

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or _____ Date Reached TD _____ Completion Date or
Recompletion Date _____ Recompletion Date _____

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Griffin, Charles N.
Well Name	CAMBRIE 1
Doc ID	1477030

All Electric Logs Run

Dual Induction Log
Sonic Log
Micro Log
Compensated Density-Neutron Log

Form	ACO1 - Well Completion
Operator	Griffin, Charles N.
Well Name	CAMBRIE 1
Doc ID	1477030

Tops

Name	Top	Datum
Heeber	3918	-1905
Brown Lime	4082	-2069
Lansing	4098	-2085
Stark	4355	-2342
Base KC	4486	-2474
Pawnee	4544	-2531
Cherokee	4588	-2575
Viola	4633	-2620
Simpson	4790	-2777

QUALITY WELL SERVICE, INC.

7177

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-727-3410
Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Invt. C-2088

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-24-19	28	29S	15W	PRATT	Ks		
Lease	Cambrie		Well No.	1			
Contractor	W/W Dalg Rig # 1A			Location PRATT, KS Hwy 59 to 140th Rd S to 103rd Rd			
Type Job	6 1/2 LS			Owner I E to 130th Rd VAS Einto			
Hole Size	7 7/8			To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Csg.	5 1/2 17*			T.D. 4865'			
Tbg. Size				Depth 4359'			
Tool				Charge To Griffin			
Cement Left in Csg.	20.10			Street			
Meas Line	Displace 112.26			City State			
EQUIPMENT				The above was done to satisfaction and supervision of owner agent or contractor.			
Pumptrk	B No. JT			Cement Amount Ordered 200sc Pro C			
Bulktrk	10 No. TAKE			2% Gel 10% SALT 5 1/2 KOLSEAL .6% C-16A 1 1/4 CF			
Bulktrk	No.			Common 200 sc pro C			
Pickup	No.			Poz. Mix			
JOB SERVICES & REMARKS				Gel. 376 lbs			
Rat Hole 304				Calcium			
Mouse Hole 204				Hulls			
Centralizers 1-2-3-4-5-6				Salt 1101 lbs			
Baskets				Flowseal 50 lbs			
D/V or Port Collar				Kol-Seal 1000 lbs			
Run 117 ft's 5 1/2 17" SET @ 4859'				Mud CLR 48 500 gal			
CSG ON BOTTOM & TAG & BREAK CIRC				CFL-117 or CD110 CAF 38 C16A 113 lbs			
W/ RIG DROP BALL & CIRC W/ RIG				Sand CC-1 10 gal			
START Pumping 5 Bbls H ₂ O 12 Bbls MF 5 Bbls H ₂ O				Handling 226			
START PLUG P-M HOLES 50 SC				Mileage 2.5			
START M 1/2 & Pump 150 gal CS6 @ 14.0 #/gal				5 1/2 FLOAT EQUIPMENT			
SHUT DOWN CLEAR PUMP & LINE & RELEASE PLUG				Guide Shoe 1 EA HEAD & manifold			
START Disp 2% KCL				Centralizer 6 EA			
Lift ps 95 out 650 #				Baskets			
LAND PLUG 112.26 1200 #				AFU Inserts 2 EA - ADD HLL			
PSI T ON CSG 1600 #				Float Shoe 1 EA			
RELEASE & HOLD				Latch Down 1 EA			
1/2 Bbl BACK				SERVICE SUPPLY			
GOOD CIRC THRU JOB				LMV 25			
Thank you				Pumptrk Charge 65			
PLEASE CALL DALLIN				Mileage 50			
Signature <i>[Signature]</i>				Tax			
				Discount			
				Total Charge			

TODD T. JAKES

QUALITY WELL SERVICE, INC.

