



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1232097  
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: \_\_\_\_\_

1232097

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Crooked Creek 5-8
Doc ID	1232097

Tops

Name	Top	Datum
Heebner	4462'	-1779
Toronto	4485'	-1802
Lansing	4607	-1924
Marmaton	5270	-2587
Cherokee	5442	-2759
Atoka	5701	-3018
Morrow	5760	-3077
Mississippi Chester	5884	-3201
Ste. Genevieve	6124	-3441
St. Louis	6211	-3528



**O'Brien Energy Resources, Inc.**  
**Crooked Creek Offset No. 5-8, Angell South Field**  
**Section 8, T33S, R29W**  
Meade County, Kansas  
May, 2012

**Well Summary**

The O'Brien Energy Resources, Crooked Creek Offset No. 5-8 was drilled to a total depth of 6350' in the Mississippian St. Louis Formation. It offset the Crooked Creek Offset No. 4-8 by 1200' to the West. Formation tops ran high relative to this offset. The Heebner to the Atoka ran 7' high. The Morrow came in 5' high. The Chester, Ste. Genevieve and St. Louis came in 21', 13' and 6' high respectively.

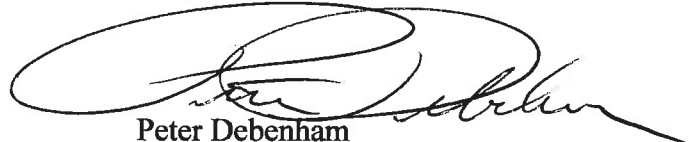
Several Morrow show intervals were documented. A Morrow B Sandstone(5813'-5821') consists of a Sandstone in 15% of the samples: Light brown, buff, hard to friable in part, very fine upper, well sorted subround grains, siliceous cement, slightly calcareous, clean, trace intergranular and fine vuggy porosity, bright light yellow to pale blue hydrocarbon fluorescence(all sand) good streaming cut, trace light brown matrix oil stain, gas bubbles when crushed, no live oil, slight odor. A 42 Unit gas increase was recorded. This interval proves tight with 2' of 12 percent porosity and little micro log separation.

The interval from 5838' to 5854' consists of a Sandstone in 25% of the samples: Light to medium mottled brown to gray, hard, slightly friable, very fine upper to fine lower, well sorted, subround grains, very calcareous, fossiliferous, argillaceous to clean, good intergranular porosity and fine vuggy porosity, pale mottled blue hydrocarbon fluorescence(most SS), slow bleeding to weak streaming cut, trace gas bubbles and oil stain when crushed, weak show. A 120 to 70 Unit gas kick was recorded. This interval calculates wet.

Additional minor shows were noted in the St. Louis and Cherokee.

The Crooked Creek Offset No. 5-8 was plugged and abandoned 5/12/12.

Respectfully Submitted,

  
Peter Debenham

## WELL DATA

Operator: O'Brien Energy Resources, Inc., John Forma – Portsmouth, NH  
Geologist: Paul Wiemann – Denver, CO

Prospect Geologist: David Ward, Ed Schuett, Denver

Well: Crooked Creek No. 5-8, Angell South Field

Location: 1858'' FSL & 1671' FEL, Section 8, T33S, R29W, Meade County, Kansas – Southeast of Plains.

Elevation: Ground Level 2671', Kelly Bushing 2683'

Contractor: Duke Drilling Rig No. 6, Type: Double jackknife, triple stand, Toolpusher Rick Schollenbarger, Drillers: Terry Sorter, Danny White, Saul Garcia

Company Man: Roger Pearson – Liberal, Kansas

Spud Date: 5/5/12

Total Depth: 5/11/12, Driller 6350', Logger 6356', St. Louis Formation

Casing Program: 40 joints of 8 5/8", J-2, 24Lbs/ft, set at 1480'.

Mud Program: Mud-Co/Service Mud, engineer Justin Whiting, displaced 2800', Chem. gel/LCM.

Wellsite Consultant: Peter Debenham with mudlogging trailer, Call depth 4000', Box 350, Drake, CO 80515, 720/220-4860.

Samples: 30' to 5700', 20' to TD and 10' through zones of interest.

Electric Logs: Weatherford, engineer Ron Hoffman , Array Induction, Compensated Neutron/Density, Microlog, Hi Res.

Status: Plugged and abandoned 5/12/12

## WELL CHRONOLOGY

<b>10 PM</b>			
<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
5/4			Move to and rig up rotary tools.
5/5	1165'	1165'	Mix spud mud and blow down mouse hole and rat hole. Spud in 12 1/4" surface hole to 1165'. Survey(3/4 deg.).
5/6	1630'	1490'	To 1490' and circulate and trip out. Run and cement 8 5/8" set at 1480' and wait on cement. Plug down at 10 am. Back off landing joint and nipple up BOP and pressure test blind rams. Trip in and test pipe rams. Drill plug and cement and 7 7/8" hole to 1630'.
5/7	3110'	1390'	To 1700' and trip for bit no. 3. Survey(1/2 deg.) and drill to 3110'. Clean suction and displace mud system at 2500'.
5/8	4500'	1390'	
5/9	5255'	755'	To 5010' and circulate and wiper trip 27 stands. To 5255'.
5/10	6265'	1010'	
5/11	6350'TD	85'	TD and circulate and short trip 40 stands and circulate and condition mud. Drop survey(1 deg.) and out for logs and run e-logs. Trip and out open ended and plug and abandon well.
5/12	TD		Plug and abandon well and rig down.

## LOST CIRCULATION

none

## BIT RECORD

<u>NO.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>
1	STC	FDnSTC	12 1/4"	1490'	1490'	22
2	STC	F27I	7 7/8"	1700'	210'	4 1/2
3	HTC	Q506F	7 7/8"	6350'	4650'	97 1/2
Total Rotating Hours:						123
Average:						51.6 Ft/hr

## DEVIATION RECORD - degree

1012' 3/4, 1490' 3/4, 3043' 3/4, TD 1

**MUD PROPERTIES**

<b><u>DATE</u></b>	<b><u>DEPTH</u></b>	<b><u>WT</u></b>	<b><u>VIS</u></b>	<b><u>PV</u></b>	<b><u>YP</u></b>	<b><u>pH</u></b>	<b><u>WL</u></b>	<b><u>CL</u></b>	<b><u>LCM-LBS/BBL</u></b>
5/5	400'	8.8	29			7.0	nc	120	3
5/6	1490'	Water							
5/7	2430'	9.5	29			7.0	n/c	70k	2
5/8	3856'	8.95	42	12	12	8.0	18.0	6.4	3
5/9	5035'	8.75	58	16	17	9.6	9.6	4.4k	2
5/10	5920'	9.1	52	15	17	9.5	10.0	3.7k	2

**ELECTRIC LOG FORMATION TOPS- KB Elev. 2656'**

<b><u>FORMATION</u></b>	<b><u>DEPTH</u></b>	<b><u>DATUM</u></b>	<b><u>*Crooked Creek No. 4-8</u></b>	
			<b><u>DATUM</u></b>	<b><u>POSITION</u></b>
Casing	1489'			
Heebner	4462'	-1779'	-1786'	+7'
Toronto	4485'	-1802'	-1810'	+8'
Lansing	4607'	-1924'	-1930'	+6'
Marmaton	5270'	-2587'	-2592'	+5'
Cherokee	5442'	-2759'	-2766'	+7'
Atoka	5701'	-3018'	-3025'	+7'
Morrow	5760'	-3077'	-3082'	+5'
Mississippi Chester	5884'	-3201'	-3222'	+21'
Ste. Genevieve	6124'	-3441'	-3454'	+13'
St. Louis	6211'	-3528'	-3534'	+6'
TD	6356'	-3643'		

\*O'Brien Energy Resources, Crooked Creek No. 4-8, 2271'FSL & 526'FEL, Sec. 8 – app. 1150' to the East, K.B. Elev. 2656'.





