OPERATOR

Company:	Falcon Exploration, Inc.		
Address:	125 N. Market Suite 1252 Wichita, KS 67202		
Contact Geologist:	Dan Fredlund		
Contact Phone Nbr:	316-262-1378		
Well Name:	Kenneth Dirks #3-8		
Location:	Sec. 8 - T28S - R30W	API:	15-069-20457-0000
Pool:		Field:	N/A
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	Kenneth Dirks #3-8		
Surface Location:	Sec. 8 - T28S - R30W		
Bottom Location:			
API:	15-069-20457-0000		
License Number:	5316		
Spud Date:	2/27/2014	Time:	00:00
Region:	Gray County		
Drilling Completed:	3/11/2014	Time:	00:40
Surface Coordinates:	2020' FSL & 1620' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	2808.00ft		
K.B. Elevation:	2818.00ft		
Logged Interval:	4000.00ft	To:	5550.00ft
Total Depth:	5550.00ft		
Formation:			
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:		Latitude:	
N/S Co-ord:	2020' FSL		
E/W Co-ord:	1620' FEL		

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:	Val Energy, Inc.		
Rig #:	2		
Rig Type:	mud rotary		
Spud Date:	2/27/2014	Time:	00:00
TD Date:	3/11/2014	Time:	00:40
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation:	2818.00ft	Ground Elevation:	2808.00ft
K.B. to Ground:	10.00ft		

NOTES

Due to results of drill stem test #1 in the Morrow Sand, the operator elected to set 5 1/2" production casing and further test through perforations and stimulation.

A Bloodhound gas detection system operated by Bluestem Environmental was employed during the drilling of this well. ROP and gas data were imported into this mudlog. The gas detector was operational by 2350 ft. A slight gas kick occured through the Chase group of minor significance, otherwise, no gas kicks were recorded prior to point (4000 ft) where sample examination began on this mudlog. Gamma ray and caliper curves were also imported from the electrical log suite. All log tops were consistently 4-5 ft high to the drill time recorded from rig measurements. These curves were not shifted to provide and exact match, but left as recorded in the field.

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

Falcon Exploration, Inc.

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
03/06/2014	4357	Geologist Keith Reavis on location @ 0330 hrs, 4141 ft, drilling ahead Heebner, Toronto, Douglas, Lansing, Marmaton, Cherokee, @ 5060 ft. pull PDC bit
03/07/2014	5060	finish pulling PDC, tight hole, back in with button bit, ctch, resume drilling, base Cherokee, Morrow, show in Morrow sand warrants DST, TOH w/bit and in with tools, conducting DST #1
03/08/2014	5133	Let tools hang overnight (oil loaded) complete DST #1, successful test, reverse out load, TIH w/bit, CTCH, resume drilling, Chester
03/09/2014	5305	drilling, St. Gen, St. Louis, show in A zone warrants test, TOH w/bit, conduct and complete DST #1, successful test, round trip tools and bit
03/10/2014	5346	resume drilling 0100 hrs, St. Louis B, show warrants DST, TOH w/bit, conducting DST #3, complete DST, successful test, TIH w/bit, resume drilling, rathole ahead, Mississippian
03/11/2014	5550	TD @0040 hrs, TOH for logs, conduct and complete logging operations, geologist off location @ 1000 hrs

Falcon Exploration, Inc.

well comparison sheet

	DRILLING WELL Falcon – K. Dirks #3-8 2020' FSL & 1620' FEL Sec. 8 T28S R30W 2818 KB				COMPARISON WELL Falcon – K. Dirks #2-8 2090' FSL & 440' FEL Sec. 8 T28S R30W 2819 KB		Structural Relationship		COMPARISON WELL Falcon – Lanterman #1-8 2030' FNL & 370' FEL Sec. 8 T28S R30W 2821 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	4150	-1332	4145	-1327	4149	-1330	-2	3	4146	-1325	-7	-2
Lansing	4248	-1430	4242	-1424	4246	-1427	-3	3	4249	-1428	-2	4
Stark	4606	-1788	4602	-1784	4612	-1793	5	9	4606	-1785	-3	1
Marmaton	4753	-1935	4749	-1931	4752	-1933	-2	2	4743	-1922	-13	-9
Pawnee	4835	-2017	4835	-2017	4838	-2019	2	2	4837	-2016	-1	-1
Cherokee	4885	-2067	4881	-2063	4886	-2067	0	4	4881	-2060	-7	-3
Morrow Sand	5109	-2291	5105	-2287	5117	-2298	7	11	5118	-2297	6	10
Miss St. Gen.	5193	-2375	5208	-2390	5217	-2398	23	8	5244	-2423	48	33
St. Lo B Por.	5332	-2514	5329	-2511	5341	-2522	8	11	5345	-2524	10	13
Salem	5503	-2685	5500	-2682	5498	-2679	-6	-3	np			
Total Depth	5550	-2732	5548	-2730	5550	-2731	-1	1	5406	-2585	-147	-145

