KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1153519

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4058
Name: American Warrior, Inc.
Address 1: 3118 Cummings Rd
Address 2: PO BOX 399
City: GARDEN CITY State: KS Zip: 67846 + _ _ _ _
Contact Person: Joe Smith
Phone: (620) 275-2963
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Jeff Lawler
Purchaser: NCRA

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

05/06/2013	05/14/2013	07/29/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-189-22797-00-00
Spot Description:
NE - SW - SW - NE Sec. 15 Twp. 32 S. R. 35 [ ] East [x] West
2260 Feet from [x] North / [ ] South Line of Section
2264 Feet from [x] East / [ ] West Line of Section

Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW

County: Stevens
Lease Name: Glen McCully Well #: 7-15
Field Name:
Producing Formation: Chester
Elevation: Ground: 2986 Kelly Bushing: 2997
Total Depth: 6250 Plug Back Total Depth: 6200
Amount of Surface Pipe Set and Cemented at: 1740 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 15000 ppm Fluid volume: 100 bbls
Dewatering method used: Evaporated

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

- [ ] **Letter of Confidentiality Received**
  Date:
- [ ] **Confidential Release Date:**
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [x] **I** [ ] **II** [ ] **III** **Approved by:** Deanna Garrison **Date:** 07/31/2013

Side Two

1153519

Operator Name: American Warrior, Inc. Lease Name: Glen McCully Well #: 7-15

Sec. 15 Twp. 32 S. R. 35 ☐ East ☑ West County: Stevens

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

Porosity
Induction
Micro

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Surface	12.250	8.625	24	1740	Class A	575	3%CC,2% gel
Production	7.875	5.50	17	6248	SMD	200	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
4	6120' to 6148		

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:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
6120' to 6148'

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	Glen McCully 7-15
Doc ID	1153519

Tops

Name	Top	Datum
Heebner	4176'	-1179
Lansing	4305'	-1308
Stark	4794'	-1797
Marmaton	4977'	-1980
Cherokee	5186'	-2189
Atoka	5450'	-2453
Morrow	5609'	-2612
Chester	5970'	-2973
St.Gen	6150'	-3153

ALLIED OIL & GAS SERVICES, LLC 053031

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Liberal ks.

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
05-07-13	15	32S	35W		2:30Pm	5:30	6:30Pm

LEASE	WELL #	LOCATION	COUNTY	STATE
Glen McCully	7-15	N.E. Hugoton ks.	Stevens.	KS

OLD OR (NEW) (Circle one)

CONTRACTOR Duke #9

OWNER American Warrior

TYPE OF JOB Surface.

HOLE SIZE 12 1/4 T.D. 1745 feet

CASING SIZE 8 5/8 24# DEPTH 1740.22

TUBING SIZE DEPTH

DRILL PIPE 4 1/2. DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 41.85 ft

CEMENT LEFT IN CSG. 41.85 ft

PERFS.

DISPLACEMENT 108.186 BBls.

EQUIPMENT

PUMP TRUCK #531-541 CEMENTER Ruben Chavez
HELPER Cesar Pavia

BULK TRUCK #470- DRIVER Ricardo Estrada

BULK TRUCK #527-field BIN. DRIVER

REMARKS:

Pressure test lines at 2000 PSI, then pump 10 BBls H2O-Spacer. Mix + pump 525sk of Cement (286 BBls of slurry) and displace with 108 BBls H2O. Bump plug at 1000 PSI, release pressure flow held. Circulate to pit 20 BBls of slurry.
Thank you

CHARGE TO: American Warrior

STREET

CITY STATE ZIP

CEMENT

AMOUNT ORDERED 425sk "A" 3% C.C 2% NaMS, 2% Gyp Seal, 1/4 lb/sk F-Seal, 150sk "C" 2% C-C.

COMMON	class A 425sk	@ 17.90	7,607.50
POZMIX		@	
GEL		@	
CHLORIDE	19 sk	@ 64.00	1,216.00
ASC		@	
CCPP	Class "C" 150sk	@ 24.40	3,660.00
NAMS	799 lb	@ 3.30	2,636.70
GpSL	8 sk	@ 37.60	300.80
FLSL	106 lb	@ 2.97	314.82
		@	
		@	
		@	
		@	
HANDLING	629 Cu ft	@ 2.48	1,559.92
MILEAGE	527 Ton Mi.	2.60	1,370.20

TOTAL 18,665.94

SERVICE

DEPTH OF JOB	1745 feet		
PUMP TRUCK CHARGE			2,213.75
EXTRA FOOTAGE		@	
MILEAGE	heavy Veh. 20	@ 7.70	154.00
MANIFOLD	+ Cem head 1	@ 275.00	275.00
Light Vehicle	20 M.	@ 4.40	88.00
		@	

TOTAL 2,730.75

PLUG & FLOAT EQUIPMENT

8 5/8

Guide Shoe	1	@ 460.98	460.98
AFU-Float Value	1	@ 446.94	446.94
Centralizer	3	@ 74.88	224.64
Cement Basket	1	@ 559.26	559.26
Top rubber plug	1	@ 131.64	131.64

TOTAL 1,822.86

SALES TAX (If Any)

TOTAL CHARGES 23,219.55

DISCOUNT IF PAID IN 30 DAYS

NET = 18,575.64

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.

PRINTED NAME Emigdio Rojas

SIGNATURE Emigdio Rojas

SWIFT Services, Inc.

CHARGE TO: American Warrior

ADDRESS

CITY, STATE, ZIP CODE

TICKET № 24712

PAGE 1 OF 2

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	7-15	Glen McCully	Stevens	KS	Satanta	15 MAY 13	
2.	TICKET TYPE ☐ SERVICE ☐ SALES	CONTRACTOR DUKE	RIG NAME/NO. 9	SHIPPED VIA CT	DELIVERED TO Location	ORDER NO.	
3.	WELL TYPE Oil	WELL CATEGORY Development	JOB PURPOSE cement long string		WELL PERMIT NO.	WELL LOCATION 15-32-35	
4.							
REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE TRK 114	120	mi			6.00	720.00
578		1			Pump Charge	1	ea			1500.00	1500.00
402		1			Centralizer	5½	in	10	ea	70.00	700.00
403		1			Cement Basket	5½	in	2	ea	285.00	570.00
406		1			Latch Down Plug & baffle	5½	in	1	ea	275.00	275.00
407		1			Insert Float shoe w/ Auto Fill	5½	in	1	ea	375.00	375.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY,** and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X Jose Reyes

DATE SIGNED 5-15-2013 TIME SIGNED ☐ A.M. ☐ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 1	4130.00
2	7193.65
subtotal	11,323.65
Stevens TAX 6.3%	448.62
TOTAL	11,782.27

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR A Simpbell APPROVAL

Thank You!

SWIFT Services, Inc.

PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 24712

CUSTOMER: American Warrior | WELL: Glen McColly 7-15 | DATE: 15 MAY 13 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
330		1		1		SMD cement	250	sk			17.00	4250.00
276		1		1		flocele	75	lb			2.00	150.00
281		1		1		mudflush	500	gal			1.25	625.00
221		1				KCl liquid	2	gal			25.00	50.00
290		1		1		D-AIR	3	gal			42.00	126.00
~~582~~ 581		1				SERVICE CHARGE 250	CUBIC FEET				2.00	500.00
583		1		1		MILEAGE CHARGE TOTAL WEIGHT 24877 LOADED MILES 120 1492.65	TON MILES				1.00	1492.65

CONTINUATION TOTAL 7193.65

JOB LOG

SWIFT Services, Inc.

DATE 15 MAY 13 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
American Warrior	7-15	Glen McCully	cement long string	24712

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								250sk SMD w/ ¼# Flocele
								5½" x 17# TD = 6250' 144 joints
								Centralize 1, 3, 5, 7, 9, 11, 13, 17, 19, 21
								Basket #10, #20 5 joints out
								set 6248' shoe jt 44'
	0845							on loc TRK 114
	0910							start 5½" 17# casing in well
	1210							Drop ball - circulate
	1240	4¾	12				200	Pump 500 gal mud Flush
		4¾	20				200	Pump 20 bbl KCL Flush
	1248		15					Plug RH - MH ~~30sks~~ - ~~20sks~~
	1257	4¾	37				200	mix SMD cement ~~50sks~~ @ 12.7 ppg
		4¾	24				200	mix SMD cement ~~100sks~~ @ 13.5 ppg
		4¾	17				200	mix SMD cement ~~50sks~~ @ 14.3 ppg
			78 slurry					200 total
								Drop latch down plug
	1313							wash out pump & line
	1318	6¾					200	Displace plug
		8	130				800	
	1330	8	144				1700	Land plug
	1335							Release pressure to truck - dried up
	~~1340~~ ~~1415~~							wash truck
								rack up
	1415							job complete
								Thanks Dave, Doug & Blaine

DRILL STEM TEST REPORT

Prepared For: **American Warrior, Inc**

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

Glen McCully #7-15

15-32s-35w Stevens,KS

Start Date: 2013.05.13 @ 05:30:15

End Date: 2013.05.13 @ 14:27:00

Job Ticket #: 50199 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.20 @ 13:16:23

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 50199 **DST#: 1**

Test Start: 2013.05.13 @ 05:30:15

GENERAL INFORMATION:

Formation: **Chester Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:58:00
Time Test Ended: 14:27:00

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

Interval: 6055.00 ft (KB) To 6125.00 ft (KB) (TVD)
Total Depth: 6125.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

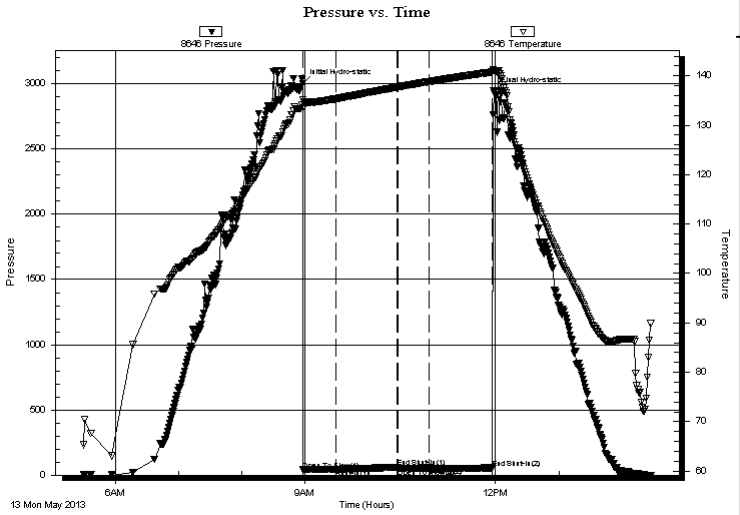
Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8646 **Inside**

Press@RunDepth: 55.68 psig @ 6056.00 ft (KB)
Start Date: 2013.05.13 End Date: 2013.05.13
Start Time: 05:30:15 End Time: 14:27:00

Capacity: 8000.00 psig
Last Calib.: 2013.05.13
Time On Btm: 2013.05.13 @ 08:57:45
Time Off Btm: 2013.05.13 @ 11:58:15

TEST COMMENT: IF:Built to 1/4" blow and died to 1/8" blow
IS:No return blow
FF:No blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3004.75	135.22	Initial Hydro-static
1	40.23	133.57	Open To Flow (1)
32	45.12	135.37	Shut-In(1)
90	59.93	137.71	End Shut-In(1)
90	50.51	137.72	Open To Flow (2)
120	55.68	138.84	Shut-In(2)
180	55.43	140.77	End Shut-In(2)
181	2944.08	141.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m (thick mud)	0.02

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 50199 **DST#: 1**

Test Start: 2013.05.13 @ 05:30:15

Tool Information

Drill Pipe:	Length:	5851.00 ft	Diameter:	3.80	inches	Volume:	82.07	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:	182.00 ft	Diameter:	2.25	inches	Volume:	0.90	bbl	Weight to Pull Loose:	100000.0 lb
						Total Volume:	82.97	bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		6.00 ft							String Weight: Initial	88000.00 lb
Depth to Top Packer:		6055.00 ft							Final	89000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		70.00 ft								
Tool Length:		98.00 ft								
Number of Packers:		2	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			6028.00		
Shut In Tool	5.00			6033.00		
Hydraulic tool	5.00			6038.00		
Jars	5.00			6043.00		
Safety Joint	3.00			6046.00		
Packer	5.00			6051.00	28.00	Bottom Of Top Packer
Packer	4.00			6055.00		
Stubb	1.00			6056.00		
Recorder	0.00	8646	Inside	6056.00		
Recorder	0.00	8365	Outside	6056.00		
Perforations	4.00			6060.00		
Change Over Sub	1.00			6061.00		
Drill Pipe	32.00			6093.00		
Change Over Sub	1.00			6094.00		
Perforations	26.00			6120.00		
Bullnose	5.00			6125.00	70.00	Bottom Packers & Anchor
Total Tool Length:	**98.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 50199 **DST#: 1**

Test Start: 2013.05.13 @ 05:30:15

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:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.38 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100% m (thick mud)	0.025

