Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1102784

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 # 33168
Name: Woolsey Operating Company, LLC
Address 1: 125 N MARKET STE 1000
Address 2:
City: WICHITA State: KS Zip: 67202 + 1729
Contact Person: DEAN PATTISSON
Phone: (316) 267-4379
CONTRACTOR: License # 33902
Name: Hardt Drilling LLC
Wellsite Geologist: ROGER FISHER
Purchaser: PLAINS MARKETING / WEST WICHITA

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 #:

08/02/2012 Spud Date or Recompletion Date
08/14/2012 Date Reached TD
09/12/2012 Completion Date or Recompletion Date

API No. 15 - 15-095-22262-00-00
Spot Description:
_ - S2 - SW - SW Sec. 25 Twp. 28 S. R. 6 ☐ East ☑ West
330 Feet from ☐ North / ☑ South Line of Section
660 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Kingman
Lease Name: KOSTNER GU B Well #: 2
Field Name: HEDRICK
Producing Formation: MISSISSIPPIAN
Elevation: Ground: 1418 Kelly Bushing: 1428
Total Vertical Depth: 4402 Plug Back Total Depth: 3972
Amount of Surface Pipe Set and Cemented at: 287 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: 31000 ppm Fluid volume: 1800 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: MESSENGER PETROLEUM INC
Lease Name: NICHOLAS License #: 4706
Quarter NE Sec. 20 Twp. 30 S. R. 8 ☐ East ☑ West
County: KINGMAN Permit #: D27434

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: 11/30/2012
☑ **Confidential Release Date:** 11/30/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 12/03/2012

1102784

Operator Name: Woolsey Operating Company, LLC Lease Name: KOSTNER GU B Well #: 2

Sec. 25 Twp. 28 S. R. 6 ☐ East ☑ West County: Kingman

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Compensated Density/Comp Neutron PE
Dual Induction

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

Name	Top	Datum
HERINGTON	1036	+392
DOUGLAS	2832	-1404
LANSING A	3086	-1658
SWOPE LS	3460	-2032
MISSISSIPPIAN	3856	-2428
SIMPSON	4275	-2847

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	14.75	10.75	32.75	287	CLASS A	265	2% gel, 3% cc
PRODUCTION	7.875	4.5	10.5	4017	60/40 POZMIX	50	4% gel, 1/4# Celoflake
PRODUCTION	7.875	4.5	10.5	4017	CLASS H	75	10% salt, 10% Gypseal, 6# Kolseal, 1/4#

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	-			
	-			

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 *(Amount and Kind of Material Used)*	Depth
4	3856-3884	1400 gallons 10% MIRA	3856-3884
		56,195 gal slick wtr, 40,300# 30/50 sd, 12,000# 16/30 sd,	
		4000# 16/30 resin coated sd, 578,000 SCF nitrogen	3856-3884

TUBING RECORD: Size: 2.375 x 4.7# Set At: 3926 Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 09/19/2012

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	2	100	120	50000	

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: 3856-3884

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

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

November 28, 2012

DEAN PATTISSON
Woolsey Operating Company, LLC
125 N MARKET STE 1000
WICHITA, KS 67202-1729

Re: ACO1
API 15-095-22262-00-00
KOSTNER GU B 2
SW/4 Sec.25-28S-06W
Kingman County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
DEAN PATTISSON

ALLIED OIL & GAS SERVICES, LLC 053868

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Medicine Lodge KS

DATE 08-03-12	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 7:45AM
LEASE Koster	WELL # B-2		LOCATION			COUNTY Kingman	STATE KS
OLD OR NEW (Circle one)							

CONTRACTOR Hardt #1
TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D.
CASING SIZE 10 3/4 DEPTH 227 + 15x8 8"
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 250 MINIMUM —
MEAS. LINE SHOE JOINT N/A
CEMENT LEFT IN CSG. 20'
PERFS.
DISPLACEMENT 26 1/2 BBLS Fresh H2O

OWNER Woolsey Oper.

CEMENT
AMOUNT ORDERED 265 sx class A +3%cc +2% gel

EQUIPMENT

PUMP TRUCK CEMENTER D. Felio
471-302 HELPER R. Silley
BULK TRUCK
383-290 DRIVER G. Mclemore
BULK TRUCK
DRIVER

COMMON	265 sx "A"	@ 16.25	4306.25
POZMIX		@	
GEL	5 sx	@ 21.25	106.25
CHLORIDE	10 sx	@ 58.20	582.00
ASC		@	
HANDLING	280.57	@ 2.10	601.80
MILEAGE	1308 x 35 x 2.35		1075.83
		TOTAL	$6672.13

WELL FILE
Regulatory Correspondence
Drlg / Comp Workovers
Tests / Meters Operations

REMARKS:
See 506 Log
Cement Did Circ.
Shut in / No Baffle
THX ☺

SERVICE

DEPTH OF JOB	292		
PUMP TRUCK CHARGE			1125-
EXTRA FOOTAGE		@	
MILEAGE	35	@ 7.00	245.00
MANIFOLD	N/A	@	
Light Vehicle	35	@ 4.00	140.00
		@	
		TOTAL	1510-

CHARGE TO: Woolsey Oper.
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

NONE

TOTAL

SALES TAX (If Any) -0-
TOTAL CHARGES 8182.13
DISCOUNT 20% $1636.43 IF PAID IN 30 DAYS
$6545.70

AUG 29 2012

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 Donald Boyd

SIGNATURE Donald Boyd

Kostner GUB-2

ALLIED OIL & GAS SERVICES, LLC 053846

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Medicine Lodge KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
08/15/2012	25	28s	6w				6:45PM

LEASE Kostner WELL# B-2 LOCATION Adams KS, East to Murdock Rd, 8miles North, East into COUNTY Kingman STATE KS

OLD OR (NEW) (Circle one)

2.02

CONTRACTOR Hardt Drlg
OWNER Woolsey

TYPE OF JOB Production
HOLE SIZE 7 7/8 T.D. 4402
CASING SIZE 4½ DEPTH 4017
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 1600 MINIMUM
MEAS. LINE SHOE JOINT 37.92
CEMENT LEFT IN CSG. 37.92
PERFS.
DISPLACEMENT 64 BBls w 2% KCL

EQUIPMENT

PUMP TRUCK CEMENTER Sean Thiegarch
398 HELPER Scott Piddy / Wayne DL
BULK TRUCK
364 DRIVER Brett Gains
BULK TRUCK
DRIVER

REMARKS:

Plug and Hold

WELL FILE
Regulatory Correspondence
Drlg / (Comp) Workovers
Tests / Meters Operations

CHARGE TO: Woolsey
STREET
CITY STATE ZIP

CEMENT

AMOUNT ORDERED 75sx 60:40:4%Gel, 75sx Class H +10% Gypseal +10% salt + 6# Kolseal +.8% fl-160 + Floseal

COMMON	Class H 75 sx	@ 19.25	1443.75
POZMIX	30 sx	@ 8.50	255.00
GEL	3 sx	@ 21.25	63.75
CHLORIDE		@	
ASC		@	
Common	Class A 45 sx	@ 16.25	731.25
Gypseal	14 sx	@ 34.20	478.80
Salt	8 sx	@ 12.00	96.00
Kolseal	450 lbs	@ .95	427.50
fl-160	56 lbs	@ 17.20	963.20
floseal	18.75 lbs	@ 2.70	50.62
		@	
		@	
HANDLING	186 cuft	@ 2.10	390.60
MILEAGE	7.61 tons X 35 mi X 2.35		633.02
		TOTAL	5533.49

269.37

SERVICE

DEPTH OF JOB 4017

PUMP TRUCK CHARGE			2405.00
EXTRA FOOTAGE		@	
MILEAGE	35 mi	@ 7	245.00
MANIFOLD		@	200
LV	35 mi	@ 4	140.00
		@	
		TOTAL	2990.00

PLUG & FLOAT EQUIPMENT

4½

AFU Float Shoe -1	@	349.00
Latch down plug -1	@	350.00
recip scratchers -20	@ 76.00	1520.00
centralizers -6	@ 80.00	480.00
	@	
	TOTAL	2699.00

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 Donald Boyd

SIGNATURE Donald Boyd

SALES TAX (If Any) -0-

TOTAL CHARGES 11,222.49

DISCOUNT 20% 2244.50 IF PAID IN 30 DAYS

NET 8977.99

AUG 30 2012

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49534 **DST#: 1**

Test Start: 2012.08.11 @ 08:52:02

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:26:02
Time Test Ended: 17:57:17

Test Type: Conventional Bottom Hole (Initial)
Tester: Ryan Reynolds
Unit No: 63

Interval: 3859.00 ft (KB) To 3875.00 ft (KB) (TVD)
Total Depth: 3875.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

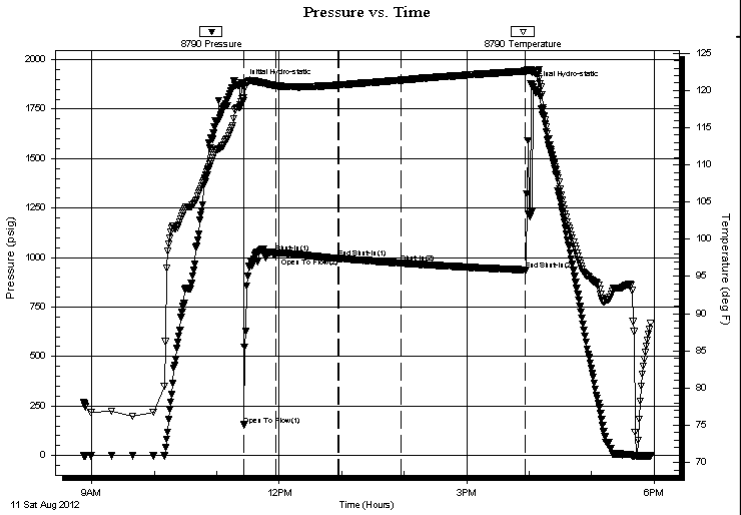
Reference Elevations: 1428.00 ft (KB)
1418.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8790

Press@RunDepth: 972.30 psig @ ft (KB)
Start Date: 2012.08.11 End Date: 2012.08.11
Start Time: 08:52:07 End Time: 17:57:17

Capacity: 8000.00 psig
Last Calib.: 2012.08.11
Time On Btm: 2012.08.11 @ 11:24:32
Time Off Btm: 2012.08.11 @ 16:01:47

