OPERATOR

Company:	Gulf Exploration, LLC		
Address:	9701 N. Broadway Extension Oklahoma City, OK 73114		
Contact Geologist:	Frank Thompson		
Contact Phone Nbr:	405-840-3371		
Well Name:	Skolout Trust #1-15		
Location:	Sec. 7 - T7S - R35W		
API:	15-193-20986-0000		
Pool:		Field:	Wildcat
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	Skolout Trust #1-15		
Surface Location:	Sec. 7 - T7S - R35W		
Bottom Location:			
API:	15-193-20986-0000		
License Number:	35147		
Spud Date:	2/9/2017	Time:	8:30 PM
Region:	Thomas County		
Drilling Completed:	2/17/2017	Time:	9:10 PM
Surface Coordinates:	2436' FSL & 330' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	3304.00ft		
K.B. Elevation:	3309.00ft		
Logged Interval:	3600.00ft	To:	5406.00ft
Total Depth:	5406.00ft		
Formation:	Pre-Cambrian		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	
Latitude:	
N/S Co-ord:	2436' FSL
E/W Co-ord:	330' FWL

LOGGED BY

Keith Reavis
Consulting Geologist

Company:	Keith Reavis, Inc.		
Address:	3420 22nd Street Great Bend, KS 67530		
Phone Nbr:	620-617-4091		
Logged By:	KLG #136	Name:	Keith Reavis

CONTRACTOR

Contractor:	Murfin Drilling Company		
Rig #:	7		
Rig Type:	mud rotary		
Spud Date:	2/9/2017	Time:	8:30 PM
TD Date:	2/17/2017	Time:	9:10 PM
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation:	3309.00ft	Ground Elevation:	3304.00ft
K.B. to Ground:	5.00ft		

NOTES

Due to negative results of drill stem testing and electrical log evaluation, it was determined by the operator that the Skolout Trust #1-15 be plugged and abandoned as a dry test.

Samples were saved and will be available for review at the Kansas Geological Survey Well Sample library located in

Wichita, KS.

Respectfully submitted,
Keith Reavis

Gulf Exploration, LLC

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
02/11/2017	3635	Geologist Keith Reavis on location @ 0600 hrs, 3572 ft, drilling ahead cfs @ 3947', show (Bern or Howard) warrants test, short trip, ctch, TOH for DST #1
02/12/2017	3970	complete DST #1, successful test, TIH w/bit (replace PDC with button), resume drilling, Topeka, Oread, Heebner, Toronto, Lansing, show in E zone warrants test, short trip and TOH for DST #2
02/13/2017	4275	trip out, conduct and complete DST #2, successful test, show in H zone, no shows I & J zones, set up straddle test for H zone, TOH w/bit in w/tools
02/14/2017	4381	conducting DST #3, complete DST #3, successful test, TIH w/bit, resume drilling, Stark, BKC, Marmaton, show in Pawnee warrants test, pulled tight coming out of hole, short trip, TOH w/bit
02/15/2017	4565	TOH w/bit, TIH w/tools, conduct and complete DST #4, successful test, back in hole w/bit, resume drilling, Ft. Scott, Cherokee
02/16/2017	4861	drilling ahead, Cherokee, Mississippian, Arbuckle
02/17/2017	5246	drilling ahead, Arbuckle, Pre-Cambrian, TD @ 5406' @ 2110 hrs, short trip
02/18/2017	5406	ctch, TOH for logs, logging tools quit working going in hole, re-heading and waiting on another truck en-route, new truck on loc, conduct and complete logging. Decision made to straddle upper Pawnee and isolate top porosity zone, make up tools, TIH, conduct DST #5 straddle, TOH
02/19/2017	5406	finish TOH w/tools, successful test, decision to plug, geologist off Location @ 0300 hrs

Gulf Exploration, LLC

well comparison sheet

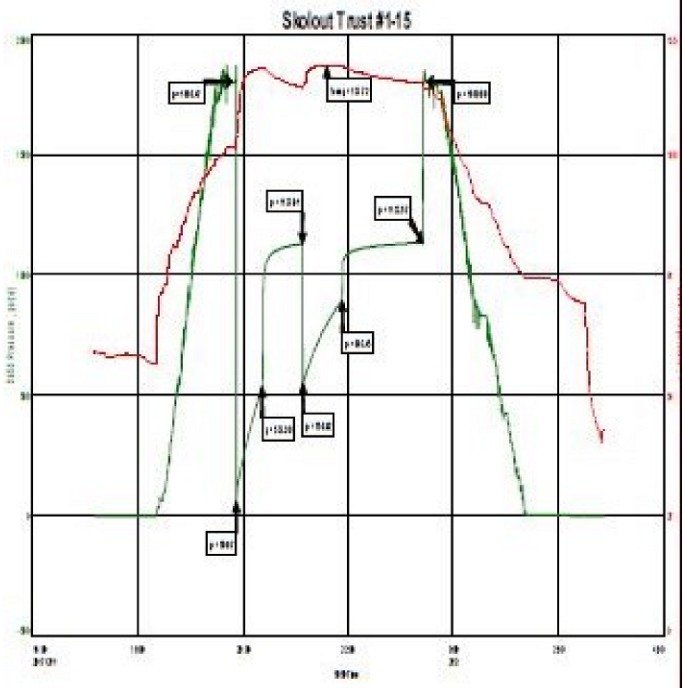
	DRILLING WELL Skolout Trust #1-15 2436' FSL & 330' FWL Sec 15-T7S-R35W				COMPARISON WELL Gulf - Miller #1-20 C SE NE Sec 20-T7S-R35W				COMPARISON WELL Dark Horse Bellamy #1-21 2290' FSL & 2285' FWL Sec 21-T7S-R35W			
	3309 KB				3320 KB		Structural Relationship		3309 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Howard	3898	-589	3900	-591	3901	-581	-8	-10	3920	-611	22	20
Topeka	3956	-647	3959	-650	3963	-643	-4	-7	3977	-668	21	18
Oread	4118	-809	4098	-789	4126	-806	-3	17	4136	-816	7	27
Heebner	4136	-827	4136	-827	4144	-824	-3	-3	4160	-840	13	13
Lansing	4184	-875	4180	-871	4188	-868	-7	-3	4207	-887	12	16
Muncie Creek	4298	-989	4300	-991	4312	-992	3	1	4328	-1008	19	17
Stark Shale	4381	-1072	4378	-1069	4394	-1074	2	5	4411	-1091	19	22
Base KC	4460	-1151	4459	-1150	4474	-1154	3	4	4493	-1173	22	23
Marmaton	4477	-1168	4474	-1165	4486	-1166	-2	1	4508	-1188	20	23
Pawnee	4545	-1236	4553	-1244	4576	-1256	20	12	4600	-1280	44	36
Cherokee	4613	-1304	4616	-1307	4634	-1314	10	7	4654	-1334	30	27
Mississippian	4760	-1451	4764	-1455	4814	-1494	43	39	4862	-1542	91	87
Arbuckle	5066	-1757	5068	-1759	5100	-1780	23	21	nr			
Reagan (equiv)	5320	-2011	5323	-2014	5345	-2025	14	11	nr			
Pre-Cambrian	5343	-2034	5346	-2037	5369	-2049	15	12	nr			
Total Depth	5406	-2097	5410	-2101	5443	-2123	26	22	4911	-1591	-506	-510

Drill Stem Test #1

Michael Carroll
620-617-0368

Michael Carroll
620-617-0368
carroll.dtllc@gmail.com

Hoisington, Kansas



General Information

Company Name Gulf Exploration LLC

Contact	Pat McGraw
Well Name	Skolout Trust #1-15
Unique Well ID	Dst #1 Howard 3866-3947'
Surface Location	Sec 15-7s-35w Thomas County
Field	Wildcat
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	Gulf Exploration LLC
Formation	Dst #1 Howard 3866-3947'
Well Fluid Type	06 Water
Test Purpose	Initial Test
Start Test Date	2017/02/11
Start Test Time	17:10:00
Final Test Time	02:53:00
Job Number	P0160
Report Date	2017/02/11
Prepared By	Michael Carroll

