

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

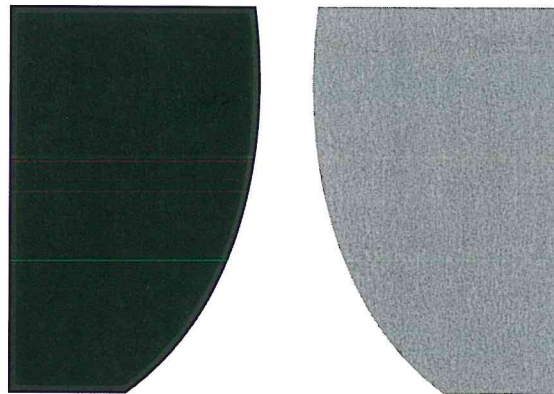
Time: 1:00 AM

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

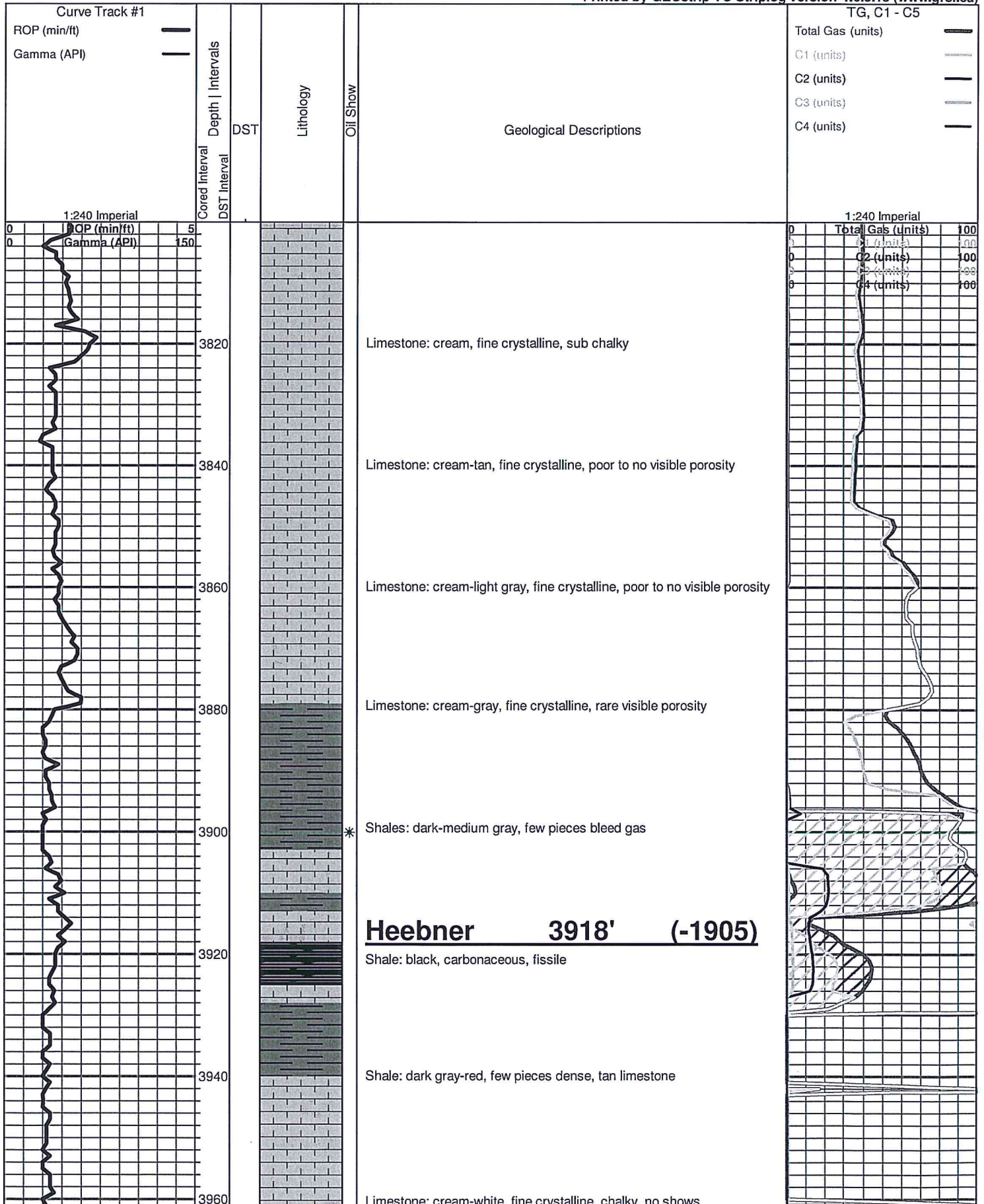
 DST Int

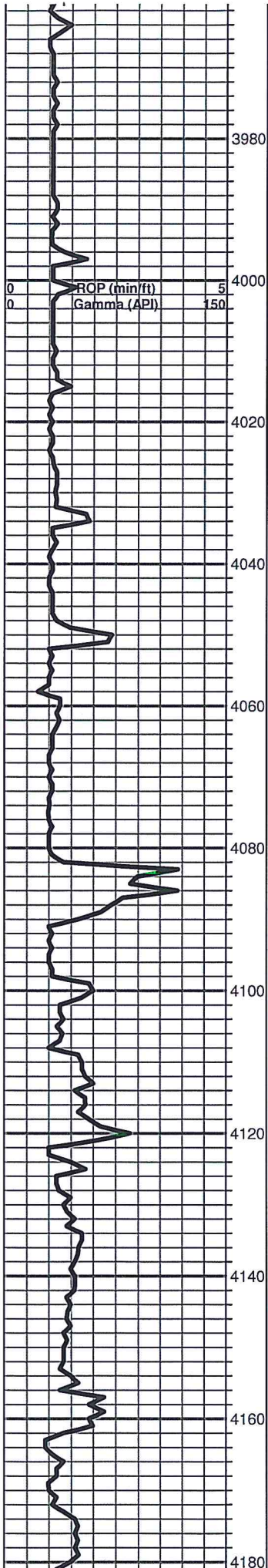
DST

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

- DST alt
- Core
- || tail pipe

