



**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1105651

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
---	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

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				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

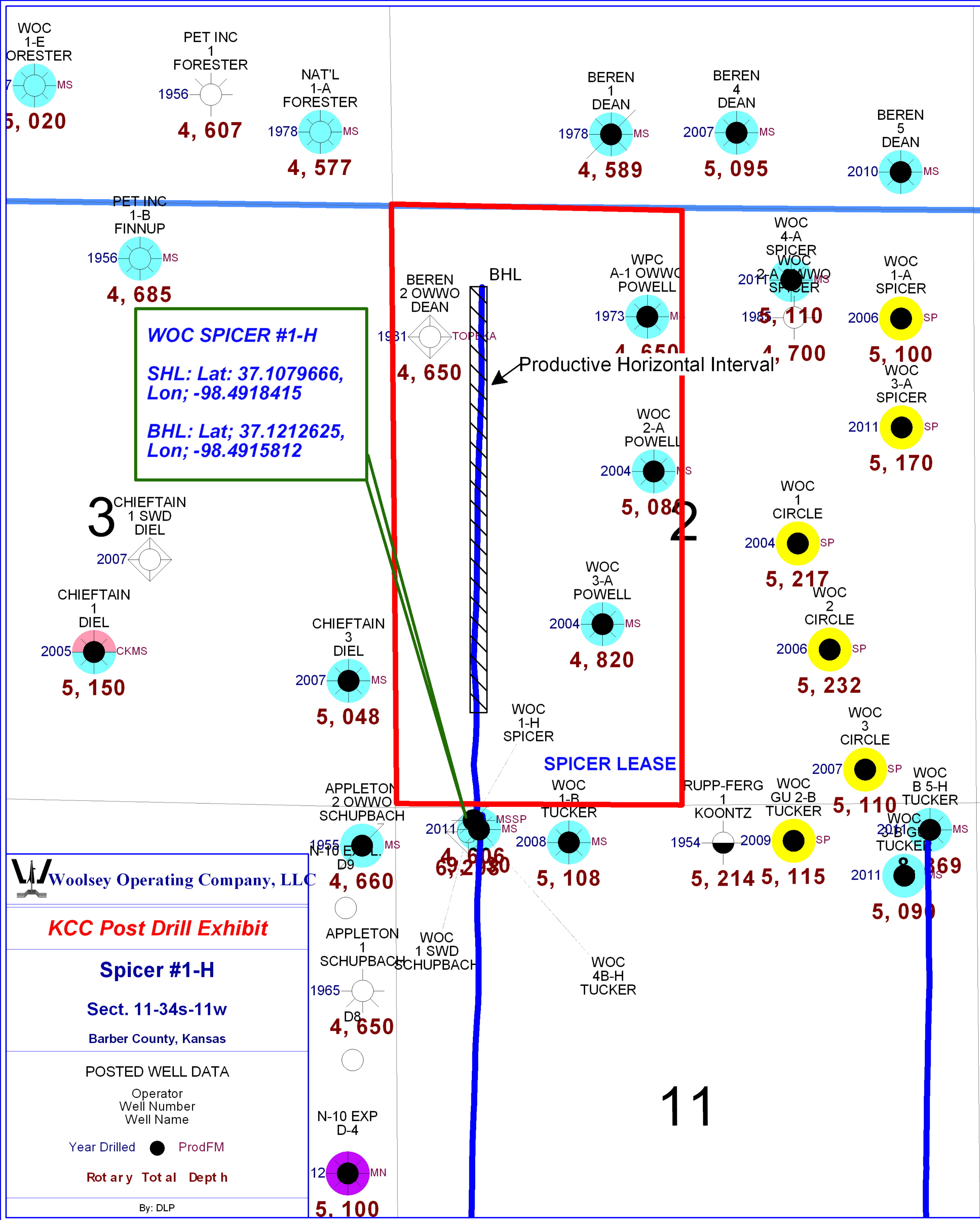
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
-----------------------------------	-----------	---------	-------------	---------------	---------

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
---	--	--

Form	ACO1 - Well Completion
Operator	Woolsey Operating Company, LLC
Well Name	SPICER 1 H
Doc ID	1105651

#### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
CONDUCTOR	30	20	53	40	GROUT	4	4 yards, not sx
SURFACE	17.5	13.375	54.5	324	CLASS A	300	2% gel, 3% cc
INTERMEDIATE	12.25	7	23	5229	60/40 POZMIX	50	2% gel, 3% cc
INTERMEDIATE	12.25	7	23	5229	CLASS H	200	10% gyp, 10% salt, .5% fluid loss, ¼# flow seal & 6% Kolseal



**Woolsey Operating Company, LLC**

**KCC Post Drill Exhibit**

**Spicer #1-H**

**Sect. 11-34s-11w**  
 Barber County, Kansas

**POSTED WELL DATA**

Operator  
 Well Number  
 Well Name

Year Drilled ● ProdFM

Rotary Total Depth

By: DLP

11

P.O. # \_\_\_\_\_

**BIG BUCKETS RATHOLE DRILLING**

**No 5014**

ORDERED BY

*Mike Sharp*

P.O. Box 5252  
Enid, Oklahoma 73702  
Phone (580) 233-9850  
Fax (580) 233-4588

Date *8/22/12*

Bill To

*Woolsey Operating LLC*

Lease

*Spicer #1-H*

Address

Legal

*Sec 11-345-11W*

County

*Barber, Ks.*

Rig

*Dan D Dreg #11*

DESCRIPTION	AMOUNT	
Furnish Men & Equipment To		
<i>Drill rat mouse holes - 5ft of 60" cellar 40ft of 30" holes &amp; remove dirt from loc.</i>		
Materials Furnished		
<i>40ft of 30" pipe - 4yds of 8 pk grout 5' of 60" timber (cellar) 50ft of 15" timber (Boat R#11) Ks trip permits</i>		
		<i>\$7000.00</i>
Operator <i>Dean Whittington</i>	Approved By	Total <i>\$7000.00</i>

# ALLIED OIL & GAS SERVICES, LLC 053911

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Adair Co. KS

DATE <u>09/11/2012</u>	SEC. <u>11</u>	TWP. <u>34s</u>	RANGE <u>11w</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>23024</u>
LEASE <u>Spicer</u>	WELL.# <u>1-H</u>	LOCATION <u>281 + Gerlane, East to Bethel,</u>			COUNTY <u>Barber</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)		<u>South 1/2, 29 west</u>					

CONTRACTOR Dart-D OWNER Woolley  
 TYPE OF JOB Surface  
 HOLE SIZE 17 1/2 T.D. 330  
 CASING SIZE 13 3/8 DEPTH 324.87  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX 200 MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG. 20ft  
 PERFS.  
 DISPLACEMENT 47 Bbls fresh H<sub>2</sub>O

CEMENT  
 AMOUNT ORDERED 300.00 Class A + 5% wt + 2% Gel

COMMON "A" 300 @ 17.91	5310.00
POZMIX @	
GEL 1.0 @ 28.40	28.40
CHLORIDE 11.0 @ 64.00	704.00
ASC @	
HANDLING 321 x 2148 @	796.08
MILEAGE 7.40 x 15 x 21.00	288.60
TOTAL	7229.08

EQUIPMENT  
 PUMP TRUCK CEMENTER Sean Thinesch /  
#558/555 HELPER Baron Franklin /  
 BULK TRUCK  
#421/252 DRIVER Troy Lenz /  
 BULK TRUCK  
 # DRIVER

REMARKS:  
Circ cement

WELL FILE

Regulatory Correspondence  
 Drilling Comp Workovers  
 Tests / Meters Operations

CHARGE TO: Woolley  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE  
 DEPTH OF JOB \_\_\_\_\_  
 PUMP TRUCK CHARGE \_\_\_\_\_ 1512.25  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 MILEAGE 15 @ 7.70 115.50  
 MANIFOLD @ \_\_\_\_\_  
 15 @ 4.40 66.00  
 @ \_\_\_\_\_

TOTAL \$11037.5

**PLUG & FLOAT EQUIPMENT**

\_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_

TOTAL \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME MIKE TAMM  
 SIGNATURE M. Tamm

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES \$8992.83  
 DISCOUNT 25% of 2248.21 IF PAID IN 30 DAYS  
Net \$ 6744.62

OCT - 1 2012

# ALLIED OIL & GAS SERVICES, LLC 053921

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Medicine Lodge KS

DATE 09/24/12	SEC 11	TWP. 34s	RANGE 11w	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 5:45AM
LEASE Spicer	WELL# 1-A	LOCATION 281 + Coakline Rd, East to Beth Rd, 1 south, 34 west			COUNTY Barber	STATE KS	
OLD OR NEW (Circle one)							

CONTRACTOR Dan - D  
TYPE OF JOB Production  
HOLE SIZE 8 3/4 T.D. 5236  
CASING SIZE 7 DEPTH 5228  
TUBING SIZE DEPTH  
DRILL PIPE DEPTH  
TOOL DEPTH  
PRES. MAX 2000 MINIMUM  
MEAS. LINE SHOE JOINT 43.30  
CEMENT LEFT IN CSG. 43.30  
PERFS.  
DISPLACEMENT 104 1/2 Bbls Fresh H<sub>2</sub>O

OWNER Woolsey Oper  
CEMENT  
AMOUNT ORDERED 50sx 60:40:4% Gel  
200sx Class H + 10% Gypseal + 10% salt +  
6# Kalseal + .5% Ft-160 + 4# Floseal  
COMMON .30 SX @ 17.90 537.00  
POZMIX 20 SX @ 9.35 187.00  
GEL 2 SX @ 23.40 46.80  
CHLORIDE @  
ASC @  
H 200 SX @ 21.20 4240.00  
Gypseal 19 SX @ 37.60 714.40  
Salt 22 SX @ 13.17 289.74  
Kalseal 1200 # @ .98 1176.00  
Ft-160 94 # @ 18.90 1776.60  
floseal 30 # @ 2.97 148.50  
HANDLING 342.87 @ 2.48 850.31  
MILEAGE 1379 / 15 @ 2.60 537.81  
206.85 TOTAL 10,504.16

EQUIPMENT  
PUMP TRUCK CEMENTER Jason Thimarch 1  
# 558/555 HELPER Tray Lenz / Scott Priddy 2  
BULK TRUCK # 356/290 DRIVER Jake Heard 3  
BULK TRUCK # DRIVER Darrin Franklin - Pump 1

REMARKS:  
Plug Did Hold

3 HRS wait time from 2 AM to 5 AM

**WELL FILE**

Regulatory Correspondence  
Drill / Comp Workovers  
Operations  
CHARGE TO: Woolsey

STREET  
CITY STATE ZIP

SERVICE  
DEPTH OF JOB  
PUMP TRUCK CHARGE 3099.25  
EXTRA FOOTAGE @  
MILEAGE 15 @ 7.70 115.50  
MANIFOLD @ 275.00  
Light Vehicle 15 @ 4.40 66.00  
TOTAL 3555.75

PLUG & FLOAT EQUIPMENT  
1- Sure seal shoe @ 886.86  
1- Sure seal collar @ 712.53  
5- spiral gliders @ 189.20 946.00  
5- limit clamps @ 56.16 280.80  
1- Rubber plug @ 99.45  
TOTAL 2925.64

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME MIKE THARP  
SIGNATURE Mike Tharp

SALES TAX (If Any)  
TOTAL CHARGES 16,985.55  
DISCOUNT 22% IF PAID IN 30 DAYS  
(Net) 13,248.72  
- 3 hours waiting time x 550.00  
Discount 1650.00  
(Net) 11,598.72

OCT 22 2012

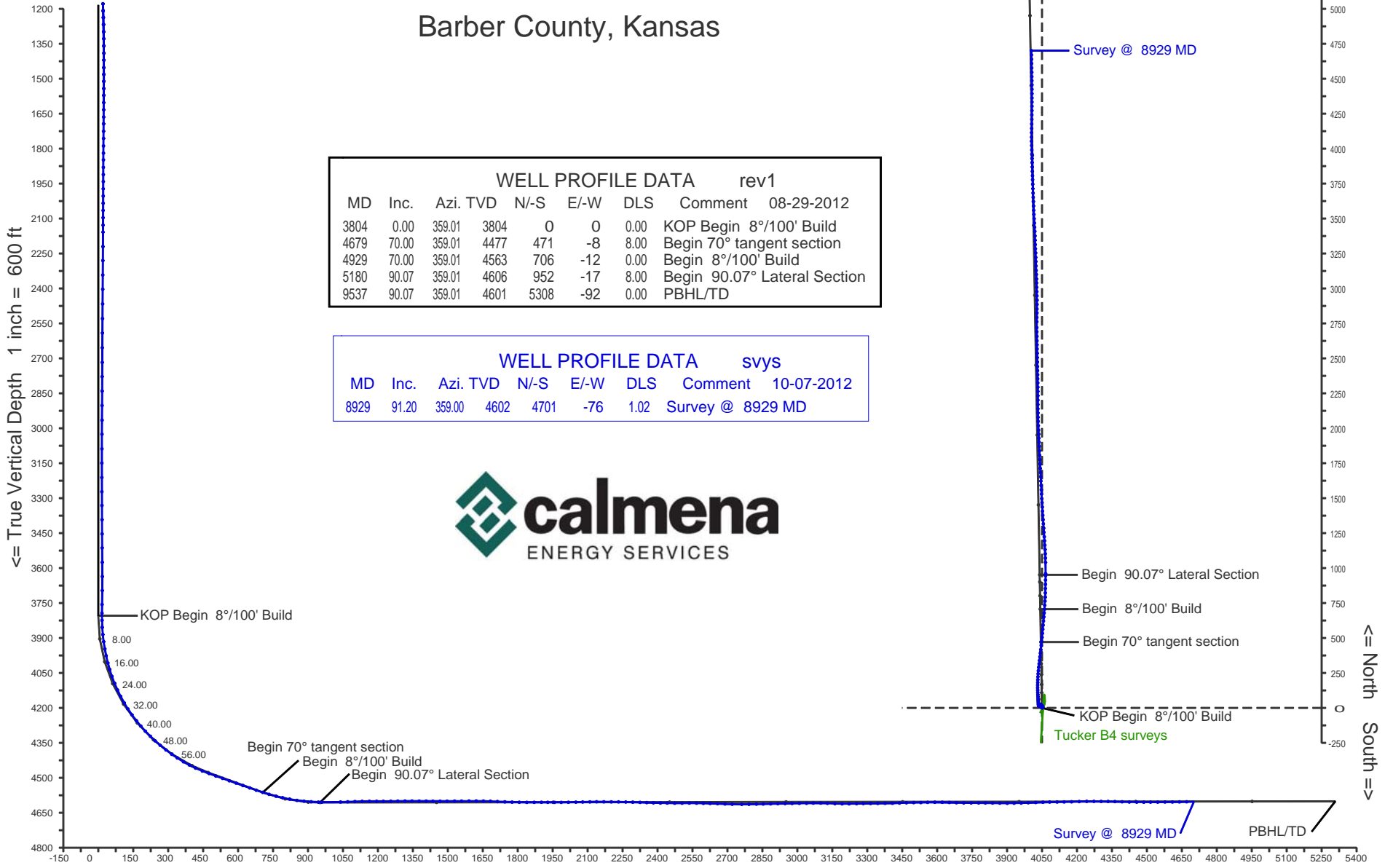
Disc. 3373.82

# Woolsey Operating Company, LLC

## Spicer #1-H

### Barber County, Kansas

<= West East => 1 inch = 1000 ft



WELL PROFILE DATA rev1							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
3804	0.00	359.01	3804	0	0	0.00	KOP Begin 8°/100' Build
4679	70.00	359.01	4477	471	-8	8.00	Begin 70° tangent section
4929	70.00	359.01	4563	706	-12	0.00	Begin 8°/100' Build
5180	90.07	359.01	4606	952	-17	8.00	Begin 90.07° Lateral Section
9537	90.07	359.01	4601	5308	-92	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
8929	91.20	359.00	4602	4701	-76	1.02	Survey @ 8929 MD