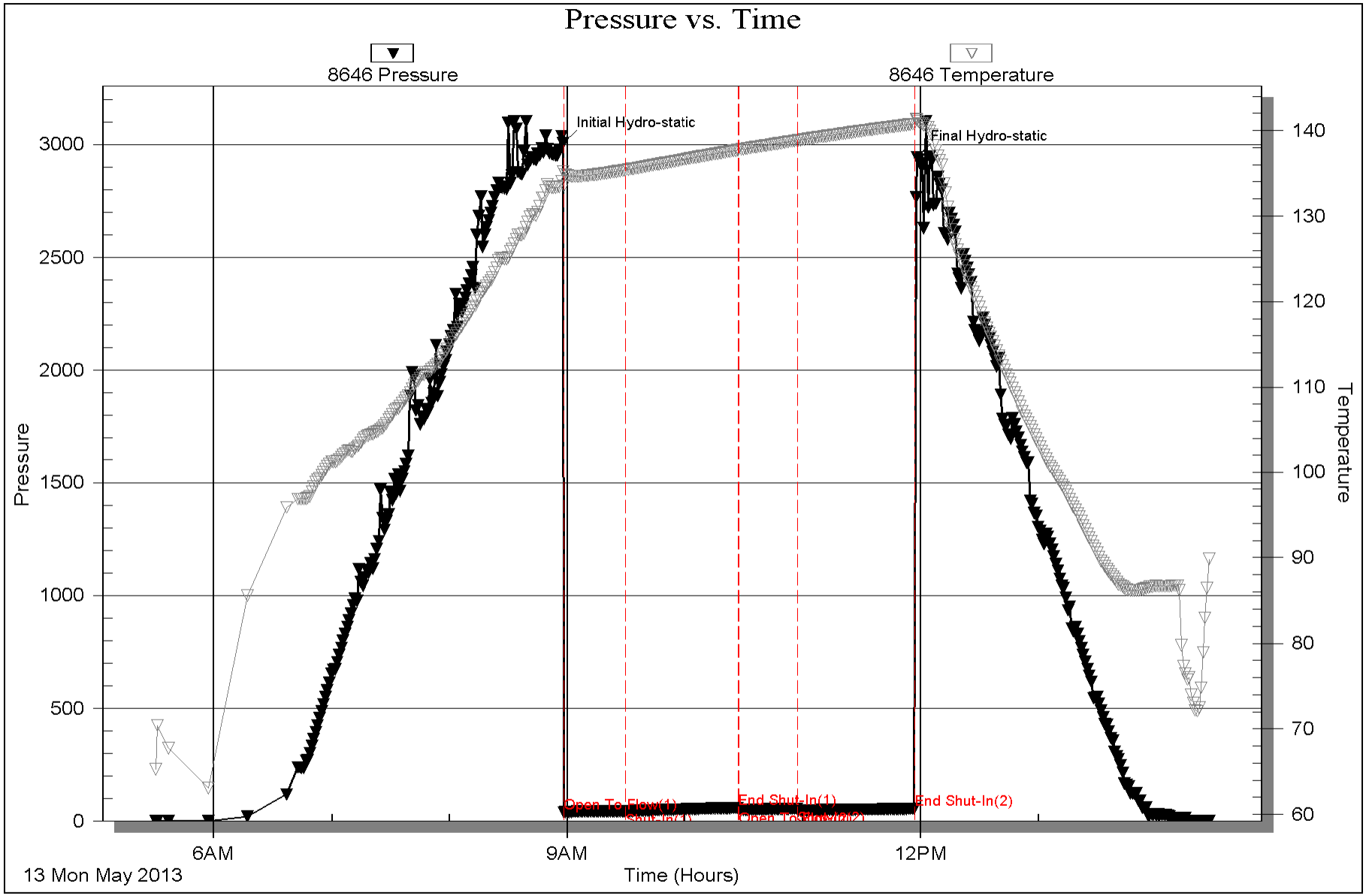
Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8646 **Inside** American Warrior, Inc Glen McCully #7-15 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50199 Printed: 2013.05.20 @ 13:16:25

DRILL STEM TEST REPORT

Prepared For: **American Warrior, Inc**

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

Glen McCully #7-15

15-32s-35w Stevens,KS

Start Date: 2013.05.14 @ 14:38:34
End Date: 2013.05.14 @ 21:22:34
Job Ticket #: 53210 DST #: 2

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

Printed: 2013.05.20 @ 13:15:39

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 53210 **DST#: 2**

Test Start: 2013.05.14 @ 14:38:34

GENERAL INFORMATION:

Formation: **Chester**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:30:00
Time Test Ended: 21:22:34

Test Type: Conventional Straddle (Reset)
Tester: Tate Lang
Unit No: 46

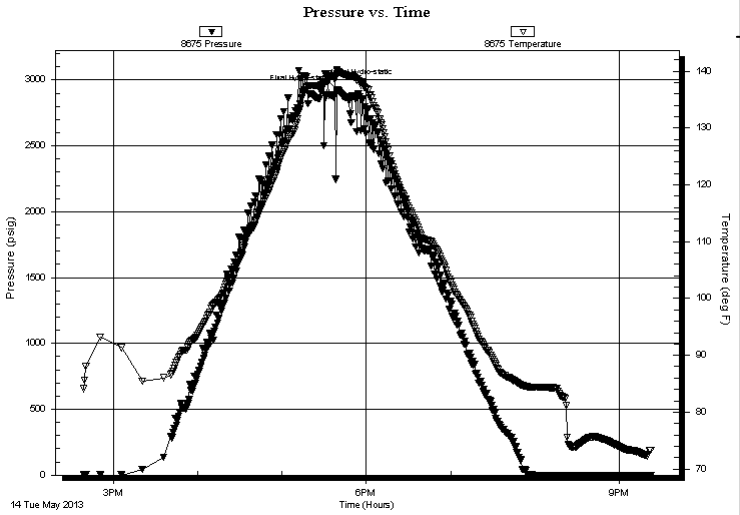
Interval: 5838.00 ft (KB) To 5920.00 ft (KB) (TVD)
Total Depth: 6200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8675 **Inside**

Press@RunDepth:	psig @	5836.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2013.05.14	End Date:	2013.05.14	Last Calib.:	2013.05.14
Start Time:	14:38:49	End Time:	21:22:34	Time On Btm:	2013.05.14 @ 17:29:34
				Time Off Btm:	2013.05.14 @ 17:39:04

TEST COMMENT: Set 3 time Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2972.52	137.57	Initial Hydro-static
10	2926.73	140.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
690.00	100%M	8.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 53210 **DST#: 2**

Test Start: 2013.05.14 @ 14:38:34

GENERAL INFORMATION:

Formation: **Chester**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:30:00
Time Test Ended: 21:22:34

Test Type: Conventional Straddle (Reset)
Tester: Tate Lang
Unit No: 46

Interval: 5838.00 ft (KB) To 5920.00 ft (KB) (TVD)
Total Depth: 6200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

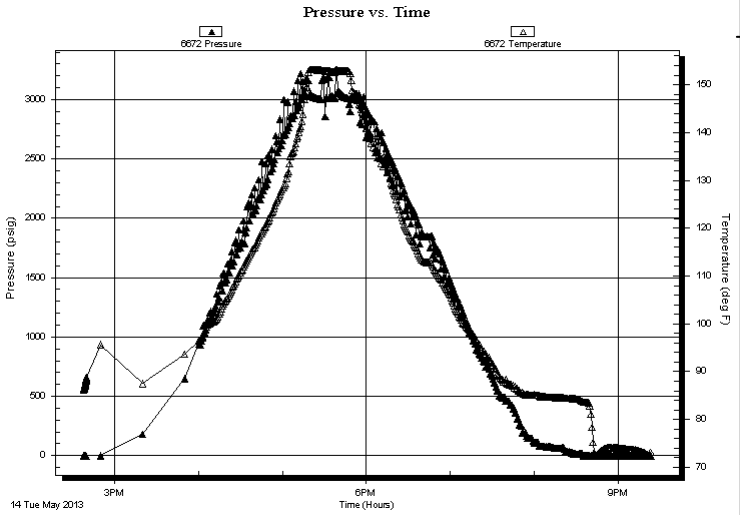
Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 6672 **Below (Straddle)**

Press@RunDepth: psig @ 5944.00 ft (KB)
Start Date: 2013.05.14 End Date: 2013.05.14
Start Time: 14:38:05 End Time: 21:23:34

Capacity: 8000.00 psig
Last Calib.: 2013.05.14
Time On Btm:
Time Off Btm:

TEST COMMENT: Set 3 time Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
690.00	100%M	8.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 53210 **DST#: 2**

Test Start: 2013.05.14 @ 14:38:34

GENERAL INFORMATION:

Formation: **Chester**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:30:00
Time Test Ended: 21:22:34

Test Type: Conventional Straddle (Reset)
Tester: Tate Lang
Unit No: 46

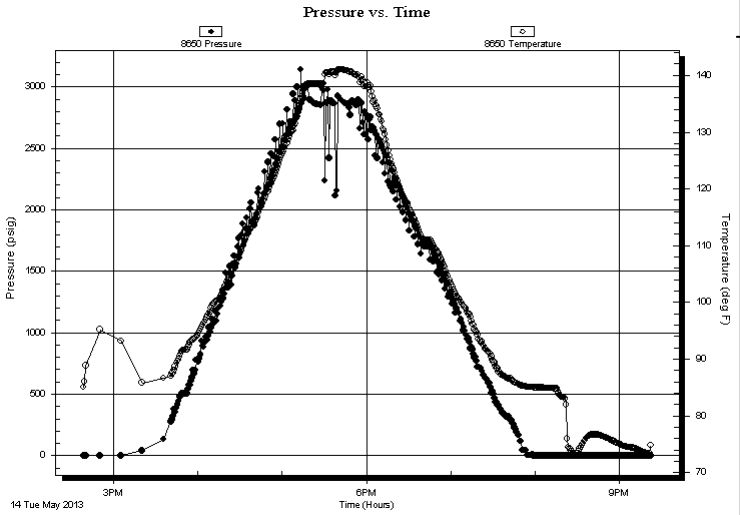
Interval: 5838.00 ft (KB) To 5920.00 ft (KB) (TVD)
Total Depth: 6200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8650 **Outside**

Press@RunDepth:	psig @	5836.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2013.05.14	End Date:	2013.05.14	Last Calib.:	2013.05.14
Start Time:	14:38:43	End Time:	21:22:43	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: Set 3 time Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
690.00	100%M	8.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 53210 **DST#: 2**

Test Start: 2013.05.14 @ 14:38:34

Tool Information

Drill Pipe:	Length:	5657.00 ft	Diameter:	3.80 inches	Volume:	79.35 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:		30000.00 lb
Drill Collar:	Length:	182.00 ft	Diameter:	2.25 inches	Volume:	0.90 bbl	Weight to Pull Loose:		110000.0 lb
					Total Volume:	80.25 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		31.50 ft					String Weight:	Initial	95000.00 lb
Depth to Top Packer:		5835.00 ft						Final	105000.0 lb
Depth to Bottom Packer:		5917.00 ft							
Interval between Packers:		82.00 ft							
Tool Length:		398.50 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			5812.50		
Hydraulic tool	5.00			5817.50		
Jars	5.00			5822.50		
Safety Joint	2.50		Fluid	5825.00		
Packer	5.00			5830.00	27.50	Bottom Of Top Packer
Packer	5.00			5835.00		
Stubb	1.00			5836.00		
Recorder	0.00	8675	Inside	5836.00		
Recorder	0.00	8650	Outside	5836.00		
Perforations	1.00			5837.00		
Change Over Sub	1.00			5838.00		
drill Pipe	63.00			5901.00		
change Over Sub	1.00			5902.00		
Perforations	14.00			5916.00		
Blank Off Sub	1.00			5917.00	82.00	Tool Interval
Packer	3.00			5920.00		
Stubb	1.00			5921.00		
Perforations	22.00			5943.00		
Change Over Sub	1.00			5944.00		
Recorder	0.00	6672	Below	5944.00		
Drill Pipe	258.00			6202.00		
Change Over Sub	1.00			6203.00		
Bullnose	3.00			6206.00	289.00	Bottom Packers & Anchor
Total Tool Length:	**398.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior, Inc

PO Box 399
Garden City KS 67846

ATTN: Jeff Lawler

15-32s-35w Stevens,KS

Glen McCully #7-15

Job Ticket: 53210 **DST#: 2**

Test Start: 2013.05.14 @ 14:38:34

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:	ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.37 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

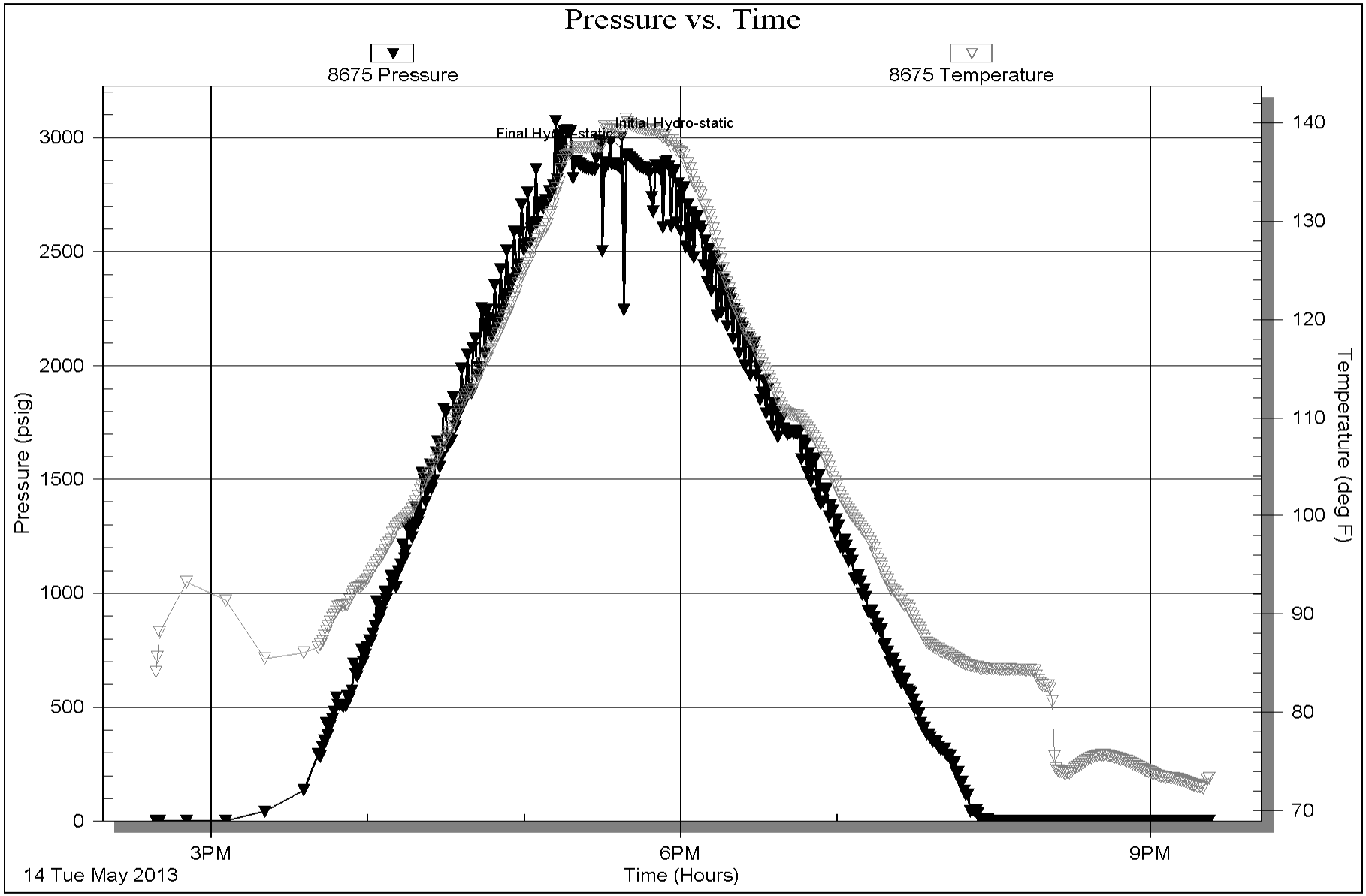
Length ft	Description	Volume bbl
690.00	100%M	8.021

