KOLAR Document ID: 1418862

CORRECTION #1

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 # 30742
Name: Palomino Petroleum, Inc.
Address 1: 4924 SE 84TH ST
Address 2:
City: NEWTON State: KS Zip: 67114 + 8827
Contact Person: K. Robert Watchous
Phone: (316) 799-1000
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Andrew Stenzel
Purchaser: NCRA

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 #:

01/15/2015 Spud Date or Recompletion Date
01/28/2015 Date Reached TD
02/16/2015 Completion Date or Recompletion Date

API No.: 15-109-21383-00-00
Spot Description:
SE - NW - NE - NW Sec. 30 Twp. 15 S. R. 35 ☐ East ☑ West
605 Feet from ☑ North / ☐ South Line of Section
1710 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Logan
Lease Name: Harold Michaelis Family Trust Well #: 1
Field Name: None (Wildcat)
Producing Formation: Altamont A, B
Elevation: Ground: 3234 Kelly Bushing: 3239
Total Vertical Depth: 4923 Plug Back Total Depth: 4866
Amount of Surface Pipe Set and Cemented at: 217 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2510 Feet
If Alternate II completion, cement circulated from: 2510
feet depth to: 0 w/ 220 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 0 ppm Fluid volume: 0 bbls
Dewatering method used: Evaporated
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: 04/08/2015
☑ **Confidential Release Date:** 04/07/2017
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 08/20/2018

KOLAR Document ID: 1418862

CORRECTION #1

Page Two

Operator Name: Palomino Petroleum, Inc. Lease Name: Harold Michaelis Family Trust Well #: 1

Sec. 30 Twp. 15 S. R. 35 ☐ East ☑ West County: Logan

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 *(Attach Additional Sheets)*	☑ Yes	☐ No	☐ Log Formation (Top), Depth and Datum ☐ Sample
Samples Sent to Geological Survey	☐ Yes	☑ No	Name: Attached Top: Attached Datum: Attached
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	

List All E. Logs Run:
Attached

CASING RECORD ☑ New ☐ 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
Surface	12.250	8.6250	23	217	Common	165	2% gel, 3% c.c.
Production	7.8750	5.50	17	4921	SMD/EA-2	195	500 gal. mud flush with add. followed by :

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 2/20/2015	Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*					
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	
	85.68		0			

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:	
		Top	Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	4409	4440

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	4409	4413			1000 gal. 15% NE
4	4435	4440			250 gal. 15% MCA
					750 gal. 20% NE

TUBING RECORD: Size: 2.8750 Set At: 4874 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	Harold Michaelis Family Trust 1
Doc ID	1418862

All Electric Logs Run

Dual Receiver Cement Bond
Microresistivity
Dual Compensated Porosity
Dual Induction
Computer Processed Interpretation

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	Harold Michaelis Family Trust 1
Doc ID	1418862

Tops

Name	Top	Datum
Anhy.	2514	(+725)
Base Ahny.	2532	(+707)
Topeka	3722	(-483)
Heebner	3854	(-715)
Toronto	3978	(-739)
Lansing	4008	(-769)
Muncie Creek	4174	(-935)
BKC	4350	(-1111)
Marmaton	4404	(-1165)
Pawnee	4480	(-1241)
Ft. Scott	4521	(-1282)
Cherokee Sh.	4536	(-1297)
Johnson	4628	(-1389)
Morrow Sh.	4675	(-1436)
Morrow Sd.	4750	(-1511)
Miss.	4773	(-1534)
LTD	4923	(-1684)

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	Harold Michaelis Family Trust 1
Doc ID	1418862

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	8.6250	23	217	Common	165	2% gel, 3% c.c.
Production	7.8750	5.50	17	4921	SMD/EA-2	195	500 gal. mud flush with add. followed by 20 bbls of KCL water

Confidentiality Requested:
☑ Yes ☐ No

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1248401

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

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WELL HISTORY - DESCRIPTION OF WELL & LEASE

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Address 2:
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Contact Person: K. Robert Watchous
Phone: (316) 799-1000
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Andrew Stenzel
Purchaser: NCRA

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover

☑ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ 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 ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

01/15/2015	01/28/2015	02/16/2015
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-109-21383-00-00
Spot Description:
SE - NW - NE - NW Sec. 30 Twp. 15 S. R. 35 ☐ East ☑ West
605 Feet from ☑ North / ☐ South Line of Section
1710 Feet from ☐ East / ☑ West Line of Section
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☐ NE ☑ NW ☐ SE ☐ SW
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Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Logan
Lease Name: Harold Michaelis Family Trust Well #: 1
Field Name: None (Wildcat)
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Elevation: Ground: 3234 Kelly Bushing: 3239
Total Vertical Depth: 4923 Plug Back Total Depth: 4866
Amount of Surface Pipe Set and Cemented at: 217 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2510 Feet
If Alternate II completion, cement circulated from: 2510
feet depth to: 0 w/ 220 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 0 ppm Fluid volume: 0 bbls
Dewatering method used: Evaporated
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: 04/08/2015
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 04/08/2015

Andrew Stenzel
Geologist

Home
(785) 798-3400

Ness City, Kansas

Cell
(785) 798-5977

WELLSITE GEOLOGIST'S REPORT

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	Harold Michaelis Family Trust #1		
Well Id:			
Location:	Sec. 30-15S-35W (Logan County)		
License Number:	15-109-21383	Region:	KANSAS
Spud Date:	1/15/15	Drilling Completed:	1/28/15
Surface Coordinates:	605' FNL & 1710' FWL		
Bottom Hole Coordinates:			
Ground Elevation (ft):	3234	K.B. Elevation (ft):	3239
Logged Interval (ft):	3500 To: TD	Total Depth (ft):	4925
Formation:			
Type of Drilling Fluid:	Mud-Co Chemical		

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Palomino Petroleum, Inc.
Address: 4924 SE 84th St.
Newton, KS 67114

GEOLOGIST

Name: Andrew Stenzel
Company: Petroleum Geologist
Address: 515 S. Franklin
Ness City, KS 67560

Misc. Info.

RIG: WW Drilling Rig #2

MUD: MUDCO
LOGS: Pioneer (CND, DIL, ML)
TESTER: Trilobite Testing

Formation Tops

Sample Tops		LogTops	
Anhy.	2516 (+723)	Anhy.	2514 (+725)
Base Anhy.	2533 (+706)	Base Anhy.	2532 (+707)
Topeka	3722 (-483)	Topeka	3722 (-483)
Heebner	3953 (-714)	Heebner	3954 (-715)
Toronto	3972 (-733)	Toronto	3978 (-739)
Lansing	4004 (-765)	Lansing	4008 (-769)
Muncie Cr	4187 (-948)	Muncie Cr	4174 (-935)
BKC	4348 (-1109)	BKC	4350 (-1111)
Marmaton	4415 (-1176)	Marmaton	4404 (-1165)
Pawnee	4475 (-1236)	Pawnee	4480 (-1241)
Ft. Scott	4521 (-1282)	Ft. Scott	4521 (-1282)

Lansing	4004 (-765)	Lansing	4008 (-769)
Muncie Cr	4187 (-948)	Muncie Cr	4174 (-935)
BKC	4348 (-1109)	BKC	4350 (-1111)
Marmaton	4415 (-1176)	Marmaton	4404 (-1165)
Pawnee	4475 (-1236)	Pawnee	4480 (-1241)
Ft. Scott	4521 (-1282)	Ft. Scott	4521 (-1282)
Cher. Sh.	4536 (-1297)	Cher. Sh	4536 (-1297)
Johnson	4622 (-1383)	Johnson	4628 (-1389)
Morrow Sh	4675 (-1436)	Morrow Sh	4675 (-1436)
Morrow Sd	4745 (-1506)	Morrow Sd	4750 (-1511)
Miss	4776 (-1537)	Miss	4773 (-1534)
RTD	4925 (-1686)	LTD	4923 (-1684)

