

OPERATOR

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

Contact Geologist:
Contact Phone Nbr:

Well Name: #2 Cambrie
Location: Section 28-29S-15W
API: 15-151-22498
Pool:
State: Kansas

Field: Croft Ext.
Country: USA

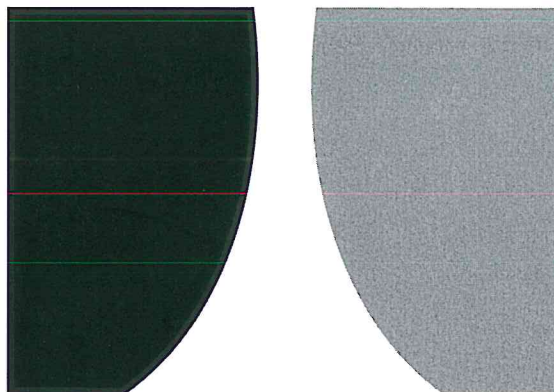
Scale 1:240 Imperial

Well Name: #2 Cambrie
Surface Location: Section 28-29S-15W
Bottom Location:
API: 15-151-22498
License Number:
Spud Date: 8/27/2019 Time: 5:15 PM
Region: Pratt County
Drilling Completed: 8/31/2019 Time: 3:15 AM
Surface Coordinates: 1650' FNL & 330' FWL
Bottom Hole Coordinates:
Ground Elevation: 2000.00ft
K.B. Elevation: 2011.00ft
Logged Interval: 3800.00ft To: 4880.00ft
Total Depth: 4880.00ft
Formation:
Drilling Fluid Type: Chemical (MudCo)

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude:
Latitude:
N/S Co-ord: 1650' FNL
E/W Co-ord: 330' 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:	Sterling Drilling		
Rig #:	4		
Rig Type:	mud rotary		
Spud Date:	8/27/2019	Time:	5:15 PM
TD Date:	8/31/2019	Time:	3:15 AM
Rig Release:	9/1/2019	Time:	9:45 PM

ELEVATIONS

K.B. Elevation:	2011.00ft	Ground Elevation:	2000.00ft
K.B. to Ground:	11.00ft		

NOTES

Surface Casing: 8-5/8" at 267'
 Production Casing: 5-1/2" at 4877.5'

Daily Penetration:

08/27/19	Spud @ 5:15 PM
08/28/19	271'
08/29/19	1840'
08/30/19	3580'
08/31/19	4620' RTD @ 3:15 PM
09/01/19	4880' Rig released @ 9:45 PM

FORMATION TOPS

Formation	Sample Top	Datum	Log Top	Datum	Comparison*
Heebner	3929'	-1918	3932'	-1921	-17
Brown Lime	4094'	-2083	4095'	-2084	-15
Lansing	4105'	-2094	4105'	-2094	-9
Stark	4365'	-2354	4367'	-2356	-13
Base KC	4495'	-2484	4497'	-2486	-11
Pawnee	4561'	-2550	4562'	-2551	-12
Cherokee	4598'	-2587	4600'	-2589	-13
Viola	4666'	-2655	4664'	-2653	-32
Simpson	4797'	-2786	4799'	-2788	-11
Simpson Sand	4827'	-2816	4828'	-2817	-10

*Charles N. Griffin, #1 Cambrie, 2310' FNL/990' FWL, Section 28-29S-15W
 Pratt County, Kansas

