



Home  
(785) 798-3400

# Andrew Stenzel Geologist

Ness City, Kansas



Cell  
(785) 798-8977

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

Well Name: Wu #1

API: 15-135-26035-00-00

Location: SW-SE-NE-SE Sec. 17-18S-24W (Ness County)

License Number: 30742

Spud Date: 1/10/19

Surface Coordinates: 1280' FNL & 568' FEL

Region: KANSAS

Drilling Completed: 1/19/19

Bottom Hole

Coordinates:

Ground Elevation (ft): 2289

K.B. Elevation (ft): 2299

Logged Interval (ft): 3400 To: TD

Total Depth (ft): 4430

Formation: MISSISSIPPI

Type of Drilling Fluid: Mud-Co Chemical

Printed by MudLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

Company: Palomino Petroleum, Inc.

Address: 4924 SE 84th St.  
Newton, KS 67114

## GEOLOGIST

Name: Andrew Stenzel

Company: Petroleum Geologist

Address: 501 S. Franklin  
Ness City, KS 67560

## Drilling Report

### DAILY DRILLING REPORT:

1/10/19 MIRU

1/11/19 Spudded at 12 am, ran surface casing

1/12/19 Drilling @ 1010'

1/13/19 Drilling @ 2294'

1/14/19 Drilling @ 3107'

1/15/19 Drilling @ 3696'

1/16/19 Short Trip @ 4244'

1/17/19 DST #1, DST #2

1/18/19 Circulating to condition hole for logs, ran electric logs, DST #3

1/19/19 Ran production casing

Services

RIG: WW Drilling, Rig #22

MUD: MUDCO

LOGS: Gemini Wireline: CNDL, PE, DIL, ML

Casing Record

SURFACE Casing: Ran 5 jts new 8 5/8", 24# casing @ 224'

PRODUCTION Casing: Ran 105 jts new 5 1/2", 14# casing @ 4428'. Port Collar @ 1611'.

Formation Tops

Sample Tops		Log Tops	
Anhy.	1585 (+714)	Anhy.	1576 (+723)
Base Anhy.	1616 (+683)	Base Anhy.	1610 (+689)
Heebner	3653 (-1354)	Heebner	3662 (-1363)
Lansing	3695 (-1396)	Lansing	3705 (-1406)
BKC	3997 (-1698)	BKC	4010 (-1711)
Pawnee	4116 (-1817)	Pawnee	4127 (-1828)
Ft. Scott	4196 (-1897)	Ft. Scott	4206 (-1907)
Cher. Sh.	4221 (-1922)	Cher. Sh.	4230 (-1931)
Miss.	4305 (-2006)	Miss.	4305 (-2006)
RTD	4430 (-2131)	LTD	4430 (-2131)



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc  
4924 SE 84th St  
New ton KS 67114+8827  
ATTN: Andrew Stenzel

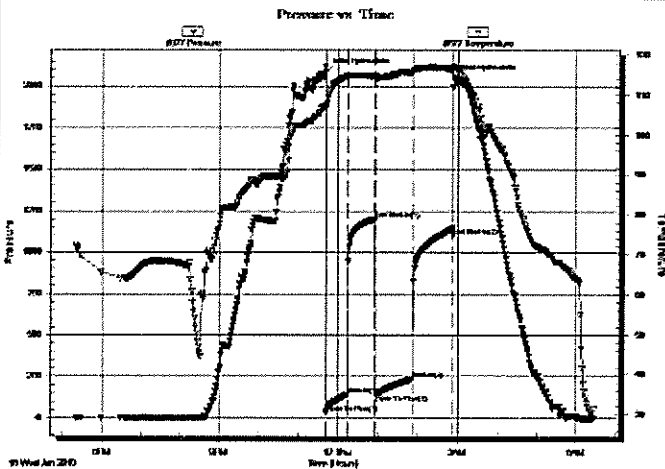
17-18s-24w Ness,KS  
**Wu #1**  
Job Ticket: 57083      DST#: 1  
Test Start: 2019.01.16 @ 17:22:00