TEST COMMENT: IF: Weak blow . 1 1/2"- Dead in 20mins.
ISI: No blow
FF: No blow
FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1877.16	118.93	Initial Hydro-static
2	154.47	118.68	Open To Flow (1)
32	1021.82	120.66	Shut-In(1)
92	996.33	120.74	End Shut-In(1)
93	996.38	120.74	Open To Flow (2)
153	972.30	121.40	Shut-In(2)
272	937.58	122.60	End Shut-In(2)
278	1870.93	122.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49534 **DST#: 1**

Test Start: 2012.08.11 @ 08:52:02

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:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl

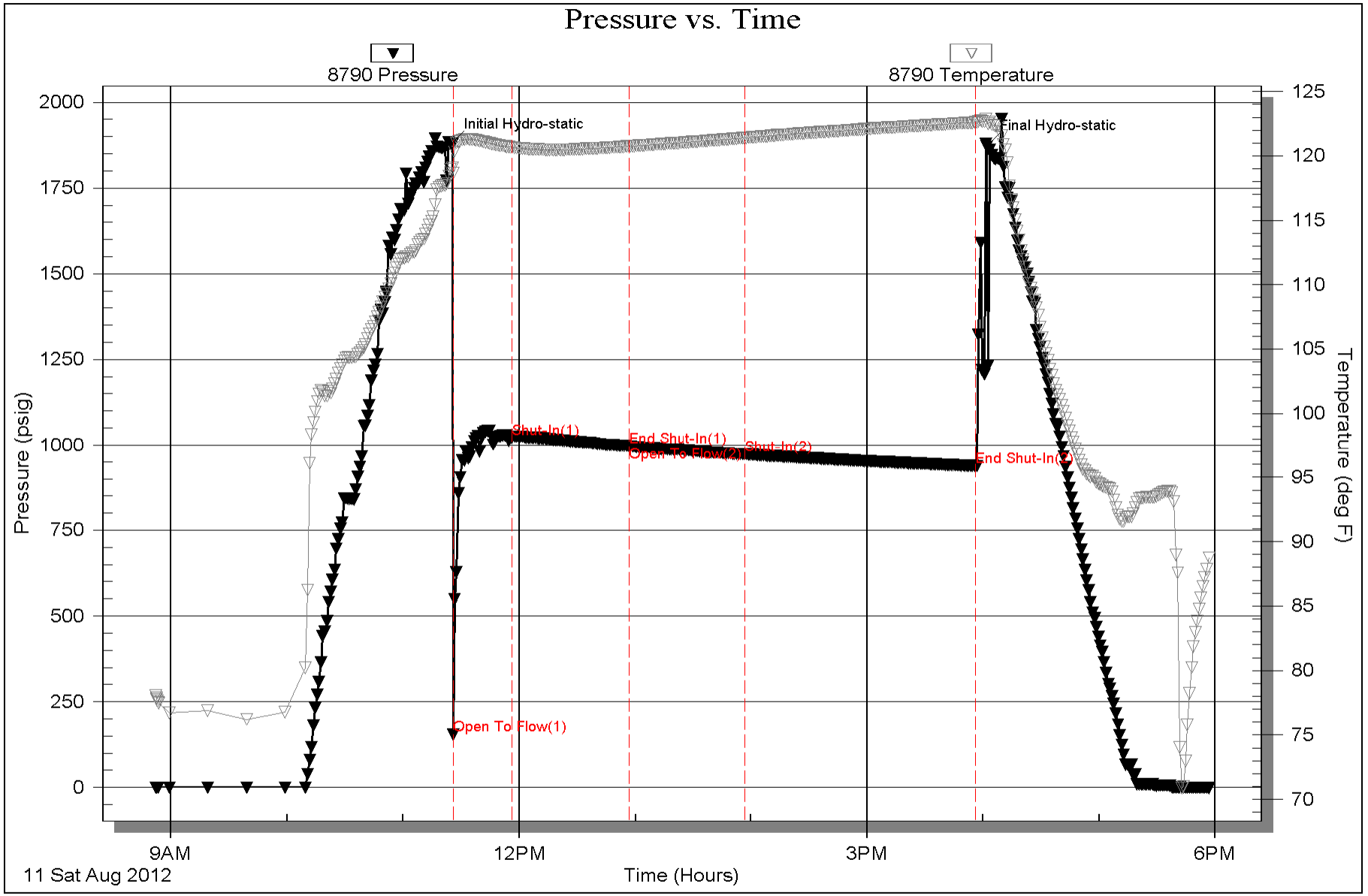
Total Length: ft Total Volume: bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8790 | Woolsey Oper. Co. LLC. | Kostner "B" #2 | DST Test Number: 1



Trilobite Testing, Inc | Ref. No: 49534 | Printed: 2012.08.12 @ 02:02:25

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49535 **DST#: 2**

Test Start: 2012.08.12 @ 02:20:37

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:03:22
Time Test Ended: 10:26:37

Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Reynolds
Unit No: 63

Interval: 3860.00 ft (KB) To 3896.00 ft (KB) (TVD)
Total Depth: 3896.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

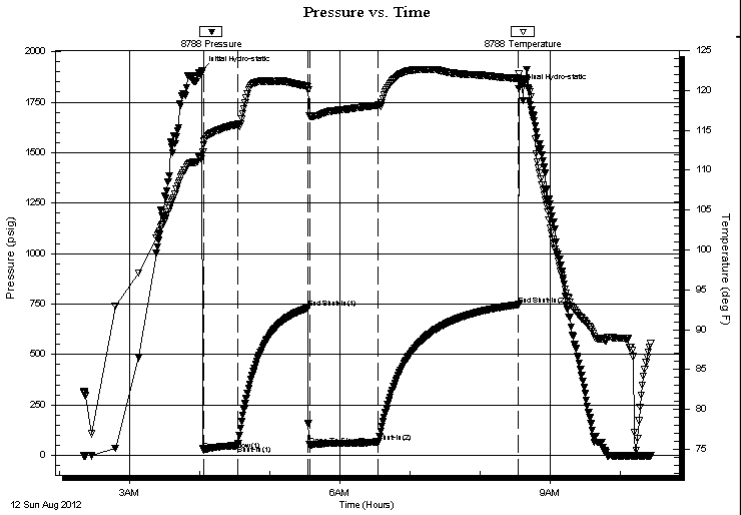
Reference Elevations: 1428.00 ft (KB)
1418.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8788 **Inside**

Press@RunDepth: 67.71 psig @ 3861.00 ft (KB)
Start Date: 2012.08.12 End Date: 2012.08.12
Start Time: 02:20:42 End Time: 10:26:36

Capacity: 8000.00 psig
Last Calib.: 2012.08.12
Time On Btm: 2012.08.12 @ 04:02:07
Time Off Btm: 2012.08.12 @ 08:33:07

TEST COMMENT: IF: Strong blow . BOB in 1 min.
ISI: No blow
FF: Strong blow . BOB 15sec. GTS @ 37min.
FSI: Weak 1/2" BB



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1905.48	111.41	Initial Hydro-static
2	26.53	113.18	Open To Flow (1)
31	49.41	115.74	Shut-In(1)
91	730.38	120.48	End Shut-In(1)
92	49.39	116.70	Open To Flow (2)
151	67.71	118.13	Shut-In(2)
271	746.96	121.52	End Shut-In(2)
271	1818.61	122.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 20%gas 24%oil 56%mud	0.30
60.00	OGCM 4%oil 10%gas 86%mud	0.31
20.00	SLI OCM 2%oil 98%mud	0.28

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.50	6.70
Last Gas Rate	0.13	3.50	6.70
Max. Gas Rate	0.13	3.50	6.70

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49535 **DST#: 2**

Test Start: 2012.08.12 @ 02:20:37

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:	4000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.18 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 20%gas 24%oil 56%mud	0.295
60.00	OGCM 4%oil 10%gas 86%mud	0.313
20.00	SLI OCM 2%oil 98%mud	0.281

Total Length: 140.00 ft Total Volume: 0.889 bbl

Num Fluid Samples: 1 Num Gas Bombs: 1 Serial #: RR-1

Laboratory Name: Caraway Laboratory Location: Liberal, KS

Recovery Comments:

DRILL STEM TEST REPORT

GAS RATES

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49535 **DST#: 2**

Test Start: 2012.08.12 @ 02:20:37

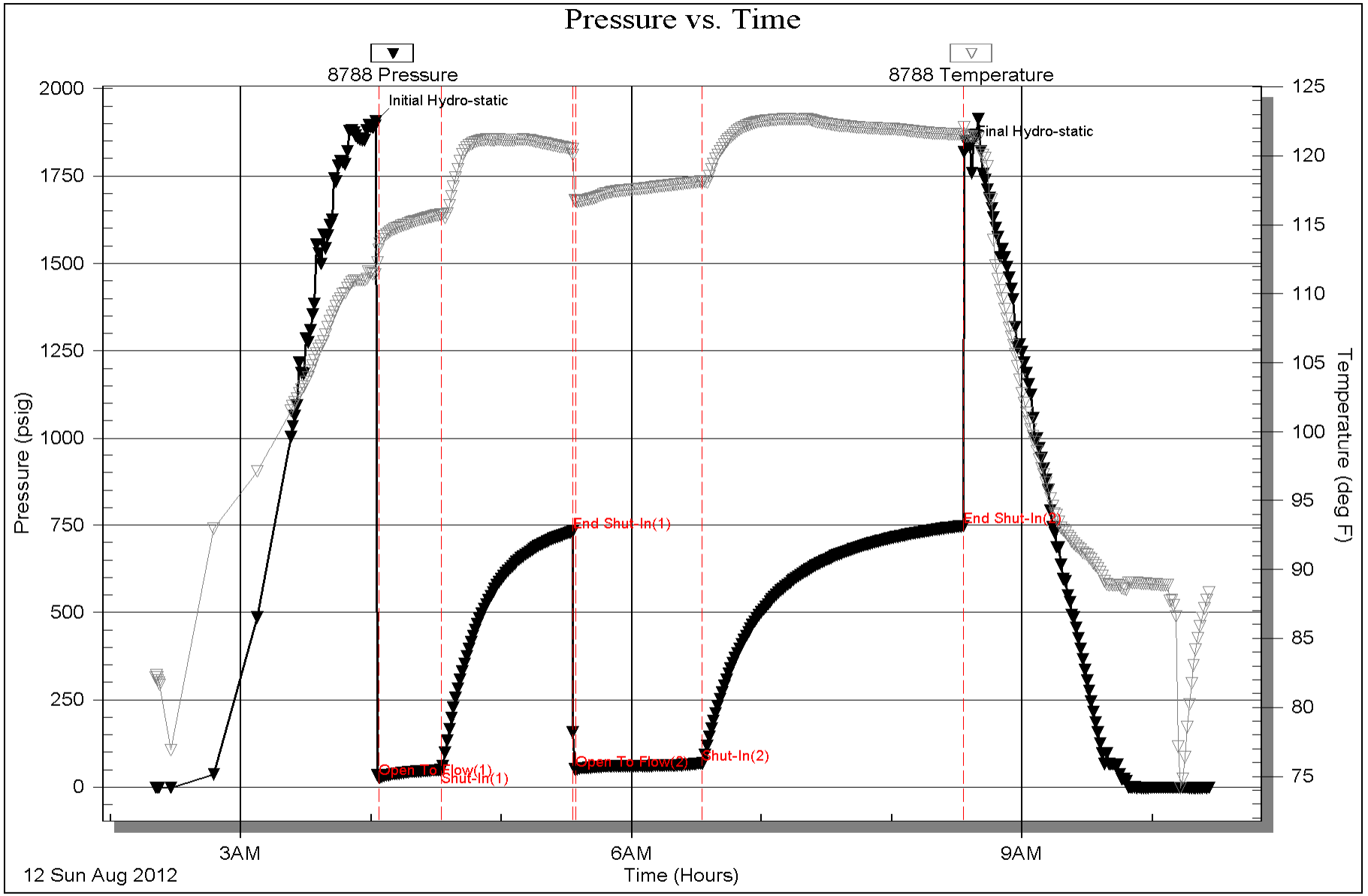
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	40	0.13	3.50	6.70
2	40	0.13	3.50	6.70
2	40	0.13	3.50	6.70