TEST RECOVERY

Remarks	Recovery:	184'	OCMW	4%O	66%W	30%M
		1699'	SLOCMCW	1%O	96%W	3%M

Total Fluid: 1883'

Sampler Recovery: 4000ML Water
PSI: 50

Chlorides 58000 PPM
RW .18 @ 55 Degrees
PH 7

Drill Stem Test #2

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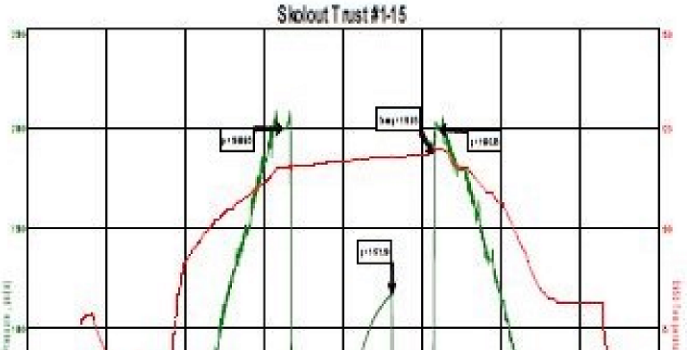
Hoisington, Kansas

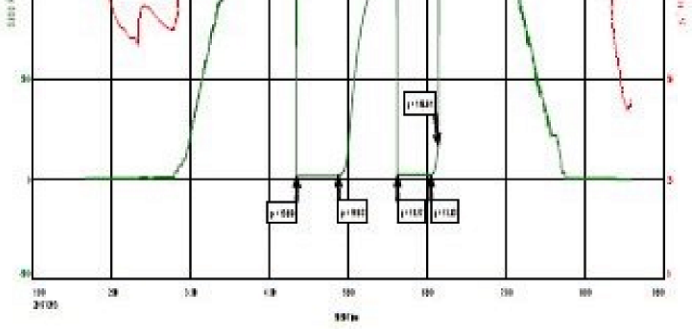


General Information

Company Name Gulf Exploration LLC

Contact	Pat McGraw
Well Name	Skolout Trust #1-15
Unique Well ID	Dst #2 Lans E&F 4243-4275'
Surface Location	Sec 15-7s-35w Thomas County
Field	Wildcat
Well Type	Vertical

Test Type	Drill Stem Test
Well Operator	Gulf Exploration LLC
Formation	Dst #2 Lans E&F 4243-4275'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2017/02/13
Start Test Time	01:40:00
Final Test Time	08:35:00
Job Number	P0161
Report Date	2017/02/13
Prepared By	Michael Carroll



TEST RECOVERY

Remarks Recovery: 15' OSWCM 30%W 70%M >1% Oil

Total Fluid: 15'

Sampler Recovery: 4000 ML Mud With Oil Specks
PSI: 20

Chlorides 55000 PPM
Rw .15 @ 55 Degrees
PH 8

Drill Stem Test #3

DIAMOND TESTING LLC

Hoisington, Kansas

Michael Carroll
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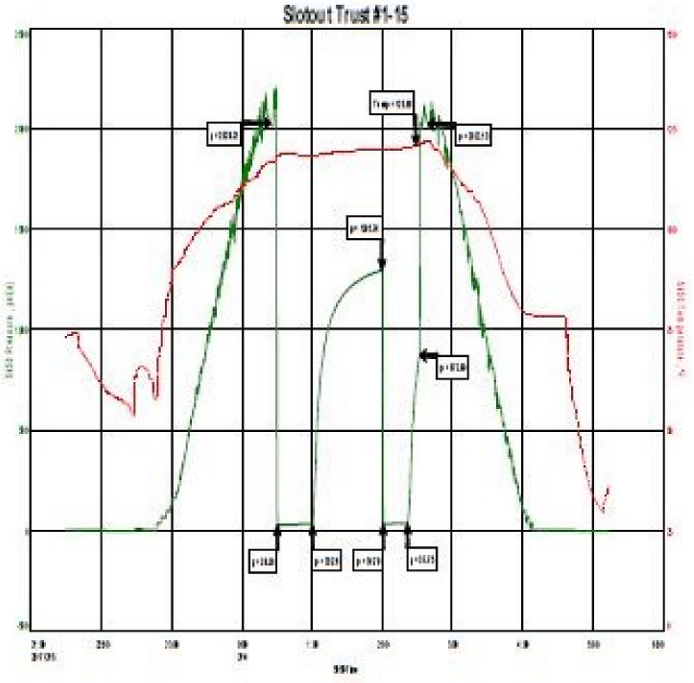

General Information

Company Name Gulf Exploration LLC

Contact	Pat McGraw
Well Name	Slotout Trust #1-15
Unique Well ID	Dst #3 Lans 'H' 4303-4328' Rtd 4381
Surface Location	Sec 15-7s-35w Thomas County
Field	Wildcat
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	Gulf Exploration LLC
Formation	Dst #3 Lans 'H' 4303-4328' Rtd 4381
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2017/02/13
Start Test Time	21:30:00
Final Test Time	05:15:00
Job Number	P0162
Report Date	2017/02/13
Prepared By	Michael Carroll

TEST RECOVERY

Remarks Recovery: 40' Mud 100%M

Total Fluid: 40'

Sampler Recovery: 4000ML Mud
PSI: 100

Drill Stem Test #4

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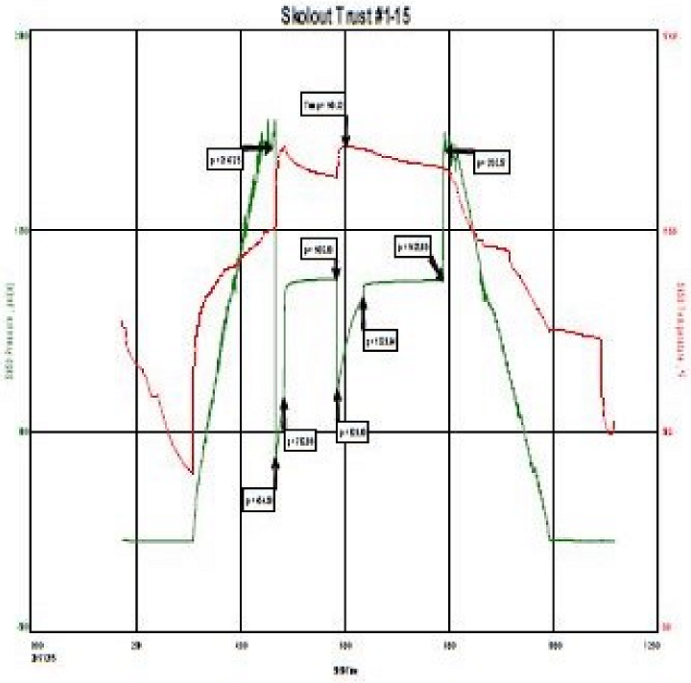
Hoisington, Kansas



General Information

Company Name Gulf Exploration LLC

Contact	Pat McGraw
Well Name	Skolout Trust #1-15
Unique Well ID	Dst #4 Pawnee 4527-4565'
Surface Location	Sec 15-7s-35w Thomas County
Field	Wildcat
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	Gulf Exploration LLC
Formation	Dst #4 Pawnee 4527-4565'
Well Fluid Type	06 Water
Test Purpose	Initial Test
Start Test Date	2017/02/15
Start Test Time	01:45:00
Final Test Time	11:10:00
Job Number	P0163
Report Date	2017/02/15
Prepared By	Michael Carroll