Drilling Report

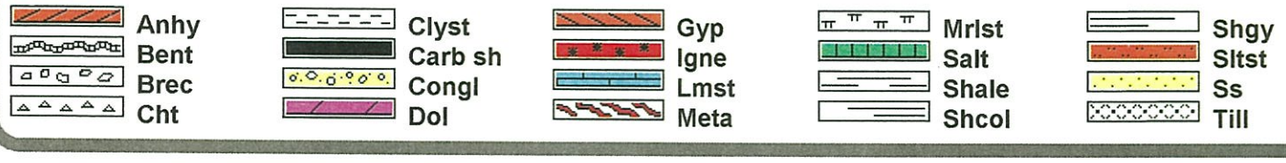
1/15/15 MIRU, ran surface casing.
1/16/15 Drilling @ 350'
1/17/15 Drilling @ 2255'
1/18/15 Drilling @ 3295'
1/19/15 Drilling @ 3845', DST 1
1/20/15 DST 2
1/21/15 DST 3, DST 4
1/22/15 DST 5, DST 6
1/23/15 DST 7, DST 8
1/24/15 Drilling @ 4340', DST 9
1/25/15 Tripping out for DST 10, DST 10
1/26/15 Circulating @ 4686', DST 11
1/27/15 Drilling @ 4843'
1/28/15 Ran production casing

Comments

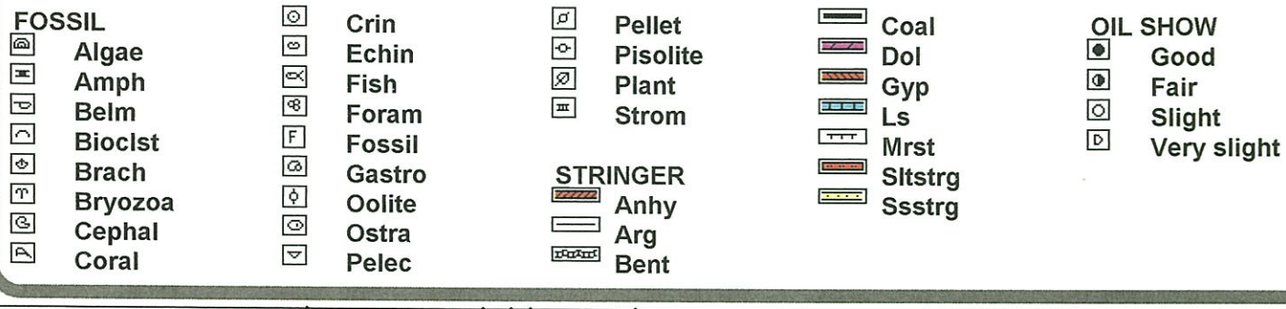
SURFACE Casing: Ran 5 jts new 8 5/8", 23# casing @ 217'.

PRODUCTION Casing: Ran 129 jts new 5 1/2", 17# casing set 4' off bottom @ 4291'.

