



Home
(785) 798-3400

Andrew Stenzel Geologist

Ness City, Kansas



Cell
(785) 798-5977

WELLSITE GEOLOGIST'S REPORT

WellSight Systems

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

Well Name: Lyle Schaben 5-31
Location: Sec. 31-19S-21W (Ness County)
License Number: 15-135-25930
Spud Date: 10/6/16
Surface Coordinates: 1562 FNL & 962 FEL
Region: KANSAS
Drilling Completed: 10/14/16

Bottom Hole
Coordinates:
Ground Elevation (ft): 2259 K.B. Elevation (ft): 2270
Logged Interval (ft): 3600 To: TD Total Depth (ft): 4490
Formation:
Type of Drilling Fluid: Mud-Co Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Schaben Oil, LLC
Address: 2704 Ash
Hays, KS 67601

GEOLOGIST

Name: Andrew Stenzel
Company: Geologist
Address: 501 S. Franklin
Ness City, KS 67560

Misc. Info.

RIG: WW Drilling, Rig 14

MUD: MUDCO

LOGS: Pioneer (CND, DIL, ML)

TESTER: Trilobite Testing

Formation Tops

Sample Tops

Anhy.	1497 (+773)
Base Anhy.	1528 (+742)
Heebner	3765 (-1495)
Lansing	3812 (-1542)
BKC	4123 (-1853)
Marmaton	4160 (-1890)
Pawnee	4233 (-1963)
Ft. Scott	4211 (-2041)
Cher. Sh.	4330 (-2060)
Miss.	4394 (-2124)
RTD	4490 (-2220)

LogTops

Anhy.	1491 (+779)
Base Anhy.	1523 (+747)
Heebner	3754 (-1484)
Lansing	3800 (-1530)
BKC	4112 (-1842)
Marmaton	4150 (-1880)
Pawnee	4219 (-1949)
Ft. Scott	4301 (-2031)
Cher. Sh.	4320 (-2050)
Miss.	4383 (-2113)
LTD	4481 (-2211)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Schaben Oil LLC
2704 Ash
Hays Ks
67601
ATTN: Andrew Stenzel

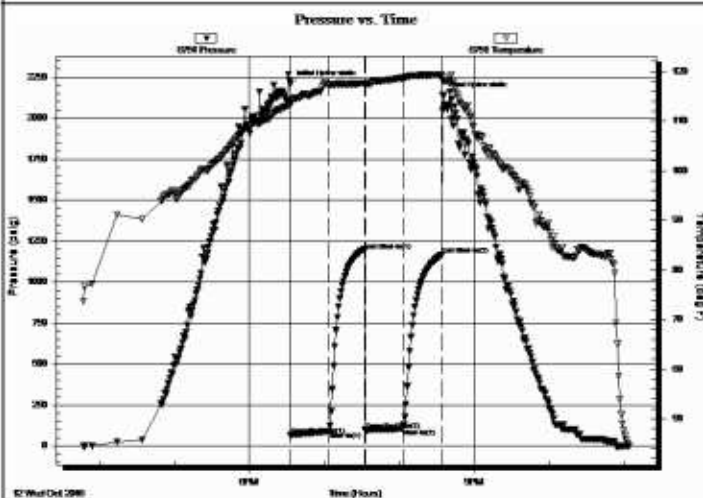
31-19s-21w Ness Co
Lyle Schaben 5-31
Job Ticket: 65619 **DST#: 1**
Test Start: 2016.10.12 @ 15:47:15

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:33:00
Time Test Ended: 23:04:00
Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81
Interval: **4327.00 ft (KB) To 4410.00 ft (KB) (TVD)**
Reference Elevations: 2270.00 ft (KB)
Total Depth: 4410.00 ft (KB) (TVD) 2259.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 6751 Outside
Press@RunDepth: 107.32 psig @ 4395.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.10.12 End Date: 2016.10.12 Last Calib.: 2016.10.12
Start Time: 15:47:15 End Time: 23:04:00 Time On Btm: 2016.10.12 @ 18:32:45
Time Off Btm: 2016.10.12 @ 20:34:45

TEST COMMENT: IF: Built to 2 1/4" blow
IS: No return blow
FF: Built to 1 1/2" blow
FS: No return blow