**ACCESSORIES**

**FOSSIL**

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

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

**MINERAL**

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- Calc
- Carb

- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt

- Sandy
- Silt
- Sil
- Sulphur
- Tuff

**STRINGER**

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

- Ssstrg

**TEXTURE**

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

**OTHER SYMBOLS**

**INTERVALS**

- Core
- Dst

**EVENTS**

- Rft
- Sidewall

**POROSITY TYPE**

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

- Pinpoint
- Vuggy

**SORTING**

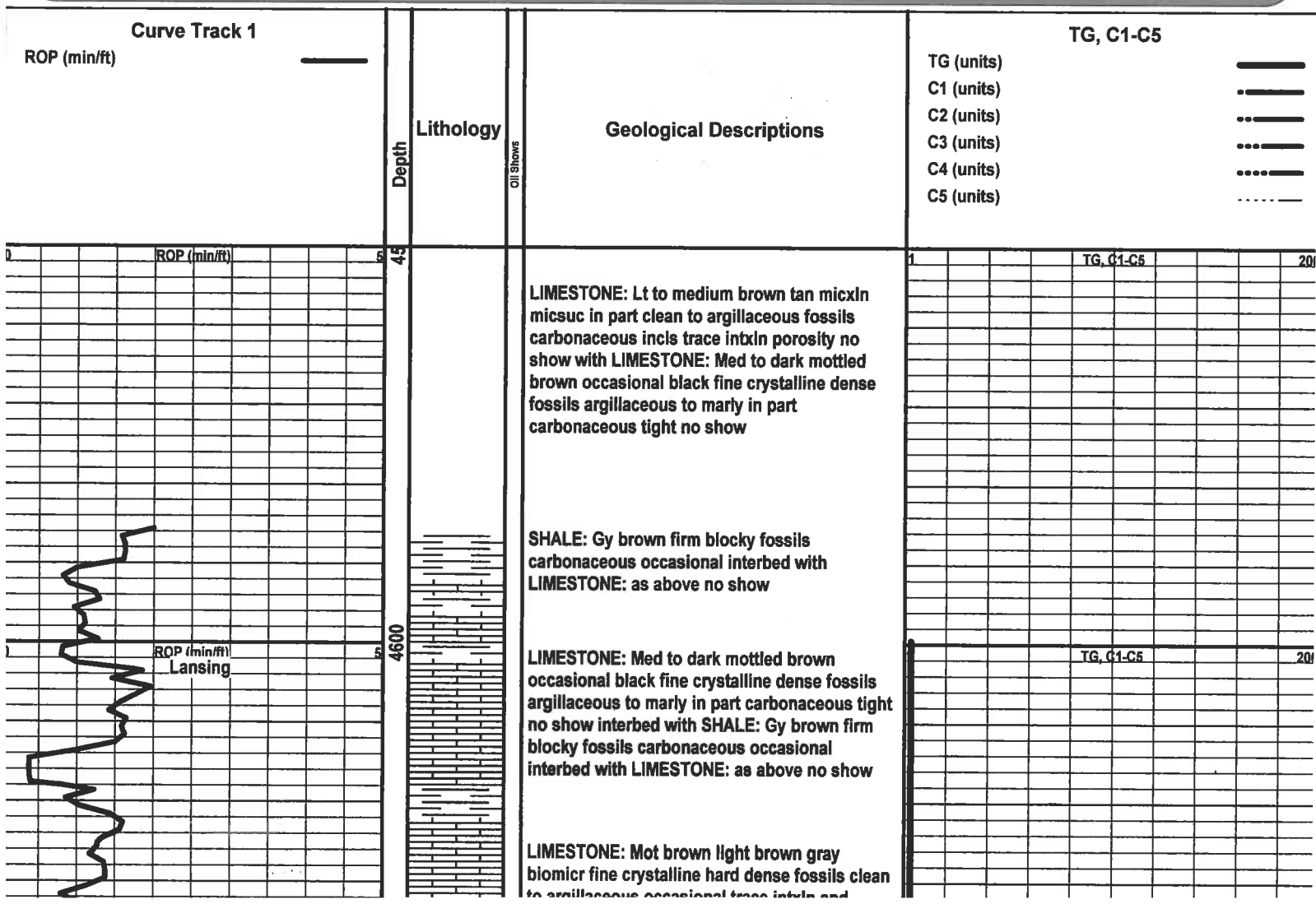
- Well
- Moderate
- Poor

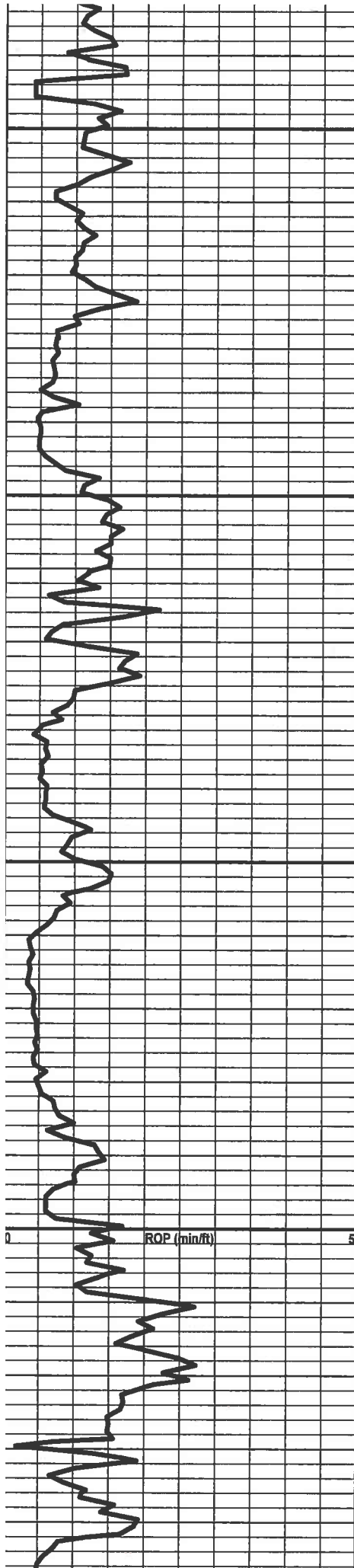
**ROUNDING**

- Rounded
- Subrnd
- Subang
- Angular

**OIL SHOWS**

- Even
- Spotted
- Ques
- Dead





moldic porosity no show

LIMESTONE: Med to light mottled brown buff micxln micsuc in part sbchky clean fossils trace intxln porosity no show

LIMESTONE: Lt mottled brown gray biomicr fine crystalline clean very fossils occasional moldic and intxln porosity predominant hard and tight no show occasional interbed with SHALE: Dk brown black blocky firm silty carbonaceous

LIMESTONE: Lt brown fine crystalline brittle clean very oolites well/exc moldic porosity no show

LIMESTONE: Med brown crpxln hard dense clean silica in part tight no show with LIMESTONE: Lt brown fine crystalline brittle clean very oolites well/exc oomoldic porosity no show