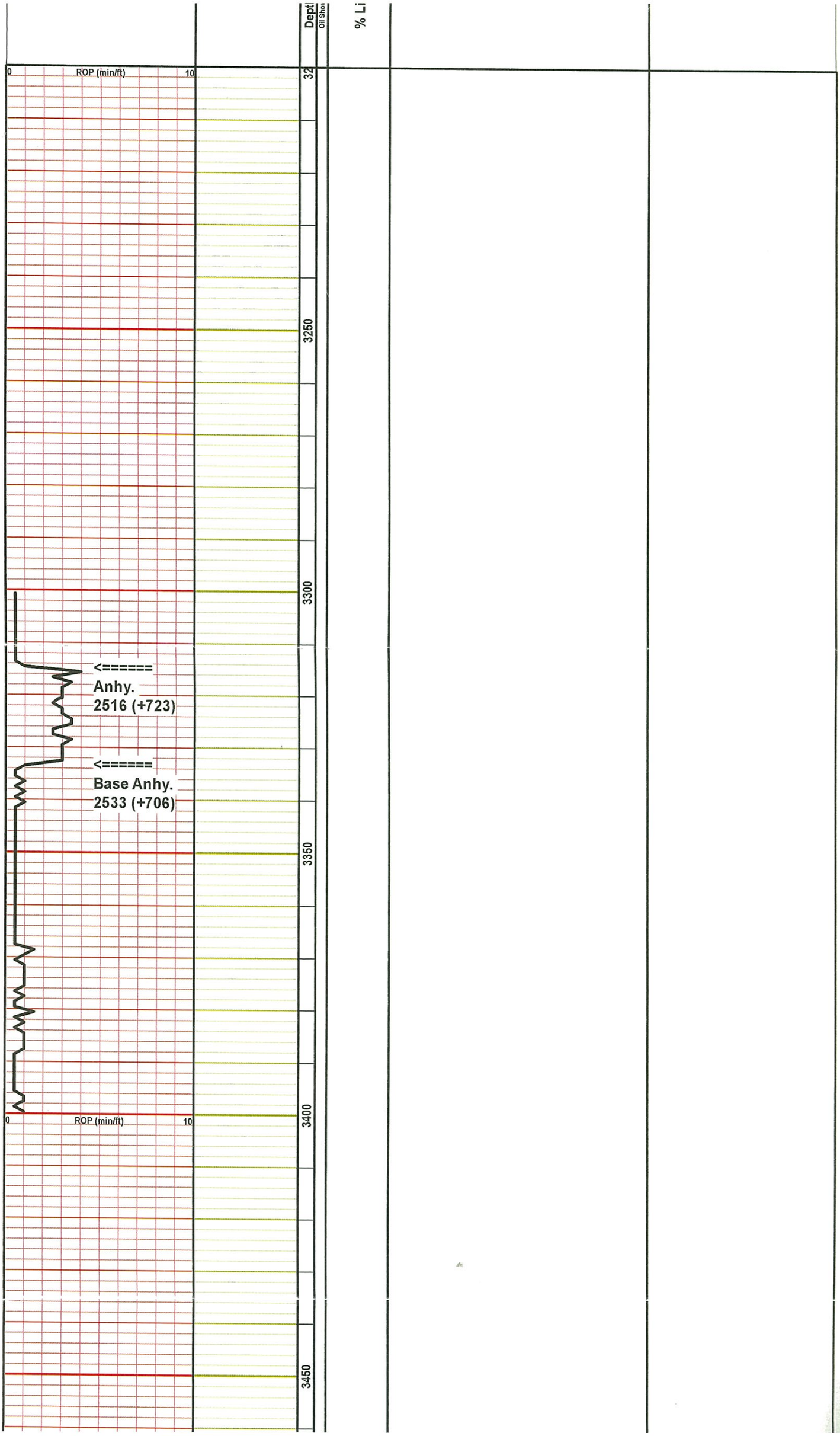
ROCK TYPES

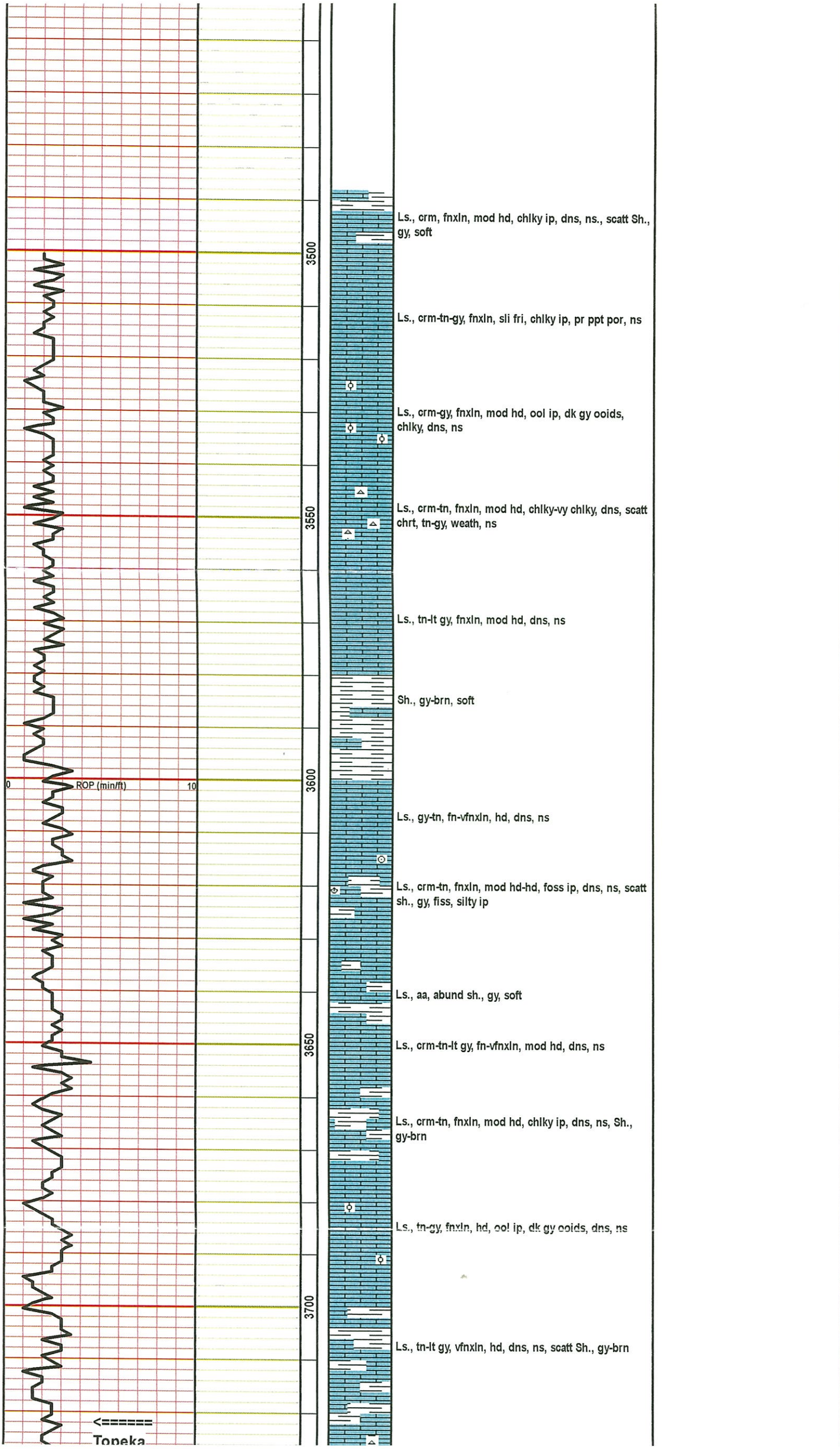


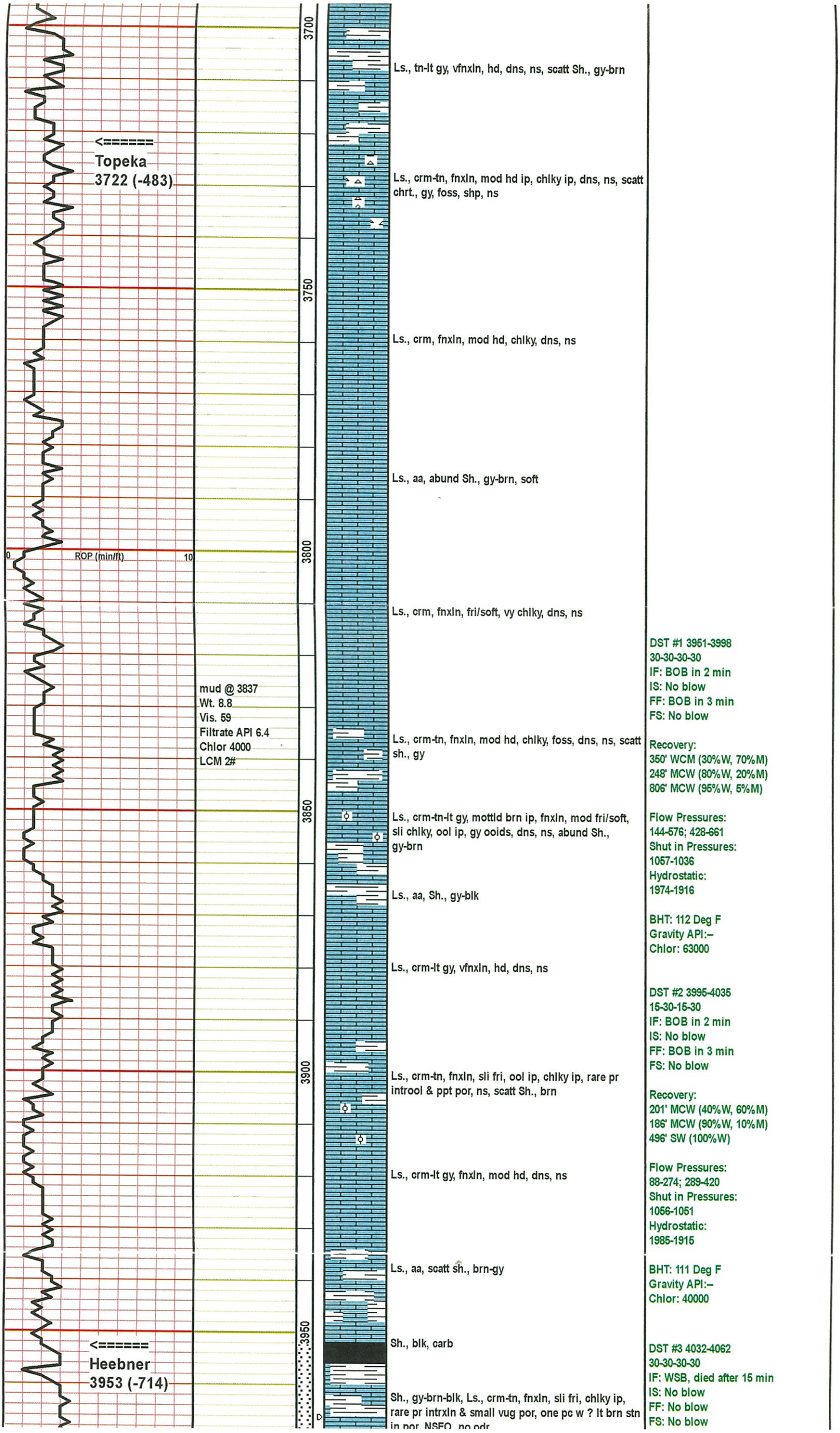
ACCESSORIES

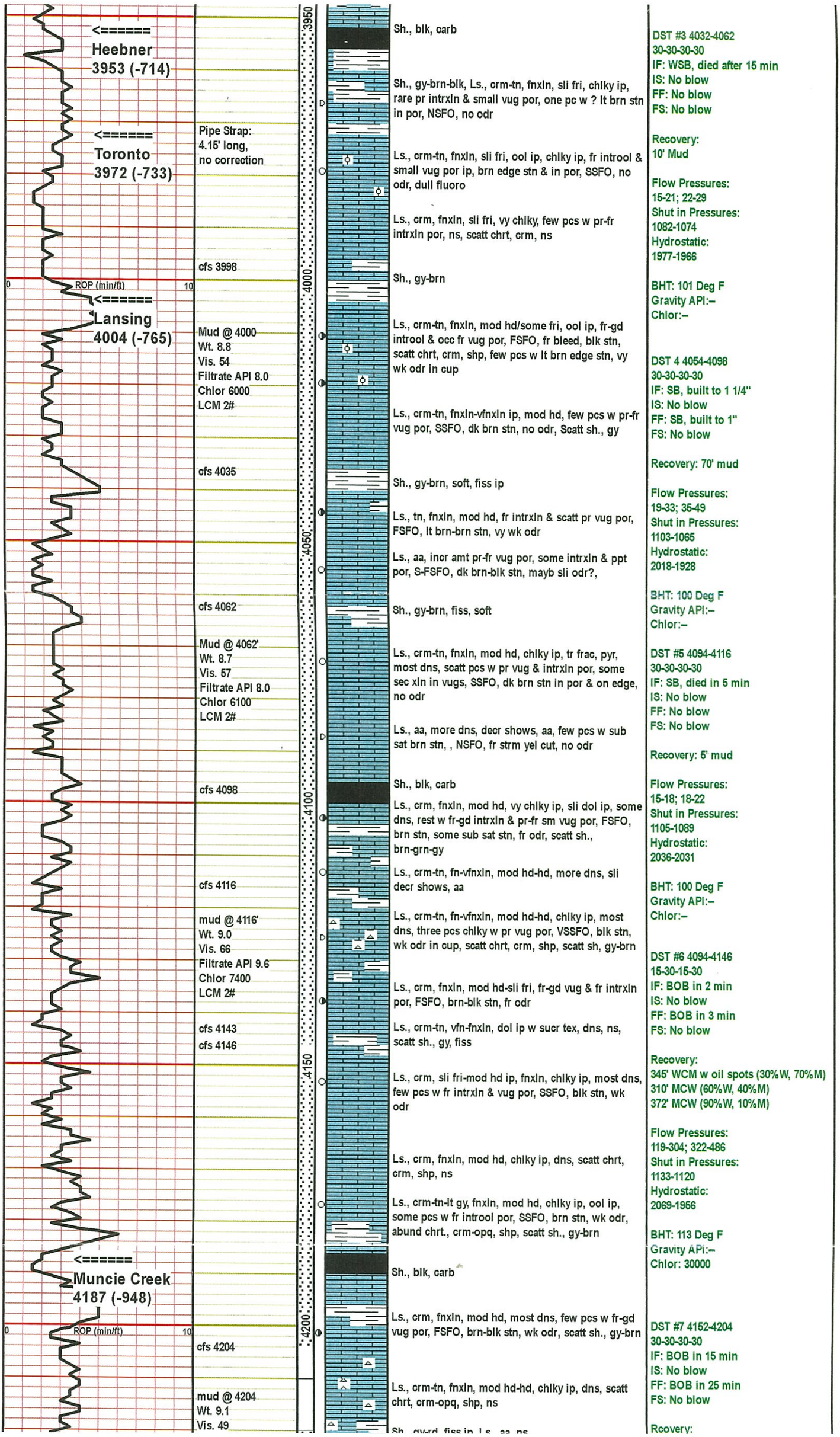