DST #1

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: KENNETHDIRKS3-8(SE)DST1

TIME ON: 15:46 3-7-14
TIME OFF: 11:22 3-8-14

Company FALCON EXPLORATION, INC. Lease & Well No. KENNETH DIRKS 3-8 (SE)
Contractor VAL ENERGY, INC. RIG #2 Charge to FALCON EXPLORATION, INC.
Elevation 2818 KB Formation MORROW SD. Effective Pay Ft. Ticket No. T318
Date 3-7-14 Sec. 8 Twp. 28 S Range 30 W County GRAY State KANSAS
Test Approved By KEITH REAVIS Diamond Representative TIMOTHY T. VENTERS

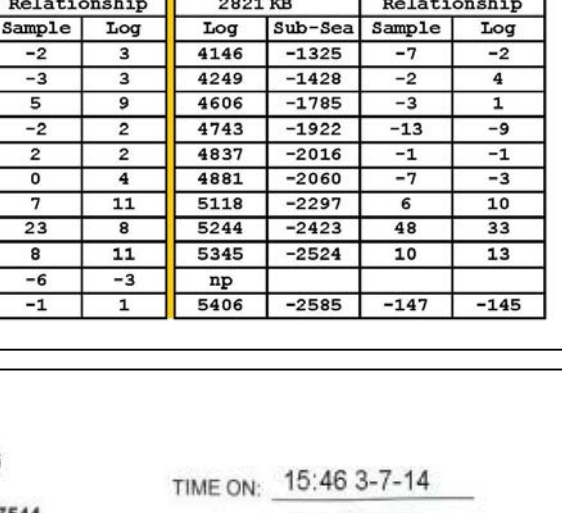
Formation Test No. 1 Interval Tested from 5084 ft. to 5133 ft. Total Depth 5133 ft.
Packer Depth 5079 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 5084 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 5065 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 5130 ft. Recorder Number 11029 Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 54 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.5 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
Chlorides 3,000 P.P.M. Drill Pipe Length 5051 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out YES Anchor Length 17 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: GOOD 2 INCH BLOW, BUILDING, REACHING
2nd Open: VERY STRONG BLOW, HITTING BOB INSTANT

Recovered 2990 ft. of GAS IN PIPE
Recovered 20 ft. of GO, 6% GAS, 94% OIL, GRAVITY: 20
Recovered 480 ft. of T,SWCO, 4% GAS, 82% OIL, 14% WATER
Recovered 1440 ft. of G,SMCO, 3% GAS, 87% OIL, 10% MUD
Recovered 125 ft. of G,OCM, 6% GAS, 21% OIL, 73% MUD
Recovered 2065 ft. of TOTAL FLUID CHLORIDES: 93,(
Remarks: PH: 6.0
RW: .10 @ 64 deg.
TOOL SAMPLE:97% OIL, 3% MUD



Time Set Packer(s) 6:32 PM A.M. P.M. Time Started Off Bottom 12:07 AM A.M. P.M. Maximum Temperature 126 deg.

Initial Hydrostatic Pressure (A) 2504 P.S.I.
Initial Flow Period Minutes 5 (B) 318 P.S.I. to (C) 330 P.S.I.
Initial Closed In Period Minutes 90 (D) 856 P.S.I.
Final Flow Period Minutes 60 (E) 421 P.S.I. to (F) 759 P.S.I.
Final Closed In Period Minutes 180 (G) 853 P.S.I.
Final Hydrostatic Pressure (H) 2504 P.S.I.

DST #2

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: KENNETHDIRKS3-8(SE)DST2

TIME ON: 13:33
TIME OFF: 22:47

Company FALCON EXPLORATION, INC. Lease & Well No. KENNETH DIRKS 3-8 (SE)
Contractor VAL ENERGY, INC. RIG #2 Charge to FALCON EXPLORATION, INC.
Elevation 2818 KB Formation ST. LOUS Effective Pay Ft. Ticket No. T319
Date 3-9-14 Sec. 8 Twp. 28 S Range 30 W County GRAY State KANSAS
Test Approved By KEITH REAVIS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 5293 ft. to 5331 ft. Total Depth 5331 ft.
Packer Depth 5288 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 5293 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Depth of Selective Zone Set