LIMESTONE: Lt to medium brown oomicr fine crystalline brittle clean very oolites exc oomoldic porosity no fluorescence no stain or cut

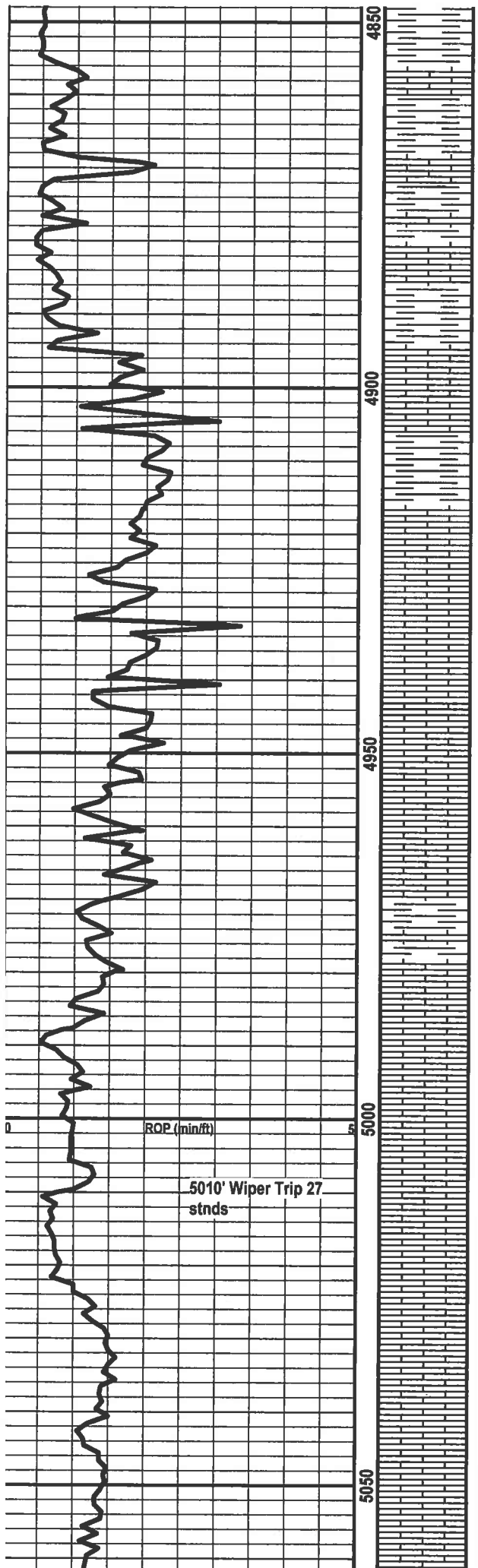
LIMESTONE: Mot brown gray crpxln hard dense silica fossils tight no show

SHALE: Dk brown hard blocky to sbfis waxy to silty carbonaceous with LIMESTONE: Brn gray crpxln hard dense tight no show

LIMESTONE: Med brown micxln micsuc brittle clean exc oomoldic porosity trace intxln porosity no show with LIMESTONE: Lt brown buff micxln micsuc in part brittle clean sbchky fossils hard and silica in part no show

LIMESTONE: Mot brown crpxln hard dense silica fossils clean to argillaceous tight no show

SHALE: Blk very dark brown firm sbfis to blocky carbonaceous silty to waxy calcareous interbed



with LIMESTONE: Lt brown buff micxn micsuc in part brittle clean sbchky fossils trace intxn porosity no fluorescence no stain or cut

LIMESTONE: Mot brown very brittle clean very oolites well/exc oomoldic porosity mottled orange mineral fluorescence no stain or cut no show

SHALE: Dk brown gray hard blocky silty carbonaceous with LIMESTONE: Mot brown to gray fine crystalline hard dense silica in part poor vis porosity no show

LIMESTONE: Lt to medium mottled brown to gray micxn micsuc in part predominant hard and silica tight/ occasional trace moldic and intxn porosity no fluorescence no stain or cut

LIMESTONE: Lt brown gray buff micxn micsuc very brittle clean chalky in part trace intxn porosity occasional moldic porosity no show

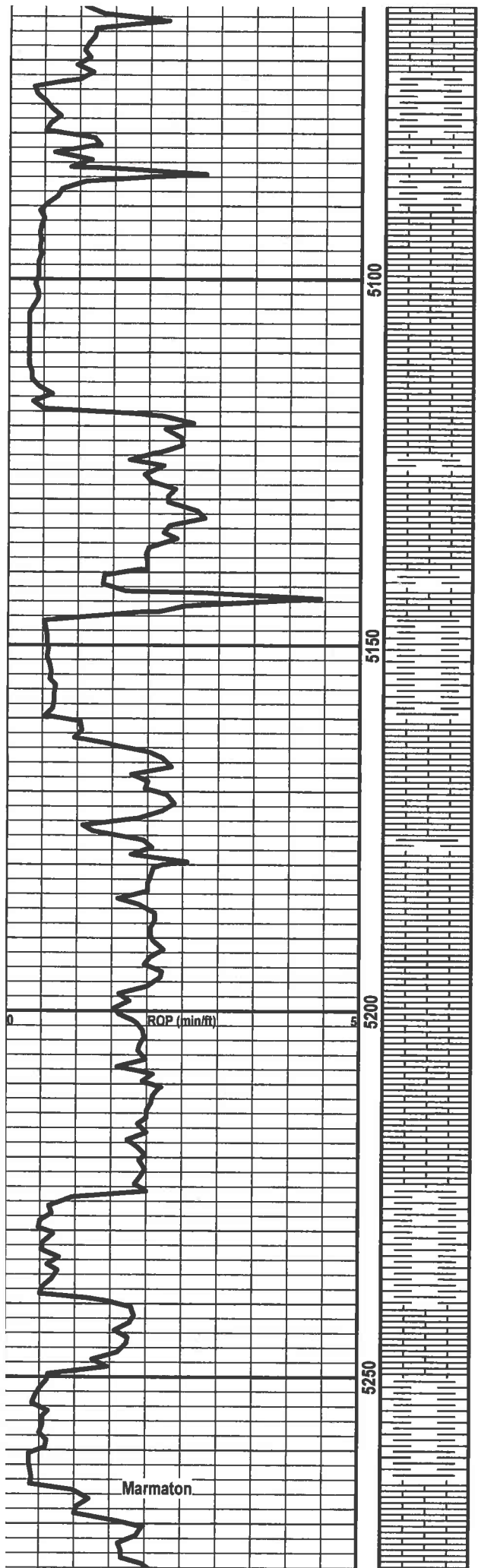
SHALE: Blk dark brown firm sbfis carbonaceous with LIMESTONE: Lt brown gray buff micxn micsuc very brittle clean chalky in part trace intxn porosity occasional moldic porosity no show

LIMESTONE: Med to dark mottled brown light brown buff micro/crpxln micsuc in part clean to marly silica in part predominant hard and tight occasional micsuc with intxn porosity no fluorescence no stain or cut

LIMESTONE: Med to dark mottled brown micr crpxln hard dense silica argillaceous to marly fossils tight no show

SHALE: Dk brown black dark gray hard blocky carbonaceous calcareous fossils silica in part interbed with LIMESTONE: Pred as above micsuc in part with trace intercrystalline

TG, C1-C5 201



SHALE: Blk very dark brown hard sbfis to blocky waxy carbonaceous silty

LIMESTONE: Med mottled brown oomicr fine crystalline brittle clean very oolites well/exc oomoldic porosity no fluorescence no stain or cut mottled orange mineral fluorescence