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2205.47	113.63	Initial Hydro-static
1	67.23	113.45	Open To Flow (1)
31	90.55	117.15	Shut-in(1)
60	1191.68	117.63	End Shut-in(1)
60	97.40	117.30	Open To Flow (2)
90	107.32	118.74	Shut-in(2)
121	1164.87	119.39	End Shut-in(2)
122	2138.13	118.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	gcmo 5%g 20%m 75%o	0.29
64.00	gcom 5%g 25%o 70%m	0.36
0.00	2" free oil on top	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Schaben Oil LLC

31-19s-21w Ness Co

2704 Ash
Hays Ks 67601

Lyle Schaben 5-31

Job Ticket: 65620 **DST#: 2**

ATTN: Andrew Stenzel

Test Start: 2016.10.13 @ 05:49:15

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:37:45

Time Test Ended: 13:03:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4408.00 ft (KB) To 4416.00 ft (KB) (TVD)

Total Depth: 4416.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2270.00 ft (KB)

2259.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press@RunDepth: 208.05 psig @ 4409.00 ft (KB)

Start Date: 2016.10.13

End Date: 2016.10.13

Start Time: 05:49:15

End Time: 13:03:15

Capacity: 8000.00 psig

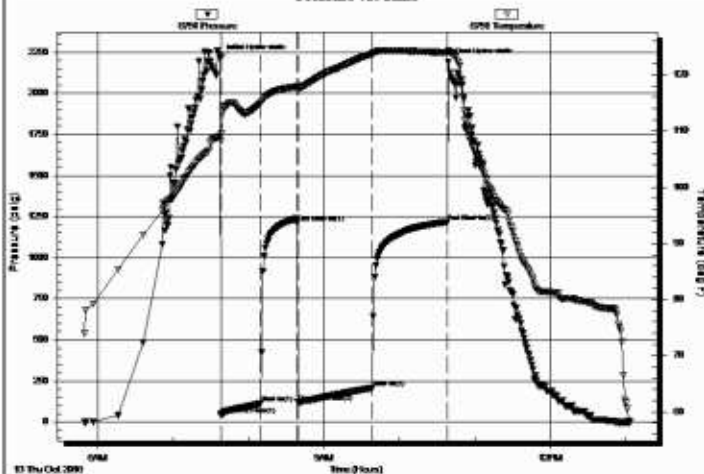
Last Calib.: 2016.10.13

Time On Btm: 2016.10.13 @ 07:37:30

Time Off Btm: 2016.10.13 @ 10:39:00

TEST COMMENT: IF:BOB in 21 min.
IS:Return blow built to weak surface and died in 18 min
FF:Built to 7" blow
FS:Return blow built to weak surface and died in 23 min.

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.17	109.10	Initial Hydro-static
1	43.87	108.13	Open To Flow (1)
32	112.28	114.96	Shut-in(1)
62	1211.48	117.87	End Shut-in(1)
62	121.25	117.54	Open To Flow (2)
121	208.05	123.69	Shut-in(2)
181	1217.69	123.94	End Shut-in(2)
182	2189.10	124.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	ocmw 2%o 30%g 68%w (Collars)	0.58
124.00	gcow m 10%g 10%o 10%w 70%m	1.74
206.00	gco 20%g 80%o	2.89
0.00	GLP= 372 feet	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Schaben Oil LLC
2704 Ash
Hays Ks
67601
ATTN: Andrew Stenzel

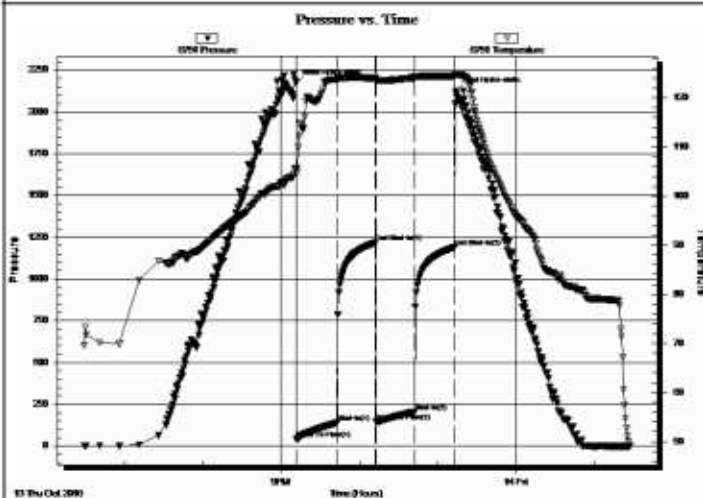
31-19s-21w Ness Co
Lyle Schaben 5-31
Job Ticket: 65621 **DST#: 3**
Test Start: 2016.10.13 @ 18:29:15

