



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1188788
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

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

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1188788

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

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

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Date 01-04-13 District Liberad Ticket No. 52370
 Company Palmer's Oil Inc Rig Duke 9
 Lease Willis Well No. 23-6
 County Stevens State KS
 Location Hugoton Ks. N to CR Field _____
U. E 2 Mi to CR 18, S 1 M. W 1 to 4.

CASING DATA: Conductor PTA Squeeze Misc
 Surface Intermediate Production Liner
 Size 8 5/8 Type 1-55 Weight 24# Collar _____

CEMENT DATA:
 Spacer Type: H2O - 10 BBIS
 Amt. _____ Sks Yield _____ ft³/sk Density 8.34 PPG
 LEAD: Pump Time _____ hrs. Type _____
 Excess _____
 Amt. 625 Sks Yield 1.97 ft³/sk Density 12.4 PPG
 TAIL: Pump Time _____ hrs. Type _____
 Excess _____
 Amt. 200 Sks Yield 1.18 ft³/sk Density 15.6 PPG
 WATER: Lead 10.9 gals/sk Tail 5.3 gals/sk Total 187 Bbls.

Casing Depths: Top _____ Bottom 1750ft

Pump Trucks Used 531-541
 Bulk Equip. 774-744 / 472-554
868-842
 * 200sk "A" Pumped top off 1"

Drill Pipe: Size _____ Weight _____ Collars _____
 Open Hole: Size 12 1/4 T.D. 1750ft ft. P.B. to _____ ft.
 CAPACITY FACTORS:
 Casing: Bbbs/Lin. ft. .0637 Lin. ft./Bbl. 15.698
 Open Holes: Bbbs/Lin. ft. _____ Lin. ft./Bbl. _____
 Drill Pipe: Bbbs/Lin. ft. _____ Lin. ft./Bbl. _____
 Annulus: Bbbs/Lin. ft. .0735 Lin. ft./Bbl. 13.605
 Bbbs/Lin. ft. _____ Lin. ft./Bbl. _____
 Perforations: From _____ ft. to _____ ft. Amt. _____

Float Equip: Manufacturer Weatherford
 Shoe: Type Guide Shoe Depth 1750ft
 Float: Type AFU Float Valve Depth 1707.67ft
 Centralizers: Quantity 3 Plugs Top 1 Btm. _____
 Stage Collars _____
 Special Equip. Cement Basket
 Disp. Fluid Type H2O Amt. 109 Bbbs. Weight 8.34 PPG
 Mud Type _____ Weight _____ PPG

COMPANY REPRESENTATIVE [Signature]

CEMENTER Ruben Chavez

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	
9:00						Got to location, spot trucks + rig up.
1:00						Pre job safety meeting
1:15					2	Pump 2 BBIS H2O - fill pump lines
1:17						Pressure test lines - 2500 PST
1:18		220		10	8	Pump 8 BBIS H2O - spacer
1:20		200		172.2	162.2	Start pumping lead cement. 625sk
1:50		150		215.2	43	Start pumping tail cement 200sk
2:00						Shut down
2:03						Drop plug and
2:05		0		310.2	95	Start displacement.
2:25		550				Slow pump rate to 3.5 BPM
2:30		600		324.2	14	Finished displacement and
		1100				Bump plug at 1100 PST
2:35						Release pressure Float held.
						Didn't circulate cement to surface.
7:00		120			43	Start pumping thru 1" pipe to
						top of 1" off. 200sk "A"
7:30						Shut down - 10 BBIS - good
						cement circulate to pit.
						Job complete.
						Thank you

Customer <i>Palmer Oil / American Warfare</i>		Lease No. <i>Willis</i>		Date <i>01-12-14</i>	
Lease <i>Willis</i>		Well # <i>23-6</i>		Service Receipt <i>1717-04374 A</i>	
Casing <i>5 1/2"</i>	Depth <i>6489'</i>	County <i>Stewarts</i>		State <i>KS</i>	
Job Type <i>5 1/2" Long String</i>		Formation		Legal Description <i>23-325-37U</i>	
Pipe Data			Perforating Data		Cement Data
Casing size <i>5 1/2"</i>	Tubing Size	Shots/Ft		Lead Rat Hole <i>170use Hole</i> <i>50 sks 60/40 Pz</i> <i>13.5 ppg</i> Tail in 200 sks <i>AA2 Cement</i> <i>14.8 ppg 5% W-60</i> <i>10% Salt 6.9% C-15</i> <i>1/4" Deforman 5# Bilswite</i>	
Depth <i>6489'</i>	Depth	From	To		
Volume <i>154</i>	Volume	From	To		
Max Press <i>2000psi</i>	Max Press	From	To		
Well Connection	Annulus Vol.	From	To		
Plug Depth <i>6447'</i>	Packer Depth	From	To		
Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>0500</i>					<i>Called Out</i>
<i>0510</i>					<i>Safety Meeting</i>
<i>0700</i>					<i>On Location</i>
<i>0800</i>					<i>Start Running Pipe & Float Equipment</i>
<i>1120</i>					<i>Safety Meeting</i>
<i>1130</i>					<i>On Bottom Make up Hande manifold</i>
<i>1135</i>					<i>Circulate with Rig Pump</i>
<i>1250</i>					<i>Test Lines to Rig Floor - 2500psi</i>
<i>1240</i>	-		<i>13</i>	<i>4</i>	<i>13.5 ppg Start mixing cement for Rat Hole</i>
			<i>12</i>	<i>4</i>	<i>13.5 ppg Pump 12 BBLs Mud Flush</i>
<i>1255</i>	<i>200</i>		<i>54</i>	<i>6</i>	<i>Mix & pump Tail cement</i>
	<i>400</i>				<i>14.8 ppg - 54 BBLs</i>
					<i>Finished mixing cement. Wash up</i>
					<i>Drop Latch down plug</i>
<i>1305</i>	<i>200-psi</i>		<i>153.4</i>	<i>6</i>	<i>Displace 153.4 BBLs</i>
<i>1337</i>	<i>1300 psi</i>				<i>Land Plug - Redensed - Held</i>
					<i>Job Completed Thanks</i>
					<i>BASIC Services</i>
Service Units	<i>21755</i>	<i>38750-19864</i>	<i>30463-19566</i>		
Driver Names	<i>Roger</i>	<i>Carlos</i>	<i>Even</i>		

Enridgio Rojas
 Customer Representative

Jerry Bennett
 Station Manager

Rogers
 Cementer



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET
1717 04374 A

DATE _____ TICKET NO. _____

DATE OF JOB <i>1-12-14</i> DISTRICT <i>Liberal 1717</i>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:						
CUSTOMER <i>Palmer Oil / American Warrior</i>		LEASE <i>Willis</i>		236 WELL NO.				
ADDRESS		COUNTY <i>Stevens</i>		STATE <i>KS</i>				
CITY STATE		SERVICE CREW <i>Roger - Carlos - Evan</i>						
AUTHORIZED BY		JOB TYPE: <i>242 5 1/2" Long String</i>						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED <i>1-12-14</i> DATE	AM PM	TIME
<i>21755</i>	<i>6</i>							<i>0500</i>
<i>38250-19864</i>	<i>6</i>					ARRIVED AT JOB		<i>0700</i>
<i>30463-19566</i>	<i>6</i>					START OPERATION		<i>1240</i>
						FINISH OPERATION		<i>1345</i>
						RELEASED		<i>1430</i>
						MILES FROM STATION TO WELL		<i>50</i>