7168

*JW
6-20-81*

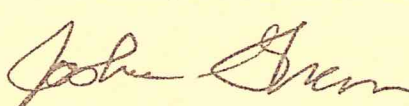
Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

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Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish	
7-17-19	28	29S	15W	PRATT	Ks			
Lease	Cambrie		Well No.	1				Location
PRATT, Ks W on Hwy 54 to Rd 140 ⁿ 10S to 100 ⁿ								
Contractor	WW Dalg. Prg # 14			Owner	I E to 130 ⁿ Rd 14S E into			
Type Job	SURFACE			To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.				
Hole Size	12 1/4		T.D.	261				
Csg.	8 5/8 23 #		Depth	261				
Tbg. Size			Depth					
Tool			Depth					
Cement Left in Csg.	25		Shoe Joint	25				
Meas Line			Displace	Cement Amount Ordered 275# Common 2 1/2" 3 1/2" 1/2" PS				
EQUIPMENT				1 TN CNT 225# Common 002R 400# 4 1/2" 1/2" PS				
Pumptrk	No.	75		Common 275# 1/2" csg				
Bulktrk	No.	Kettl		Poz-Mix 300#				
Bulktrk	No.			Gel. 517 lbs				
Pickup	No.			Calcium 1692 lbs				
JOB SERVICES & REMARKS				Hulls				
Rat Hole				Salt				
Mouse Hole				Flowseal 175 lbs				
Centralizers				Kol-Seal				
Baskets				Mud CLR 48				
D/V or Port Collar				CFL-117 or CD110 CAF 38				
Run 6 ft's 8 5/8 23" csg set d				Sand				
csg on Bottom Hook up to csg Break				Handling 6d4				
circ w/ KIB				Mileage 25 / 9500				
START Pumping 3 Bbls H ₂ O				FLOAT EQUIPMENT				
START MIX 1 Bmp 275# Common				Guide Shoe				
2 1/2" 3 1/2" 1/2" PS 14.8" / cal				Centralizer				
LOST CIR 200# out				Baskets				
START DISO				AFU Inserts				
PLUG DOWN				Float Shoe 1 EA HEAD manifold				
Close Valve on csg 2:15				Latch Down 1 EA WOODEN PLUG				
3:20 TAG CNT 50'				SERVICE SUPPLY 1 EA				
Run 40' inch				LNUV 25				
1 1/2" Pump 75#				Pumptrk Charge See PAGE				
SHUT DOWN WOC				Mileage 25 75				
TAG CNT 50-55'								
1 1/2" Pump 75# SHUT DOWN WOC								
X Signature				Tax				
				Discount				
				Total Charge				

QUALITY WELL SERVICE, INC.

Federal Tax I.D. # 481187368
 Home Office 30060 N. Hwy 281, Pratt, KS 67124
 Mailing Address P.O. Box 468

1100
6-2081

Office 620-727-3410
 Fax 620-672-3663

Rich's Cell 620-727-3409
 Brady's Cell 620-727-6964

Date	7-17-19	Sec.	28	Twp.	29S	Range	15W	County	PRATT	State	KI	On Location	Finish
Lease	Cambrie	Well No.	*1		Location								
Contractor	WW Drlg Rig #14							Owner					
Type Job	SURFACE							To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Hole Size	12 1/4		T.D.		261'		Charge To						
Csg.	8 5/8 23"		Depth		261'		Griffin						
Tbg. Size			Depth		Street								
Tool			Depth				City		State				
Cement Left in Csg.	25		Shoe Joint		25		The above was done to satisfaction and supervision of owner agent or contractor.						
Meas Line			Displace		Cement Amount Ordered								

CMT DOWN 40'45'
 MIX & Pump 75 SC
 SHUT DOWN W/O
 0200 400 SI Common 4 1/2 CC
 CMT DOWN 40'45'
 MIX & Pump 75 SC Common 3 1/2 CC
 CIRC CUT TO PIT
 WATCH CELLAR 30 MIN
 DON'T FALL
 RELEASED BY TOOL PUSHER

TOTAL CMT
 ↓ C56 275 SC Common 2 1/2 CC 3 1/2 CC 1/2 PS
 1 in CMT 275 Common 4 1/2 CC 1/2 PS
 225 SC Common 3 1/2 CC
 575 SC total

OPERATOR

Company: Charles N. Griffin
Address: PO Box 347
Pratt, KS 67124

Contact Geologist:
Contact Phone Nbr:
Well Name: Cambrie 1
Location: Section 28-29S-15W
API: 15-151-22496
Pool:
State: Kansas