Total Length: 690.00 ft Total Volume: 8.021 bbl

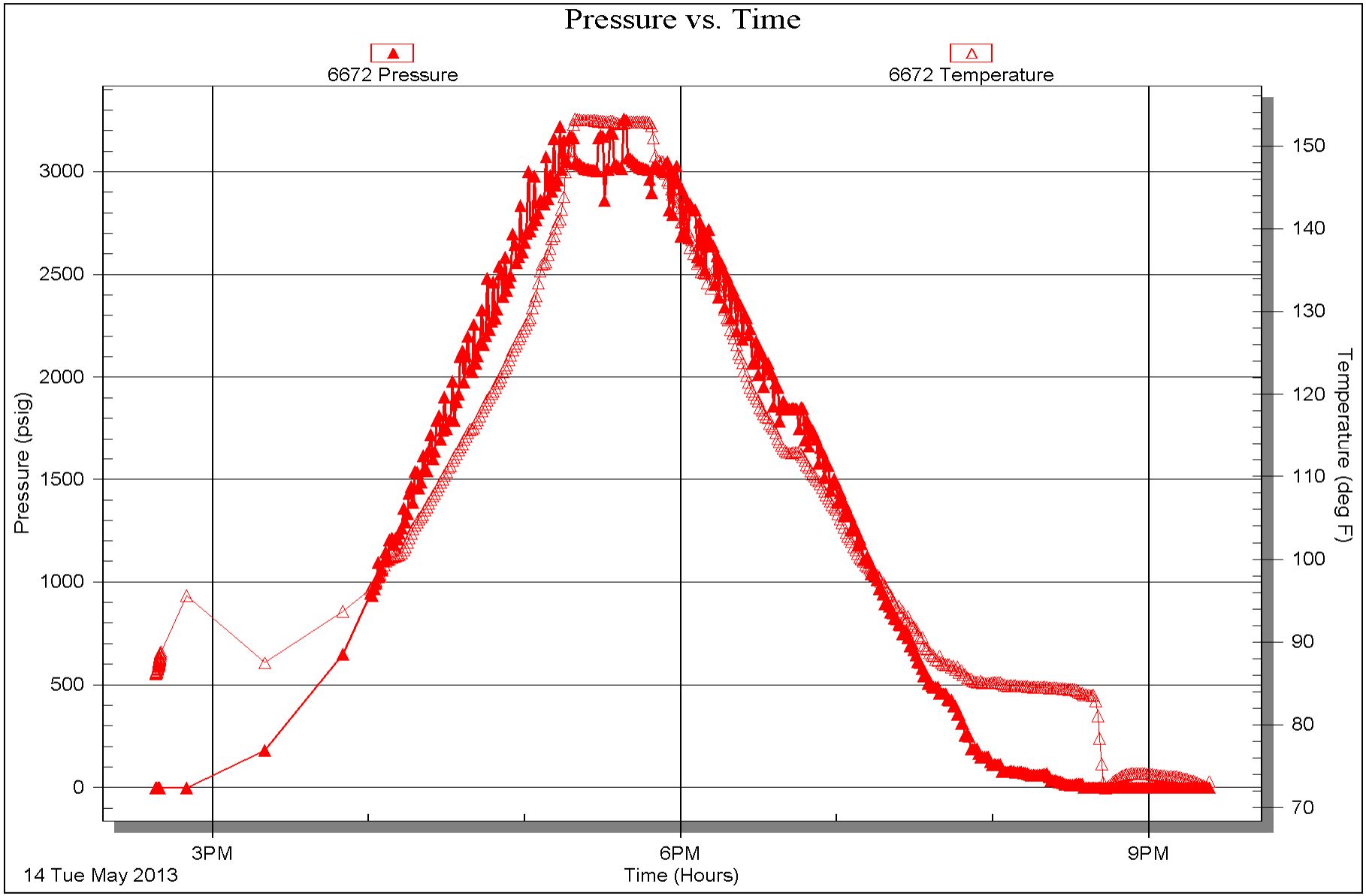
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

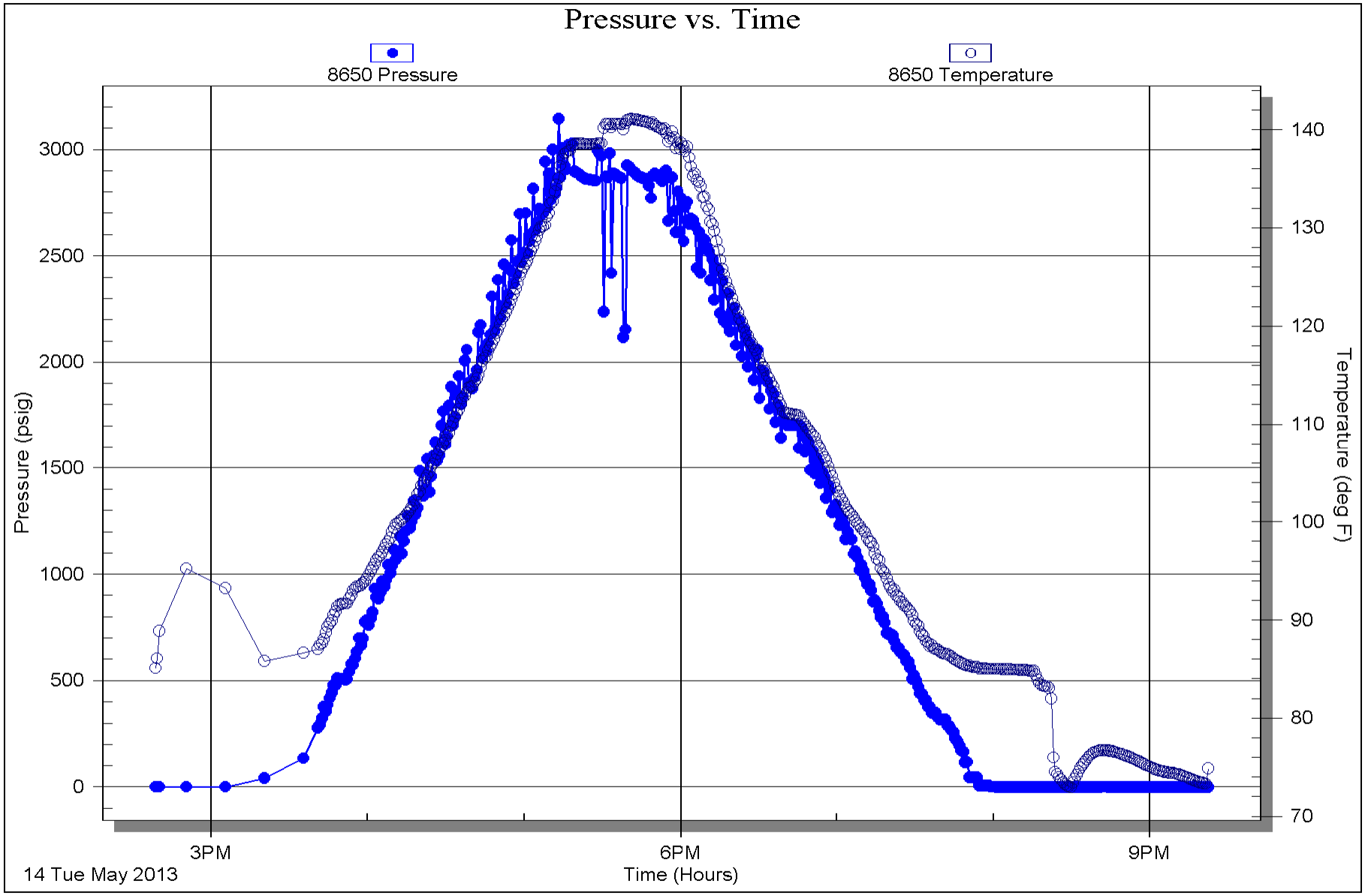

Pressure vs. Time
8675 Pressure
8675 Temperature
Final Hydro-static
Initial Hydro-static
Pressure (psig)
3000
2500
2000
1500
1000
500
0
Temperature (deg F)
140
130
120
110
100
90
80
70
3PM
6PM
9PM
14 Tue May 2013
Time (Hours)

Serial #: 6672 Below (Straddle) American Warrior, Inc Glen McCully #7-15 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 53210 Printed: 2013.05.20 @ 13:15:42

Serial #: 8650 **Outside** American Warrior, Inc Glen McCully #7-15 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 53210 Printed: 2013.05.20 @ 13:15:43

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50199

Well Name & No. Glen McCully #7-15 Test No. 1 Date 5-13-13
Company American Warrior Inc Elevation 2984 KB 2997 GL
Address 3118 Cummings Rd P.O Box 399 Garden City KS 67846
Co. Rep / Geo. Jeff Lawler Rig Duke #9
Location: Sec. 15 Twp. 32 Rge. 35 Co. Stevens State KS

Interval Tested 6055-6125 Zone Tested Chester Sand
Anchor Length 70 Drill Pipe Run 5851 Mud Wt. 9.0
Top Packer Depth 6051 Drill Collars Run 182 Vis 55
Bottom Packer Depth 6055 Wt. Pipe Run 0 WL 6.4
Total Depth 6125 Chlorides 2000 ppm System LCM 7

Blow Description IF: Built to 1/4" Died to 1/8"
IS: No Return Blow
FF: No Blow
FS: No Return Blow

Rec 5	Feet of MUD (Thick Mud)	%gas	%oil	%water 100	%mud
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 5 BHT 141 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	3004	☑ Test	1450	T-On Location	03:30
(B) First Initial Flow	40	☑ Jars	250.00	T-Started	05:30
(C) First Final Flow	45	☑ Safety Joint	75.00	T-Open	08:56
(D) Initial Shut-In	59	☑ Circ Sub	NC	T-Pulled	11:56
(E) Second Initial Flow	50	☐ Hourly Standby		T-Out	14:27
(F) Second Final Flow	55	☑ Mileage	200 RT 310.00	Comments	
(G) Final Shut-In	55	☐ Sampler			
(H) Final Hydrostatic	2944	☐ Straddle		☐ Ruined Shale Packer	
		☑ Shale Packer	250.00	☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	60	☐ Extra Recorder		Sub Total	0
Final Flow	30	☐ Day Standby		Total	2335
Final Shut-In	60	☐ Accessibility		MP/DST Disc't	
		Sub Total	2335.00		

Approved By _____ Our Representative Matthew Rat

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.

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 53210

Well Name & No. Glen McCully 7-15 Test No. 2 Date 5-14-13
Company American Warrior INC Elevation 2997 KB 2984 GL
Address ~~PO Box Garden~~ 3318 Cummings RD P.O. Box 339 Garden City KS 67846
Co. Rep / Geo. Jeff Lawler Rig Duke Rig 9
Location: Sec. 15 Twp. 32 Rge. 35 Co. Stevens State KS

Interval Tested 5835 5920 Zone Tested Chester
Anchor Length 85' Tail 280' Drill Pipe Run 5657 Mud Wt. 9.0
Top Packer Depth 5831 Drill Collars Run ~~[illegible]~~ 182 Vis 55
Bottom Packer Depth 5835 Wt. Pipe Run 0 WL 6.3
Total Depth 6200 Chlorides 2000 ppm System LCM ~~[illegible]~~ 2#

Blow Description
Set 3 time Packe Failure

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec 690	Feet of Mud	%gas	%oil	%water	100 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 690 BHT Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2973
(B) First Initial Flow
(C) First Final Flow
(D) Initial Shut-In
(E) Second Initial Flow
(F) Second Final Flow
(G) Final Shut-In
(H) Final Hydrostatic 2927

Initial Open
Initial Shut-In
Final Flow Packer Failure
Final Shut-In

- [x] Test 1250
- [x] Jars 250
- [x] Safety Joint 75
- [x] Circ Sub N/C
- [ ] Hourly Standby
- [x] Mileage 200 RT 310
- [ ] Sampler
- [x] Straddle 600
- [x] Shale Packer 250
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total 2735

T-On Location 13:25
T-Started 14:38
T-Open 17:30
T-Pulled 17:45
T-Out 21:23
Comments

- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total 0
Total 2735
MP/DST Disc't

Approved By 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.