Vertical Section on 359.01 deg azimuth with reference 0.00 N, 0.00 E



## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 1  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
<b>Surface Location</b>								<b>160613.00</b>	<b>2002441.00</b>	175 FNL 773 FWL Sec11
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160613.00	2002441.00	
659.00	0.70	64.60	658.98	1.73	3.64	0.11	1.66	160614.73	2002444.64	
689.00	1.00	39.50	688.98	2.01	3.97	1.57	1.94	160615.01	2002444.97	
721.00	1.70	22.80	720.97	2.66	4.33	2.49	2.59	160615.66	2002445.33	
752.00	2.00	1.90	751.96	3.62	4.53	2.36	3.55	160616.62	2002445.53	
781.00	2.50	354.70	780.93	4.76	4.48	1.98	4.68	160617.76	2002445.48	
813.00	3.20	346.20	812.89	6.32	4.21	2.55	6.25	160619.32	2002445.21	
842.00	3.20	345.20	841.85	7.89	3.81	0.19	7.82	160620.89	2002444.81	
873.00	2.90	330.60	872.80	9.41	3.20	2.68	9.35	160622.41	2002444.20	
903.00	2.80	326.50	902.77	10.68	2.42	0.76	10.64	160623.68	2002443.42	
933.00	2.70	329.20	932.73	11.90	1.66	0.55	11.87	160624.90	2002442.66	
964.00	2.60	329.90	963.70	13.14	0.93	0.34	13.12	160626.14	2002441.93	
995.00	2.60	326.90	994.67	14.33	0.19	0.44	14.33	160627.33	2002441.19	
1026.00	2.40	329.50	1025.64	15.48	-0.52	0.74	15.49	160628.48	2002440.48	
1057.00	2.30	330.00	1056.61	16.58	-1.16	0.33	16.60	160629.58	2002439.84	
1088.00	2.20	319.90	1087.59	17.57	-1.85	1.32	17.60	160630.57	2002439.15	
1120.00	2.40	310.40	1119.56	18.48	-2.76	1.34	18.52	160631.48	2002438.24	
1147.00	2.50	307.00	1146.54	19.20	-3.66	0.65	19.26	160632.20	2002437.34	
1179.00	2.60	307.00	1178.51	20.06	-4.80	0.31	20.14	160633.06	2002436.20	
1209.00	2.70	308.10	1208.48	20.90	-5.90	0.37	21.00	160633.90	2002435.10	
1238.00	2.60	304.90	1237.44	21.70	-6.97	0.62	21.82	160634.70	2002434.03	
1268.00	2.40	301.40	1267.42	22.42	-8.07	0.84	22.55	160635.42	2002432.93	
1299.00	2.10	298.10	1298.39	23.02	-9.12	1.05	23.18	160636.02	2002431.88	
1329.00	2.00	293.50	1328.37	23.49	-10.09	0.64	23.66	160636.49	2002430.91	
1360.00	1.40	282.60	1359.36	23.79	-10.95	2.19	23.97	160636.79	2002430.05	
1391.00	1.20	271.30	1390.35	23.88	-11.65	1.05	24.08	160636.88	2002429.35	
1421.00	1.10	260.30	1420.34	23.84	-12.25	0.81	24.04	160636.84	2002428.75	
1453.00	0.80	253.20	1452.34	23.72	-12.76	1.01	23.94	160636.72	2002428.24	
1482.00	0.60	254.30	1481.34	23.62	-13.10	0.69	23.84	160636.62	2002427.90	
1512.00	0.60	258.00	1511.34	23.54	-13.41	0.13	23.77	160636.54	2002427.59	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 2  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
1543.00	0.50	253.20	1542.34	23.47	-13.70	0.35	23.71	160636.47	2002427.30	
1572.00	0.50	234.20	1571.33	23.36	-13.92	0.57	23.60	160636.36	2002427.08	
1603.00	0.50	238.50	1602.33	23.21	-14.14	0.12	23.45	160636.21	2002426.86	
1634.00	0.50	237.40	1633.33	23.07	-14.37	0.03	23.31	160636.07	2002426.63	
1665.00	0.50	230.20	1664.33	22.91	-14.59	0.20	23.16	160635.91	2002426.41	
1694.00	0.50	225.80	1693.33	22.74	-14.78	0.13	22.99	160635.74	2002426.22	
1726.00	0.50	221.20	1725.33	22.54	-14.97	0.13	22.79	160635.54	2002426.03	
1757.00	0.40	219.00	1756.33	22.35	-15.13	0.33	22.61	160635.35	2002425.87	
1789.00	0.50	217.70	1788.33	22.15	-15.28	0.31	22.41	160635.15	2002425.72	
1820.00	0.50	217.20	1819.33	21.94	-15.45	0.01	22.20	160634.94	2002425.55	
1849.00	0.40	228.10	1848.32	21.77	-15.60	0.45	22.04	160634.77	2002425.40	
1881.00	0.30	196.60	1880.32	21.62	-15.71	0.67	21.88	160634.62	2002425.29	
1912.00	0.40	207.90	1911.32	21.44	-15.78	0.39	21.71	160634.44	2002425.22	
1942.00	0.40	207.40	1941.32	21.26	-15.88	0.01	21.53	160634.26	2002425.12	
1973.00	0.40	226.70	1972.32	21.09	-16.01	0.43	21.36	160634.09	2002424.99	
2004.00	0.40	213.30	2003.32	20.92	-16.14	0.30	21.20	160633.92	2002424.86	
2035.00	0.40	205.20	2034.32	20.73	-16.25	0.18	21.01	160633.73	2002424.75	
2066.00	0.40	212.60	2065.32	20.54	-16.35	0.17	20.82	160633.54	2002424.65	
2097.00	0.30	217.40	2096.32	20.39	-16.46	0.34	20.67	160633.39	2002424.54	
2129.00	0.30	216.70	2128.32	20.26	-16.56	0.01	20.54	160633.26	2002424.44	
2159.00	0.40	208.80	2158.32	20.10	-16.66	0.37	20.39	160633.10	2002424.34	
2221.00	0.30	196.60	2220.32	19.76	-16.81	0.20	20.04	160632.76	2002424.19	
2281.00	0.40	219.50	2280.32	19.44	-16.99	0.28	19.73	160632.44	2002424.01	
2343.00	0.30	211.90	2342.31	19.14	-17.21	0.18	19.43	160632.14	2002423.79	
2404.00	0.50	218.80	2403.31	18.80	-17.46	0.34	19.09	160631.80	2002423.54	
2467.00	0.40	213.20	2466.31	18.40	-17.76	0.17	18.70	160631.40	2002423.24	
2530.00	0.60	214.60	2529.31	17.94	-18.06	0.32	18.25	160630.94	2002422.94	
2592.00	0.40	208.60	2591.31	17.48	-18.35	0.33	17.80	160630.48	2002422.65	
2655.00	0.40	215.60	2654.30	17.11	-18.59	0.08	17.43	160630.11	2002422.41	
2718.00	0.40	220.20	2717.30	16.77	-18.86	0.05	17.09	160629.77	2002422.14	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 3  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
2779.00	0.30	208.40	2778.30	16.46	-19.07	0.20	16.79	160629.46	2002421.93	
2841.00	0.20	195.00	2840.30	16.22	-19.17	0.19	16.54	160629.22	2002421.83	
2903.00	0.10	183.40	2902.30	16.06	-19.21	0.17	16.39	160629.06	2002421.79	
2966.00	0.30	207.90	2965.30	15.86	-19.29	0.34	16.19	160628.86	2002421.71	
3026.00	0.40	224.20	3025.30	15.57	-19.51	0.23	15.90	160628.57	2002421.49	
3089.00	0.30	196.60	3088.30	15.25	-19.71	0.31	15.59	160628.25	2002421.29	
3150.00	0.30	248.80	3149.30	15.04	-19.90	0.43	15.38	160628.04	2002421.10	
3212.00	0.40	276.60	3211.30	15.01	-20.27	0.31	15.35	160628.01	2002420.73	
3273.00	0.50	290.10	3272.29	15.12	-20.73	0.24	15.48	160628.12	2002420.27	
3332.00	0.70	296.80	3331.29	15.37	-21.29	0.36	15.74	160628.37	2002419.71	
3393.00	0.50	325.70	3392.29	15.76	-21.77	0.58	16.14	160628.76	2002419.23	
3454.00	0.50	296.50	3453.29	16.10	-22.16	0.41	16.48	160629.10	2002418.84	
3514.00	0.50	332.50	3513.28	16.45	-22.52	0.52	16.84	160629.45	2002418.48	
3576.00	0.60	313.90	3575.28	16.91	-22.88	0.33	17.31	160629.91	2002418.12	
3637.00	0.40	295.10	3636.28	17.23	-23.30	0.42	17.63	160630.23	2002417.70	
3697.00	0.80	177.10	3696.28	16.90	-23.47	1.75	17.30	160629.90	2002417.53	
3757.00	1.00	159.20	3756.27	15.99	-23.26	0.57	16.39	160628.99	2002417.74	
3794.00	0.50	189.90	3793.27	15.53	-23.17	1.69	15.93	160628.53	2002417.83	
3825.00	1.40	325.50	3824.26	15.71	-23.41	5.78	16.11	160628.71	2002417.59	
3855.00	3.40	339.00	3854.24	16.84	-23.94	6.88	17.25	160629.84	2002417.06	
3886.00	5.70	350.10	3885.14	19.21	-24.53	7.91	19.64	160632.21	2002416.47	
3917.00	7.90	354.60	3915.92	22.85	-25.00	7.30	23.28	160635.85	2002416.00	
3948.00	10.10	354.80	3946.53	27.68	-25.44	7.10	28.12	160640.68	2002415.56	
3978.00	12.00	355.00	3975.98	33.41	-25.95	6.33	33.85	160646.41	2002415.05	
4010.00	14.40	354.80	4007.13	40.69	-26.61	7.50	41.14	160653.69	2002414.39	
4039.00	16.90	356.10	4035.05	48.48	-27.22	8.70	48.95	160661.48	2002413.78	
4070.00	19.70	357.10	4064.48	58.20	-27.79	9.09	58.67	160671.20	2002413.21	
4102.00	22.20	357.80	4094.36	69.63	-28.29	7.85	70.11	160682.63	2002412.71	
4133.00	24.70	357.30	4122.80	81.95	-28.82	8.09	82.44	160694.95	2002412.18	
4164.00	27.20	357.10	4150.67	95.50	-29.49	8.07	96.00	160708.50	2002411.51	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 4  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° Az (feet)	Grid Y	Grid X	Comments
4195.00	30.00	357.50	4177.89	110.32	-30.19	9.05	110.83	160723.32	2002410.81	
4226.00	33.00	358.20	4204.32	126.51	-30.79	9.75	127.02	160739.51	2002410.21	
4257.00	35.80	0.10	4229.89	144.01	-31.04	9.67	144.53	160757.01	2002409.96	
4288.00	38.30	0.80	4254.63	162.69	-30.89	8.18	163.20	160775.69	2002410.11	
4318.00	40.50	1.30	4277.81	181.73	-30.54	7.41	182.23	160794.73	2002410.46	
4348.00	43.30	2.20	4300.14	201.75	-29.92	9.55	202.24	160814.75	2002411.08	
4378.00	45.60	3.10	4321.55	222.73	-28.95	7.95	223.20	160835.73	2002412.05	
4407.00	47.50	4.10	4341.50	243.74	-27.62	7.01	244.19	160856.74	2002413.38	
4436.00	50.00	5.20	4360.62	265.47	-25.85	9.08	265.88	160878.47	2002415.15	
4468.00	52.80	5.90	4380.58	290.36	-23.43	8.92	290.72	160903.36	2002417.57	
4499.00	54.90	6.60	4398.87	315.24	-20.70	7.02	315.55	160928.24	2002420.30	
4528.00	57.10	6.90	4415.08	339.12	-17.88	7.63	339.38	160952.12	2002423.12	
4559.00	60.00	6.90	4431.25	365.37	-14.70	9.35	365.57	160978.37	2002426.30	
4589.00	62.70	6.60	4445.64	391.51	-11.61	9.04	391.65	161004.51	2002429.39	
4618.00	65.50	6.40	4458.30	417.43	-8.65	9.68	417.51	161030.43	2002432.35	
4650.00	68.80	5.90	4470.73	446.74	-5.50	10.41	446.77	161059.74	2002435.50	
4681.00	69.90	5.40	4481.66	475.61	-2.64	3.86	475.58	161088.61	2002438.36	
4712.00	70.20	5.40	4492.24	504.62	0.10	0.97	504.54	161117.62	2002441.10	
4743.00	70.60	5.40	4502.64	533.69	2.85	1.29	533.57	161146.69	2002443.85	
4774.00	70.80	5.20	4512.88	562.83	5.55	0.89	562.65	161175.83	2002446.55	
4805.00	71.00	5.00	4523.03	592.00	8.16	0.89	591.78	161205.00	2002449.16	
4836.00	70.80	4.80	4533.17	621.19	10.66	0.89	620.91	161234.19	2002451.66	
4867.00	70.70	4.70	4543.39	650.36	13.08	0.44	650.03	161263.36	2002454.08	
4897.00	71.00	4.70	4553.23	678.60	15.40	1.00	678.23	161291.60	2002456.40	
4926.00	71.60	4.50	4562.53	705.98	17.61	2.17	705.57	161318.98	2002458.61	
4955.00	74.00	3.80	4571.10	733.61	19.61	8.59	733.16	161346.61	2002460.61	
4986.00	76.40	3.10	4579.02	763.53	21.41	8.04	763.04	161376.53	2002462.41	
5015.00	77.90	2.40	4585.47	791.77	22.77	5.68	791.25	161404.77	2002463.77	
5046.00	79.30	1.70	4591.60	822.13	23.86	5.03	821.60	161435.13	2002464.86	
5078.00	81.50	0.80	4596.94	853.68	24.54	7.41	853.12	161466.68	2002465.54	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 5  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
5108.00	84.40	0.80	4600.62	883.44	24.96	9.67	882.88	161496.44	2002465.96	
5139.00	86.80	0.80	4603.00	914.35	25.39	7.74	913.77	161527.35	2002466.39	
5170.00	88.20	0.60	4604.35	945.31	25.77	4.56	944.73	161558.31	2002466.77	
5185.00	89.20	0.30	4604.69	960.31	25.89	6.96	959.72	161573.31	2002466.89	
5265.00	91.70	359.20	4604.06	1040.30	25.54	3.41	1039.70	161653.30	2002466.54	
5296.00	92.10	358.00	4603.03	1071.27	24.78	4.08	1070.68	161684.27	2002465.78	
5327.00	92.00	357.30	4601.92	1102.23	23.51	2.28	1101.65	161715.23	2002464.51	
5358.00	91.20	356.80	4601.06	1133.17	21.92	3.04	1132.62	161746.17	2002462.92	
5389.00	89.80	356.40	4600.79	1164.12	20.08	4.70	1163.59	161777.12	2002461.08	
5420.00	89.90	356.40	4600.87	1195.05	18.13	0.32	1194.56	161808.05	2002459.13	
5449.00	90.10	356.10	4600.87	1223.99	16.23	1.24	1223.53	161836.99	2002457.23	
5481.00	90.60	355.90	4600.67	1255.91	14.00	1.68	1255.48	161868.91	2002455.00	
5511.00	91.20	355.90	4600.20	1285.83	11.86	2.00	1285.44	161898.83	2002452.86	
5542.00	90.60	356.20	4599.71	1316.75	9.72	2.16	1316.39	161929.75	2002450.72	
5572.00	89.70	356.20	4599.64	1346.69	7.73	3.00	1346.35	161959.69	2002448.73	
5603.00	89.60	356.10	4599.82	1377.62	5.65	0.46	1377.31	161990.62	2002446.65	
5633.00	89.00	356.40	4600.19	1407.55	3.69	2.24	1407.28	162020.55	2002444.69	
5662.00	89.40	356.60	4600.60	1436.49	1.92	1.54	1436.25	162049.49	2002442.92	
5693.00	90.00	356.80	4600.76	1467.44	0.14	2.04	1467.22	162080.44	2002441.14	
5723.00	91.40	356.60	4600.39	1497.39	-1.59	4.71	1497.19	162110.39	2002439.41	
5755.00	90.30	357.30	4599.92	1529.34	-3.29	4.07	1529.17	162142.34	2002437.71	
5785.00	90.10	357.30	4599.81	1559.31	-4.71	0.67	1559.16	162172.31	2002436.29	
5817.00	90.80	357.10	4599.56	1591.27	-6.27	2.28	1591.14	162204.27	2002434.73	
5848.00	89.90	357.50	4599.37	1622.23	-7.73	3.18	1622.12	162235.23	2002433.27	
5879.00	88.80	357.10	4599.72	1653.19	-9.19	3.78	1653.11	162266.19	2002431.81	
5909.00	87.80	357.30	4600.61	1683.15	-10.65	3.40	1683.08	162296.15	2002430.35	
5939.00	87.50	357.30	4601.84	1713.09	-12.07	1.00	1713.04	162326.09	2002428.93	
5971.00	87.50	356.80	4603.24	1745.01	-13.71	1.56	1744.99	162358.01	2002427.29	
6002.00	88.30	356.80	4604.38	1775.94	-15.44	2.58	1775.95	162388.94	2002425.56	
6033.00	89.20	357.30	4605.05	1806.90	-17.04	3.32	1806.92	162419.90	2002423.96	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 6  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
6065.00	89.90	357.30	4605.30	1838.86	-18.54	2.19	1838.91	162451.86	2002422.46	
6097.00	90.50	357.50	4605.19	1870.83	-20.00	1.98	1870.89	162483.83	2002421.00	
6128.00	89.80	357.50	4605.11	1901.80	-21.35	2.26	1901.88	162514.80	2002419.65	
6155.00	89.60	357.50	4605.25	1928.77	-22.53	0.74	1928.87	162541.77	2002418.47	
6184.00	89.90	357.50	4605.38	1957.74	-23.79	1.03	1957.86	162570.74	2002417.21	
6213.00	90.20	357.30	4605.35	1986.71	-25.11	1.24	1986.85	162599.71	2002415.89	
6244.00	90.60	357.30	4605.14	2017.68	-26.57	1.29	2017.83	162630.68	2002414.43	
6276.00	91.10	358.50	4604.66	2049.65	-27.74	4.06	2049.82	162662.65	2002413.26	
6305.00	91.50	358.90	4604.00	2078.64	-28.40	1.95	2078.82	162691.64	2002412.60	
6336.00	91.00	358.90	4603.33	2109.62	-28.99	1.61	2109.81	162722.62	2002412.01	
6365.00	90.00	359.70	4603.07	2138.62	-29.35	4.42	2138.81	162751.62	2002411.65	
6396.00	89.60	359.60	4603.18	2169.62	-29.53	1.33	2169.80	162782.62	2002411.47	
6428.00	90.00	0.10	4603.29	2201.62	-29.62	2.00	2201.80	162814.62	2002411.38	
6459.00	89.00	359.90	4603.56	2232.62	-29.62	3.29	2232.79	162845.62	2002411.38	
6490.00	89.10	359.60	4604.08	2263.61	-29.75	1.02	2263.79	162876.61	2002411.25	
6520.00	88.50	359.40	4604.71	2293.60	-30.02	2.11	2293.78	162906.60	2002410.98	
6551.00	88.40	359.00	4605.55	2324.59	-30.45	1.33	2324.77	162937.59	2002410.55	
6580.00	88.20	359.20	4606.41	2353.57	-30.90	0.98	2353.76	162966.57	2002410.10	
6609.00	88.10	358.90	4607.34	2382.55	-31.38	1.09	2382.74	162995.55	2002409.62	
6639.00	88.70	358.90	4608.18	2412.54	-31.96	2.00	2412.73	163025.54	2002409.04	
6668.00	89.40	358.90	4608.66	2441.53	-32.52	2.41	2441.72	163054.53	2002408.48	
6700.00	89.70	358.70	4608.91	2473.52	-33.19	1.13	2473.72	163086.52	2002407.81	
6732.00	90.70	358.70	4608.80	2505.51	-33.91	3.13	2505.72	163118.51	2002407.09	
6763.00	90.40	358.70	4608.50	2536.50	-34.62	0.97	2536.72	163149.50	2002406.38	
6794.00	88.70	359.00	4608.75	2567.49	-35.24	5.57	2567.72	163180.49	2002405.76	
6823.00	88.50	359.40	4609.45	2596.48	-35.64	1.54	2596.71	163209.48	2002405.36	
6852.00	88.70	359.20	4610.16	2625.47	-36.00	0.98	2625.70	163238.47	2002405.00	
6884.00	88.00	359.20	4611.08	2657.45	-36.44	2.19	2657.69	163270.45	2002404.56	
6916.00	87.40	358.90	4612.37	2689.42	-36.97	2.10	2689.66	163302.42	2002404.03	
6947.00	88.30	359.70	4613.53	2720.40	-37.35	3.88	2720.64	163333.40	2002403.65	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 7  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
6988.00	90.20	0.80	4614.07	2761.39	-37.17	5.35	2761.62	163374.39	2002403.83	
7019.00	91.00	0.60	4613.74	2792.39	-36.79	2.66	2792.61	163405.39	2002404.21	
7051.00	91.20	1.00	4613.13	2824.38	-36.35	1.40	2824.58	163437.38	2002404.65	
7080.00	91.30	0.60	4612.50	2853.37	-35.94	1.42	2853.56	163466.37	2002405.06	
7112.00	91.20	0.10	4611.80	2885.36	-35.75	1.59	2885.55	163498.36	2002405.25	
7143.00	91.20	359.60	4611.15	2916.35	-35.83	1.61	2916.54	163529.35	2002405.17	
7174.00	91.40	358.30	4610.45	2947.34	-36.40	4.24	2947.53	163560.34	2002404.60	
7204.00	90.90	358.50	4609.84	2977.32	-37.23	1.80	2977.52	163590.32	2002403.77	
7235.00	90.00	358.20	4609.60	3008.31	-38.13	3.06	3008.52	163621.31	2002402.87	
7266.00	91.10	358.70	4609.30	3039.29	-38.97	3.90	3039.51	163652.29	2002402.04	
7295.00	91.80	358.50	4608.57	3068.28	-39.67	2.51	3068.50	163681.28	2002401.33	
7327.00	88.80	357.80	4608.40	3100.25	-40.71	9.63	3100.50	163713.25	2002400.29	
7356.00	87.30	357.60	4609.39	3129.21	-41.87	5.22	3129.47	163742.21	2002399.13	
7388.00	87.50	358.50	4610.84	3161.16	-42.96	2.88	3161.43	163774.16	2002398.04	
7419.00	89.30	358.90	4611.71	3192.14	-43.66	5.95	3192.42	163805.14	2002397.34	
7449.00	90.80	357.80	4611.68	3222.13	-44.52	6.20	3222.42	163835.13	2002396.48	
7481.00	91.40	357.50	4611.06	3254.09	-45.84	2.10	3254.40	163867.09	2002395.16	
7510.00	90.70	358.00	4610.53	3283.07	-46.97	2.97	3283.39	163896.07	2002394.03	
7541.00	90.30	357.50	4610.26	3314.04	-48.19	2.07	3314.38	163927.04	2002392.81	
7572.00	90.70	358.50	4609.99	3345.02	-49.27	3.47	3345.37	163958.02	2002391.73	
7603.00	90.70	358.00	4609.61	3376.00	-50.22	1.61	3376.37	163989.00	2002390.78	
7635.00	90.60	356.90	4609.25	3407.97	-51.64	3.45	3408.35	164020.97	2002389.36	
7665.00	92.50	357.30	4608.44	3437.92	-53.16	6.47	3438.32	164050.92	2002387.84	
7695.00	92.20	356.80	4607.21	3467.85	-54.70	1.94	3468.28	164080.85	2002386.30	
7726.00	90.00	356.90	4606.61	3498.80	-56.41	7.10	3499.25	164111.80	2002384.59	
7757.00	91.20	357.30	4606.29	3529.76	-57.97	4.08	3530.23	164142.76	2002383.03	
7786.00	91.60	357.80	4605.58	3558.72	-59.21	2.21	3559.21	164171.72	2002381.79	
7817.00	90.50	357.60	4605.01	3589.69	-60.46	3.61	3590.20	164202.69	2002380.54	
7849.00	89.00	358.00	4605.15	3621.67	-61.69	4.85	3622.19	164234.67	2002379.31	
7879.00	87.90	358.00	4605.96	3651.64	-62.73	3.67	3652.18	164264.64	2002378.27	

## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 8  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 359.67° (feet)	Az Grid Y	NAD27 Ks South gr elev=1400 RKB=1417 Grid X	Comments
7910.00	88.10	357.30	4607.05	3682.59	-64.00	2.35	3683.15	164295.59	2002377.00	
7941.00	89.30	358.00	4607.75	3713.56	-65.27	4.48	3714.13	164326.56	2002375.73	
7973.00	90.30	357.80	4607.86	3745.53	-66.45	3.19	3746.12	164358.53	2002374.55	
8005.00	90.10	358.90	4607.75	3777.52	-67.37	3.49	3778.12	164390.52	2002373.63	
8034.00	89.30	358.90	4607.90	3806.51	-67.92	2.76	3807.12	164419.51	2002373.08	
8065.00	89.40	357.60	4608.25	3837.50	-68.87	4.21	3838.11	164450.50	2002372.13	
8096.00	88.50	358.70	4608.82	3868.48	-69.87	4.58	3869.11	164481.48	2002371.13	
8128.00	89.90	358.00	4609.27	3900.46	-70.79	4.89	3901.10	164513.46	2002370.21	
8157.00	91.10	358.70	4609.01	3929.44	-71.63	4.79	3930.10	164542.44	2002369.37	
8188.00	91.80	358.20	4608.23	3960.42	-72.47	2.77	3961.08	164573.42	2002368.53	
8218.00	92.30	358.90	4607.16	3990.39	-73.22	2.87	3991.06	164603.39	2002367.78	
8250.00	92.20	358.50	4605.90	4022.36	-73.95	1.29	4023.04	164635.36	2002367.05	
8281.00	91.90	359.20	4604.79	4053.33	-74.57	2.46	4054.02	164666.33	2002366.43	
8310.00	90.80	0.10	4604.11	4082.32	-74.75	4.90	4083.01	164695.32	2002366.25	
8342.00	90.10	1.00	4603.86	4114.32	-74.44	3.56	4114.99	164727.32	2002366.56	
8372.00	90.80	0.60	4603.62	4144.32	-74.02	2.69	4144.98	164757.32	2002366.98	
8404.00	91.40	1.00	4603.01	4176.31	-73.58	2.25	4176.96	164789.31	2002367.42	
8437.00	92.10	0.60	4602.00	4209.29	-73.12	2.44	4209.92	164822.29	2002367.88	
8469.00	90.70	0.40	4601.22	4241.28	-72.84	4.42	4241.90	164854.28	2002368.16	
8500.00	89.30	1.10	4601.22	4272.27	-72.43	5.05	4272.89	164885.27	2002368.57	
8531.00	89.90	0.40	4601.43	4303.27	-72.02	2.97	4303.87	164916.27	2002368.98	
8561.00	89.90	0.30	4601.49	4333.27	-71.84	0.33	4333.86	164946.27	2002369.16	
8590.00	88.40	359.60	4601.92	4362.27	-71.87	5.71	4362.86	164975.27	2002369.13	
8621.00	87.80	0.10	4602.94	4393.25	-71.95	2.52	4393.84	165006.25	2002369.05	
8652.00	88.40	0.30	4603.97	4424.23	-71.84	2.04	4424.81	165037.23	2002369.16	
8684.00	89.40	359.20	4604.59	4456.22	-71.98	4.65	4456.80	165069.22	2002369.02	
8714.00	90.20	358.70	4604.69	4486.22	-72.53	3.14	4486.80	165099.22	2002368.47	
8743.00	90.40	359.60	4604.54	4515.21	-72.96	3.18	4515.80	165128.21	2002368.04	
8774.00	90.50	359.20	4604.30	4546.21	-73.28	1.33	4546.80	165159.21	2002367.72	
8805.00	90.50	359.00	4604.03	4577.21	-73.77	0.65	4577.80	165190.21	2002367.23	



## Calmena Energy Services

Company: Woolsey Operating Company  
 Well: Spicer #1-H  
 Location: Barber County, Kansas

Date: 7-Oct-2012  
 Surveys  
 Page 9  
 Job# : 6526

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 359.67° Az (feet)	Grid Y	Grid X	Comments
8837.00	90.50	358.90	4603.75	4609.20	-74.36	0.31	4609.80	165222.20	2002366.64	
8867.00	90.40	359.20	4603.51	4639.20	-74.85	1.05	4639.80	165252.20	2002366.15	
8898.00	91.10	358.70	4603.10	4670.19	-75.42	2.77	4670.79	165283.19	2002365.58	
8929.00	91.20	359.00	4602.48	4701.17	-76.04	1.02	4701.79	165314.17	2002364.96	

NAD27 Ks South gr elev=1400 RKB=1417



Do It Once  
Do It Right

16-Stage 4-1/2" StackFRAC® HD

Mr. Carl Durr  
9/13/2012

# StackFRAC® HD

Multi-Stage Fracturing System from



Do It Once  
Do It Right

Prepared for:

## Woolsey Petroleum

Mr. Carl Durr

### Spicer #1H

Barber County, KS

16-Stage 4-1/2" StackFRAC® HD  
Completion





Do It Once.  
Do It Right.

Confidential Information - not to be disclosed outside  
Woolsey Petroleum

Completion  
FINAL

Prepared for		Company	Date		
Mr. Carl Durr		Woolsey Petroleum	14-Oct-12		
Well Name		Type of Installation	Location		
Spicer # 1H		16-Stage 4-1/2" StackFRAC® HD	Barber, KS		
Depth	Drawing	Description	OD (in)	ID (in)	Length
<b>Page 2 of 2</b>					
5172' 204bbbs		7" 26# P-110 LT&C Casing  7" 23-32 ppf x 3.875" Lower Bore x 4.75" Upper Bore SF Liner Hanger Packer 35 (3 shear pins at 482 each; 1,446 psi setting pressure) SF Bottom Guide  PN: 108425-000001 SN: SNU0008855	5.875"	4.750" 3.875"	9.90'
		Do not run handling pups on Drillable FracPORT's	5.850"	3.850"	
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2 6-1/8" open hole horizontal	4.500"	4.000"	90.50'
5275'		34 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.42'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 1	4.500"	4.000"	44.88'
Stage 16 5328' 206bbbs		33 Packers Plus 4-1/2" Drillable FracPORT® with 3.500" Seat for 3.625" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000023	5.630"	3.500" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.05'
5427'		32 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.41'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.18'
Stage 15 5525' 210bbbs		31 Packers Plus 4-1/2" Drillable FracPORT® with 3.375" Seat for 3.500" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000319	5.630"	3.375" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.71'
5670'		30 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.39'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.52'
Stage 14 5768' 213bbbs		29 Packers Plus 4-1/2" Drillable FracPORT® with 3.250" Seat for 3.375" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000321	5.630"	3.250" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.76'
5913'		28 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.40'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.46'
Stage 13 6012' 217bbbs		27 Packers Plus 4-1/2" Drillable FracPORT® with 3.125" Seat for 3.250" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000323	5.630"	3.125" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.77'
6156'		26 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.43'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.14'
Stage 12 6255' 221bbbs		25 Packers Plus 4-1/2" Drillable FracPORT® with 3.000" Seat for 3.125" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000325	5.630"	3.000" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.69'
6399'		24 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.40'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.55'
Stage 11 6498' 225bbbs		23 Packers Plus 4-1/2" Drillable FracPORT® with 2.875" Seat for 3.000" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000327	5.630"	2.875" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.72'
6643'		22 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.44'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.52'
Stage 10 6741' 228bbbs		21 Packers Plus 4-1/2" Drillable FracPORT® with 2.750" Seat for 2.875" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000329	5.630"	2.750" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.84'
6886'		20 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) PN: 121381-000001	5.75"	3.875"	14.43'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 2	4.500"	4.000"	90.53'
Stage 9 6985' 232bbbs		19 Packers Plus 4-1/2" Drillable FracPORT® with 2.625" Seat for 2.750" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) PN: 121332-000331	5.630"	2.625" 3.875"	2.65'
		4-1/2" 11.60# N-80 LTC LINER JOINTS: 3	4.500"	4.000"	135.29'
Cont page 2					
Service Center Conway, AR		Telephone 501-327-0241	Contact Gary Leber		Telephone Chad Williams 405-255-3223



Do It Once.  
Do It Right.

Confidential Information - not to be disclosed outside  
Woolsey Petroleum

Completion  
FINAL

Prepared for		Company	Date		
Mr. Carl Durr		Woolsey Petroleum	14-Oct-12		
Well Name		Type of Installation	Location		
Spicer # 1H		16-Stage 4-1/2" StackFRAC® HD	Barber, KS		
Depth	Drawing	Description	OD (in)	ID (in)	Length
	Con't page 1		<b>Page 1 of 2</b>		
7129'		18 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	5.75"	3.875"	#REF!
<b>Stage 8</b>		17 Packers Plus 4-1/2" Drillable FracPORT® with 2.500" Seat for 2.625" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000333 JOINTS: 3	4.500" 5.630"	4.000" 3.875"	90.46' #REF!
7228' 236bbls		16 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	135.74' #REF!
7372'		15 Packers Plus 4-1/2" Drillable FracPORT® with 2.375" Seat for 2.500" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000335 JOINTS: 3	4.500" 5.630"	4.000" 2.375"	90.47' #REF!
7471' 240bbls		14 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	135.66' #REF!
7615'		13 Packers Plus 4-1/2" Drillable FracPORT® with 2.250" Seat for 2.375" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000337 JOINTS: 3	4.500" 5.630"	4.000" 2.250"	90.06' 2.65'
7714' 243bbls		12 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	129.12' 14.41'
7851'		11 Packers Plus 4-1/2" Drillable FracPORT® with 2.125" Seat for 2.250" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000339 JOINTS: 3	4.500" 5.630"	4.000" 3.875"	79.15' 2.65'
7939' 247bbls		10 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	118.08' 14.39'
8066'		9 Packers Plus 4-1/2" Drillable FracPORT® with 2.000" Seat for 2.125" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000341 JOINTS: 3	4.500" 5.630"	4.000" 2.000"	84.35' 2.65'
8158' 250bbls		8 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	126.49' 14.40'
8294'		7 Packers Plus 4-1/2" Drillable FracPORT® with 1.875" Seat for 2.000" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000343 JOINTS: 3	4.500" 5.630"	4.000" 1.875"	79.68' 2.65'
8382' 254bbls		6 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	123.47' 14.39'
8514'		5 Packers Plus 4-1/2" Drillable FracPORT® with 1.750" Seat for 1.875" High Pressure Ball (6 shear pins @ 315 psi each for 1,890 psi opening pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 121332-000345 JOINTS: 3	4.500" 5.630"	4.000" 1.750"	73.94' 2.65'
8596' 257bbls		4 Packers Plus 7" x 4-1/2" RockSEAL® II 10K Hydraulic Set Open Hole Packer (6 pins @ 324 psi each for 1,944 psi setting) 4-1/2" 11.60# N-80 LTC LINER PN: 121381-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	125.76' 14.42'
8731'		3 Packers Plus 7" x 4-1/2" RockSEAL® IIS 10K Hydraulic Set Anchor Packer (6 shear pins at 324 psi each: 1,944 psi setting pressure) 4-1/2" 11.60# N-80 LTC LINER PN: 124306-000001 JOINTS: 2	4.500" 5.75"	4.000" 3.875"	78.99' 16.40'
8824'		2 Packers Plus 4-1/2" Dual Hydraulic FracPORT® (11 pins at 391 psi each: 4,301 psi Upper ) / ( 7 pins at 630 psi each: 4,410 psi Lower ) 4-1/2" 11.60# N-80 LTC LINER PN: 121288-000001 JOINTS: 2	4.500" 5.630"	4.000" 3.875"	82.49' 13.53'
8923' 262bbls		1 Packers Plus 4-1/2" Toe Circulating Sub w/ Step Down Seat for High Pressure Ball (3 pins at 366 psi each: 1,098 psi closing pressure) 4-1/2" LTC Single Valve Float Collar PN: 103039-000005 PN: 104733-000001	4.500" 5.500"	4.000" 4.000"	80.71' 18.48'
Toe Sub 9017' 264bbls		4-1/2" LTC Single Valve Float Collar PN: 104733-000001	5.000"	4.000"	
		4-1/2" LTC Guide Shoe PN: 121704-000001	5.500"	2.250"	
Service Center	Telephone	Contact	Telephone		
Conway, AR	501-327-0241	Gary Leber	Chad Williams 405-255-3223		

# PACKERS PLUS - PACKER PLACEMENT



**Do It Once  
Do It Right**

Operator:	Woolsey Petroleum	Base Point:	20600 Conway
Company Rep:	Mike Tharp	Packers Plus Rep:	Gary Goodman/Brad Kelley
Well Name:	Spicer # 1-H	Date Started:	7-Oct
Ticket Number:	SOU005667	Date Completed:	14-Oct
County/State:	Barber Co. KS.	Type of Job:	Stac Frac HD