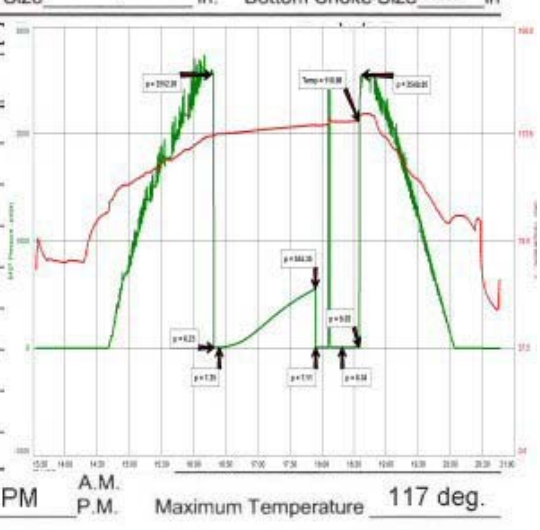
Top Recorder Depth (Inside) 5274 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 5328 ft. Recorder Number 11029 Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 45 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.1 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
Chlorides 2,500 P.P.M. Drill Pipe Length 5260 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 38 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW THROUGHOUT PERIC
2nd Open: NO BLOW THROUGHOUT PERIOD.

Recovered 5 ft. of M W/SP. O, SPOTTY OIL, 100% MUD
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks:

TOOL SAMPLE:SPOTTY OIL OIL, 100% MUD



Time Set Packer(s) 4:18 PM A.M. P.M. Time Started Off Bottom 6:33 PM A.M. P.M. Maximum Temperature 117 deg.

Initial Hydrostatic Pressure (A) 2552 P.S.I.
Initial Flow Period Minutes 5 (B) 6 P.S.I. to (C) 7 P.S.I.
Initial Closed In Period Minutes 90 (D) 554 P.S.I.
Final Flow Period Minutes 25 (E) 7 P.S.I. to (F) 8 P.S.I.
Final Closed In Period Minutes 15 (G) 9 P.S.I.
Final Hydrostatic Pressure (H) 2550 P.S.I.

DST #3

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: KENNETHDIRKS3-8(SE)DST3

TIME ON: 05:33
TIME OFF: 16:57

Company FALCON EXPLORATION, INC. Lease & Well No. KENNETH DIRKS 3-8 (SE)
Contractor VAL ENERGY, INC. RIG #2 Charge to FALCON EXPLORATION, INC.
Elevation 2818 KB Formation ST. LOUS "B" Effective Pay Ft. Ticket No. T320
Date 3-10-14 Sec. 8 Twp. 28 S Range 30 W County GRAY State KANSAS
Test Approved By KEITH REAVIS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 Interval Tested from 5328 ft. to 5346 ft. Total Depth 5346 ft.
Packer Depth 5323 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Packer Depth 5328 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 5309 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 5343 ft. Recorder Number 11029 Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 52 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.2 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
Chlorides 3,000 P.P.M. Drill Pipe Length 5295 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 18 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW THROUGHOUT PERIOD. (NO BB)
2nd Open: NO BLOW THROUGHOUT PERIOD. (NO BB)

Recovered 5 ft. of MUD
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of
Remarks: JASON TOOK OVER DURING THE INITIAL SHUT-IN.

TOOL SAMPLE:SPOTTY OIL ,100% MUD

Time Set Packer(s) 8:27 AM A.M. P.M. Time Started Off Bottom 10:42 AM A.M. P.M. Maximum Temperature 116 deg.

Initial Hydrostatic Pressure (A) 2550 P.S.I.
Initial Flow Period Minutes 5 (B) 6 P.S.I. to (C) 8 P.S.I.
Initial Closed In Period Minutes 90 (D) 1572 P.S.I.
Final Flow Period Minutes 25 (E) 9 P.S.I. to (F) 11 P.S.I.
Final Closed In Period Minutes 15 (G) 1191 P.S.I.
Final Hydrostatic Pressure (H) 2548 P.S.I.

ROCK TYPES

Clystgy
sdy lmst
Lmst fw<7
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
shale, red
Shcol
Ss
Sltst

ACCESSORIES

MINERAL
- Chert, dark
- Dolomitic
- Glauconite
- Mineral Crystals
- Pyrite
- Chert White

FOSSIL
- Bioclastic or Fragmental
- F Fossils < 20%
- Oolite
- Pellets
- Oomoldic

STRINGER
- Dolomite
- Limestone
- Sandstone
- Siltstone
- Shale
- green shale
- red shale
- carb shale