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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

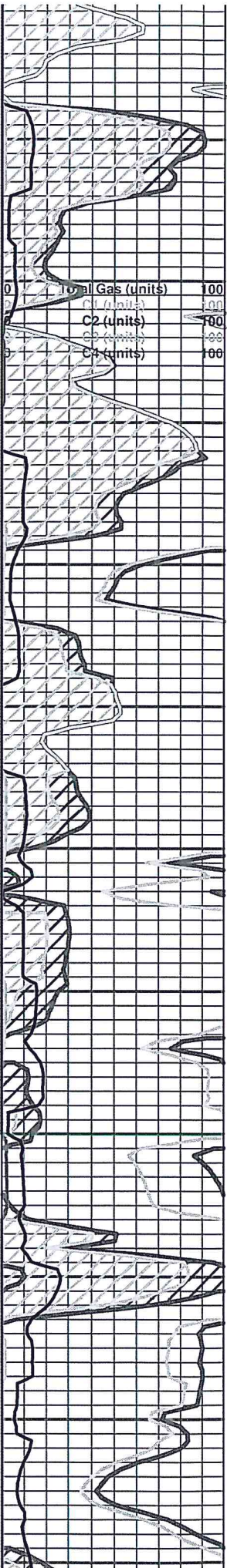
Lansing 4098' (-2085)
Shale: dark-medium gray with some tan-cream limestone

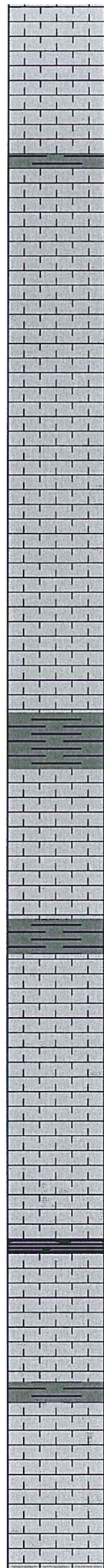
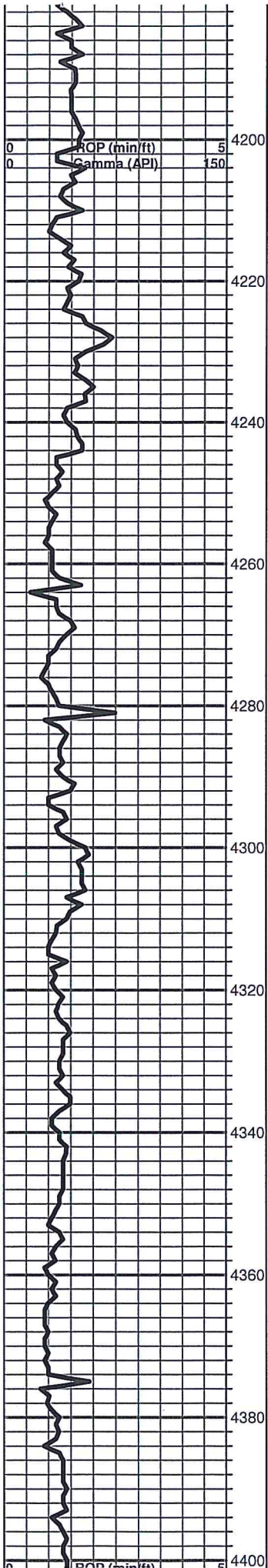
Limestone: tan-cream-gray, fine crystalline, slightly fossiliferous, no shows