ROCK TYPES


 Cht	 Lmst fw7> shale, gry	 Carbon Sh
 Dolprim		 Ss

OTHER SYMBOLS


INTERVALS

 Core

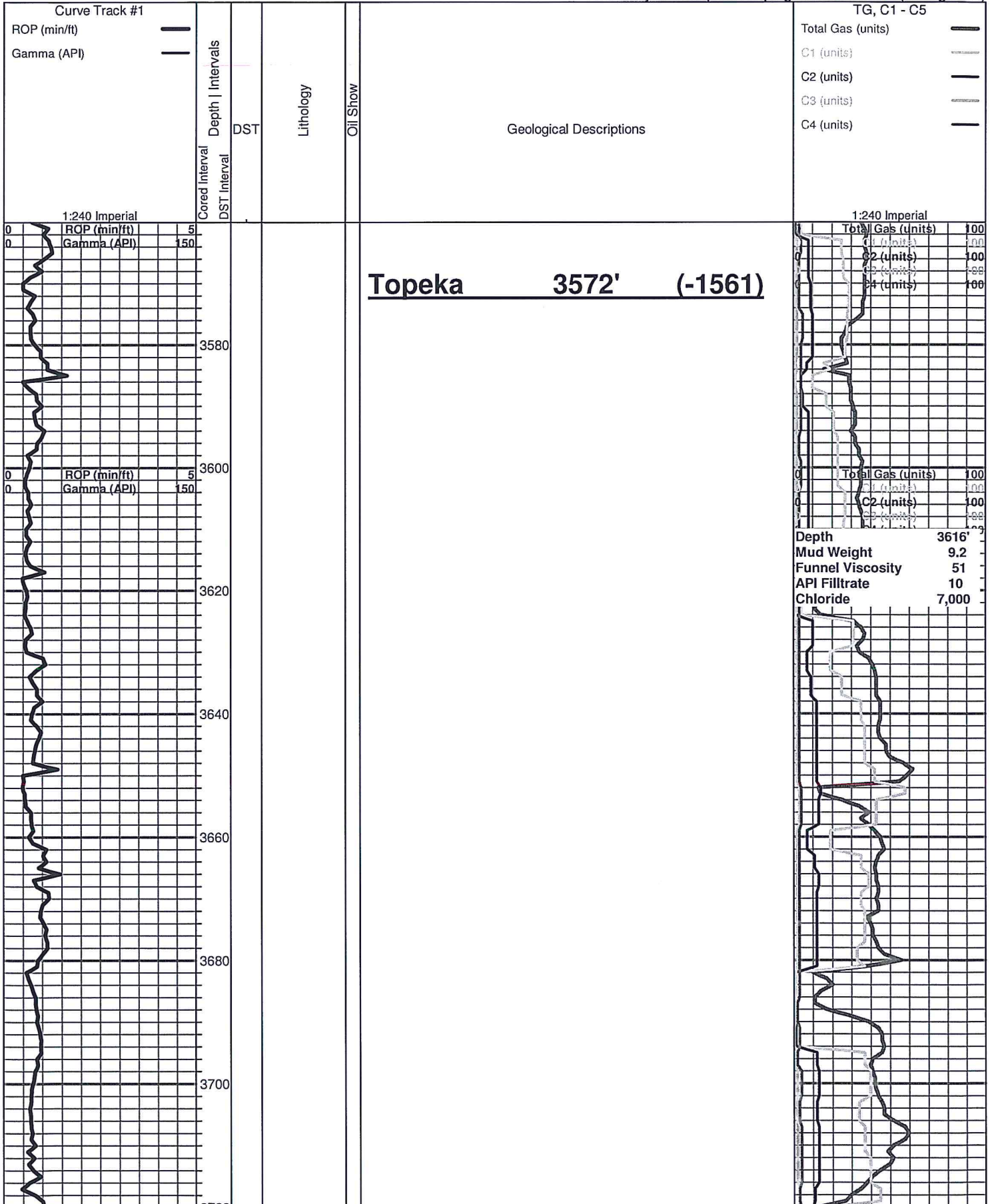
Oil Show

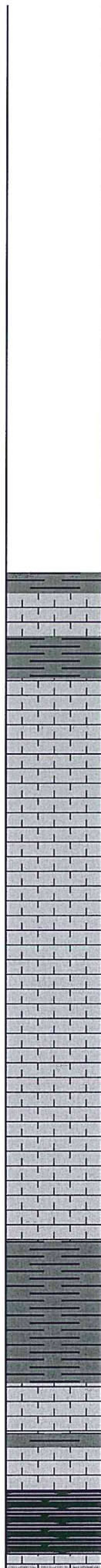
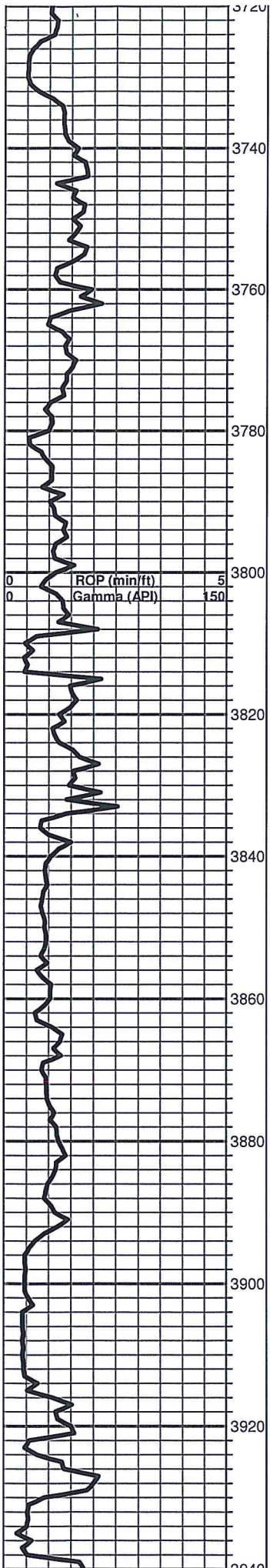
 Good Show

DST

 DST Int

- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Strn
- D Dead Oil Strn
- Fluorescence
- * Gas
- DST alt
- Core
- || tail pipe