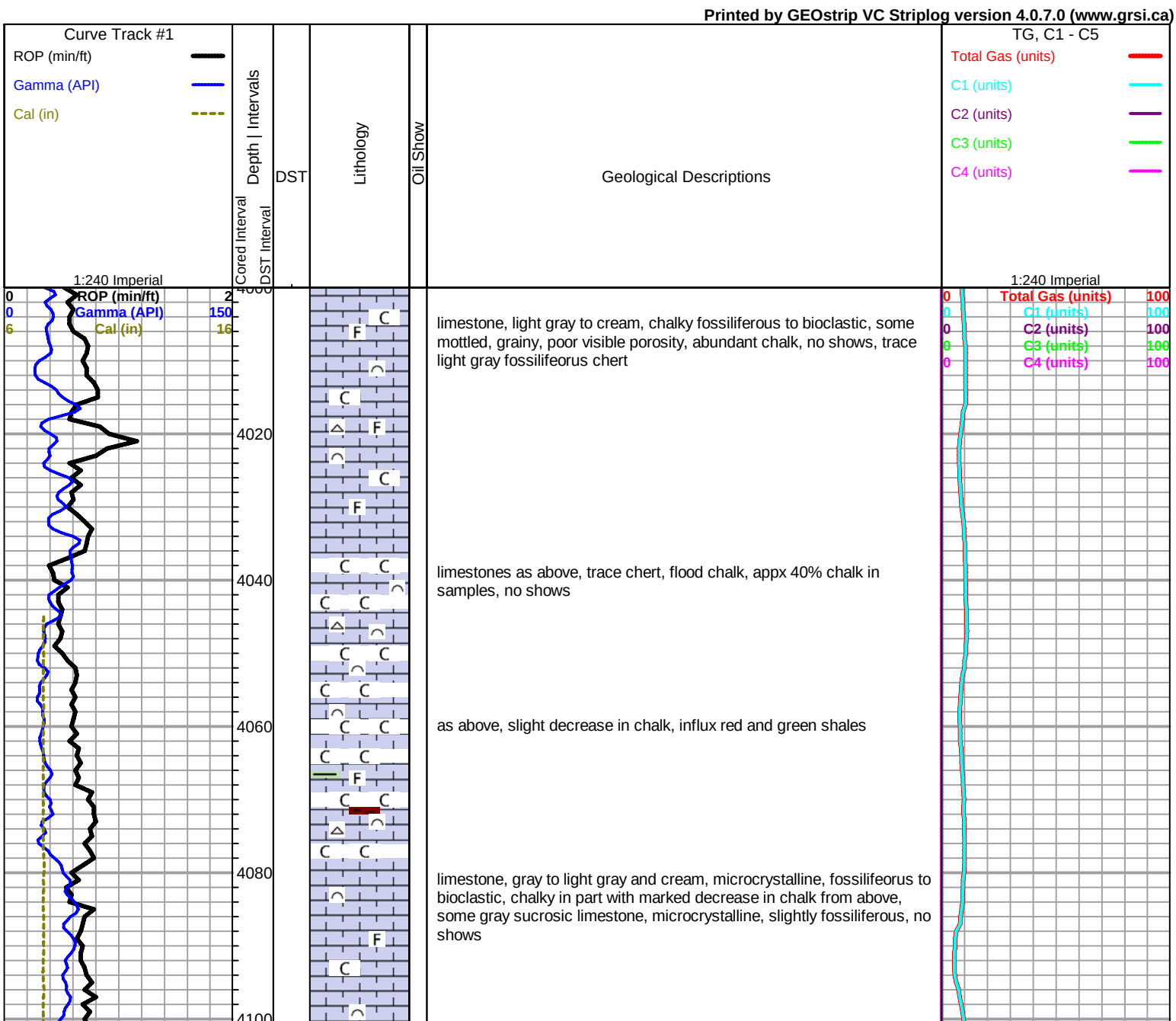
TEXTURE
- C Chalky
- L Lithogr

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 4.0.7.0 (www.grsi.ca)



limestone as above, with limestone, dark gray, microcrystalline, lithographic to slightly fossiliferous, trace white cherts, some gray dense limey shales, no shows

Heebner 4150 -1332

shale, black carbonaceous

shale gas, kick low, readjusted lag on Bloodhound

Toronto

limestone, white to light gray, microcrystalline, fossiliferous to bioclastic, chalky, limestone, dolomitic, pale green/gray, microcrystalline, arenaceous to sub-sucrosic, chalky, some chalk and dark gray fossilifeorus cherts, no shows

Douglas

shales, gray and green

limestone, mixed gray to brown, microcrystalline, fossiliferous, some grainy very fossilifeorus, chalky to dense and cherty in part, some large clasts, poor visible porosity, no shows