TEST RECOVERY

Remarks	Recovery:	365'	MW	51%W	49%M	
		252'	SLOCMW	2%O	68%W	30%M
		1008'	OCMCW	5%O	88%W	7%M
		1134'	SLOCSLMCW	2%O	96%W	2%M

Total Fluid: 2759'

Sampler Recovery: 4000ML Water
PSI: 180

Chlorides 60000 PPM
RW .1 @ 79 Degrees
PH 7

Drill Stem Test #5

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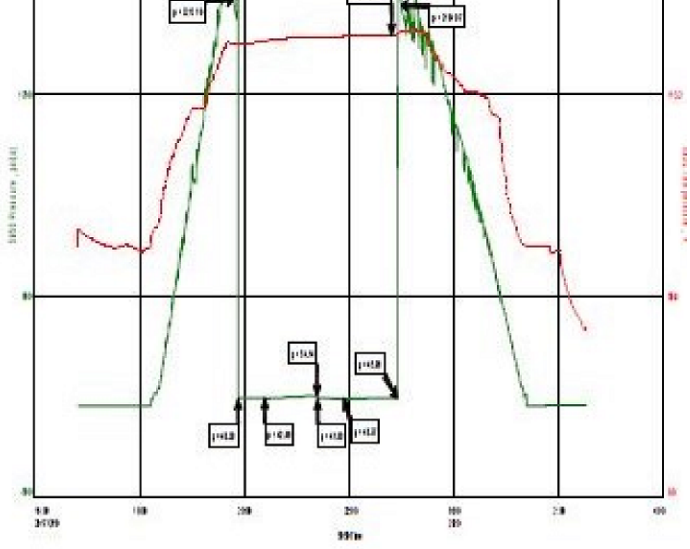
620-617-0368
carroll.dtllc@gmail.com

Hoisington, Kansas

General Information

Company Name	Gulf Exploration LLC
Contact	Pat McGraw
Well Name	Skolout Trust #1-15
Unique Well ID	Dst #5 Pawnee 4530-4556' Ltd 5410'
Surface Location	Sec 15-7s-35w Thomas County
Field	Wildcat
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	Gulf Exploration LLC
Formation	Dst #5 Pawnee 4530-4556' Ltd 5410'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2017/02/18
Start Test Time	16:50:00
Final Test Time	02:30:00
Job Number	P0164
Report Date	2017/02/18
Prepared By	Michael Carroll



TEST RECOVERY

Remarks	Recovery:	40'	Mud	100%M
	Total Fluid:	40'		
	Sampler Recovery:		100ML	Mud
	PSI:	0		

ROCK TYPES

Cht vari, Dolprim, Dolsec, Lmst fw<7, Lmst fw7>, shale, grn, shale, gry, Carbon Sh, shale, red, Shcol, Ss, Sltst, Igne

ACCESSORIES

MINERAL
- Argillaceous
- Calcareous
- Chert, dark
- Dolomitic
- Glauconite
- Mineral Crystals
- P Pyrite
- Sandy
- Silty
- Chert White
- Mc Mica

FOSSIL
- Bioclastic or Fragmenta
- Cephalopod
- Coral
- F Fossils < 20%
- Oolite
- Pellets