Shales: medium gray, some cream limestone

Limestone: cream-light tan-gray, fine crystalline, few pieces fossiliferous, poor visible porosity

Limestone: more cream, fine crystalline, no visible porosity, dense

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

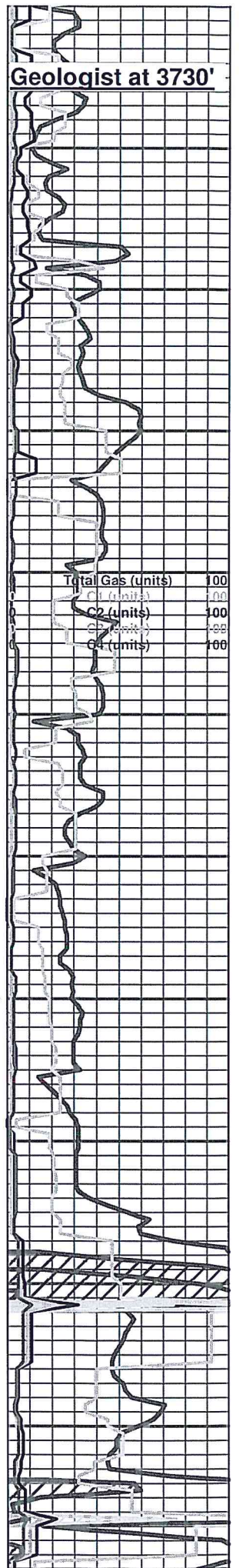
Limestone: cream to fine crystalline, poor to no visible porosity, dense, chalky