Lansing 4248 -1430

limestone, white to light gray, micro-cryptocrystalline, chalky fossiliferous to bioclastic, with chert, frosted light gray, fossiliferous and spiculitic, fresh, sharp, no shows

limestone, light gray to gray, mostly cryptocrystalline, lithographic to fossiliferous, dense to chalky, with limestone, gray, mostly cryptocrystalline, mottled with white to light gray fossil clasts, dense, no shows

limestone, cream to light gray, chalky fossiliferous to sub-oolitic, some gray to tan earthy chalky fossiliferous, abundant opaque crystalline calcite nodules, loose, no shows

grades to limestone, mixed gray, mostly microcrystalline, dense arenaceous to fossiliferous, some brown earthy fossiliferous, gray cherty fossiliferous, abundant shale, gray silty and red, no shows

limestone, white to cream, chalky fossiliferous to bioclastic, flood chalk in samples, poor visible porosity, no shows

limestone, cream to white, oomoldic to oolitic/pelletal to bioclastic, some good oomold porosity, otherwise very chalky with poor visible porosity, abundant chalk, no shows

as above, grading to more of a chalky but dense bioclast facies

4500 sample, abundant tan oolitic, small oolities, some sub-oomoldic, scattered porosity, dense, barren

Mud-Co Mud chk
@ 4449 ft.
0715 hrs. 3/6/14
Vis. 43 Wt. 9.3
PV 13 YP 14
WL 9.2
Cake 1/32,
pH 10.5
CHL 3200 ppm
Ca 20 ppm
Sol 7.0 LCM 2.5#
DMC $3279.40
CMC $9878.15

Muncie Creek

limestone, mixed non-descript gray to tan fossiliferous, some tan pelletal, some scattered chert, abundant chalk, poor porosity, no shows

as above

flood chalk, appx 60-70% in samples, with light gray limestone, chalky, fossiliferous to bioclastic, poor visible prosiy, no shows

limestone, light gray, microcrystalline, fossiliferous, chalky, with light gray cryptocrystalline, fossiliferous to sub-lithographic, poor visble porosity, abundant chalk, no shows

4640 sample - fleeting odor, as above with some very small sub-oolitic, trace sub-oomoldic, no shows or fluoresence

Stark Shale 4606 -1788

very gassy black carbonaceous shale

limestone, light gray, microcrystalline, fossiliferous, chalky, with light gray cryptocrystalline, sub-lithographic, some gray pelletal limestone, poor visble porosity, abundant chalk, no shows

as above

flood chalk with limestone, light gray fossiliferous, chalky, with cream oolitic to sub-oomoldic, scattered porosity, no show

grades to limestone, gray mottled, heavily weathered, chalky, some large clasts, some limestone weathered to almost chalk, abundant chalk, no shows

limestone, mottled gray, weathered chalky, fossiliferous to bioclastic,

shale gas

recycle

gas dying, jetting pit - mud diverted to run-around

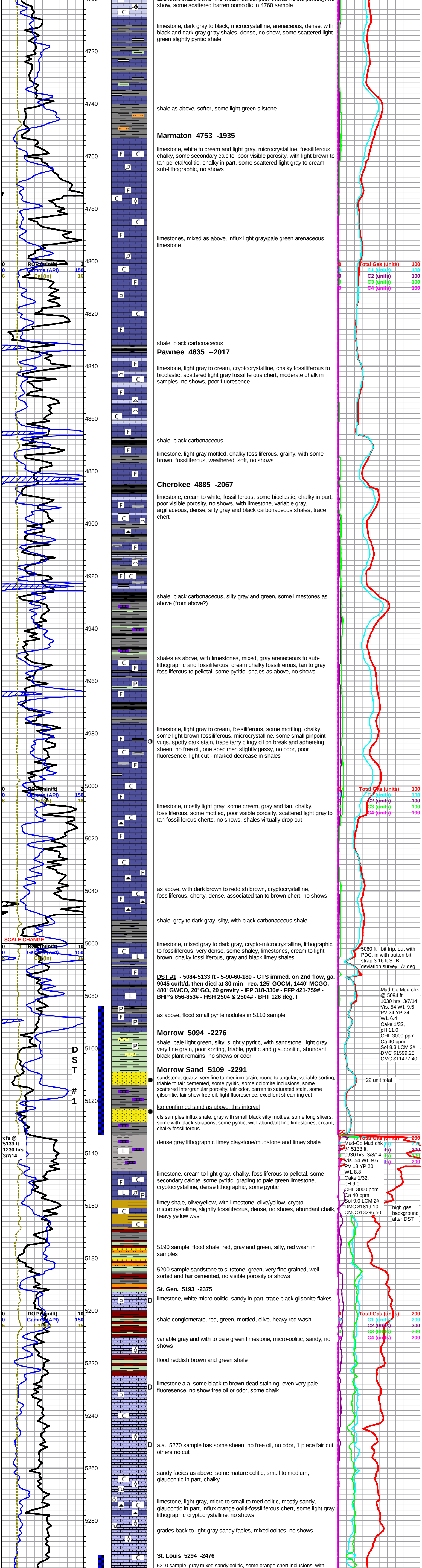
0 ROP (min/ft) 2
0 Gamma (API) 150
6 Cal (in) 16