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

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

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

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CL105	AA2 Cement	sk	200		
CL103	60/40 POZ	sk	50		
CC113	Gypsum	lb	940		
CC111	SALT	lb	1107		
CC103	C-15	lb	113		
CC105	C-41P	lb	47		
CC201	Gilsonite	lb	1000		
CF1251	Auto Fill Float Shoe 5 1/2" (Blue)	ea	1		
CF607	Latch Down Plug Baffle 5 1/2" Blue	ea	1		
CF4452	Economizer Hinged, Welded Containment 5 1/2"	ea	12		
CF4552	Cement Basket, CANVAS 5 1/2"	ea	1		
CF3000	Industrial Rubber Thread Lock Kit	ea	1		
CC151	Mud Flush	gal	500		
E101	Heavy Equipment Mi/loge	mi	100		
CE240	Blending & Mixing Service Charge	sk	250		
E113	Proppant Bulk Delivery Charges	Tm	518		
CE207	Depth Charge 600' - 1000'	4Hrs	1		
CE504	Plug Container Utilization Charge	Job	1		
E100	Unit Mi/loge Charge - Pickup	mi	50		
5003	Service Supervisor, First 8 Hrs. on Loc	ea	1		
				SUB TOTAL	10854 68
CHEMICAL / ACID DATA:					
SERVICE & EQUIPMENT				%TAX ON \$	
MATERIALS				%TAX ON \$	
				TOTAL	

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



DRILL STEM TEST REPORT

Prepared For: **Palmer Oil, Inc.**

PO Box 399
Garden, City KS 67846

ATTN: Wyatt Urban

Willis #23-6

23-32s-37w Stevens,KS

Start Date: 2014.01.10 @ 12:41:00

End Date: 2014.01.10 @ 23:03:45

Job Ticket #: 56704 DST #: 1

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

Printed: 2014.01.14 @ 08:49:47



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Palmer Oil, Inc.
PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS

Willis #23-6

Job Ticket: 56704

DST#: 1

Test Start: 2014.01.10 @ 12:41:00

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:23:30
 Time Test Ended: 23:03:45
 Interval: **6323.00 ft (KB) To 6384.00 ft (KB) (TVD)**
 Total Depth: 6384.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Sam Esparza
 Unit No: 64
 Reference Elevations: 3118.00 ft (KB)
 3106.00 ft (CF)
 KB to GR/CF: 12.00 ft

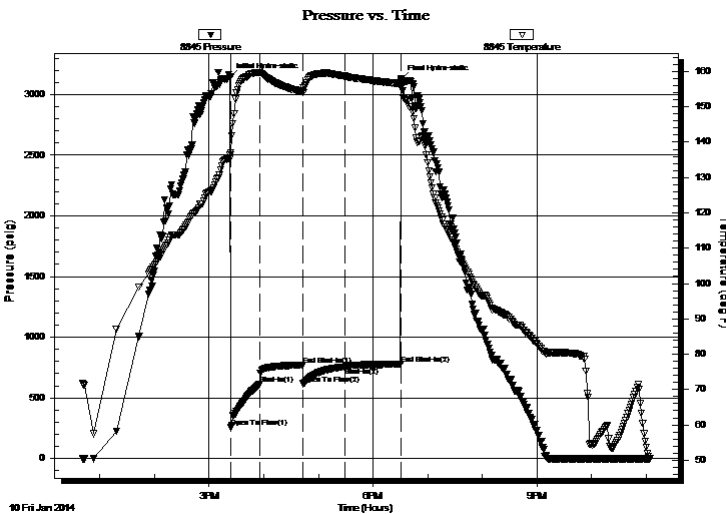
Serial #: 8845

Outside

Press@RunDepth: 756.11 psig @ 6324.00 ft (KB)
 Start Date: 2014.01.10 End Date: 2014.01.10
 Start Time: 12:41:05 End Time: 23:03:45
 Capacity: 8000.00 psig
 Last Calib.: 2014.01.10
 Time On Btm: 2014.01.10 @ 15:23:00
 Time Off Btm: 2014.01.10 @ 18:30:45

TEST COMMENT: IF: BOB @ 2 1/2 min.
 IS: Bled off for 2 min. No Return.
 FF: BOB @ 9 min.
 FS: Bled off for 2 min. 1/4" Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3139.93	136.54	Initial Hydro-static
1	259.61	135.66	Open To Flow (1)
33	610.36	159.72	Shut-In(1)
80	769.26	154.23	End Shut-In(1)
81	616.78	154.05	Open To Flow (2)
127	756.11	158.66	Shut-In(2)
188	776.10	156.57	End Shut-In(2)
188	3126.36	157.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1010.00	GOMCW 20g 5o 10m 65w	12.49
635.00	GOWCM 10g 5o 20w 65m	8.91
0.00	180' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palmer Oil, Inc.
PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS
Willis #23-6
Job Ticket: 56704 **DST#: 1**
Test Start: 2014.01.10 @ 12:41:00

Tool Information

Drill Pipe:	Length: 6121.00 ft	Diameter: 3.80 inches	Volume: 85.86 bbl	Tool Weight: 2000.00 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: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 140000.0 lb
			<u>Total Volume: 86.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 86000.00 lb
Depth to Top Packer:	6323.00 ft			Final 96000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			6296.00	
Shut In Tool	5.00			6301.00	
Hydraulic tool	5.00			6306.00	
Jars	5.00			6311.00	
Safety Joint	3.00			6314.00	
Packer	5.00			6319.00	28.00 Bottom Of Top Packer
Packer	4.00			6323.00	
Stubb	1.00			6324.00	
Recorder	0.00	6772	Outside	6324.00	
Recorder	0.00	8845	Outside	6324.00	
Perforations	22.00			6346.00	
Change Over Sub	1.00			6347.00	
Drill Pipe	31.00			6378.00	
Change Over Sub	1.00			6379.00	
Bullnose	5.00			6384.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palmer Oil, Inc.
PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS
Willis #23-6
Job Ticket: 56704 **DST#: 1**
Test Start: 2014.01.10 @ 12:41:00

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:	85000 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1800.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1010.00	GOMCW 20g 5o 10m 65w	12.491
635.00	GOWCM 10g 5o 20w 65m	8.907
0.00	180' GIP	0.000

Total Length: 1645.00 ft Total Volume: 21.398 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Water Salinity: .179 @ 34 degrees= 85,000 ppm