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:11:45
Time Test Ended: 01:27:00
Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81
Interval: **4415.00 ft (KB) To 4421.00 ft (KB) (TVD)**
Reference Elevations: 2270.00 ft (KB)
Total Depth: 4421.00 ft (KB) (TVD) 2259.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 6751 Outside
Press@RunDepth: 204.52 psig @ 4416.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.10.13 End Date: 2016.10.14 Last Calib.: 2016.10.14
Start Time: 18:29:15 End Time: 01:27:00 Time On Btm: 2016.10.13 @ 21:11:30
Time Off Btm: 2016.10.13 @ 23:14:00

TEST COMMENT: IF:BOB in 15 min.
IS:Bult to weak surface blow and died in 18 min.
FF:BOB in 23 min.
FS:Bult to weak surface blow and died in 21 min.



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.81	105.68	Initial Hydro-static
1	40.75	104.59	Open To Flow (1)
32	138.59	123.82	Shut-in(1)
61	1216.99	124.02	End Shut-in(1)
62	142.83	123.64	Open To Flow (2)
91	204.52	124.05	Shut-in(2)
122	1188.49	124.45	End Shut-in(2)
123	2125.73	124.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	sw 100% sw (Collars)	1.45
124.00	ocmw 5%o 10%m 85%w	1.74
62.00	ocmw 5%o 40%m 55%w	0.87
30.00	w com 15%w 25%o 60%m	0.42
15.00	free oil 100%o	0.21

* Recovery from multiple tests

Gas Rates

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

Drilling Report

10/6/16 MIRU, ran surface casing
 10/7/16 Wait on cement
 10/8/16 Drilling @ 1630'
 10/9/16 Drilling @ 2730'
 10/10/16 Drilling @ 3350'
 10/11/16 Drilling @ 4011'
 10/12/16 Circ @ 4350', DST 1
 10/13/16 DST 2, DST 3
 10/14/16 Ran Electric logs, Ran Production Casing


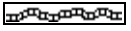
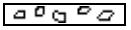
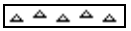
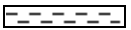
Comments







SURFACE Casing: Ran 5 jts new 8 5/8", 23# casing @226' with 165 sx common, 3% cc, 2% gel, plug down @ 3:45am, cement did circ.


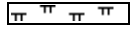
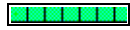
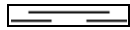
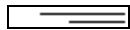
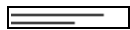
PRODUCTION Casing: Ran 107 jts new 5 1/2", 15.5# casing with 200sx common, 10% cc, 5% gel, Port Collar @ 1474', plug down @ 12:45 am 10/15/16.