STRINGER
- Chert
- Dolomite
- Limestone
- Sandstone
- Siltstone
- red shale

TEXTURE
- C Chalky
- L Lithogr

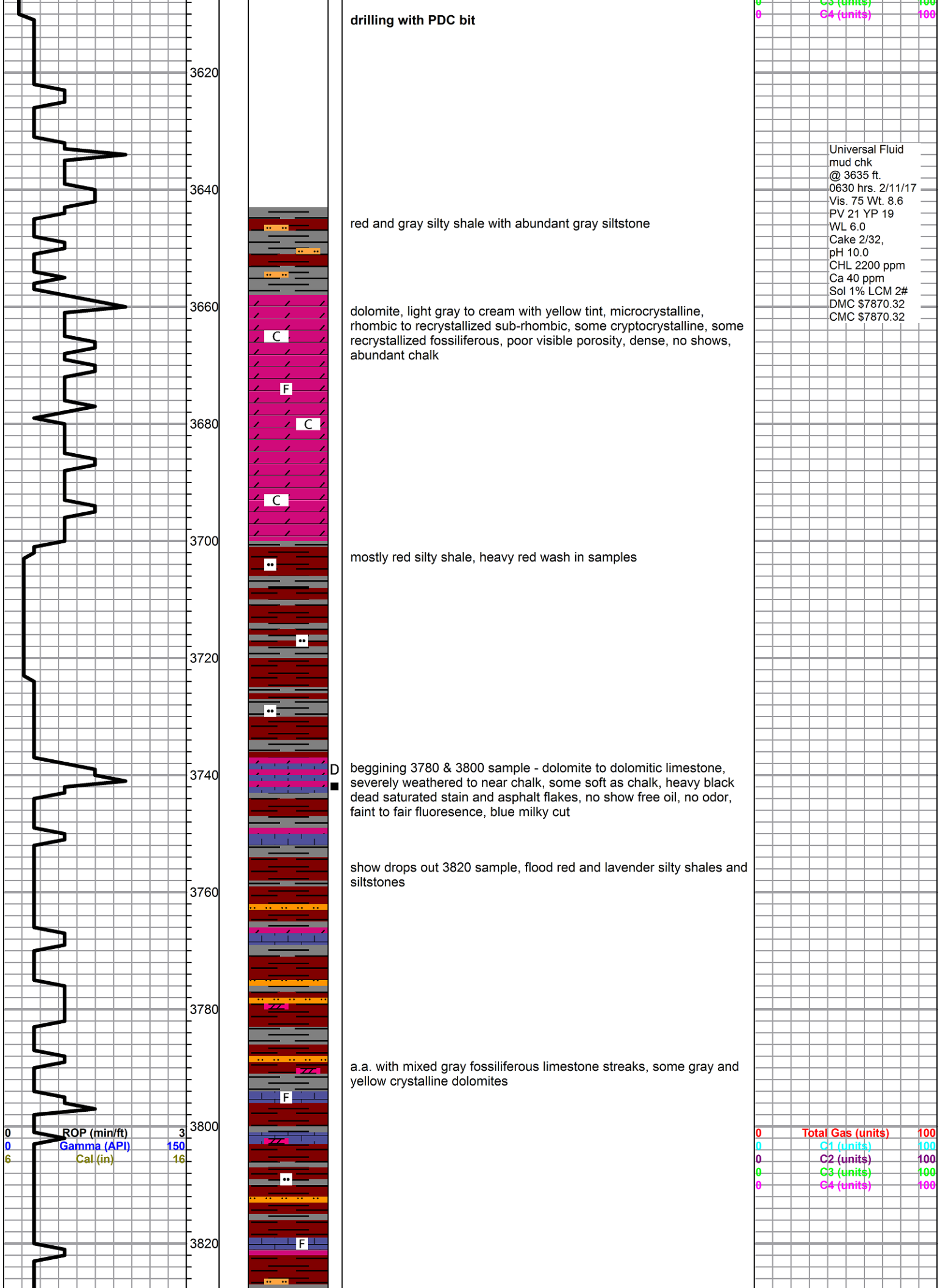
OTHER SYMBOLS

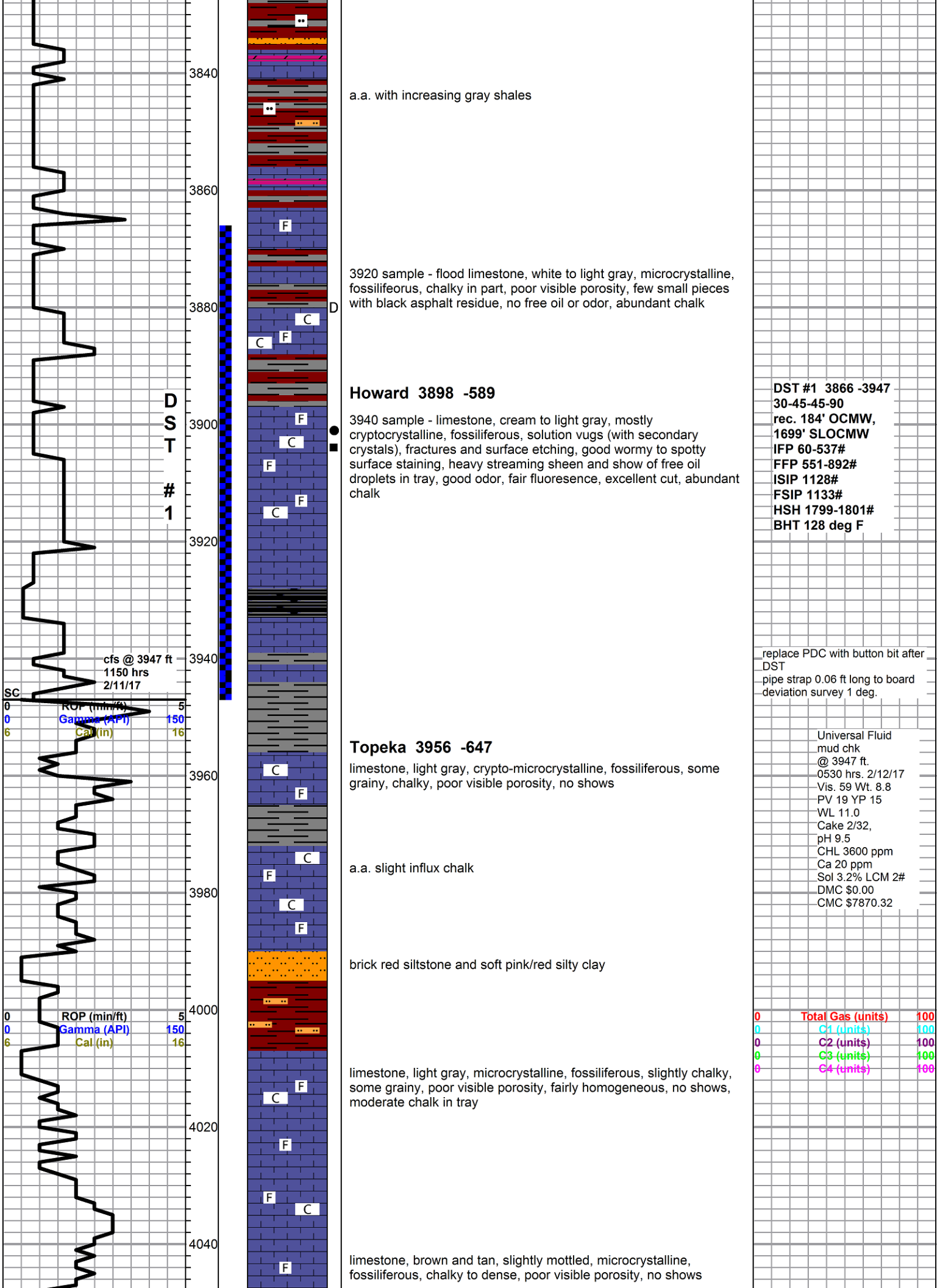
Oil Show
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- D Dead Oil Stn
- Fluorescence
- Gas

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

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

Curve Track #1	Depth | Intervals	DST	Lithology	Oil Show	Geological Descriptions	TG, C1 - C5
ROP (min/ft), Gamma (API), Cal (in)	Cored Interval, DST Interval					Total Gas (units), C1 (units), C2 (units), C3 (units), C4 (units)
1:240 Imperial						1:240 Imperial
0 ROP (min/ft) 3						0 Total Gas (units) 100
0 Gamma (API) 150						0 C1 (units) 100
6 Cal (in) 16					Begin 20 ft wet and dry samples @ 3600'	0 C2 (units) 100


drilling with PDC bit
red and gray silty shale with abundant gray siltstone
dolomite, light gray to cream with yellow tint, microcrystalline, rhombic to recrystallized sub-rhombic, some cryptocrystalline, some recrystallized fossiliferous, poor visible porosity, dense, no shows, abundant chalk
mostly red silty shale, heavy red wash in samples
beggining 3780 & 3800 sample - dolomite to dolomitic limestone, severely weathered to near chalk, some soft as chalk, heavy black dead saturated stain and asphalt flakes, no show free oil, no odor, faint to fair fluoresence, blue milky cut
show drops out 3820 sample, flood red and lavender silty shales and siltstones
a.a. with mixed gray fossiliferous limestone streaks, some gray and yellow crystalline dolomites
Universal Fluid
mud chk
@ 3635 ft.
0630 hrs. 2/11/17
Vis. 75 Wt. 8.6
PV 21 YP 19
WL 6.0
Cake 2/32,
pH 10.0
CHL 2200 ppm
Ca 40 ppm
Sol 1% LCM 2#
DMC $7870.32
CMC $7870.32
3620
3640
3660
3680
3700
3720
3740
3760
3780
3800
3820
C
F
C
C
D
F
F
0 ROP (min/ft) 3
0 Gamma (API) 150
6 Cal (in) 16
0 C3 (units) 100
0 C4 (units) 100
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100



a.a. with increasing gray shales

3920 sample - flood limestone, white to light gray, microcrystalline, fossilifeorus, chalky in part, poor visible porosity, few small pieces with black asphalt residue, no free oil or odor, abundant chalk

Howard 3898 -589

3940 sample - limestone, cream to light gray, mostly cryptocrystalline, fossiliferous, solution vugs (with secondary crystals), fractures and surface etching, good wormy to spotty surface staining, heavy streaming sheen and show of free oil droplets in tray, good odor, fair fluoresence, excellent cut, abundant chalk

DST #1 3866 -3947
30-45-45-90
rec. 184' OCMW,
1699' SLOCMW
IFP 60-537#
FFP 551-892#
ISIP 1128#
FSIP 1133#
HSH 1799-1801#
BHT 128 deg F

replace PDC with button bit after DST
pipe strap 0.06 ft long to board
deviation survey 1 deg.

Topeka 3956 -647

limestone, light gray, crypto-microcrystalline, fossiliferous, some grainy, chalky, poor visible porosity, no shows