Serial #: 8788 **Inside** Woolsey Oper. Co. LLC. Kostner "B" #2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 49535 Printed: 2012.08.13 @ 09:50:51

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49536 **DST#: 3**

Test Start: 2012.08.13 @ 12:53:54

GENERAL INFORMATION:

Formation: **Misner Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:27:09
Time Test Ended: 19:33:09

Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Reynolds
Unit No: 63

Interval: 4116.00 ft (KB) To 4190.00 ft (KB) (TVD)
Total Depth: 4190.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

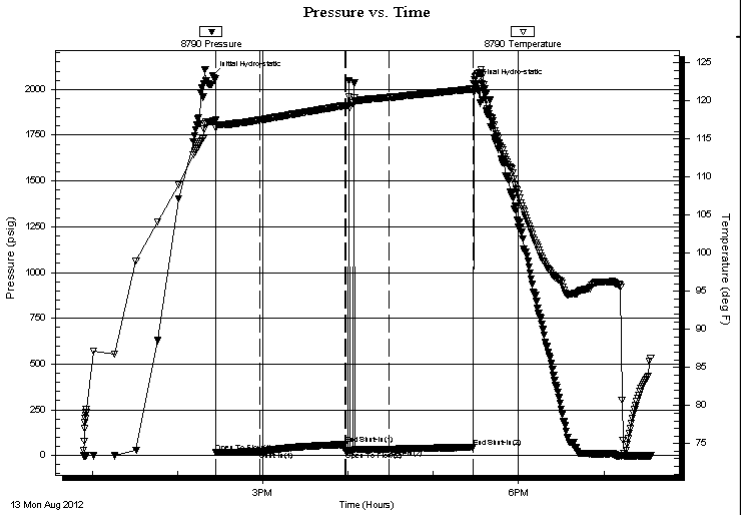
Reference Elevations: 1428.00 ft (KB)
1418.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8790 **Inside**

Press@RunDepth: 33.84 psig @ 4117.00 ft (KB)
Start Date: 2012.08.13 End Date: 2012.08.13
Start Time: 12:53:59 End Time: 19:33:08

Capacity: 8000.00 psig
Last Calib.: 2012.08.13
Time On Btm: 2012.08.13 @ 14:24:39
Time Off Btm: 2012.08.13 @ 17:29:39

TEST COMMENT: IF: Weak blow . 1/2" - Dead in 6 mins.
ISI: No blow
FF: No blow . Flushed tool 5 min. & 10 min. into flow period. No blow
FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2074.67	117.37	Initial Hydro-static
3	18.24	116.46	Open To Flow (1)
34	20.45	117.51	Shut-In(1)
93	60.11	119.41	End Shut-In(1)
94	22.29	119.38	Open To Flow (2)
125	33.84	120.48	Shut-In(2)
184	44.51	121.59	End Shut-In(2)
185	2030.24	123.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100% mud	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Roger Fisher

25-28s-6w

Kostner "B" #2

Job Ticket: 49536 **DST#: 3**

Test Start: 2012.08.13 @ 12:53:54

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:	3000 ppm
Viscosity:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100% mud	0.049

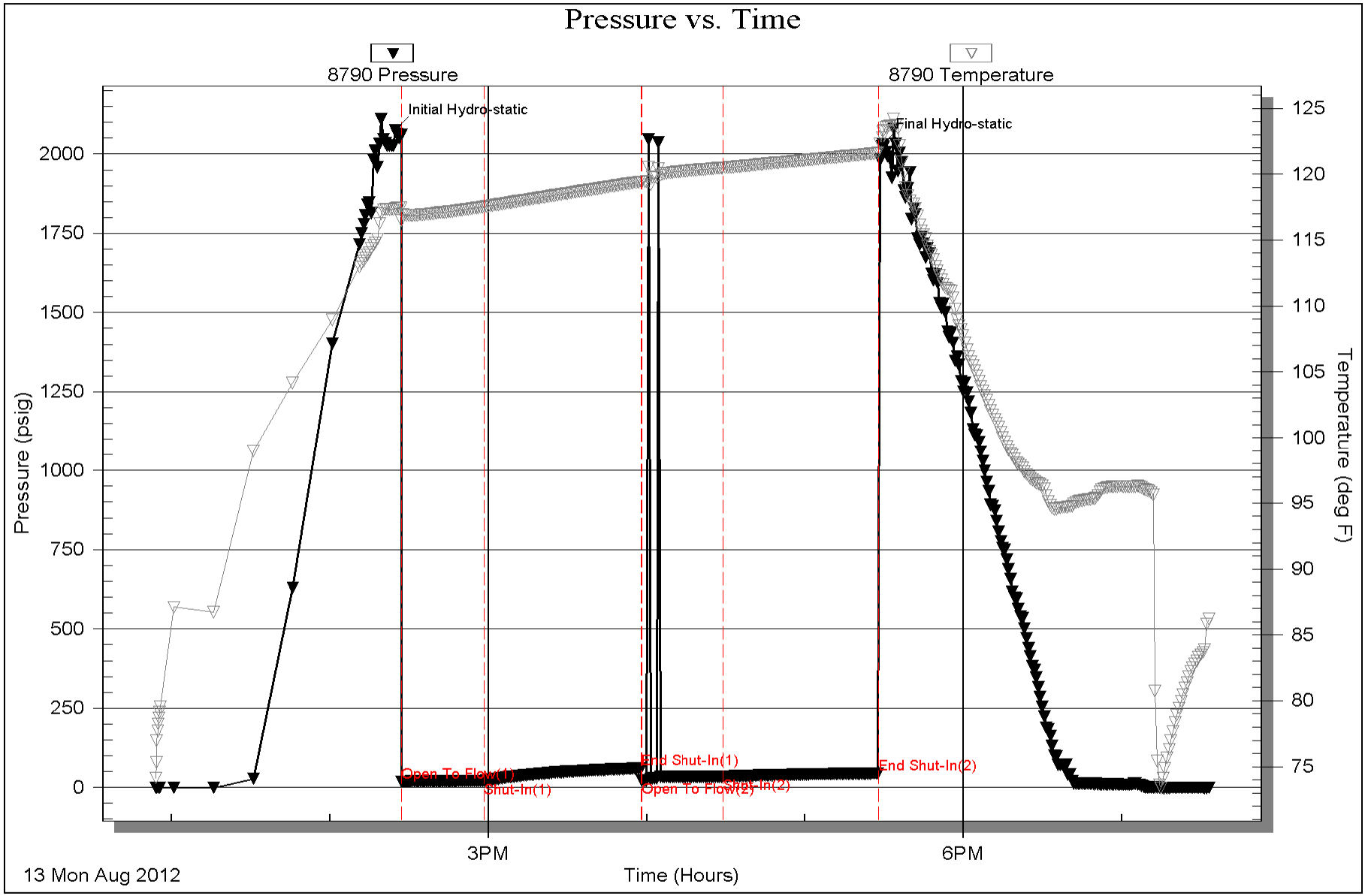
Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8790 **Inside** Woolsey Oper. Co. LLC. Kostner "B" #2 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 49536 Printed: 2012.08.14 @ 01:13:30

Woolsey Operating Company, LLC

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

Well Name:	**Kostner GU B#2**		
Location:	**S/2-SW-SW/4 Section 25 T28S-R6W**		
License Number:	**API: 15-095-22262-00-00**	**Region:**	**Kingman Co, KS**
Spud Date:	**Aug. 2, 2012**	**Drilling Completed:**	**Aug 14, 2012**
Surface Coordinates:	**330' FSL & 660' FWL Section 25 T28S-R6W**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**1418'**	**K.B. Elevation (ft):**	**1428'**
Logged Interval (ft):	**2500 To: TD**	**Total Depth (ft):**	**4403**
Formation:			
Type of Drilling Fluid:	**Chemical Displaced at 2500'**		

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

OPERATOR

Company: **Woolsey Operating Company,LLC**
Address: **125 N. Market, Suite 1000**
Wichita, KS 67202

GEOLOGIST

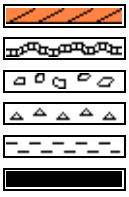
Name: **Roger L. Fisher**
Company: **Consulting Geologist**
Address: **1928 N. Garland**
Wichita Kansas, 67203

COMMENTS

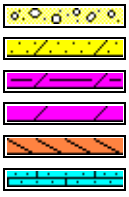
Surface Casing: 287' of 10 1/2"
Production Casing: 4402' of 4 1/2"
Hardt Drilling Rig
Gas Detector: Woolsey Operating Lab
Mud System: Mud Co
OH Logs: Superior Wireline; DILL, CDL/CNL/PE