ROCK TYPES

LITHOLOGY

-  Anhy
-  Bent
-  Brec
-  Cht
-  Clyst

-  Carb sh
-  Congl
-  Dol
-  Gyp
-  Igne
-  Lmst

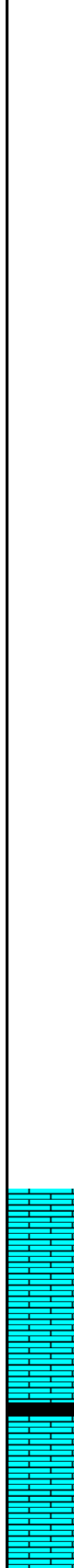
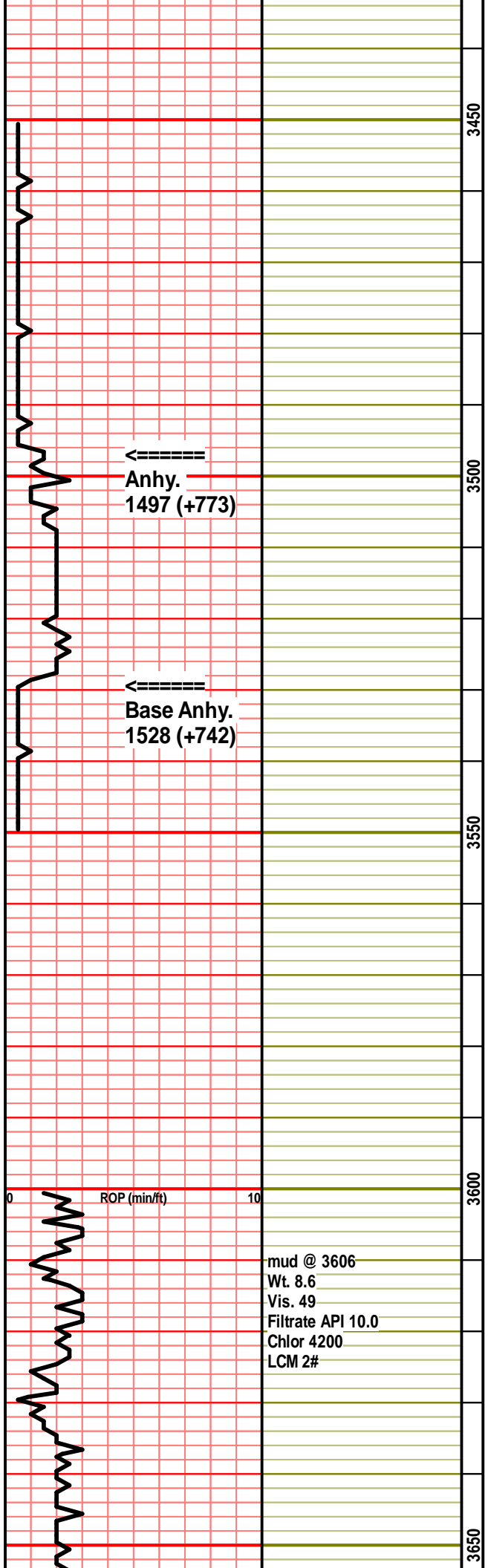
-  Meta
-  Mrlst
-  Salt
-  Shale
-  Shcol
-  Shgy

-  Sltst
-  Ss
-  Till

-  Fair
-  Slight
-  Very slight

- OIL SHOW**
-  Good

ROP ROP (min/ft)	Misc Info	Depth Oil Shows	% Lithology	Geological Descriptions	DSTs
0 — 10		33			
0 — 10		3400			



ROP (min/ft)

0 10

3600

3650

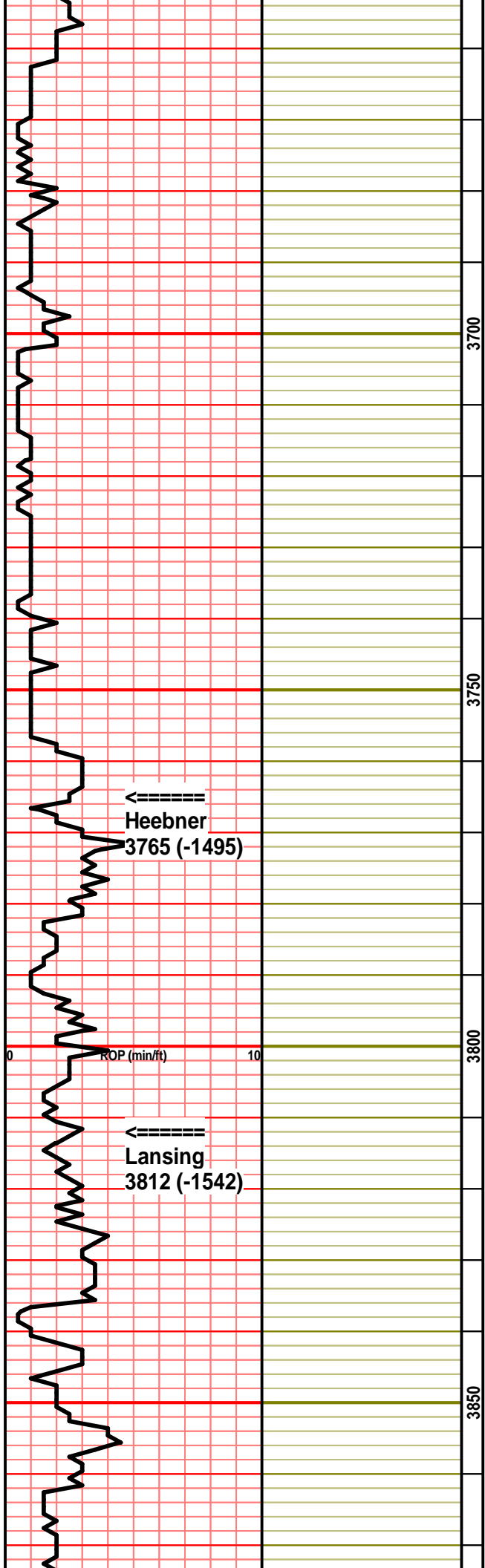
Ls., crm-lt gy, vfnxn, mod hd, brittle, nvp, ns