LIMESTONE: Dk mottled gray to brown occasional black crpxln hard dense silica argillaceous to marly in part tight no show

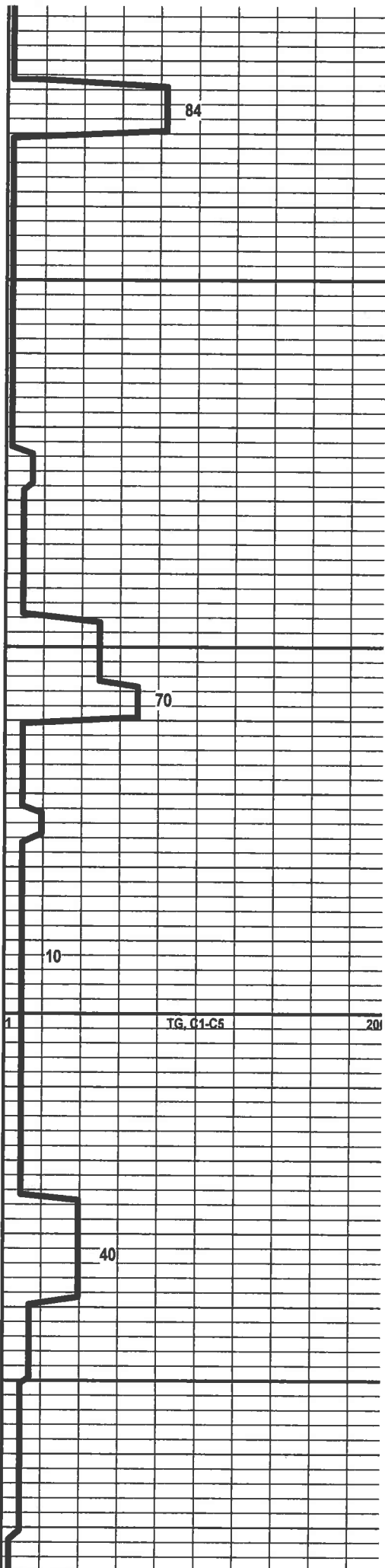
SHALE: Blk very dark brown hard sbfis to blocky waxy carbonaceous silty

LIMESTONE: Dk mottled brown gray micr crpxln hard dense argillaceous to marly fossils carbonaceous tight no show with SHALE: Blk dark brown hard sbfis carbonaceous

LIMESTONE: Med to dark mottled brown fine crystalline brittle clean very oolites exc oomoldic porosity trace intxn porosity mottled orange mineral fluorescence no stain or cut no show

LIMESTONE: Med mottled brown crpxln hard dense brittle in part argillaceous fossils occasional exc oomoldic porosity no show

SHALE: Blk dark brown firm fissile carbonaceous silty interbed with LIMESTONE: Pred as above occasional exc oomoldic porosity no fluorescence no stain or cut



84

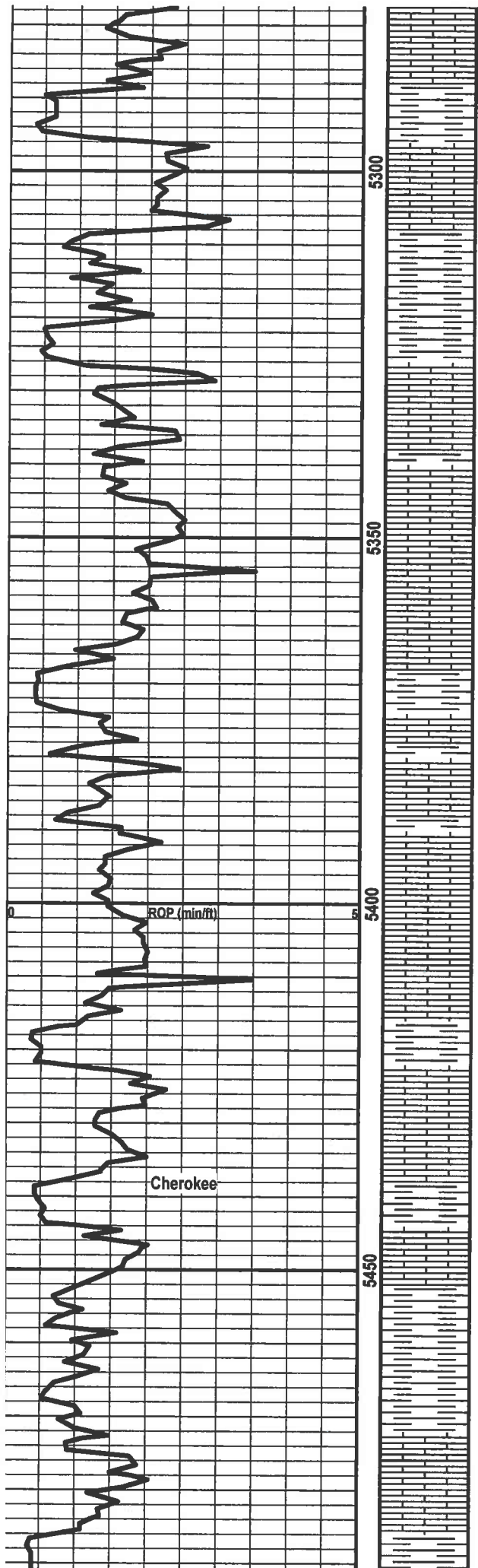
70

10

TG, C1-C6

20

40



**LIMESTONE:** Mot brown to gray fine crystalline hard dense silica in part fossils oolites clean tight no show

**SHALE:** Blk dark gray firm sbfis to blocky carbonaceous calcareous silty to sandy in part interbed with **LIMESTONE:** Lt brown buff white fine crystalline sbchky clean to argillaceous soft brittle no show

**LS:** Lt brown white tan micxn chalky in part clean to argillaceous soft brittle poor vis porosity no fluorescence no stain or cut

**SHALE with interbed LIMESTONE:** as above no show

**LIMESTONE:** Lt brown buff white fine crystalline chalky in part soft brittle clean no show with **LIMESTONE:** Med mottled brown oomicr micxn very oolites well/exc oomoldic porosity no show occasional Interbed with **SHALE:** Blk firm fissile

**LIMESTONE:** Lt brown buff white fine crystalline chalky in part soft brittle clean no show with **LIMESTONE:** Med mottled brown oomicr micxn very oolites well/exc oomoldic porosity no show

**SHALE:** Blk dark brown firm sbfis to blocky waxy to silty carbonaceous

**LIMESTONE:** Brn micxn micsuc in part clean fossils sbchky tight no show with **SHALE:** Dk brown to gray black firm sbfis to blocky carbonaceous