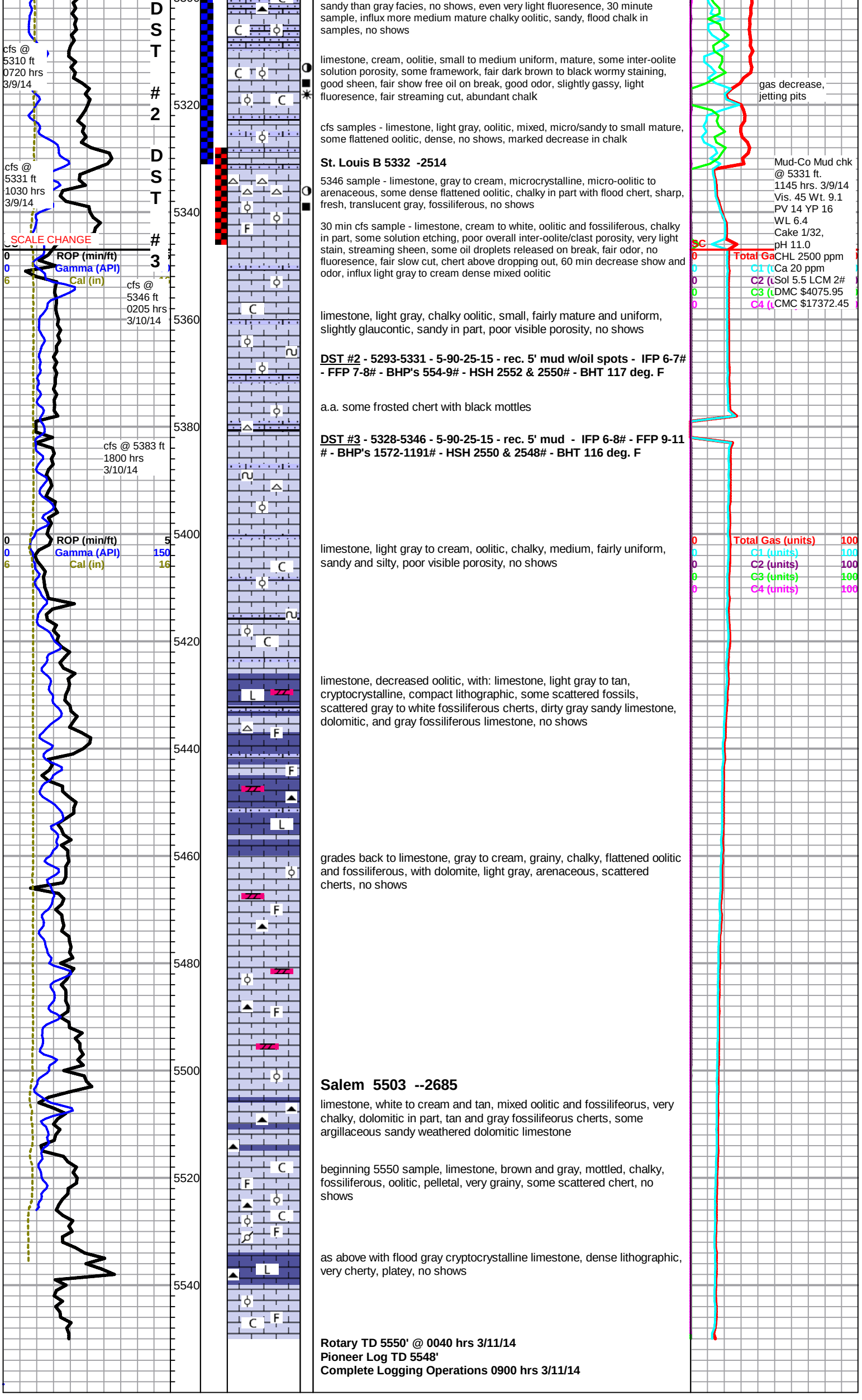
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100

4100 4120 4140 4160 4180 4200 4220 4240 4260 4280 4300 4320 4340 4360 4380 4400 4420 4440 4460 4480 4500 4520 4540 4560 4580 4600 4620 4640 4660 4680 4700