Ls., crm-tn, fnxn, sli fri, chlky ip, foss, nvp, ns

Sh., blk, carb

Ls., crm-tn, fnxn, mod hd-sli fri, foss ip, scatt fr intrxn & foss por, ns, no odr

mud @ 3606
 Wt. 8.6
 Vis. 49
 Filtrate API 10.0
 Chlor 4200
 LCM 2#



Ls., crm-lt gy, fnxln, sli fri, scatt pcs w por aa, ns, no odr, scatt sh., gy

Ls., crm-tn, fnxln, sli fri/soft, vy chlky, some w pr intrxn por, ns, no odr, abund sh., gy-grn

Ls., crm-tn, fnxln, sli fri/soft, chlky, nvp, ns, sh., aa

Ls., crm-tn-mottld brn, fri/soft, chlky, pr intrxn por, ns, no odr, scatt sh., aa, scatt chrt., crm-tn, foss

Sh., blk, carb

Ls., tn, vfxln, hd, dns, nvp, ns, abund sh., gy, soft

Sh., aa, Ls., crm-tn, fnxln, sli fri, chlky, pr-fr intrxn por, ns, no odr

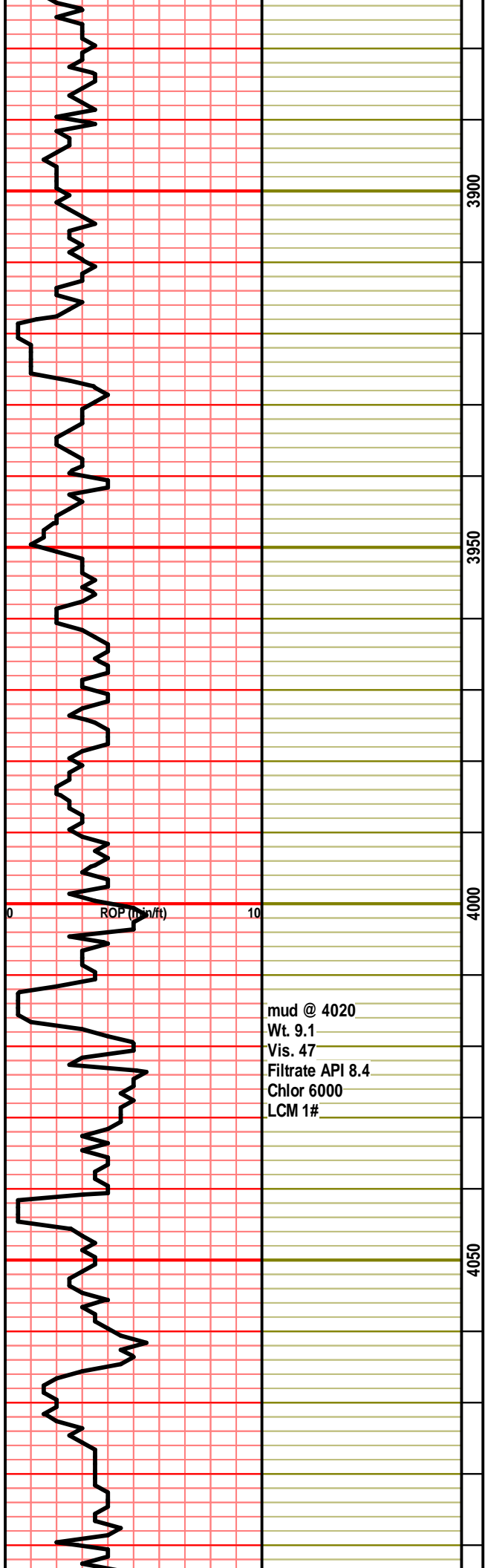
Ls., crm-tn, fnxln, sli fri-mod hd, vy pr intrxn por, ns, no odr, scatt chrt., crm, shp, abund sh., gy