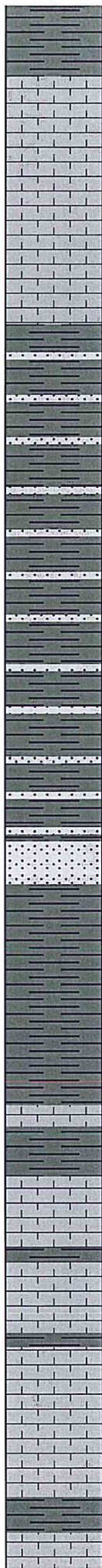
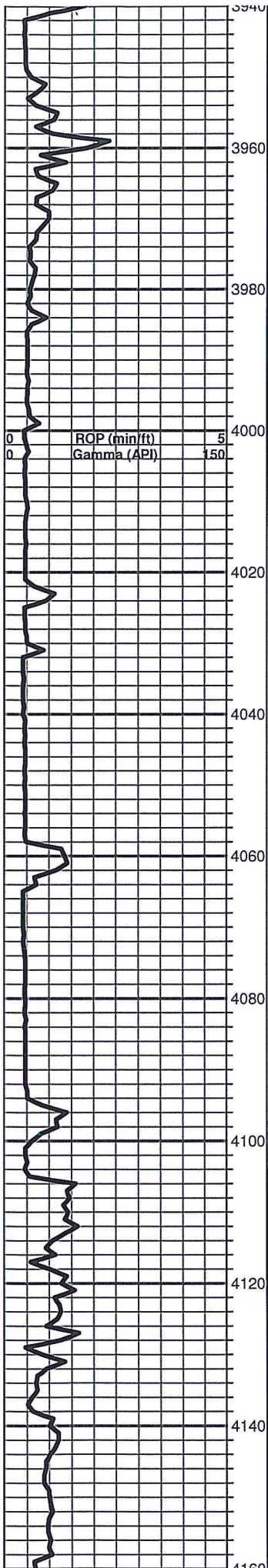
Shale: dark-medium gray-black, bleeds gas (found in 3940' drilling sample)

Limestone: cream-tan, fine to very fine crystalline, dense

Heebner 3929' (-1918)

Shale: black, carbonaceous, fissile, soft





Limestone: cream-white, fine crystalline, poor visible porosity, chalky

Limestone: as above, increase in chalky material, no shows

Shale: light to medium gray, slightly sandy

Shale: gray with cream-light gray, very fine grained sandstone

Shale and sandstone: as above

Sandstone: gray, fine grained, micaeous

Shale: light-medium gray, slightly sandy

Brown Lime 4094' (-2083)

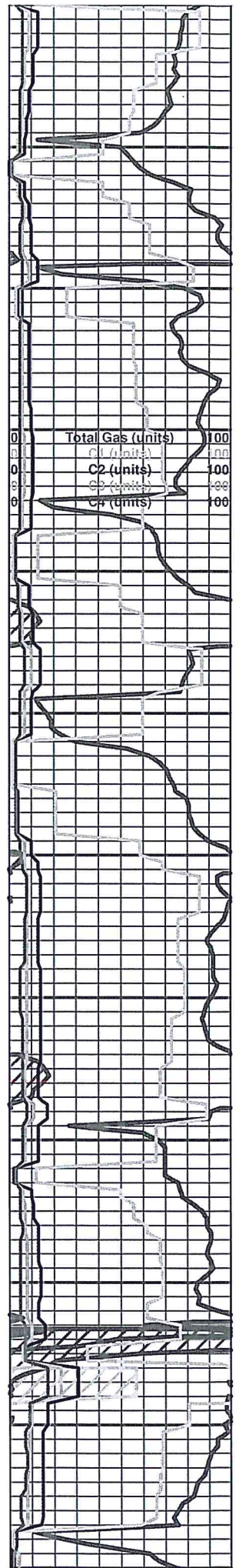
Limestone: cream-tan-brown, fine crystalline, dense