OPERATOR

Company:	AMERICAN WARRIOR, INC.		
Address:	3118 CUMMINGS RD. P.O. BOX 399 GARDEN CITY, KS 67846		
Contact Geologist:	CECIL O'BRATE		
Contact Phone Nbr:	(785) 623-1524		
Well Name:	GLEN MCCULLY #7-15		
Location:	NE SW SW NE Sec. 15 - 32S - 35W	API:	15-189-22797-00-00
Pool:		Field:	LARRABEE WEST
State:	KANSAS	Country:	USA

Scale 1:240 Imperial

Well Name:	GLEN MCCULLY #7-15		
Surface Location:	NE SW SW NE Sec. 15 - 32S - 35W		
Bottom Location:			
API:	15-189-22797-00-00		
License Number:	4058		
Spud Date:	5/6/2013	Time:	7:30 PM
Region:	STEVENS COUNTY		
Drilling Completed:	5/14/2013	Time:	12:22 AM
Surface Coordinates:	2260' FNL & 2264' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	2984.00ft		
K.B. Elevation:	2997.00ft		
Logged Interval:	3900.00ft	To:	6198.00ft
Total Depth:	6250.00ft		
Formation:	MISSISSIPPIAN (CHESTER SAND)		
Drilling Fluid Type:	FRESH WATER/CHEMICAL GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-101.1113166	Latitude:	37.2652254
N/S Co-ord:	2260' FNL		
E/W Co-ord:	2264' FEL		

LOGGED BY

Company:	SOLUTIONS CONSULTING, INC.		
Address:	108 W 35TH HAYS, KS 67601		
Phone Nbr:	(785) 259-3737		
Logged By:	Geologist	Name:	JEFF LAWLER

CONTRACTOR

Contractor:	DUKE DRILLING COMPANY, INC.		
Rig #:	9		
Rig Type:	MUD ROTARY		
Spud Date:	5/6/2013	Time:	7:30 PM
TD Date:	5/14/2013	Time:	12:22 AM
Rig Release:	5/16/2013	Time:	3:45 PM

ELEVATIONS

K.B. Elevation:	2997.00ft	Ground Elevation:	2984.00ft
K.B. to Ground:	13.00ft		

NOTES

AFTER LOG ANALYSIS DST #2 WAS ATTEMPTED WITHOUT SUCCESS OVER THE UPPER CHESTER SECTION, 5835' - 5920'. DECISION WAS MADE BY THE OPERATOR TO DEEPEN 50' AND RUN 5 1/2" PRODUCTION CASING AND FURTHER EVALUATE THE ZONE OF INTEREST WITH PERFORATION.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

					•						•						•						P&A 6-27-2001			
					AMERICAN WARRIOR, INC.						MOBIL OIL CORP.						MOBIL OIL CORP.						MOBIL OIL CORP.			
					GLEN MCCULLY #6-15						GLENN MCCULLEY #1						C.E. DOWNING #1						VERNON COMBS #1			
	GLEN MCCULLY #7-15				SE NW NW NE 15-32-35						N2 NE 15-32-35						NW NW NW 14-32-35						SE SE 10-32-35			
	KB	2997			KB	3005					KB	2987					KB	2972					KB	2984		
	LOG TOPS		SAMPLE TOPS		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.	
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.	
HEEBNER SHALE	4176	-1179	4178	-1181	4187	-1182	+	3	+	1	4157	-1170	-	9	-	11	4149	-1177										
LANSING	4305	-1308	4305	-1308	4312	-1307	-	1	-	1	4270	-1283	-	25	-	25	4270	-1298					4289	-1305	-	3	-	3
STARK	4795	-1798	4774	-1777	4812	-1807	+	9	+	30																		
MARMATON	4977	-1980	4979	-1982	4992	-1987	+	7	+	5	4975	-1988	+	8	+	6	4950	-1978					4960	-1976	-	4	-	6
CHEROKEE SHALE	5186	-2189	5178	-2181	5194	-2189	+	0	+	8	5178	-2191	+	2	+	10	5152	-2180					5164	-2180	-	9	-	1
ATOKAN	5450	-2453	5436	-2439	5436	-2431	-	22	-	8							5570	-2598	+	145	+	159						
MORROW	5609	-2612	5610	-2613	5614	-2609	-	3	-	4													5578	-2594	-	18	-	19
MORROW LIME	5808	-2811	5773	-2776	5804	-2799	-	12	+	23																		
CHESTER	5898	-2901			5900	-2895	-	6															5891	-2907	+	6		
CHESTER A	5970	-2973	5967	-2970	5956	-2951	-	22	-	19	5943	-2956	-	17	-	14	5916	-2944	-	29	-	26						
CHESTER B	6051	-3054			6049	-3044	-	10			6030	-3043	-	11														
CHESTER A SAND	6115	-3118	6092	-3095	6105	-3100	-	18	+	5																		
ST. GEN.	6150	-3153	6130	-3133	6142	-3137	-	16	+	4	6128	-3141	-	12	+	8	6100	-3128	-	25	-	5	6113	-3129	-	24	-	4
ST. LOUIS											6257	-3270					6335	-3363					6196	-3212				
RTD			6250	-3253	6240	-3235			-	18	6350	-3363			+	110	6335	-3363			+	110	6400	-3416			+	163
LTD	6198	-3201			6240	-3235	+	34																				

DST #1 CHESTER SAND 6055' - 6125'

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

American Warrior, Inc
3118 Cummings Rd.
P.O. Box 399
Garden City KS 67846
ATTN: Jeff Lawler

15-32-35 Stevens Co. KS

Glen McCully 7 15

Job Ticket: 50199 **DST#: 1**

Test Start: 2013.05.13 @ 05:30:15

GENERAL INFORMATION:

Formation: **Chester Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:58:00
Time Test Ended: 14:27:00

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

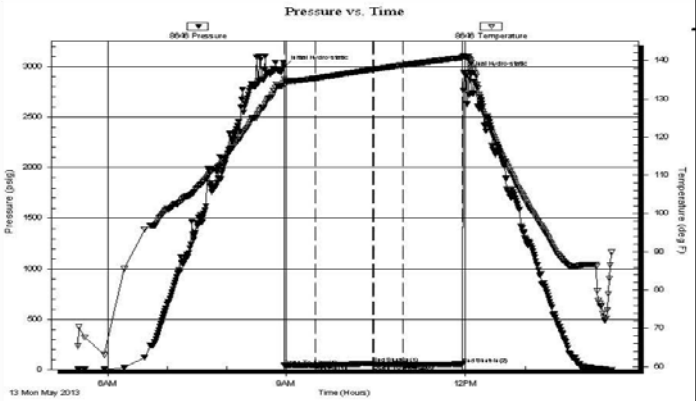
Interval: 6055.00 ft (KB) To 6125.00 ft (KB) (TVD)
Total Depth: 6125.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8646 **Inside**
Press@RunDepth: 55.68 psig @ 6056.00 ft (KB)
Start Date: 2013.05.13 End Date: 2013.05.13
Start Time: 05:30:15 End Time: 14:27:00

Capacity: 8000.00 psig
Last Calib.: 2013.05.13
Time On Btm: 2013.05.13 @ 08:57:45
Time Off Btm: 2013.05.13 @ 11:58:15

TEST COMMENT: IF:Built to 1/4" blow and died to 1/8" blow
IS:No return blow
FF:No blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3004.75	135.22	Initial Hydro-static
1	40.23	133.57	Open To Flow (1)
32	45.12	135.37	Shut-In(1)
90	59.93	137.71	End Shut-In(1)
90	50.51	137.72	Open To Flow (2)
120	55.68	138.84	Shut-In(2)
180	55.43	140.77	End Shut-In(2)
181	2944.08	141.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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

5.00	mud 100% m (thick mud)	0.02

Trilobite Testing, Inc Ref. No: 50199 Printed: 2013.05.13 @ 15:35:35

DST #2 CHESTER 5835' - 5920' (MISRUN)

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

American Warrior, Inc
3118 Cummings Rd.
P.O. Box 399
Garden City KS 67846
ATTN: Jeff Lawler

15-32-35 Stevens Co. KS
Glen McCully 7-15
Job Ticket: 53210 **DST#: 2**
Test Start: 2013.05.14 @ 14:38:34

GENERAL INFORMATION:

Formation: **Chester**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:30:00
Time Test Ended: 21:22:34

Interval: 5838.00 ft (KB) To 5920.00 ft (KB) (TVD)
Total Depth: 6200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

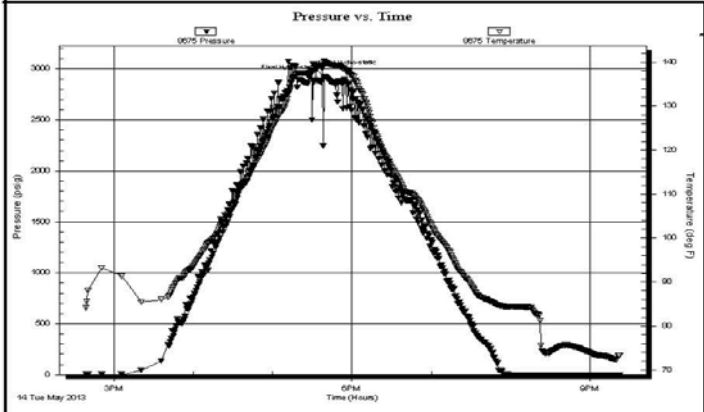
Test Type: Conventional Straddle (Reset)
Tester: Tate Lang
Unit No: 46

Reference Elevations: 2997.00 ft (KB)
2984.00 ft (CF)
KB to GR/CF: 13.00 ft

Serial #: 8675 **Inside**
Press@RunDepth: psig @ 5836.00 ft (KB)
Start Date: 2013.05.14 End Date: 2013.05.14
Start Time: 14:38:49 End Time: 21:22:34

Capacity: 8000.00 psig
Last Calib.: 2013.05.14
Time On Btm: 2013.05.14 @ 17:29:34
Time Off Btm: 2013.05.14 @ 17:39:04

TEST COMMENT: Set 3 time Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2972.52	137.57	Initial Hydro-static
10	2926.73	140.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
690.00	100%M	8.02

* Recovery from multiple tests

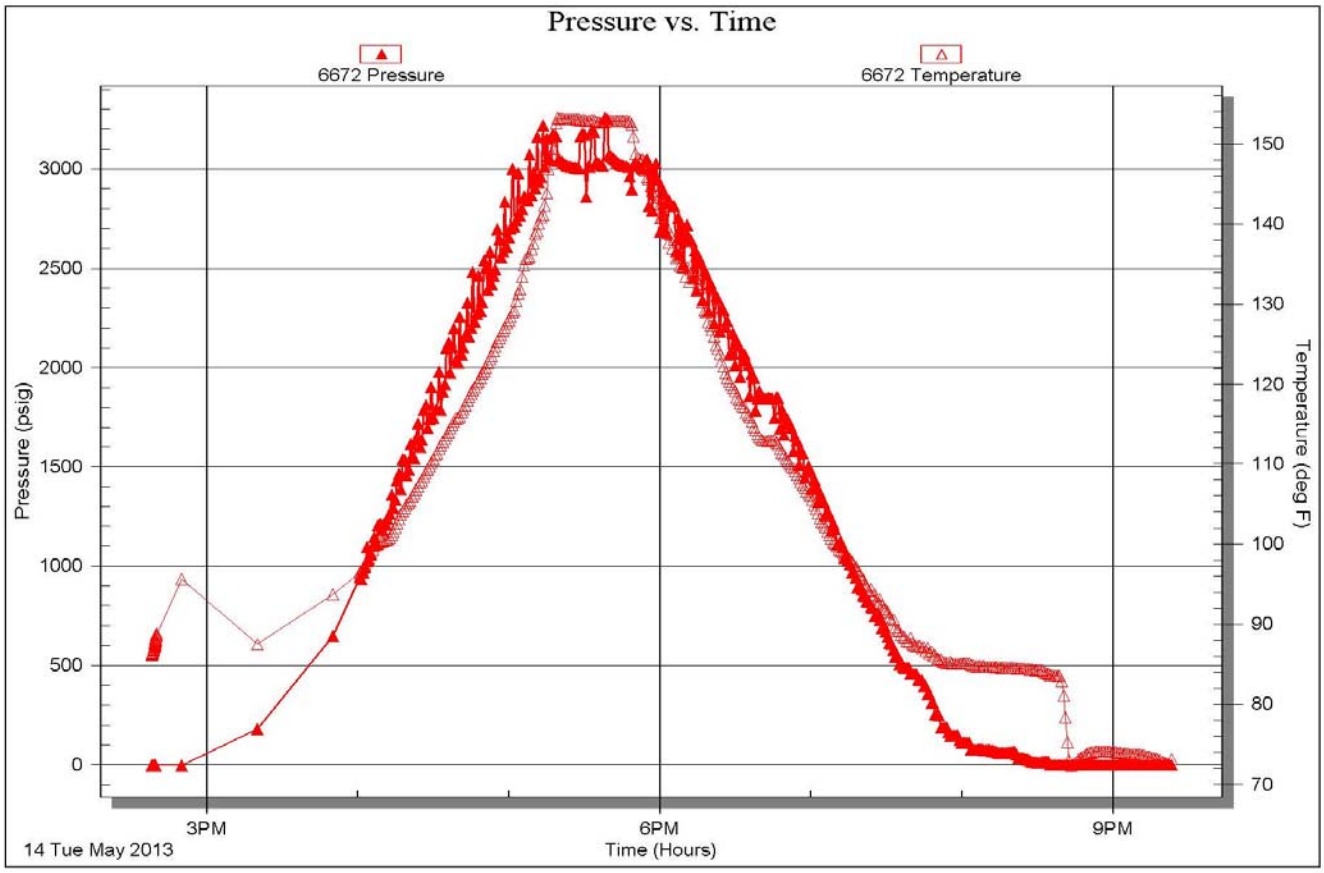
Gas Rates

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

Trilobite Testing, Inc Ref. No: 53210 Printed: 2013.05.17 @ 10:04:04

DST #2 BOTTOM PACKER CHART

Serial #: 6672 | Below (Straddle) | Addison Warrior, Inc | Glen McCully 7-15 | DST Test Number: 2



Trilobite Testing, Inc | Ref. No: 53210 | Printed: 2013.05.17 @ 10:04:07

ROCK TYPES

Dolprim	Lmst fw7>	shale, gry	Carbon Sh	Ss
Lmst fw<7	shale, grn	Shblck	shale, red	

ACCESSORIES

MINERAL	FOSSIL	STRINGER	TEXTURE
Sandy	Oomoldic	Sandstone	Chalky

OTHER SYMBOLS

DST
- DST Int
- DST alt
- Core

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #1	Depth | Intervals	DST	Lithology	Oil Show	Geological Descriptions	TG, C1 - C5
ROP (min/ft)						Total Gas (units)
Gamma (API)						C1 (units)
Cal (in)						C2 (units)
						C3 (units)
						C4 (units)