a.a. slight influx chalk

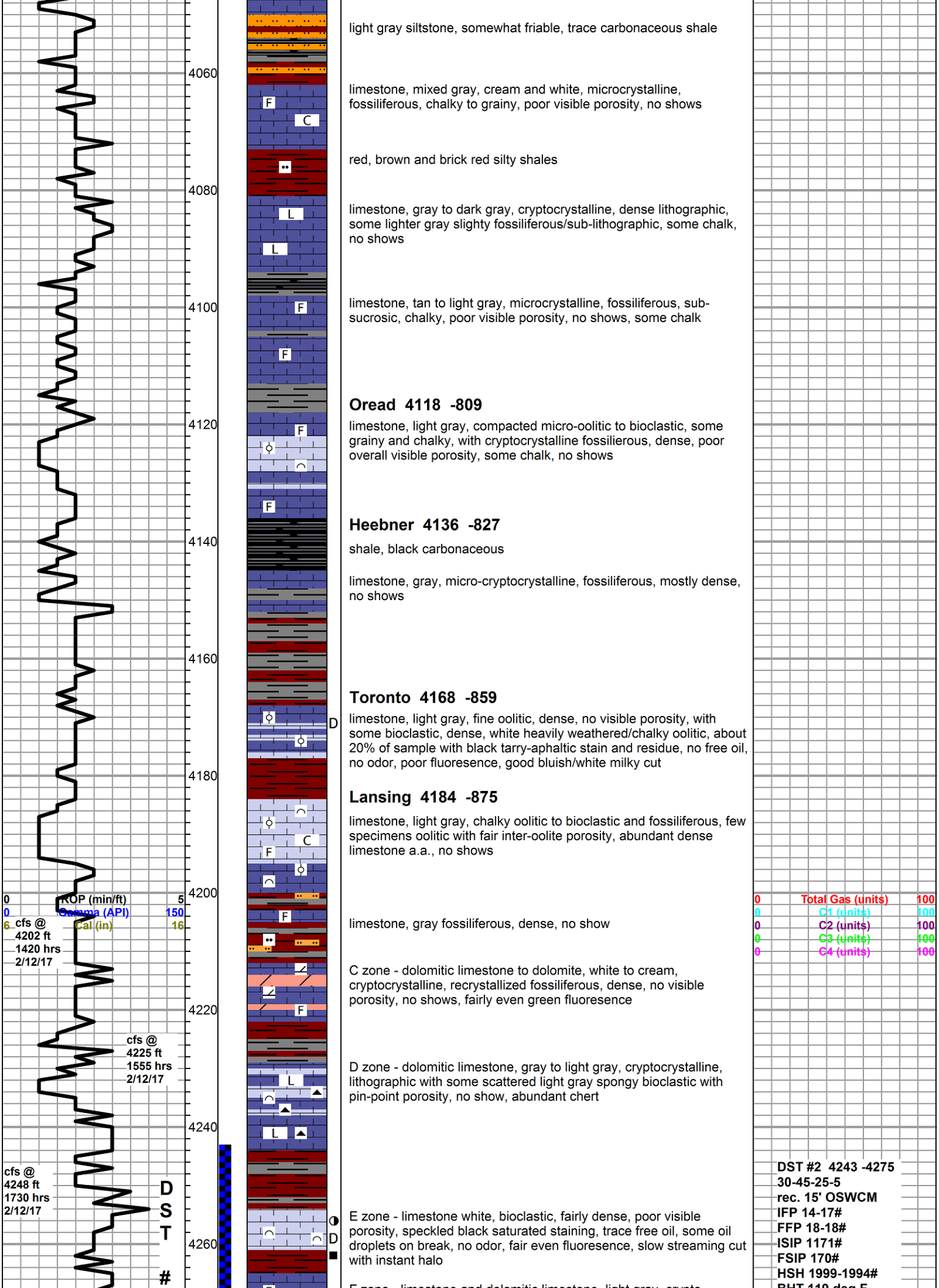
Universal Fluid
mud chk
@ 3947 ft.
0530 hrs. 2/12/17
Vis. 59 Wt. 8.8
PV 19 YP 15
WL 11.0
Cake 2/32,
pH 9.5
CHL 3600 ppm
Ca 20 ppm
Sol 3.2% LCM 2#
DMC $0.00
CMC $7870.32

brick red siltstone and soft pink/red silty clay

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

limestone, light gray, microcrystalline, fossiliferous, slightly chalky, some grainy, poor visible porosity, fairly homogeneous, no shows, moderate chalk in tray

limestone, brown and tan, slightly mottled, microcrystalline, fossiliferous, chalky to dense, poor visible porosity, no shows



light gray siltstone, somewhat friable, trace carbonaceous shale

limestone, mixed gray, cream and white, microcrystalline, fossiliferous, chalky to grainy, poor visible porosity, no shows

red, brown and brick red silty shales

limestone, gray to dark gray, cryptocrystalline, dense lithographic, some lighter gray slighty fossiliferous/sub-lithographic, some chalk, no shows

limestone, tan to light gray, microcrystalline, fossiliferous, sub-sucrosic, chalky, poor visible porosity, no shows, some chalk

Oread 4118 -809

limestone, light gray, compacted micro-oolitic to bioclastic, some grainy and chalky, with cryptocrystalline fossilierous, dense, poor overall visible porosity, some chalk, no shows

Heebner 4136 -827

shale, black carbonaceous

limestone, gray, micro-cryptocrystalline, fossiliferous, mostly dense, no shows

Toronto 4168 -859

limestone, light gray, fine oolitic, dense, no visible porosity, with some bioclastic, dense, white heavily weathered/chalky oolitic, about 20% of sample with black tarry-aphaltic stain and residue, no free oil, no odor, poor fluoresence, good bluish/white milky cut

Lansing 4184 -875

limestone, light gray, chalky oolitic to bioclastic and fossiliferous, few specimens oolitic with fair inter-oolite porosity, abundant dense limestone a.a., no shows

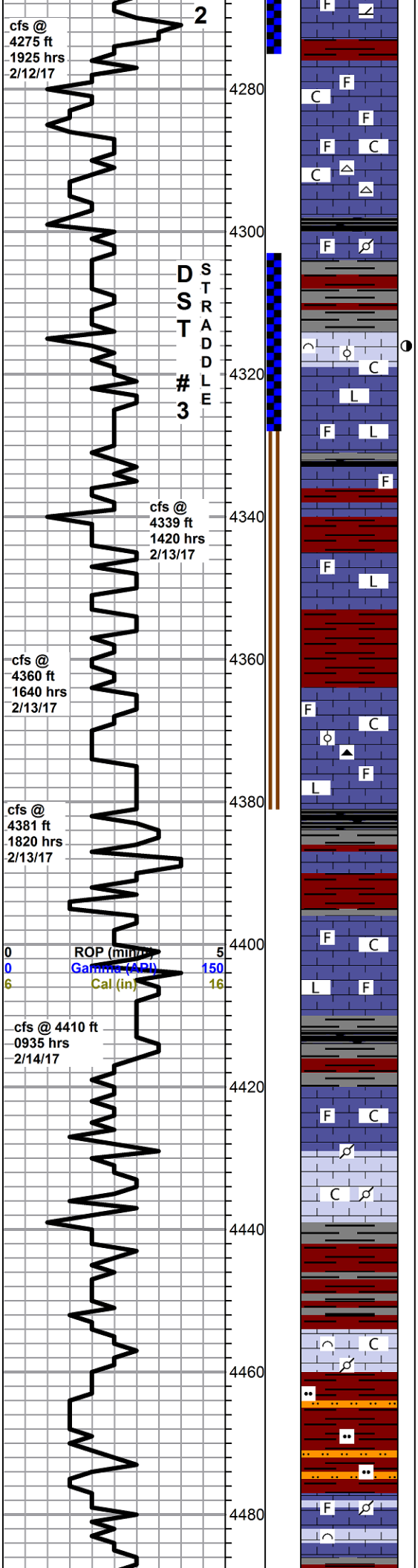
limestone, gray fossiliferous, dense, no show

C zone - dolomitic limestone to dolomite, white to cream, cryptocrystalline, recrystallized fossiliferous, dense, no visible porosity, no shows, fairly even green fluoresence

D zone - dolomitic limestone, gray to light gray, cryptocrystalline, lithographic with some scattered light gray spongy bioclastic with pin-point porosity, no show, abundant chert

E zone - limestone white, bioclastic, fairly dense, poor visible porosity, speckled black saturated staining, trace free oil, some oil droplets on break, no odor, fair even fluoresence, slow streaming cut with instant halo

DST #2 4243 -4275
30-45-25-5
rec. 15' OSWCM
IFP 14-17#
FFP 18-18#
ISIP 1171#
FSIP 170#
HSH 1999-1994#



F zone - limestone and dolomitic limestone, light gray, crypto-microcrystalline, fossiliferous to sub-lithographic, dense to chalky, trace pyritic, no shows

limestone, light gray, mostly cryptocrystalline, fossiliferous, poor visibel porosity, trace pyritic, abundant chalk in samples, no shows

a.a. with some darker gray limestone an influx gray to gray frosted cherts, sharp, fresh, no shows