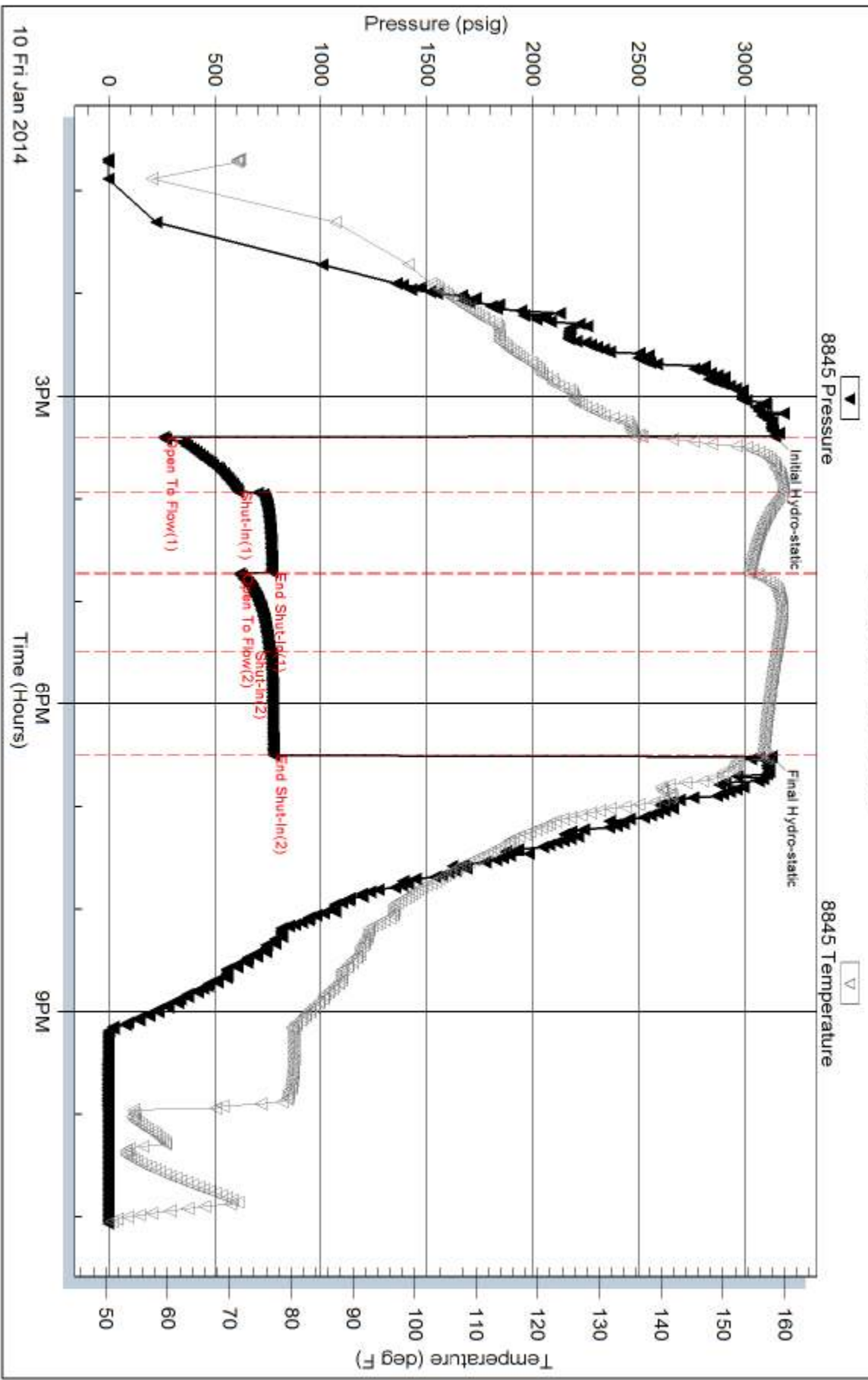
Serial #: 8845

Outside Palmer Oil, Inc.

Wells #23-6

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 56704

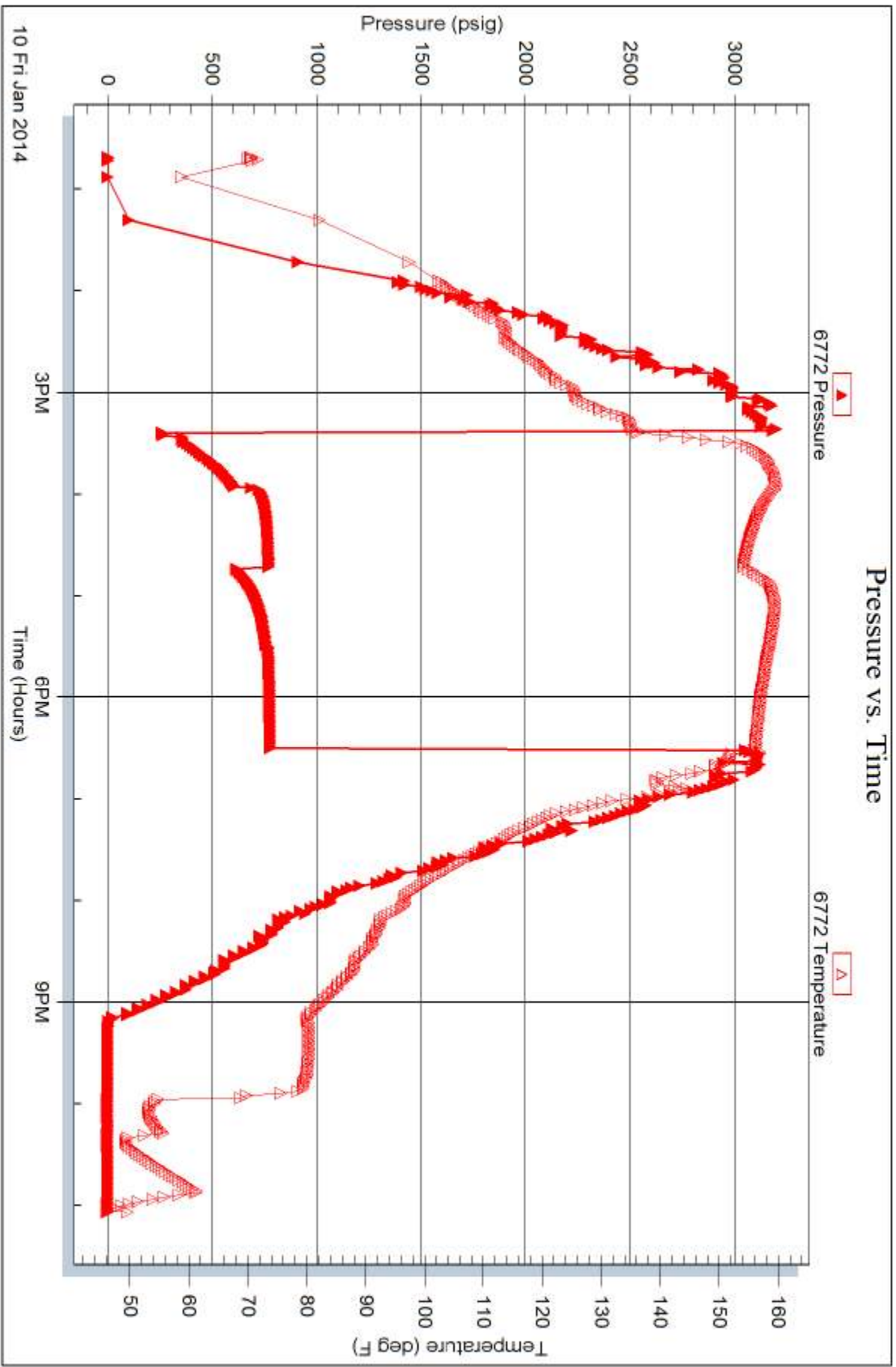
Printed: 2014.01.14 @ 08:49:49

Serial #: 6772

Outside Palmer Oil, Inc.

Wells #23-6

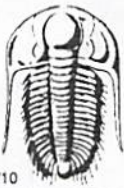
DST Test Number: 1



Tribble Testing, Inc

Ref. No: 56704

Printed: 2014.01.14 @ 08:49:50



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56704

Well Name & No. Willis #23-6 Test No. 1 Date 1/10/14
 Company Palmer O.I., Inc. Elevation 3118 KB 3106 GL
 Address 3118 N Cummings Rd PO Box 399 Garden City, KS 67846
 Co. Rep / Geo. Wyatt Urban Rig Duke #9
 Location: Sec. 23 Twp. 32S Rge. 37W Co. Stevens State KS

Interval Tested 6323 - 6384 Zone Tested ST. Louis
 Anchor Length 61" Drill Pipe Run 6121 Mud Wt. 9.4
 Top Packer Depth 6319 Drill Collars Run 184 Vis 48
 Bottom Packer Depth 6323 Wt. Pipe Run Ø WL 8.0
 Total Depth 6384 Chlorides 1800 ppm System LCM 2
 Blow Description IF: BOB @ 2 1/2 min.
IST: Bled off for 2 min. No Return.
FF: BOB @ 9 min.
FSD: Bled off for 2 min. 1/4" Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>635</u>	<u>Gowcm</u>	<u>10</u>	<u>5</u>	<u>20</u>	<u>65</u>
<u>1010</u>	<u>GOMCW</u>	<u>20</u>	<u>5</u>	<u>65</u>	<u>10</u>
<u>180'</u>	<u>GIP</u>				

Rec Total 1645 BHT 157 Gravity — API RW .179 @ 34 °F Chlorides 85,000 ppm

(A) Initial Hydrostatic <u>3140</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>11:45</u>
(B) First Initial Flow <u>260</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:41</u>
(C) First Final Flow <u>610</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:23</u>
(D) Initial Shut-In <u>769</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>18:30</u>
(E) Second Initial Flow <u>617</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:04</u>
(F) Second Final Flow <u>756</u>	<input checked="" type="checkbox"/> Mileage <u>210 R/T</u> 325.50	Comments <u>Loaded Tools</u>
(G) Final Shut-In <u>776</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>3126</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2420.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2100.50</u>	

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.