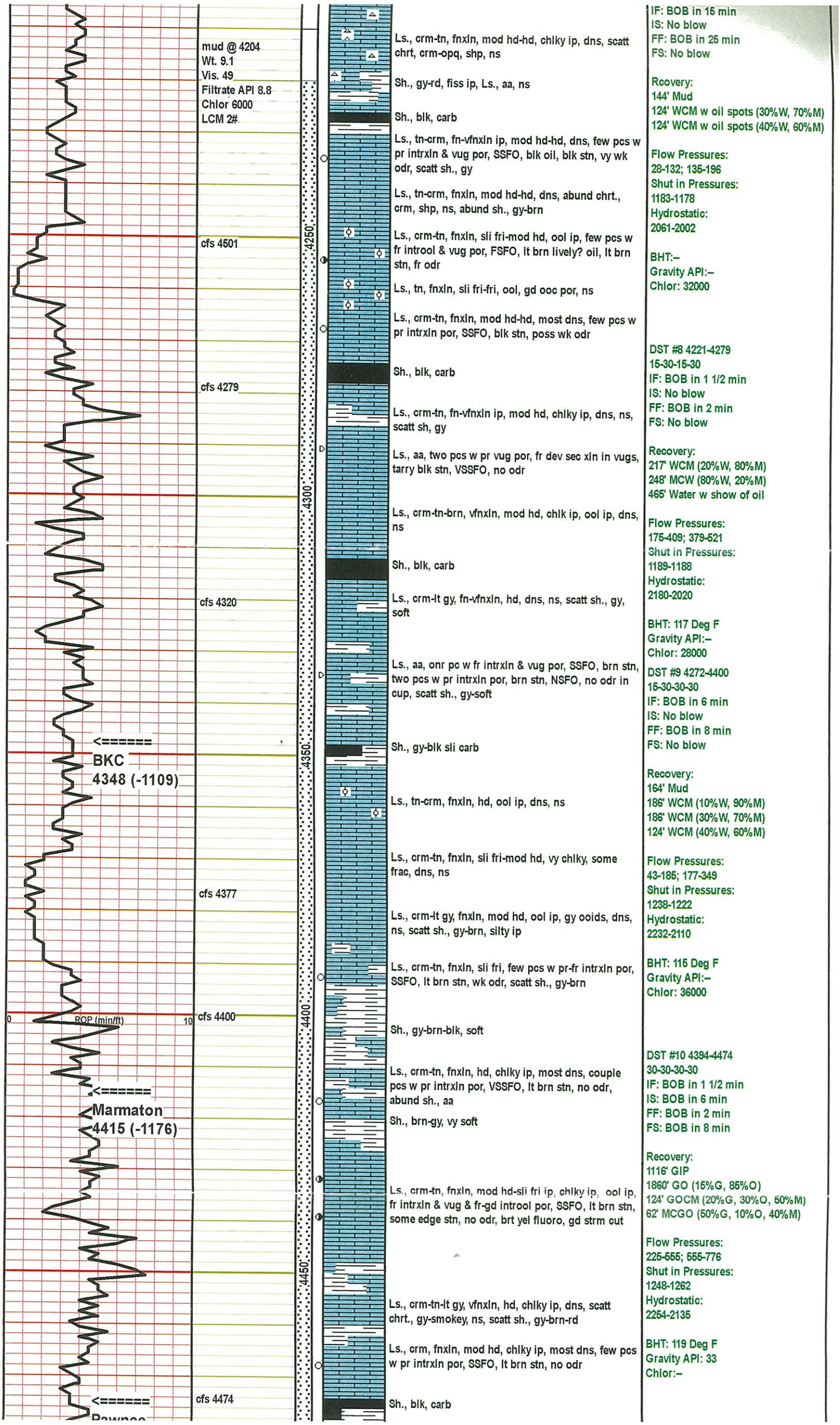
ROP ROP (min/ft)	Misc Info	Depth Oil Shows	% Lith ology	Geological Descriptions	DSTs
0 ROP (min/ft) 10		32			