Field: Croft EXT
Country: USA

Scale 1:240 Imperial

Well Name: Cambrie
Surface Location: Section 28-29S-15W
Bottom Location:
API: 15-151-22496
License Number:
Spud Date: 7/16/2019
Region: Pratt County
Drilling Completed: 7/23/2019
Surface Coordinates: 2310' FNL & 990' FWL
Bottom Hole Coordinates:
Ground Elevation: 2002.00ft
K.B. Elevation: 2013.00ft
Logged Interval: 3800.00ft
Total Depth: 4860.00ft
Formation:
Drilling Fluid Type: Chemical (MudCo)

Time: 8:30 PM

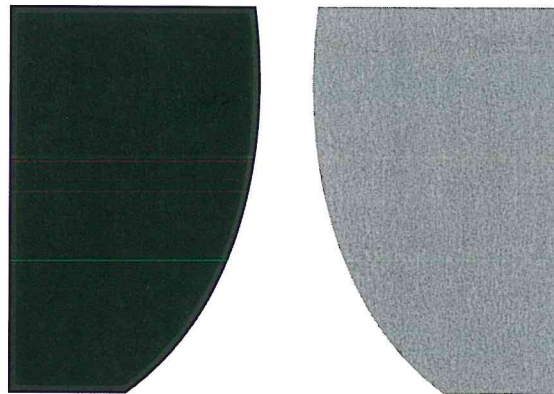
Time: 1:00 AM

To: 4860.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude:
Latitude:
N/S Co-ord: 2310' FNL
E/W Co-ord: 990' FWL

LOGGED BY



TERRATECH

ENERGY SERVICE, LLC

Company: TerraTech Energy Service LLC.
Address: 1632 S. West St. Suite 12
Wichita, KS 67208

Phone Nbr: 316-617-3959
Logged By: Geologist

Name: Bruce Reed

CONTRACTOR

Contractor:	WW Drilling		
Rig #:	14		
Rig Type:	mud rotary		
Spud Date:	7/16/2019	Time:	8:30 PM
TD Date:	7/23/2019	Time:	1:00 AM
Rig Release:	7/24/2019	Time:	7:15 AM

ELEVATIONS

K.B. Elevation:	2013.00ft	Ground Elevation:	2002.00ft
K.B. to Ground:	11.00ft		

NOTES

Surface Casing: 8-5/8" at 261'
 Production Casing: 5-1/2" at 4859'

Daily Penetration:

07/16/19	Spud @ 8:30 PM
07/17/19	220'
07/18/19	261'
07/19/19	2882'
07/20/19	3168'
07/21/19	4105'
07/22/19	4600'
07/23/19	4860' RTD @ 1:00 AM
07/24/19	4860' Rig released @ 7:15 AM

FORMATION TOPS

Formation	Sample Top	Datum	Log Top	Datum	Comparison*
Heebner	3918'	-1905	3917'	-1904	-4
Brown Lime	4082'	-2069	4082'	-2069	-7
Lansing	4098'	-2085	4098'	-2085	-7
Stark	4355'	-2342	4356'	-2343	-5
Base KC	4486'	-2474	4487'	-2474	-3
Pawnee	4544'	-2531	4553'	-2540	-7
Cherokee	4588'	-2575	4589'	-2576	-6
Viola	4633'	-2620	4634'	-2621	+9
Simpson	4790'	-2777	4789'	-2776	-11