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 chaly

Limestone: cream-white-light tan, increase in chaly 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 chaly

Limestone: as above

Limestone: gray, fine crystalline, sub shaly

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

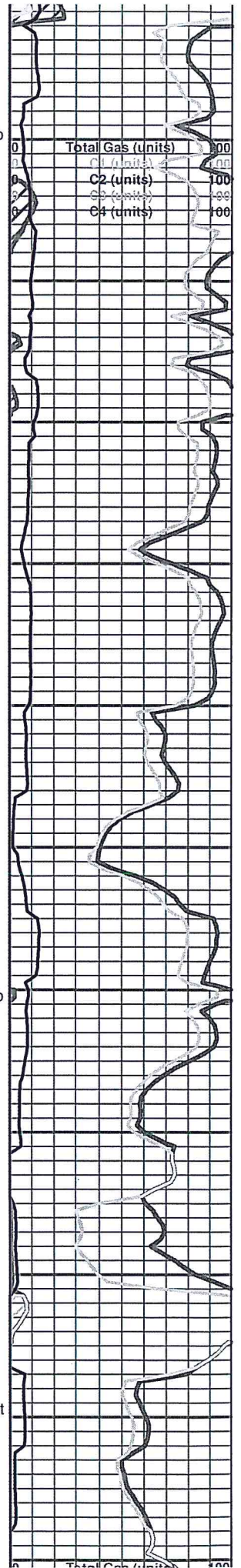
Limestone: cream-light tan-brown, dense

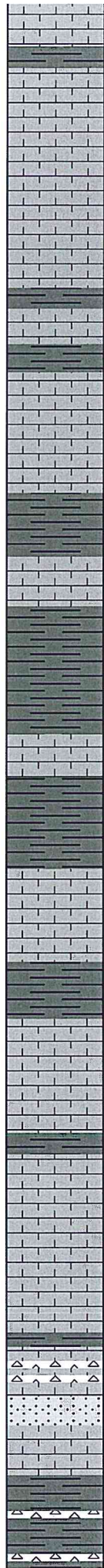
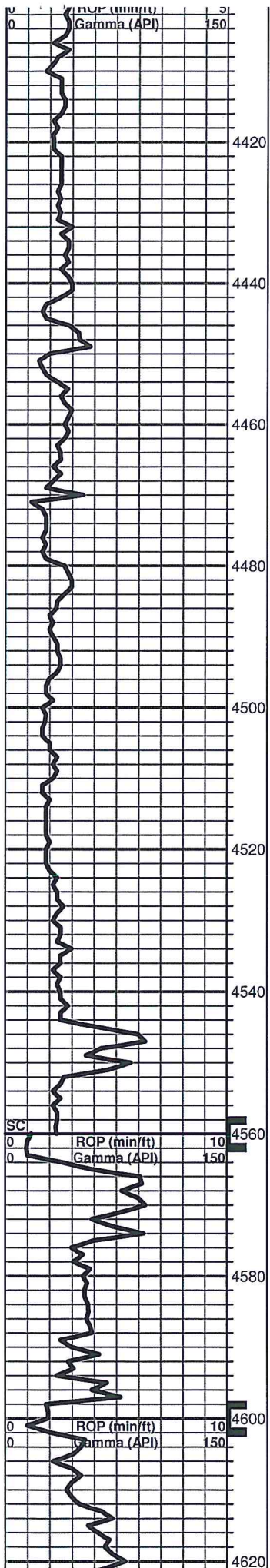
Stark 4355' (-2342)