1:240 Imperial

0	ROP (min/ft)	3
0	Gamma (API)	150
6	Cal (in)	16

Core
DST

0	ROP (min/ft)	3
0	Gamma (API)	150
6	Cal (in)	16

DRILL TIME ACQUIRED BY BLUESTEM GAS DETECTOR TRAILER
20' WET/DRY SAMPLES FROM 4200' - 4700'
10' WET/DRY SAMPLES FROM 4700' - RTD
GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 4000' - RTD

1:240 Imperial

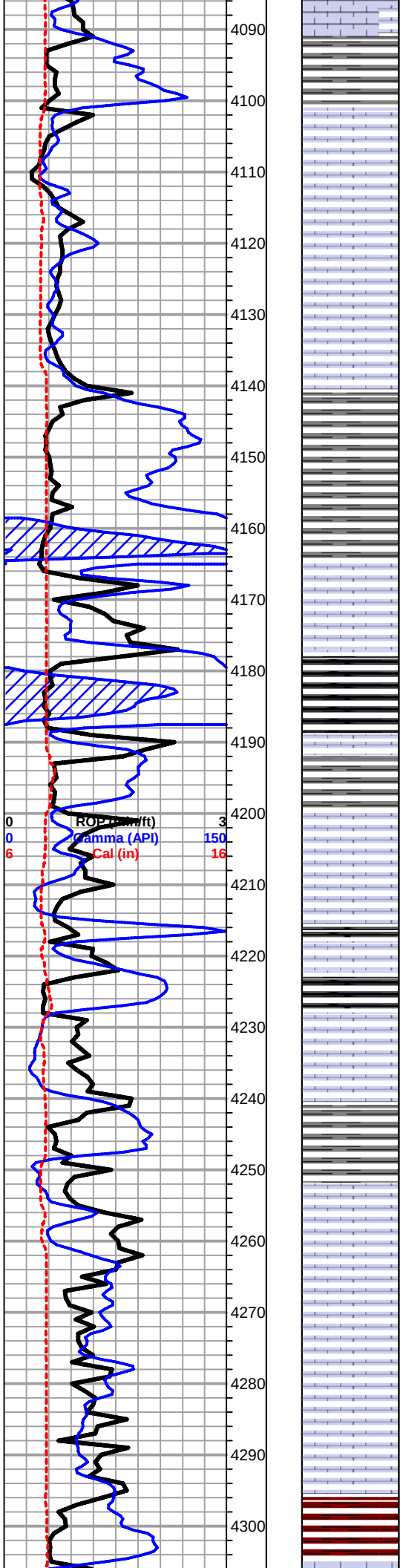
0	Total Gas (units)	50
0	C1 (units)	50
0	C2 (units)	50
0	C3 (units)	50
0	C4 (units)	50

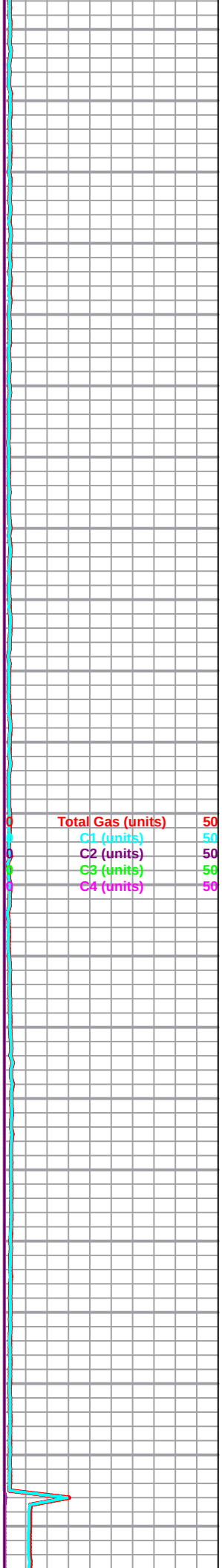
WIRELINE SURVEYS

855'	1 dgr.
1745'	1/2 dgr.
2780'	3/4 dgr.
4895'	3/4 dgr.
5653'	1 dgr.
6125'	1 dgr.

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

TURBO DRLG FLUIDS MD CHK:
4037' @ 15:00 5/9/2013
WT: 9.2 FV: 41 PV: 16 YP: 10
pH: 9.5 WL: 12.0 CAKE: 2/32
CHLOR: 3900 Ca: 30 LCM: 4#
DMC: $4419 CMC: $7553





HEEBNER SHALE 4178' (-1181) E-LOG 4176' (-1179) Sh- Black, fissile, sl gritty, carbonaceous

Lm- Tan Buff, FXLN, sl fsl, poorly developed & well cemented, few chips of lt gray fsl cherty ls, all w/ micro XLN & XLN porosity

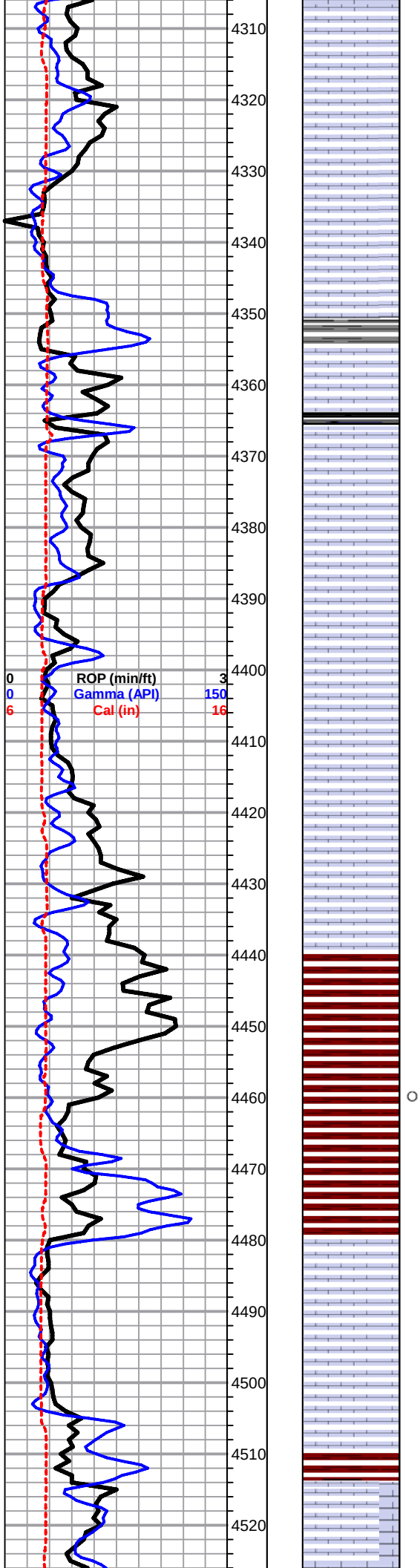
Lm- Tan Buff, FXLN & Vf Grn, mostly well cemented & fsl w/ sctrd XLN porosity, much soft white chalk

Lm- Cream Tan, FXLN, loosely cemented & sl chalky in part, fsl, few sl oolitic, massive w/ PR interoolite porosity, Sh- Gray, silty & spkld w/ drk minerals

Lm- Tan, VFXLN, dense, vry well cemented, no vis. - minimal vis. porosity

Lm- Cream Off White, FXLN, loosely cemented & crumbley, sl oolitic, poorly developed w/ PR interoolite porosity, barren

Sh- Gray Maroon, gritty & earthy



LANSING 4305' (-1308) E-LOG 4305' (-1308) Lm- Cream Tan, FXLN, loosely cemented & crumbley, poorly dev. & sl chalky in part, few pcs of cream crypto XLN w/o vis. porosity, all barren

Lm- Cream Off White, FXLN & Fn Grn, dense, poorly dev. w/ micro XLN & sctrd vry fn ppt porosity, few pcs of gritty sl dolomitic ls, all barren

Lm- Tan Cream, Fn Grn, sl chalky in part, poorly cemented, sl fsl w/ some fragments Sh- Gray Black, gritty & silty, sl unconsolidated & pebbley

Lm- Cream Tan Smokey Gray, VF-FXLN, dense, loosely-well cemeted, mostly tight w/ few pcs of sl fsl cherty ls, barren

Lm- Buff Cream, VF-FXLN, sl fsl, mostly tight w/ micro XLN porosity, sctrd XLN secondary recrystallization porosity, barren, more smokey gray cherty ls A/A

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

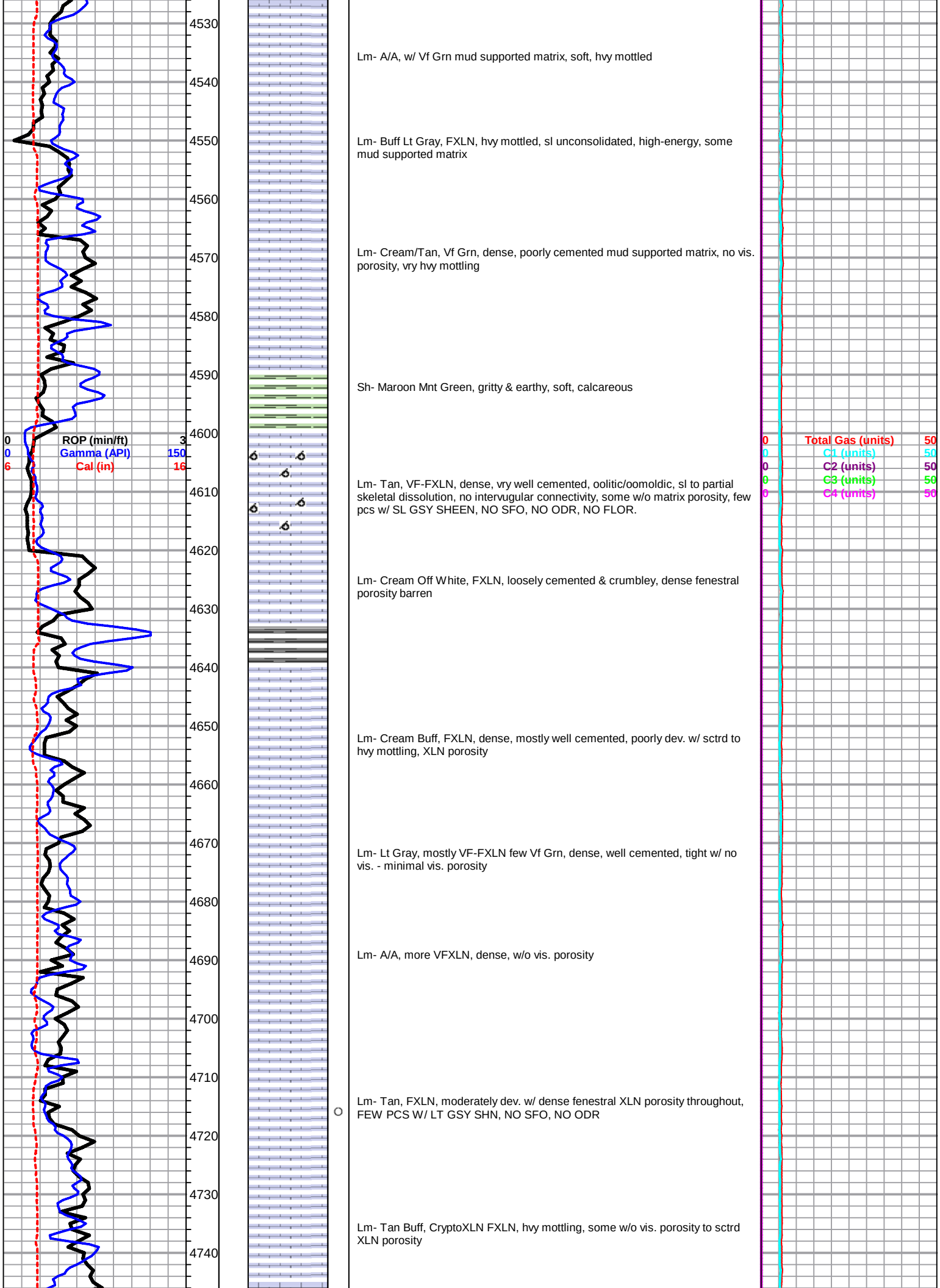
Lm- Cream Buff, Vf-Fn Grn, dense, loosely cemented & crumbley, some w/ chalky cementation, some w/ mostly consistant vry fn interparticle porosity, barren

Lm- Buff, FXLN, dense, some loosely cemented, sl fsl w/ XLN porosity

Lm- Cream Tan, Fn Grn, loosely cemented & crumbley, sl chalky cementation, few pcs w/ WK SPOTTY STN, FLAKEY, NO SFO, VRY FNT ODR

Lm- Cream Off White, FXLN, dense, well cemented, fsl w/ few fusulinids, mod. dev. w/ XLN & sctrd ppt inter fsl porosity, barren, much soft white chalk

Lm- Cream Tan, FXLN, fsl, hvy mottling, sctrd XLN to dense fenestral porosity, much soft white chalk



Lm- A/A, w/ Vf Grn mud supported matrix, soft, hvy mottled

Lm- Buff Lt Gray, FXLN, hvy mottled, sl unconsolidated, high-energy, some mud supported matrix

Lm- Cream/Tan, Vf Grn, dense, poorly cemented mud supported matrix, no vis. porosity, vry hvy mottling

Sh- Maroon Mnt Green, gritty & earthy, soft, calcareous

Lm- Tan, VF-FXLN, dense, vry well cemented, oolitic/oomoldic, sl to partial skeletal dissolution, no intervugular connectivity, some w/o matrix porosity, few pcs w/ SL GSY SHEEN, NO SFO, NO ODR, NO FLOR.