Item	Description	Length	Landed @	Date TMD	
			Actual MD	Accumulated	Proposed
			9030.00		
	<b>GUIDE SHOE</b>	<b>0.92</b>	9029.08	0.92	
	<b>FLOAT COLLAR</b>	<b>1.32</b>	9027.76	2.24	
	<b>PUP</b>	<b>6.09</b>	9021.67	8.33	
	<b>FLOAT COLLAR</b>	<b>1.33</b>	9020.34	9.66	
	<b>TOE SUB</b>	<b>2.72</b>	<b>9017.62</b>	<b>12.38</b>	
	<b>PUP</b>	<b>6.10</b>	9011.52	18.48	
1	Casing 4 1/2" 11.6ppf N80 LTC	39.33	8972.19	57.81	
2	Casing 4 1/2" 11.6ppf N80 LTC	41.38	8930.81	99.19	
	<b>PUP</b>	<b>3.11</b>	8927.70	102.30	
	<b>DEH FRAC PORT</b>	<b>4.33</b>	<b>8923.37</b>	<b>106.63</b>	
	<b>PUP</b>	<b>6.09</b>	8917.28	112.72	
3	Casing 4 1/2" 11.6ppf N80 LTC	42.20	8875.08	154.92	
4	Casing 4 1/2" 11.6ppf N80 LTC	40.29	8834.79	195.21	
	<b>PUP</b>	<b>3.10</b>	8831.69	198.31	
	<b>RSII</b>	<b>7.20</b>	<b>8824.49</b>	<b>205.51</b>	
	<b>PUP</b>	<b>6.10</b>	8818.39	211.61	
5	Casing 4 1/2" 11.6ppf N80 LTC	37.55	8780.84	249.16	
6	Casing 4 1/2" 11.6ppf N80 LTC	41.44	8739.40	290.60	
	<b>PUP</b>	<b>3.09</b>	8736.31	293.69	
	<b>RSII</b>	<b>5.23</b>	<b>8731.08</b>	<b>298.92</b>	
	<b>PUP</b>	<b>6.10</b>	8724.98	305.02	
7	Casing 4 1/2" 11.6ppf N80 LTC	42.18	8682.80	347.20	
8	Casing 4 1/2" 11.6ppf N80 LTC	41.40	8641.40	388.60	
9	Casing 4 1/2" 11.6ppf N80 LTC	42.18	8599.22	430.78	
	<b>FRAC PORT (1.750")</b>	<b>2.65</b>	<b>8596.57</b>	<b>433.43</b>	
10	Casing 4 1/2" 11.6ppf N80 LTC	39.54	8557.03	472.97	
11	Casing 4 1/2" 11.6ppf N80 LTC	34.40	8522.63	507.37	
	<b>PUP</b>	<b>3.08</b>	8519.55	510.45	
	<b>RSII</b>	<b>5.22</b>	<b>8514.33</b>	<b>515.67</b>	
	<b>PUP</b>	<b>6.09</b>	8508.24	521.76	
12	Casing 4 1/2" 11.6ppf N80 LTC	40.02	8468.22	561.78	
13	Casing 4 1/2" 11.6ppf N80 LTC	41.25	8426.97	603.03	
14	Casing 4 1/2" 11.6ppf N80 LTC	42.20	8384.77	645.23	
	<b>FRAC PORT (1.875")</b>	<b>2.65</b>	<b>8382.12</b>	<b>647.88</b>	
15	Casing 4 1/2" 11.6ppf N80 LTC	37.52	8344.60	685.40	
16	Casing 4 1/2" 11.6ppf N80 LTC	42.16	8302.44	727.56	

## PACKERS PLUS - PACKER PLACEMENT

	PUP	3.08	8299.36	730.64	
	RSII	5.24	8294.12	735.88	
	PUP	6.08	8288.04	741.96	
17	Casing 4 1/2" 11.6ppf N80 LTC	42.11	8245.93	784.07	
18	Casing 4 1/2" 11.6ppf N80 LTC	42.20	8203.73	826.27	
19	Casing 4 1/2" 11.6ppf N80 LTC	42.18	8161.55	868.45	
	FRAC PORT (2.000")	2.65	8158.90	871.10	
20	Casing 4 1/2" 11.6ppf N80 LTC	42.20	8116.70	913.30	
21	Casing 4 1/2" 11.6ppf N80 LTC	42.15	8074.55	955.45	
	PUP	3.08	8071.47	958.53	
	RSII	5.22	8066.25	963.75	
	PUP	6.09	8060.16	969.84	
22	Casing 4 1/2" 11.6ppf N80 LTC	40.08	8020.08	1009.92	
23	Casing 4 1/2" 11.6ppf N80 LTC	39.02	7981.06	1048.94	
24	Casing 4 1/2" 11.6ppf N80 LTC	38.98	7942.08	1087.92	
	FRAC PORT (2.125")	2.65	7939.43	1090.57	
25	Casing 4 1/2" 11.6ppf N80 LTC	37.00	7902.43	1127.57	
26	Casing 4 1/2" 11.6ppf N80 LTC	42.15	7860.28	1169.72	
	PUP	3.08	7857.20	1172.80	
	RSII	5.23	7851.97	1178.03	
	PUP	6.10	7845.87	1184.13	
27	Casing 4 1/2" 11.6ppf N80 LTC	41.70	7804.17	1225.83	
28	Casing 4 1/2" 11.6ppf N80 LTC	42.18	7761.99	1268.01	
29	Casing 4 1/2" 11.6ppf N80 LTC	45.24	7716.75	1313.25	
	FRAC PORT (2.250")	2.65	7714.10	1315.90	
30	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7668.84	1361.16	
31	Casing 4 1/2" 11.6ppf N80 LTC	44.80	7624.04	1405.96	
	PUP	3.07	7620.97	1409.03	
	RSII	5.23	7615.74	1414.26	
	PUP	6.08	7609.66	1420.34	
32	Casing 4 1/2" 11.6ppf N80 LTC	45.20	7564.46	1465.54	
33	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7519.20	1510.80	
34	Casing 4 1/2" 11.6ppf N80 LTC	45.20	7474.00	1556.00	
	FRAC PORT (2.375")	2.65	7471.35	1558.65	
35	Casing 4 1/2" 11.6ppf N80 LTC	45.21	7426.14	1603.86	
36	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7380.88	1649.12	
	PUP	3.06	7377.82	1652.18	
	RSII	5.23	7372.59	1657.41	
	PUP	6.08	7366.51	1663.49	
37	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7321.25	1708.75	
38	Casing 4 1/2" 11.6ppf N80 LTC	45.23	7276.02	1753.98	
39	Casing 4 1/2" 11.6ppf N80 LTC	45.25	7230.77	1799.23	
	FRAC PORT (2.500")	2.65	7228.12	1801.88	
40	Casing 4 1/2" 11.6ppf N80 LTC	45.20	7182.92	1847.08	
41	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7137.66	1892.34	
	PUP	3.08	7134.58	1895.42	
	RSII	5.24	7129.34	1900.66	
	PUP	6.09	7123.25	1906.75	

## PACKERS PLUS - PACKER PLACEMENT

42	Casing 4 1/2" 11.6ppf N80 LTC	45.25	7078.00	1952.00	
43	Casing 4 1/2" 11.6ppf N80 LTC	45.26	7032.74	1997.26	
44	Casing 4 1/2" 11.6ppf N80 LTC	44.78	6987.96	2042.04	
	<b>FRAC PORT (2.625")</b>	<b>2.65</b>	<b>6985.31</b>	<b>2044.69</b>	
45	Casing 4 1/2" 11.6ppf N80 LTC	45.25	6940.06	2089.94	
46	Casing 4 1/2" 11.6ppf N80 LTC	45.28	6894.78	2135.22	
	PUP	<b>3.11</b>	6891.67	2138.33	
	<b>RSII</b>	<b>5.23</b>	<b>6886.44</b>	<b>2143.56</b>	
	PUP	<b>6.09</b>	6880.35	2149.65	
47	Casing 4 1/2" 11.6ppf N80 LTC	45.28	6835.07	2194.93	
48	Casing 4 1/2" 11.6ppf N80 LTC	45.26	6789.81	2240.19	
49	Casing 4 1/2" 11.6ppf N80 LTC	45.30	6744.51	2285.49	
	<b>FRAC PORT (2.750")</b>	<b>2.65</b>	<b>6741.86</b>	<b>2288.14</b>	
50	Casing 4 1/2" 11.6ppf N80 LTC	45.27	6696.59	2333.41	
51	Casing 4 1/2" 11.6ppf N80 LTC	45.25	6651.34	2378.66	
	PUP	<b>3.09</b>	6648.25	2381.75	
	<b>RSII</b>	<b>5.23</b>	<b>6643.02</b>	<b>2386.98</b>	
	PUP	<b>6.12</b>	6636.90	2393.10	
52	Casing 4 1/2" 11.6ppf N80 LTC	45.23	6591.67	2438.33	
53	Casing 4 1/2" 11.6ppf N80 LTC	45.24	6546.43	2483.57	
54	Casing 4 1/2" 11.6ppf N80 LTC	45.25	6501.18	2528.82	
	<b>FRAC PORT (2.875")</b>	<b>2.65</b>	<b>6498.53</b>	<b>2531.47</b>	
55	Casing 4 1/2" 11.6ppf N80 LTC	45.27	6453.26	2576.74	
56	Casing 4 1/2" 11.6ppf N80 LTC	45.28	6407.98	2622.02	
	PUP	<b>3.08</b>	6404.90	2625.10	
	<b>RSII</b>	<b>5.23</b>	<b>6399.67</b>	<b>2630.33</b>	
	PUP	<b>6.09</b>	6393.58	2636.42	
57	Casing 4 1/2" 11.6ppf N80 LTC	45.27	6348.31	2681.69	
58	Casing 4 1/2" 11.6ppf N80 LTC	45.20	6303.11	2726.89	
59	Casing 4 1/2" 11.6ppf N80 LTC	45.22	6257.89	2772.11	
	<b>FRAC PORT (3.00")</b>	<b>2.65</b>	<b>6255.24</b>	<b>2774.76</b>	
60	Casing 4 1/2" 11.6ppf N80 LTC	45.22	6210.02	2819.98	
61	Casing 4 1/2" 11.6ppf N80 LTC	44.92	6165.10	2864.90	
	PUP	<b>3.11</b>	6161.99	2868.01	
	<b>RSII</b>	<b>5.23</b>	<b>6156.76</b>	<b>2873.24</b>	
	PUP	<b>6.09</b>	6150.67	2879.33	
62	Casing 4 1/2" 11.6ppf N80 LTC	45.25	6105.42	2924.58	
63	Casing 4 1/2" 11.6ppf N80 LTC	45.28	6060.14	2969.86	
64	Casing 4 1/2" 11.6ppf N80 LTC	45.24	6014.90	3015.10	
	<b>FRAC PORT (3.125")</b>	<b>2.65</b>	<b>6012.25</b>	<b>3017.75</b>	
65	Casing 4 1/2" 11.6ppf N80 LTC	45.21	5967.04	3062.96	
66	Casing 4 1/2" 11.6ppf N80 LTC	45.25	5921.79	3108.21	
	PUP	<b>3.09</b>	5918.70	3111.30	
	<b>RSII</b>	<b>5.23</b>	<b>5913.47</b>	<b>3116.53</b>	
	PUP	<b>6.08</b>	5907.39	3122.61	
67	Casing 4 1/2" 11.6ppf N80 LTC	45.29	5862.10	3167.90	
68	Casing 4 1/2" 11.6ppf N80 LTC	45.27	5816.83	3213.17	
69	Casing 4 1/2" 11.6ppf N80 LTC	45.20	5771.63	3258.37	

**PACKERS PLUS - PACKER PLACEMENT**

	<b>FRAC PORT (3.250")</b>	<b>2.65</b>	<b>5768.98</b>	<b>3261.02</b>	
70	Casing 4 1/2" 11.6ppf N80 LTC	45.27	5723.71	3306.29	
71	Casing 4 1/2" 11.6ppf N80 LTC	45.25	5678.46	3351.54	
	PUP	<b>3.09</b>	5675.37	3354.63	
	<b>RSII</b>	<b>5.22</b>	<b>5670.15</b>	<b>3359.85</b>	
	PUP	<b>6.08</b>	5664.07	3365.93	
72	Casing 4 1/2" 11.6ppf N80 LTC	45.24	5618.83	3411.17	
73	Casing 4 1/2" 11.6ppf N80 LTC	45.26	5573.57	3456.43	
74	Casing 4 1/2" 11.6ppf N80 LTC	45.21	5528.36	3501.64	
	<b>FRAC PORT (3.375")</b>	<b>2.65</b>	<b>5525.71</b>	<b>3504.29</b>	
75	Casing 4 1/2" 11.6ppf N80 LTC	44.90	5480.81	3549.19	
76	Casing 4 1/2" 11.6ppf N80 LTC	45.28	5435.53	3594.47	
	PUP	<b>3.10</b>	5432.43	3597.57	
	<b>RSII</b>	<b>5.23</b>	<b>5427.20</b>	<b>3602.80</b>	
	PUP	<b>6.08</b>	5421.12	3608.88	
77	Casing 4 1/2" 11.6ppf N80 LTC	45.27	5375.85	3654.15	
78	Casing 4 1/2" 11.6ppf N80 LTC	44.78	5331.07	3698.93	
	<b>FRAC PORT (3.500")</b>	<b>2.65</b>	<b>5328.42</b>	<b>3701.58</b>	
79	Casing 4 1/2" 11.6ppf N80 LTC	44.88	5283.54	3746.46	
	PUP	<b>3.08</b>	5280.46	3749.54	
	<b>RSII</b>	<b>5.23</b>	<b>5275.23</b>	<b>3754.77</b>	
	PUP	<b>6.11</b>	5269.12	3760.88	
80	Casing 4 1/2" 11.6ppf N80 LTC	45.26	5223.86	3806.14	
81	Casing 4 1/2" 11.6ppf N80 LTC	45.24	5178.62	3851.38	
	PUP	<b>3.07</b>	5175.55	3854.45	
	<b>BOTTOM CONNECTION</b>	<b>1.02</b>	5174.53	3855.47	
	<b>SF HANGER</b>	<b>1.84</b>	<b>5172.69</b>	<b>3857.31</b>	
	LOWER LOCK ADAPTER	<b>0.67</b>	5172.02	3857.98	
	LOWER SETTING SLEEVE	<b>2.82</b>	5169.20	3860.80	
	UPPER SETTING SLEEVE	<b>4.47</b>	5164.73	3865.27	
	TOP CONNECTION	<b>1.03</b>	5163.70	3866.30	
	HANDLING SUB	<b>7.84</b>	5155.86	3874.14	
1	DP	62.12	5093.74	3936.26	
2		62.73	5031.01	3998.99	
3		62.32	4968.69	4061.31	
4		62.61	4906.08	4123.92	
5		61.94	4844.14	4185.86	
6		59.55	4784.59	4245.41	
7		62.61	4721.98	4308.02	
8		63.03	4658.95	4371.05	
9		60.96	4597.99	4432.01	
10		62.72	4535.27	4494.73	
11		63.22	4472.05	4557.95	
12		61.78	4410.27	4619.73	
13		60.73	4349.54	4680.46	
14		61.12	4288.42	4741.58	
15		60.30	4228.12	4801.88	
16		63.05	4165.07	4864.93	



## PACKERS PLUS - PACKER PLACEMENT

17		60.23	4104.84	4925.16	
18		63.50	4041.34	4988.66	
19		61.93	3979.41	5050.59	
20		61.37	3918.04	5111.96	
21		60.36	3857.68	5172.32	
22		62.05	3795.63	5234.37	
23	<b>DP</b>	60.70	3734.93	5295.07	
24	<b>HWDP</b>	61.94	3672.99	5357.01	
25		61.95	3611.04	5418.96	
26		61.70	3549.34	5480.66	
27		61.83	3487.51	5542.49	
28		61.95	3425.56	5604.44	
29		61.80	3363.76	5666.24	
30		61.48	3302.28	5727.72	
31		61.06	3241.22	5788.78	
32		61.28	3179.94	5850.06	
33		61.48	3118.46	5911.54	
34		61.97	3056.49	5973.51	
35		62.36	2994.13	6035.87	
36		61.92	2932.21	6097.79	
37		61.95	2870.26	6159.74	
38		61.31	2808.95	6221.05	
39		62.53	2746.42	6283.58	
40		60.91	2685.51	6344.49	
41		61.60	2623.91	6406.09	
42		61.25	2562.66	6467.34	
43	<b>HWDP</b>	61.24	2501.42	6528.58	
44	<b>DP</b>	62.69	2438.73	6591.27	
45		61.94	2376.79	6653.21	
46		60.52	2316.27	6713.73	
47		61.80	2254.47	6775.53	
48		60.83	2193.64	6836.36	
49		60.80	2132.84	6897.16	
50		63.25	2069.59	6960.41	
51		60.43	2009.16	7020.84	
52		62.35	1946.81	7083.19	
53		61.18	1885.63	7144.37	
54		62.88	1822.75	7207.25	
55		61.21	1761.54	7268.46	
56		62.08	1699.46	7330.54	
57		61.12	1638.34	7391.66	
58		58.78	1579.56	7450.44	
59		61.99	1517.57	7512.43	
60		63.59	1453.98	7576.02	
61		58.58	1395.40	7634.60	
62		58.63	1336.77	7693.23	
63		60.61	1276.16	7753.84	
64		62.62	1213.54	7816.46	

## PACKERS PLUS - PACKER PLACEMENT

65		62.59	1150.95	7879.05	
66		60.49	1090.46	7939.54	
67		60.48	1029.98	8000.02	
68		60.22	969.76	8060.24	
69		60.21	909.55	8120.45	
70		63.47	846.08	8183.92	
71		63.44	782.64	8247.36	
72		61.58	721.06	8308.94	
73		61.41	659.65	8370.35	
74		62.22	597.43	8432.57	
75		62.44	534.99	8495.01	
76		60.91	474.08	8555.92	
77		58.72	415.36	8614.64	
78		60.98	354.38	8675.62	
79		61.12	293.26	8736.74	
80		61.40	231.86	8798.14	
81		61.63	170.23	8859.77	
82		62.09	108.14	8921.86	
83		61.92	46.22	8983.78	
84	<b>DP</b>	62.43	-16.21	9046.21	

Job Record V1.1.2

Operator:	Woolsey Petroleum	Base Point:	20600 Conway
Company Rep:	Mike Tharp	Packers Plus Rep:	Gary Goodman/Brad Kelley
Well Name:	Spicer # 1-H	Date Started:	10/7/2012
Ticket Number:	SOU005667	Date Completed:	10/14/2012
County/State:	Barber Co, KS.	Type of Job:	StackFrac HD
Field	Mayberry North	Formation	Mississippi
Rig Name	Dan D rig 11	Well API #	15-007-23934-01-00

DETAIL THE JOB - THIS FORM USED TO REPORT WHAT ACTUALLY TOOK PLACE - FILL OUT COMPLETELY

General Well Information				Stages			
Well Profile	Open Hole Horizontal			Number of Stages	16		
Depth TVD	4,604	Feet		MD to Packer 1	237		
Depth MD	9,069	Feet		Packer 1 to Packer 2	211		
Lateral Length	3,833	Feet		Packer 2 to Packer 3	214		
KOP	3,808	Feet		Packer 3 to Packer 4	222		
Hole Size	6.125	Inch		Packer 4 to Packer 5	209		
BHP	2,011	PSI		Packer 5 to Packer 6	231		
BHT	95	°F		Packer 6 to Packer 7	237		
Reamer run?	yes	Size	6	Packer 7 to Packer 8	238		
Build Rate	10/100	°/100 FT		Packer 8 to Packer 9	237		
Max Dog Leg	9.75	°/100 FT		Packer 9 to Packer 10	238		
Angle of Perma Plus	75	°		Packer 10 to Packer 11	238		
Planned Depth Bullet Guide	9,029	Feet		Packer 11 to Packer 12	237		
Actual Depth Bullet Guide	9,030	Feet		Packer 12 to Packer 13	238		
Distance Off	-1	Feet		Packer 13 to Packer 14	238		
				Packer 14 to Packer 15	237		
				Packer 15 to Packer 16	146		
				Average Stage Length	231		Feet

WORK STRING INFORMATION

Casing	Weight	Thread	ID	Capacity	Grade	Shoe		
7	23	LTC	6.366	0.039368521	J55	5228		
				0				
Drill Pipe	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4" Full Hole	14	IF	3.34	0.010836992	XH	7652.63	10K	
Heavy Weight	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4" Full Hole	27.2	IF	3.31	0.01064319	XH	1233.51	10K	
Drill Collar	Weight	Thread	ID	Capacity	Grade	Length	Torque	
X	X	X	X	#VALUE!	X	X	X	
Liner	Weight	Thread	ID	Capacity	Grade	Length	Torque	
4	11.6	LTC	4	0.015543035	L80	4472.62	2280	
Well Data							Open Hole	
MD	TVD	KOP	Shoe		Lateral	Size	Capacity	
9069	4604	3808	5228		3833	6.125	0.03644417 bbl/ft	

FLUIDS

Mud Weight	Mud Type	Fill Fluid	Fill Weight	LCM (if yes-amount- ppg)	Viscosity		
8.4	WaterBase	water	8.34	LCM 1/2ppg	33		
Fluid Level in Annulus Start	full	PUMP TYPE	SPM	BPS	Rig Type	Kelly	Weight
Fluid Level in Annulus Change	x	DH-7000	77	0.079	Kelly	Double	10K

AS RUN IN HOLE WEIGHTS

Liner	Push Pipe	H.W.D.P.	D.P.
Air	Air	Air	Air
0	8	0	0
Mud	Mud	Mud	Mud
0	8	8	8
<b>Calculated Neutral Weight Including Blocks:</b>		<b>98,690</b>	<b>Weight When Released From PermaPlus:</b>
			<b>Pipe Stretch in Inches Before Releasing:</b>
			<b>98K</b>
			<b>22</b>
Setting Tool Part Number	108720-000001	FracPORT Part Number	121332-000023
Elastomer / Metallurgy / Pinned to		Elastomer / Metallurgy / Pinned to	
Packer Part Number	121381-000001	Other Part Number	124306-000001
Elastomer / Metallurgy / Pinned to		Elastomer / Metallurgy / Pinned to	
FTR	Yes	Problem on Job	balls did not get to seat

Notes:



**Woolsey Operating Company, LLC**  
Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: Spicer #1 H  
Location: Section 11 - Township 34 South - Range 11 West  
License Number: 15-007-23934-01-00 Region: Barber County, KS  
Spud Date: September 12, 2012 Drilling Completed:  
Surface Coordinates: Approx. NW NE NW NW  
175' FNL, 773' FWL  
Bottom Hole Coordinates:  
Ground Elevation (ft): 1401' K.B. Elevation (ft): 1417'  
Logged Interval (ft): To: Total Depth (ft):  
Formation: Kansas City Group ----> Mississippian  
Type of Drilling Fluid: Chemical Mud  
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

Company: Woolsey Operating Company, LLC  
Address: 125 N. Market, Suite 1000  
Wichita, KS 67202

**GEOLOGIST**

Name: Billy G. Klaver  
Company: Woolsey Operating Co. LLC  
Address: 125 N. Market, Wichita Kansas, 67202

### Comments

Set 20" X 53#/ft conductor to 40' KB with 4 yards of grout. Ran 11 joints of 13 3/8" X 54.5#/ft new surface casing to 324' KB (tally 324') with 300 sx Class A, 2% gel, 3% cc. Cement did circulate, plug down 8:30 am on September 11, 2012.

### Bit Record:

- 1) 17 1/2" HTC J2 RT to 324'
- 2) 12 1/2" HTC J-11-4 RT to 707'
- 3) 8 3/4" PLT 616 DTM to 4369'
- 4) 8 3/4" Reed RA 23APDH to







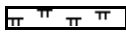

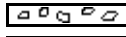












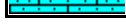

### Drilling Info

Gas Detector: Woolsey Operating Co. Gas Trailer #2  
Drilling Fluid Program: Mud-Co. Brad Bortz, Engineer  
Calmena Directional Drillers: Heath Foster, Mark Sanders  
MWD Hands: Shane Lewis, Peter Lancaster

### Crews

Toolpushers: Mitch Sovia, Relief: Sammy Fry  
Drillers: (12 hour tours) Johnnie Stone, Terry Stark, David Herring, Jeffery Meyers. And a host of assorted Okie roughnecks.