Pipe was run to further test

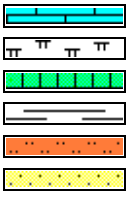
ROCK TYPES



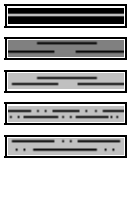
Anhy
Bent
Brec
Cht
Clyst
Coal



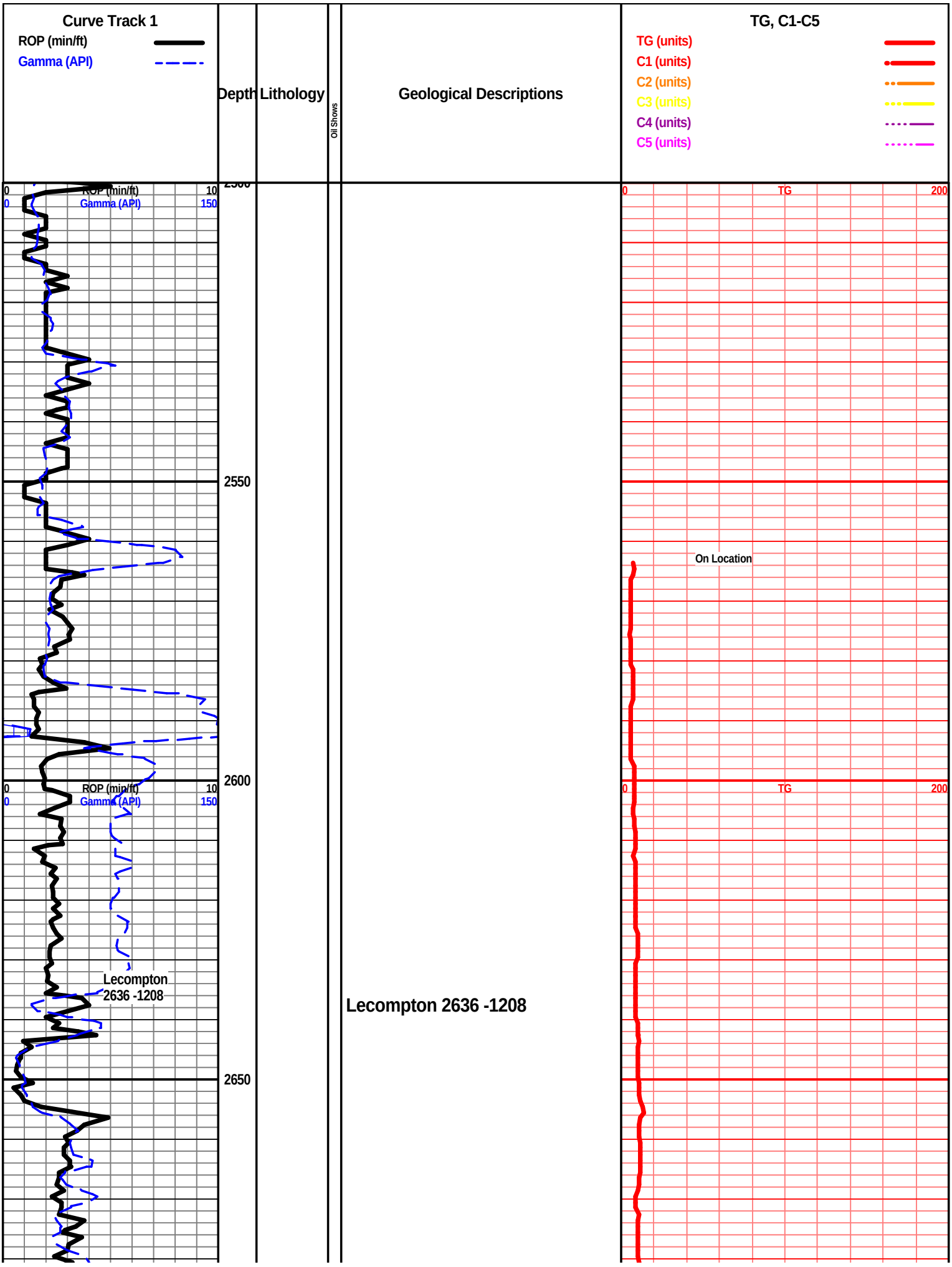
Congl
Sdy dolo
Shy dolo
Dol
Gyp
Sdy lmst