**SHALE:** Blk firm fissile carbonaceous

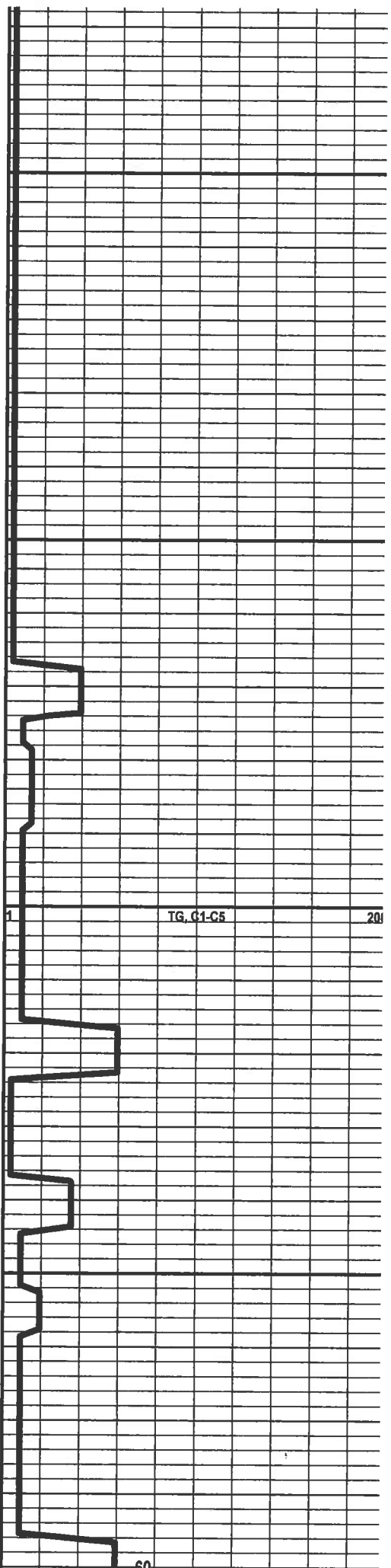
**LIMESTONE:** Med to dark brown gray crpxn hard dense silica fossils clean to argillaceous tight no show

**SHALE:** Blk firm fissile carbonaceous

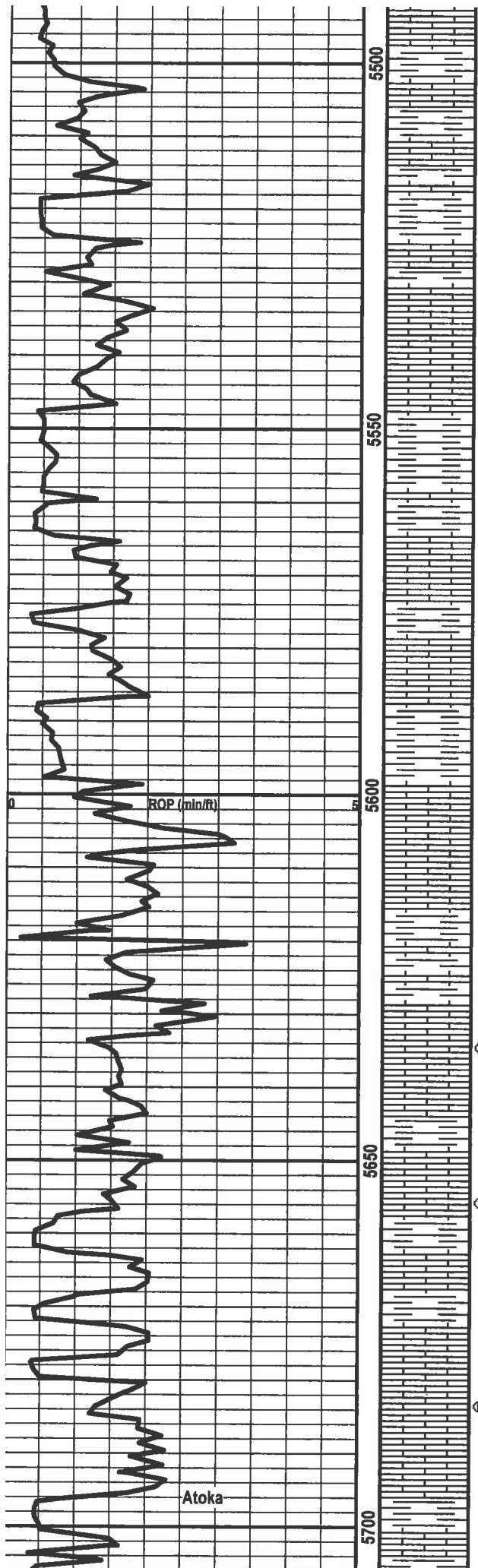
**LIMESTONE:** Med to dark brown occasional black crpxn hard dense silica argillaceous fossils poor vis porosity no show

**SHALE:** Blk dark gray to brown sbfis firm carbonaceous silty

**LIMESTONE:** Med to dark brown to gray biomicr crpxn hard dense fossils argillaceous to marly carbonaceous tight no show interbed with **SHALE:** Blk firm fissile carbonaceous



TG, C1-C5 20



LIMESTONE: Med to dark brown to gray biomicr crpxln hard dense fossils argillaceous to marly carbonaceous tight no show interbed with SHALE: Blk firm fissile carbonaceous

LIMESTONE: Med to dark mottled brown gray occasional black micr crpxln hard dense argillaceous to marly fossils carbonaceous tight interbed with SHALE: Blk firm fissile carbonaceous

SHALE: Blk dark brown firm sbfis to blocky carbonaceous calcareous

LIMESTONE: Dk brown fine crystalline hard dense fossils argillaceous to marly tight no show with SHALE: as above

SHALE: Blk dark brown to gray hard blocky to sbfis carbonaceous calcareous silty

LIMESTONE: Mot brown to gray buff micxn firm dense to trace intxln porosity sbchky in part clean to argillaceous no fluorescence no stain or cut

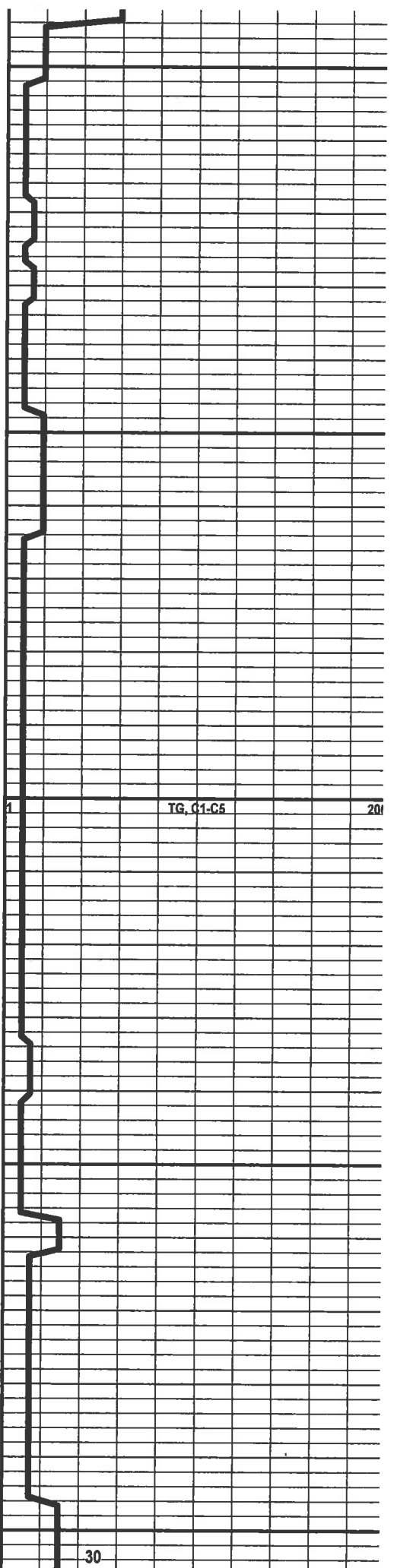
SHALE: Blk dark brown firm sbfis to blocky carbonaceous interbed with LIMESTONE: Mot brown buff fine crystalline hard dense sbchky poor vis porosity no fluorescence no stain or cut