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 23:41:15  
Time Test Ended: 06:27:00  
Interval: **4238.00 ft (KB) To 4320.00 ft (KB) (TVD)**  
Total Depth: **4320.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Spencer J Staab  
Unit No: 67  
Reference Elevations: **2299.00 ft (KB)**  
**2287.00 ft (CF)**  
KB to GR/CF: **12.00 ft**

**Serial #: 8677      Inside**  
Press@RunDepth: **236.68 psig @ 4239.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2019.01.16**      End Date: **2019.01.17**      Last Callb.: **2019.01.17**  
Start Time: **17:22:05**      End Time: **06:27:00**      Time On Blm: **2019.01.16 @ 23:40:45**  
Time Off Blm: **2019.01.17 @ 02:53:30**

**TEST COMMENT:** 30-IF-BOB 14 mins; Built to 21"  
30-ISI-Weak; Built to 1/4"  
60-FF-BOB 16 mins; Built to 31"  
60-FSI-Weak; Built to 1/4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2088.14	107.56	Initial Hydro-static
1	32.47	106.82	Open To Flow (1)
32	143.59	114.59	Shut-In(1)
75	1199.19	114.80	End Shut-In(1)
76	144.05	114.36	Open To Flow (2)
131	236.68	115.72	Shut-In(2)
192	1101.29	116.35	End Shut-In(2)
193	2053.30	116.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
380.00	GHMCO 20%G 30%M 50%O	4.30
190.00	GO 30%G 70%O	2.69
0.00	63' GP 100%G	0.00

## Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcfd)



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc  
 4924 SE 84th St  
 Newton KS 67114+8827  
 ATTN: Andrew Stenzel

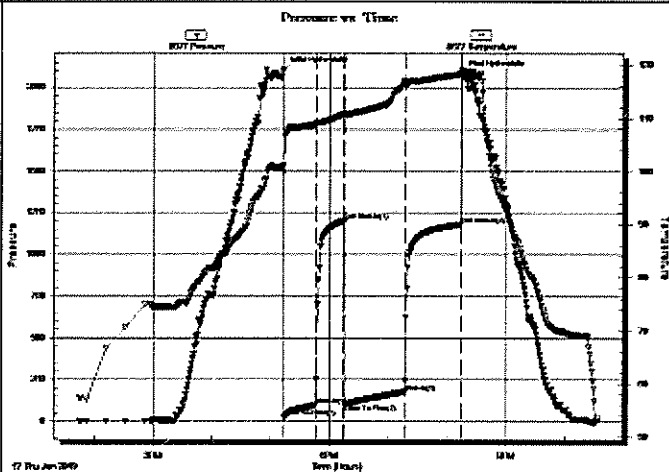
17-18s-24w Ness,KS  
 Wu #1  
 Job Ticket: DST#:2  
 Test Start: 2019.01.17 @ 13:45:05

## GENERAL INFORMATION:

Formation: Miss  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 17:13:45 Tester: Spencer J Staab  
 Time Test Ended: 22:33:30 Unit No: 67  
 Interval: 4318.00 ft (KB) To 4328.00 ft (KB) (TVD) Reference Elevations: 2299.00 ft (KB)  
 Total Depth: 4320.00 ft (KB) (TVD) 2287.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 12.00 ft

**Serial #: 8677 Inside**  
 Press@RunDepth: 177.55 psig @ 4319.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.01.17 End Date: 2019.01.17 Last Callb.: 2019.01.17  
 Start Time: 13:45:05 End Time: 22:33:30 Time On Btrr: 2019.01.17 @ 17:13:15  
 Time Off Btrr: 2019.01.17 @ 20:15:14

**TEST COMMENT:** 30 IFP BOB in 23 mins Built to 13 1/2"  
 30 ISI Weak blow built to 1"  
 60 FFP BOB in 25 mn built to 21"  
 60 FSI Weak blow back built to 3/4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2102.47	100.92	Initial Hydro-static
1	26.01	99.85	Open To Flow (1)
33	99.26	108.84	Shut-In(1)
62	1200.59	110.73	End Shut-In(1)
62	103.63	110.69	Open To Flow (2)
124	177.55	116.83	Shut-In(2)
181	1180.57	118.27	End Shut-In(2)
182	2083.69	118.95	Final Hydro-static