Musgrove

PETROLEUM CORPORATION
Clafin, Kansas

NOTES

Company: Palmer Oil, Inc.

Lease: Willis 23-6

Field: Willis

Location: (2100' FNL & 1400' FWL)

Sec: 23 Twsp: 32S Rge: 37W

County: Stevens State: Kansas

KB: 3119' GL: 3105'

API #: 15-189-22828-00-00

Contractor: Duke Drilling Inc. (Rig #9)

Spud: 1/02/2014 Comp: 1/11/2014

RTD: 6500' LTD: 6500'

Mud Up: 4600' Type Mud: Chemical

Samples Saved From: 4700' to RTD

Drilling Time Kept From: 4100' to RTD

Samples Examined From: 4700' to RTD

Geological Supervision from: 4700' to RTD

Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8"@1755'

Electronic Surveys: Logged by Pioneer Energy Services, DIL/BHCS, CNL/CDL, MEL

Palmer Oil, Inc. Willis 23-6

Formation	DRILLING WELL Palmer Oil, Willis 23-6 NE-SE-SW-NE 23-32-37 3119 KB				COMPARISON WELL Palmer Oil, Willis 23-5 NE-NW-SE-NE 23-32-37 3120 KB				COMPARISON WELL EOG RESOURCES Willis 23-2 S2-NE-NE-SE 23-32S-37W 3119 KB			
	Sample	Sub-Sea	Log	Sub-Sea	LOG	Sub-Sea	Structural Relationship		Log	Sub-Sea	Structural Relationship	
							Sample	Log			Sample	Log
B. Heebner									4160	-1041	1041	
Lansing									4275	-1156	1156	
Marmaton	4971	-1852	4969	-1850	4966	-1846	-6	-4	4967	-1848	-4	-2
Cherokee	5162	-2043	5162	-2043	5168	-2048	5	5	5167	-2048	5	5
Morrow	5645	-2526	5632	-2513	5639	-2519	-7	6	5634	-2515	-11	2
St. Gen	6180	-3061	6178	-3059	6179	-3059	-2	0				
St. Louis	6298	-3179	6298	-3179	6298	-3178	-1	-1	6293	-3174	-5	-5
St. Louis B	6354	-3235	6361	-3235	6361	-3241	6	6				
RTD	6500	-3381	6500		6500	-3380	-1		6500	-3381		
LTD	6500	-3381	6500		6475	-3355	-26					



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palmer Oil, Inc.

3118 N Cummings Rd

23-32s-37w Stevens co.

Willis #23-6



PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

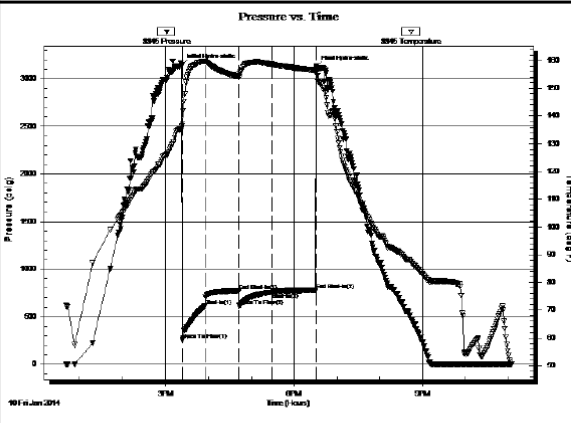
Job Ticket: 56704 **DST#:** 1
Test Start: 2014.01.10 @ 12:41:00

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:23:30 Test Type: Conventional Bottom Hole (Initial)
 Time Test Ended: 23:03:45 Tester: Sam Esparza
 Unit No: 64
 Interval: **6323.00 ft (KB) To 6384.00 ft (KB) (TVD)** Reference Elevations: 3118.00 ft (KB)
 Total Depth: 6384.00 ft (KB) (TVD) 3106.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 12.00 ft

Serial #: 8845 Outside
 Press@RunDepth: 756.11 psig @ 6324.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.01.10 End Date: 2014.01.10 Last Calib.: 2014.01.10
 Start Time: 12:41:05 End Time: 23:03:45 Time On Btm: 2014.01.10 @ 15:23:00
 Time Off Btm: 2014.01.10 @ 18:30:45

TEST COMMENT: F: BOB @ 2 1/2 min.
 IS: Bled off for 2 min. No Return.
 FF: BOB @ 9 min.
 FSt: Bled off for 2 min. 1/4" Return.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3139.93	136.54	Initial Hydro-static
1	259.61	135.66	Open To Flow (1)
33	610.36	159.72	Shut-h(1)
80	769.26	154.23	End Shut-h(1)
81	616.78	154.05	Open To Flow (2)
127	756.11	158.66	Shut-h(2)
188	776.10	156.57	End Shut-h(2)
188	3126.36	157.15	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
1010.00	GOMCW 20g 5o 10m 65w	12.49
635.00	GOWCM 10g 5o 20w 65m	8.91
0.00	180' GIP	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (M cfd)

ROCK TYPES

- sdy lmst
- Lmst fw<7
- Lmst fw7>
- shale, gry
- Carbon Sh
- shale, red

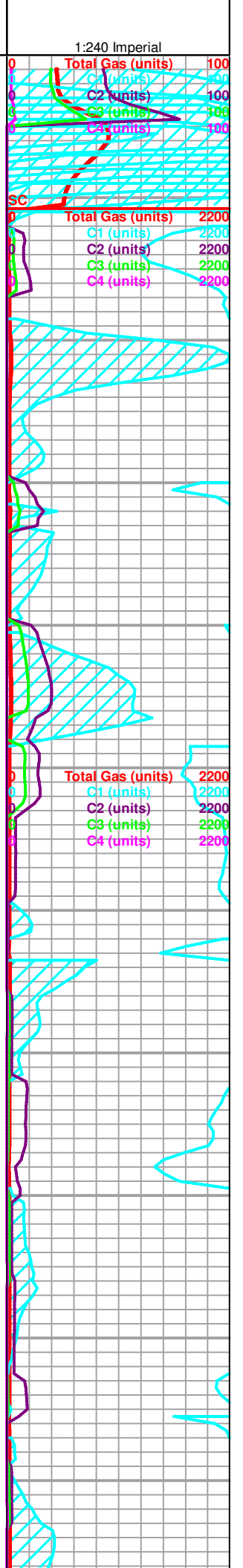
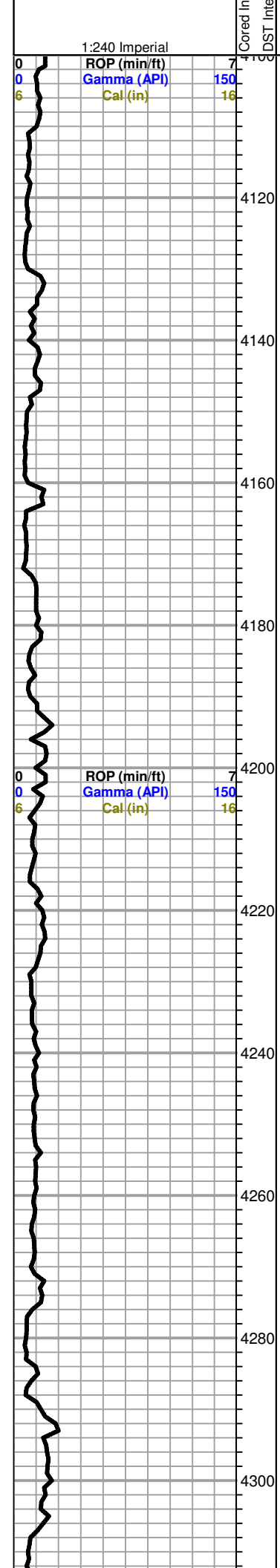
OTHER SYMBOLS

- Oil Show**
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Strn
- D Dead Oil Strn
- Fluorescence
- * Gas