LIMESTONE: Medium to light brown micrite finely crystalline to microscrosic in part clean fossiliferous occ tr intcrystalline porosity pred tight light pale blue hydrc flor(2% spl) slow bleeding cut tr o stn

SHALE: Blk firm fissile carbonaceous interbed with IS: Dk brown black medium to light brown buff micr crpxln to micxn dense sbchky in part fossils clean to marly fossils tight no show trace CHRT

LIMESTONE: Medium to light brown micrite finely crystalline to microscrosic in part clean fossiliferous occ tr intcrystalline porosity pred tight light pale blue hydrc flor(2% spl) slow bleeding cut tr o stn

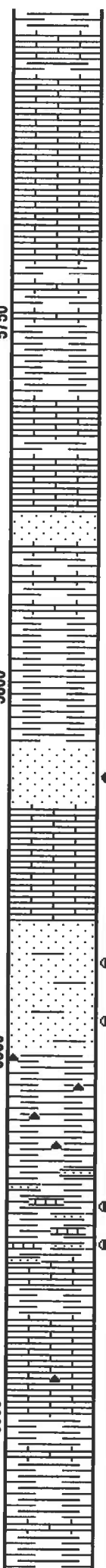
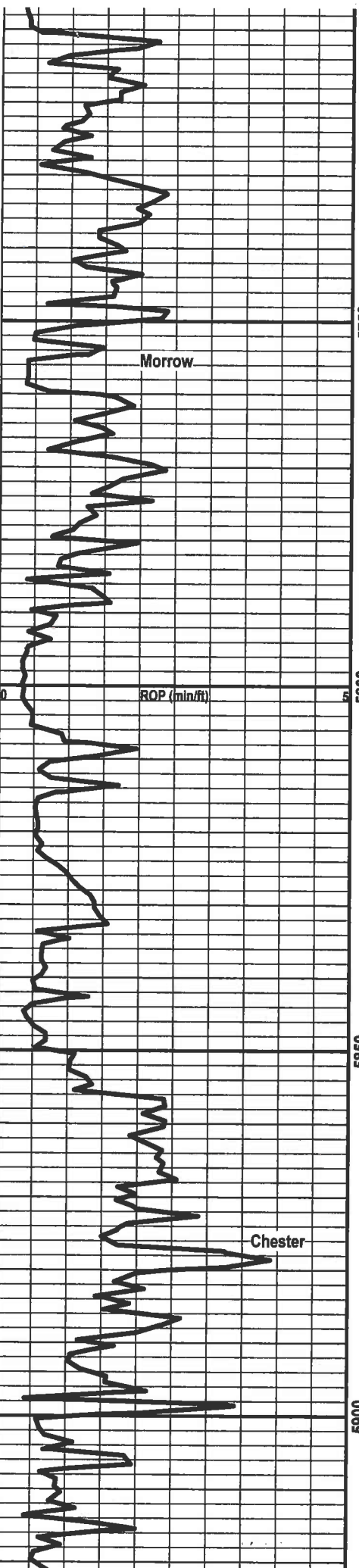
SHALE: Blk dark brown firm fissile to blocky



TG, C1-C5

20

30



very to silty carbonaceous member with  
**LIMESTONE:** Dk to medium brown occasional black crpxln hard dense argillaceous to marly occasional sbchky and clean poor vis porosity no fluorescence no stain or cut

**SHALE:** Blk firm to hd fissile carbonaceous

**LIMESTONE:** Dk mot brown to gray black micr fine crystalline dense argillaceous to clean carbonaceous occasional sbchky trace very dull pale blue hydrocarbon fluorescence faint cut no stain weak show

**SH:** Blk dk gy frm fis to blkly carb wxy to sndy ip foss glauc

**LS:** Mot brn to gy f xln dns sndy glauc foss carb p vis por tr mot bl hydc flor fnt cut wk show

**SS(15% spl):** Lt brn bf fri to hd vfu w srtd sbrnd grs sil cmt sl calc clin tr intgran por tr f vug por bri lt yel to pale yelbl hydc flor(all SS) gd to fr strmg cut occ lt brn mtx o stn no vis live oil abt gas bubbles when crushed sl odor

**SH:** Blk dk gy frm sbfis to fis wxy carb

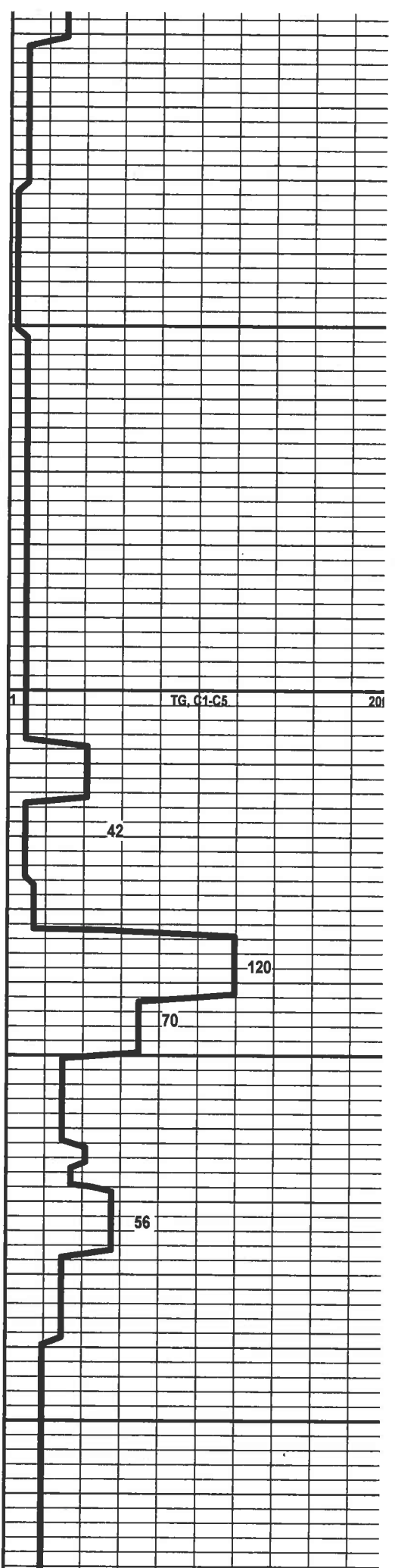
**SS(25% spl):** Lt to med mot brn to gy hd to sl fri ip vfu/fl w srtd sbrnd grs v calc foss arg to mrlly ip occ clin tr ro gd intgran por f isol vug por pale mot bl hydc flor(most SS) slow bldng to wk strmg cut tr gas bubbles no stn with tr arg to mrlly sandy LS: Poor vis por wk show