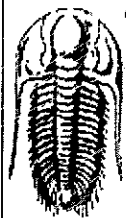
## Recovery

Length (ft)	Description	Volume (bbl)
250.00	GSOCMW 10%G 5%O 65%W 20%M	2.46
160.00	GO 40%g 60%o	2.27
0.00	120' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)



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# DRILL STEM TEST REPORT

Palomino Petroleum Inc  
4924 SE 84th St  
Newton KS 67114+8827  
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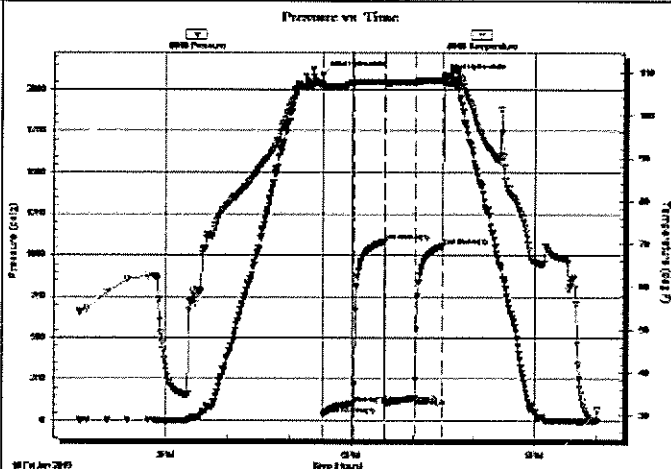
17-18s-24w Ness,KS  
Wu #1  
Job Ticket: 57085      DST#:3  
Test Start: 2019.01.18 @ 13:35:00

## GENERAL INFORMATION:

Formation: Ft. Scott  
Deviated: No Whipstock      ft (KB)  
Time Tool Opened: 17:32:45  
Time Test Ended: 22:01:00  
Interval: 4190.00 ft (KB) To 4245.00 ft (KB) (TVD)  
Total Depth: 4430.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Spencer J Staab  
Unit No: 67  
Reference Elevations: 2299.00 ft (KB)  
2287.00 ft (CF)  
KB to GR/CF: 12.00 ft

**Serial #: 8018      Inside**  
Press@RunDepth: 138.02 psig @ 4192.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2019.01.18      End Date: 2019.01.18      Last Callb.: 2019.01.18  
Start Time: 13:35:05      End Time: 22:00:59      Time On Btm: 2019.01.18 @ 17:32:30  
Time Off Btm: 2019.01.18 @ 19:30:15

**TEST COMMENT:** 30-IF-Weak; Built to 7"  
30-ISI-No Return  
30-FF-Weak; Built to 5&1/2"  
30-FSI-No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.41	107.18	Initial Hydro-static
1	37.83	106.39	Open To Flow (1)
30	105.26	107.49	Shut-in(1)
60	1083.31	107.78	End Shut-in(1)
61	108.53	107.54	Open To Flow (2)
90	138.02	107.71	Shut-in(2)
117	1057.45	108.14	End Shut-in(2)
118	2075.68	108.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water 100%W	0.62
60.00	MW 40% M 60%W	0.85
10.00	MO 50%M 50%O	0.14



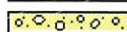

\* Recovery from multiple tests

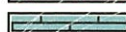

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

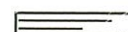


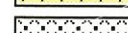
ROCK TYPES

-  Anhy
-  Bent
-  Brec
-  Cht

-  Clyst
-  Carb shale
-  Congl
-  Dol

-  Gyp
-  Igne
-  Lmst
-  Meta

-  Mrlst
-  Salt
-  Shale
-  Shcol

-  Shgy
-  Sltst
-  Ss
-  Till

ROP

ROP (min/ft)

Misc

Depth  
Cl Shams

% Lithology

Geological Descriptions

DST

ROP (min/ft)

10

32

3250

3300

3350

←-----  
Anhy.  
1585 (+714)

←-----  
Base Anhy.  
1616 (+683)