- DST**
- DST Int
- DST alt
- Core
- tail pipe

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)	Interval	DST	Lithology	Oil Show	Geological Descriptions	Total Gas (units)
Gamma (API)						C1 (units)
Cal (in)						C2 (units)
						C3 (units)
						C4 (units)



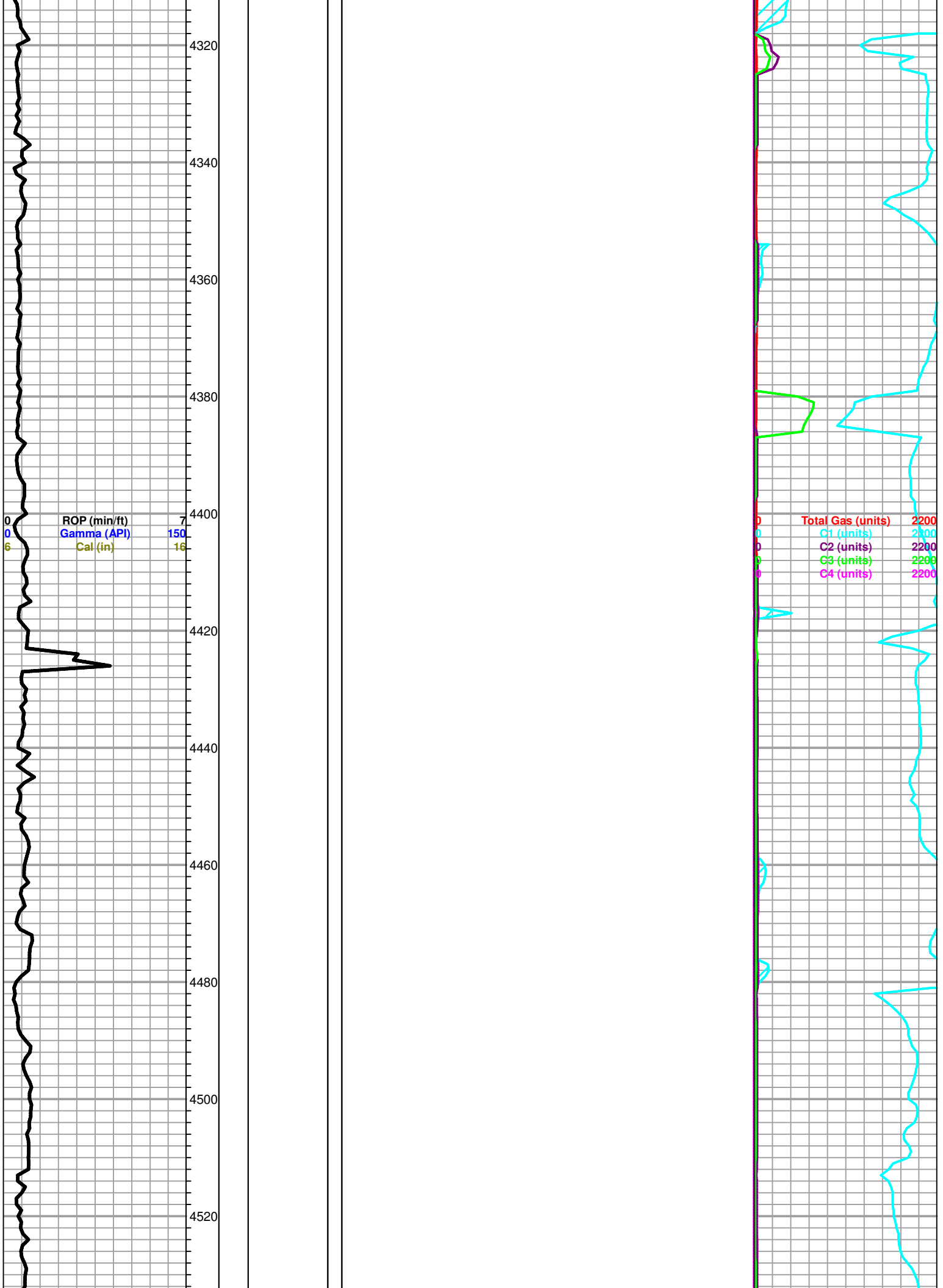
4320
4340
4360
4380
4400
4420
4440
4460
4480
4500
4520

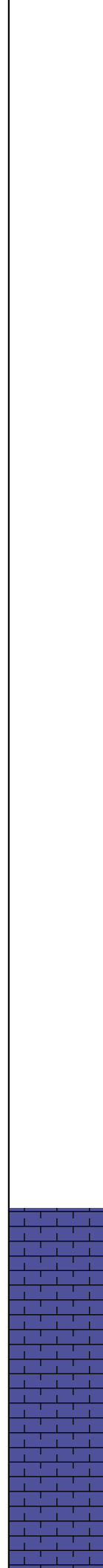
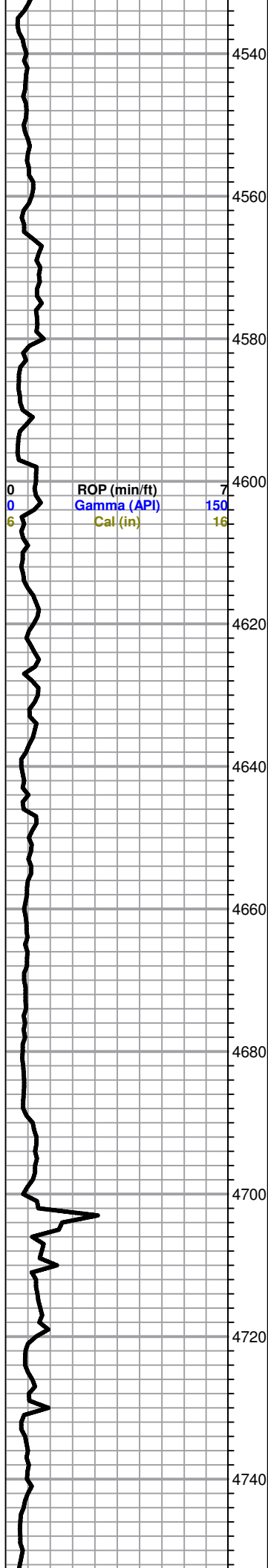
ROP (min/ft) 7
Gamma (API) 150
Cal (in) 16

0
0
6

Total Gas (units) 2200
C1 (units) 2200
C2 (units) 2200
C3 (units) 2200
C4 (units) 2200