### ROCK TYPES

 Anhy	 Congl	 Lmst	 Black sh
 Bent	 Sdy dolo	 Mrlst	 Gry sh
 Brec	 Shy dolo	 Salt	 Shale
 Cht	 Dol	 Shale	 Shyltst
 Clyst	 Gyp	 Sltst	 Sltsh
 Coal	 Sdy lmst	 Ss	

**ACCESSORIES**

**MINERAL**

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt

- Chlorite
- Dol
- Sand
- Slty

**FOSSIL**

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra

- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

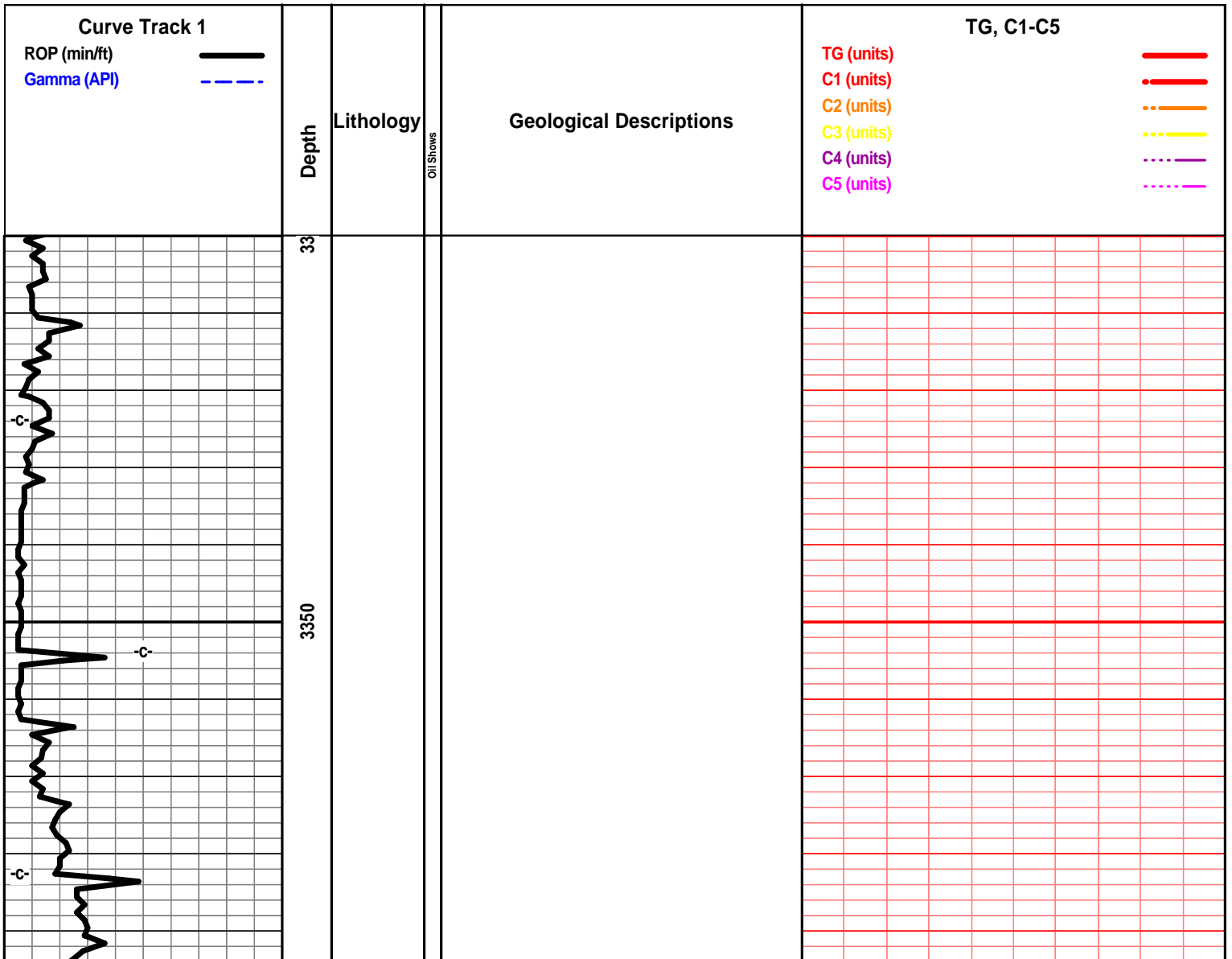
**STRINGER**

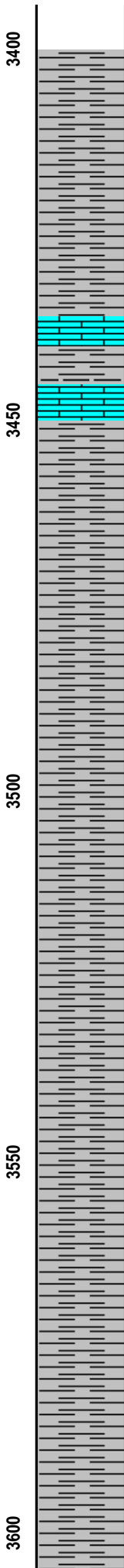
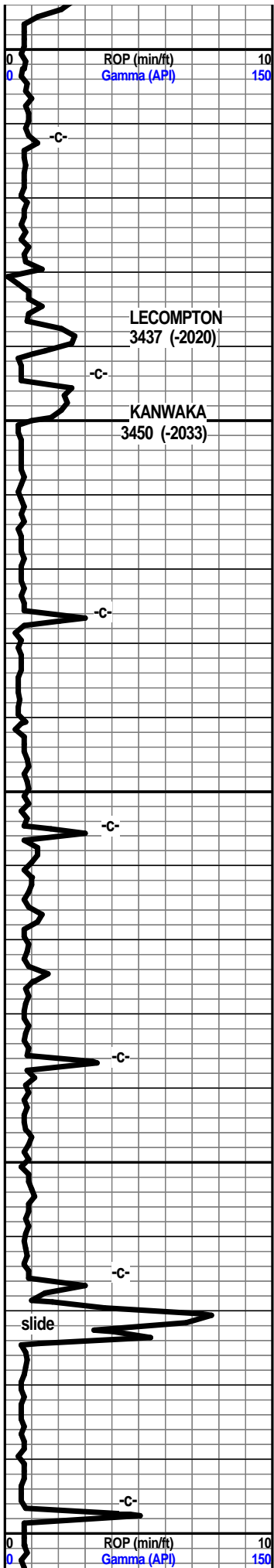
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Slststrg
- Ssststrg
- Carbsh
- Clystn
- Dol

- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Slststn

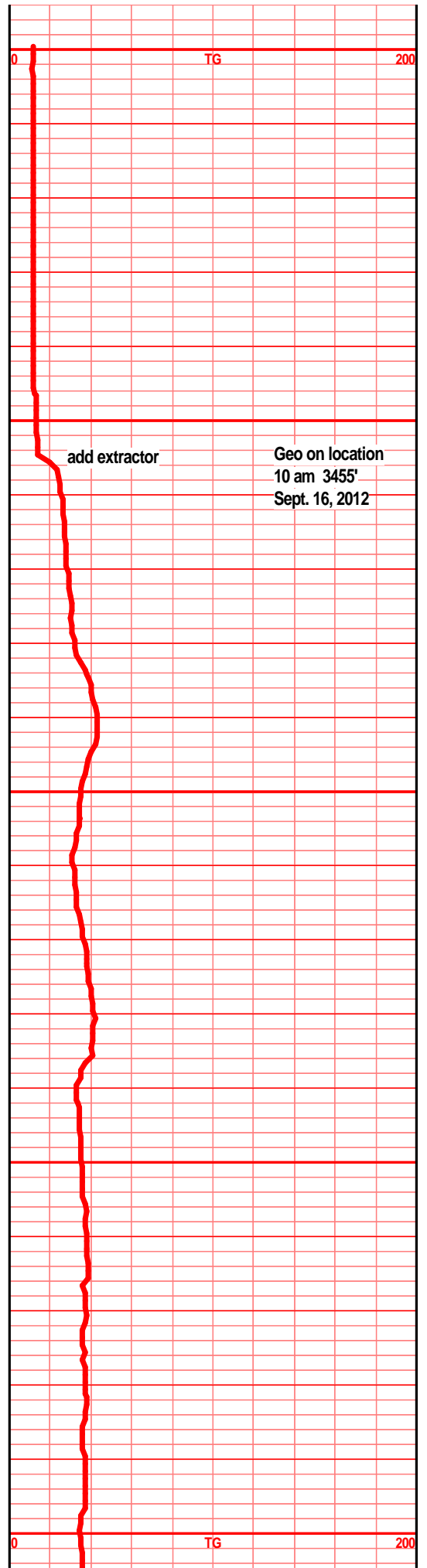
**TEXTURE**

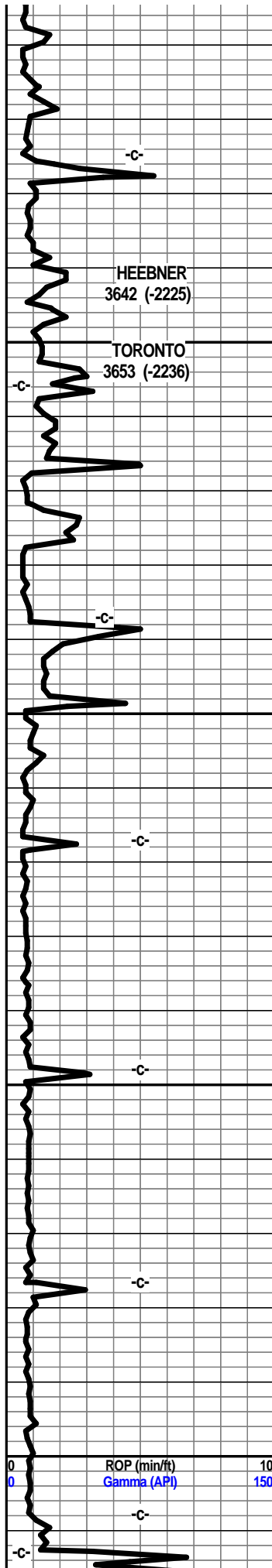
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest



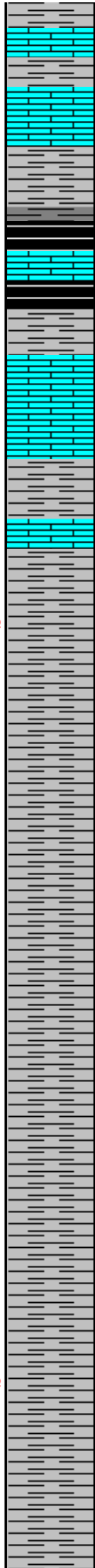


shl gry med drk gry silty soft ratty in prt





3650  
3700  
3750  
3800



shl gry drk gry silty soft gritty, lst tan gry brn f sli med xln blk ang hrd dns calc fill tr micro foss

shl drk gry, gry blk carb in prt, lst tan brn blk ang hrd dns mirco foss frags, calc xln fill

lst wht off wht tan f xln gran soft chky tr micro foss, tr calc xln fill,

shl gry med gry silty soft spls wsh med gry, tr sndy gritty, snd grn inclu

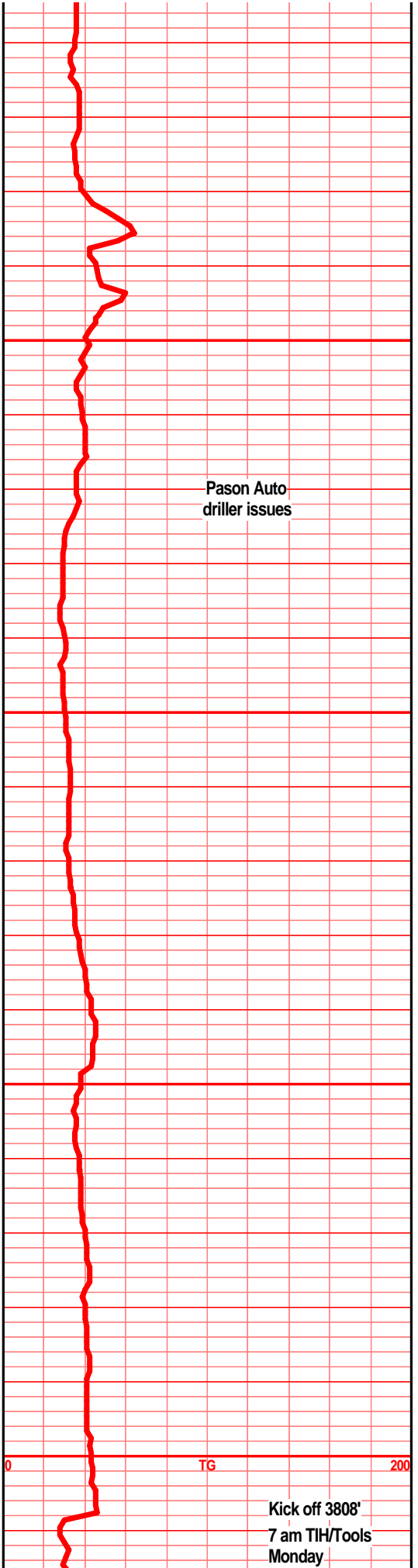
shl gry geen med gry silty soft, sndy gritty

shl dry gry/green silty sndy gritty. tr calc

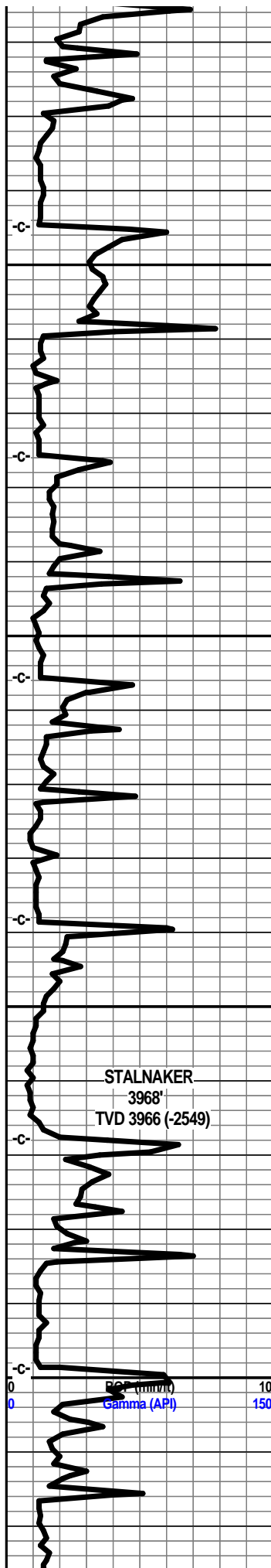
shl gry drk gry green silty gritty

shl gry drk gry green silty sndy gritty

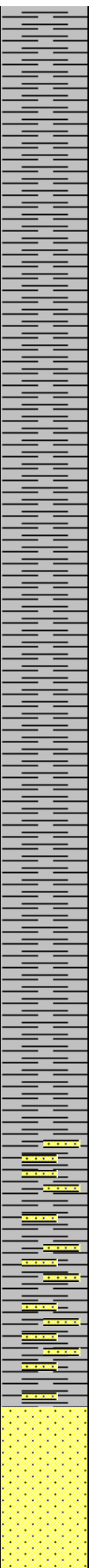
shl gry med gry silty gritty soft gran , spls wsh drk gry







1.4 deg @ 325.4 az  
 3.4 deg @ 339.0 az  
 5.7 deg @ 350.1 az  
 7.9 deg @ 354.6 az  
 10.1 deg @ 354.8 az  
 12.0 deg @ 355 az  
 14.4 deg @ 354.8 az



shl gry drk med drk gry silty gritty, tr sndy, snd gry inclu

shl gry med drk gry silty soft gritty tr sndy

shl gry med drk gry silty soft gritty

shl gry drk med drk gry soft silty gritty tr sndy

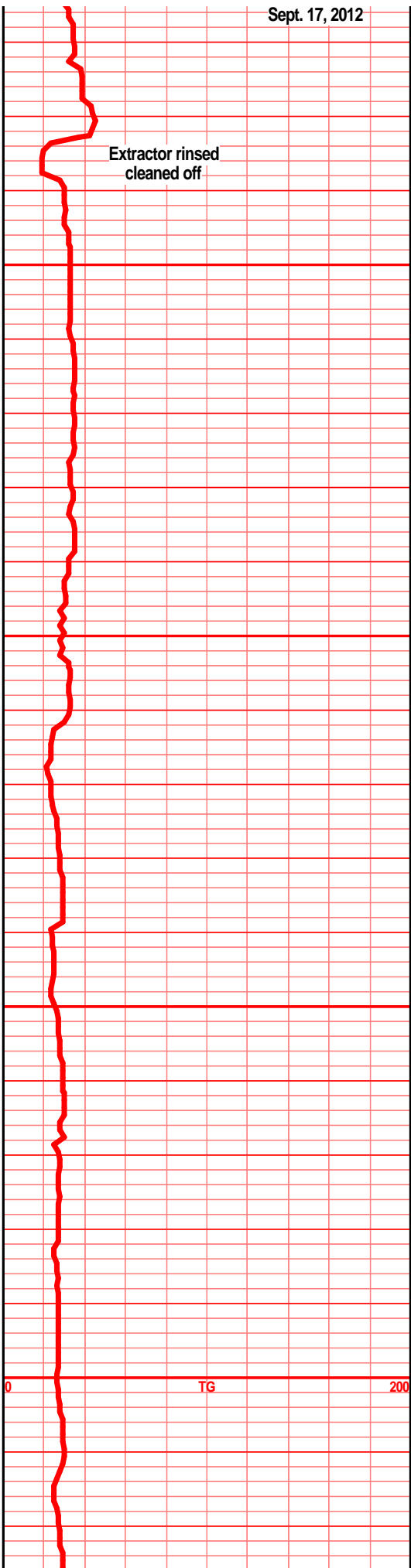
shl gry med/drk gry soft silty tr gritty, some ratty

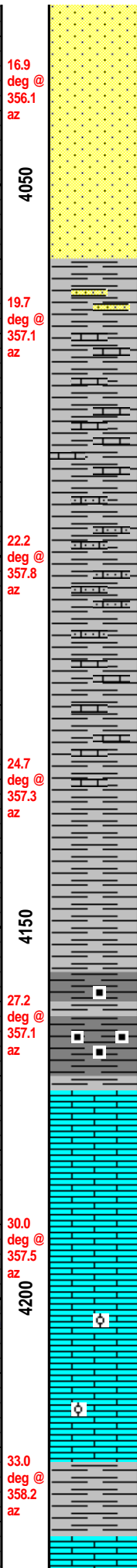
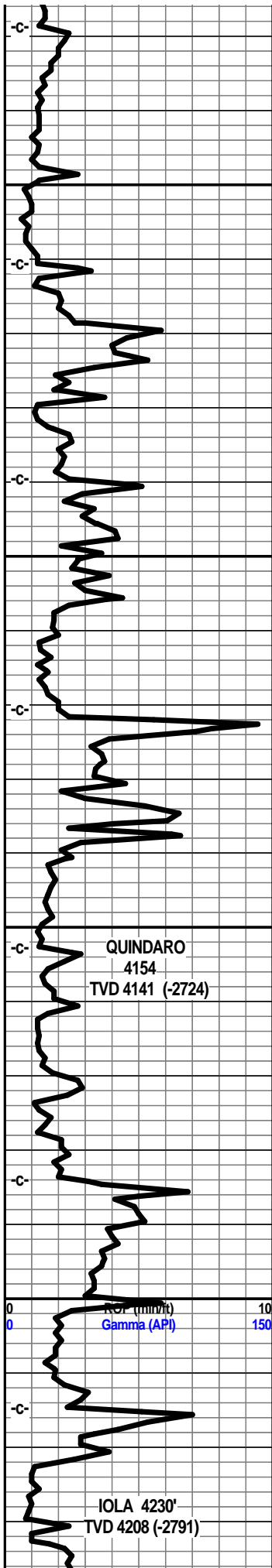
shl gry med drk gry soft gran tr gritty, sndy text, snd grn inclu in prt

shl gry drk gry silty gritty soft wsh drk gry

shl gry lt med gry silty, gritty, gran, tr sndy, carb flecks in prt, sst lt gry gry f vf grnd, sub ang grns, well srted, sub fria to tite, mic, calc fill/cem, arg, tr blk carb fill

shl gry lt gry sndy gritty, sst lt gry tr gry green f vf grnd sub ang, well srted, sub fria to tite, arg, tr mic, tr blk carb fill, calc cem, calc fill





sst off wht lt gry, gry, f vf grnd, sub ang, well/prly srted, sub fria to tite, arg, tr mic, calc fill/cem, clay fill tr blk carb fill

sst off wht lt gry f vf grnd, sub ang grns, sub fria to tite, fair to prly srted, arg, clay fill calc cem/fill, tr mic,

shl gry med drk gry silty sndy gran calc in prt, abun sst aa in spl

shl drk gry silty hard, calc, lst gry brn off wht mott, f vf xln gran blk arg hrd arg, poor spl, all hole sweep material

lst drk gry lt gry tr drk tan mott, f vf xln, dns hrd blk arg, silty, clay clasts, shl gry med gry calc

shl gry med gry silty gritty tr sndy, lst gry drk gry f vf xln dns hrd blk arg silty, calc xln casts,

shl gry med/drk gry silty gritty, tr calc fill, tr sndy text

shl gry drk gry, gry blk, carb text, blk arg flky carb pcs, filmy cond, gas bubs

lst off wht lt gry tan f xln blk arg pcs, sub chlky foss frags, calc xln fill,

lst crm tan off wht tr lt gry f xln blk arg flky pcs, sub chlky foss frags, micro foss frags, tr foss ool, calc xln fill

lst off wht tan lt gry f xln gran sub chlky foss



lst off wht tan lt gry f xln gran sub chlky foss  
frag micro foss frags, calc xln fill, tr foss ool, shl  
gry med gry calc silty

lst wht off wht lt gry f xln blk ang gran flky pcs,  
sub chlky foss frags, micro foss frags, calc xln  
fill arg in prt

lst crm tan off wht f xln gran blk ang sub chlky,  
foss frags, micro foss, foss ool, pelletal, chrt lt  
gry shrp frsh opaq

lst wht off wht tan f xln gran blk ang sub chlky  
foss frags, micro foss, foss ool, calc xln fill, chrt  
lt gry shrp frsh opaq

lst off wht lt gry f xln blk ang sub chlky, foss  
frags, micro foss, chrt off wht lt gry shrp frsh  
opaq transl

lst crm off wht lt gry f xln gran tr soft, sub chlky,  
calc xln fill foss frags, tr micro foss, tr chrt lt gry  
shrp frsh opaq

lst crm tan lt gry f xln blk ang gran soft in prt,  
sub chlky foss frags, tr foss ool, chrt wht lt gry  
shrp frsh opaq transl

lst crm tan off wht f xln sub chlky gran, foss  
frags, tr foss ool, calc xln fill, chrt wht lt gry shrp  
frsh opaq

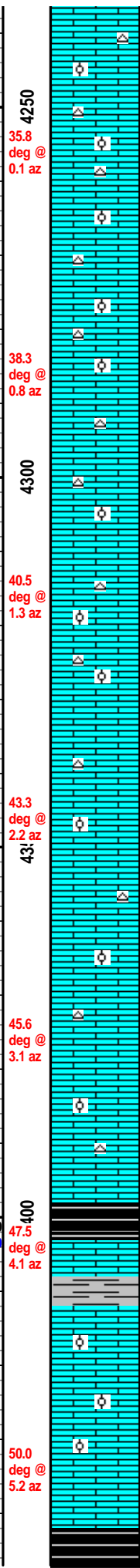
lst off wht lt gry f xln blk ang pcs, sub chlky,  
gran micro foss frags, calc xln fill, tr chrt lt gry  
shrp frsh

much blk wxy grsy carb shl in 4420' spl, shl gry  
calc, lst tan off wht lt gry f xln gran sub chlky  
micro foss, arg,

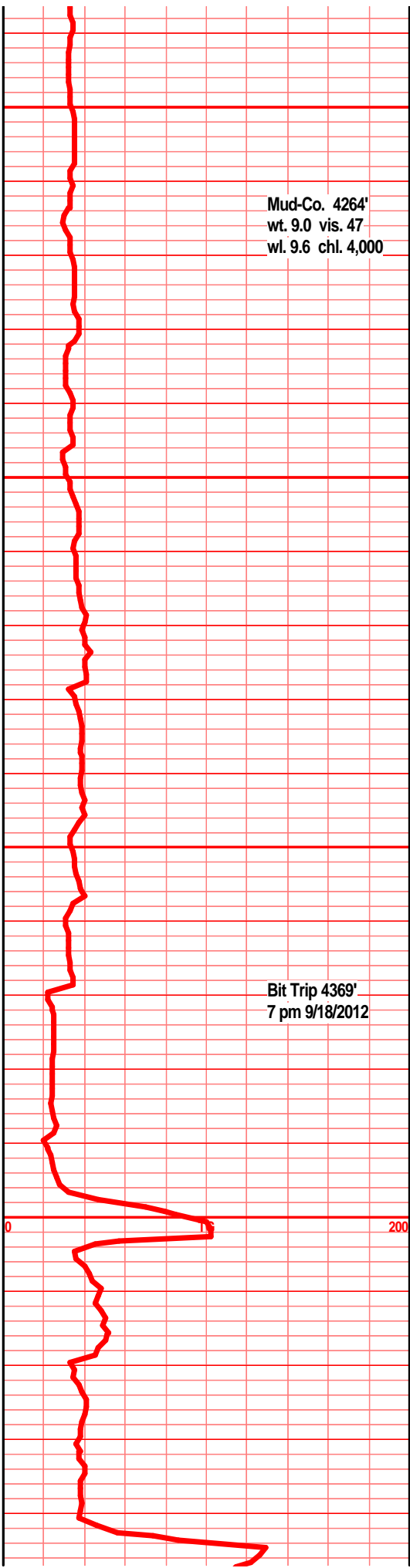
lst crm tan lt gry f xln blk ang hrd dns sub chlky  
micro foss frags, chrt lt gry off wht shrp frsh  
opaq

Mud-Co. 4264'  
wt. 9.0 vis. 47  
wl. 9.6 chl. 4,000

Bit Trip 4369'  
7 pm 9/18/2012



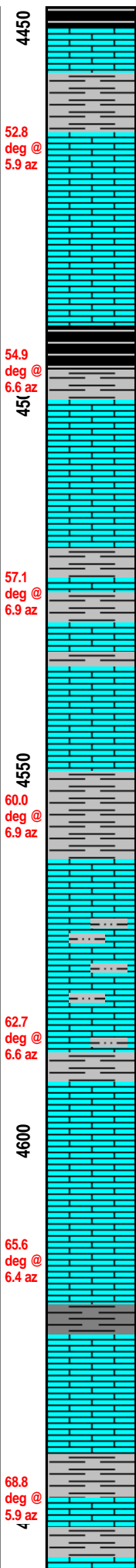
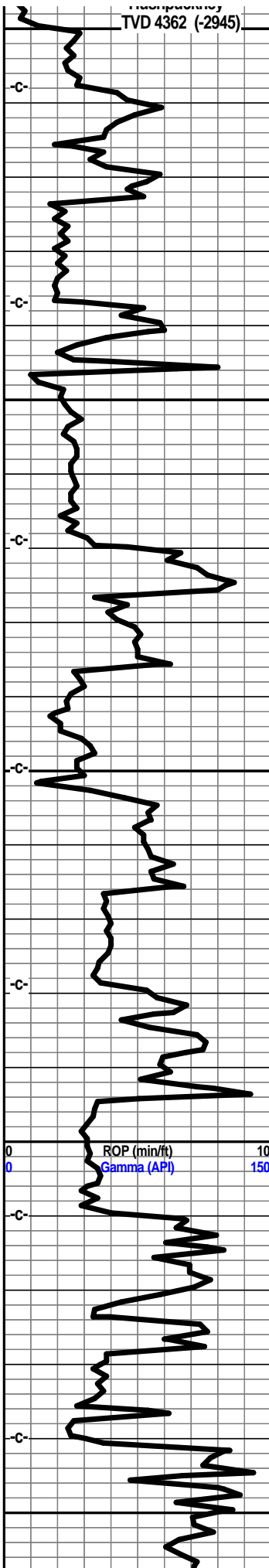
Vertical column of lithology descriptions corresponding to the stratigraphic column.