Ls., crm-lt gy, vfxln, mod hd, foss ip, nvp, ns

Sh., gy-dk gy

Ls., crm, fnxln, mod hd, ool, gd ooc por, ns, no odr

Ls., crm-lt gy, vfxln, hd, mass, nvp, ns, scatt sh., gy-brn



Ls., crm-tn-lt gy, fnxln, mod hd, tr sec xln, nvp, ns, abund sh., dk gy-gy

3900 Ls., crm, fn-vfnxln, mod hd, chlky ip, nvp, ns, abund chrt, crm, shp

Ls., tn, fnxln, ool, mod hd, fr ooc por, ns, no odr

Ls., crm, vfnxln, mod hd-hd, nvp, ns, scatt sh., gy-brn

3950 Ls., crm-lt gy, vfnxln, mod hd-hd, nvp, ns, scatt chrt., crm

Sh., gy-blk

Ls., tn-brn, fnxln, hd, dns, nvp, ns, sh., aa

Ls., crm, fnxln, mod hd, nvp, ns, scatt chrt., crm-lt gy, sli weath, foss

4000 Sh., gy, fiss

Ls., crm, fnxln, ool, mod hd, fr-gd ooc por, ns, no odr

Ls., tn-lt gy, vfnxln, hd, brittle, nvp, ns, scatt sh., gy-brn

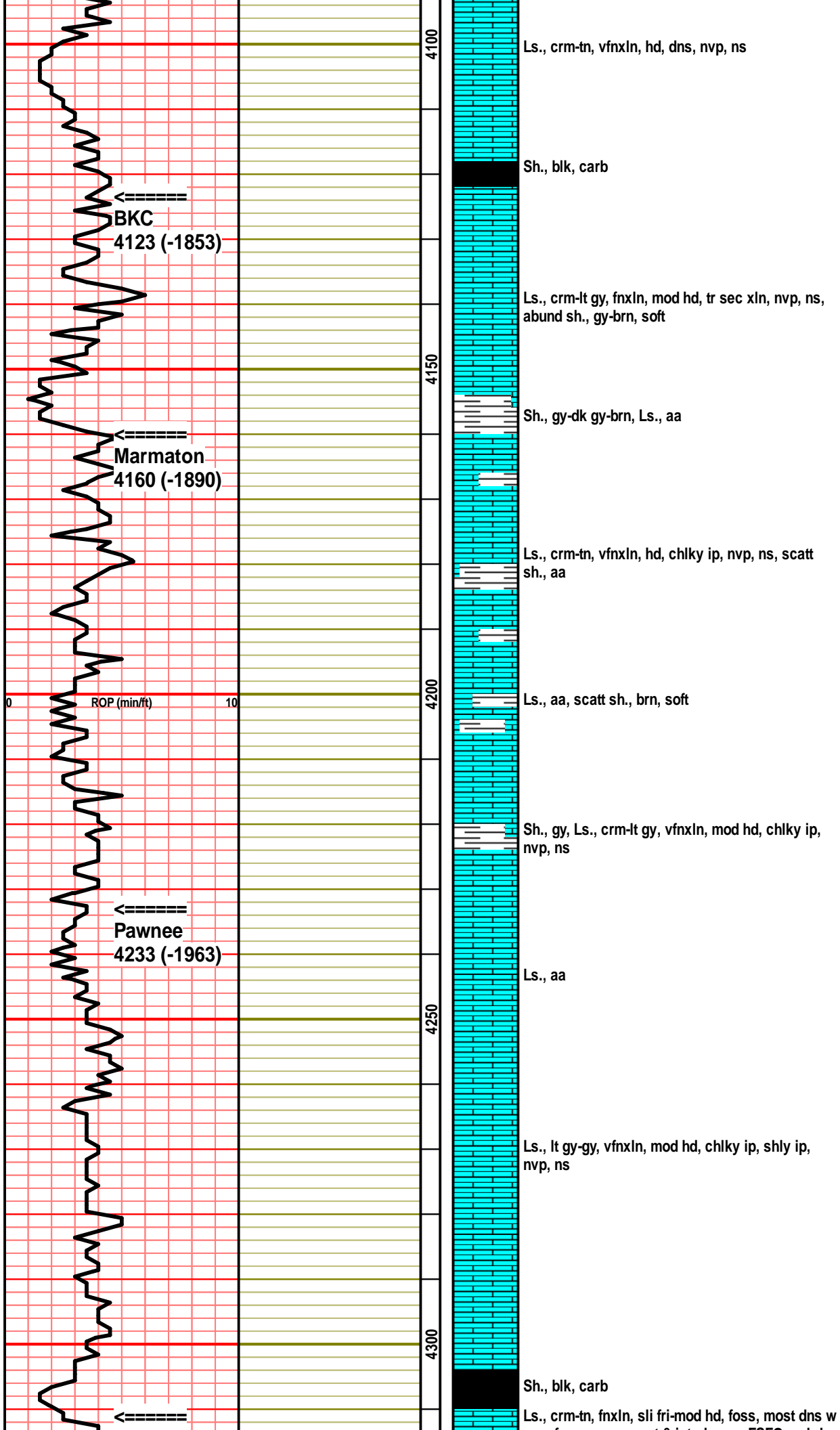
Ls., tn, fnxln, mod hd, ool, fr ooc por, ns no odr