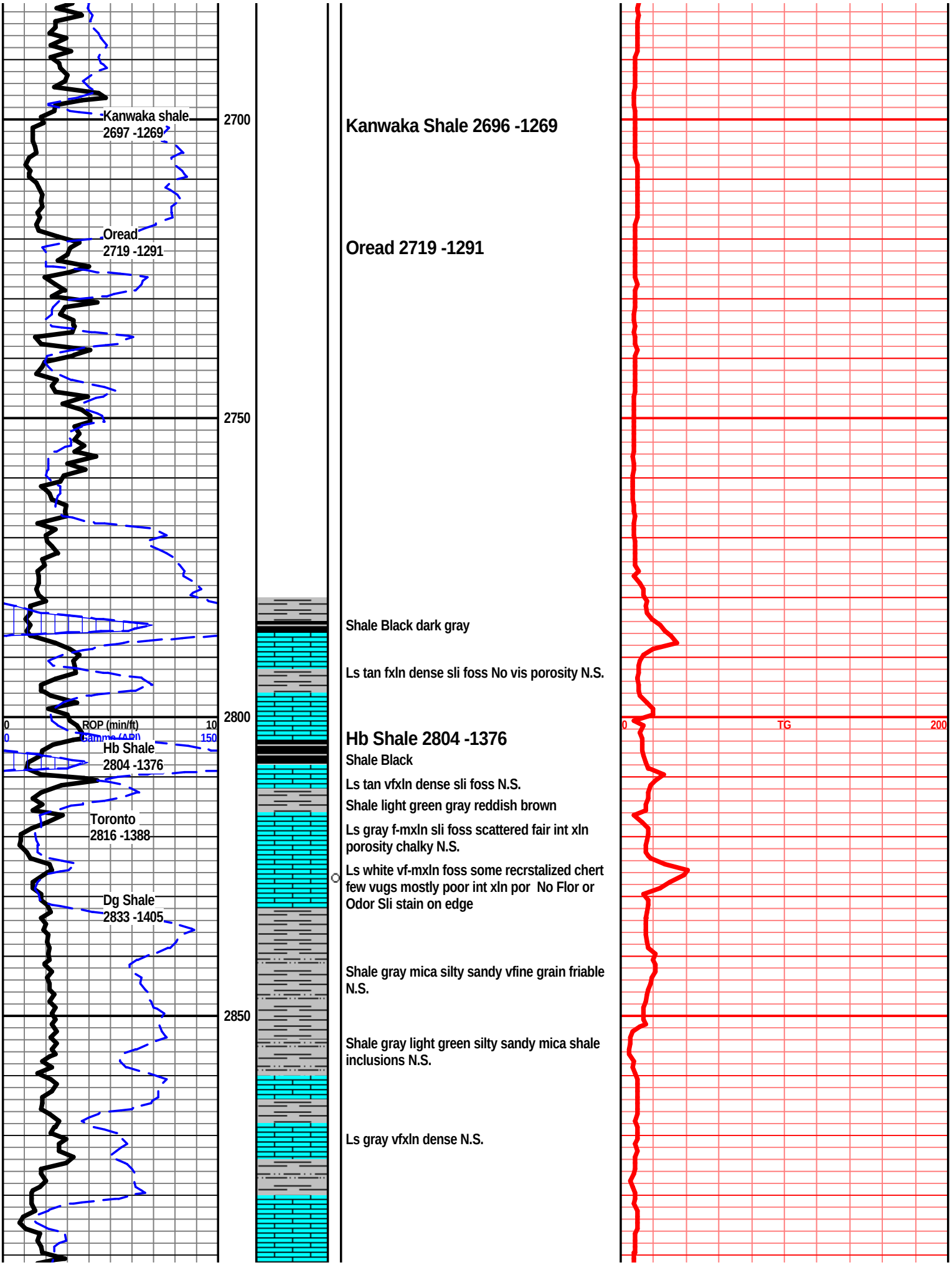


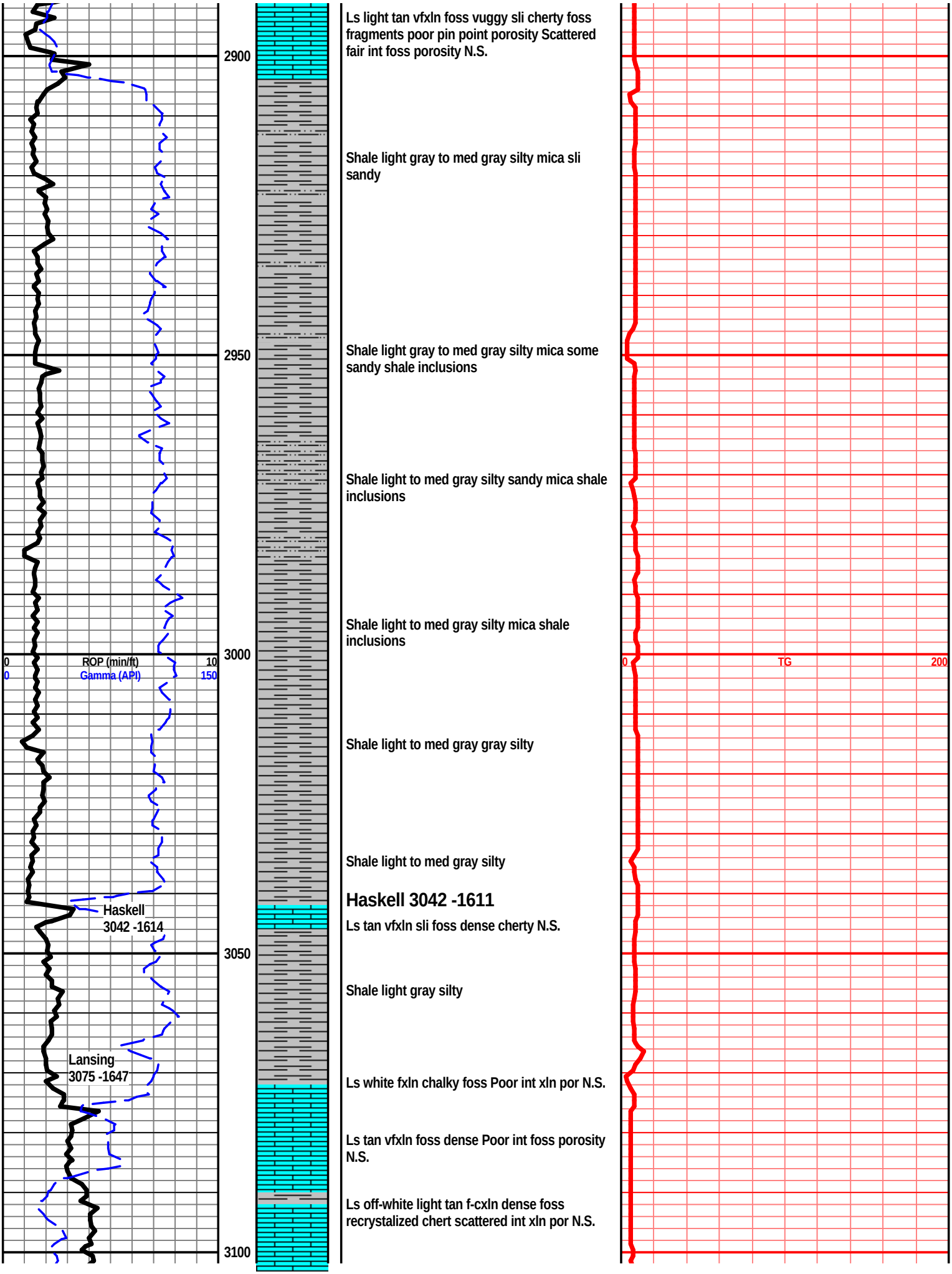
Lmst
Mrlst
Salt
Shale
Sltst
Ss

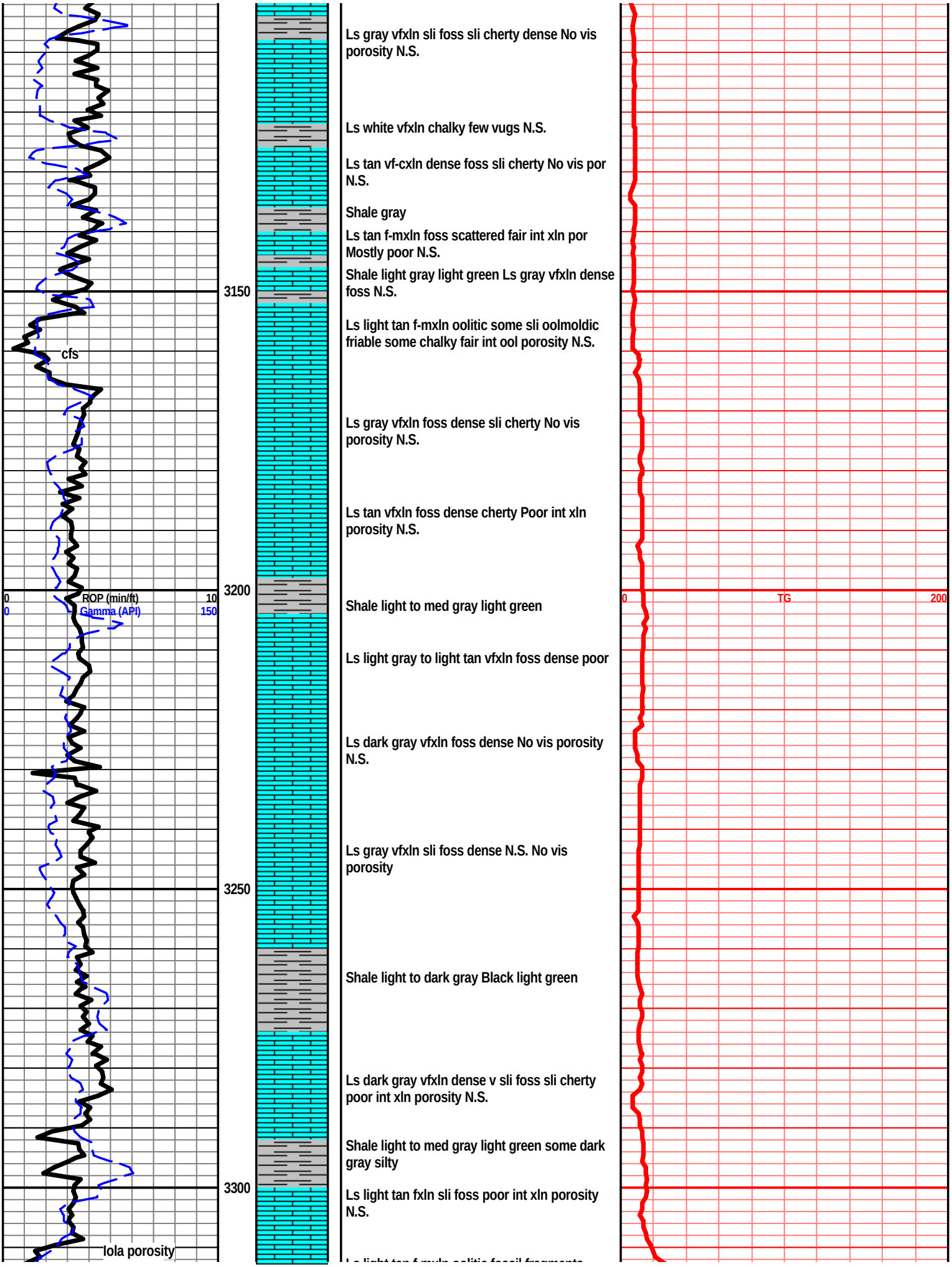


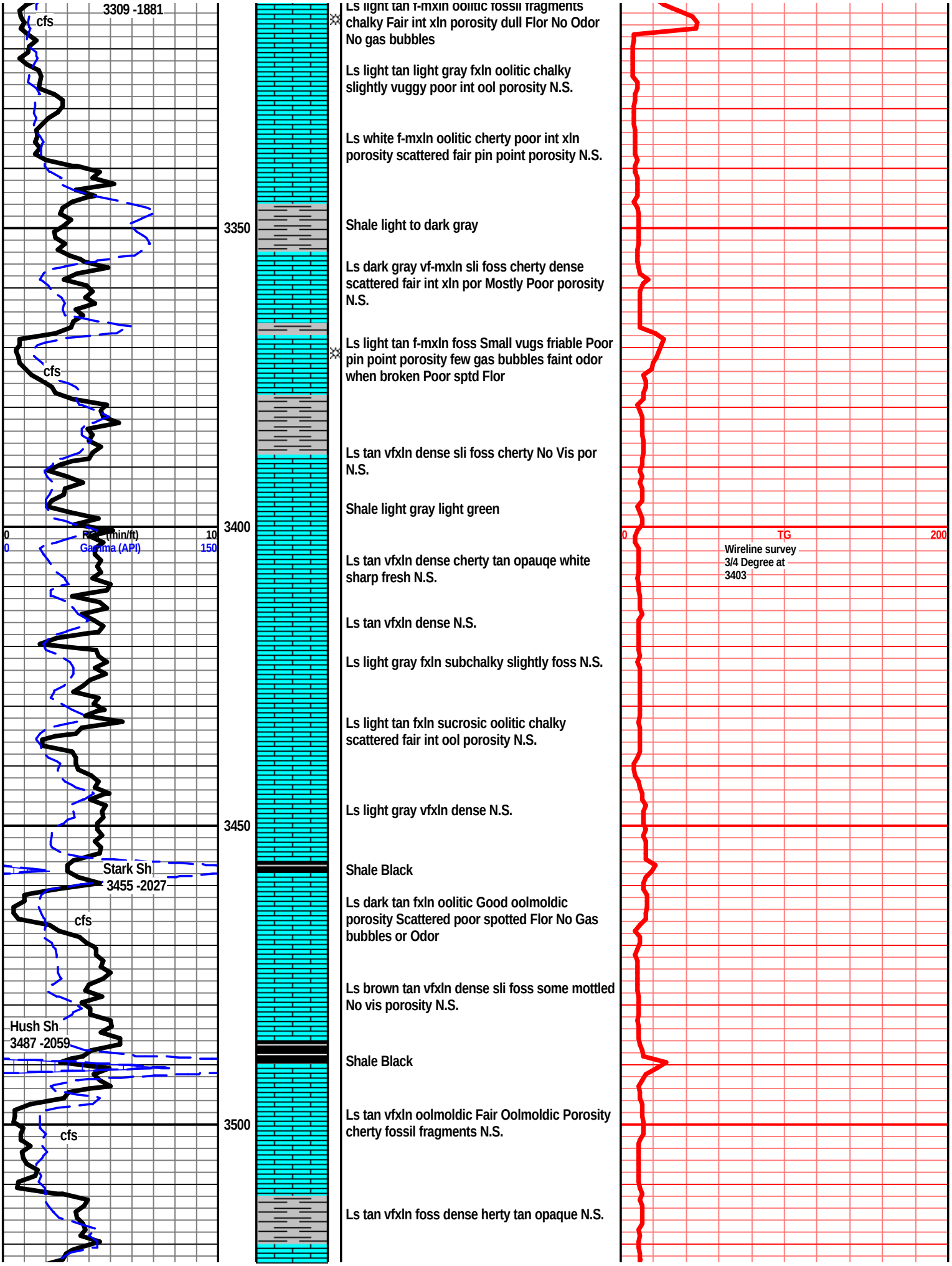
Black sh
Gry sh
Shale
Shysltst
Sltysh

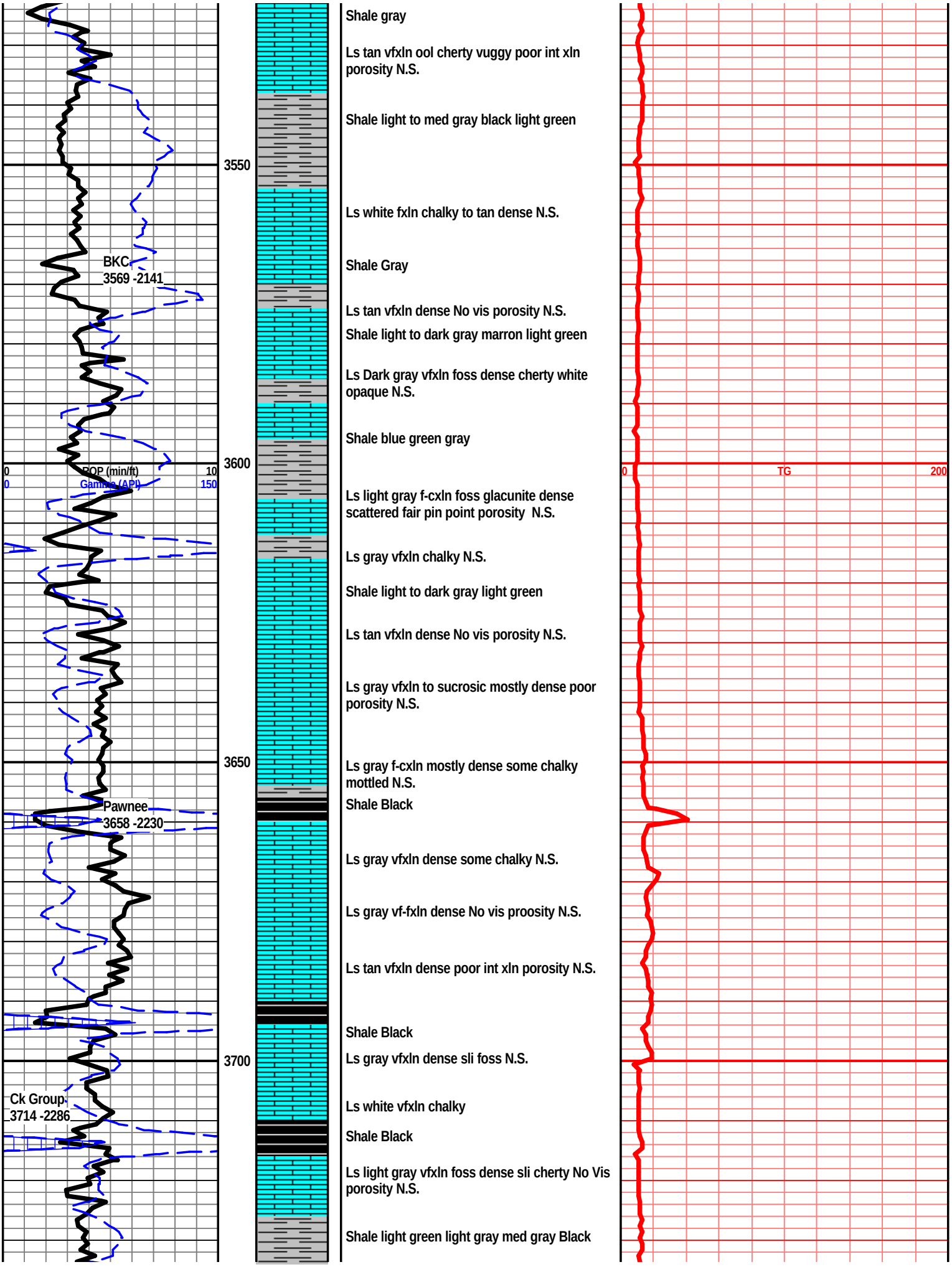

Curve Track 1
ROP (min/ft)
Gamma (API)
Depth
Lithology
Oil Shows
Geological Descriptions
TG, C1-C5
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)
0
10
150
200
TG
2550
2600
2650
On Location
Lecompton
2636 -1208
Lecompton 2636 -1208

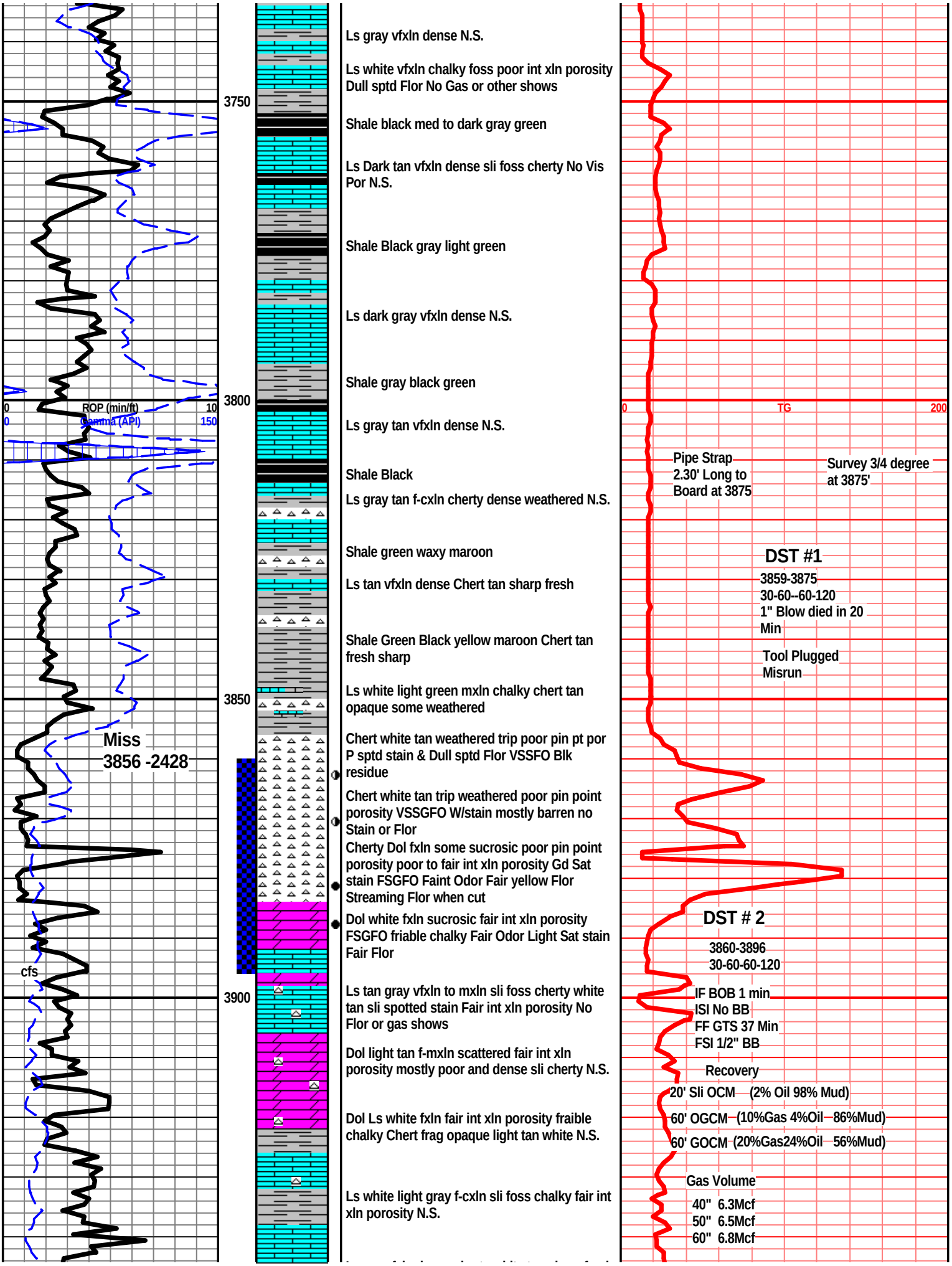

Kanwaka shale
2697 -1269
Oread
2719 -1291
Hb Shale
2804 -1376
Toronto
2816 -1388
Dg Shale
2833 -1405
2700
2750
2800
2850
0
ROP (min/ft)
10
0
Gamma (API)
150
Kanwaka Shale 2696 -1269
Oread 2719 -1291
Shale Black dark gray
Ls tan fxln dense sli foss No vis porosity N.S.
Hb Shale 2804 -1376
Shale Black
Ls tan vfxln dense sli foss N.S.
Shale light green gray reddish brown
Ls gray f-mxln sli foss scattered fair int xln porosity chalky N.S.
Ls white vf-mxln foss some recrstalized chert few vugs mostly poor int xln por No Flor or Odor Sli stain on edge
Shale gray mica silty sandy vfine grain friable N.S.
Shale gray light green silty sandy mica shale inclusions N.S.
Ls gray vfxln dense N.S.
0
TG
200