STARK 4398'  
TVD 4332 (-2915)

ROP (min/ft)  
Gaming (API)

Hushuckneve



4450  
flood grsy wxy blk carb shl, lst off wht lt gry f xln  
gran soft sub chlky foss frags, foss tr ool, chrt  
wht lt gry shrp frsh opa

52.8 deg @  
5.9 az

lst crm tan off wht tr lt gry f xln gran blk ang  
pcs, foss frags, sub chlky, calc xln fill, chrt wht lt  
gry shrp frsh foss opa

4500  
54.9 deg @  
6.6 az

much blk carb shl, shl gry med gry silty gritty  
calc fill, tr foss fill, lst tan gry f xln dns hrd blk  
gran vry arg silty spls wsh gry

shl gry silty gritty calc fill, lst tan lt gry f vf xln  
dns hrd blk ang arg silty, foss frags, tr chrt tan  
gry brn shrp frsh

57.1 deg @  
6.9 az

lst crm off wht mstly lt gry f xln gran soft sub  
chlky arg, silty gritty in prt, shl gry lt gry silty  
calc

4550  
60.0 deg @  
6.9 az

shl gry green, blue green, silty gritty, sndy in prt,  
calc in prt, lst tan gry brn f vf xln dns hrd blk  
ang arg silty

shl gry green, tan gry blue green silty gritty tr  
sndy, calc in prt, lst tan lt gry brn f vf xln dns hrd  
blk ang arg silty

62.7 deg @  
6.6 az

lst crm tan buff f xln blk ang hrd tr sub chlky,  
calc xln fill micro foss frags, chrt wht tan opa  
shrp frsh

4600

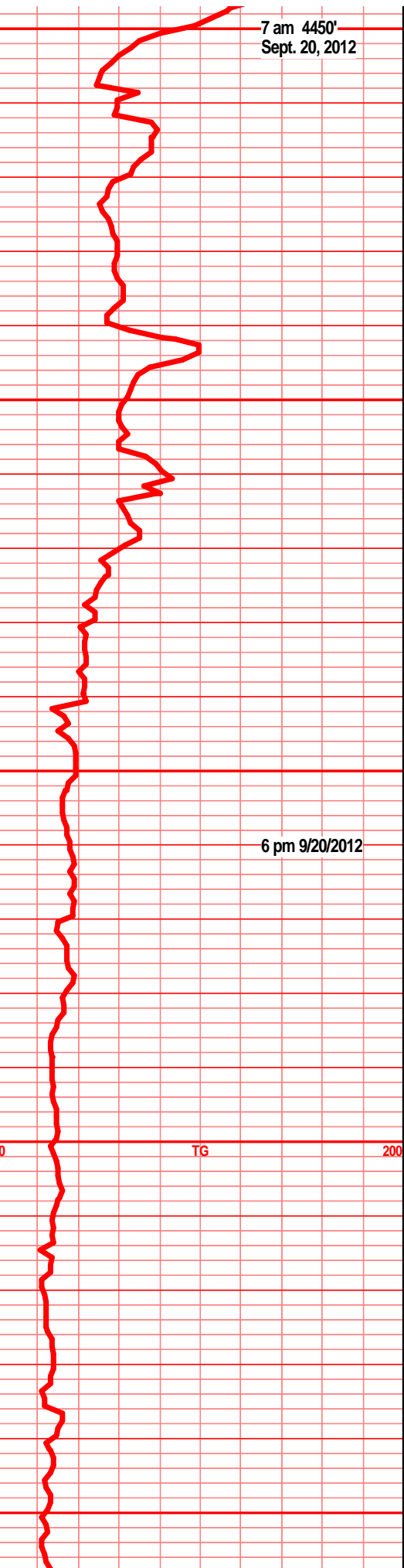
lst off wht crm buff f vf xln blk ang dns sub  
chlky micro foss frags, calc xln fill

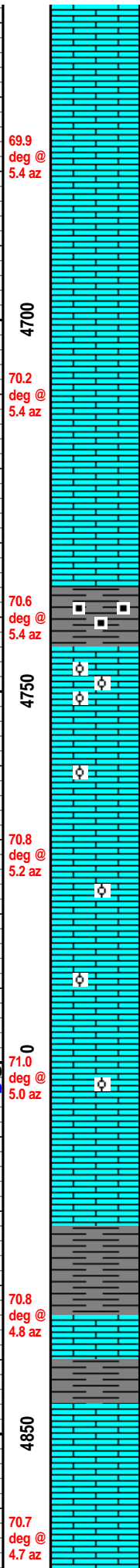
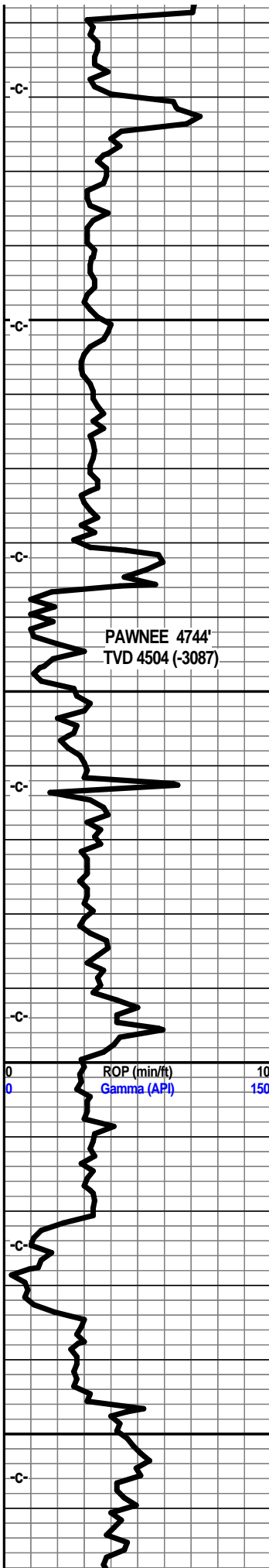
65.6 deg @  
6.4 az

shl gry med gry calc, lst crm tan buff f xln blk  
ang, sub chlky micro foss frags, tr chrt wht shrp  
frsh opa

68.8 deg @  
5.9 az

shl gry lt gry silty soft calc, lst tan lt gry t buff f  
xln blk ang hrd dns, sub chlky tr micro foss  
frags, micro xln fill





lst crm buff tan f micro xln blkly ang pcs, sub chlky micro foss frags, calc xln fill

lst tan off wht lt gry f vf xln dn shrd blkly ang pcs, sub chlky calc xln fill

lst off wht lt gry buff f vf xln blkly ang hrd dns sub chlky in prt, micro foss frags,

lst off wht tan lt gry f vf lxn dns hrd blkly, semi chlky, tr micro foss frags,

much gry drk gry/blk shl, tr blk grsy, wxy semi carb shl, lst tan off wht buff f vf xln blkly ang hrd dns, sub chlky, calc xln fill, foss frags/ool, gas bubs, bright UV, nodor, nsfo, pp por, mstly tite

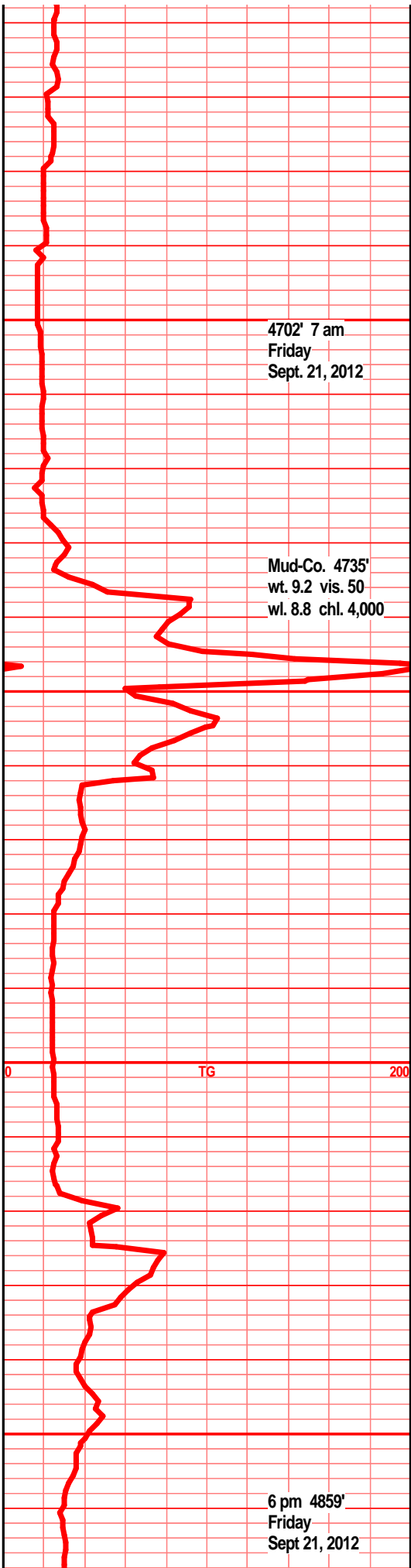
lst crm buff tan off wht f vf xln blkly ang dns hrd, sub chlky tr micro foss, micro ool, calc xln fill around ool

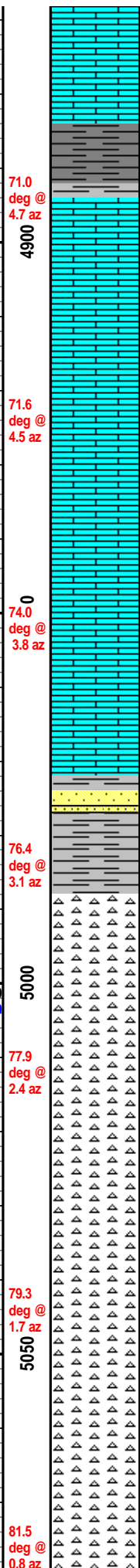
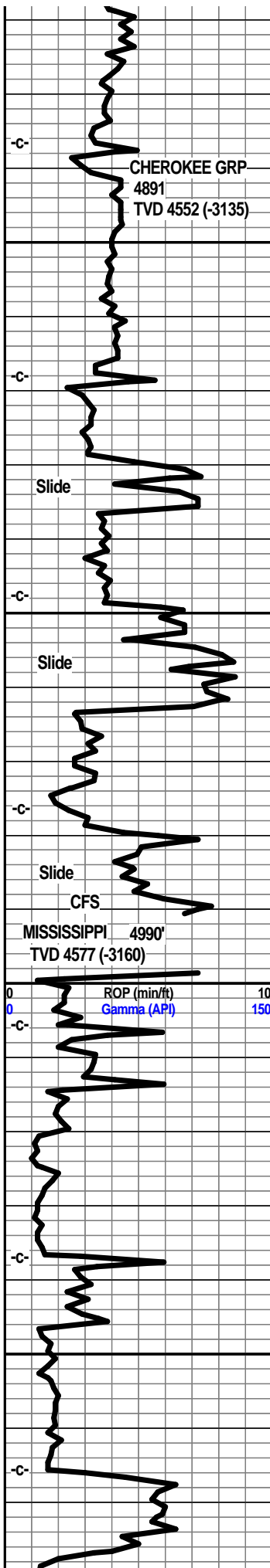
lst crm buff tan lt gry f vf xln dns hrd blkly ang sub chlky foss frags, micro ool, calc xln fill

lst crm buff tan lt gry f vf xln dns hrd blkly sub chlky, foss frags, foss ool, micro ool, calc xln fill

shl gry blk, med gry, blk carb, wxy, grsy, abun gas bubs, blkly ang carb pcs, filmy cond w/brkn

lst crm buff lt gry f vf xln dns hrd blkly ang, sub chlky, micro foss frags, calc xln fill,





lst crm buff off wht tan f vf xln gran blkly ang dns hrd pcs, sub chlky, foss frags, tr foss ool, calc xln fill

shl gry drk gry blk, wxy grsy blkly ang blk carb shl pcs, tr gas bubs, filmy cond w/brkn

lst crm buff tan off wht f vf xln blkly ang hrd sub chlky micro foss frags, calc xln fill, foss ool, pelletal in prt

hole flush/poly lube/graphite

lst tan crm buff off wht, f vf xln blkly ang dns hrd, sub chlky, foss frags, calc xln fill, shl gry med gry silty gritty calc

shl gry, gry green, maroon, tr vari-color, silty gritty gran, tr ratty,

sst tan lt brn clstrs, f vf grnd, sub ang grns, w/srtd, w/cem, calc cem, sub fria, tan brn stain, drk SFO/brkn, tr gas bub

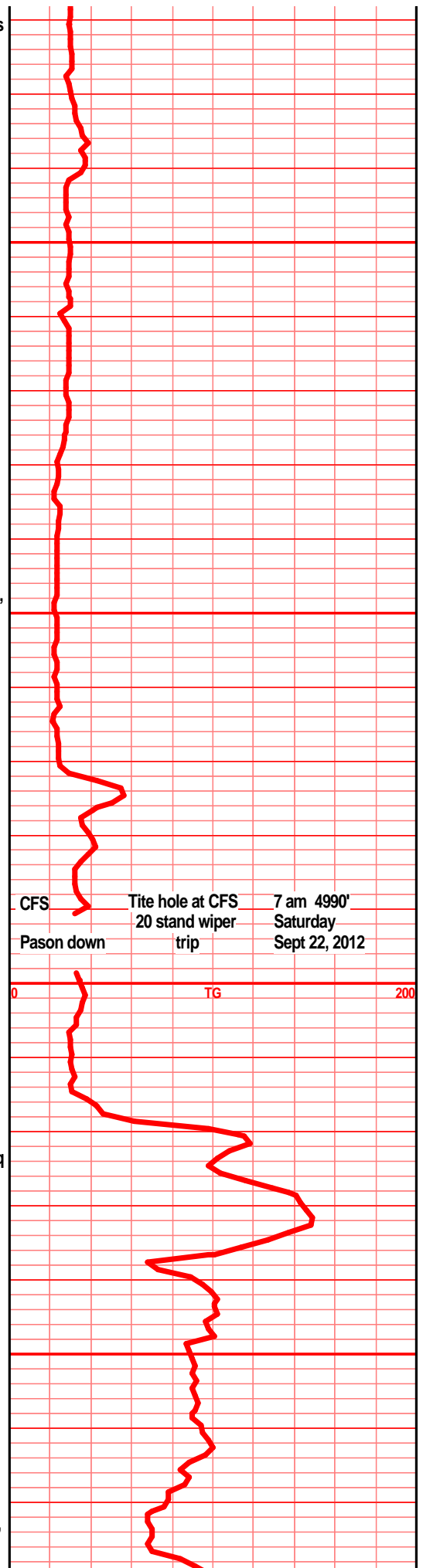
chrt (5-6 pcs) wht off wht, lt gry smokey/lt blue, shrp frsh, semi transl, opa, blkly ang shrp shards NVP, NS

chrt wht lt gry, smokey, lt blue/gry, shrp frsh, transl, semi opa, blkly ang pcs, chrt lt gry smokey with sli sub chlky weath edge, tr pp moldic por, tr hvy blkly stain, blk SFO, gas?, nodor

chrt wht lt gry smokey lt blue gry, shrp frsh opa transl, chrt tan lt brn shrp frsh with weath gran sli trip text edge, tr spongey text, pp moldic por, even stain, lt transl SFO, gas bubs, sli odor

chrt wht lt gry smokey shrp frsh opa, blkly ang pcs, chrt tan lt brn mott shrp frsh opa, w/sli weath trip text, tr spongy text, even tan lt brn stain, transl/RBSFO, gas, odor?

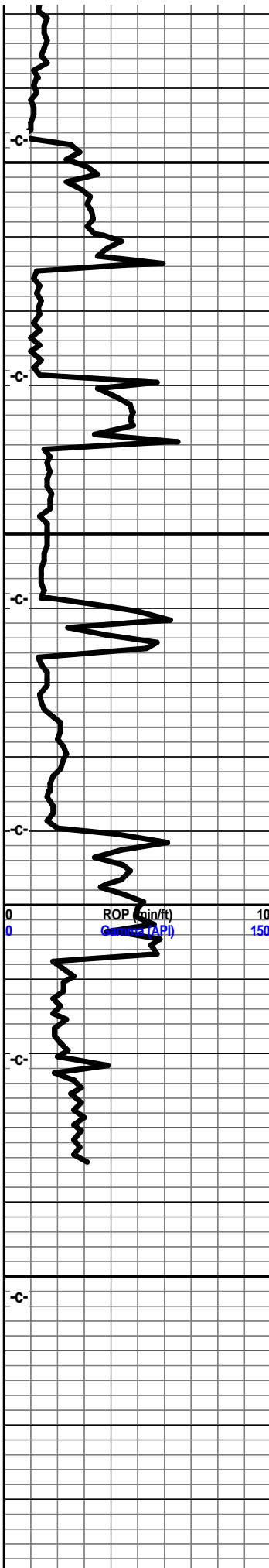
chrt lt gry smokey shrp frsh opa, semi transl, foss, chrt tan lt brn, mott in prt, tan lt brn stain, sli trip text in prt, tr spongey text, pp moldic por, stain filmy SFO, gas bubs, dull UV. sli odor



CFS Tite hole at CFS 7 am 4990' Saturday Sept 22, 2012  
Pason down 20 stand wiper trip

TG

200



5100

5150

5200

5250

a 50-50 mix: chrt off wht lt gry smokey shrp frsh opa trans, blk ang pcs, and chrt tan lt brn with sli weath edge text, pp moldic por, even tan brn stain, filmy sfo, dull UV, tr gas bubs

chrt off wht lt gry, smokey/blue shrp frsh ang blk shards, tr foss, chrt tan lt brn with sli weath trip text edges, tan lt brn stain, dull UV, RBSFO, filmy SFO. sli odor, gd pp moldic por

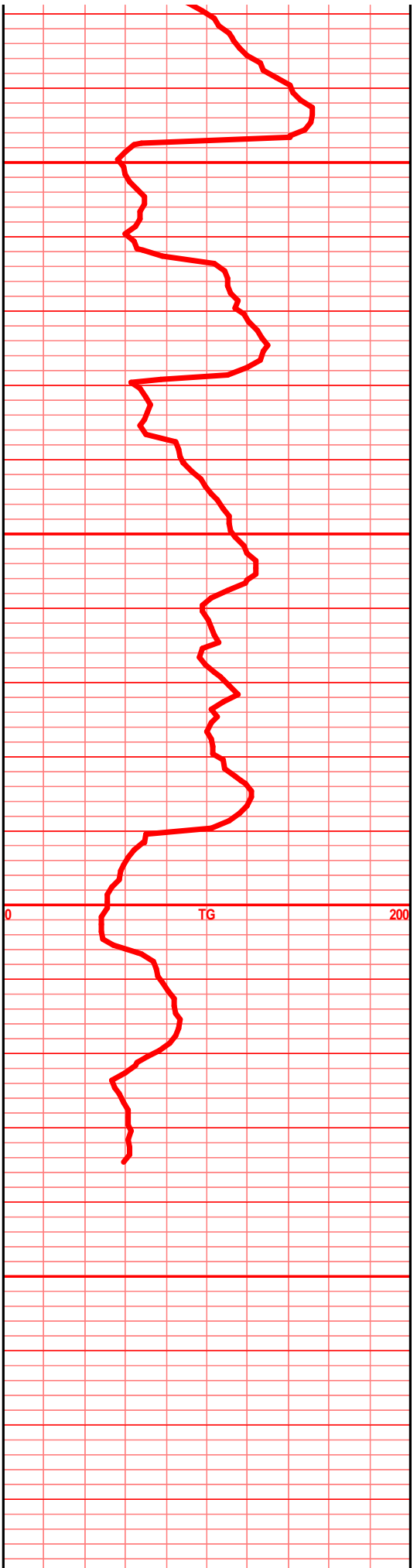
chrt off wht lt gry smokey/bluish, shrp frsh opa semi transl, blk ang shards, with tan brn sli weath edge text, tan brn stain, filmy sfo, dull UV, tr gas sli odor

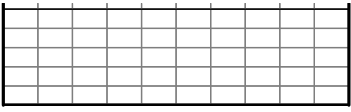
chrt off wht lt gry smokey, tr lt blue gry, shrp frsh opa trans with weath text edges, pp moldic por, tan lt brn stain, filmy SFO, SSFO, sli odor, tr gas bubs, Dull UV

chrt off wht lt gry tr lt smokey color, shrp frsh opa, transl, blk ang pcs with sli weath, weath trip text edges in prt, pp moldic por, tan lt brn stain, odor, filmy SFO, tr floating droplets, dull UV, tr gas bubs

chrt off wht lt gry smokey, shrp frsh opa semi transl, foss, with sli weath sli trip text edge, tan brn stain, pp moldic por, filmy SFO, sli odor dull UV

chrt off wht lt gry lt smokey color, shrp frsh opa, semi transl, with sli weath, sli trip text, pp moldic por, filmy SFO, dull UV, sli odor, incr frsh chrt in this sample

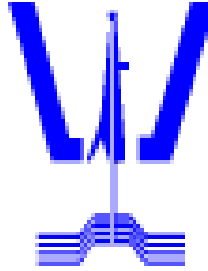




00







# Woolsey Operating Company, LLC

Scale 1:600 (2"=100') Metric  
Measured Depth Log

Well Name: Spicer #1 H  
Location: Section 11 - Township 34 South - Range 11 West  
License Number: 15-007-23934-01-00 Region: Barber County KS  
Spud Date: September 12, 2012 Drilling Completed:  
Surface Coordinates: 175' FNL and 773' FWL  
Approx. NW NE NW NW  
Bottom Hole  
Coordinates:  
Ground Elevation (m): 1401' K.B. Elevation (m): 1417'  
Logged Interval (m): 3800' To: 9069' Total Depth (m): 9069'  
Formation: Kansas City Group -----> Mississippian  
Type of Drilling Fluid: Chemical Mud, Water/Flo-Zan

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

## OPERATOR

Company: Woolsey Operating Company, LLC  
Address: 125 N. Market Suite 1000  
Wichita, Kansas 67202

## GEOLOGIST

Name: Bill Klaver  
Company: Woolsey Operating Company, LLC  
Address: 125 N. Market Suite 1000  
Wichita, Kansas 67202


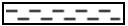

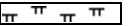
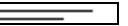
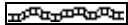




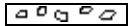









### Drilling Info

Gas Detector: Woolsey Operating Co. Gas Trailer #2  
 Drilling Fluid Program: Mud-Co. Brad Bortz, Engineer  
 Calmena Directional Drillers: Heath Foster, Mark Sanders  
 MWD Hands: Shane Lewis, Peter Lancaster

### Crews
















Toolpusher: Mitch Sovia, Sammy Fry, relief  
 Drillers: (12 hour tours) Johnnie Stone, Terry Stark, David Herring, Jeffery Meyers. Assorted Okie roughnecks.


### ROCK TYPES

	Anhy		Clyst		Gyp		Mrlst		Shgy
	Bent		Coal		Igne		Salt		Sltst
	Brec		Congl		Lmst		Shale		Ss
	Cht		Dol		Meta		Shcol		Till
