Muncie Creek 4298 -989

shale, black carbonaceous

limestone, brown mottled and gray mottled, fossiliferous to sub-pelletal, chalky to very dense, no visible porosity, no shows

H zone - limestone, cream, oolitic-bioclastic fossiliferous, mostly recrystallized, chalky in part, some fair interclast porosity with few vugs, saturated to spotty black to brown stain, show oil on break, slight sheen in tray, fleeting odor in wet cup, fair instant cut with halo and bright milky slow streaming cut

grades to limestone, cream to light gray, cryptocrystalline lithographic to fossiliferous, mostly dense, some chalk, show rocks above drop out

30 min sample, darker gray, mostly fossiliferous

limestone, light gray, cryptocrystalline lithographic and microcrystalline, sub-sucrosic, fossiliferous, dense, hard, no show

J zone - limestone, mixed, variable gray and some brown, crypto-microcrystalline fossiliferous to lithographic, mostly dense, some chalky, with some scattered fine oolitic, dense to chalky, poor visible porosity, no shows, trace gray chert

Stark Shale 4381 -1072

black shale

limestone, gray, grainy dense bioclastic, poor visible porosity, no show

limestone, cream and light gray, microcrystalline, chalky, fossiliferous, some fractures othewise no visible porosity, no show

cfs sample grades to limestone, dark gray, microcrystalline, arenaceous to fossiliferous, dense and cryptocrystalline, dense lithographic, no shows

mixed shales abundant black

limestone, gray/green, cryptocrystalline, fossiliferous, some maroon blotches, dense

4440 influx limestone, gray/green, pelletal-fossiliferous, chalky, poor visible porosity, no shows

limestone, gray, pelletal to bioclastic, chalky, abundant chalk, no shows

Base KC 4460 -1151

4480 and 90 samples, flood brick red silty shale and siltstone

Marmaton 4477 -1168

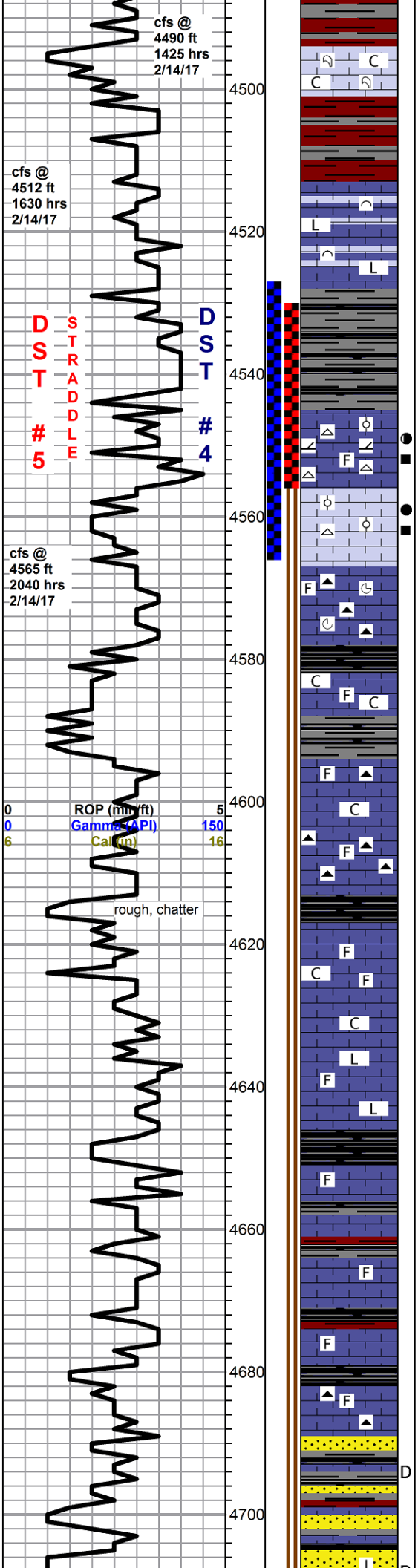
limestone, variable gray and lavender, micro-cryptocrystalline, arenaceous/argillaceous to lithographic and slightly fossiliferous, some cream to light gray, pelletal/bioclastic, chalky in part, poor visible porosity, no shows

BHT 119 deg F

DST #3 4303 -4328
(straddle)
30-60-20-10
rec. 40' mud
IFP 28-33#
FFP 35-38#
ISIP 1296#
FSIP 873#
HSH 2029-2023#
BHT 121 deg F

Universal Fluid
mud chk
@ 4381 ft.
1915 hrs. 2/13/17
Vis. 48 Wt. 9.2
PV 11 YP 19
WL 9.3
Cake 2/32,
pH 8.0
CHL 1900 ppm
Ca 20 ppm
Sol 4.2% LCM 2#
DMC $0.00
CMC $11474.01

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



limestone, cream, bioclast of primarily coral fragments, some large loose frags and coral fans, some good porosity, barren, flood chalk in samples, cfs sample influx cream to light gray and tan pelletal, no shows

limestone, light gray to cream, dense bioclastic, with cream and light gray chert, limestone, light gray to gray, cryptocrystalline, lithographic to sub-lithographic, some gray arenaceous limestone, no shows

4550 sample, flood black and dark gray shale

Pawnee 4545 -1236

4560 sample, shale a.a. with limestone, dolomitic, cream to light gray, crypto-microcrystalline, recrystallized fossiliferous and oolitic to sub-lithographic, very cherty, some small solution vugs, fair interclast porosity, appx 50% sample with varying degrees of staining, slight show free oil, good odor, fair show on break, fair to light fluoresence, good to excellent cut, abundant boney to smokey gray chert, sharp, fresh

4565 sample, a.a. decrease in shale and slight decrease in show 4565 30 min, limestone, light gray, fine oolitic to sub-oomoldic, fairly mature oolites, good interoolite porosity, saturated stain, fair show free oil and good sheen, good odor, fair fluoresence, excellent cut, decrease in cherts, 60 min sample, same as previous limestone, sample trashy, abundant mixed limestones and shales

limestone, gray to dark gray and light brown, mottled, very fossiliferous and partly re-crystallized with ammonites, very dense, dark gray chert, spiculitic with ammonites, no shows

limestone, cream, chalky fossiliferous, poor visible porosity, abundant chalk in samples, with black carbonaceous shale, no shows

a.a. with mixed fossiliferous limestone, gray/black/brown shale, some with small clastic layers, trace smokey-frosted light gray fossiliferous chert, no shows 4620 sample - grades to limestone, cream to light gray, micro-cryptocrystalline, chalky but dense, fossiliferous, no visible porosity, flood frosted light gray fossiliferous chert, no shows

Cherokee (field pick) 4613 -1304

flood black carbonaceous shale with:

limestone, cream to tan, cryptcrystalline with secondary calcite, fossiliferous, chalky texture, dense and very cherty to brittle

a.a. carrying abun variable shales with influx cream to light gray sub-lithographic dense limestone

limestone, dark gray, slightly mottled cryptocrystalline, sub-lithographic to fossiliferous, cherty and dense, no shows

True Cherokee

shale, black carbonaceous

limestone, light gray, mostly cryptocrystalline, fossiliferous, some secondary calcite and calcite seams, fairly dense and cherty, some chalk with scattered black, gray and red/brown shale, no shows

4700 sample, primarily limestones a.a. with abundant light gray cherts, sharp, fresh

4710 sample, conglomerate? **mixed gray fossiliferous limestones, some weathered, few pieces with black tarry residue, slow milky cut, mixed gray, green and lavender shales, sandstone, dirty gray/brown, very fine to fine grain, angular to rounded, poorly sorted, glauconitic, micaceous, well cemented, calcareous, barren, poor visible porosity, some orange chert and pyrite, no show free oil and no odor in samples trace fluoresence**