Drilling w 6  
blade PDC bit  
ROP (ft 10)  
14K WOB  
110 RPM



3400

Ls., cm, vfnxn, soft, vy chky, nvp, ns

Ls., aa, scatt Sh., gy-bm

3450

Ls., cm-tn, vfn-fnxln, soft, most vy chky, nvp, ns, few pcs fnxln, sli fri, ool, nvp, ns

Sh., gy-dk gy, Ls., aa

Ls., cm-tn, most vfnxn, soft, vy chky, nvp, ns, few pcs fnxln, sli fri, foss, pr intrxn & foss por, ns, no odr

3500

Ls., cm, vfnxn, soft, vy chky, nvp, ns

Sh., gy-dk gy

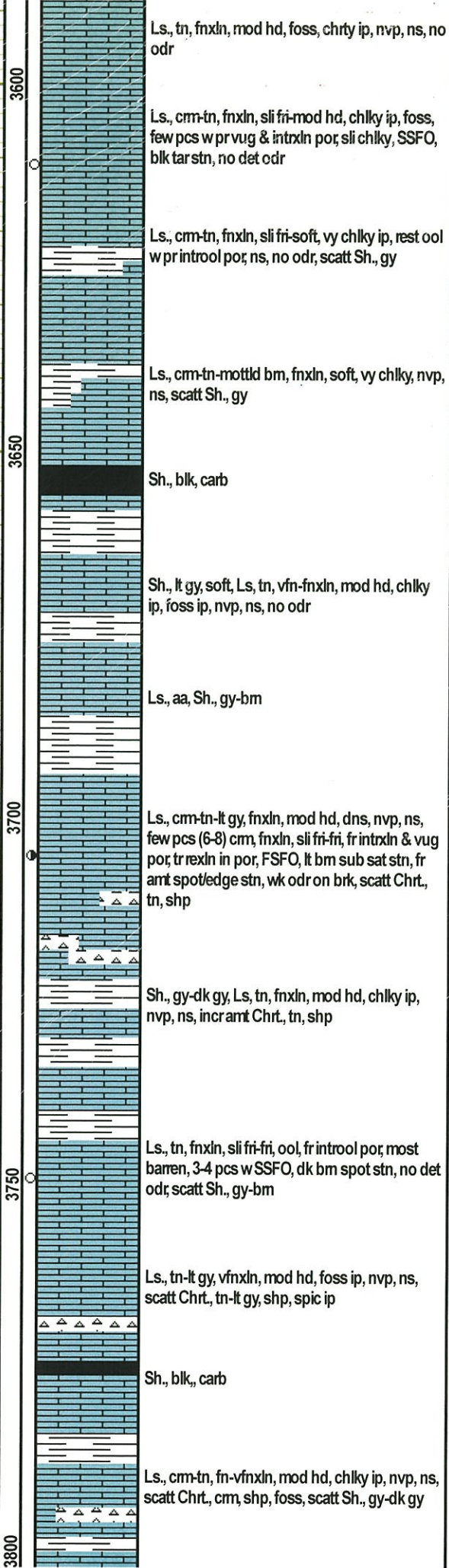
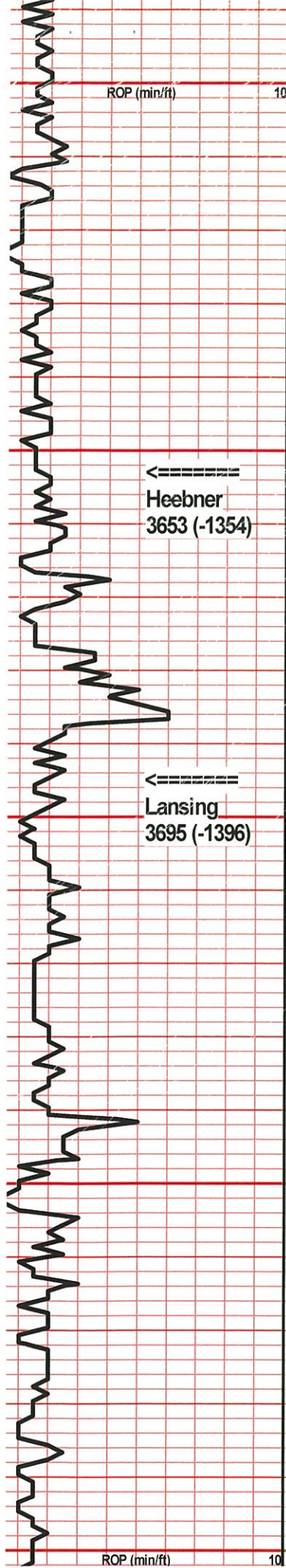
Ls., cm-tn-mottld bm ip, fn-vfnxn, mod hd-sli fri, chky ip, foss, ool, pr-fr introol & foss por, ns, no odr, some vfnxn, mod hd, dns, nvp, ns, scatt Sh., gy