### ACCESSORIES







#### MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau

	Gyp
	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff

#### FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite












	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom

#### STRINGER

	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst

	Sltstrg
	Ssstrg

#### TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackst

**OTHER SYMBOLS**

**POROSITY**

- E Earthy
- F Fenest
- F Fracture
- X Inter
- M Moldic
- O Organic
- P Pinpoint

V Vuggy

**SORTING**

- W Well
- M Moderate
- P Poor

**ROUNDING**

- R Rounded
- S Subrnd
- a Subang
- A Angular

**OIL SHOW**

- Even

Spotted

- Q Ques
- D Dead

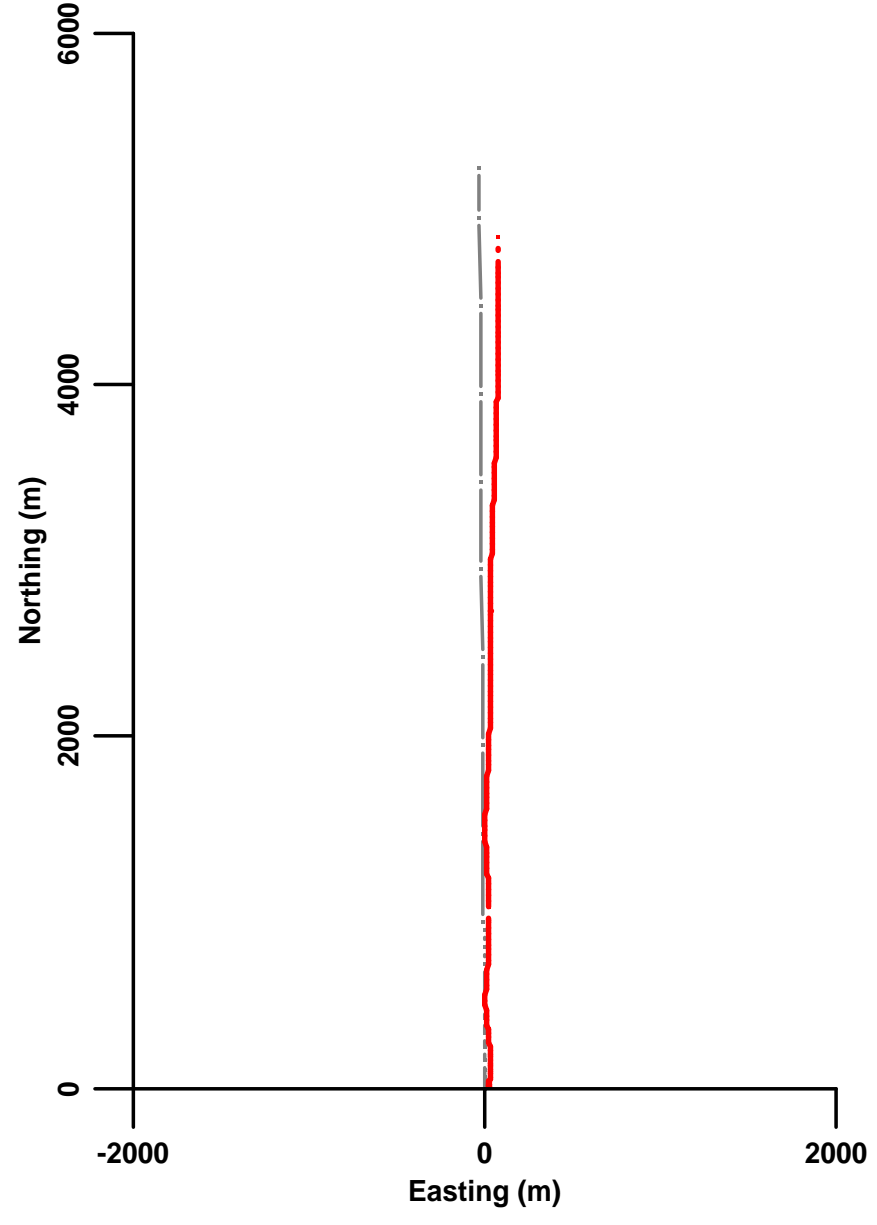
**INTERVAL**

- Core
- Dst

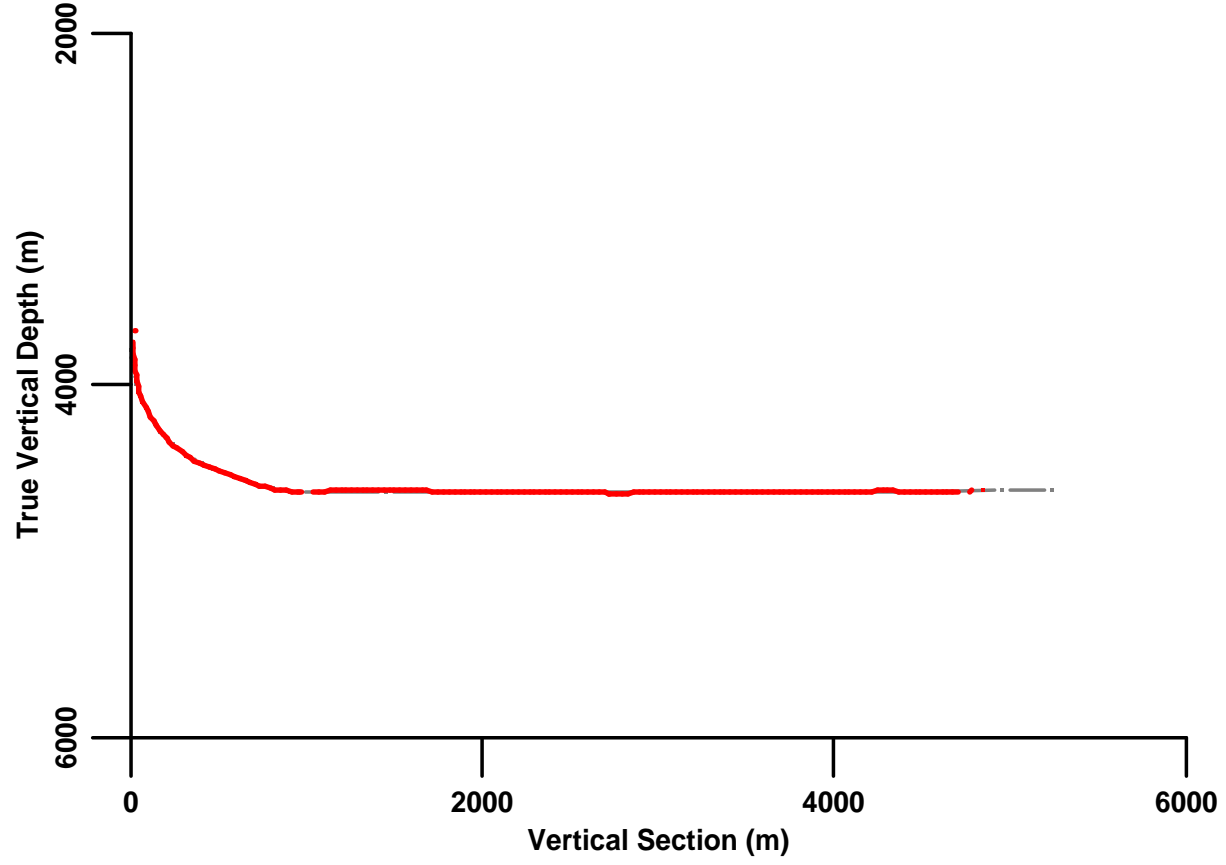
**EVENT**

- Rft
- Sidewall

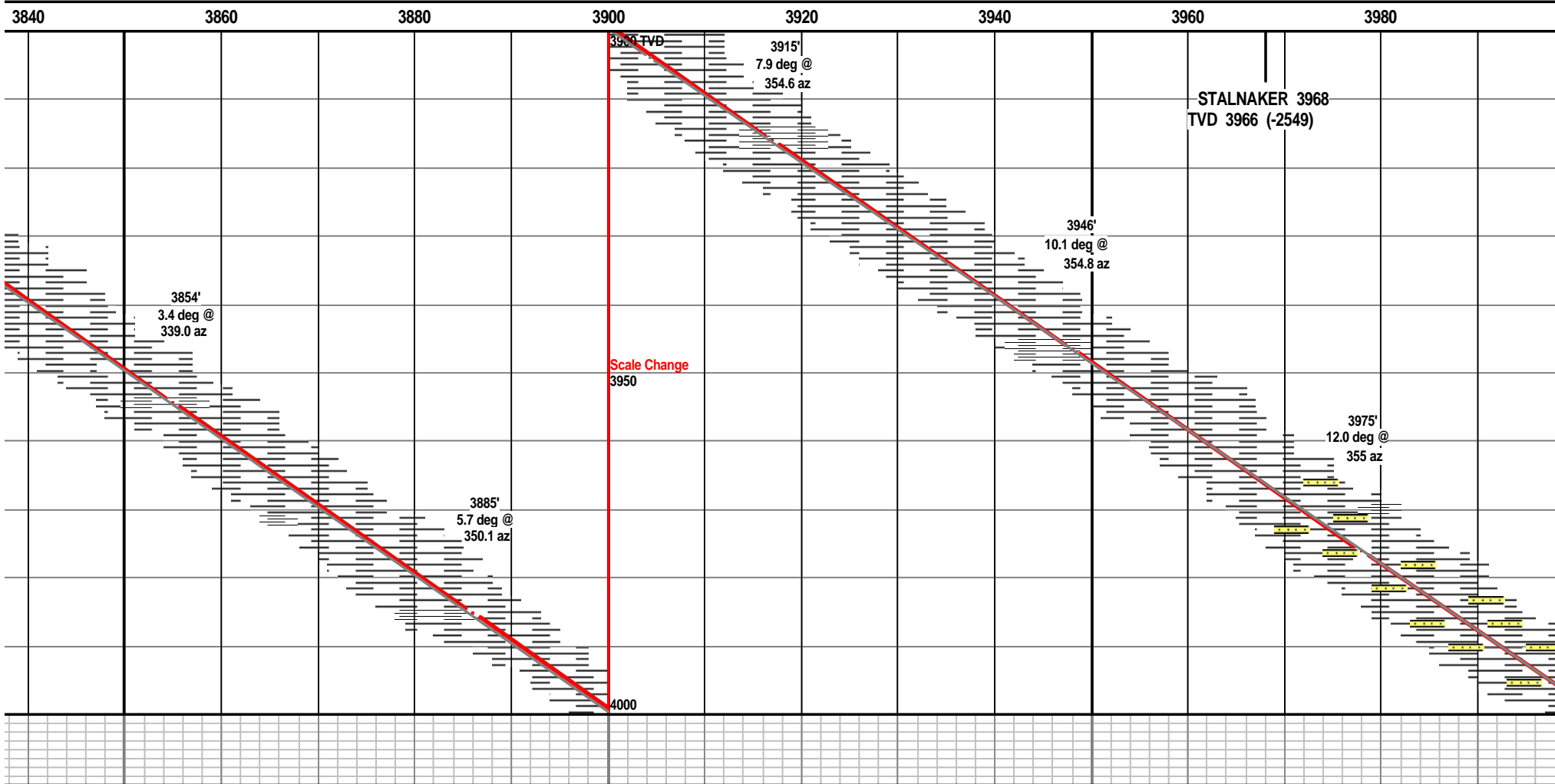
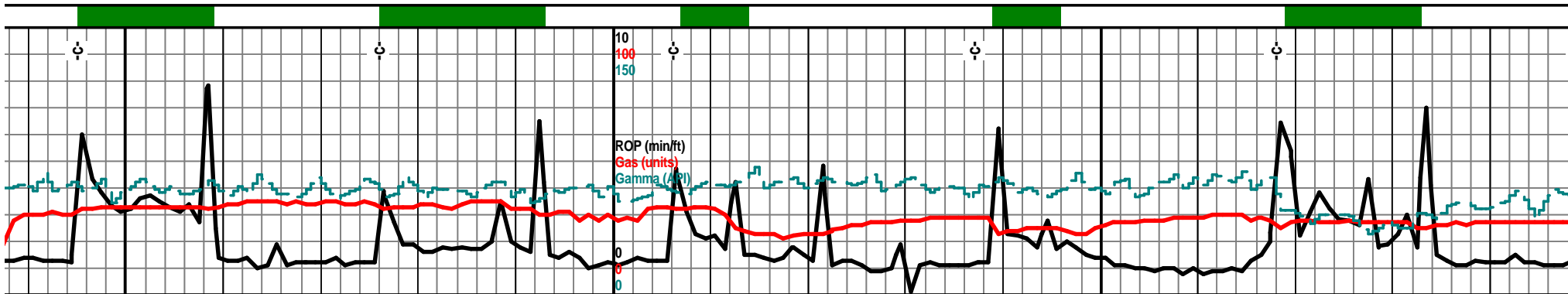
# Plan

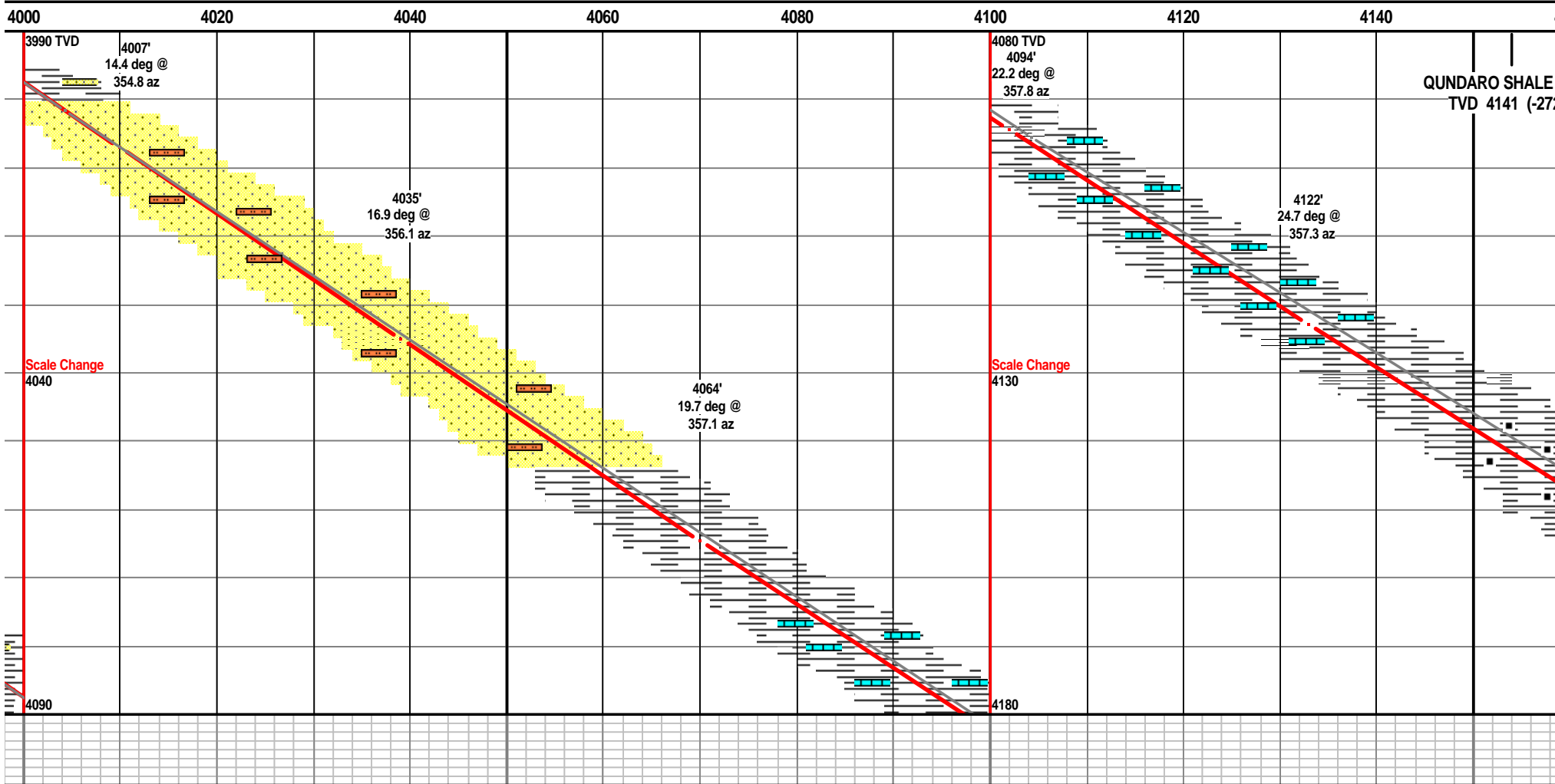
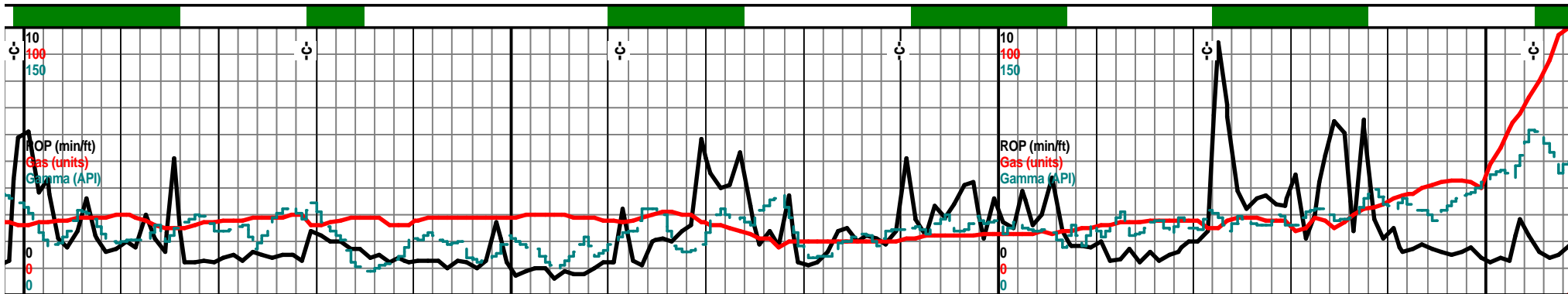


# Elevation

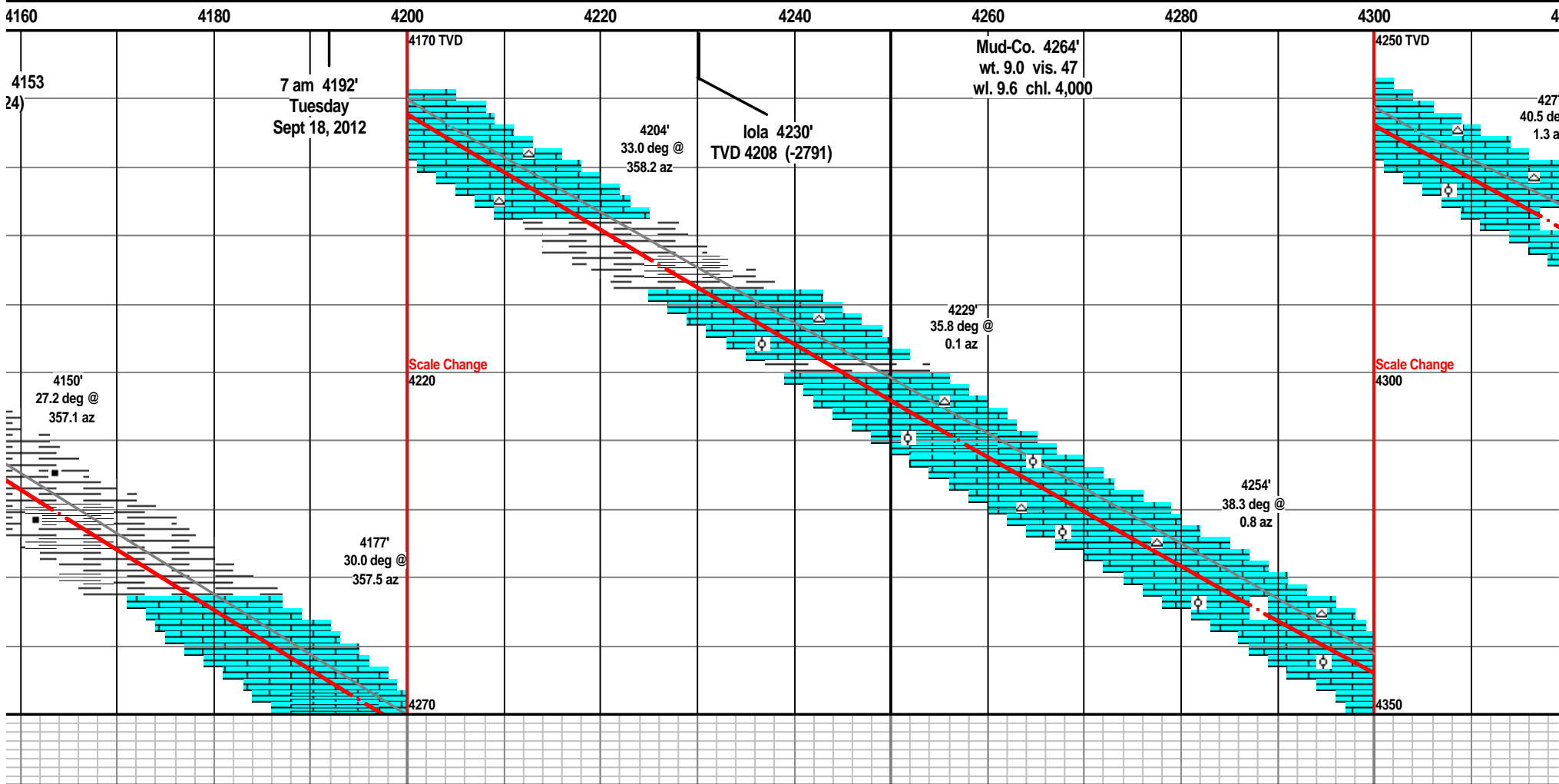
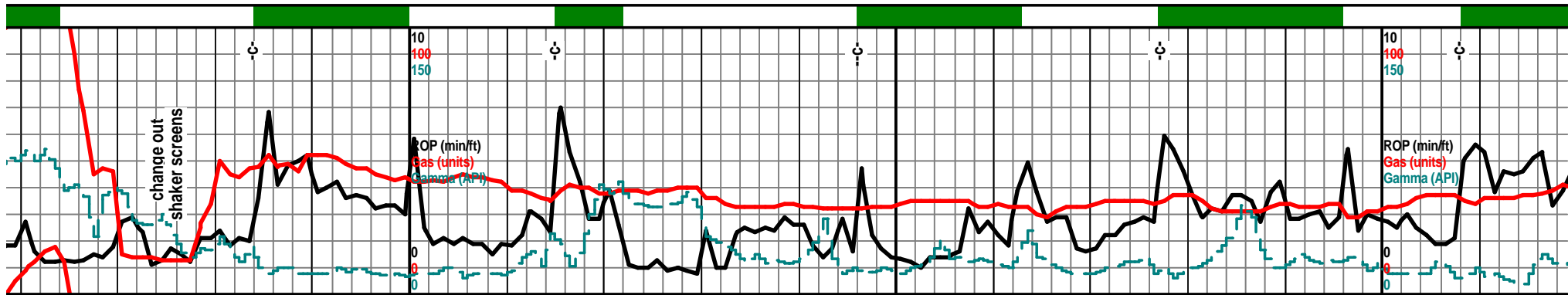


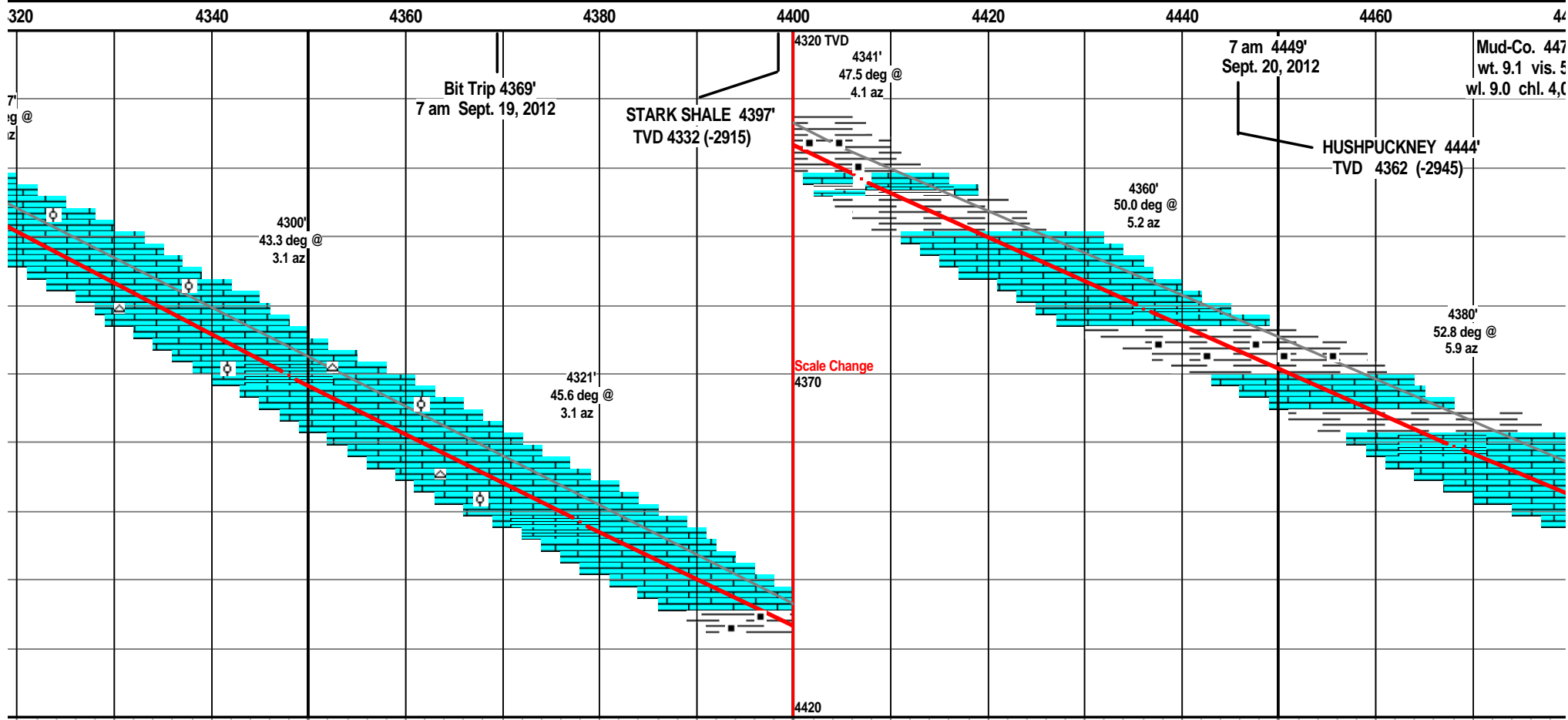
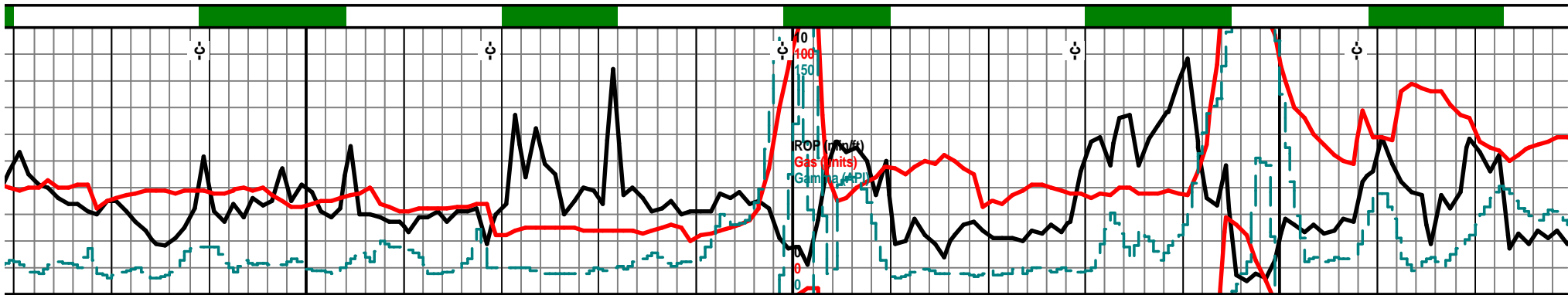


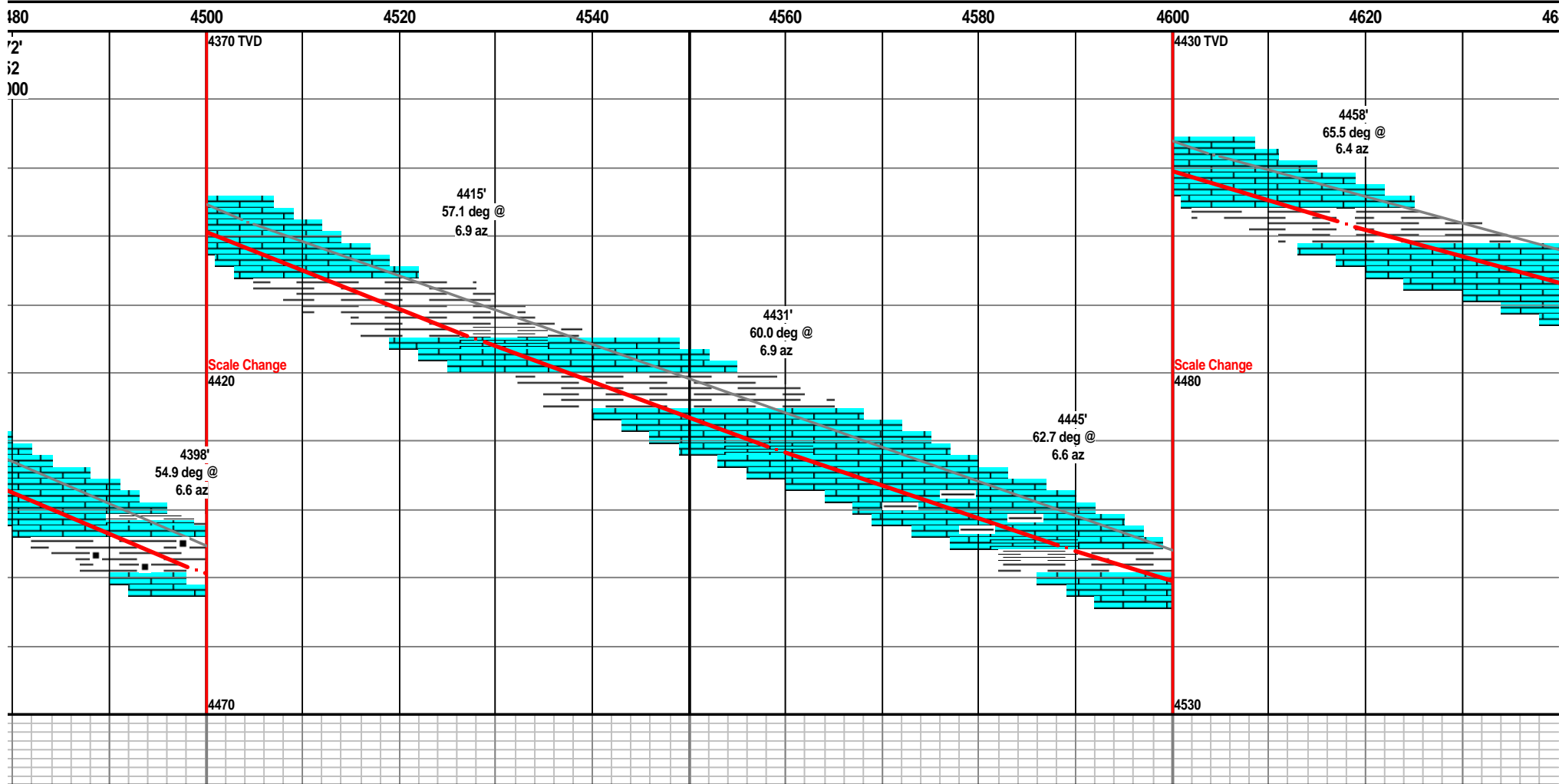
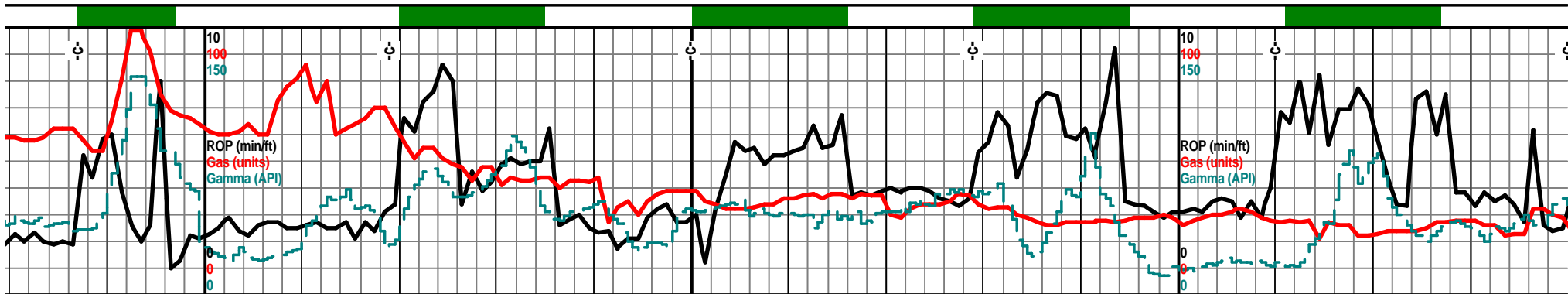