*Charles N. Griffin, #1 Addie, Section 28-29S-15W, Pratt County, Kansas

ROCK TYPES


 Cht	 Lmst fw7> shale, gry	 Carbon Sh
 Dolprim		 Ss

OTHER SYMBOLS

INTERVALS

 Core

Oil Show

 Good Show

DST

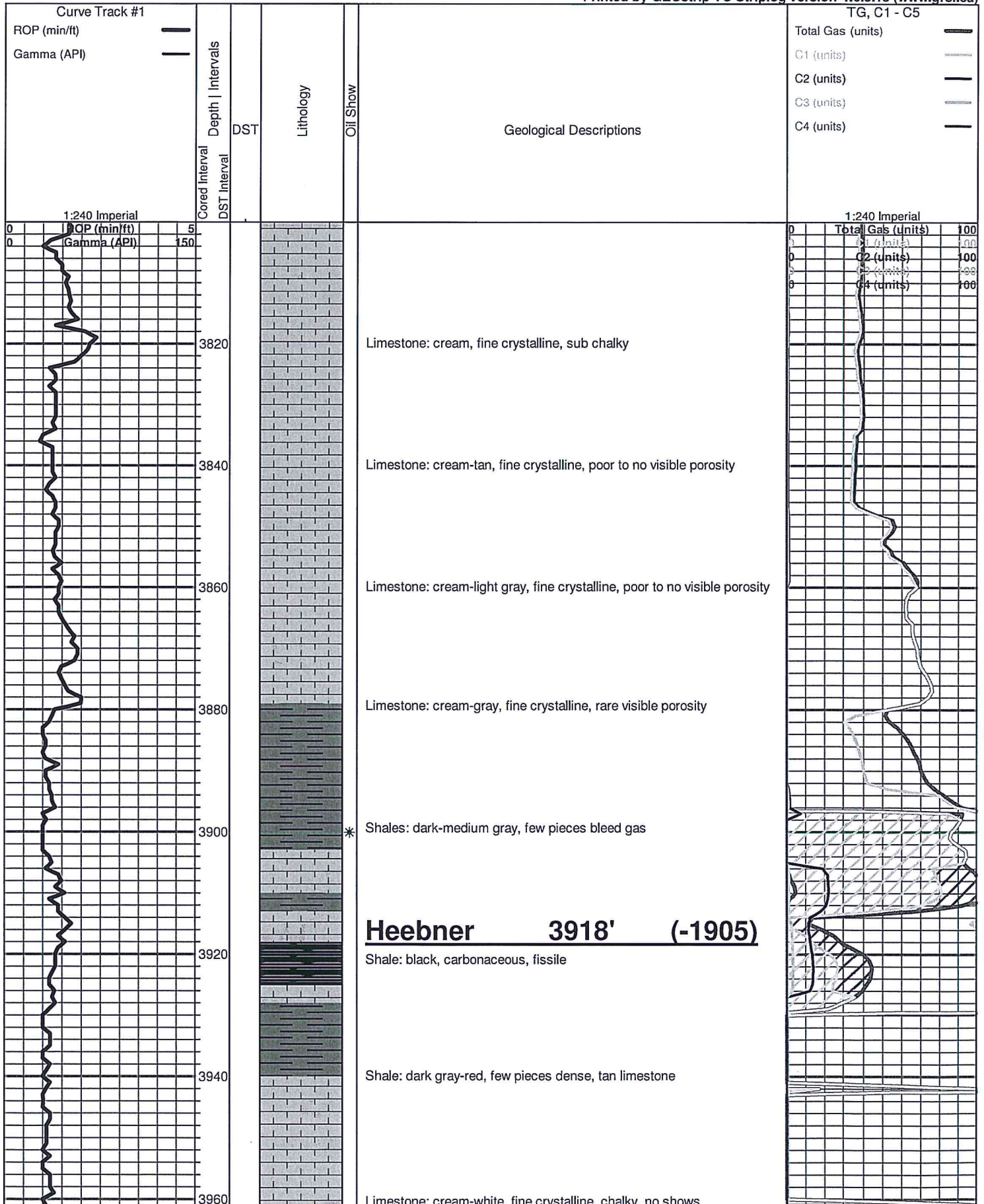
 DST Int

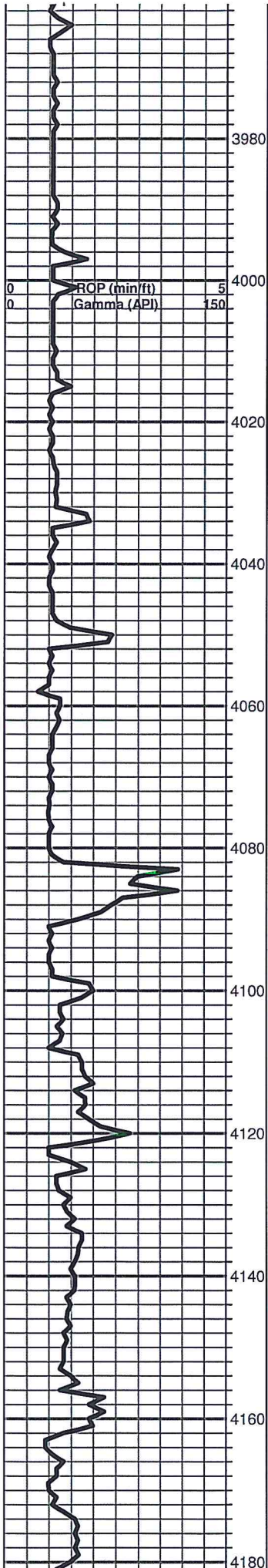
DST

- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Str
- Dead Oil Str
- Fluorescence
- * Gas

- DST alt
- Core
- || tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Shale: dark-medium gray, silty to sandy