3550

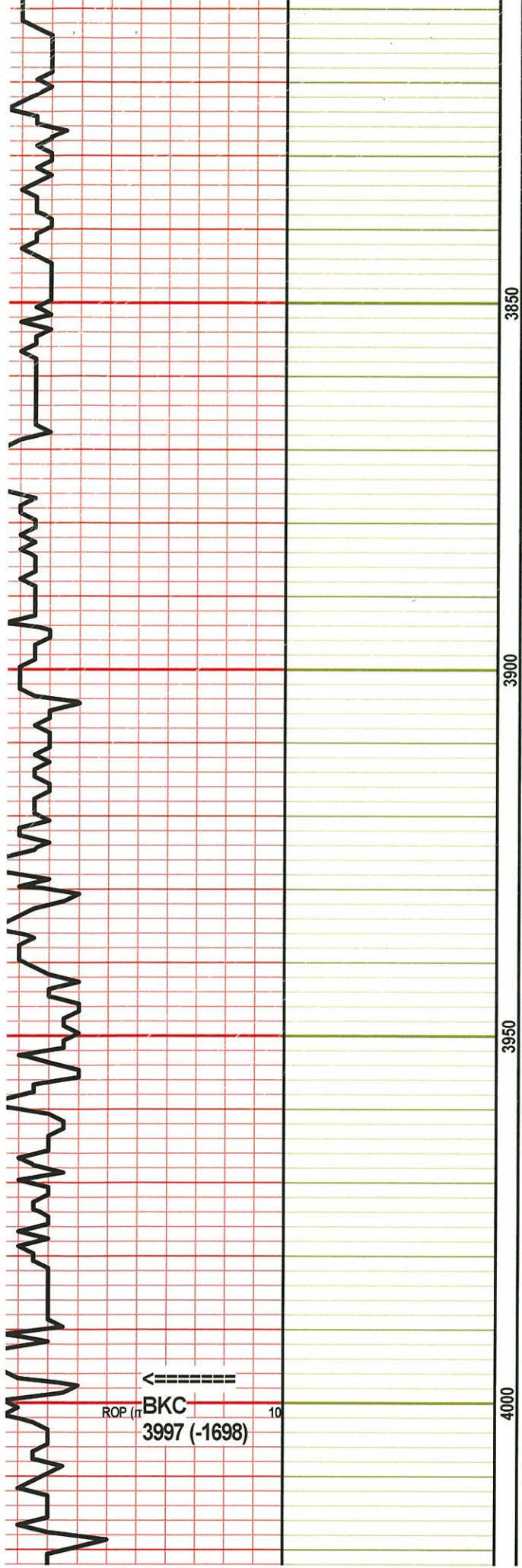
Ls., tn-lt gy, fn-vfnxn, mod hd-sli fri, some dns w nvp, few pcs w pr intrxn por, ns, no odr, scatt Chrt, lt gy, shp

Sh., blk, carb

Ls., tn-lt gy, fnxln, mod hd-sli fri, chky ip, ool ip w pr introol por, ns, no odr, some Ls, dns, sli shly, nvp, ns, scatt Sh., gy







3850

3900

3950

4000



Ls., aa, scatt Chrt, aa

Ls., cm, vfnxn, mod hd, chky ip, nvp, ns, scatt Sh., gy

Ls., cm-lt gy, vfnxn, mod hd-sli fri, few pcs w pr intrxn por, ns, no odr, scatt Sh., aa