4050 Ls., tn-lt gy, vfnxln, hd, dns, nvp, ns, scatt sh., gy

Ls., crm-tn, fnxln, mod hd, chlky ip, some pr intrxln por, ns, no odr

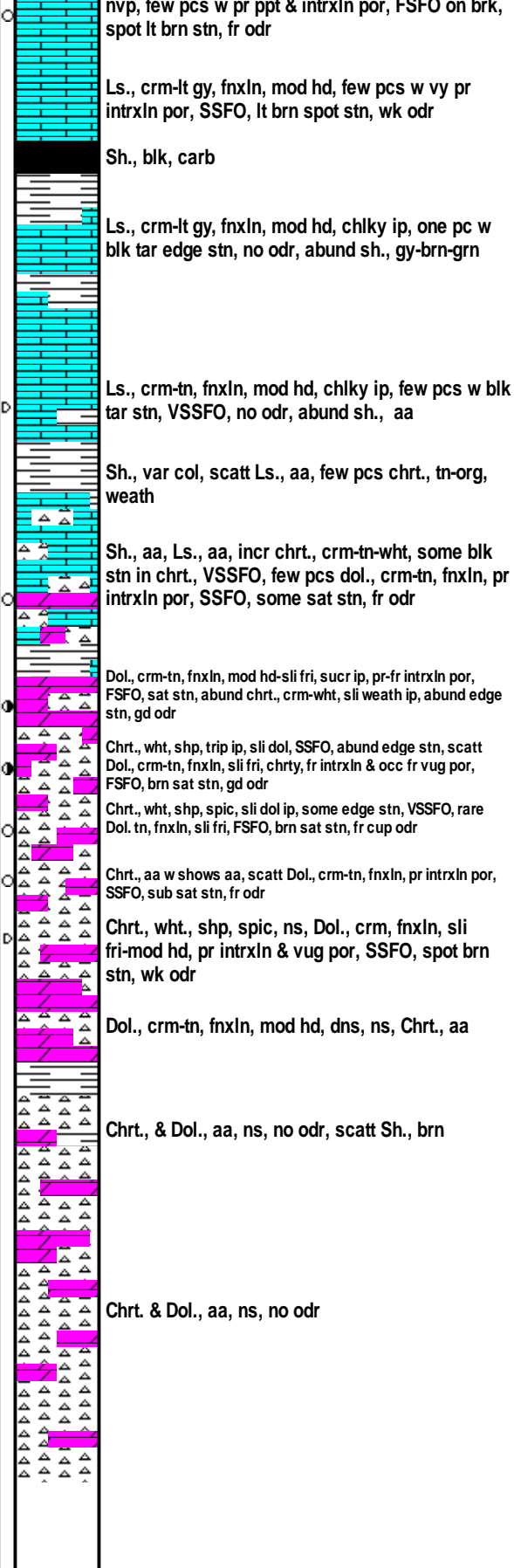
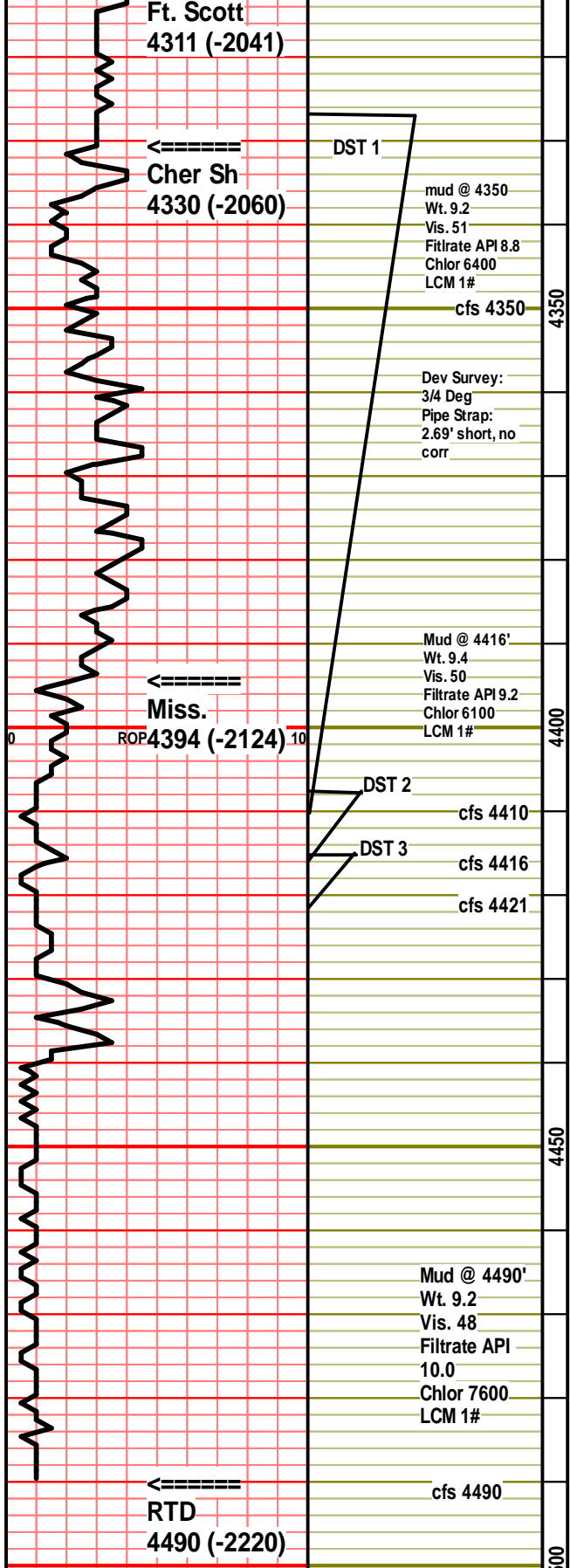
Ls., crm, vfn-fnxln, hd, dns, nvp, ns, abund chrt., lt gy, spic, shp