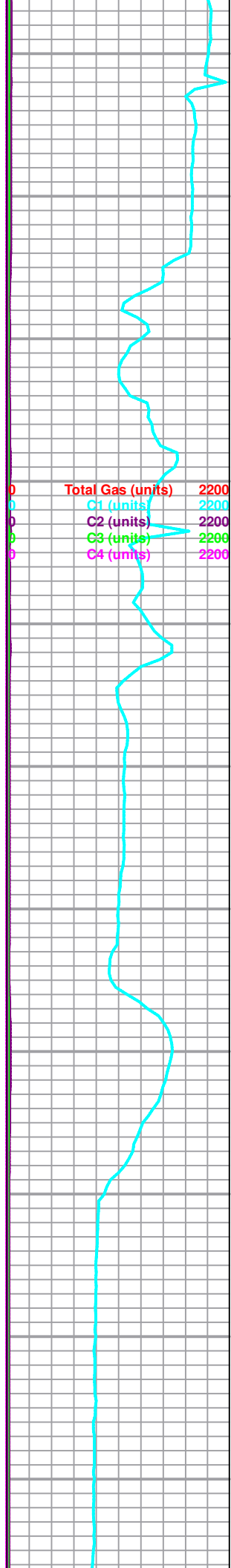
0
0
0
0
0

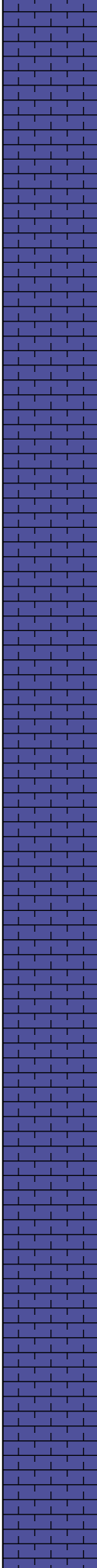
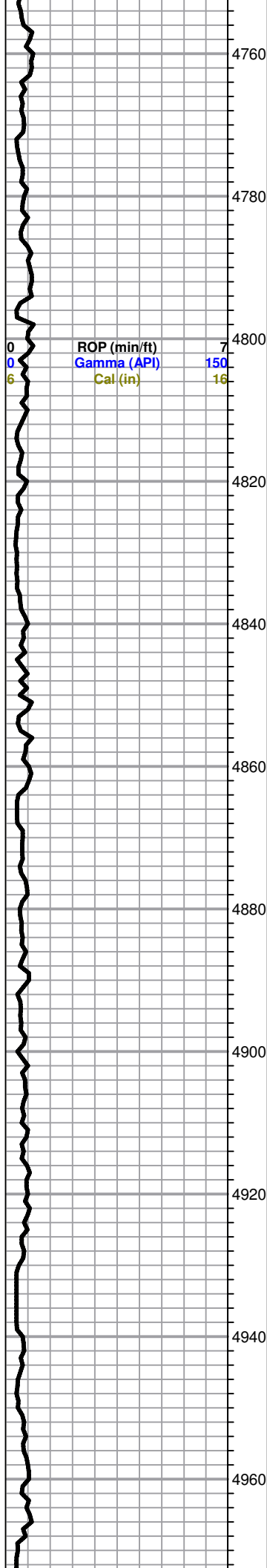




LS, cream to tan, FXL, chalky in parts,

LS, tan to brown, mott. dense, cherty in parts, poor visible porosity, no shows





black carb shale

LS, cream to tan, chalky, poor visible porosity, no shows

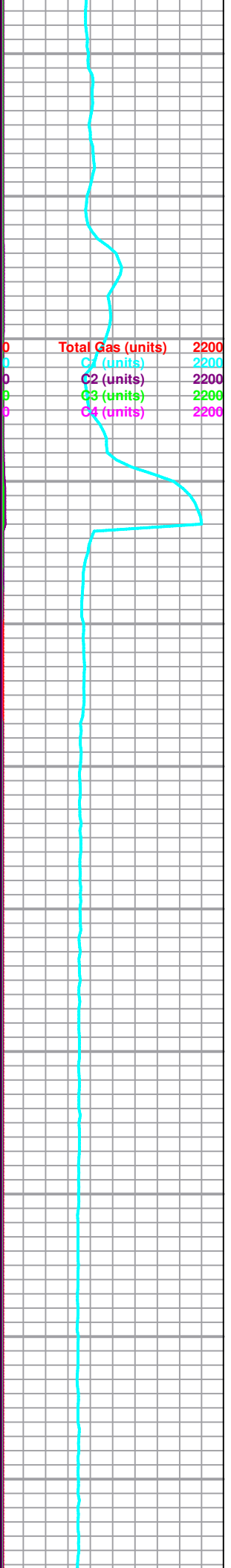
LS, gray, mott. dense, poor visible porosity,

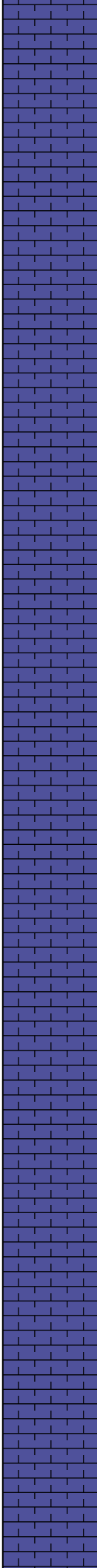
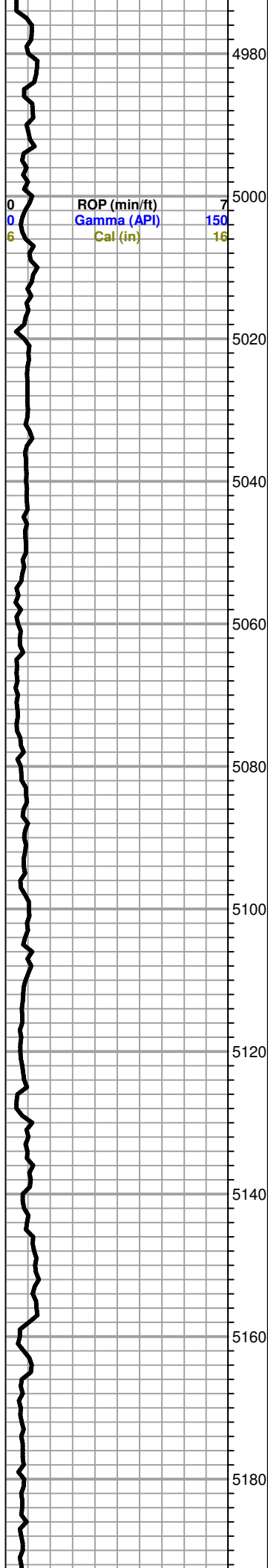
SH. black, gray, greenish,

LS, tan brown, chalky, foss, poor scattered porosity, no shows

Slug black shale,

LS, cream to tan, ool, fair-vuggy oom porosity, chalky



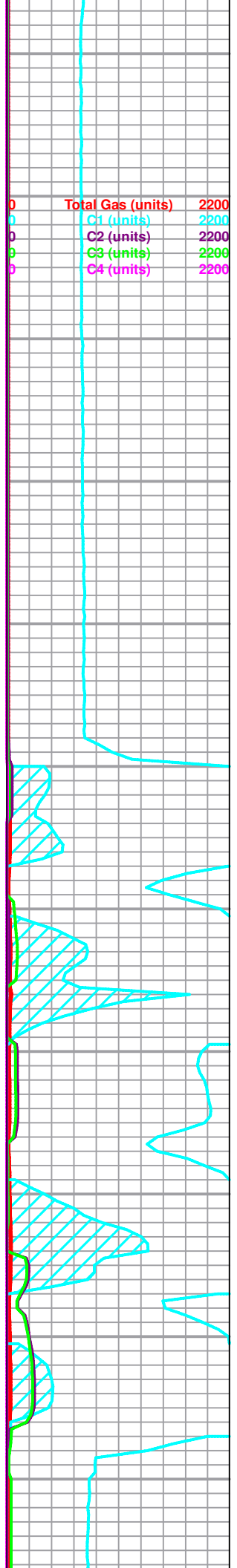


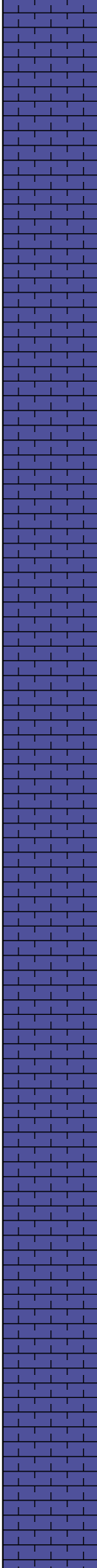
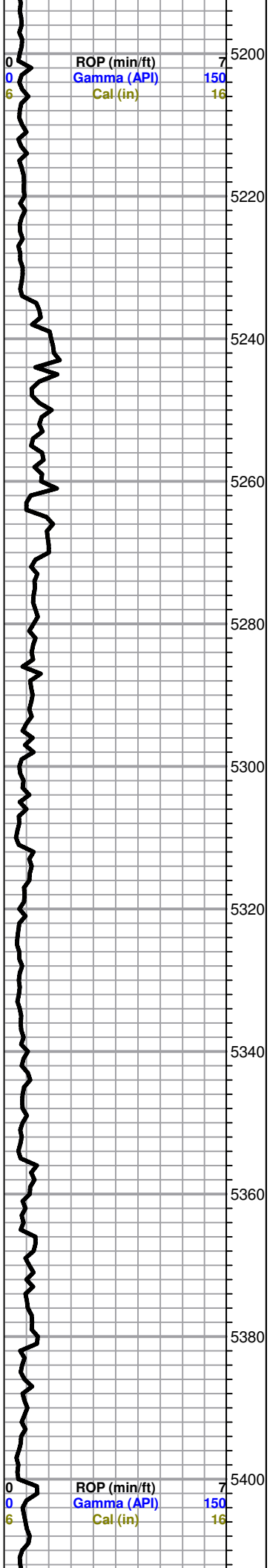
LS, gray, chert, poor visible porosity, no show