Sh., gy-dk gy-bm, Ls., aa, ns, no odr, scatt Chrt, tn, sli weath

Ls., cm-tn, fnxn, mod hd, dns, foss ip, nvp, ns, no odr

Ls., aa, abund Sh., gy-bm

Ls., tn, fnxn, mod hd-sli fri, ool, frooc por, ns, no odr

Ls., tn-lt gy, fnxn, mod hd, foss ip, nvp, ns, no odr; abund Sh., gy-dk gy

Sh., blk, carb

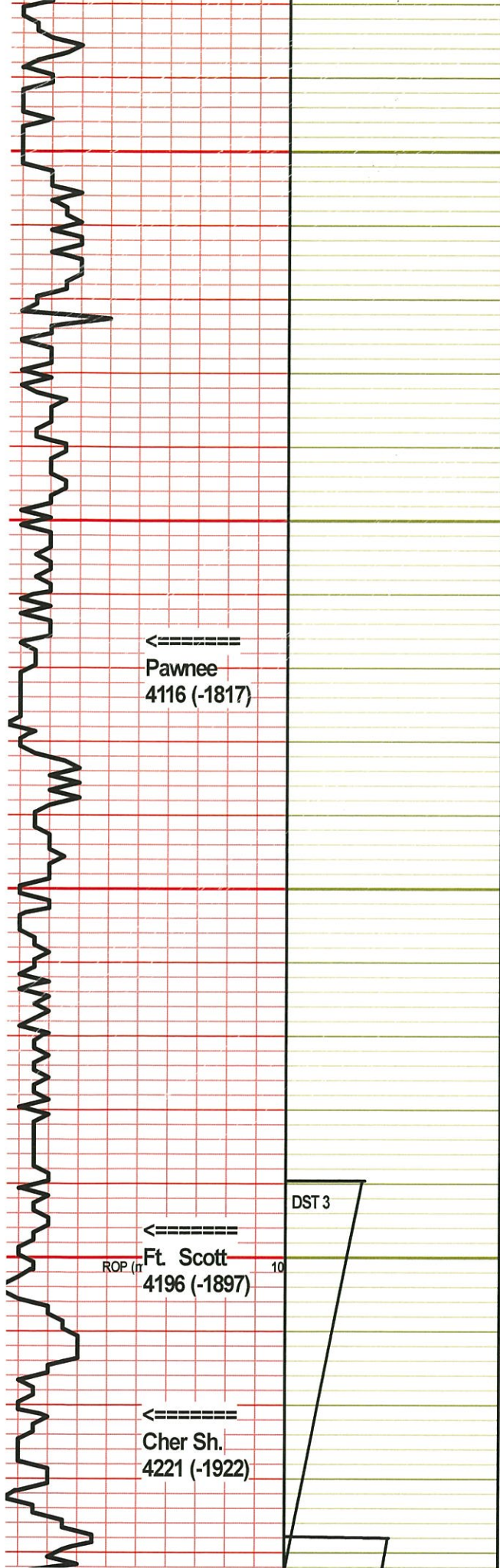
Ls., lt gy, vfnxn, mod hd-hd, shly ip, dns, nvp, ns, scatt Sh., gy

Ls., tn-lt gy, fn-vfnxn, mod hd, ool ip, pr ooc por, ns, no odr

Sh., blk, carb

Sh., gy, Ls., cm-lt gy, fnxn, mod hd, shly ip, nvp, ns, no odr

ROP (ft) ← BKC 3997 (-1698) 10



Sh, lt gy-gm-bm, scatt Ls., aa

Sh., dk gy-blk

Ls., tn-lt gy, fnxln, sli fri, sli chlky, scatt pcs w pr intrxn por; ns, no odr, abund Sh., aa

Ls., cm-tn, fn-vfnxln, mod hd-hd, chlky ip, foss ip, nvp, ns

Ls., cm, fnxln, mod hd-sli fri, few pcs (6-8) w pr-rare fr vug & intrxn por; FSFO, sub sat stn ip, many wedge stn, fr show gas, wk odr