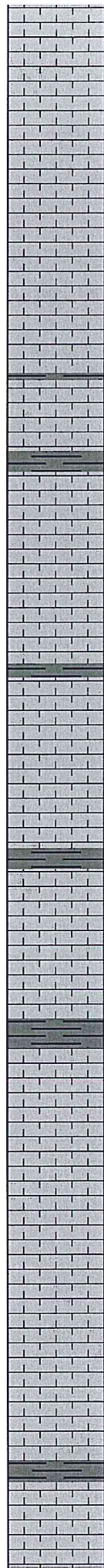
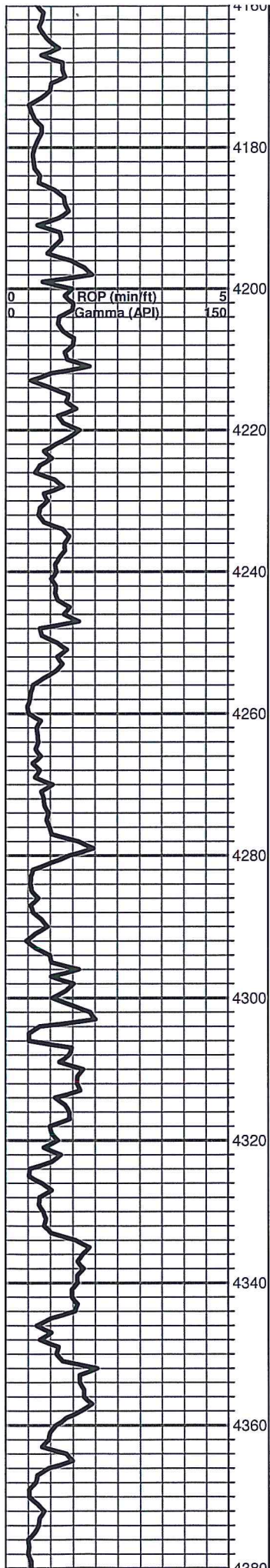
Lansing 4105' (-2094)

Limestone: cream, fine crystalline to slightly fossiliferous, poor visible porosity, trace chalky, sub shaley

Limestone: cream-white-brown, mostly fine crvstalline, trace fossiliferous, some visible porosity, trace gas bubble, no odor

Limestone: cream-white-light tan. fine crvstalline to fossiliferous. chalky





Limestone: cream-light tan, fine crystalline, scattered oolitic pieces, no shows

Limestone: cream-white, fine crystalline, dense

Limestone: cream-brown, fine crystalline, poor to no visible porosity, dense

Limestone: cream-red-brown, few pieces appear granular, mostly tite, no shows

Limestone: cream-light tan, fine crystalline to fossiliferous, some visible porosity, trace chalky