4719 sample, sandstone, quartz, frosted to white, very fine to medium

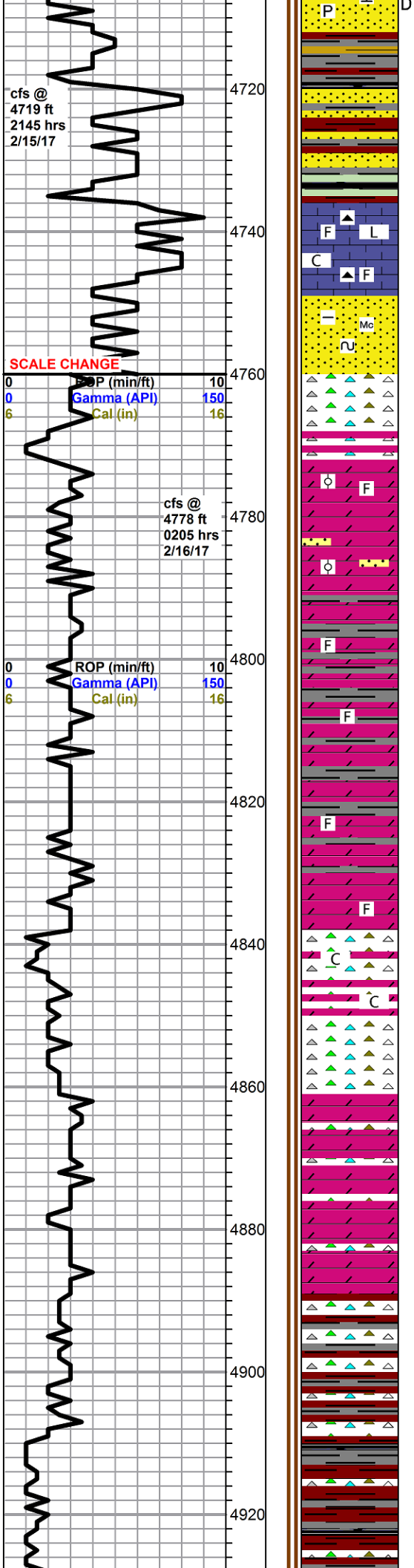
DST #5 4530-4556 (straddle)
30-60-30-60
rec. 40 ft mud
IFP 40-43#
FFP 41-41#
ISIP 54#
FSIP 45#
HSH 2213-2184#
BHT 130 deg F

DST #4 4527-4565
15-60-30-90
rec. 365' MW, 252'
SLOCMW, 1008'
OCMW, 1134'
SLOCSLMCW
IFP 455-783#
FFP 829-1329#
ISIP 1433#
FSIP 1426#
HSH 2148-2134#
BHT 141 deg F

Universal Fluid
mud chk
@ 4525 ft.
1930 hrs. 2/14/17
Vis. 57 Wt. 9.0
PV 11 YP 15
WL 7.7
Cake 2/32,
pH 11.0
CHL 1200 ppm
Ca 40 ppm
Sol 3.8% LCM 4#
DMC $1444.58
CMC $12918.59

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

Universal Fluid



grain, round to angular, poorly sorted, fairly cemented, some intergrain porosity, calcareous, pyritic, fair flakey gilsonitic stain, no free oil or odor, no fluoresence, fair cut fluoresence

gray, maroon and olive mottled shale

4740 mixed shale a.a. with sandstone, white to pale green, very fine to medium grain, rounded to sub-angular, fair to poor sorted, poorly cemented, slightly calcareous, some glauconite and feldspars, good intergranular porosity, barren

4750 limestone, gray to olive/yellow, cryptocrystalline, grainy and chalky fossiliferous to dense lithographic, no visible porosity, with gray and olive/yellow fossiliferous cherts, abundant chalk, no shows - 4760 same

4570 flood sandstone, quartz, white, very fine to fine grain, few large grains in clusters, otherwise fair sorted and rounded, siliceous cement, well cemented, small flecks biotite and glauconite throughout clusters, poor porosity, no fluoresence or show

Mississippian 4760 -1451

4778 chert, white to pale yellow, severly leached (tripolitic) oolitic, grainy with inter-oolite porosity, chert, white to tan and olive/yellow, trace orange, fossilferous, moderate tripolitic to fresh, no shows

30 min cfs - dolomite, gray, microcrystalline, recrystallized oolitic to fossiliferous, some sucrosic, some lithographic, poor visible porosity, no shows

a.a. with influx tan and light gray dolomite, flattened oolitic, scattered sandstone a.a., some large quartz grains

dolomite, mottled gray-dark gray, cryptocrystalline, dense and cherty to highly altered fossiliferous to highly weathered and chalky, some argillaceous, appx 40% light gray blocky to soft calcareous shales

a.a. with influx tan/gray/black dolomite, mottled, fine crystalline, altered fossiliferous, grainy to sucrosic, poor visible porosity, no shows

dolomites a.a. with chert, light gray/black mottled spiculitic to black fossiliferous, some sub-tripolitic, abundant chalk

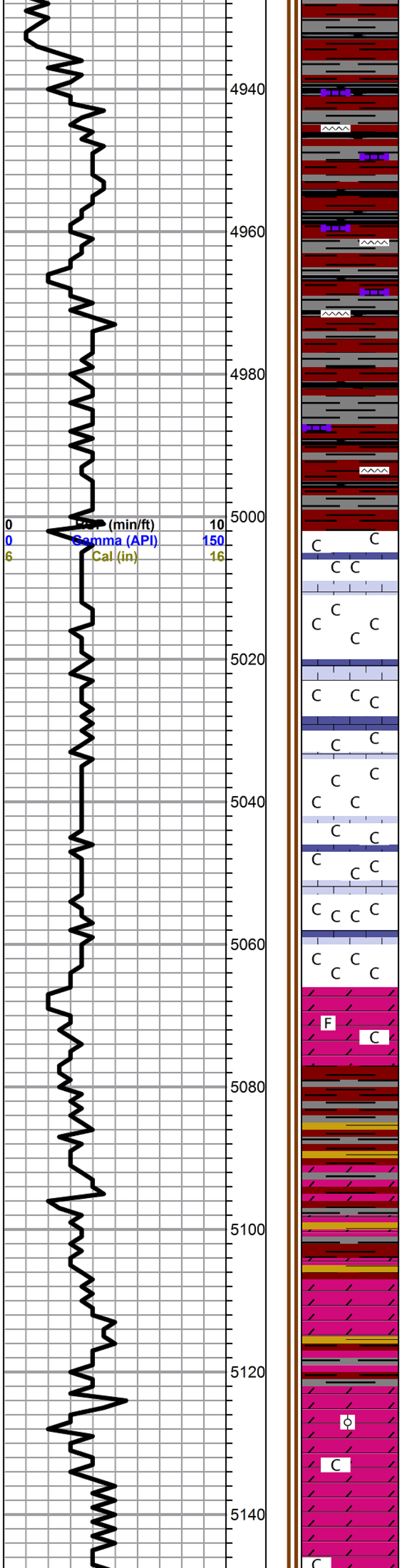
dolomite, gray to tan mottled, microcrystalline, altered fossiliferous, grainy to sucrosic, poor porosity, with gray to dark gray arenaceous to argillaceous dolomite, bedded cherts, mottled fossiliferous, no shows

grades to chert, gray and white mottled, spiculitic and fossiliferous, shales, red, gray, lavender some black

4940 sample, almost entirely shale, some chert a.a. (cavings?)

mud chk
@ 4800 ft.
0220 hrs. 2/16/17
Vis. 48 Wt. 9.1
PV 12 YP 15
WL 8.6
Cake 2/32,
pH 11
CHL 1400 ppm
Ca 40 ppm
Sol 3.8% LCM 3#
DMC $1630.17
CMC $14548.76