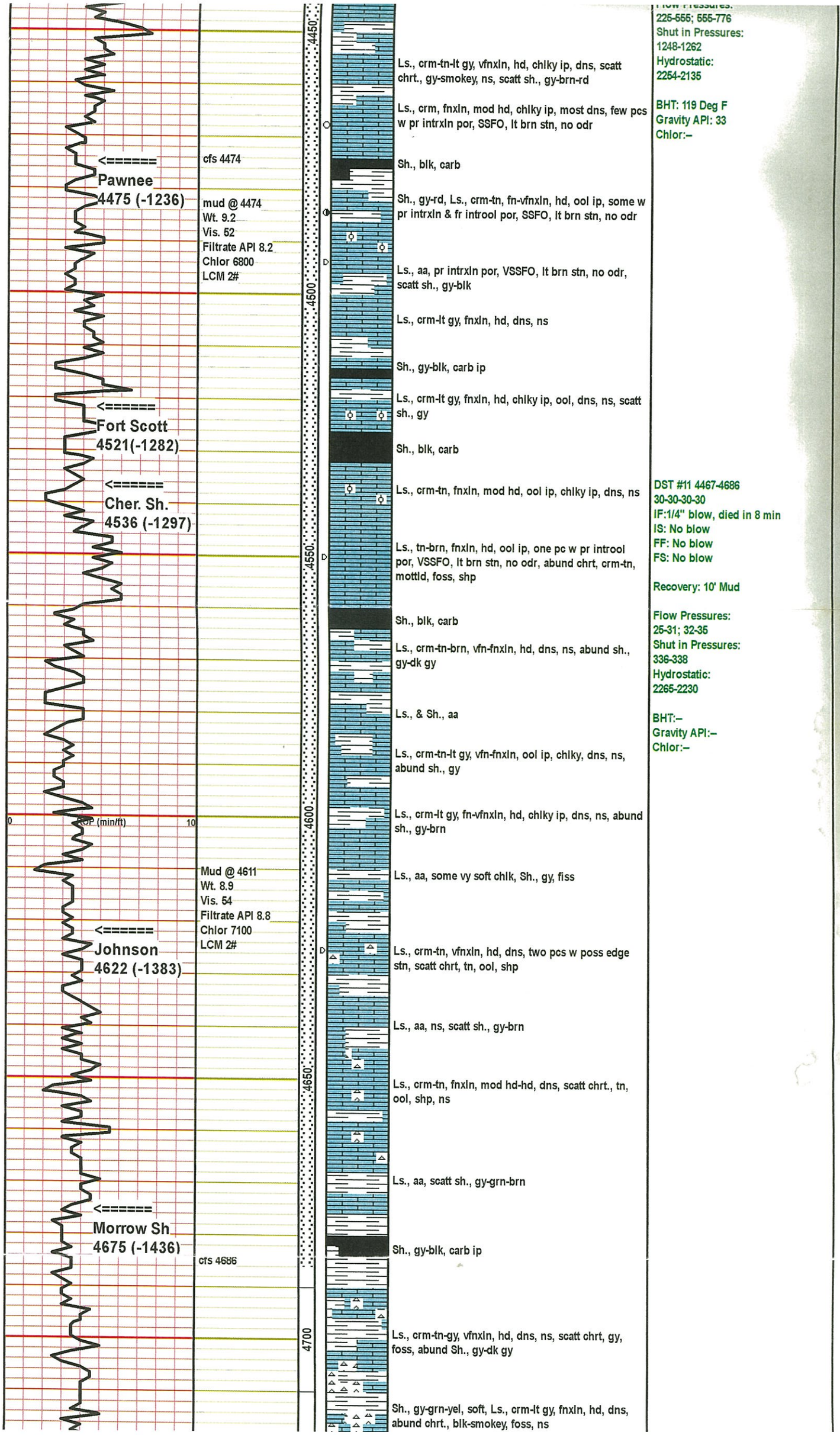

Depth
Oil Show
% Li
0
ROP (min/ft)
10
3250
3300
3350
3400
3450
<======
Anhy.
2516 (+723)
<======
Base Anhy.
2533 (+706)

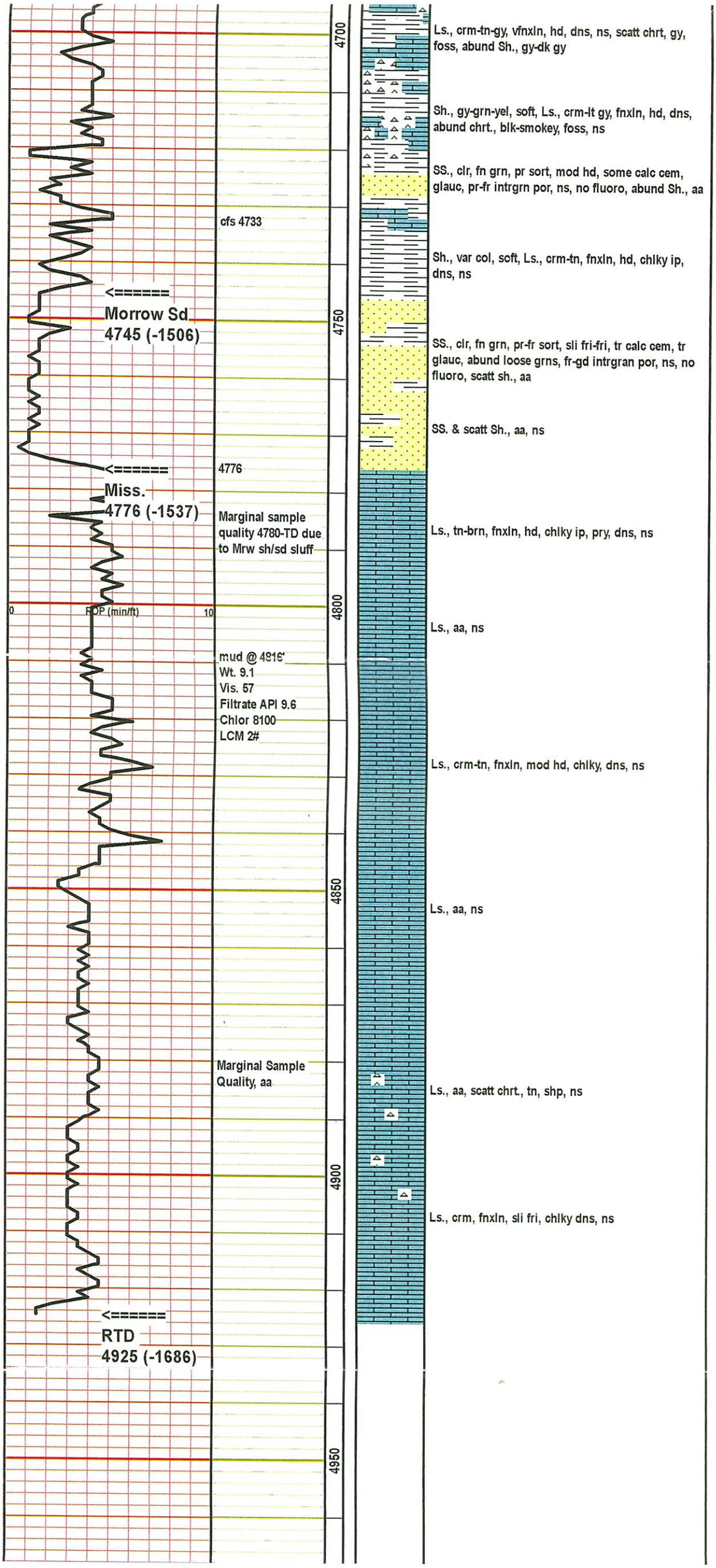

3500
3550
3600
3650
3700
0
ROP (min/ft)
10
<=======
Topeka
Ls., crm, fnxln, mod hd, chlky ip, dns, ns., scatt Sh., gy, soft
Ls., crm-tn-gy, fnxln, sli fri, chlky ip, pr ppt por, ns
Ls., crm-gy, fnxln, mod hd, ool ip, dk gy ooids, chlky, dns, ns
Ls., crm-tn, fnxln, mod hd, chlky-vy chlky, dns, scatt chrt, tn-gy, weath, ns
Ls., tn-lt gy, fnxln, mod hd, dns, ns
Sh., gy-brn, soft
Ls., gy-tn, fn-vfnxln, hd, dns, ns
Ls., crm-tn, fnxln, mod hd-hd, foss ip, dns, ns, scatt sh., gy, fiss, silty ip
Ls., aa, abund sh., gy, soft
Ls., crm-tn-lt gy, fn-vfnxln, mod hd, dns, ns
Ls., crm-tn, fnxln, mod hd, chlky ip, dns, ns, Sh., gy-brn
Ls., tn-gy, fnxln, hd, ool ip, dk gy ooids, dns, ns
Ls., tn-lt gy, vfnxln, hd, dns, ns, scatt Sh., gy-brn