Limestone: as above, some soft chalky material

Limestone: light tan-cream-white, fine to slight medium crystalline, chalky

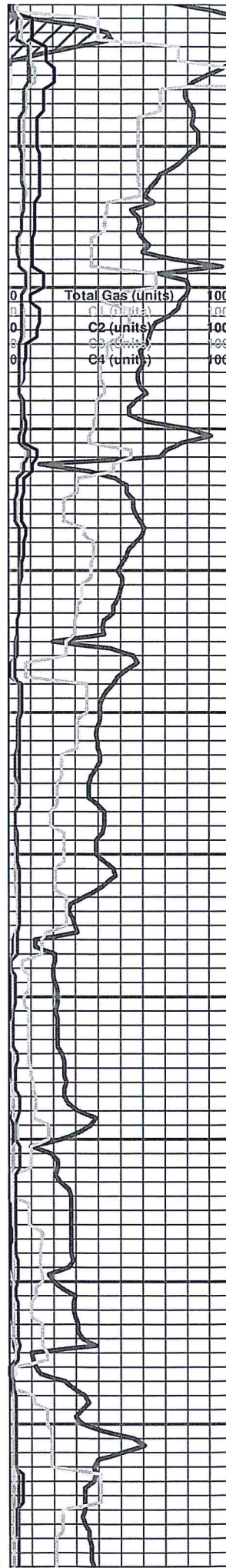
Limestone: cream-white, chalky

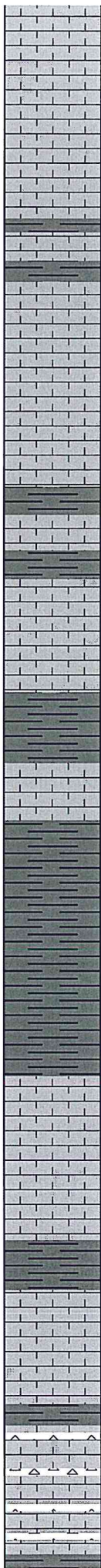
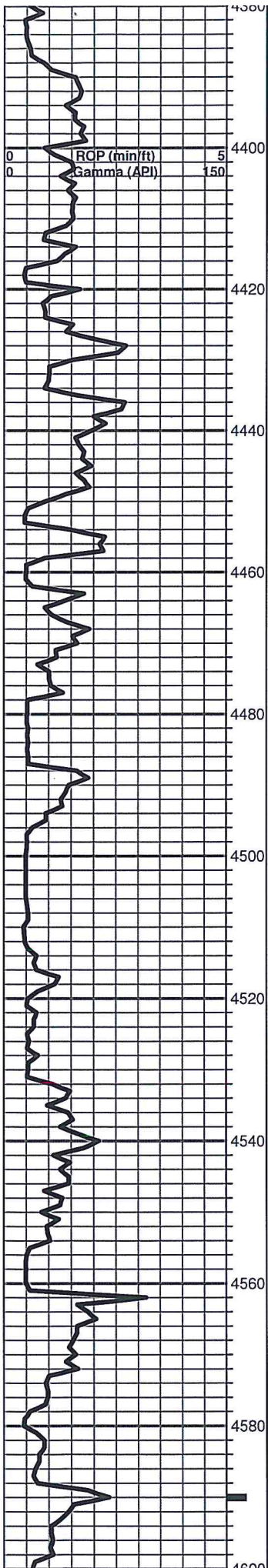
Limestone: cream-light tan, fine to very fine crystalline, dense

Limestone: as above, dense

Stark 4365' (-2354)

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





trace dark gray-black shale, no shows

Limestone: cream-white-light tan, fine crystalline, poor visible porosity

Shales: dark-medium gray

Limestone: light tan, very fine crystalline, no visible porosity, dense

Shales: gray with cream-light tan limestone, dense

Shale: dark-medium gray, soft

B/KC 4495' (-2484)

Shale: flood dark-medium gray-green

Shales: as above with trace tan, dense limestone

Limestone: light tan-cream-gray, fine crystalline, very slightly fossiliferous, no visible porosity, samples carry lots gray-brown, silty shale

Shale: dark-medium gray, soft

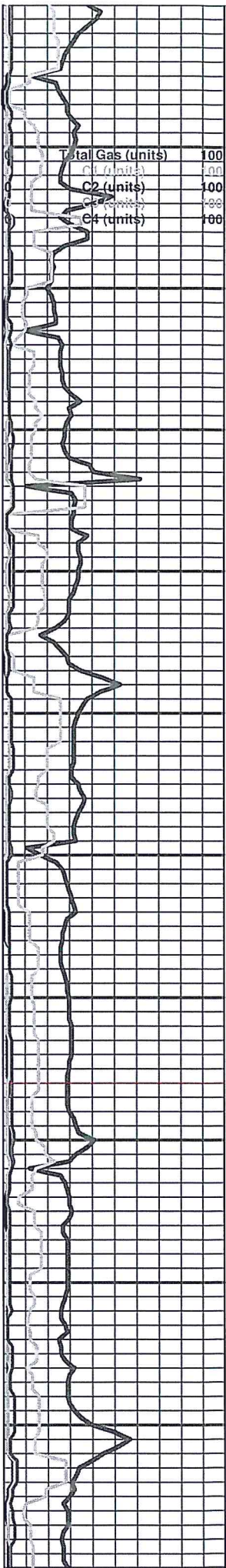
Pawnee 4561' (-2550)