Shale: as above, few pieces sandstone

Shale: medium gray

Sandstone: cream-white, fine grained, tite, no shows

Shale: gray

Shale: gray
Brown Lime 4082' (-2069)

Limestone: tan-brown, dense

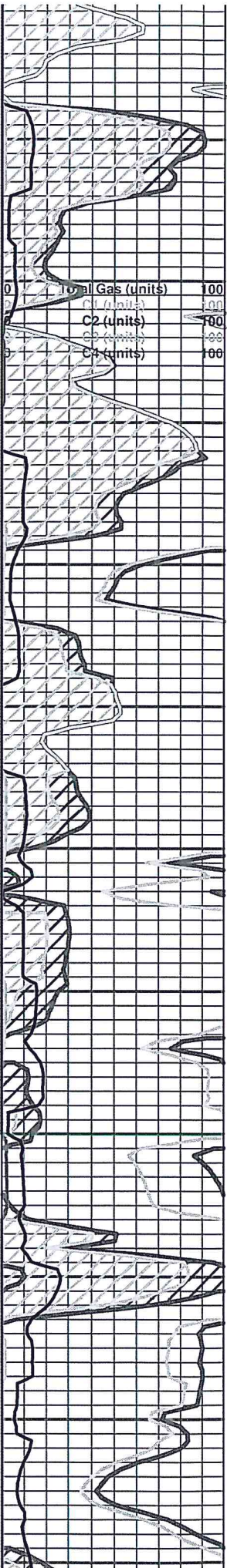
Lansing 4098' (-2085)
Shale: dark-medium gray with some tan-cream limestone

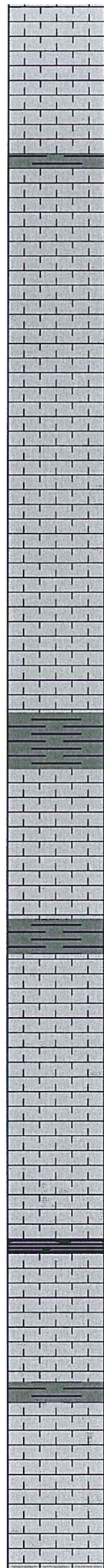
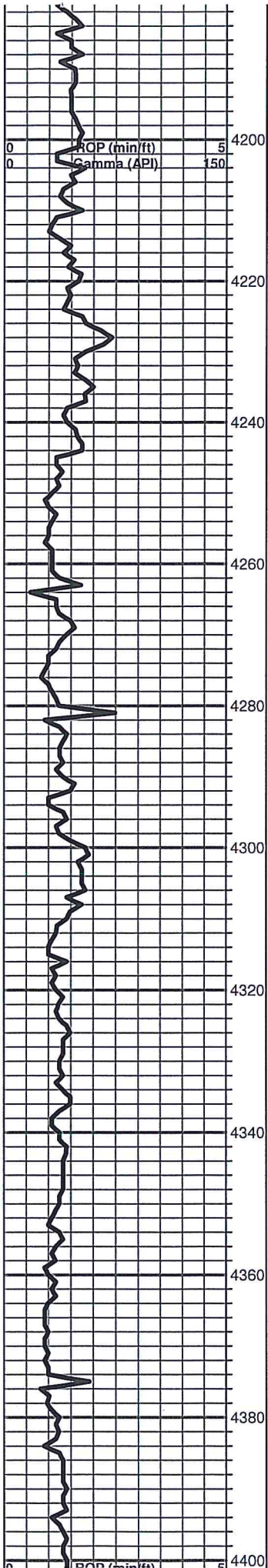
Limestone: tan-cream-gray, fine crystalline, slightly fossiliferous, no shows