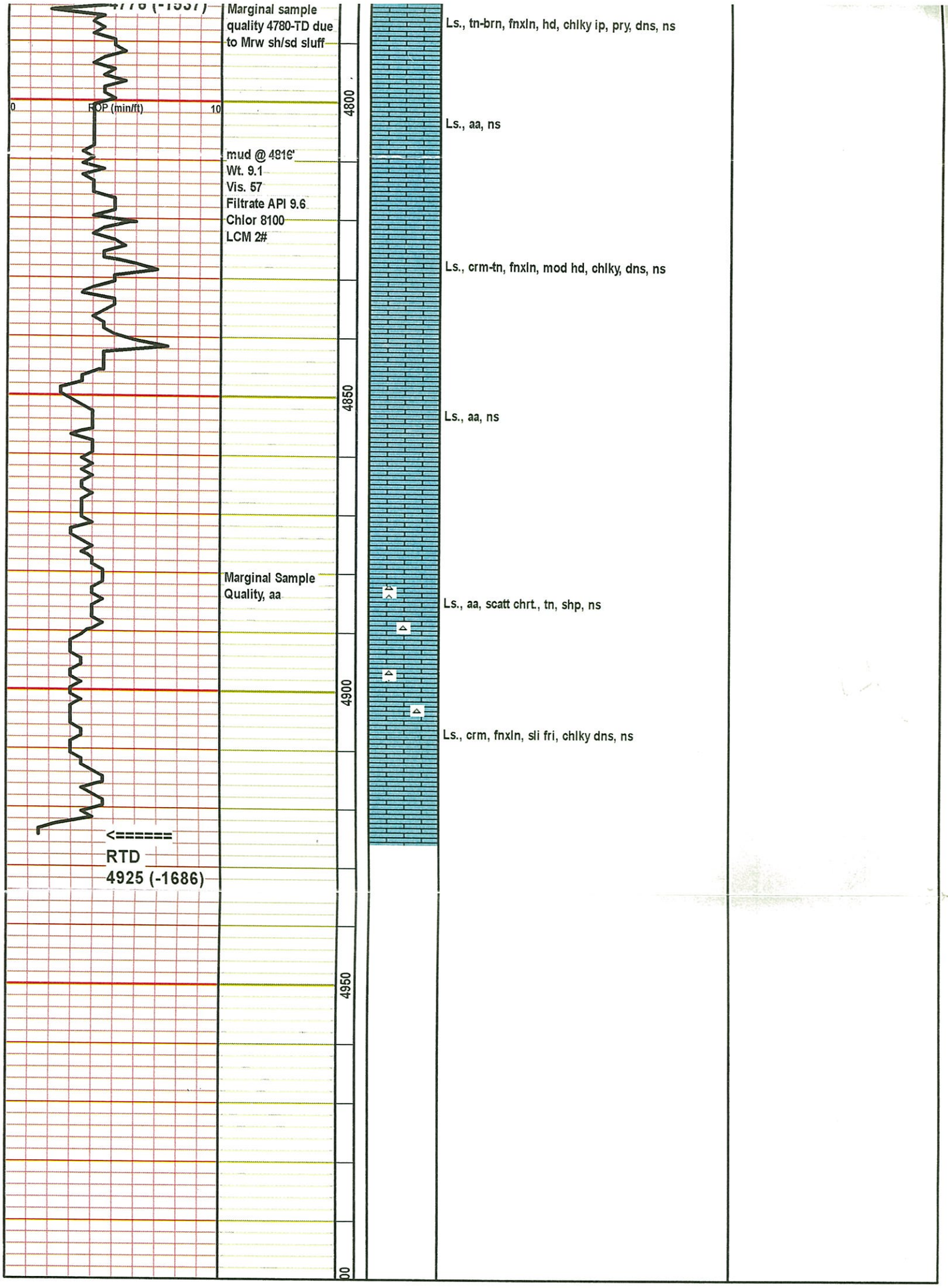

<======
Topeka
3722 (-483)
0
ROP (min/ft)
10
3700
3750
3800
3850
3900
3950
mud @ 3837
Wt. 8.8
Vis. 59
Filtrate API 6.4
Chlor 4000
LCM 2#
<======
Heebner
3953 (-714)
Ls., tn-lt gy, vfnxln, hd, dns, ns, scatt Sh., gy-brn
Ls., crm-tn, fnxln, mod hd ip, chlky ip, dns, ns, scatt chrt., gy, foss, shp, ns
Ls., crm, fnxln, mod hd, chlky, dns, ns
Ls., aa, abund Sh., gy-brn, soft
Ls., crm, fnxln, fri/soft, vy chlky, dns, ns
Ls., crm-tn, fnxln, mod hd, chlky, foss, dns, ns, scatt sh., gy
Ls., crm-tn-lt gy, mottld brn ip, fnxln, mod fri/soft, sli chlky, ool ip, gy ooids, dns, ns, abund Sh., gy-brn
Ls., aa, Sh., gy-blk
Ls., crm-lt gy, vfnxln, hd, dns, ns
Ls., crm-tn, fnxln, sli fri, ool ip, chlky ip, rare pr introol & ppt por, ns, scatt Sh., brn
Ls., crm-lt gy, fnxln, mod hd, dns, ns
Ls., aa, scatt sh., brn-gy
Sh., blk, carb
Sh., gy-brn-blk, Ls., crm-tn, fnxln, sli fri, chlky ip, rare pr intrxln & small vug por, one pc w ? lt brn stn in por, NSFO, no odr
DST #1 3951-3998
30-30-30-30
IF: BOB in 2 min
IS: No blow
FF: BOB in 3 min
FS: No blow
Recovery:
350' WCM (30%W, 70%M)
248' MCW (80%W, 20%M)
806' MCW (95%W, 5%M)
Flow Pressures:
144-576; 428-661
Shut in Pressures:
1057-1036
Hydrostatic:
1974-1916
BHT: 112 Deg F
Gravity API:--
Chlor: 63000
DST #2 3995-4035
15-30-15-30
IF: BOB in 2 min
IS: No blow
FF: BOB in 3 min
FS: No blow
Recovery:
201' MCW (40%W, 60%M)
186' MCW (90%W, 10%M)
496' SW (100%W)
Flow Pressures:
88-274; 289-420
Shut in Pressures:
1056-1051
Hydrostatic:
1985-1915
BHT: 111 Deg F
Gravity API:--
Chlor: 40000
DST #3 4032-4062
30-30-30-30
IF: WSB, died after 15 min
IS: No blow
FF: No blow
FS: No blow