Lm- Cream Off White, FXLN, loosely cemented & crumbley, dense fenestral porosity barren

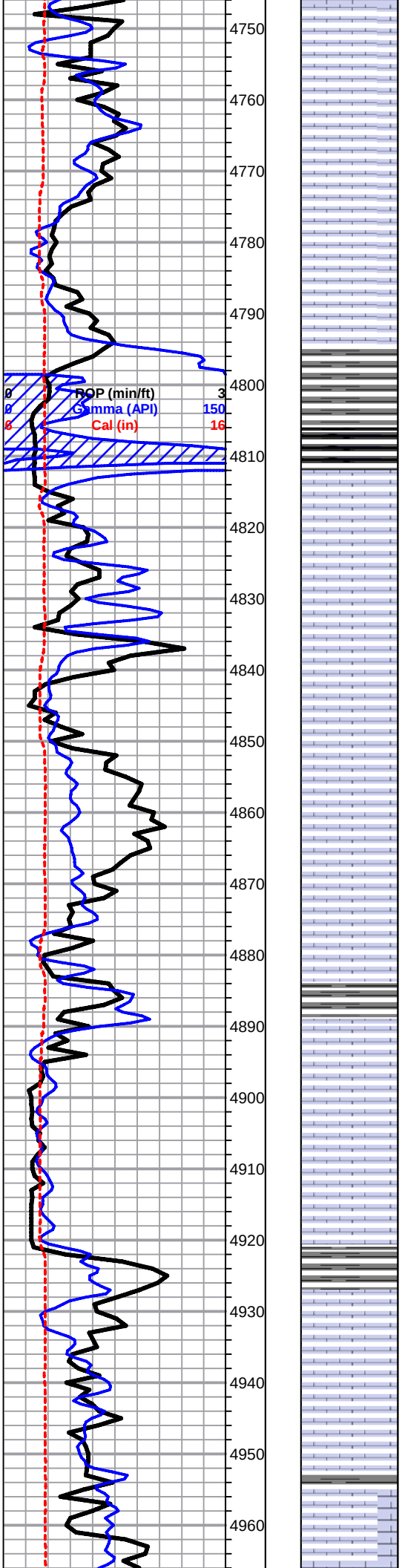
Lm- Cream Buff, FXLN, dense, mostly well cemented, poorly dev. w/ sctrd to hvy mottling, XLN porosity

Lm- Lt Gray, mostly VF-FXLN few Vf Grn, dense, well cemented, tight w/ no vis. - minimal vis. porosity

Lm- A/A, more VFXLN, dense, w/o vis. porosity

Lm- Tan, FXLN, moderately dev. w/ dense fenestral XLN porosity throughout, FEW PCS W/ LT GSY SHN, NO SFO, NO ODR

Lm- Tan Buff, CryptoXLN FXLN, hvy mottling, some w/o vis. porosity to sctrd XLN porosity



Lm- Lt Gray, Vf Grn, dense, soft, poorly cemented mud supported matrix, hvy mottling, sl unconsolidated

Lm- Cream Tan, Vf Grn, dense, poorly cemented & crumbley, sctrd mottling, sl unconsolidated, LT GSY SHN, NO SFO, SL MINERAL FLOR. NO WET CUT

STARK SHALE 4774' (-1777) E-LOG 4794' (-1797) Sh- Black Drk Gray, fissile, carbonaceous, gitty & silty, sl unconsolidated & pebbley

Lm- Tan, FXLN, oolitic/oomolidic, partial skeletal dissolution, no intervugular interconnectivity, vuggy porosity, barren

Lm- Cream Off White, FXLN & Vf Grn, sl fsl, poorly dev. w/ sctrd XLN porosity, Vf Grn- dense, lithographic, lithofied mud matrix, vry well cemented, sctrd XLN recrystallized secondary porosity, sl mottling, barren

Lm- Cream Buff, FXLN, dense, poory dev. w/ sctrd XLN porosity

Lm- Cream Lt Gray Tan, FXLN, dense, mod. dev. w/ dense fenestral XLN porosity, loosely cemented, some crumbley, LT GSY SHN, NO SFO, FNT ODR, FEW PCS W/ FLASH HALO FLOR & SL LT YLW STRM WET CUT

Lm- Tan Lt Brown, FXLN, oolitic/oomoldic, partial skeletal dissolution, poor intervugular connectivity, well cemented, barren

Sh- Gray, girtty & silty

Lm- Cream Tan Lt Gray, FXLN, sl fsl, mostly tight w/ sctrd XLN porosity, few sl unconsolidated w/ sctrd mottling

Lm- Tan, FXLN, oolitic/oomoldic, partial skeletal dissolution, some pcs w/ densely packed small oolites, vry well cemented w/o vis. porosity

Sh- Drk Gray Lt Gray, silty & soft, few pcs of shaley Ss, fn grn, well cemented, no stn

Lm- Cream Off White, Vf Grn, dense mud supported matrix, unconsolidated w/ interbedded oolites, minimal cementation, chalky

Lm- Drk Gray Smokey Gray, mix of Fn Grn, no interparticle vis. porosity, & oolitic fresh bedded chert

Sh- Drk Gray, gritty, well compacted, sctrd soft white chalk

Lm- Tan Off White Cream, FXLN Fn Grn, high-energy fsl mix w/ sctrd fsl fragments, sctrd XLN porosity

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

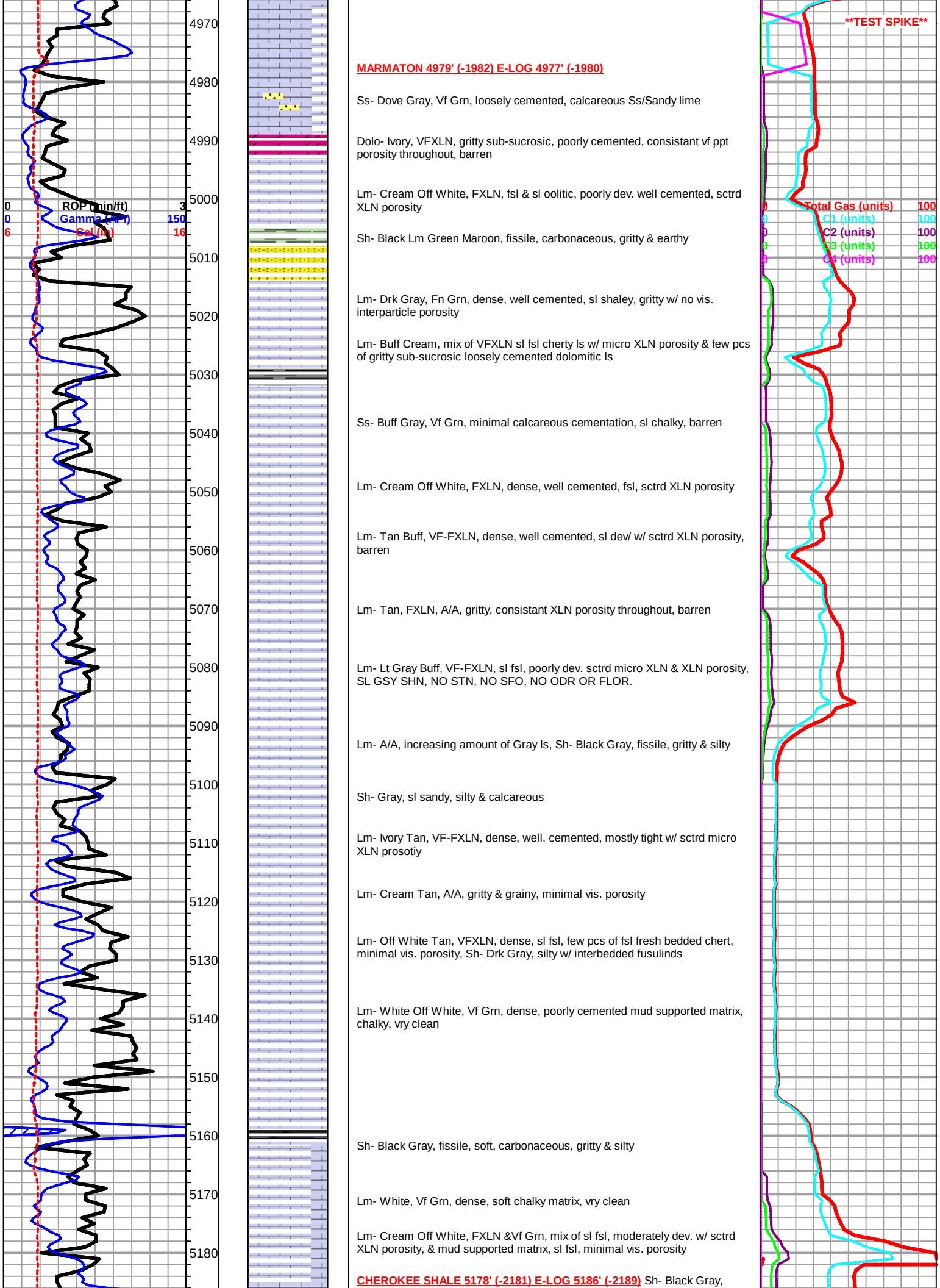
TURBO DRLG FLUIDS MD CHK
@ 4897' 13:45 5/10
WT: 9.1 FV: 69 PV: 23 YLD: 14
pH: 9.5 WL: 8.8 CAKE: 2/32
CHLOR: 2000 Ca: 40 LCM: 18#
DMC: $5080 CMC: $12,633

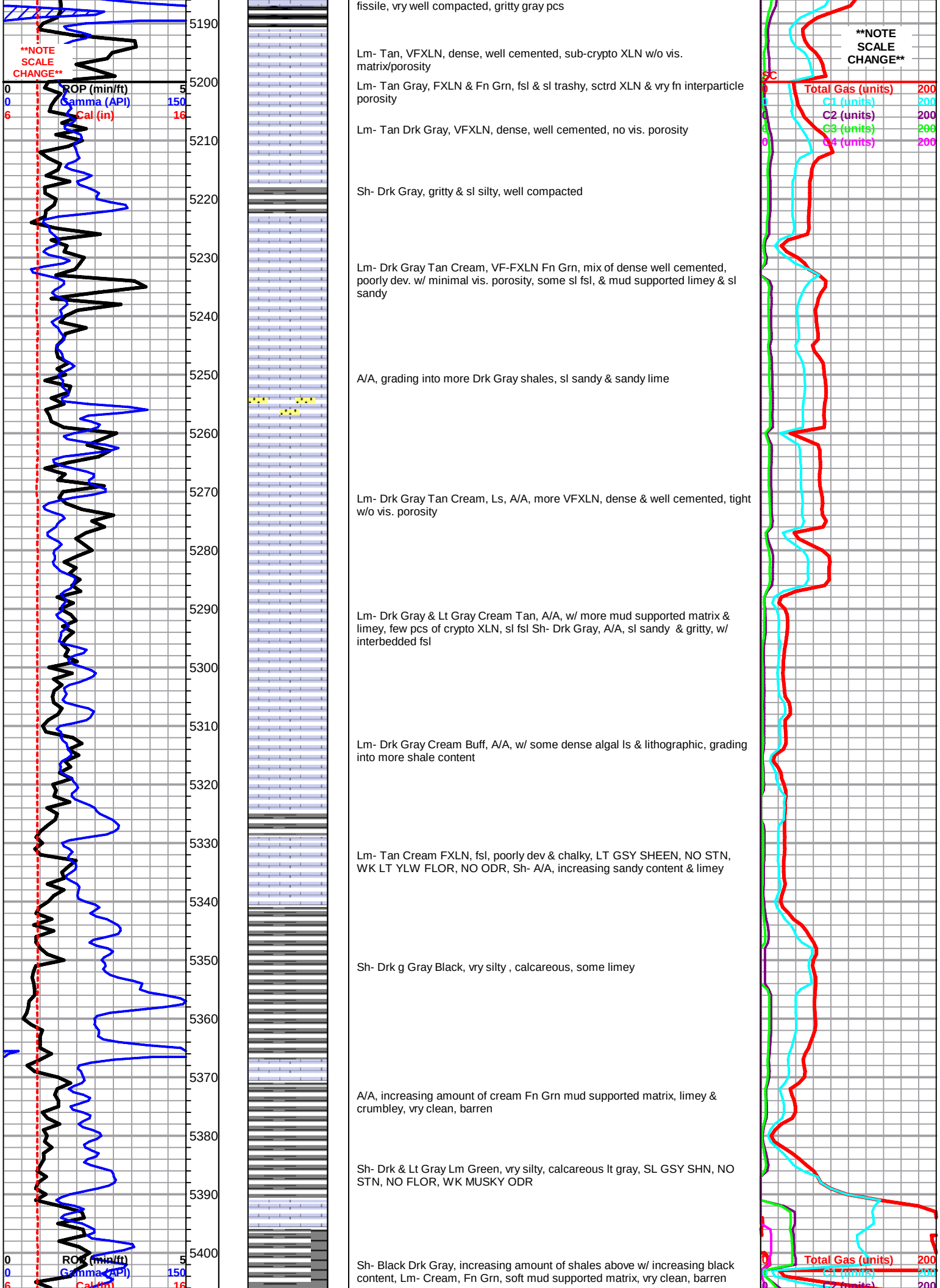
WIPER TRIP @ 4897'