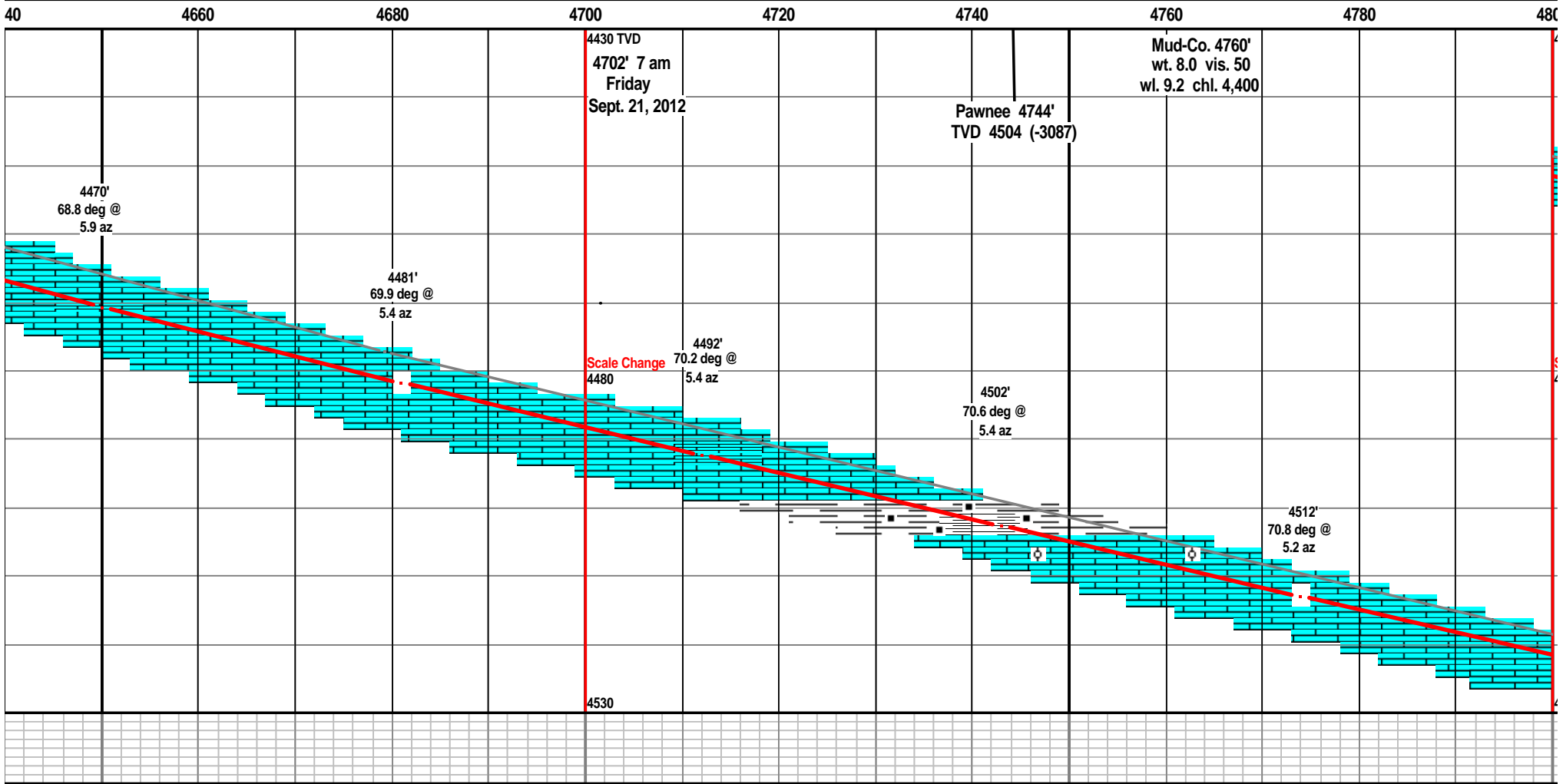
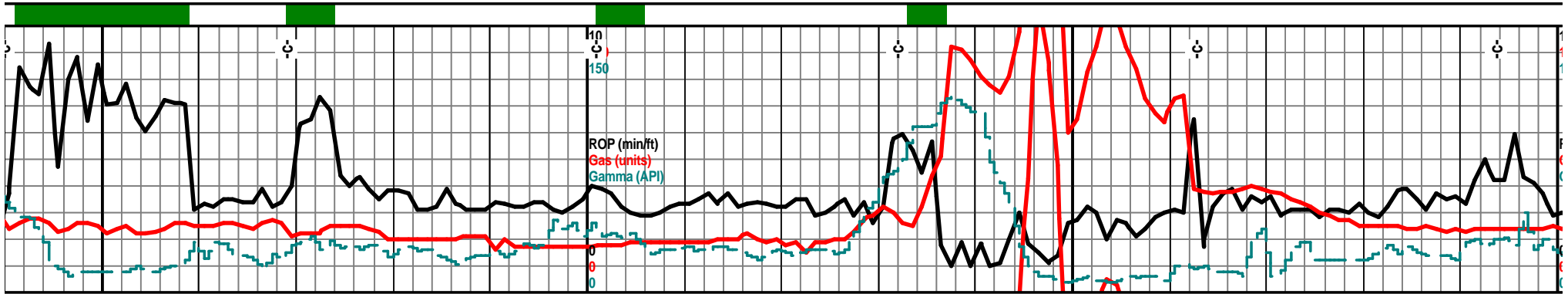


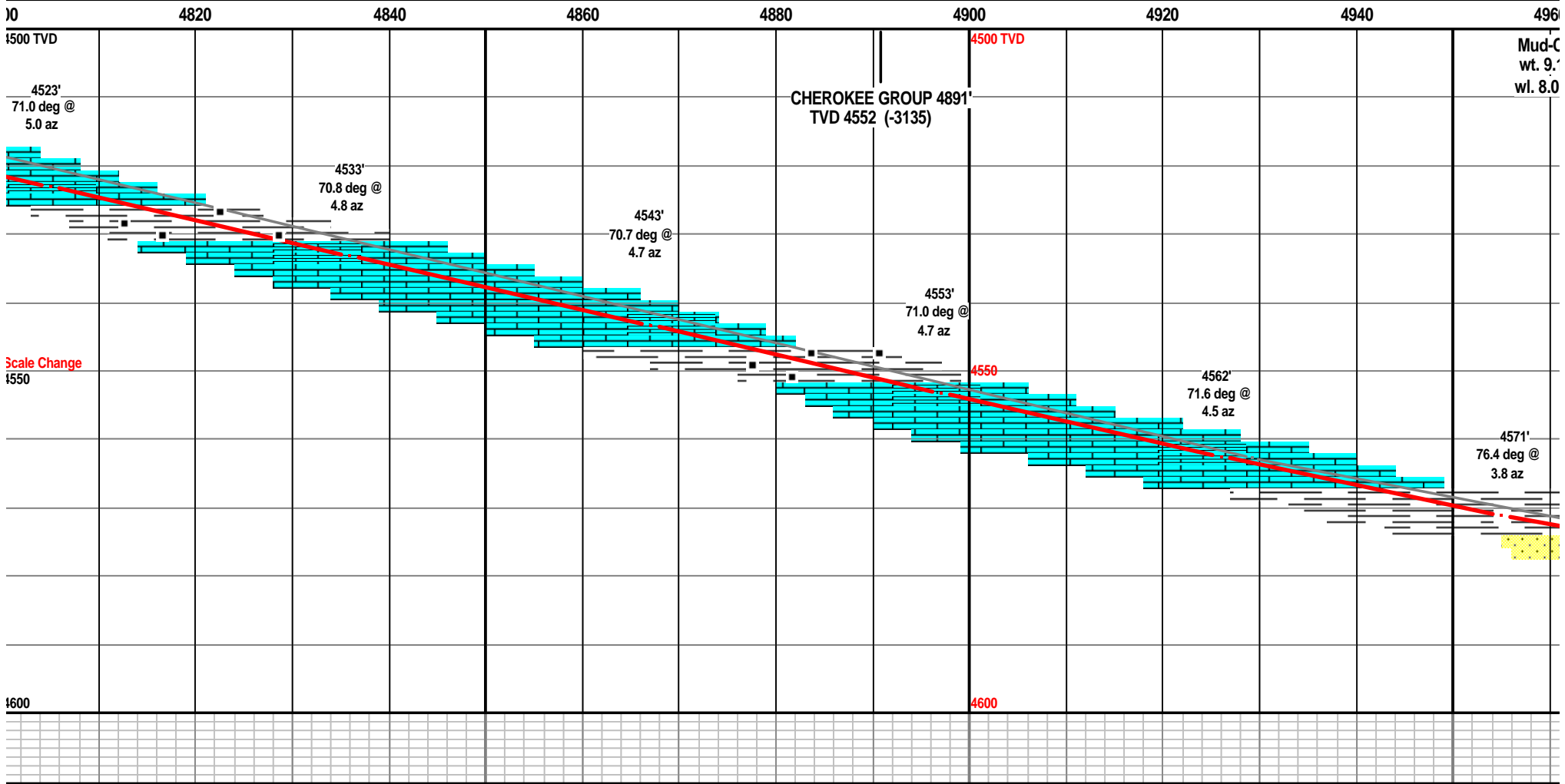
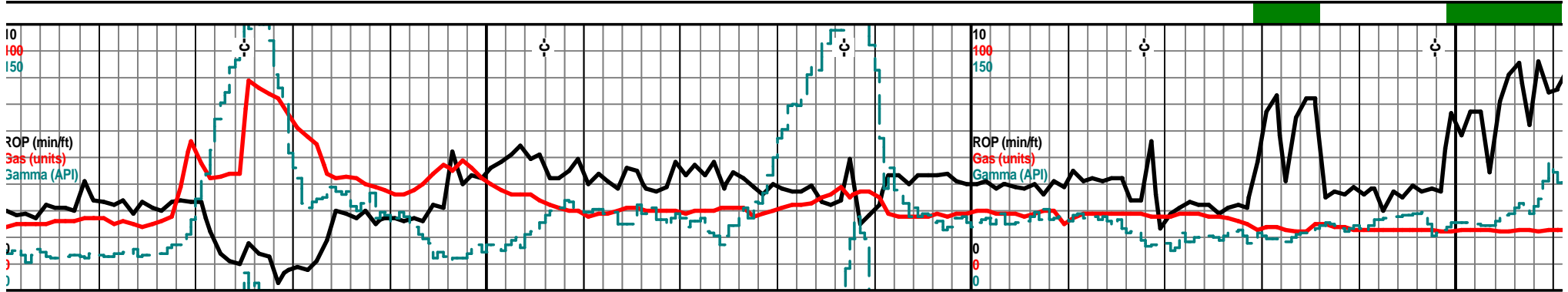




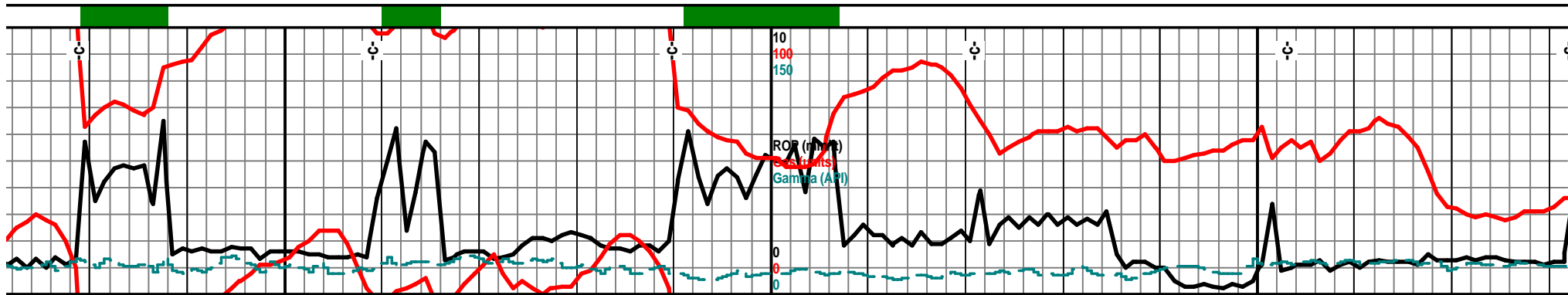








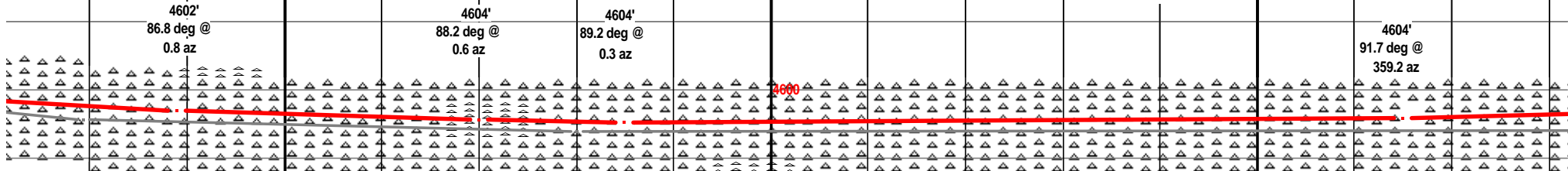




5140 5160 5180 5200 5220 5240 5260 5280

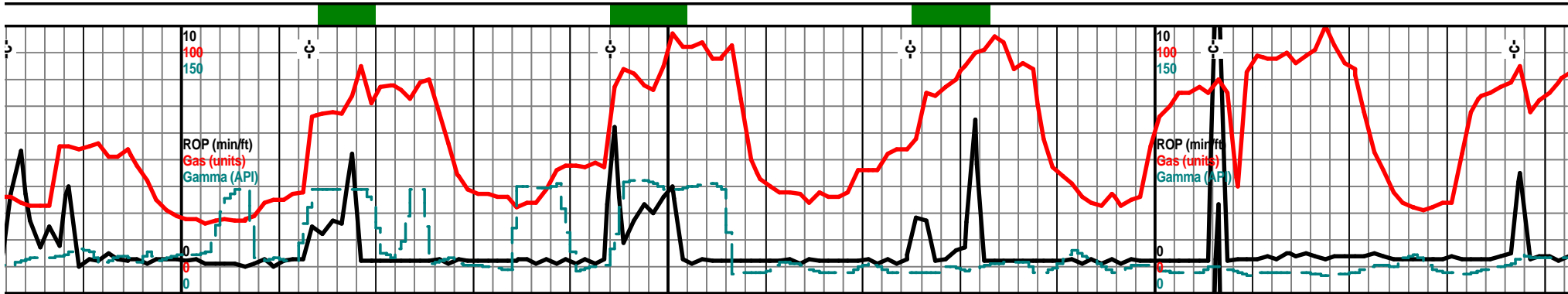
				4550 TVD				
chrt off wht lt gry, smokey/bluish, shrp frsh opa, semi transl, blk ang shards, with tan brn weath text edge, pp moldic por, tan brn stain, RBSFO, filmy SFO, dull UV, tr gas, faint odor		chrt off wht lt gry lt smokey, shrp frsh, blk ang, opa, semi transl, with sli weath trip edge text, tan brn mott in prt, tan brn stain, pp moldic por, filmy SFO, odor, dull UV			chrt off wht lt gry shrp frsh opa semi transl, blk ang pcs, with sli weath gran sli trip text, tan brn stain, filmy SFO, tr gas bubs, sli odor, incr frsh chrt			chrt off wht lt gry smokey, shrp frsh opa, semi transl, blk ang shrp shards, with tan lt brn mott weath sli trip edges, pp moldic por, drk brn blk stain, filmy SFO, sli odor dull UV

						7" Casing Point 5236' Set at 5228'		
--	--	--	--	--	--	--	--	--



y shrp frsh opa semi lt, sli weath trip text p moldic por, filmy SFO,	chrt off wht lt gry smokey color, frsh shrp blk, opa sub transl, blk ang pcs with weath sli trip text edges, tan lt brn bec drker brn stain, tan brn filmy SFO, tr floating droplets, sli odor, dull UV, tr gas bubs	chrt off wht lt gry, smokey color, shrp frsh opa, semi transl, blk ang pcs, with with weath sli gran sli trip edge text, pp moldic por, tan brn bec drker brn stain, filmy SFO, dull UV, odor?	chrt off wht lt gry frsh shrp opa, semi transl, blk ang shards, with tan drk gry brn weath sli trip text edge, pp moldic por, brn stain sli odor, mslty cement!	chrt lt gry smokey shrp drk gry/blk weath sli tr vug por, brn blk stain, wht/wht spongy chlky chrt
---	--	--	---	--

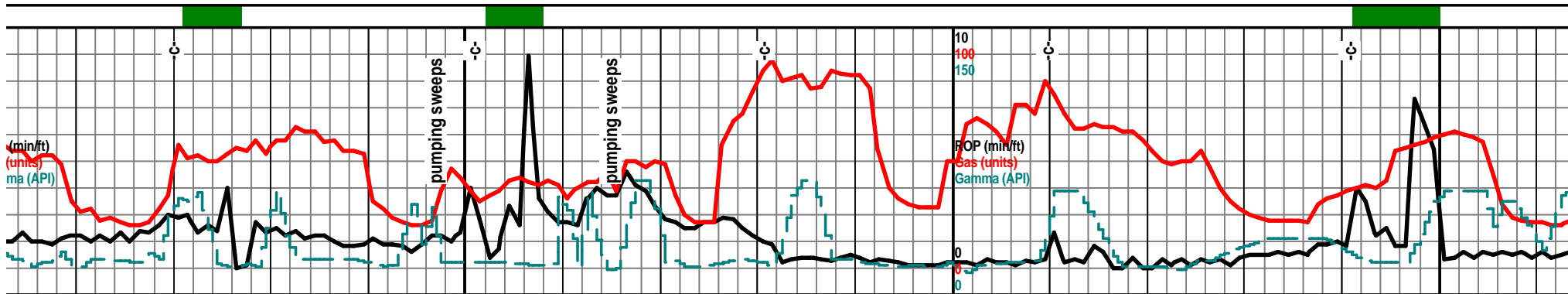
4650



5300		5320		5340		5360		5380		5400		5420		5440	
4550 TVD										4550 TVD					
chrt lt gry smokey shrp frhs opa semi transl, with tan brn tr blk weath sli trip edge text, pp moldic vug por, brn blk stain filmy SFO, sli odor, gas bubs dull UV		chrt lt gry off wht smokey, shrp frsh opa semi transl, with weath sli trip text edges, tan brn tr blk edge, tan brn blk stain, pp vug moldic por, filmy SFO, gas bubs, dull UV		chrt off wht lt gry smokey shrp frsh opa semi transl w/drk tan brn stained weath sli trip text edge, pp moldic por, chrt gry smokey frsh shrp w/weath spongy chiky text edge, pp vug por tan brn tr blk hvy stain, dull UV (incr frsh shrp chrt this spl)		chrt gry tan, gry brn mott shrp frsh opa semi transl with weath sli trip to trip edges, pp moldic por, tan brn blk stain, filmy SFO, sli odor, gd stain, dull UV									
4603' 92.1 deg @ 358.0 az		4601' 92.0 deg @ 373.3 az		4601' 91.2 deg @ 356.8 az		4600' 89.8 deg @ 356.4 az		4600' 89.9 deg @ 356.4 az							
p frsh opa transl, with tan ip text edges, pp moldic filmy SFO, gas bubs, off limy text, lst wht f xin chiky		chrt off wht lt gry smokey color, shrp frsh opa transl, tr wht spongy text, chiky limy in prt, chrt aa w/ tan brn weath sli trip text pp vug moldic por, tan brn tr blk stain, filmy SFO, gas bubs		chrt lt gry lt smokey shrp frsh opa transl with sli weath edge, tan brn stain, filmy SFO, chrt wht spongy chiky soft trip text, tan brn stain, hvy blk stain, sli odor in all, dull UV		chrt off wht lt gry smoke color, shrp frsh opa, semi transl, blk ang pcs, with tan brn tr blk stained sli weath edges, v sli trip text, pp vug por, sli odor, filmy SFO tr gas bubs, dull UV		chrt lt gry smokey, to gr weath sli trip to trip text, por, gd brn blk stain, film dull UV							
4650								4650							

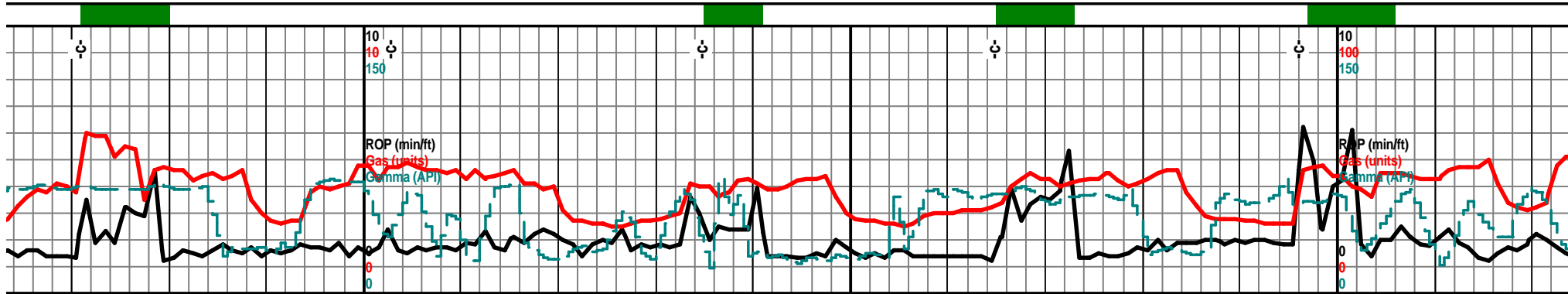






5620 5640 5660 5680 5700 5720 5740 5760

TVD										4550 TVD																																																	
chrt off wht lt gry smokey, shrp frsh opa q transl, with tan brn tr blk stained sli weath trip edges, pp moldic por, brn blk stain, filmy SFO, tr gas bubs dull UV										chrt lt gry smokey with wht spongy text edge, with tan brn sli trip weath edge, tan brn tr blk stain, pp moldic por, blk grsy stain, filmy SFO, odor, dull UV										chrt off wht lt gry smoke color, with wht spongy edge, tr chlky soft, w/ tan brn tr blk stained weath sli trip edge text, tan brn SFO, floaters, sli odor, gas bubs, dull UV										chrt lt gry off wht smoke color, with wht spongy weath sub chlky edge, weath tan brn sli trip edge text, pp moldic por, tan brn stain, filmy SFO, dull UV, sli odor, SSFO,																													
19' eg @ 1 az										4600' 89.0 deg @ 356.4 az										4600' 89.4 deg @ 356.6 az										4600' 90.0 deg @ 356.8 az										4600' 91.4 deg @ 356.6 az										4600' 90.3 deg @ 357.3 az									
hrp frsh opa q semi lk stained weath sli trip filmy SFO, sli odor										chrt lt gry smokey shrp frsh opa q, transl, with weath sli trip text edge, tan brn blk stain, odor?, filmy SFO, tr lst edge, wht f xln chlky gran chrt y tr glau										chrt lt gry smokey shrp frsh opa q, transl, with wht weath spongy text edge, tr soft chlky, w/weath sli trip text edges, tan brn tr blk mott stain, filmy SFO, dull UV, odor, tr gas bubs										cht wht lt gry off wht smokey, shrp frsh opa q semi transl, with wht weath soft spongy text, tan brn stained trip weath edges, filmy SFO, "floaters" gas bubs, odor dull UV										chrt off wht lt gry lt smoke blue/smokey, weath sli trip por, tan brn stain, odor, fil																			
																				4650																																							



5780

5800

5820

5840

5860

5880

5900

5920

4550 TVD

4550 TVD

chrt off wht lt gry lt smokey color, shrp frsh opa, sub transl, with weath sli spongy trip edge, tan brn stained sli trip edge, pp moldic por, sli odor, filmy SFO, dull UV, incr frsh chrt AB

chrt off wht lt gry smokey color, shrp frsh opa, blk ang pcs, with weath sli trip edge text, tan brn stain, pp moldic por, sli odor

chrt lt gry smokey off wth shrp frsh opa sub transl with tan brn stained weath edge text, pp moldic por, tan brn tr blk stain, SSFO, hvy stain, filmy SFO, odor, incr stained chrt in this spl

chrt lt gry off wht lt smokey shrp frsh opa as before, with tan brn stained weath sli trip edge text, pp moldic por, tan brn stain, hvy grsy SFO/stain, filmy SFO, tr gas bubs, odor, dull UV

4599'  
90.1 deg @  
357.3 az

4599'  
90.8 deg @  
357.1 az

4599'  
89.9 deg @  
357.5 az

4599'  
88.8 deg @  
357.1 az

4600'  
87.8 deg @  
357.3 az



y shrp incr frsh, lt trip edge, pp moldic my sfo,

chrt lt gry off wht lt smokey shrp frsh opa sub transl, with chlky trip edge, tan brn stained sli trip edge, pp moldic por, tan brn stain, blk stain sli odor, filmy SFO, dull UV

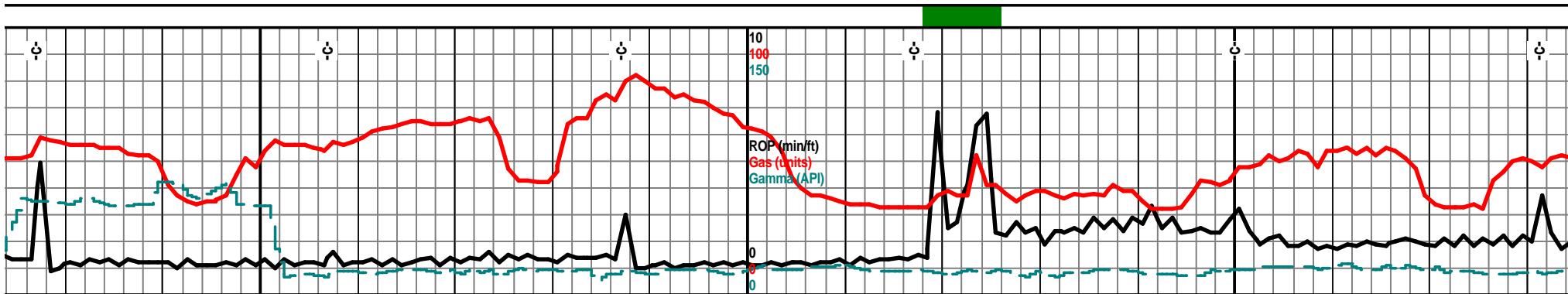
chrt lt gry off wht smokey color, shrp frsh opa, semi transl, with chlky spongy weath edge, tan brn stain, with tan brn weath sli trip edge, pp moldic por, tan brn, tr blk stain, sli odor, dull UV, 50-50 frsh with NS and weath w/stain

chrt off wht lt gry tr lt smokey color, shrp frsh opa foss, transl with tan lt brn/brn tr blk weath trip edge text, pp moldic small vug por, tan brn stain, grsy hvy SFO, filmy SFO tr gas bubs, odor, dull UV

chrt lt gry off wht lt smokey c sub transl with tan brn stain pp moldic por, sli odor, tan brn filmy SFO, dull UV

4650

4650



5940 5960 5980 6000 6020 6040 6060 6080

4550 TVD  
7 am 6020'  
Sept. 26, 2012

chrt lt gry off wth lt smokey color, shrp frsh opa, transl, with tan brn stained weath sli trip text edges, pp moldic por, tan brn tr blk grsy stain sli odor, tr SFO, filmy SFO, dull UV

chrt off wht lt gry lt smokey color, shrp frsh opa, with tan brn stain weath sli trip edges pp moldic por, tan brn stain filmy SFO, gas bubs odor

chrt wht off wht lt gry shrp frsh opa semi transl, with weath sli trip text edges, tan brn stained edges, pp moldic por vug por, sli odor, filmy SFO, tr gas bubs, dull UV, incr frsh chrt

chrt off wht lt gry smokey color, shrp frsh opa semi transl blk ang hrd, with weath sli trip edge text, pp moldic por, vug por, tan brn tr blk stain, odor? filmy SFO, dull UV, incr vis show from 6040' spl.