<======
Heebner
3953 (-714)
<======
Toronto
3972 (-733)
Pipe Strap:
4.15' long,
no correction
cfs 3998
0 ROP (min/ft) 10
<======
Lansing
4004 (-765)
Mud @ 4000
Wt. 8.8
Vis. 54
Filtrate API 8.0
Chlor 6000
LCM 2#
cfs 4035
cfs 4062
Mud @ 4062'
Wt. 8.7
Vis. 57
Filtrate API 8.0
Chlor 6100
LCM 2#
cfs 4098
cfs 4116
mud @ 4116'
Wt. 9.0
Vis. 66
Filtrate API 9.6
Chlor 7400
LCM 2#
cfs 4143
cfs 4146
<======
Muncie Creek
4187 (-948)
0 ROP (min/ft) 10
cfs 4204
mud @ 4204
Wt. 9.1
Vis. 49
3950
4000
4050
4100
4150
4200
Sh., blk, carb
Sh., gy-brn-blk, Ls., crm-tn, fnxln, sli fri, chlky ip, rare pr intrxln & small vug por, one pc w ? lt brn stn in por, NSFO, no odr
Ls., crm-tn, fnxln, sli fri, ool ip, chlky ip, fr introol & small vug por ip, brn edge stn & in por, SSFO, no odr, dull fluoro
Ls., crm, fnxln, sli fri, vy chlky, few pcs w pr-fr intrxln por, ns, scatt chrt, crm, ns
Sh., gy-brn
Ls., crm-tn, fnxln, mod hd/some fri, ool ip, fr-gd introol & occ fr vug por, FSFO, fr bleed, blk stn, scatt chrt, crm, shp, few pcs w lt brn edge stn, vy wk odr in cup
Ls., crm-tn, fnxln-vfnxln ip, mod hd, few pcs w pr-fr vug por, SSFO, dk brn stn, no odr, Scatt sh., gy
Sh., gy-brn, soft, fiss ip
Ls., tn, fnxln, mod hd, fr intrxln & scatt pr vug por, FSFO, lt brn-brn stn, vy wk odr
Ls., aa, incr amt pr-fr vug por, some intrxln & ppt por, S-FSFO, dk brn-blk stn, mayb sli odr?,
Sh., gy-brn, fiss, soft
Ls., crm-tn, fnxln, mod hd, chlky ip, tr frac, pyr, most dns, scatt pcs w pr vug & intrxln por, some sec xln in vugs, SSFO, dk brn stn in por & on edge, no odr
Ls., aa, more dns, decr shows, aa, few pcs w sub sat brn stn, , NSFO, fr strm yel cut, no odr
Sh., blk, carb
Ls., crm, fnxln, mod hd, vy chlky ip, sli dol ip, some dns, rest w fr-gd intrxln & pr-fr sm vug por, FSFO, brn stn, some sub sat stn, fr odr, scatt sh., brn-grn-gy
Ls., crm-tn, fn-vfnxln, mod hd-hd, more dns, sli decr shows, aa
Ls., crm-tn, fn-vfnxln, mod hd-hd, chlky ip, most dns, three pcs chlky w pr vug por, VSSFO, blk stn, wk odr in cup, scatt chrt, crm, shp, scatt sh, gy-brn
Ls., crm, fnxln, mod hd-sli fri, fr-gd vug & fr intrxln por, FSFO, brn-blk stn, fr odr
Ls., crm-tn, vfn-fnxln, dol ip w sucr tex, dns, ns, scatt sh., gy, fiss
Ls., crm, sli fri-mod hd ip, fnxln, chlky ip, most dns, few pcs w fr intrxln & vug por, SSFO, blk stn, wk odr
Ls., crm, fnxln, mod hd, chlky ip, dns, scatt chrt, crm, shp, ns
Ls., crm-tn-lt gy, fnxln, mod hd, chlky ip, ool ip, some pcs w fr introol por, SSFO, brn stn, wk odr, abund chrt., crm-opq, shp, scatt sh., gy-brn
Sh., blk, carb
Ls., crm, fnxln, mod hd, most dns, few pcs w fr-gd vug por, FSFO, brn-blk stn, wk odr, scatt sh., gy-brn
Ls., crm-tn, fnxln, mod hd-hd, chlky ip, dns, scatt chrt, crm-opq, shp, ns
Sh., gy-rd, fiss ip, Ls., aa, ns
DST #3 4032-4062
30-30-30-30
IF: WSB, died after 15 min
IS: No blow
FF: No blow
FS: No blow
Recovery:
10' Mud
Flow Pressures:
15-21; 22-29
Shut in Pressures:
1082-1074
Hydrostatic:
1977-1966
BHT: 101 Deg F
Gravity API:–
Chlor:–
DST 4 4054-4098
30-30-30-30
IF: SB, built to 1 1/4"
IS: No blow
FF: SB, built to 1"
FS: No blow
Recovery: 70' mud
Flow Pressures:
19-33; 35-49
Shut in Pressures:
1103-1065
Hydrostatic:
2018-1928
BHT: 100 Deg F
Gravity API:–
Chlor:–
DST #5 4094-4116
30-30-30-30
IF: SB, died in 5 min
IS: No blow
FF: No blow
FS: No blow
Recovery: 5' mud
Flow Pressures:
15-18; 18-22
Shut in Pressures:
1105-1089
Hydrostatic:
2036-2031
BHT: 100 Deg F
Gravity API:–
Chlor:–
DST #6 4094-4146
15-30-15-30
IF: BOB in 2 min
IS: No blow
FF: BOB in 3 min
FS: No blow
Recovery:
345' WCM w oil spots (30%W, 70%M)
310' MCW (60%W, 40%M)
372' MCW (90%W, 10%M)
Flow Pressures:
119-304; 322-486
Shut in Pressures:
1133-1120
Hydrostatic:
2069-1956
BHT: 113 Deg F
Gravity API:–
Chlor: 30000
DST #7 4152-4204
30-30-30-30
IF: BOB in 15 min
IS: No blow
FF: BOB in 25 min
FS: No blow
Recovery:


mud @ 4204
Wt. 9.1
Vis. 49
Filtrate API 8.8
Chlor 6000
LCM 2#
cfs 4501
cfs 4279
cfs 4320
<======
BKC
4348 (-1109)
cfs 4377
0
ROP (min/ft)
10
cfs 4400
<======
Marmaton
4415 (-1176)
cfs 4474
<======
4250
4300
4350
4400
4450
Ls., crm-tn, fnxln, mod hd-hd, chlky ip, dns, scatt chrt, crm-opq, shp, ns
Sh., gy-rd, fiss ip, Ls., aa, ns
Sh., blk, carb
Ls., tn-crm, fn-vfnxln ip, mod hd-hd, dns, few pcs w pr intrxln & vug por, SSFO, blk oil, blk stn, vy wk odr, scatt sh., gy
Ls., tn-crm, fnxln, mod hd-hd, dns, abund chrt., crm, shp, ns, abund sh., gy-brn
Ls., crm-tn, fnxln, sli fri-mod hd, ool ip, few pcs w fr introol & vug por, FSFO, lt brn lively? oil, lt brn stn, fr odr
Ls., tn, fnxln, sli fri-fri, ool, gd ooc por, ns
Ls., crm-tn, fnxln, mod hd-hd, most dns, few pcs w pr intrxln por, SSFO, blk stn, poss wk odr
Sh., blk, carb
Ls., crm-tn, fn-vfnxln ip, mod hd, chlky ip, dns, ns, scatt sh, gy
Ls., aa, two pcs w pr vug por, fr dev sec xln in vugs, tarry blk stn, VSSFO, no odr
Ls., crm-tn-brn, vfnxln, mod hd, chlk ip, ool ip, dns, ns
Sh., blk, carb
Ls., crm-lt gy, fn-vfnxln, hd, dns, ns, scatt sh., gy, soft
Ls., aa, onr pc w fr intrxln & vug por, SSFO, brn stn, two pcs w pr intrxln por, brn stn, NSFO, no odr in cup, scatt sh., gy-soft
Sh., gy-blk sli carb
Ls., tn-crm, fnxln, hd, ool ip, dns, ns
Ls., crm-tn, fnxln, sli fri-mod hd, vy chlky, some frac, dns, ns
Ls., crm-lt gy, fnxln, mod hd, ool ip, gy ooids, dns, ns, scatt sh., gy-brn, silty ip
Ls., crm-tn, fnxln, sli fri, few pcs w pr-fr intrxln por, SSFO, lt brn stn, wk odr, scatt sh., gy-brn
Sh., gy-brn-blk, soft
Ls., crm-tn, fnxln, hd, chlky ip, most dns, couple pcs w pr intrxln por, VSSFO, lt brn stn, no odr, abund sh., aa
Sh., brn-gy, vy soft
Ls., crm-tn, fnxln, mod hd-sli fri ip, chlky ip, ool ip, fr intrxln & vug & fr-gd introol por, SSFO, lt brn stn, some edge stn, no odr, brt yel fluoro, gd strm cut
Ls., crm-tn-lt gy, vfnxln, hd, chlky ip, dns, scatt chrt., gy-smokey, ns, scatt sh., gy-brn-rd
Ls., crm, fnxln, mod hd, chlky ip, most dns, few pcs w pr intrxln por, SSFO, lt brn stn, no odr
Sh., blk, carb
IF: BOB in 15 min
IS: No blow
FF: BOB in 25 min
FS: No blow
Rcovery:
144' Mud
124' WCM w oil spots (30%W, 70%M)
124' WCM w oil spots (40%W, 60%M)
Flow Pressures:
28-132; 135-196
Shut in Pressures:
1183-1178
Hydrostatic:
2061-2002
BHT:–
Gravity API:–
Chlor: 32000
DST #8 4221-4279
15-30-15-30
IF: BOB in 1 1/2 min
IS: No blow
FF: BOB in 2 min
FS: No blow
Recovery:
217' WCM (20%W, 80%M)
248' MCW (80%W, 20%M)
465' Water w show of oil
Flow Pressures:
175-409; 379-521
Shut in Pressures:
1189-1188
Hydrostatic:
2180-2020
BHT: 117 Deg F
Gravity API:–
Chlor: 28000
DST #9 4272-4400
15-30-30-30
IF: BOB in 6 min
IS: No blow
FF: BOB in 8 min
FS: No blow
Recovery:
164' Mud
186' WCM (10%W, 90%M)
186' WCM (30%W, 70%M)
124' WCM (40%W, 60%M)
Flow Pressures:
43-185; 177-349
Shut in Pressures:
1238-1222
Hydrostatic:
2232-2110
BHT: 115 Deg F
Gravity API:–
Chlor: 36000
DST #10 4394-4474
30-30-30-30
IF: BOB in 1 1/2 min
IS: BOB in 6 min
FF: BOB in 2 min
FS: BOB in 8 min
Recovery:
1116' GIP
1860' GO (15%G, 85%O)
124' GOCM (20%G, 30%O, 50%M)
62' MCGO (50%G, 10%O, 40%M)
Flow Pressures:
225-555; 555-776
Shut in Pressures:
1248-1262
Hydrostatic:
2254-2135
BHT: 119 Deg F
Gravity API: 33
Chlor:–