D G

data gap, geograph hung up


0
ROP (min/ft)
2
0
Gamma (API)
150
6
Cal (in)
16
4700
4720
4740
4760
4780
4800
4820
4840
4860
4880
4900
4920
4940
4960
4980
5000
5020
5040
5060
5080
5100
5120
5140
5160
5180
5200
5220
5240
5260
5280
5300
SCALE CHANGE
0
ROP (min/ft)
10
0
Gamma (API)
150
6
Cal (in)
16
DST #1
cfs @ 5133 ft 1230 hrs 3/7/14
C
F
P
L
D
limestone, dark gray to black, microcrystalline, arenaceous, dense, with black and dark gray gritty shales, dense, no show, some scattered light green slightly pyritic shale
shale as above, softer, some light green silstone
Marmaton 4753 -1935
limestone, white to cream and light gray, microcrystalline, fossiliferous, chalky, some secondary calcite, poor visible porosity, with light brown to tan pelletal/oolitic, chalky in part, some scattered light gray to cream sub-lithographic, no shows
limestones, mixed as above, influx light gray/pale green arenaceous limestone
shale, black carbonaceous
Pawnee 4835 --2017
limestone, light gray to cream, cryptocrystalline, chalky fossiliferous to bioclastic, scattered light gray fossiliferous chert, moderate chalk in samples, no shows, poor fluoresence
shale, black carbonaceous
limestone, light gray mottled, chalky fossiliferous, grainy, with some brown, fossiliferous, weathered, soft, no shows
Cherokee 4885 -2067
limestone, cream to white, fossiliferous, some bioclastic, chalky in part, poor visible porosity, no shows, with limestone, variable gray, argillaceous, dense, silty gray and black carbonaceous shales, trace chert
shale, black carbonaceous, silty gray and green, some limestones as above (from above?)
shales as above, with limestones, mixed, gray arenaceous to sub-lithographic and fossiliferous, cream chalky fossiliferous, tan to gray fossiliferous to pelletal, some pyritic, shales as above, no shows
limestone, light gray to cream, fossiliferous, some mottling, chalky, some light brown fossiliferous, microcrystalline, some small pinpoint vugs, spotty dark stain, trace tarry clingy oil on break and adhereing sheen, no free oil, one specimen slightly gassy, no odor, poor fluoresence, light cut - marked decrease in shales
limestone, mostly light gray, some cream, gray and tan, chalky, fossiliferous, some mottled, poor visible porosity, scattered light gray to tan fossiliferous cherts, no shows, shales virtually drop out
as above, with dark brown to reddish brown, cryptocrystalline, fossiliferous, cherty, dense, associated tan to brown chert, no shows
shale, gray to dark gray, silty, with black carbonaceous shale
limestone, mixed gray to dark gray, crypto-microcrystalline, lithographic to fossiliferous, very dense, some shaley, limestones, cream to light brown, chalky fossiliferous, gray and black limey shales
DST #1 - 5084-5133 ft - 5-90-60-180 - GTS immed. on 2nd flow, ga. 9045 cu/ft/d, then died at 30 min - rec. 125' GOCM, 1440' MCGO, 480' GWCO, 20' GO, 20 gravity - IFP 318-330# - FFP 421-759# - BHP's 856-853# - HSH 2504 & 2504# - BHT 126 deg. F
as above, flood small pyrite nodules in 5110 sample
Morrow 5094 -2276
shale, pale light green, silty, slightly pyritic, with sandstone, light gray, very fine grain, poor sorting, friable, pyritic and glauconitic, abundant black plant remains, no shows or odor
Morrow Sand 5109 -2291
sandstone, quartz, very fine to medium grain, round to angular, variable sorting, friable to fair cemented, some pyritic, some dolomite inclusions, some scattered intergranular porosity, fair odor, barren to saturated stain, some gilsonitic, fair show free oil, light fluoresence, excellent streaming cut
log confirmed sand as above: this interval
cfs samples influx shale, gray with small black silty mottles, some long slivers, some with black striations, some pyritic, with abundant fine limestones, cream, chalky fossiliferous
dense gray lithographic limey claystone/mudstone and limey shale
limestone, cream to light gray, chalky, fossiliferous to pelletal, some secondary calcite, some pyritic, grading to pale green limestone, cryptocrystalline, dense lithographic, some pyritic
limey shale, olive/yellow, with limestone, olive/yellow, crypto-micorcrystalline, slightly fossilifeorus, dense, no shows, abundant chalk, heavy yellow wash
5190 sample, flood shale, red, gray and green, silty, red wash in samples
5200 sample sandstone to siltstone, green, very fine grained, well sorted and fair cemented, no visible porosity or shows
St. Gen. 5193 -2375
limestone, white micro oolitic, sandy in part, trace black gilsonite flakes
shale conglomerate, red, green, mottled, olive, heavy red wash
variable gray and with to pale green limestone, micro-oolitic, sandy, no shows
flood reddish brown and green shale
limestone a.a. some black to brown dead staining, even very pale fluoresence, no show free oil or odor, some chalk
a.a. 5270 sample has some sheen, no free oil, no odor, 1 piece fair cut, others no cut
sandy facies as above, some mature oolitic, small to medium, glauconitic in part, chalky
limestone, light gray, micro to small to med oolitic, mostly sandy, glaucontic in part, influx orange ooliti-fossiliferous chert, some light gray lithographic cryptocrystalline, no shows
grades back to light gray sandy facies, mixed oolites, no shows
St. Louis 5294 -2476
5310 sample, gray mixed sandy oolitic, some orange chert inclusions, with limestone, light orange, mixed oolite size, some medium mature, chalky, less
0
Total Gas (units)
100
C1 (units)
100
C2 (units)
100
C3 (units)
100
C4 (units)
100
200
22 unit total
5060 ft - bit trip, out with PDC, in with button bit, strap 3.16 ft STB, deviation survey 1/2 deg.
Mud-Co Mud chk @ 5094 ft.
1030 hrs. 3/7/14
Vis. 54 Wt. 9.5
PV 24 YP 24
WL 6.4
Cake 1/32,
pH 11.0
CHL 3000 ppm
Ca 40 ppm
Sol 8.3 LCM 2#
DMC $1599.25
CMC $11477,40
SC
Mud-Co Mud chk @ 5133 ft.
0930 hrs. 3/8/14
Vis. 54 Wt. 9.6
PV 18 YP 20
WL 8.8
Cake 1/32,
pH 9.0
CHL 3000 ppm
Ca 40 ppm
Sol 9.0 LCM 2#
DMC $1819.10
CMC $13296.50
high gas background after DST