mud @ 4020
 Wt. 9.1
 Vis. 47
 Filtrate API 8.4
 Chlor 6000
 LCM 1#



DST #1 4327-4410
 30-30-30-30
 IF: WSB, built to 2 1/4"
 IS: No blow
 FF: WSB, built to 1 1/2"
 FS: No blow

Recovery:
 2" Clean oil
 59' GCMO (5%G, 75%O, 20%M)
 64' GCOM (5%G, 25%O, 70%M)



123' TF

FP: 67-90; 97-107
SIP: 1191-1164
HP: 2205-2138

BHT: 118 Deg F
Gravity API: 33
Chlor: —

DST #2 4408-4416
30-30-60-60
IF: BOB in 21 min
IS: WSB, died in 8 min
FF: Built to 7"
FS: WSB, died in 23 min

Recovery:
572' GIP
206' GCO (20%G, 80%O)
124' GCOWM (10%G, 10%O, 10%W, 70%M)
118' OCMW (2%O, 30%M, 68%W)

448' TF

FP: 44-112; 121-208
SIP: 1211-1218
HP: 2211-2189

BHT: 124 Deg F
Gravity API: 34
Chlor: 13000


DST #3 4415-4421
30-30-30-30
IF: BOB in 15 min
IS: WSB, died in 18 min
FF: BOB in 23 min
FS: WSB, died in 21 min

Recovery:
15' CO (100%O)
30' WOCM (25%O, 15%W, 60%M)
62' OCMW (5%O, 55%W, 40%M)
124' OCMW (5%O, 85%W, 10%M)
180' SW (100%W)

411' TF

FP: 41-139; 143-205
SIP: 1217-1188
HP: 2173-2126

BHT: 125 Deg F
Gravity API: 33
Chlor: 14000

		50			
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