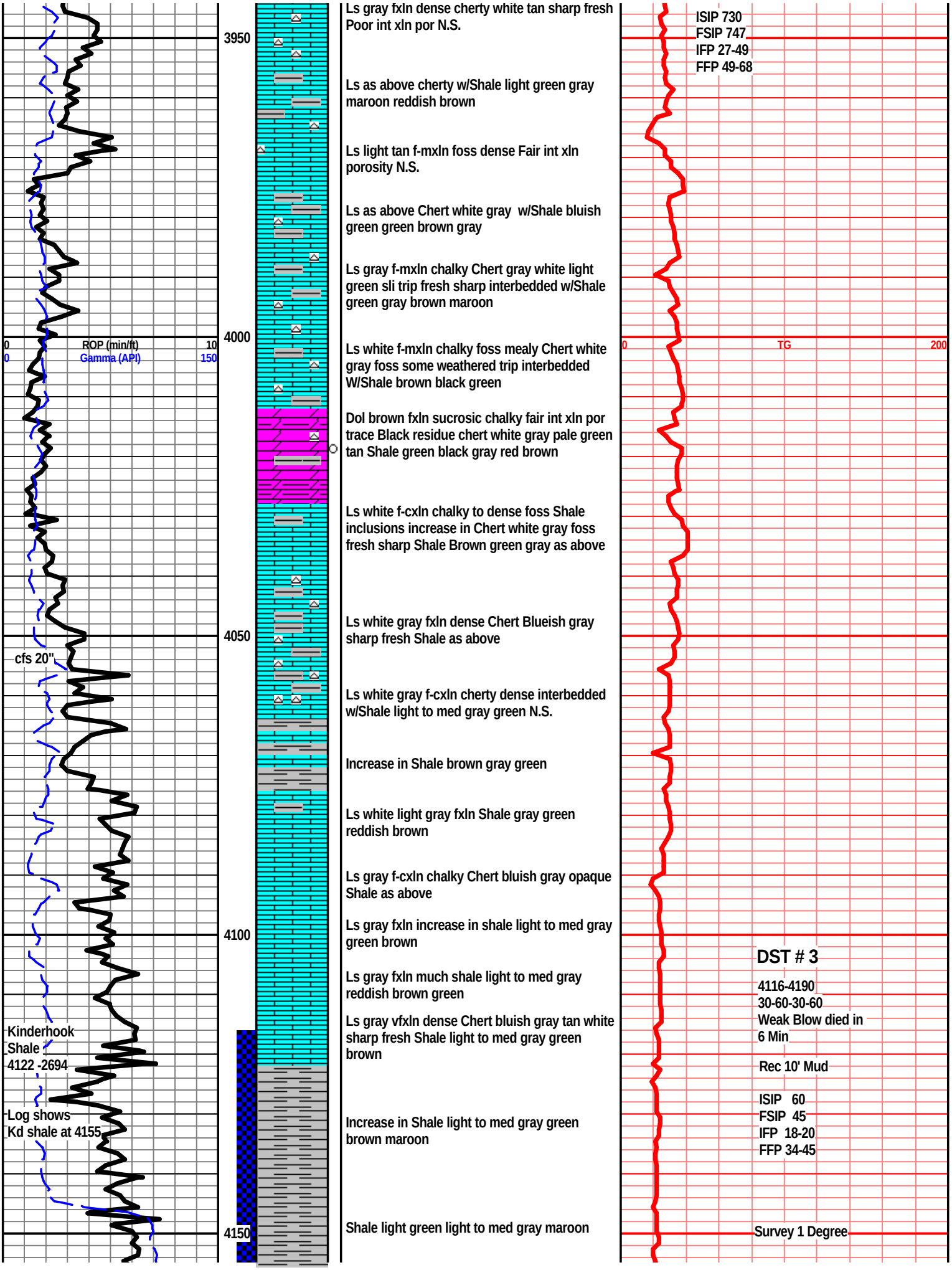

2900
2950
3000
3050
3100
0
ROP (min/ft)
10
0
Gamma (API)
150
Haskell
3042 -1614
Lansing
3075 -1647
Ls light tan vfxln foss vuggy sli cherty foss fragments poor pin point porosity Scattered fair int foss porosity N.S.
Shale light gray to med gray silty mica sli sandy
Shale light gray to med gray silty mica some sandy shale inclusions
Shale light to med gray silty sandy mica shale inclusions
Shale light to med gray silty mica shale inclusions
Shale light to med gray gray silty
Shale light to med gray silty
Haskell 3042 -1611
Ls tan vfxln sli foss dense cherty N.S.
Shale light gray silty
Ls white fxln chalky foss Poor int xln por N.S.
Ls tan vfxln foss dense Poor int foss porosity N.S.
Ls off-white light tan f-cxln dense foss recrystalized chert scattered int xln por N.S.
0
TG
200

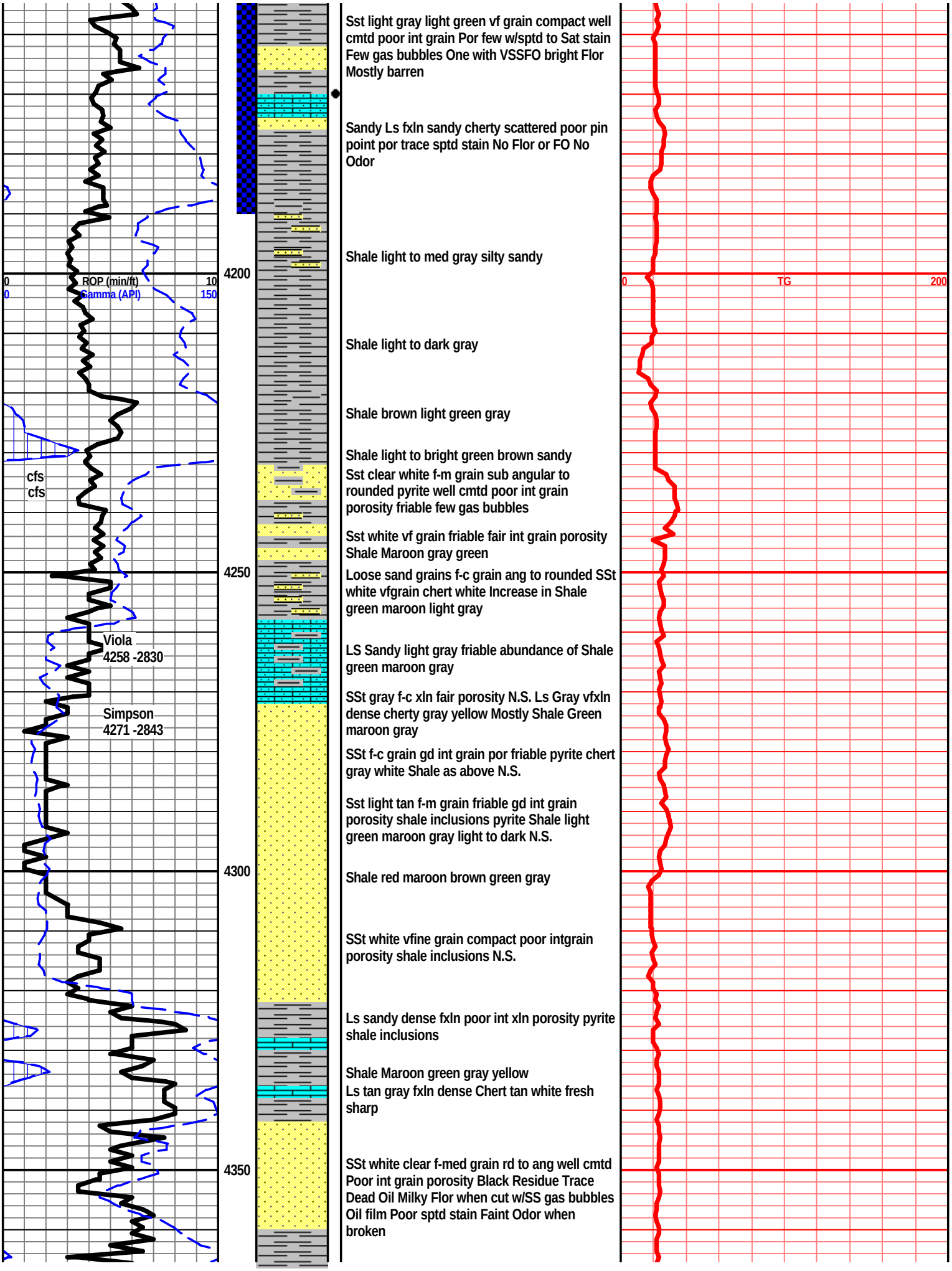

cfs
0
ROP (min/ft)
10
0
Gamma (API)
150
3150
3200
3250
3300
lola porosity
Ls gray vfxln sli foss sli cherty dense No vis porosity N.S.
Ls white vfxln chalky few vugs N.S.
Ls tan vf-cxln dense foss sli cherty No vis por N.S.
Shale gray
Ls tan f-mxln foss scattered fair int xln por Mostly poor N.S.
Shale light gray light green Ls gray vfxln dense foss N.S.
Ls light tan f-mxln oolitic some sli oolmoldic friable some chalky fair int ool porosity N.S.
Ls gray vfxln foss dense sli cherty No vis porosity N.S.
Ls tan vfxln foss dense cherty Poor int xln porosity N.S.
Shale light to med gray light green
Ls light gray to light tan vfxln foss dense poor
Ls dark gray vfxln foss dense No vis porosity N.S.
Ls gray vfxln sli foss dense N.S. No vis porosity
Shale light to dark gray Black light green
Ls dark gray vfxln dense v sli foss sli cherty poor int xln porosity N.S.
Shale light to med gray light green some dark gray silty
Ls light tan fxln sli foss poor int xln porosity N.S.
0
TG
200