sandy than gray facies, no shows, even very light fluoresence, 30 minute sample, influx more medium mature chalky oolitic, sandy, flood chalk in samples, no shows

limestone, cream, oolitie, small to medium uniform, mature, some inter-oolite solution porosity, some framework, fair dark brown to black wormy staining, good sheen, fair show free oil on break, good odor, slightly gassy, light fluoresence, fair streaming cut, abundant chalk

gas decrease, jetting pits

cfs samples - limestone, light gray, oolitic, mixed, micro/sandy to small mature, some flattened oolitic, dense, no shows, marked decrease in chalk

St. Louis B 5332 -2514

5346 sample - limestone, gray to cream, microcrystalline, micro-oolitic to arenaceous, some dense flattened oolitic, chalky in part with flood chert, sharp, fresh, translucent gray, fossiliferous, no shows

Mud-Co Mud chk @ 5331 ft. 1145 hrs. 3/9/14 Vis. 45 Wt. 9.1 PV 14 YP 16 WL 6.4 Cake 1/32, pH 11.0 CHL 2500 ppm Ca 20 ppm Sol 5.5 LCM 2# DMC $4075.95 CMC $17372.45

30 min cfs sample - limestone, cream to white, oolitic and fossiliferous, chalky in part, some solution etching, poor overall inter-oolite/clast porosity, very light stain, streaming sheen, some oil droplets released on break, fair odor, no fluoresence, fair slow cut, chert above dropping out, 60 min decrease show and odor, influx light gray to cream dense mixed oolitic

limestone, light gray, chalky oolitic, small, fairly mature and uniform, slightly glaucontic, sandy in part, poor visible porosity, no shows

<u>DST #2</u> - 5293-5331 - 5-90-25-15 - rec. 5' mud w/oil spots - IFP 6-7# - FFP 7-8# - BHP's 554-9# - HSH 2552 & 2550# - BHT 117 deg. F

a.a. some frosted chert with black mottles

<u>DST #3</u> - 5328-5346 - 5-90-25-15 - rec. 5' mud - IFP 6-8# - FFP 9-11 # - BHP's 1572-1191# - HSH 2550 & 2548# - BHT 116 deg. F

limestone, light gray to cream, oolitic, chalky, medium, fairly uniform, sandy and silty, poor visible porosity, no shows

limestone, decreased oolitic, with: limestone, light gray to tan, cryptocrystalline, compact lithographic, some scattered fossils, scattered gray to white fossiliferous cherts, dirty gray sandy limestone, dolomitic, and gray fossiliferous limestone, no shows

grades back to limestone, gray to cream, grainy, chalky, flattened oolitic and fossiliferous, with dolomite, light gray, arenaceous, scattered cherts, no shows

Salem 5503 --2685

limestone, white to cream and tan, mixed oolitic and fossilifeorus, very chalky, dolomitic in part, tan and gray fossilifeorus cherts, some argillaceous sandy weathered dolomitic limestone

beginning 5550 sample, limestone, brown and gray, mottled, chalky, fossiliferous, oolitic, pelletal, very grainy, some scattered chert, no shows

as above with flood gray cryptocrystalline limestone, dense lithographic, very cherty, platey, no shows

Rotary TD 5550' @ 0040 hrs 3/11/14
Pioneer Log TD 5548'
Complete Logging Operations 0900 hrs 3/11/14