**LS:** Brn crpxln hd dns clin to arg tt no show tr  
**CHRT:** Blk hd dns xln

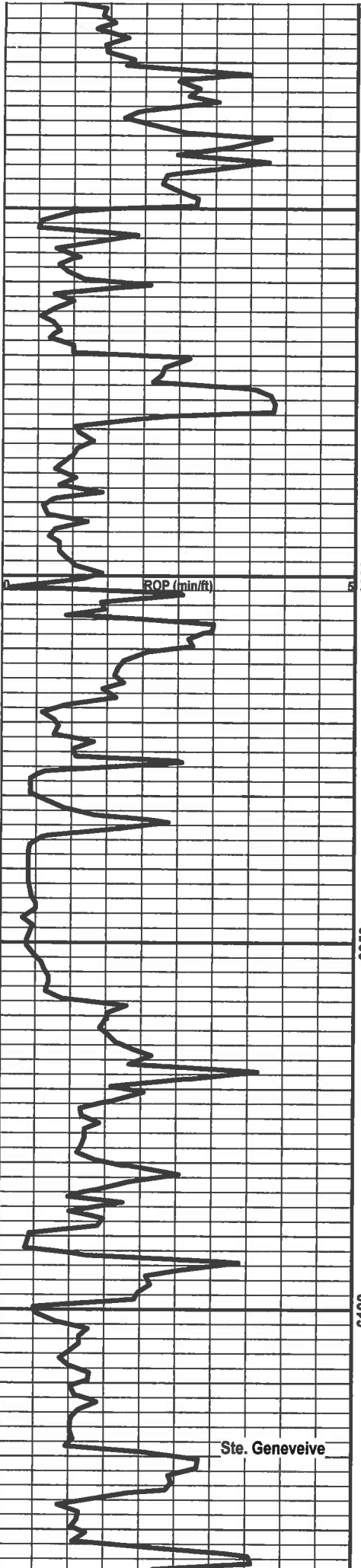
**LS:** Mot brn to gy micr f xln brit sndy carb glauc ip tr f vug & intxln por dull bl hydc flor wk cut wk show ?spl interp

**SH:** Med gy to gygn blk fis to blkly wxy carb foss calc glauc ip intbd with LS: Lt to med brn bf mot gy micxln sbchky ip foss carb tt no show

**SH:** Med gy to gygn blk fis to blkly wxy carb foss calc glauc ip occ intbd with LS: aa







LS: Lt mot brn gy micr micxln micsuc sbchky ip brit cln tr intxln por no flor no stn or cut

SH: Med gy to gygn blk fis to blkly wxy carb foss calc glauc ip

LS: Brn to gy crpxln hd dns occ sbchky & brit foss tt no show intbd with SH: Med brn gy frm blkly to sbfis wxy calc

SH: Gy gygn dk brn to blk occ redbrn blkly rthy wxy intbd with LS: Brn med to dk f xln sbchky ip dns cln tt no show

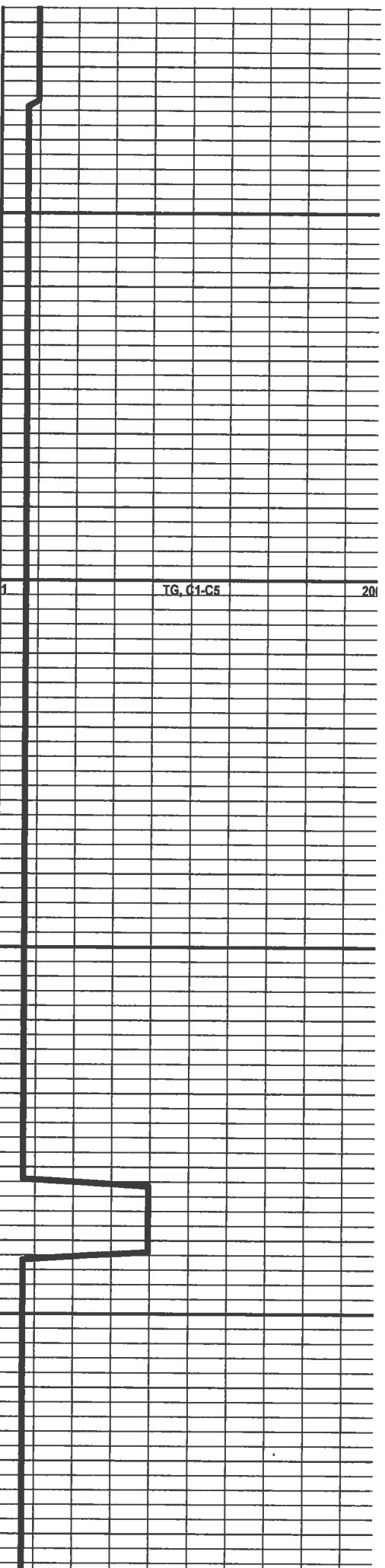
SH: Med gy to gygn dk brn occ redbrn rthy blkly to fis to blkly wxy carb foss calc glauc ip

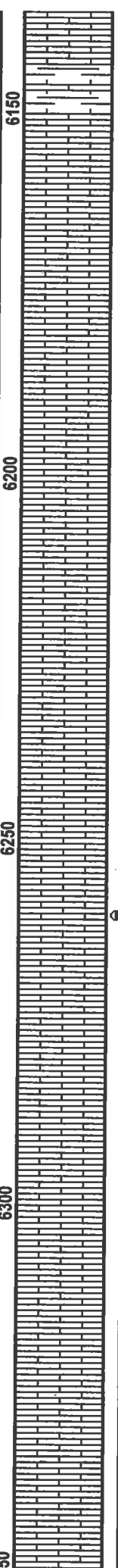
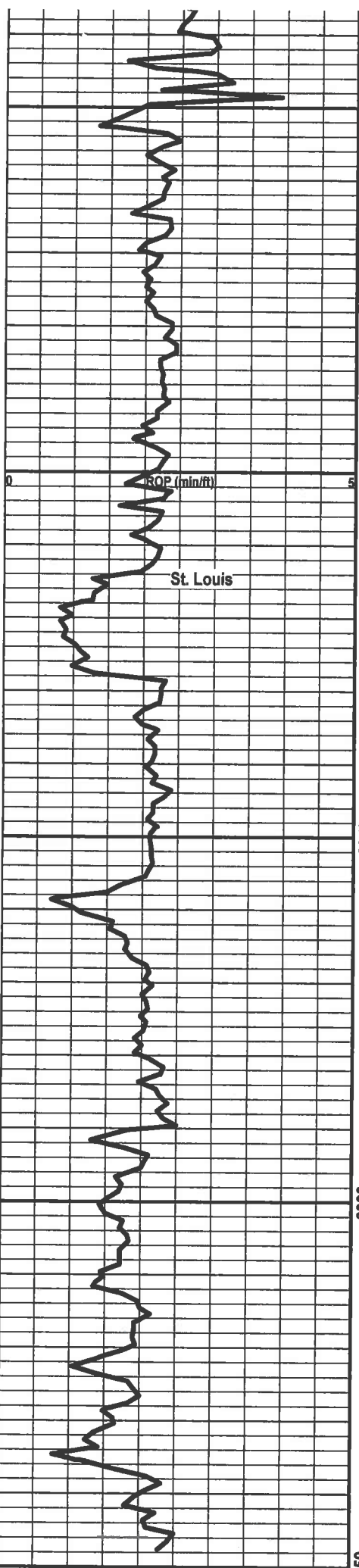
SH: Red to orngbrn gy gygn to gn mar viol varic blkly brit wxy with LS: Mot brn gy occ redbrn gygn varic ip f xln hd dns arg to mrlly tt no show

LS: Lt to dk mot brn to wh redbrn viol varic micxln micsuc ip sbchky cln to arg foss ool med to dk spec brn o stn tr live oil v dull hydc flor gd strmg cut tt to tr intxln & tr moldic por wk show no perm

SH: Red to orngbrn gy gygn to gn mar viol varic blkly brit wxy with LS: Mot brn gy occ redbrn gygn varic ip f xln hd dns arg to mrlly tt no show

Ste. Geneveve





LS: Mot brn gy occ redbrn gygn varic ip f xln hd dns arg to mrlly tt no show wihnt intbd SH: Red to orngrbrn gy gygn to gn mar viol varic blkly brit wxy