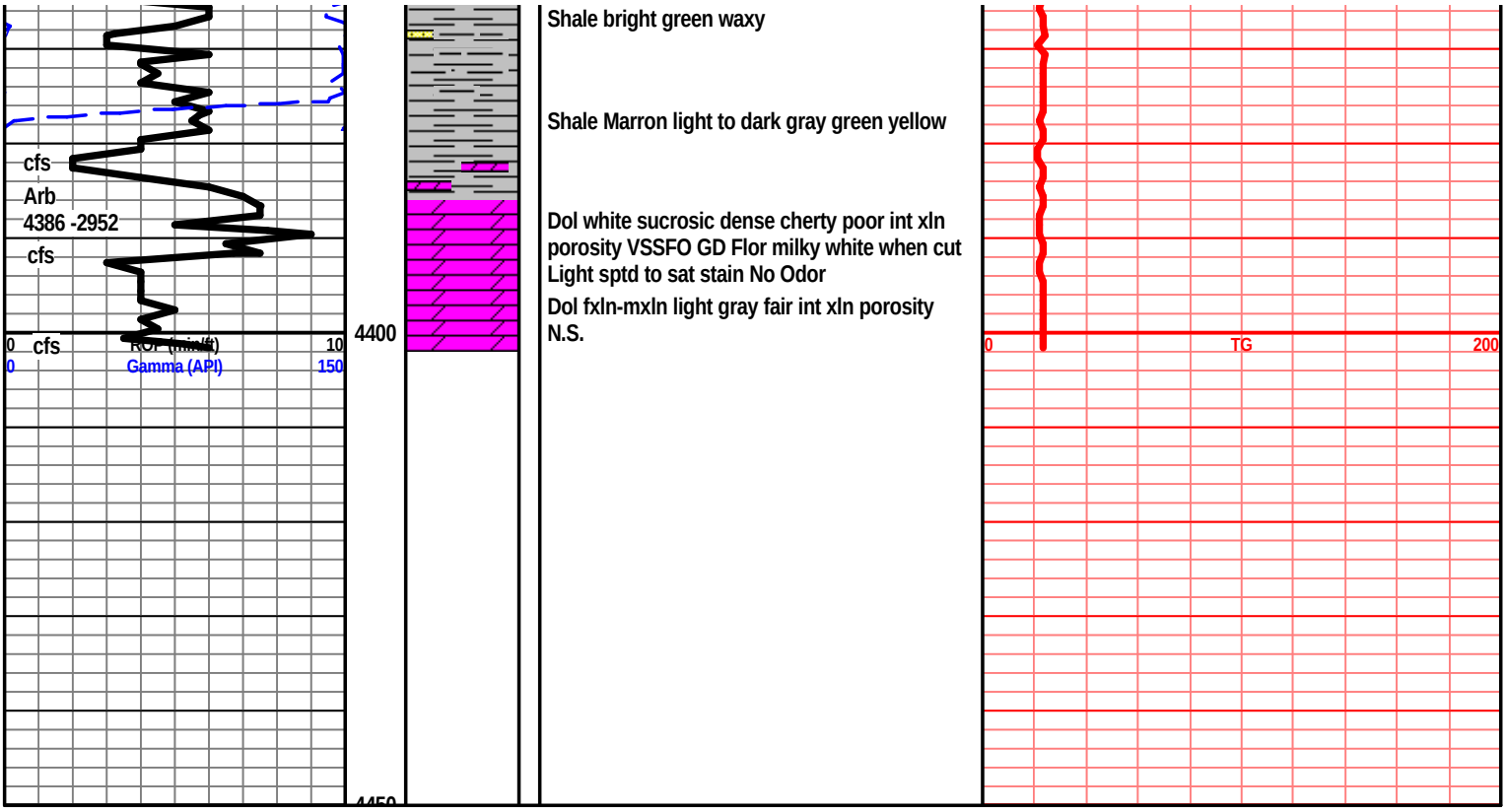

3309 -1881
cfs
cfs
cfs
0
ROP (min/ft)
10
0
Gamma (API)
150
3350
3400
3450
3500
Stark Sh
3455 -2027
Hush Sh
3487 -2059
Ls light tan f-mxln oolitic fossil fragments chalky Fair int xln porosity dull Flor No Odor No gas bubbles
Ls light tan light gray fxln oolitic chalky slightly vuggy poor int ool porosity N.S.
Ls white f-mxln oolitic cherty poor int xln porosity scattered fair pin point porosity N.S.
Shale light to dark gray
Ls dark gray vf-mxln sli foss cherty dense scattered fair int xln por Mostly Poor porosity N.S.
Ls light tan f-mxln foss Small vugs friable Poor pin point porosity few gas bubbles faint odor when broken Poor sptd Flor
Ls tan vfxln dense sli foss cherty No Vis por N.S.
Shale light gray light green
Ls tan vfxln dense cherty tan opauqe white sharp fresh N.S.
Ls tan vfxln dense N.S.
Ls light gray fxln subchalky slightly foss N.S.
Ls light tan fxln sucrosic oolitic chalky scattered fair int ool porosity N.S.
Ls light gray vfxln dense N.S.
Shale Black
Ls dark tan fxln oolitic Good oolmoldic porosity Scattered poor spotted Flor No Gas bubbles or Odor
Ls brown tan vfxln dense sli foss some mottled No vis porosity N.S.
Shale Black
Ls tan vfxln oolmoldic Fair Oolmoldic Porosity cherty fossil fragments N.S.
Ls tan vfxln foss dense herty tan opaque N.S.
0
TG
200
Wireline survey
3/4 Degree at
3403


BKC
3569 -2141
0
ROP (min/ft)
10
0
Gamma (API)
150
Pawnee
3658 -2230
Ck Group
3714 -2286
3550
3600
3650
3700
Shale gray
Ls tan vfxln ool cherty vuggy poor int xln porosity N.S.
Shale light to med gray black light green
Ls white fxln chalky to tan dense N.S.
Shale Gray
Ls tan vfxln dense No vis porosity N.S.
Shale light to dark gray marron light green
Ls Dark gray vfxln foss dense cherty white opaque N.S.
Shale blue green gray
Ls light gray f-cxln foss glacunite dense scattered fair pin point porosity N.S.
Ls gray vfxln chalky N.S.
Shale light to dark gray light green
Ls tan vfxln dense No vis porosity N.S.
Ls gray vfxln to sucrosic mostly dense poor porosity N.S.
Ls gray f-cxln mostly dense some chalky mottled N.S.
Shale Black
Ls gray vfxln dense some chalky N.S.
Ls gray vf-fxln dense No vis proosity N.S.
Ls tan vfxln dense poor int xln porosity N.S.
Shale Black
Ls gray vfxln dense sli foss N.S.
Ls white vfxln chalky
Shale Black
Ls light gray vfxln foss dense sli cherty No Vis porosity N.S.
Shale light green light gray med gray Black
0
TG
200


0
ROP (min/ft)
10
0
Gamma (API)
150
3750
3800
3850
3900
Miss
3856 -2428
cfs
Ls gray vfxln dense N.S.
Ls white vfxln chalky foss poor int xln porosity Dull sptd Flor No Gas or other shows
Shale black med to dark gray green
Ls Dark tan vfxln dense sli foss cherty No Vis Por N.S.
Shale Black gray light green
Ls dark gray vfxln dense N.S.
Shale gray black green
Ls gray tan vfxln dense N.S.
Shale Black
Ls gray tan f-cxln cherty dense weathered N.S.
Shale green waxy maroon
Ls tan vfxln dense Chert tan sharp fresh
Shale Green Black yellow maroon Chert tan fresh sharp
Ls white light green mxln chalky chert tan opaque some weathered
Chert white tan weathered trip poor pin pt por P sptd stain & Dull sptd Flor VSSFO Blk residue
Chert white tan trip weathered poor pin point porosity VSSGFO W/stain mostly barren no Stain or Flor
Cherty Dol fxln some sucrosic poor pin point porosity poor to fair int xln porosity Gd Sat stain FSGFO Faint Odor Fair yellow Flor Streaming Flor when cut
Dol white fxln sucrosic fair int xln porosity FSGFO friable chalky Fair Odor Light Sat stain Fair Flor
Ls tan gray vfxln to mxln sli foss cherty white tan sli spotted stain Fair int xln porosity No Flor or gas shows
Dol light tan f-mxln scattered fair int xln porosity mostly poor and dense sli cherty N.S.
Dol Ls white fxln fair int xln porosity fraible chalky Chert frag opaque light tan white N.S.
Ls white light gray f-cxln sli foss chalky fair int xln porosity N.S.
0
TG
200
Pipe Strap
2.30' Long to
Board at 3875
Survey 3/4 degree
at 3875'
DST #1
3859-3875
30-60--60-120
1" Blow died in 20 Min
Tool Plugged
Misrun
DST # 2
3860-3896
30-60-60-120
IF BOB 1 min
ISI No BB
FF GTS 37 Min
FSI 1/2" BB
Recovery
20' Sli OCM (2% Oil 98% Mud)
60' OGCM (10%Gas 4%Oil 86%Mud)
60' GOCM (20%Gas24%Oil 56%Mud)
Gas Volume
40" 6.3Mcf
50" 6.5Mcf
60" 6.8Mcf


3950
4000
4050
4100
4150
0
ROP (min/ft)
10
0
Gamma (API)
150
cfs 20"
Kinderhook
Shale
4122 -2694
Log shows
Kd shale at 4155
Ls gray fxln dense cherty white tan sharp fresh Poor int xln por N.S.
Ls as above cherty w/Shale light green gray maroon reddish brown
Ls light tan f-mxln foss dense Fair int xln porosity N.S.
Ls as above Chert white gray w/Shale bluish green green brown gray
Ls gray f-mxln chalky Chert gray white light green sli trip fresh sharp interbedded w/Shale green gray brown maroon
Ls white f-mxln chalky foss mealy Chert white gray foss some weathered trip interbedded W/Shale brown black green
Dol brown fxln sucrosic chalky fair int xln por trace Black residue chert white gray pale green tan Shale green black gray red brown
Ls white f-cxln chalky to dense foss Shale inclusions increase in Chert white gray foss fresh sharp Shale Brown green gray as above
Ls white gray fxln dense Chert Blueish gray sharp fresh Shale as above
Ls white gray f-cxln cherty dense interbedded w/Shale light to med gray green N.S.
Increase in Shale brown gray green
Ls white light gray fxln Shale gray green reddish brown
Ls gray f-cxln chalky Chert bluish gray opaque Shale as above
Ls gray fxln increase in shale light to med gray green brown
Ls gray fxln much shale light to med gray reddish brown green
Ls gray vfxln dense Chert bluish gray tan white sharp fresh Shale light to med gray green brown
Increase in Shale light to med gray green brown maroon
Shale light green light to med gray maroon
ISIP 730
FSIP 747
IFP 27-49
FFP 49-68
0
TG
200
DST # 3
4116-4190
30-60-30-60
Weak Blow died in 6 Min
Rec 10' Mud
ISIP 60
FSIP 45
IFP 18-20
FFP 34-45
Survey 1 Degree


0
ROP (min/ft)
10
0
Gamma (API)
150
cfs
cfs
Viola
4258 -2830
Simpson
4271 -2843
4200
4250
4300
4350
0
TG
200
Sst light gray light green vf grain compact well cmtd poor int grain Por few w/sptd to Sat stain Few gas bubbles One with VSSFO bright Flor Mostly barren
Sandy Ls fxln sandy cherty scattered poor pin point por trace sptd stain No Flor or FO No Odor
Shale light to med gray silty sandy
Shale light to dark gray
Shale brown light green gray
Shale light to bright green brown sandy
Sst clear white f-m grain sub angular to rounded pyrite well cmtd poor int grain porosity friable few gas bubbles
Sst white vf grain friable fair int grain porosity Shale Maroon gray green
Loose sand grains f-c grain ang to rounded SSt white vfgrain chert white Increase in Shale green maroon light gray
LS Sandy light gray friable abundance of Shale green maroon gray
SSt gray f-c xln fair porosity N.S. Ls Gray vfxln dense cherty gray yellow Mostly Shale Green maroon gray
SSt f-c grain gd int grain por friable pyrite chert gray white Shale as above N.S.
Sst light tan f-m grain friable gd int grain porosity shale inclusions pyrite Shale light green maroon gray light to dark N.S.
Shale red maroon brown green gray
SSt white vfine grain compact poor intgrain porosity shale inclusions N.S.
Ls sandy dense fxln poor int xln porosity pyrite shale inclusions
Shale Maroon green gray yellow
Ls tan gray fxln dense Chert tan white fresh sharp
SSt white clear f-med grain rd to ang well cmtd Poor int grain porosity Black Residue Trace Dead Oil Milky Flor when cut w/SS gas bubbles Oil film Poor sptd stain Faint Odor when broken


cfs
Arb
4386 -2952
cfs
0 cfs
10
0
Gamma (API)
150
4400
Shale bright green waxy
Shale Marron light to dark gray green yellow
Dol white sucrosic dense cherty poor int xln porosity VSSFO GD Flor milky white when cut Light sptd to sat stain No Odor
Dol fxln-mxln light gray fair int xln porosity N.S.
0
TG
200