Limestone: cream-white-tan-gray, fine crystalline to slightly fossiliferous, rare visible porosity, slight odor in fresh, no show free oil

Limestone: cream-white, fine crystalline, sub chalky

Limestone: white-light tan, rare visible porosity, very chalky





Limestone: cream-medium tan, fine crystalline, poor visible porosity, sub chalky

Limestone: cream-white-light tan, increase in chalky material

Limestone: cream-light tan, fine crsytalline, poor visible porosity, dense

Limestone: cream-white-light tan-gray, fine crystalline, poor to no visible porosity, sub chalky

Limestone: as above

Limestone: gray, fine crystalline, sub shaley

Limestone: gray-light gray, fine crystalline, very slightly fossiliferous, sub shaley

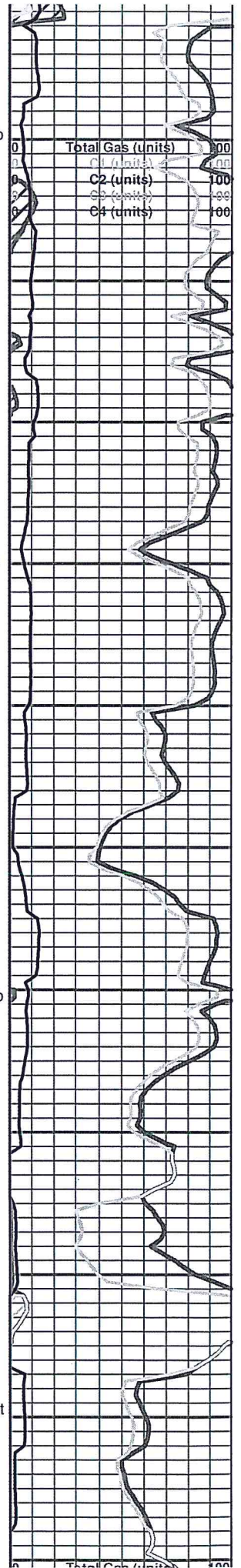
Limestone: cream-light tan-brown, dense

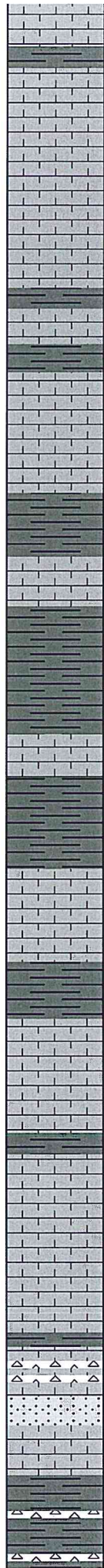
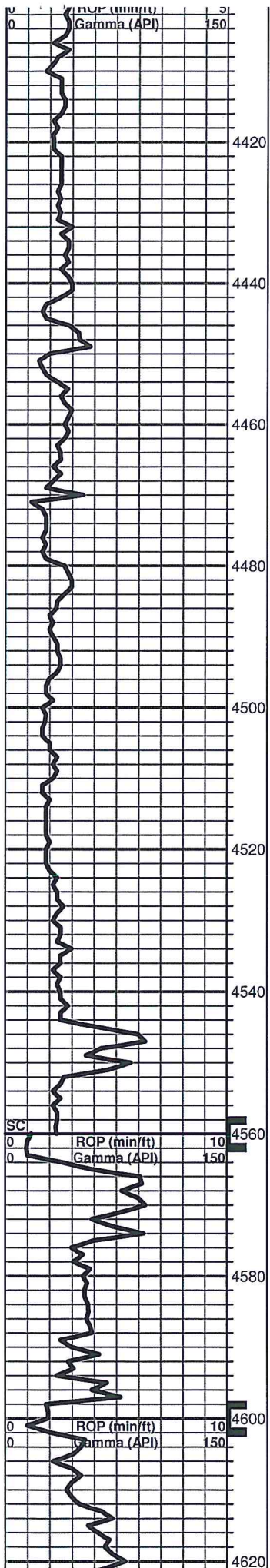
Stark 4355' (-2342)