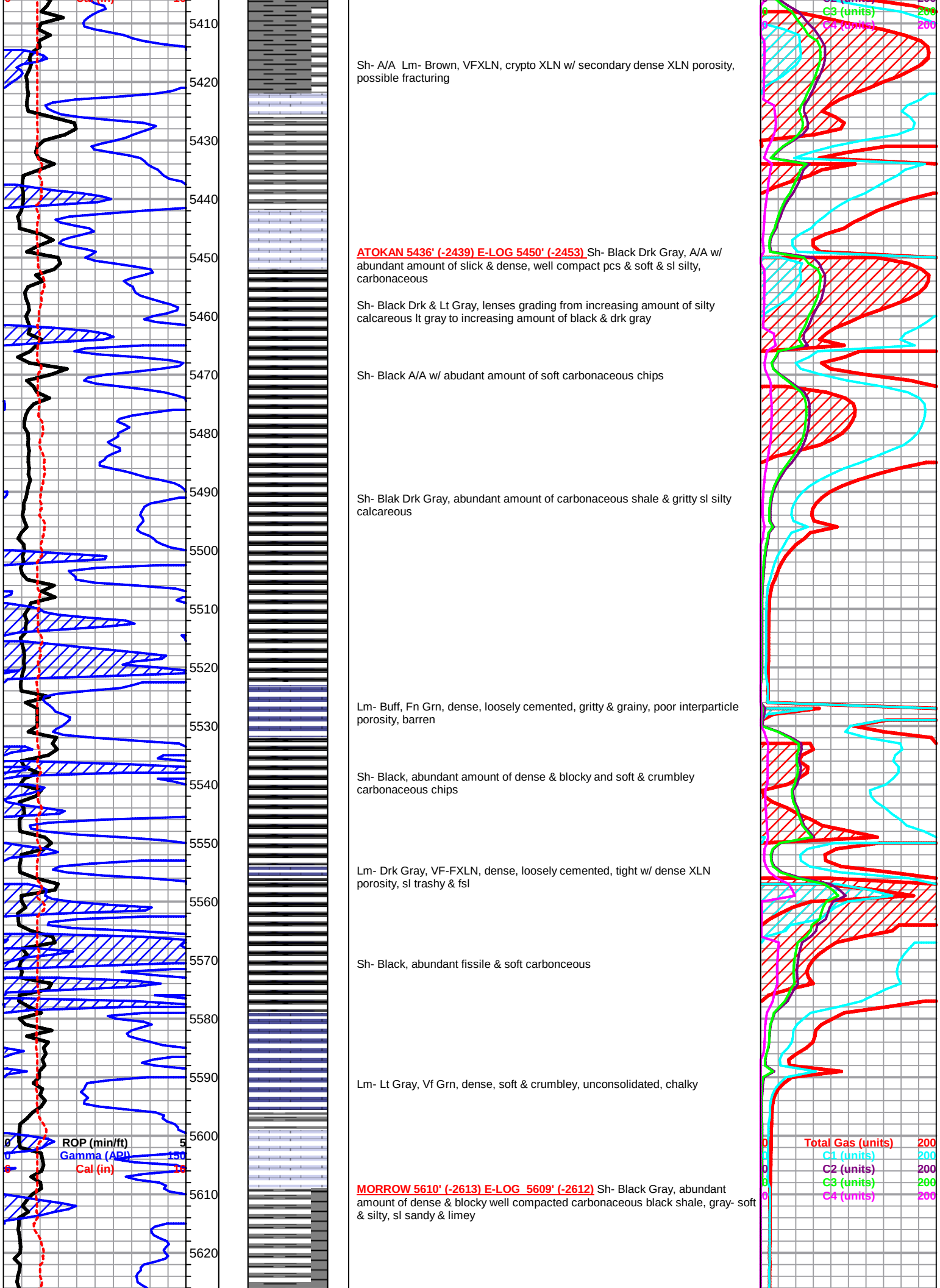
NOTE SCALE CHANGE

SC

0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100


4970
4980
4990
5000
5010
5020
5030
5040
5050
5060
5070
5080
5090
5100
5110
5120
5130
5140
5150
5160
5170
5180
0 ROP (min/ft) 3
0 Gamma (API) 150
6 Cal (in) 16
TEST SPIKE
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
MARMATON 4979' (-1982) E-LOG 4977' (-1980)
Ss- Dove Gray, Vf Grn, loosely cemented, calcareous Ss/Sandy lime
Dolo- Ivory, VFXLN, gritty sub-sucrosic, poorly cemented, consistant vf ppt porosity throughout, barren
Lm- Cream Off White, FXLN, fsl & sl oolitic, poorly dev. well cemented, sctrd XLN porosity
Sh- Black Lm Green Maroon, fissile, carbonaceous, gritty & earthy
Lm- Drk Gray, Fn Grn, dense, well cemented, sl shaley, gritty w/ no vis. interparticle porosity
Lm- Buff Cream, mix of VFXLN sl fsl cherty ls w/ micro XLN porosity & few pcs of gritty sub-sucrosic loosely cemented dolomitic ls
Ss- Buff Gray, Vf Grn, minimal calcareous cementation, sl chalky, barren
Lm- Cream Off White, FXLN, dense, well cemented, fsl, sctrd XLN porosity
Lm- Tan Buff, VF-FXLN, dense, well cemented, sl dev/ w/ sctrd XLN porosity, barren
Lm- Tan, FXLN, A/A, gritty, consistant XLN porosity throughout, barren
Lm- Lt Gray Buff, VF-FXLN, sl fsl, poorly dev. sctrd micro XLN & XLN porosity, SL GSY SHN, NO STN, NO SFO, NO ODR OR FLOR.
Lm- A/A, increasing amount of Gray ls, Sh- Black Gray, fissile, gritty & silty
Sh- Gray, sl sandy, silty & calcareous
Lm- Ivory Tan, VF-FXLN, dense, well. cemented, mostly tight w/ sctrd micro XLN prosotiy
Lm- Cream Tan, A/A, gritty & grainy, minimal vis. porosity
Lm- Off White Tan, VFXLN, dense, sl fsl, few pcs of fsl fresh bedded chert, minimal vis. porosity, Sh- Drk Gray, silty w/ interbedded fusulinds
Lm- White Off White, Vf Grn, dense, poorly cemented mud supported matrix, chalky, vry clean
Sh- Black Gray, fissile, soft, carbonaceous, gritty & silty
Lm- White, Vf Grn, dense, soft chalky matrix, vry clean
Lm- Cream Off White, FXLN &Vf Grn, mix of sl fsl, moderately dev. w/ sctrd XLN porosity, & mud supported matrix, sl fsl, minimal vis. porosity
CHEROKEE SHALE 5178' (-2181) E-LOG 5186' (-2189) Sh- Black Gray,


NOTE SCALE CHANGE
0 ROP (min/ft) 5
0 Gamma (API) 150
6 Cal (in) 16
5190
5200
5210
5220
5230
5240
5250
5260
5270
5280
5290
5300
5310
5320
5330
5340
5350
5360
5370
5380
5390
5400
fissile, vry well compacted, gritty gray pcs
Lm- Tan, VFXLN, dense, well cemented, sub-crypto XLN w/o vis. matrix/porosity
Lm- Tan Gray, FXLN & Fn Grn, fsl & sl trashy, sctrd XLN & vry fn interparticle porosity
Lm- Tan Drk Gray, VFXLN, dense, well cemented, no vis. porosity
Sh- Drk Gray, gritty & sl silty, well compacted
Lm- Drk Gray Tan Cream, VF-FXLN Fn Grn, mix of dense well cemented, poorly dev. w/ minimal vis. porosity, some sl fsl, & mud supported limey & sl sandy
A/A, grading into more Drk Gray shales, sl sandy & sandy lime
Lm- Drk Gray Tan Cream, Ls, A/A, more VFXLN, dense & well cemented, tight w/o vis. porosity
Lm- Drk Gray & Lt Gray Cream Tan, A/A, w/ more mud supported matrix & limey, few pcs of crypto XLN, sl fsl Sh- Drk Gray, A/A, sl sandy & gritty, w/ interbedded fsl
Lm- Drk Gray Cream Buff, A/A, w/ some dense algal ls & lithographic, grading into more shale content
Lm- Tan Cream FXLN, fsl, poorly dev & chalky, LT GSY SHEEN, NO STN, WK LT YLW FLOR, NO ODR, Sh- A/A, increasing sandy content & limey
Sh- Drk g Gray Black, vry silty , calcareous, some limey
A/A, increasing amount of cream Fn Grn mud supported matrix, limey & crumbley, vry clean, barren
Sh- Drk & Lt Gray Lm Green, vry silty, calcareous lt gray, SL GSY SHN, NO STN, NO FLOR, WK MUSKY ODR
Sh- Black Drk Gray, increasing amount of shales above w/ increasing black content, Lm- Cream, Fn Grn, soft mud supported matrix, vry clean, barren
NOTE SCALE CHANGE
SC
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 Lm- Brown, VFXLN, crypto XLN w/ secondary dense XLN porosity, possible fracturing

ATOKAN 5436' (-2439) E-LOG 5450' (-2453) Sh- Black Drk Gray, A/A w/ abundant amount of slick & dense, well compact pcs & soft & sl silty, carbonaceous

Sh- Black Drk & Lt Gray, lenses grading from increasing amount of silty calcareous lt gray to increasing amount of black & drk gray

Sh- Black A/A w/ abudant amount of soft carbonaceous chips

Sh- Blak Drk Gray, abundant amount of carbonaceous shale & gritty sl silty calcareous

Lm- Buff, Fn Grn, dense, loosely cemented, gritty & grainy, poor interparticle porosity, barren

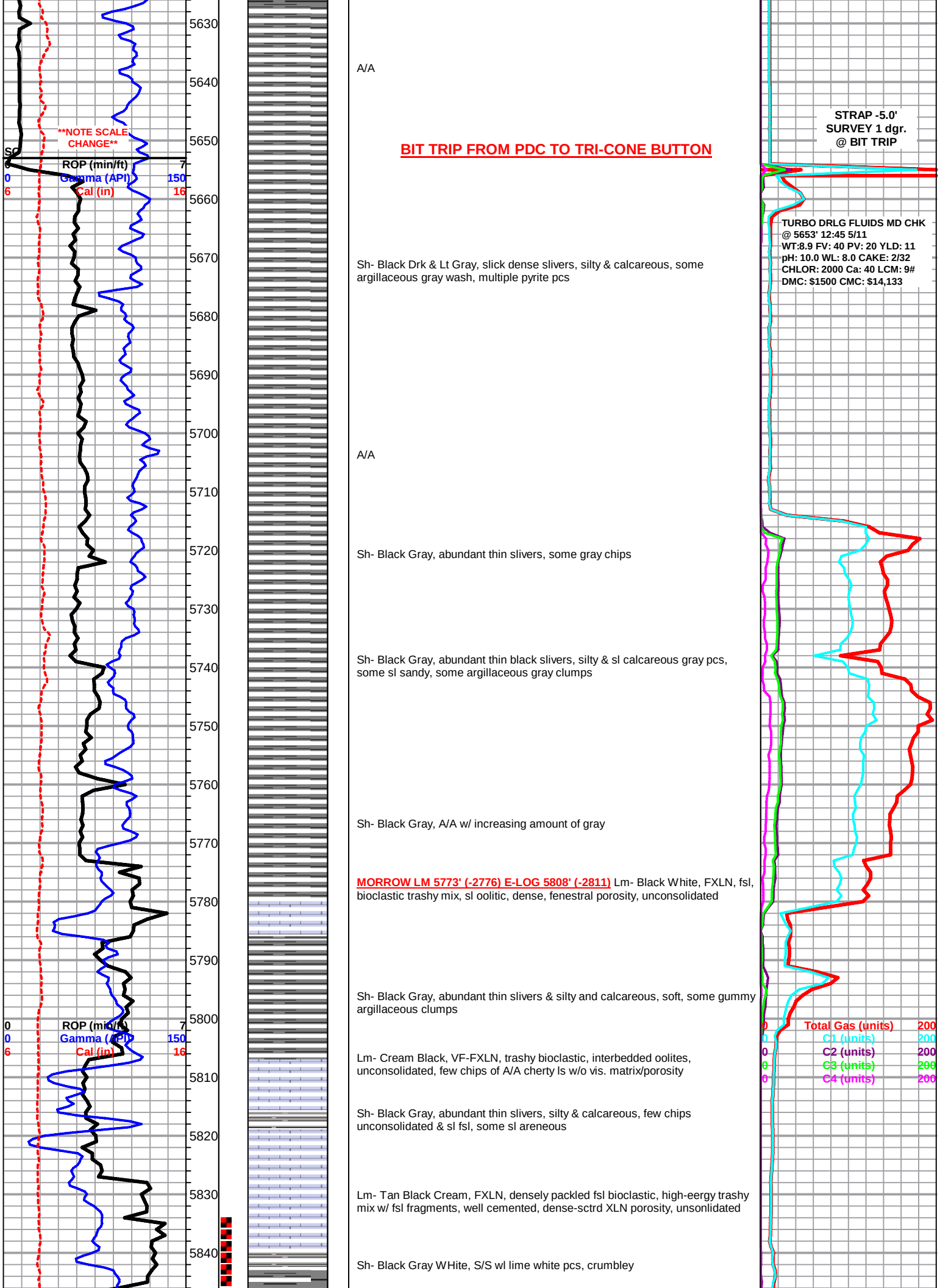
Sh- Black, abundant amount of dense & blocky and soft & crumbley carbonaceous chips

Lm- Drk Gray, VF-FXLN, dense, loosely cemented, tight w/ dense XLN porosity, sl trashy & fsl

Sh- Black, abundant fissile & soft carbonceous

Lm- Lt Gray, Vf Grn, dense, soft & crumbley, unconsolidated, chalky

MORROW 5610' (-2613) E-LOG 5609' (-2612) Sh- Black Gray, abundant amount of dense & blocky well compacted carbonaceous black shale, gray- soft & silty, sl sandy & limey