LS: Med gy gygn med brn micr f xln hd dns sndy arg to mrlly tt no show

LS: Med gy gygn med brn micr f xln hd dns sndy arg to mrlly tt no show

LS: Lt brn to med brn micsuc to suc brit cln v sndy foss ool tr vis por no flor no stn or cut

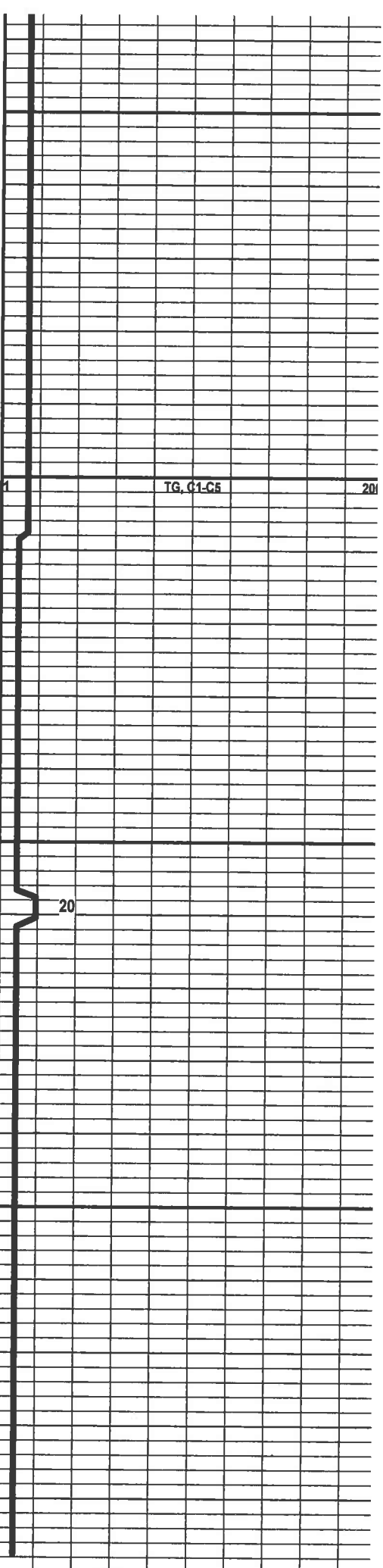
CHRT: Mlky gy hd xln LS: Brn micxln to f xln frm to hd dns v sndy cln foss ool tt no show

LS: Lt brn wh micxln sbchky to chky sft to frm brit cln foss tr pp & intxln por spec yel hydc flor(2% spl) gd strmg cut spty dk brn oil stn and tr live oil wk show

LS: Med brn f xln dns to r intxln por foss sndy cln no show

LS: Med brn f xln dns to r intxln por foss sndy cln no show

LS: Med brn f xln dns to r intxln por foss sndy cln no show







# Cement Report

Customer <b>O'Brien Energy</b>		Lease No.		Date <b>8-8-14</b>	
Lease <b>Crooked Creek</b>		Well # <b>5-8</b>		Service Receipt	
Casing <b>4 1/2 10.5#</b> Depth <b>6340'</b>		County <b>Meade</b>		State <b>KS</b>	
Job Type <b>Z-42 Production</b>		Formation		Legal Description <b>8-33-29</b>	
<b>Pipe Data</b>			<b>Perforating Data</b>		<b>Cement Data</b>
Casing size <b>4 1/2 10.5#</b>		Tubing Size		<b>Shots/Ft</b>	
Depth <b>6340'</b>		Depth			
Volume <b>100.3 bbl</b>		Volume		From	
Max Press		Max Press		To	
Well Connection		Annulus Vol.		From	
Plug Depth <b>6298'</b>		Packer Depth		To	
<b>Lead 200SX @ 14.8 ppg</b> <b>Sr. W. Co. 10% salt</b> <b>Gr. C-15.4# Defoamer</b> <b>SA 6: Bentonite</b> <b>AAA Cement</b> <b>Tail in</b> <b>50 SK @ 15.6 ppg</b> <b>Premium / common</b>					
Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1600					On location - Rig up
1800					Safety Meeting
1824	2500	2			Pressure Test
1825	50		12	5	Pump 500 gallons of Mud flush
1845	250		53.7	5	Pump 200SX @ 14.8 ppg
1855					Drop Plug
1900	50			5	start Displacement with CC-1
1915	400			2	slow Rate
1925	1000		100	2	Bump Plug
1930	0				Release PRESSURE - float Held
					Shut Down Rig Down
					Plug Rat Hole 30.5x
					Plug Mouse Hole 20.5x
Service Units	78940	38750 19842	27808 37547		
Driver Names	Ruben	Carlos	Santiago		

Roger  
Customer Representative

Jerry Bennett  
Station Manager

Ruben Martinez  
Cementer



# Cement Report

Customer <i>O'Brien Energy</i>		Lease No. _____		Date <i>9-16-14</i>	
Lease <i>Crooked Creek</i>		Well # <i>5-8</i>		Service Receipt <i>04638</i>	
Casing <i>4 1/2</i>	Depth <i>5742</i>	County <i>Meade</i>		State <i>115</i>	
Job Type <i>241 Spool</i>		Formation _____		Legal Description <i>8-33-29</i>	
<b>Pipe Data</b>			<b>Perforating Data</b>		<b>Cement Data</b>
Casing size <i>4 1/2</i>	Tubing Size <i>2 7/8</i>	<b>Shots/Ft</b>		<b>Lead</b>	
Depth <i>5838</i>	Depth <i>5742</i>	From <i>5838</i>	To <i>414</i>		
Volume <i>1.5615</i>	Volume <i>22.2613</i>	From _____	To _____		
Max Press <i>2000</i>	Max Press <i>2000</i>	From _____	To _____		
Well Connection <i>2 3/4</i>	Annulus Vol. <i>11095</i>	From _____	To _____		
Plug Depth _____	Packer Depth <i>5742</i>	From _____	To _____	<b>Tail in 75K Class H</b>	
				<i>1.06 Ft 3-SK</i>	
				<i>4.3561-SK 16.4#</i>	
Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>900</i>					<i>Arrive On location</i>
<i>910</i>					<i>Safety Meeting, Mix Up</i>
<i>920</i>		<i>2100</i>			<i>Pressure Test</i>
<i>925</i>	<i>500</i>		<i>30</i>	<i>4.0</i>	<i>Load Backside</i>
<i>935</i>		<i>6000</i>	<i>10</i>	<i>2.0</i>	<i>Lead Tubing Injection Rate</i>
<i>945</i>			<i>14.1</i>	<i>2.2</i>	<i>Pump out @ 16.4#</i>
<i>1000</i>					<i>Wash Up</i>
<i>1005</i>		<i>2000</i>	<i>20.5</i>	<i>1.0</i>	<i>Displace</i>
<i>1035</i>		<i>1000</i>	<i>30</i>	<i>2.5</i>	<i>Reverse Out</i>
<i>1100</i>					<i>Pull out 10 stands</i>
<i>1130</i>					<i>Shut in Well</i>
					<i>Job Complete</i>
Service Units <i>78938</i>		<i>7084719570</i>	<i>3302114284</i>		
Driver Names <i>Tray</i>		<i>SAM</i>	<i>Rickie</i>		

*Roger*

*Ben Brentt*

*[Signature]*

Customer Representative

Station Manager

Cementer