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

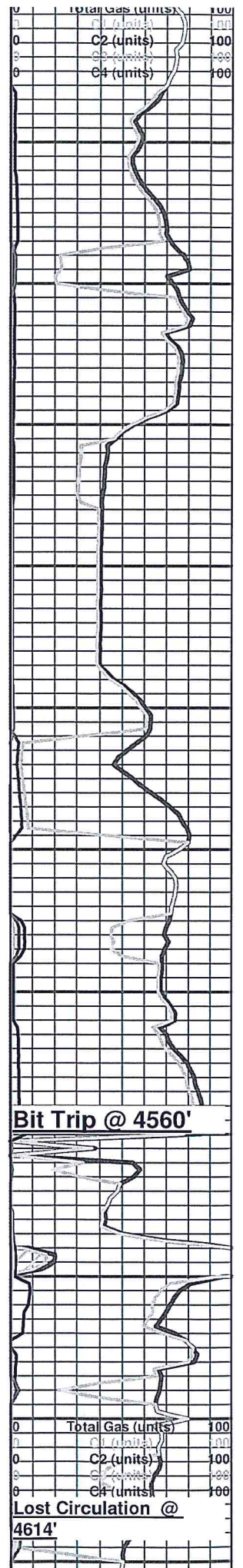
Cherokee 4588' (-2575)

Shale: black

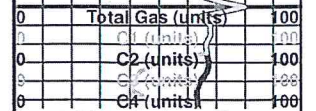
Circulated at 4600' Limestone: cream-brown, fine crystalline, dense, sub shaley, chert: white-off white, vitreous, opaque, few pieces sandstone, no shows

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

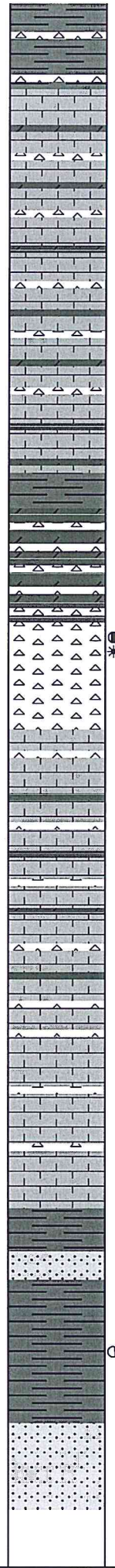
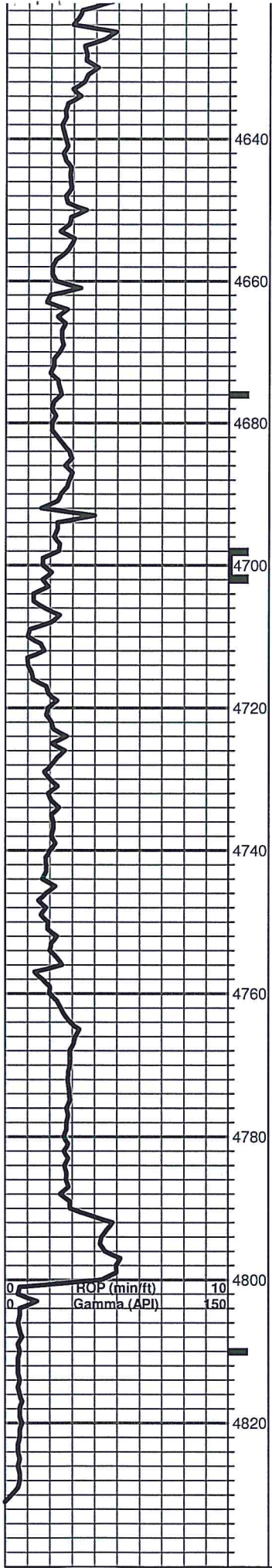
Shale: vari-colored. mud carries 'foul' odor. few pieces chert



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

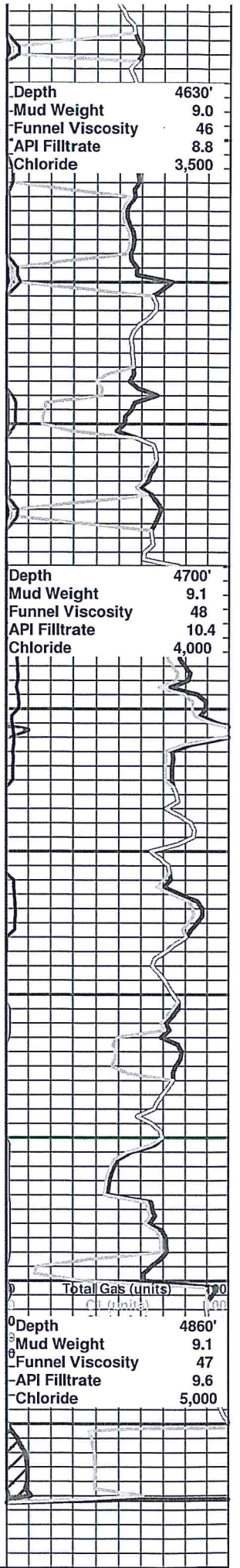
Cherty limestone: cream, fine crystalline, dense

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

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