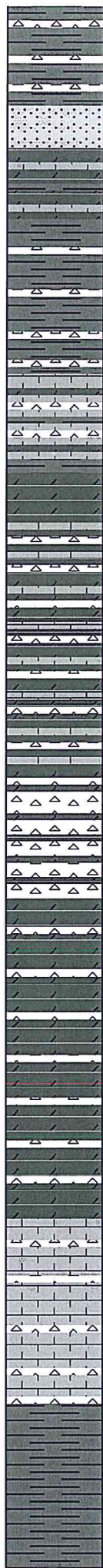
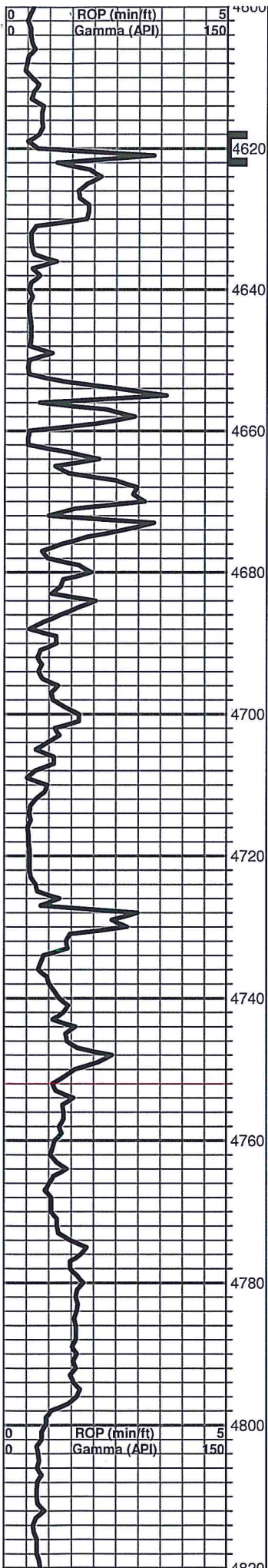
Limestone: cream-white-light tan, fine to very fine crystalline, dense, some dark gray-black shale

Circulated at 4590' Limestone: cream-light tan, fine to slightly medium crystalline, 3 pieces limestone with show free oil when broken, no odor, dull fluorescence

Cherokee 4598' (-2587)

Shale: gray-green-black, some cream-light tan dolomitic limestone, fine





Shale: gray-green-black, some cream-light tan dolomitic limestone, fine crystalline, poor to fair visible porosity, some cream-white vitreous chert, semi-translucent, few weathered pieces, black stain

Circulated at 4620' Sandstone: white, fine grained, sub rounded, moderately friable, no odor in fresh, questionable light scum (film) when broken

Circulated at 4640' Flood gray-green-rust red shale, few pieces white, vitreous chert, few weathered pieces, black shale, some cream-light tan dolomitic limestone, appears granular, no shows

Shaley, cherty, dolomitic limestone: cream-tan, poor to no visible porosity, looks tite, some cream vitreous chert, samples washed red, no odor or shows

Viola 4666' (-2655)

Dolomitic limestone: cream-light tan, fine crystalline, sub sucrosic, poor visible porosity, trace white, vitreous chert, some chalky white material, no shows

Dolomite: cream-white-pale green, fine crystalline, finely sucrosic, scattered white chalky material, some cream-white, vitreous chert, questionable odor, light film, no fluorescence

Dolomite: cream-white, trace pale green limestone, chalky material, lots of white chert, no shows

Cherty dolomite: cream-light tan, sucrosic, fair visible porosity, abundant cream-white chert, few pieces fossiliferous, black stain, very faint odor, no shows