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



all shales a.a. marked increase in black shale, with some scattered gray and cream chalky oolitic limestone and some chert a.a. (cavings?)

samples change abruptly to chalk, white, appx. 80%, with 20% limestone, light gray, micrcrystalline, fossiliferous to oolitic, dense, no porosity or shows

Arbuckle 5066 -1757

dolomite, gray to dark gray, microcrystalline, sub-sucrosic to some fine crystalline sub-rhombic, some recrystallized fossiliferous, few scattered vugs, very dense, abundant chalk/caliche, no shows

5090 sample a.a. with flood maroon and gray mottled shale, abundant lavender

a.a. with flood olive shale

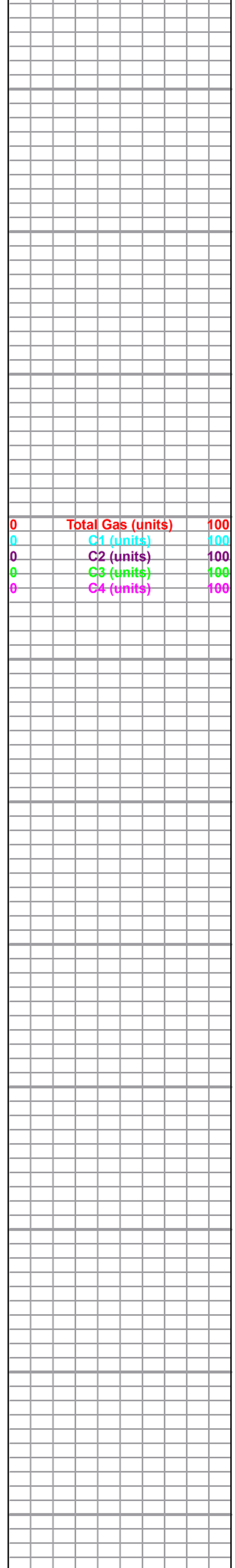
shale a.a. with influx dolomite, light gray, microcrystalline, sub-sucrosic, very dense, few scattered small vugs, no shows

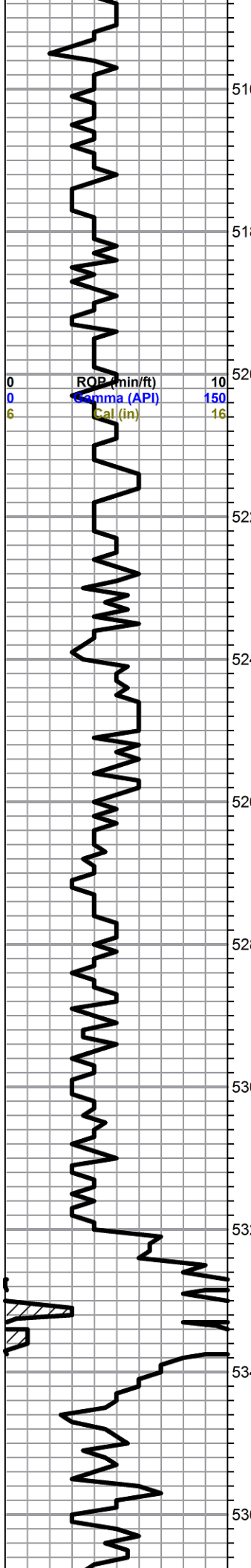
dolomite, a.a.

5130 sample, mostly shale a.a.

dolomite, light gray, micro-very fine crystalline, rhombic to sub-rhombic, with recrystallized rhombs and oolites, poor visible porosity, abundant caliche, no shows

a.a., some nice rhombic with vugs





dolomite a.a. with influx white boney chert, some slightly tripolitic

dolomite, variable gray and tan, some with glauconite specs, micro-fine crystalline, rhombic to recrystallized, some arenaceous, some lithographic, poor visible porosity, some caliche, no shows, chert drops out

dolomite, variable gray to tan and pale green, mixed crystalline, abundant sandy dolomite, increasingly glaucontic, some sandstone stringers, quartz, very fine grain, rounded, fair to well sorted, glaucontic, poor visiible porosity, well cemented

a.a. with influx purple and lavender shale

5290 sample, shaley conglomerate, mostly lavender and purple with red/brown shales with green, gray, black, brick and olive, with: mixed sandstones, mostly glauconitic and dolomites a.a.

5300 sample, increase in dolomite a.a.

5310 sample, mix shale and dolomite a.a. with influx white boney chert and caliche

5320 sample, mostly shales a.a., dolomite a.a. with influx white fine crystalline rhombic, glauconitic, sandstone drops out

Reagan equivalent?
dolomitized granite wash/sandstone mix - pink to white and pale green, diagenic matrix of feldspars white (plagioclase) and pink (orthoclase), recrystallized white and pink dolomite, rounded fine to very fine quartz sand grains (up to 50% of matrix, abundant chlorite and/or glauconite grains and nodules (up to 10%), pyrite, slowly dissolves in HCl, leaving quartz grains, glauc/chlorite and some pink feldpar, very dense and well cemented to slightly friable

5335 sample - dolomite, dirty gray, light gray, tan and white, mixed crystalline, some arenaceous, some lithographic, trace chert, some glauconitic and sandy, very dense, no shows 5340 & 5345 & 5350 samples mix of above with influx abundant shales

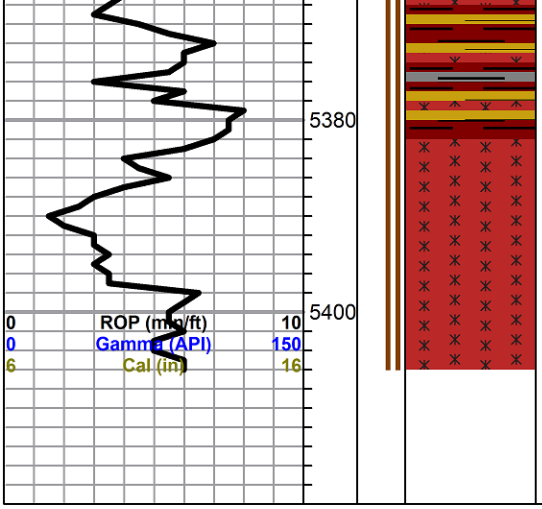
Pre-Cambrian 5343 -2034

@ 5343-granite wash - mostly mixed shales, with quartz shards and quartz granite, little feldspar, abundant biotite, some muscovite, some mixed cherty gray limestone fragments - (5360 & 70 samples)

Universal Fluid
mud chk
@ 5160 ft.
0015 hrs.
2/17/17
Vis. 67 Wt. 9.1
PV 12 YP 30
WL 9.4
Cake 2/32,
pH 9.5
CHL 800ppm
Ca 60 ppm
Sol **% LCM 4#
DMC $1429.73
CMC $15978.51

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

5 ft. samples
5325-5350



5380 sample, a.a., mostly shales, cavings? 99%, shale primarily red/brown platey, brittle, and olive, blocky

granite top 5382

5390 sample, increase in feldspar rich vs. quartz granite, total granite content increase, shales decreases to appx 60% granite, pink feldspar, quartz, biotite,

TD and cfs sample, switched back to more quartz dominant granite, very little feldspar, still carrying abundant shale from above

Rotary Total Depth 5406 ft @ 2110 hrs 2/17/17
Pioneer Wireling TD 5410 ft
complete logging operations 1530 hrs 2/18/17

Universal Fluid
mud chk
@ 5406 ft.
2115 hrs. 2/17/17
Vis. 58 Wt. 9.1
PV 15 YP 23
WL 8.8
Cake 2/32,
pH 9.5
CHL 900 ppm
Ca 60 ppm
Sol **% LCM 4#
DMC $1074.20
CMC $17052.71