LS, cream to white, foss, chalky poor scattered porosity, no show

LS, brown, FXL, cherty, no shows

LS, cream to white, trace red back gray shales



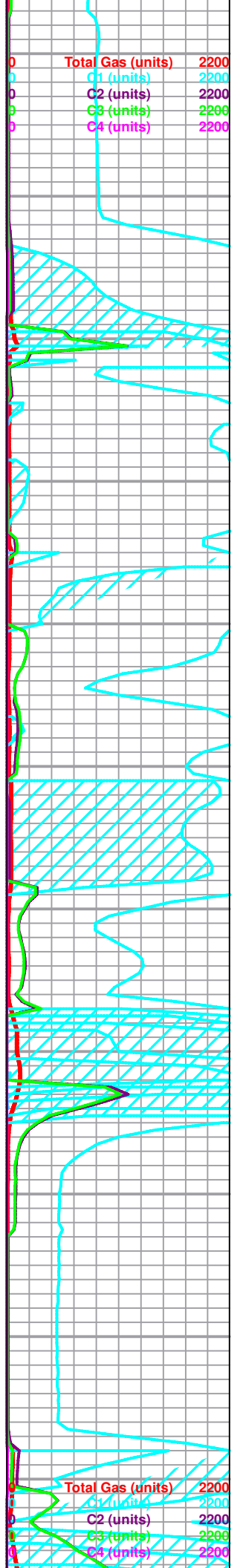


LS, gray, brown, FXL dense, chalky in parts, poor visible porosity, no shows

SH, gray to black

Sh. black, gray, trace LS, tan/brown, FX, dense, no shows

LS, cream/ chalky, no shows



Total Gas (units) 2200
 C1 (units) 2200
 C2 (units) 2200
 C3 (units) 2200
 C4 (units) 2200

Total Gas (units) 2200
 C1 (units) 2200
 C2 (units) 2200
 C3 (units) 2200
 C4 (units) 2200

5420
5440
5460
5480
5500
5520
5540
5560
5580
5600
5620

LS, chalky brown, cream few foss, poor visible porosity, no shows

Black carb shale

LS, brown to tan, ool, poorly developed, dense, poor scattered porosity, no shows

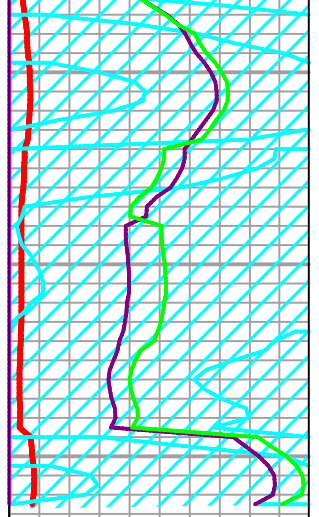
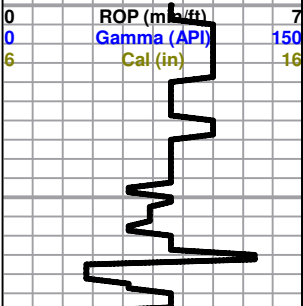
Black carb shale

LS, tan, brown, FXL, chalky in parts, poor visible porosity, no shows

LS, cream to gray, dense, chalky in parts,

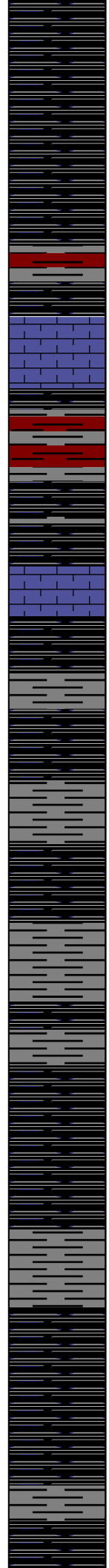
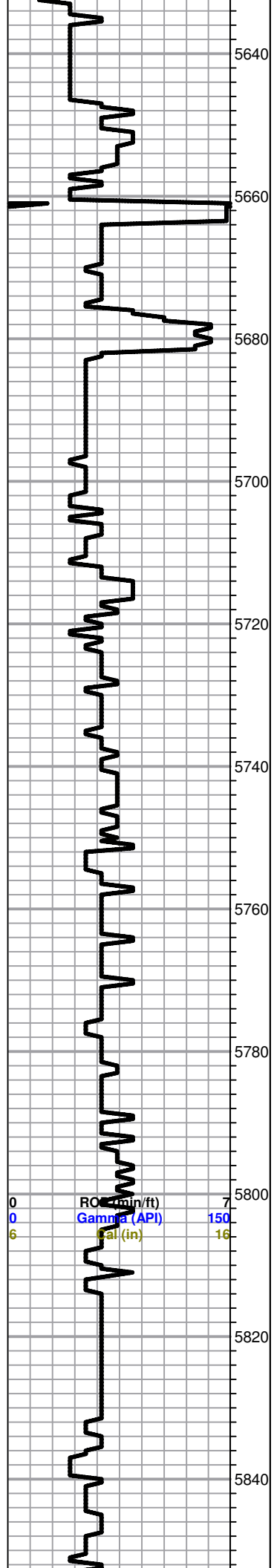
Murray 5091 (9510)

Bloodhound
d
Malfunction



0	Total Gas (units)	2200
0	C1 (units)	2200
0	C2 (units)	2200
0	C3 (units)	2200
0	C4 (units)	2200

Morrow 5631 (-2513)



Sh. black carb, silty in parts, soft

Sh. black carb, maroon, gray,

Sh. Black carb , maroon, gray, silty,

LS, gray, FXL, chalky, few foss, cherty in parts, poor scattered porosity

black carb shale trace gray, silty

Sh. black carb

Sh. black carb

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

5860
5880
5900
5920
5940
5960
5980
6000
6020
6040
6060



Sh, black gray silty,

Sh.black, red, green, brownish, silty in parts

Sh. A/A trace LS, cream to gray, poorly developed, poor scattered porosity, no shows

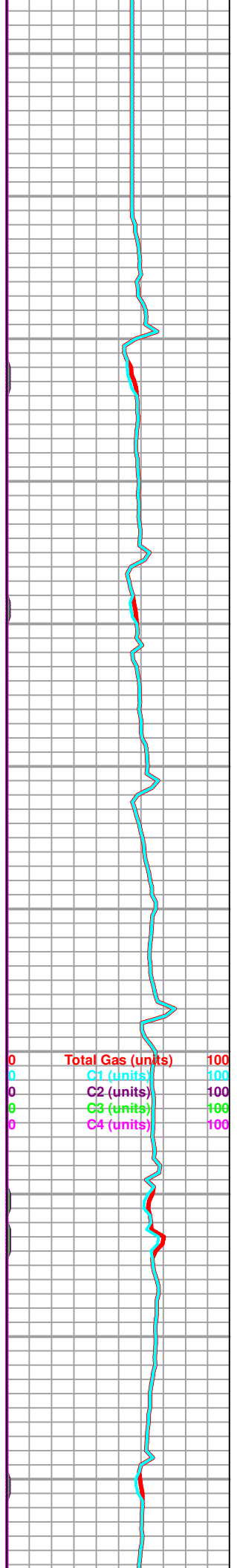
Sh. A/A trc. LS, cream brown, chalky, poor scattered porosity, N/S