Shale: black-gray

Limestone: cream-tan-white, fine crystalline, some visible porosity, slight odor, no show free oil, note samples wash white

Limestone: cream-white-light tan, fine crystalline, slightly fossiliferous





Limestone: cream-white-medium gray, fine to micro-crystalline, dense

Limestone: white, chalky

Limestone: cream-light tan, fine crystalline, lots of gray-dark gray shale

Shale: dark-medium gray

B/KC 4486' (-2473)

Poor quality sample, abundant lost circulation material and dark gray shale

Poor quality sample, lots of lost circulation material, shales gray, some dense, gray limestone

Shale & Lime: sample still carries lost circulation material

Pawnee 4544' (-2531)

Circulated at 4560' Limestone: cream-light-tan, fine to micro-crystalline, sub shaley

Shale: gray-dark gray with some cream limestone, poor to no visible porosity, pyrite, questionable odor

Limestone: cream-tan-brown, fine crystalline, rare visible porosity

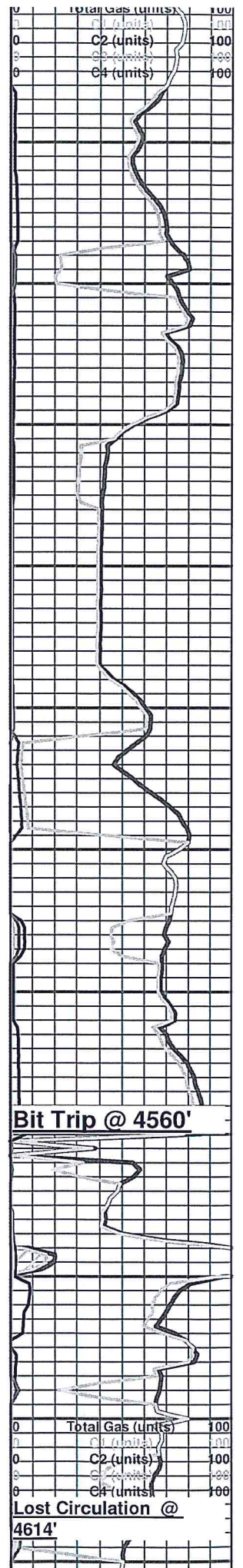
Cherokee 4588' (-2575)

Shale: black

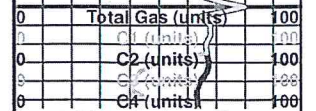
Circulated at 4600' Limestone: cream-brown, fine crystalline, dense, sub shaley, chert: white-off white, vitreous, opaque, few pieces sandstone, no shows

Poor quality sample, losing fluid, 'foul' odor in mud

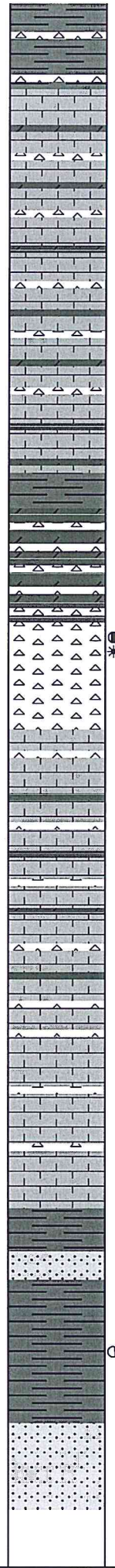
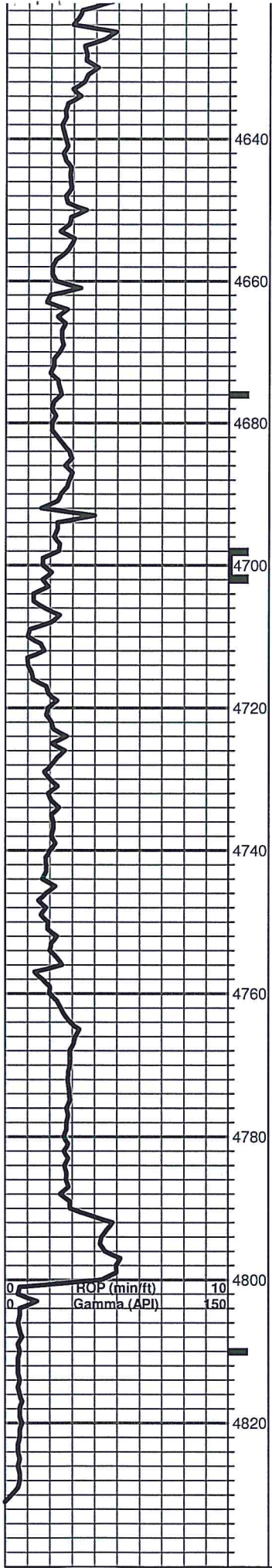
Shale: vari-colored. mud carries 'foul' odor. few pieces chert