Ls., cm-lt gy, fn-vfnxln, mod hd-hd, brittle, dns, nvp, ns, scatt Sh., gy

Ls., lt gy, vfnxln, mod hd, dns, nvp, ns

Ls., gy, vfnxln, mod hd, shly, nvp, ns, no odr

Sh., blk, carb

Ls., cm, fnxln, sli fri-mod hd, few pcs w pr-fr intrxn & pr vug por; SSFO, lt bm sat stn in many, wk cup odr, fr odr on brk

Ls., cm-tn, fnxln, sli fri-mod hd, sli chlky, scatt pcs w pr intrxn & vug por; FSFO, vy lt bm sat in many, gd cup odr, gd odr on brk, scatt Sh., gy-bm

Sh., blk, carb

Ls., cm-tn, fn-vfnxln, mod hd, few pcs w vy pr iso vug por; VSSFO, dk bm spot stn, wk odr, abund Sh., gy-blk

**DST #3 4190-4245 (Ft. Scott, Straddle)**

30-30-30-30  
 IF: Built to 7"  
 IS: No blow  
 FF: Built to 5"  
 FS: No blow

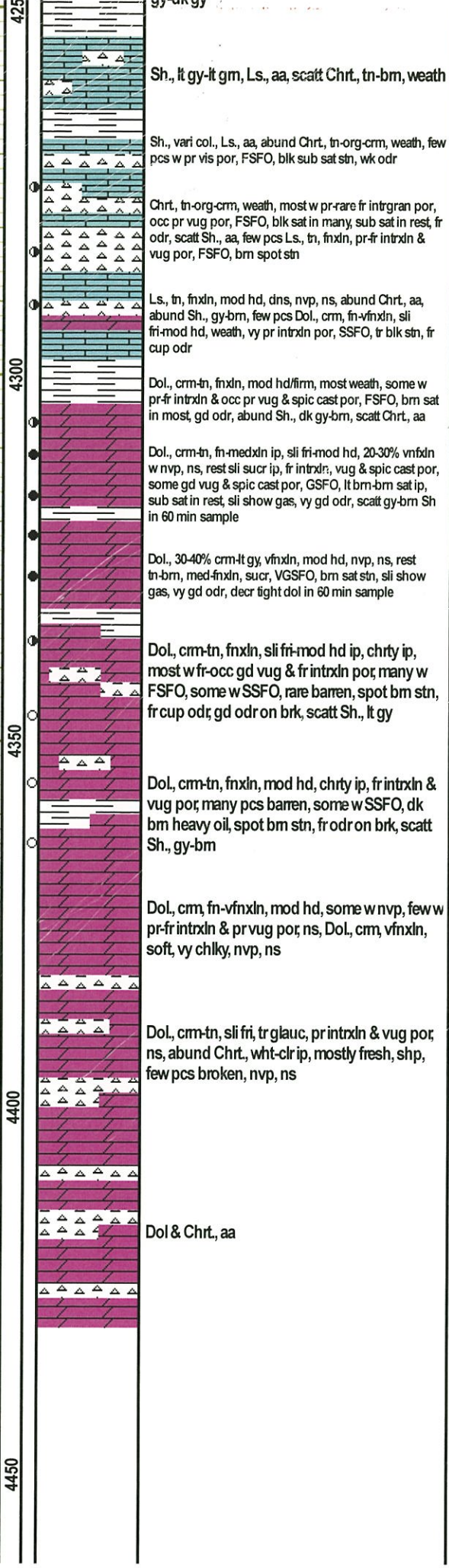
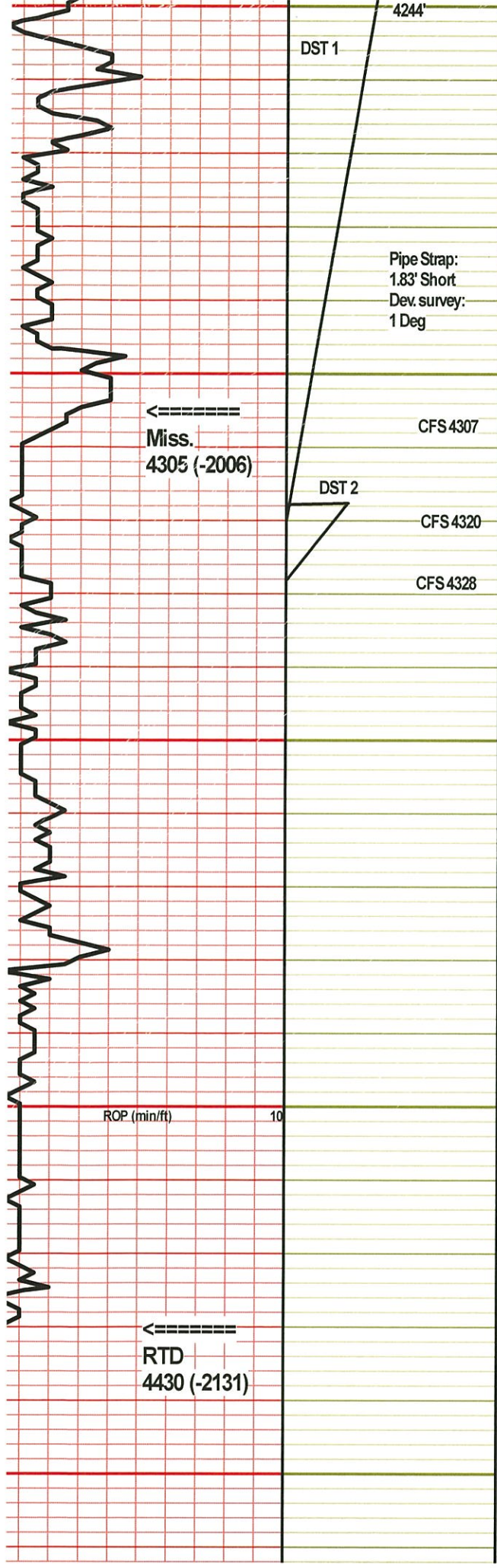
Recovery:  
 10' MO (50%O, 50%M)  
 60' MW (60%W, 40%M)  
 120' Water (100%W)  
 190' TF