<======
Pawnee
4475 (-1236)
<======
Fort Scott
4521(-1282)
<======
Cher. Sh.
4536 (-1297)
0
ROP (min/ft)
10
<======
Johnson
4622 (-1383)
<======
Morrow Sh
4675 (-1436)
4450
4500
4550
4600
4650
4700
cfs 4474
mud @ 4474
Wt. 9.2
Vis. 52
Filtrate API 8.2
Chlor 6800
LCM 2#
Mud @ 4611
Wt. 8.9
Vis. 54
Filtrate API 8.8
Chlor 7100
LCM 2#
cfs 4686
Ls., crm-tn-lt gy, vfnxln, hd, chlky ip, dns, scatt chrt., gy-smokey, ns, scatt sh., gy-brn-rd
Ls., crm, fnxln, mod hd, chlky ip, most dns, few pcs w pr intrxln por, SSFO, lt brn stn, no odr
Sh., blk, carb
Sh., gy-rd, Ls., crm-tn, fn-vfnxln, hd, ool ip, some w pr intrxln & fr introol por, SSFO, lt brn stn, no odr
Ls., aa, pr intrxln por, VSSFO, lt brn stn, no odr, scatt sh., gy-blk
Ls., crm-lt gy, fnxln, hd, dns, ns
Sh., gy-blk, carb ip
Ls., crm-lt gy, fnxln, hd, chlky ip, ool, dns, ns, scatt sh., gy
Sh., blk, carb
Ls., crm-tn, fnxln, mod hd, ool ip, chlky ip, dns, ns
Ls., tn-brn, fnxln, hd, ool ip, one pc w pr introol por, VSSFO, lt brn stn, no odr, abund chrt, crm-tn, mottld, foss, shp
Sh., blk, carb
Ls., crm-tn-brn, vfn-fnxln, hd, dns, ns, abund sh., gy-dk gy
Ls., & Sh., aa
Ls., crm-tn-lt gy, vfn-fnxln, ool ip, chlky, dns, ns, abund sh., gy
Ls., crm-lt gy, fn-vfnxln, hd, chlky ip, dns, ns, abund sh., gy-brn
Ls., aa, some vy soft chlk, Sh., gy, fiss
Ls., crm-tn, vfnxln, hd, dns, two pcs w poss edge stn, scatt chrt, tn, ool, shp
Ls., aa, ns, scatt sh., gy-brn
Ls., crm-tn, fnxln, mod hd-hd, dns, scatt chrt., tn, ool, shp, ns
Ls., aa, scatt sh., gy-grn-brn
Sh., gy-blk, carb ip
Ls., crm-tn-gy, vfnxln, hd, dns, ns, scatt chrt, gy, foss, abund Sh., gy-dk gy
Sh., gy-grn-yel, soft, Ls., crm-lt gy, fnxln, hd, dns, abund chrt., blk-smokey, foss, ns
Flow Pressures:
225-555; 555-776
Shut in Pressures:
1248-1262
Hydrostatic:
2254-2135
BHT: 119 Deg F
Gravity API: 33
Chlor:–
DST #11 4467-4686
30-30-30-30
IF:1/4" blow, died in 8 min
IS: No blow
FF: No blow
FS: No blow
Recovery: 10' Mud
Flow Pressures:
25-31; 32-35
Shut in Pressures:
336-338
Hydrostatic:
2265-2230
BHT:–
Gravity API:–
Chlor:–


4700
4750
4800
4850
4900
4950
cfs 4733
<======
Morrow Sd
4745 (-1506)
<======
4776
Miss.
4776 (-1537)
Marginal sample quality 4780-TD due to Mrw sh/sd sluff
0
ROP (min/ft)
10
mud @ 4916'
Wt. 9.1
Vis. 57
Filtrate API 9.6
Chlor 8100
LCM 2#
Marginal Sample Quality, aa
<======
RTD
4925 (-1686)
Ls., crm-tn-gy, vfnxln, hd, dns, ns, scatt chrt, gy, foss, abund Sh., gy-dk gy
Sh., gy-grn-yel, soft, Ls., crm-lt gy, fnxln, hd, dns, abund chrt., blk-smokey, foss, ns
SS., clr, fn grn, pr sort, mod hd, some calc cem, glauc, pr-fr intrgrn por, ns, no fluoro, abund Sh., aa
Sh., var col, soft, Ls., crm-tn, fnxln, hd, chlky ip, dns, ns
SS., clr, fn grn, pr-fr sort, sli fri-fri, tr calc cem, tr glauc, abund loose grns, fr-gd intrgran por, ns, no fluoro, scatt sh., aa
SS. & scatt Sh., aa, ns
Ls., tn-brn, fnxln, hd, chlky ip, pry, dns, ns
Ls., aa, ns
Ls., crm-tn, fnxln, mod hd, chlky, dns, ns
Ls., aa, ns
Ls., aa, scatt chrt., tn, shp, ns
Ls., crm, fnxln, sli fri, chlky dns, ns


4776 (-1537)
Marginal sample quality 4780-TD due to Mrw sh/sd sluff
0
ROP (min/ft)
10
4800
mud @ 4816'
Wt. 9.1
Vis. 57
Filtrate API 9.6
Chlor 8100
LCM 2#
4850
Marginal Sample Quality, aa
4900
<======
RTD
4925 (-1686)
4950
Ls., tn-brn, fnxln, hd, chlky ip, pry, dns, ns
Ls., aa, ns
Ls., crm-tn, fnxln, mod hd, chlky, dns, ns
Ls., aa, ns
Ls., aa, scatt chrt., tn, shp, ns
Ls., crm, fnxln, sli fri, chlky dns, ns

Summary of Changes

Lease Name and Number: Harold Michaelis Family Trust 1

API/Permit #: 15-109-21383-00-00

Doc ID: 1418862

Correction Number: 1

Approved By: Karen Ritter

Field Name	Previous Value	New Value
Approved By	NAOMI JAMES	Karen Ritter
Approved Date	04/08/2015	08/20/2018
Geologist Report / Mud Logs?		Yes
Method Of Completion - Perf	No	Yes
Perf_acid1		1000 gal. 15% NE
Perf_acid2		250 gal. 15% MCA
Perf_acid3		750 gal. 20% NE
Perf_perf1bottom		4413
Perf_perf1top		4409
Perf_perf2bottom		4440

Summary of changes for correction 1 continued

Field Name	Previous Value	New Value
Perf_perf2top		4435
Perf_shots1		4
Perf_shots2		4
PerforationsRevised		[[dataGrid]]
Producing Formation	Marmaton	Altamont A, B
Production Interval #1		4409
Production Interval #3		4440
Tubing Packer At	4385	

Summary of Attachments

Lease Name and Number: Harold Michaelis Family Trust 1

API: 15-109-21383-00-00

Doc ID: 1418862

Correction Number: 1

Attachment Name

Harold Michaelis Family Trust