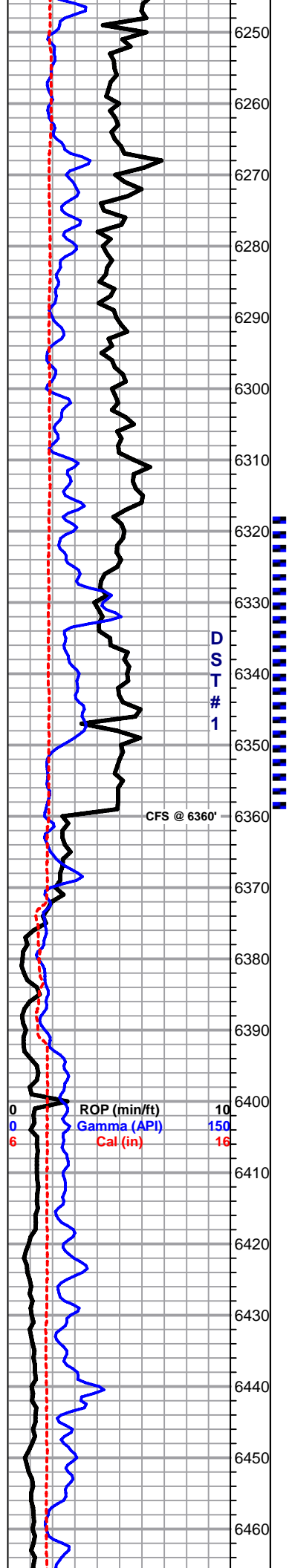
Sh- Black Drk & Lt Gray, thin waxy slivers, soft & silty pcs, some calcareous,



0 ROP (mm/ft) 10
0 Sigma (API) 150
6 Cal (in) 16

0 Total Gas (units) 200
0 C1 (units) 200
0 C2 (units) 200
0 C3 (units) 200
0 C4 (units) 200





Lm- A/A

Lm- A/A, some w/ increasing amount of lime, chalky

Lm- Cream Buff, Fn Grn, arenaceous & sucrosic, consolidated & mod. sorted, most loosely cemented w/ increasing amount fused & brittle

Lm- Cream Tan Buff, FN-Med XLN, arenaceous sucrosic ls, some well cemented & brittle w/ consistant to sctrd XLN porosity, 2-3 pcs of sl oolitic cherty ls

Lm- A/A

Lm- A/A, mix of FXLN & Fn-Med Grn arenaceous, sucrosic ls, few pcs of semi-translucent, vitreous, sl oolitic fresh bedded chert

Lm- Cream Off White, Fn-Med Grn, sl unconsolidated w/ small oolite inclusions, vry loosely cemented & chalky in part, clean & barren, fec pcs of golden brown, semi-translucent, salmon, & lm green speckled chert & cherty ls

ST. LOUIS 6324' (-3196) E-LOG 6325' (3197) Lm- White Cream, Fn Grn FXLN, mix of loosely cemented to mod cemented & fused, arenaceous sucrosic ls, mod dev. w/ mostly consistant intergranular porosity, sl chalky in part, SL WK BRWN STN, NO SFO, NO ODR, NO FLOR., increasing amount of clean clear-white & semi-translucent fresh bedded chert

Lm- A/A

○ Lm- A/A w/ WK SPOTTY STN, NO SFO, NO ODR, VR SL GSSY SHEEN, WK LT YLW FLOR UPON CRUSH

****TIH W/ PDC BIT AFTER DST #1****

ST. LOUIS 'B' E-LOG 6373' (-3245) Lm- White Off White, Fn Grn, arenaceous, chalky, loosley cemented, mod. intergranular porosity, WK SPOTTY STN, SL GSY SHN, NO SFO, FR ODR, BRT YLW FLOR. UPON CRUSH

○ Lm- White Off White, F-Med Grn, oolitic mud supported matrix, chalky cementation, mod. dev. w/ sctrd fn ppt interoolite porosity, SCTRD LT STN, FR GSY SHN, SL SFO, GD ODR

Lm- A/A transgressing w/ deplishing dev, very chalky, loosely cemented w/ poor intergranular porosity, barren

○ Lm- Off White Cream, F-MED XLN, fsl, mod. dev. w/ consistant XLN porosity, some sl chalky in part, WK SPOTTY STN, NO SFO, VRY SL GSY SHN, FNT ODR

Lm- A/A w/ increasing amount of chalk, all loosely cemented & crumbly, barren

Lm- Tan Cream, Fn Grn, dense, mud supported matrix, vry loosely cemented & crumbly, chalky in part, dense fenestral porosity, barren

Lm- A/A w/ tan cryptocrystalline cherty ls w/o vis. porosity

Lm- Cream Off White, FXLN, poorly dev., sl oolitic w/ poor chalky inter oolitic porosity, loosely cemented & crumbly, chalky in part, dense fenestral porosity, barren

26 UNITS @ 6320'

SHORT TRIP

DST #1
ST. LOUIS
6318' - 6360'

61 UNITS

43 UNITS

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

6470
6480
6490
6500
6510
6520
6530
6540

Lm- A/A w/ increasing amount of buff vf-fn grn arenaceous ls, gritty & sub-sucrosic, loosely cemented, poor-mod vr fn ppt intergranular porosity, barren, sl chalky in part

Lm- Cream Off White, A/A w/ sctrd mottling & vry soft white chalk

Lm- Cream Buff, FXLN, dense, poorly dev., well cemented, no vis. porosity, tight

Lm- A/A w/ much snow white soft chalk

**RTD 6520' (-3392) LTD 6522' (-3394) @ 09:20
8/2/2013**