5630
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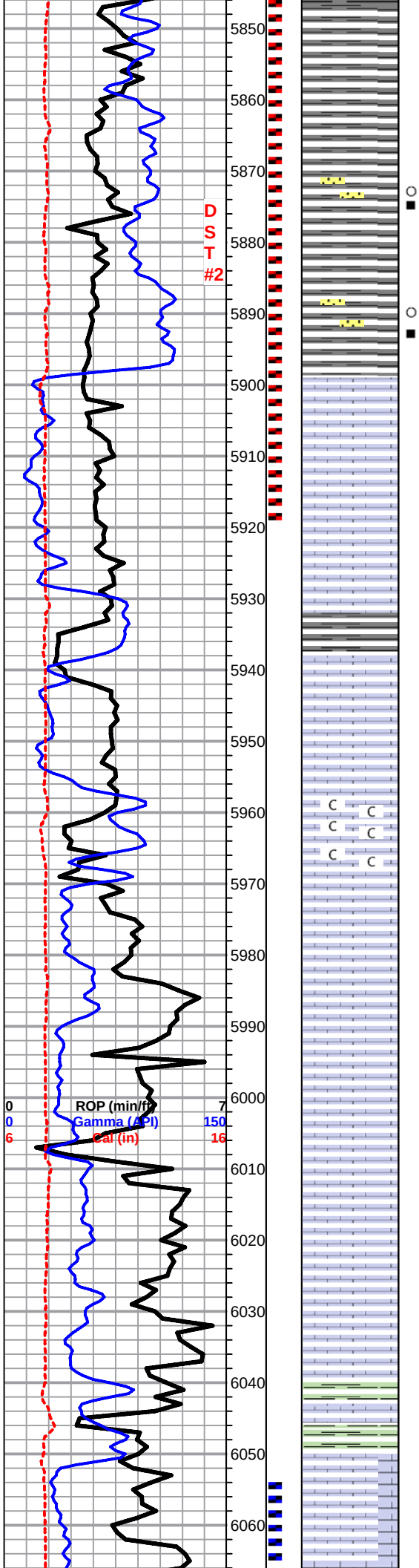
5760
5770
5780
5790
5800
5810
5820
5830
5840
NOTE SCALE CHANGE
SC
0 ROP (min/ft) 7
0 Gamma (API) 150
6 Cal (in) 16
0 ROP (min/ft) 7
0 Gamma (API) 150
6 Cal (in) 16
A/A
BIT TRIP FROM PDC TO TRI-CONE BUTTON
STRAP -5.0'
SURVEY 1 dgr.
@ BIT TRIP
TURBO DRLG FLUIDS MD CHK
@ 5653' 12:45 5/11
WT:8.9 FV: 40 PV: 20 YLD: 11
pH: 10.0 WL: 8.0 CAKE: 2/32
CHLOR: 2000 Ca: 40 LCM: 9#
DMC: $1500 CMC: $14,133
Sh- Black Drk & Lt Gray, slick dense slivers, silty & calcareous, some argillaceous gray wash, multiple pyrite pcs
A/A
Sh- Black Gray, abundant thin slivers, some gray chips
Sh- Black Gray, abundant thin black slivers, silty & sl calcareous gray pcs, some sl sandy, some argillaceous gray clumps
Sh- Black Gray, A/A w/ increasing amount of gray
MORROW LM 5773' (-2776) E-LOG 5808' (-2811) Lm- Black White, FXLN, fsl, bioclastic trashy mix, sl oolitic, dense, fenestral porosity, unconsolidated
Sh- Black Gray, abundant thin slivers & silty and calcareous, soft, some gummy argillaceous clumps
Lm- Cream Black, VF-FXLN, trashy bioclastic, interbedded oolites, unconsolidated, few chips of A/A cherty ls w/o vis. matrix/porosity
Sh- Black Gray, abundant thin slivers, silty & calcareous, few chips unconsolidated & sl fsl, some sl areneous
Lm- Tan Black Cream, FXLN, densely packled fsl bioclastic, high-eergy trashy mix w/ fsl fragments, well cemented, dense-sctrd XLN porosity, unsonlidated
Sh- Black Gray WHite, S/S wl lime white pcs, crumbley
0 Total Gas (units) 200
0 C1 (units) 200
0 C2 (units) 200
0 C3 (units) 200
0 C4 (units) 200



Sh- A/A w/ drk gray Ss pcs, fussed, sl spekled w/ glauconite, unconsolidated, barren

Ss- A/A, grading into sl cleaner, mod. sorted, sub-angular, speckled w/ glauconite & dark sedimet, sl unconsolidated, mod. cemented, WK GSY SHN, NO STN, NO ODR, WK FLASH OF LT YLW FLOR ON FEW PCS

Lm/Ss- Cream, FXLN, loosely cementedcrumbley, sl limey, fsl w/ interbedded small fusulinids Ss- Lm Green, A/A grading into Vf Grn, loosely cemented, densely spkld w/ glauconite/chlorite, clean & barren, NO FLOR

Ss- Clear to Semi-Frosted, Fn-Med Grn, mod. consolidated & sorted, loosely cemented, mostly clean, few pcs lt glauconite/chlorite spklng, LT GSY SHN, NO STN, NO SFO, WK LT YLW HALO FLASH, NO ODR

CHESTER E-LOG 5898' (-2901)

Lm- White Cream, FXLN Fn Grn, chalky, vry loosely cemented & crumbley, fsl w/ many fragments, mostly clean, dense fenestral XLN porosity, FEW PCS W/ LT GSY SHN, NO STN, NO ODR, NO FLOR, BARREN

Lm- White Off White, Tan, A/A, much soft white chalk,

Lm- Cream Off White, F-Med XLN, densely fsl, vry poorly cemented & crumbley, sl chalky in part, vry dense XLN porosity, barren

Sh- Dove Gray Maroon, much vry soft & silty, calcareous, few pcs of gritty & earthy maroon shale

Lm- Cream Off White, F-Med XLN, sl unconsolidated & chalky, loosely to well cemented, barren

Lm- A/A w/ increasing amount of soft white chalk

CHESTER A 5942' (-2945) E-LOG 5970' (-2973)

Lm- Lt Gray, VFXLN Vf Grn, mix of sl cherty ls w/o vis. matrix/porosity, & dense, vry well compacted siltstone, calcareous

Lm- Lt Gray, Vf Grn, dense algal ls, lithographic, well cemented, , no vis. porosity

Lm- Tan Lt Gray, mix of fsl FXLN, well cemented, semi-brittle, sctrd XLN porosity, & Fn Grn, gritty, sl areneous limey Ss/sandy lime, soft white chalk

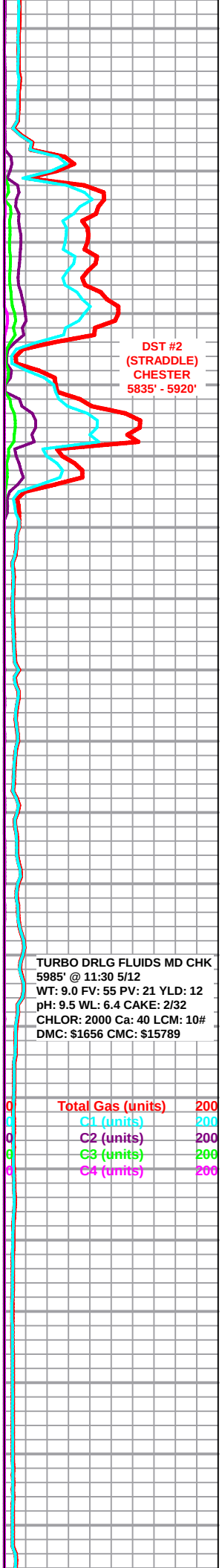
Lm- Gray Tan, A/A, lithographic w/o vis. grains/porosity, FXLN, sl fsl, mod. cemented, sctrd XLN porosity, few fsl fragments

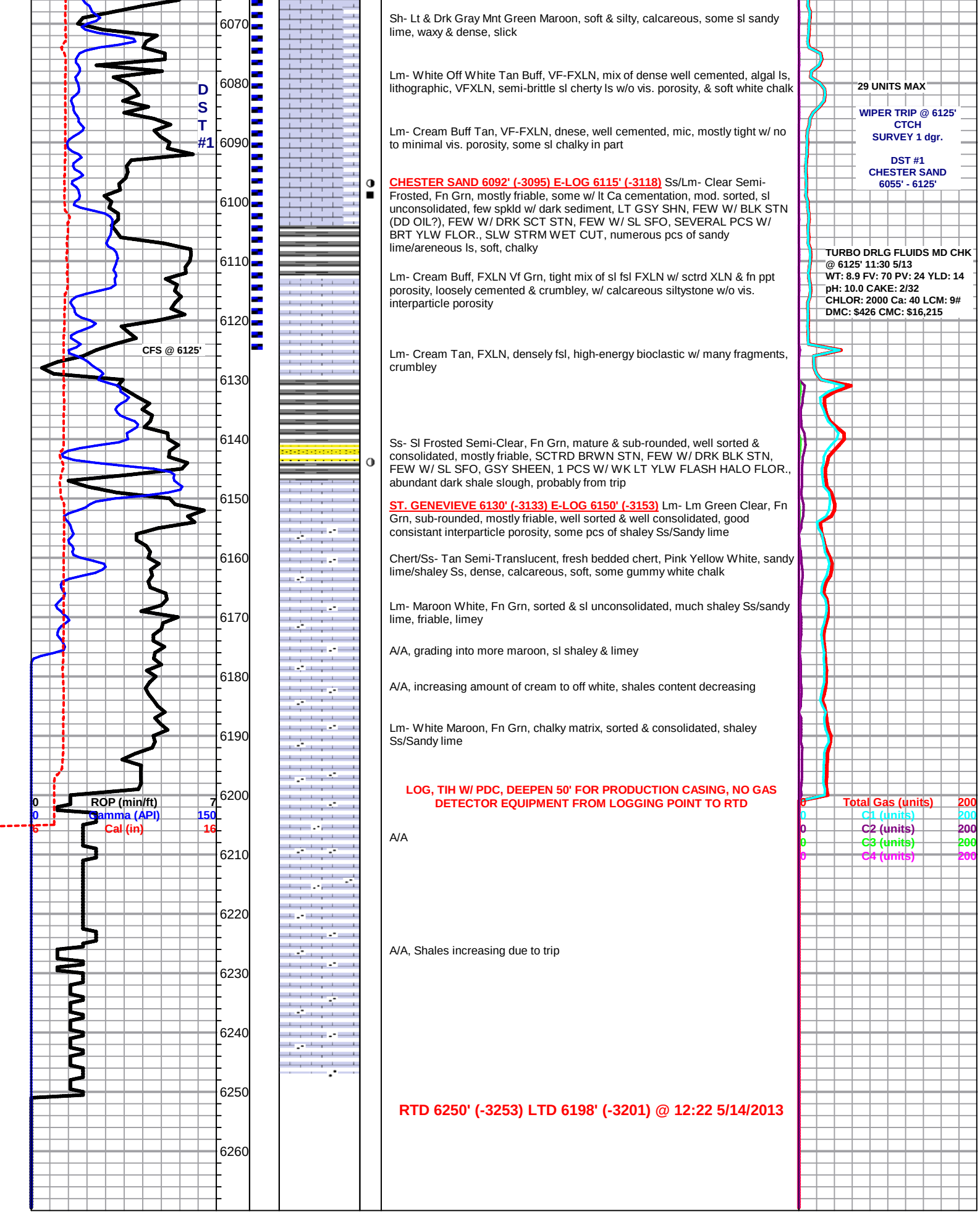
Lm- Cream Off White, F-Med Grn, loosely cemented, sandy, mostly consistant ppt interparticle porosity, sl unconsonlidated

Sh- Lm Green, soft, dull, calcareous

CHESTER B E-LOG 6051' (-3054) Lm- Lm Green White, much soft white chalk, dense algal ls, lithographic

Lm- Cream Tan, Crypto-Med XLN, mix of crypto XLN w/o vis.matrix/porpsity, loosely cemented, fsl F-Med XLN, sl chalky cementation in part, sctrd XLN & ppt porosity, few loose crionoid fragments, sl unconsolidated




6070
6080
6090
6100
6110
6120
6130
6140
6150
6160
6170
6180
6190
6200
6210
6220
6230
6240
6250
6260
DST #1
CFS @ 6125'
0 ROP (min/ft) 7
0 Gamma (API) 150
6 Cal (in) 16
Sh- Lt & Drk Gray Mnt Green Maroon, soft & silty, calcareous, some sl sandy lime, waxy & dense, slick
Lm- White Off White Tan Buff, VF-FXLN, mix of dense well cemented, algal ls, lithographic, VFXLN, semi-brittle sl cherty ls w/o vis. porosity, & soft white chalk
Lm- Cream Buff Tan, VF-FXLN, dnese, well cemented, mic, mostly tight w/ no to minimal vis. porosity, some sl chalky in part
CHESTER SAND 6092' (-3095) E-LOG 6115' (-3118) Ss/Lm- Clear Semi-Frosted, Fn Grn, mostly friable, some w/ lt Ca cementation, mod. sorted, sl unconsolidated, few spkld w/ dark sediment, LT GSY SHN, FEW W/ BLK STN (DD OIL?), FEW W/ DRK SCT STN, FEW W/ SL SFO, SEVERAL PCS W/ BRT YLW FLOR., SLW STRM WET CUT, numerous pcs of sandy lime/areneous ls, soft, chalky
Lm- Cream Buff, FXLN Vf Grn, tight mix of sl fsl FXLN w/ sctrd XLN & fn ppt porosity, loosely cemented & crumbley, w/ calcareous siltystone w/o vis. interparticle porosity
Lm- Cream Tan, FXLN, densely fsl, high-energy bioclastic w/ many fragments, crumbley
Ss- Sl Frosted Semi-Clear, Fn Grn, mature & sub-rounded, well sorted & consolidated, mostly friable, SCTRD BRWN STN, FEW W/ DRK BLK STN, FEW W/ SL SFO, GSY SHEEN, 1 PCS W/ WK LT YLW FLASH HALO FLOR., abundant dark shale slough, probably from trip
ST. GENEVIEVE 6130' (-3133) E-LOG 6150' (-3153) Lm- Lm Green Clear, Fn Grn, sub-rounded, mostly friable, well sorted & well consolidated, good consistant interparticle porosity, some pcs of shaley Ss/Sandy lime
Chert/Ss- Tan Semi-Translucent, fresh bedded chert, Pink Yellow White, sandy lime/shaley Ss, dense, calcareous, soft, some gummy white chalk
Lm- Maroon White, Fn Grn, sorted & sl unconsolidated, much shaley Ss/sandy lime, friable, limey
A/A, grading into more maroon, sl shaley & limey
A/A, increasing amount of cream to off white, shales content decreasing
Lm- White Maroon, Fn Grn, chalky matrix, sorted & consolidated, shaley Ss/Sandy lime
LOG, TIH W/ PDC, DEEPEN 50' FOR PRODUCTION CASING, NO GAS DETECTOR EQUIPMENT FROM LOGGING POINT TO RTD
A/A
A/A, Shales increasing due to trip
RTD 6250' (-3253) LTD 6198' (-3201) @ 12:22 5/14/2013
29 UNITS MAX
WIPER TRIP @ 6125'
CTCH
SURVEY 1 dgr.
DST #1
CHESTER SAND
6055' - 6125'
TURBO DRLG FLUIDS MD CHK
@ 6125' 11:30 5/13
WT: 8.9 FV: 70 PV: 24 YLD: 14
pH: 10.0 CAKE: 2/32
CHLOR: 2000 Ca: 40 LCM: 9#
DMC: $426 CMC: $16,215
0 Total Gas (units) 200
0 C1 (units) 200
0 C2 (units) 200
0 C3 (units) 200
0 C4 (units) 200