FP: 37-105; 108-138  
 SIP: 1083-1057  
 HP: 2095-2075

BHT: 108  
 Gravity: -  
 Chlor: 65000

**DST #1 4238-4320 (Mississippi)**

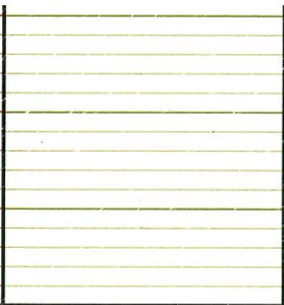
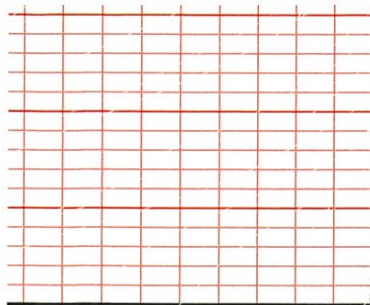
30-30-60-60  
 IF: BOB in 14 min, built to 21"  
 IS: No blow



Recovery:  
63' GIP  
190' GO (30%G, 70%O)  
380' GHMCO (20%G, 30%M, 50%O)  
570' TF  
FP: 32-144; 144-237  
SIP: 1199-1101  
HP: 2088-2053  
BHT: 116  
Gravity: 31  
Chlor: —

**DST #2 4318-4328 (Mississippi)**  
30-30-60-60  
IF: BOB in 23 min, built to 13.5"  
IS: Weak, built to 3/4"  
FF: BOB in 25 min, built to 21"  
FS: Weak, built to 3/4"

Recovery:  
120' GIP  
160' GO (40%G, 60%O)  
250' GOCMW (10%G, 5%O, 20%M, 60%W)  
410' TF  
FP: 26-99; 104-177  
SIP: 1201-1181  
HP: 2103-2091  
BHT: 118  
Gravity: 31  
Chlor: 48000



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