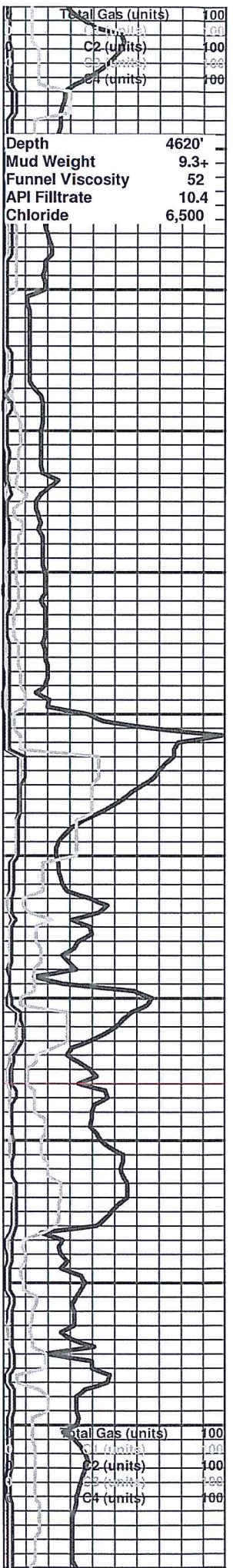
Cherty dolomite: as above, chalky material, light film, trace gas bubble, no odor

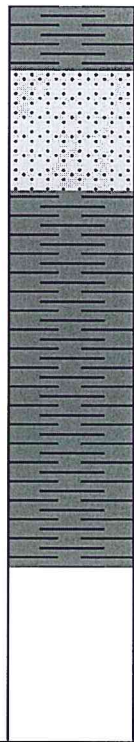
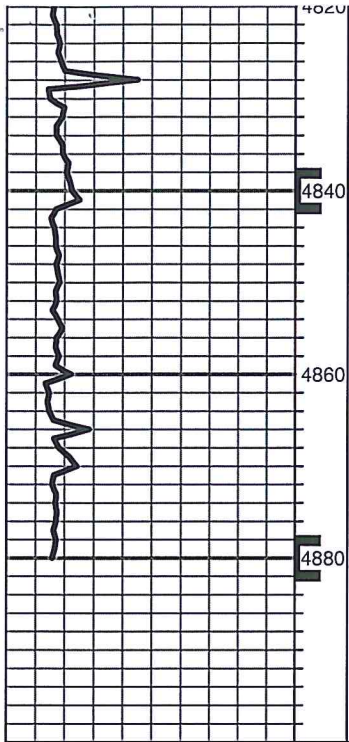
Chert: white-off white, sharp and blocky, few pieces finely sandy dolomite, no odor, no shows, trace cream-tan, fine crystalline limestone, dense

Simpson 4797' (-2786)

Shale: pale green, turquoise blue, minor amount sandstone, fine grained, poorly friable, trace black tarry oil, no odor

Shales: as above





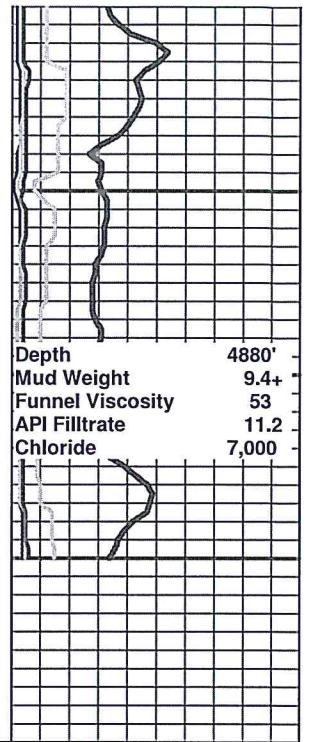
Shales, as above

Simpson Sand 4827' (-2816)

Circulated at 4840' Sandstone: brown-white, fine grained, sub rounded, poorly friable, tite, no odor or show free oil

Shales: Simpson type

Circulated at 4880' Shale: Simpson type, note: samples carry lots of sandstone, brown, fine grained and friable, odor when broken, small pinhead droplets of free oil



Depth	4880'
Mud Weight	9.4+
Funnel Viscosity	53
API Filtrate	11.2
Chloride	7,000