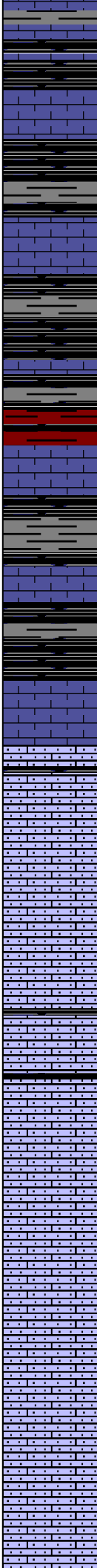
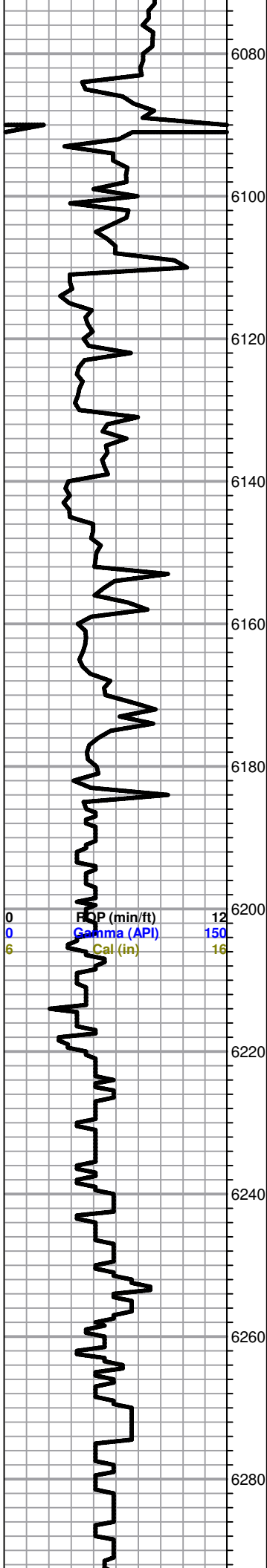
LS, cream to tan, FXL, cherty, poor visible porosity, no shows

LS, brown, tan, FXL, dense, poor visible porosity,

0 ROP (min/ft) 7
0 Gamma (API) 150
6 Cal (in) 16
SC
0 ROP (min/ft) 12
0 Gamma (API) 150
6 Cal (in) 16

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





LS, gray to cream, FXL, cherty in parts, poor scattered porosity, no shows

LS, tan to brown, FX, dense, poor visible porosity, no shows, trace back gray shales

LS, A/A, trace red, greenish, silty, shale

LS, tan to brown, FXL, dense, few chalky, poor visible porosity, no shows

Ste. Gen 6174 (-3056)

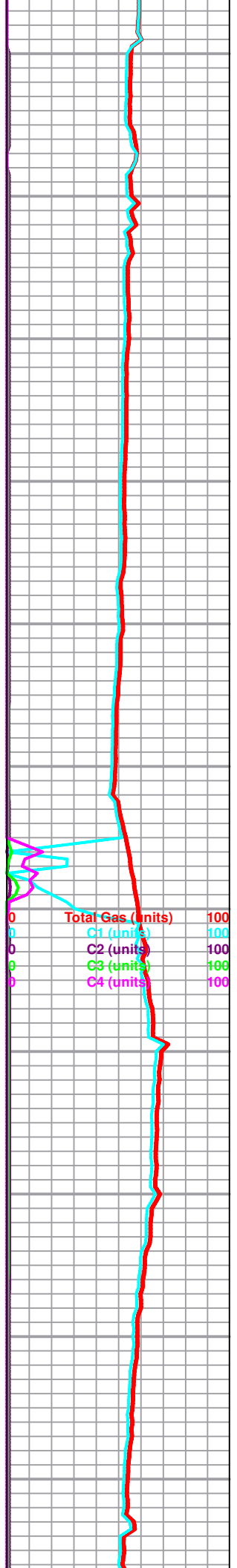
LS, tan, red, maroon, micro ool, friable, no shows

LS, tan to brown, micro ool, friable, no shows

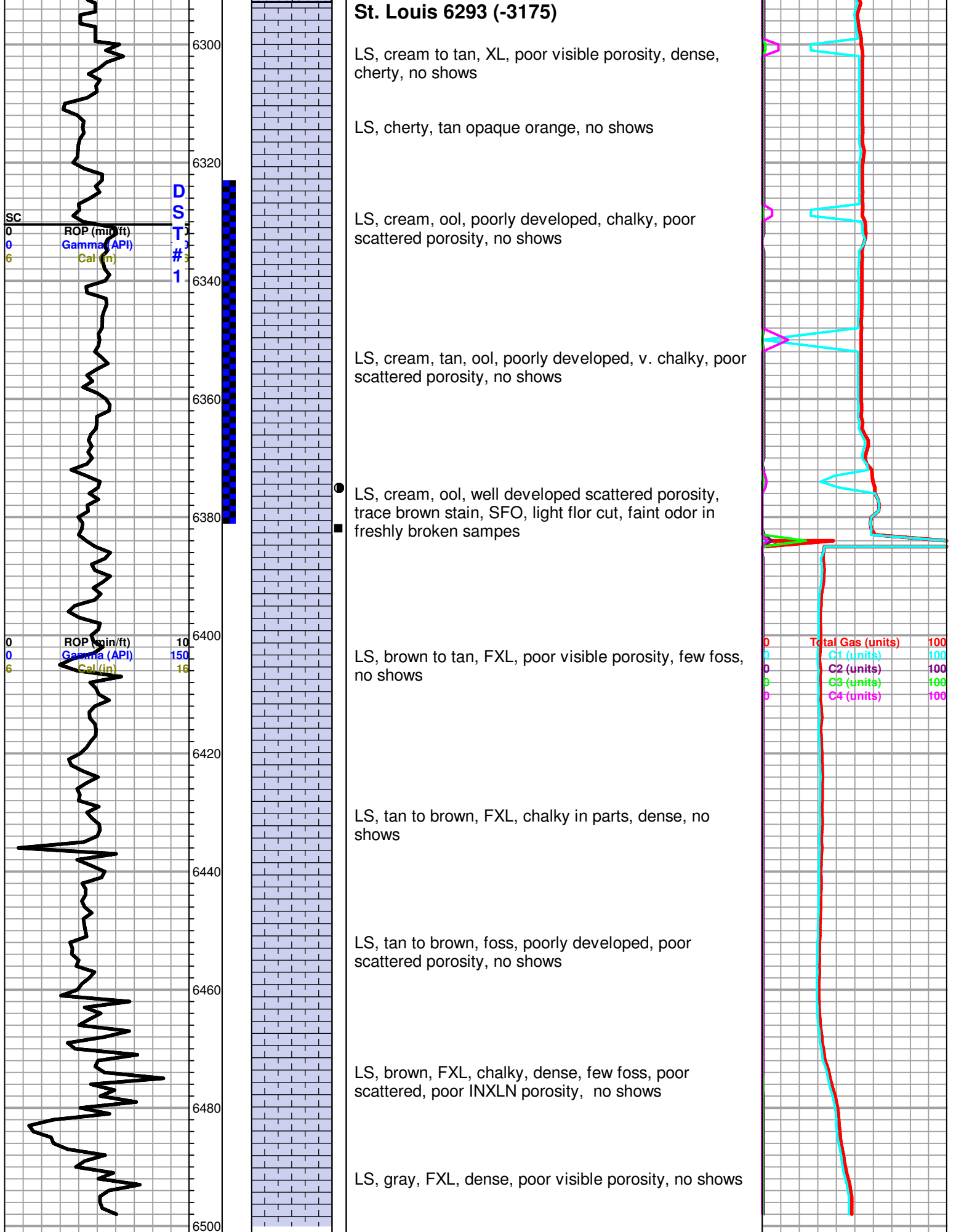
Slug of black shale

LS, tan to cream, micro ool, friable, no shows

LS, gray, FXL, dense, poor vis. porosity, dense, cherty no show



St. Louis 6293 (-3175)



RTD 6500'

6520

6540

6560

6580