Bit Trip @ 4560'



Lost Circulation @ 4614'



Poor quality sample >90% lost circulation material

Viola 4633' (-2620)

Limestone: cream-white-light gray, fine crystalline, sample carries lots of vitreous chert, few pieces weathered

Limestone/Dolomite: cream-light gray, sub sucrosic, poor visible porosity

Sample: as above

Circulated at 4676' Limestone/Dolomite: cream-light gray-pale green, fine crystalline, sub-sucrosic, abundant white, vitreous chert, dull fluorescence, no odor, no show free oil

Few pieces light gray, dolomitic limestone, odor when broken, no show free oil

Circulated at 4700' Abundant vari-colored shales, few pieces dolomite, lots of white, vitreous chert, no shows

Chert 90% vitreous, 10% weathered, white-off white, mostly sharp and blocky, weathered pieces have some visible vuggy porosity, bleeds oil/gas, no odor

Dolomitic/Limestone: cream-white-light tan, fine crystalline, sucrosic, chalky, trace very chert

Sample: as above

Dolomitic limestone: cream, fine crystalline, sucrosic, poor visible porosity, very cherty

Sample: as above

Limestone: cream-gray, fine crystalline, very cherty

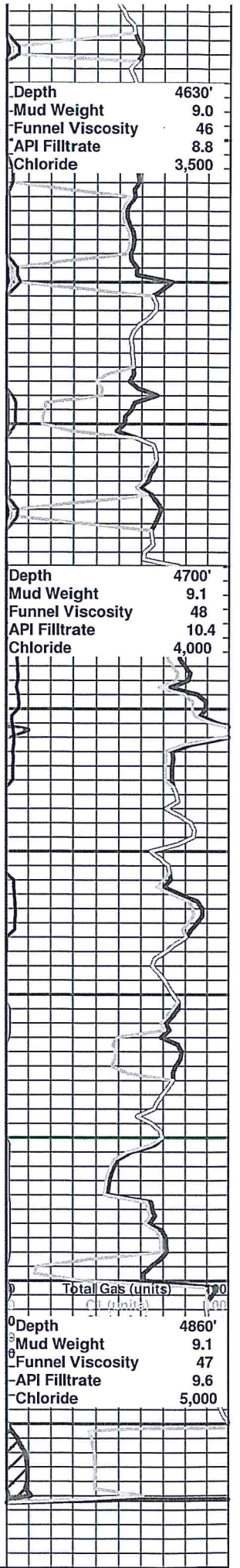
Cherty limestone: cream, fine crystalline, dense

Simpson 4790' (-2777)

Shale: turquoise, with few tite, sandstone clusters

Circulated at 4810' Mostly Simpson type shale with few Sandstone clusters, clear to frosted white, fine to medium grained, sub rounded, poorly friable, no odor, very slight show free oil, dull fluorescence

Sandstone: clear to frosted white, fine to medium grained, moderatley friable, barren to 4860'



Depth	4630'
Mud Weight	9.0
Funnel Viscosity	46
API Filtrate	8.8
Chloride	3,500

Depth	4700'
Mud Weight	9.1
Funnel Viscosity	48
API Filtrate	10.4
Chloride	4,000

Total Gas (units)

Depth	4860'
Mud Weight	9.1
Funnel Viscosity	47
API Filtrate	9.6
Chloride	5,000