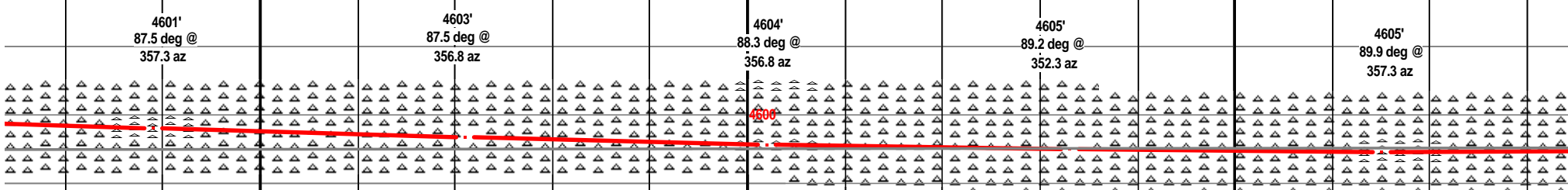
4601'  
87.5 deg @  
357.3 az

4603'  
87.5 deg @  
356.8 az

4604'  
88.3 deg @  
356.8 az

4605'  
89.2 deg @  
352.3 az

4605'  
89.9 deg @  
357.3 az



olor, frsh shrp opa d sli trip edge text, m tr blk grsy stain,

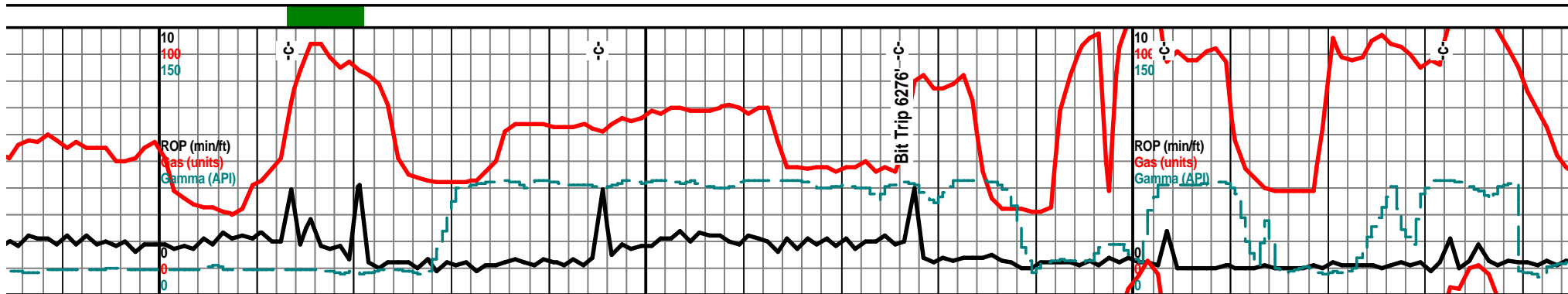
chrt off wht lt gry shrp frsh opa, transl, shrp blk pcs with tan brn stained weath sli trip text edges, pp moldic por, tan brn stain filmy sfo sli odor, dull UV

chrt off wht tr wht lt gry shrp frsh opa, blk shrp shards, with weath sli trip text edge, tan brn stained edges. pp moldic por, tan filmy SFO sli odor, incr live sho, incr frsh chrt

chrt off wht, tr wht, lt gry smokey, shrp frsh opa, semi transl, mstly frsh shrp blk ang pcs, with trace of sli trip weath edge, tr tan brn blk stain, pp molic por nodor no gas spotted UV or "jeep"

chrt...spl 80% frsh with no sh lt gry shrp frsh opa, semi tr shards, tr weath sli trip text e filmy SFO, tr gas bubs howev

4650



6100 6120 6140 6160 6180 6200 6220 6240

4550 TVD Mud-Co. 6113' wt. 8.3 vis. 26 wl. N/C chl. 800 Bit Trip 6176' 4550 TVD

chrt spl 80% frsh no show, chrt off wht lt gry smokey shrp frsh opa semi transl, with tan brn stained sli weath sli trip text edges, tan brn stain, VSSFO, filmy SFO, sli odor

chrt off wht lt gry smokey color, shrp frsh opa transl, tan brn some blk stained sli trip weath text edges, tan brn stain, filmy SFO, "floaters" tr gas bubs, dull UV, sli odor

chrt off wht lt gry shrp frsh opa with tan brn stained sli trip weath text, pp moldic por, tan brn tr blk stain, sli odor, filmy SFO. tr gas bubs, dull UV

chrt wht off wht lt gry & smokey color, shrp frsh opa transl with tan brn weath sli trip text edge, tan brn tr blk stain, sli odor, filmy SFO, sli odor, dull UV, floating oil droplets

4605; 90.5 deg @ 357.5 az

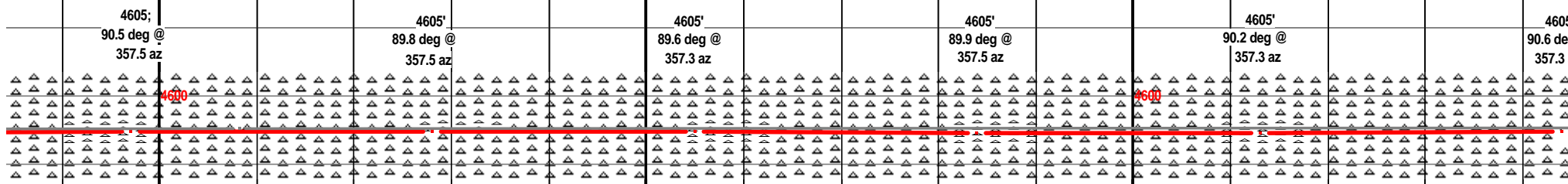
4605' 89.8 deg @ 357.5 az

4605' 89.6 deg @ 357.3 az

4605' 89.9 deg @ 357.5 az

4605' 90.2 deg @ 357.3 az

4605' 90.6 deg @ 357.3 az



low, chrt wht off wht anls, sharp blkly dges, tan brn stain, r/r!

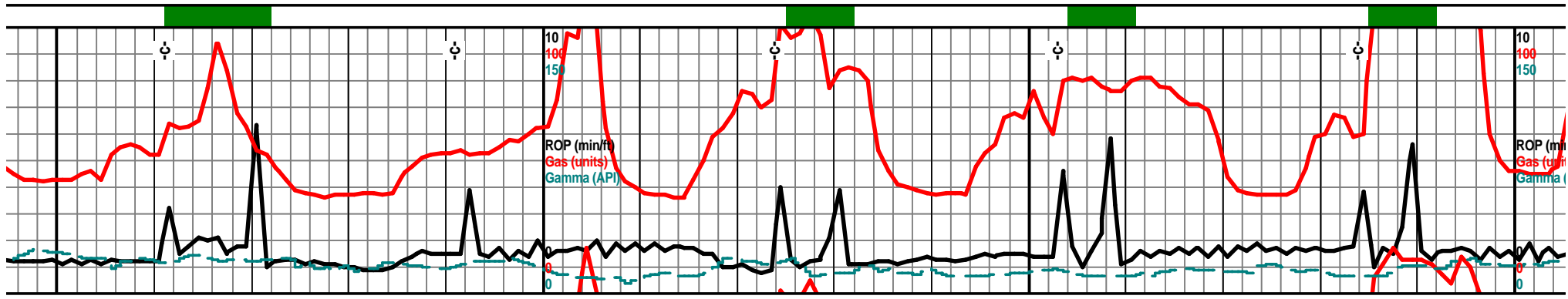
chrt off wht lt gry lt smoke color, shrp frsh opa, transl, inc weath text, tan brn lt blk stain trip weath text edges, pp moldic por, tan brn, tr blk grsy stain, floating oil droplets, filmy SFO, gas bubs, dull UV

chrt off wht lt gry smokey shrp frsh opa sub transl, tan brn some blk stained sli trip weath text edges, tan brn stain, tr hvy blk stain, filmy SFO, some "floaters", sli odor.

chrt 50-50 mix of lt gry smokey frsh shrp opa transl and lt gry smokey with tan brn stained weath sli trip text edges, pp moldic por, tan brn stain, sli odor, filmy SFO, tr gas bubs dull UV

chrt wht off wht lt gry smokey, transl, with tan brn weath sli tri brn tr blk stain, odor, tr gas bul droplets, dull UV

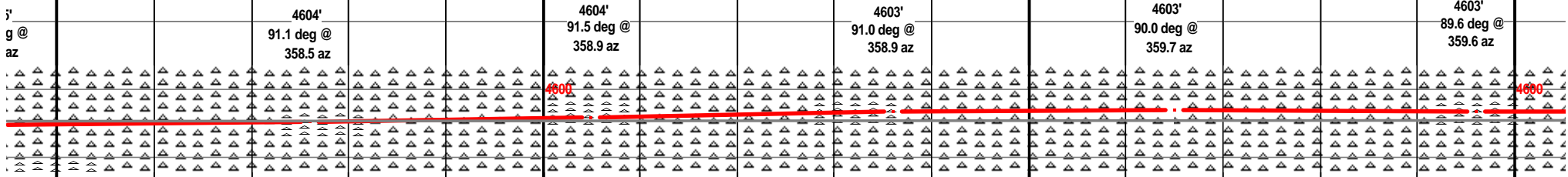
4650 4650



6260 6280 6300 6320 6340 6360 6380 6400

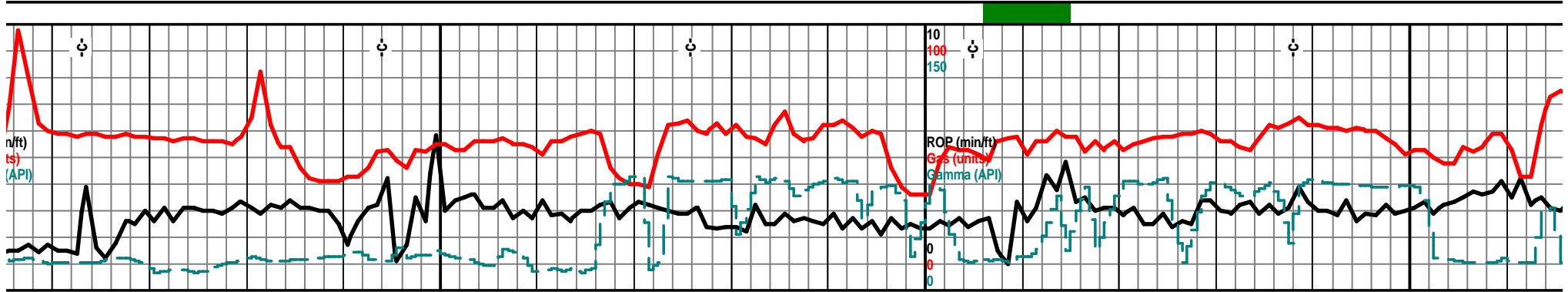
4550 TVD 7 am 6308' Sept. 27, 2012 Mud-Co. 6353' wt. 8.4 vis. 28 wl. N/C chl. 1,000 4550 TVD

chrt wht off wht lt gry lt smokey shrp frsh opa, semi transl, with weath gran sli trip edge text, pp moldic por, tan brn stain, sli odor, dull UV, tr hvly blk stain	chrt wht off wht lt gry smokey, shrp frsh opa transl, with weath gran sli trip text, tan brn stained edges, pp moldic por, tanbrn blk stain, VSSFO, floaters, tr gas dull UV	chrt split, wht off wht lt gry smokey shrp frsh opa transl, with tan brn drk brn weath sli trip text edges, pp moldic por, vug por, tan brn stain, filmy SFO. dull UV	chrt bec incr frsh NS, with chrt wht off wht lt gry shrp frsh opa. chrt aa with tan brn weath sli trip edge text, pp moldic por vug por, filmy SFO, nodor, dull UV eddges
--	--	---	---

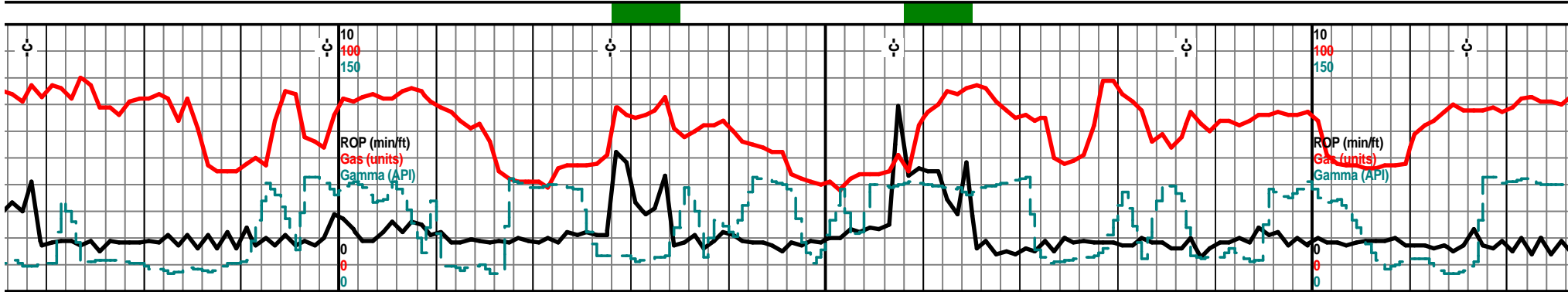


shrp frsh opa p text edges, tan ss, floating oil	chrt wht off wht lt gry shrp frsh opa blk ang pcs, tan brn mott weath sli trip weath text, pp moldic por, tan brn stain tr hvly blk stain, sli odor, filmy SFO, tr gas bubs	chrt 50-50 mix of chrt, frsh shrp blk ang opa transl & chrt lt gry off wht wht, lt smokey shrp frsh with tan brn stained weath sli trip text edges, tan brn stain, filmy SFO, tr gas sli odor, dull UV	chrt mx, off wht lt gry smokey shrp frsh opa transl blk ang shrds, with weath gran sli trip text edges, tan brn stain tr hvly blk grsy stain, SSFO, filmy SFO, tr gas odor?	chrt off wht lt gry smokey co transl incr spongy text weat chrt aa with tan brn drk brn v pp moldic vug por, tan brn sl odor, gas bubs
--	---	--	---	--

4650 4650

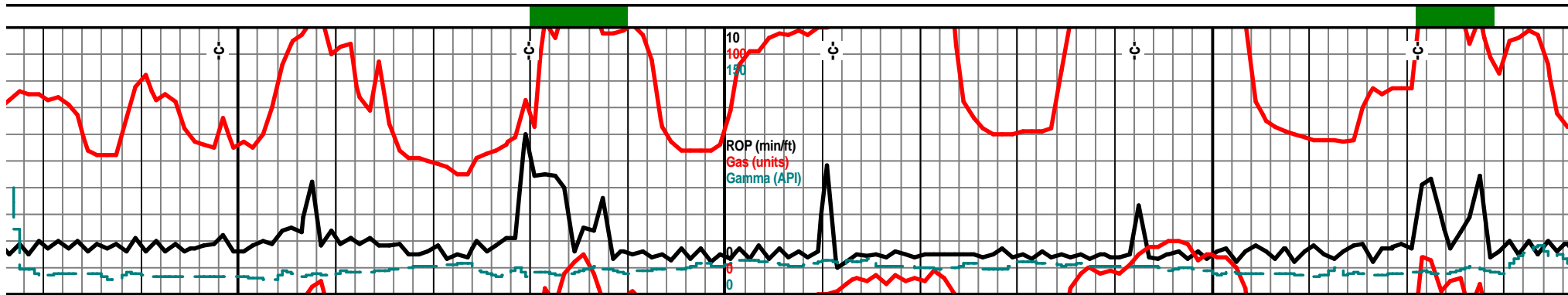


6420	6440	6460	6480	6500	6520	6540	6560
SAMPLES VERY FINE				4550 TVD			
chrt off wht lt gry smokey color with wht gran spongy text soft limy weath edge, stain, VSSFO, pp por, chrt off wht lt gry smokey shrp frsh opa with tan brn stained weath sli trip edge text, pp moldic por, filmy SFO, fair odor gas bubs		chrt wht tan lt gry shrp frsh opa, transl, and chrt tan lt gry mott shrp frsh opa trans with weath tan edges, tr tan brn stain, pp moldic por, lt tan stain, tr hvly blkstain dull UV.		chrt wh lt tan lt gry frsh opa transl, and chrt tan lt gry mott, shrp frsh opa transl, with weath gran tan edges, tr tan brn stain, pp molic por, tn stain, tr hvvy blk stain, dull UV		chrt off wht lt gry tr wht tan mott frsh shrp blkly ang hrd shrds, tan brn stained sli weath trip text edge, tan brn stain, filmy SFO, tr odor, tr gas bubs, dull UV	
	4603' 90.0 deg @ 0.1 az	4603' 89.0 deg @ 359.9 az	4604' 89.1 deg @ 359.6 az	4604' 88.5 deg @ 359.4 az	4605' 88.4 deg @ 359.0 az		
lor, frsh shrp opa h edge, brn stain, weath trip edge text tain, filmy SFO, gd	chrt off wht lt gry smokey shrp frsh opa blkly ang hrd pcs, with tan brn weath sli trip edges, tr spongy soft calc chiky edge, tan brn stain dull UV nodor		chrt wht lt tan lt gry frsh shrp opa trans, with tan weath sli trip weath edge, pp moldic por, lt tan stain, dull UV		chrt tan off wht lt gry frsh opa trans and chrt tan lt gry mott, shrp frsh opa trasns, with gran weath sli trip text edges, tan brn stain, pp moldic por dull UV		chrt tan off wht lt gry mott frsh opa, with tan gry lt brn mott v edges, pp moldic por, tan brn stain, tr filmy SFO
				4650			

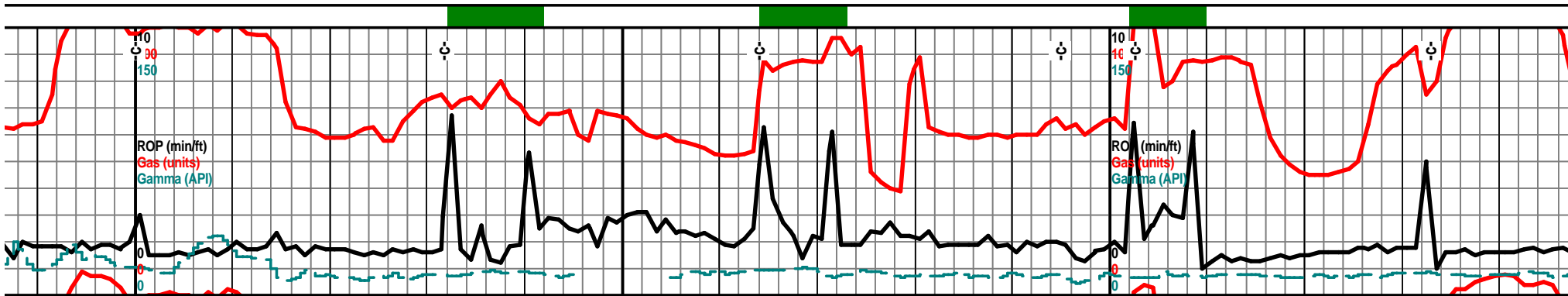


6580	6600	6620	6640	6660	6680	6700	6720
	4550 TVD					4550 TVD	
	SAMPLES VERY FINE						
Incr frsh from before, chrt tan lt gry mott, shrp frsh opa, with tan lt gry weath sli trip text edge, tan lt brn stain, sli odor, incr drk tan lt brn stain pp moldic por sli odor dull UV	chrt off wht lt gry lt gry/smokey shrp frsh opa, semi transl, shrp blk shards, with tan brn tr blk weath edge text, tan brn blk stain, pp moldic por gran dull UV, filmy SFO.		chrt lt gry off wht smokey shrp frsh opaq semi trans, chrt tan brn off wht mott with weath trip text edges, tan brn stain, pp moldic vug por, filmy SFO, tr gas dull UV, tr floating oil droplets		chrt off wht lt gry smokey color, shrp frsh opaq semi transl, chrt tan off wht mmott with weath trip text edges, tan brn stain, moldic vug por, tr gas bubs		
4606' 88.2 deg @ 359.2 az	4607' 88.1 deg @ 358.9 az		4608' 88.7 deg @ 358.9 az		4608' 89.4 deg @ 358.4 az	4608' 89.7 deg @ 358.7 az	
shrp blk ang weath sli trip text stain, dull UV, sli	chrt off wht lt gry lt smokey shrp frsh opaq semi transl, blk ang shrd, with tr weath tan lt brn sli trip text edge, pp moldic por tr hv blk stain, dull edge UV		chrt tan lt brn mott, weath gran trip text, pp moldic vug por, tan brn tr blk stain, chrt lt gry smokey frsh with tan brn weath sli trip edge, filmy SFO, dull UV		chrt off wht lt gry shrp frsh opaq trans with tan lt brn tr blk mott weath gran sli trip edges, pp moldic vug por, tan brn stain sli odor, tr filmy SFO		chrt off wht lt gry shrp frsh opaq stained sli trip text edges, pp mc stain, tr blk bvy grsy stain, gas b sli odor
	4650					4650	





6740	6760	6780	6800	6820	6840	6860	6880
SAMPLES VERY FINE			4550 TVD	7 am 6811' Sept. 28, 2012			
chrt lt tan to off wht/tan shrp frsh opa q with weath sli trip edge text, tan brn stained edges, pp moldic por, vug por, dull UV, tr gas bubs,		chrt off wht lt tan to gry smokey shrp frsh opa q semi trans with tan lt brn to brn stained weath sli trip edges text pp moldic por, sli odor, filmy SFO, tr gas bubs, dull UV		chrt lt gry smokey frsh shrp opa q trans with weath trip text edges, chrt tan brn mott weath trip text tan brn stain, pp moldic vug por, sli odor, filmy SFO dull UV, floaters, tr gas bubs.		chrt off wht lt gry smokey shrp frsh opa q, with weath trip text edges, chrt tan brn gry brn mott weath trip text edges, pp moldic vug por, tan brn stain, SSFO-"floating" droplets, tr gas bubs.	
4608' 90.7 deg @ 358.7 az	4608' 90.4 deg @ 357.7 az	4608' 88.7 deg @ 359.0 az	4600	4609' 88.5 deg @ 4609'		4610' 88.7 deg @ 359.2 az	4611' 88.0 deg @ 359.2 az
with tan lt brn moldic por, tan brn bubs, tr filmy SFO	chrt off wht lt gry smokey color, shrp frsh opa q, semi transl, with weath trip edge text, tan brn stain, pp moldic por, tr vug por, filmy SFO, gas bubs dull UV	chrt off wht lt gry to smokey color, frsh shrp blkly ang shrds, opa q semi transl, with tan lt brn stained weath trip edge text pp moldic por, filmy SFO, tr gas bub		chrt off wht lt gry smoke color, shrp frsh opa q with weath trip text edges, chrt tan brn mott weath trip text, pp moldic por, vug por tan brn stain, filmy SFO, gas bubs dull UV		chrt dull gry off wht smokey shr weath sli trip text edges, chrt tan trip text edges, pp moldic por, vug por tan brn stain, filmy SFO, gas bubs	
			4650				



6900 6920 6940 6960 6980 7000 7020 7040

4550 TVD  
 SAMPLES VERY FINE  
 Bit Trip 6995'  
 Lost Returns  
 4550 TVD

hrt lt gry off wht shrp frsh opa, blk ang  
 shards, semi transl, chrt tan lt brn mott weath trip  
 ext, pp moldic por, vug por, tan lt brn stain, sli  
 odor, filmy SFO.dull UV

chrt wht off wht lt gry shrp frsh opa, blk ang  
 shards, transl, tr chrt aa with weath sli trip edges,  
 lt tan brn stain, moldic pp por, lst wht off wht f xln  
 blk chlyk chrt, incr frsh chrt

chrt wht off wht lt gry shrp frsh opa ang hrd  
 shards, dolo crm tan f vf xln blk ang soft gran  
 pcs, tr glau, tr chrty/w chrt inclu, stain sli odor, lst  
 gry smokey frsh opa chrt with dolo edge, stain,  
 tr gas

chrt off wht lt gry smokey shrp frsh opa with  
 chrty dolo, off wht lt gry fwth tan brn weath dolo  
 edge, pp moldic por, vug por, tan brn stain, SSFO,  
 gas bubs

4600 4612' 87.4 deg @ 358.9 az 4613' 88.3 deg @ 357.9 az 4613' 88.5 deg @ 359.2 az (check shot) 4614' 90.2 deg @ 0.8 az 4680 4613' 91.0 deg @ 0.6 az



p frsh opa with  
 1 brn mott, weath  
 ug por, tan brn

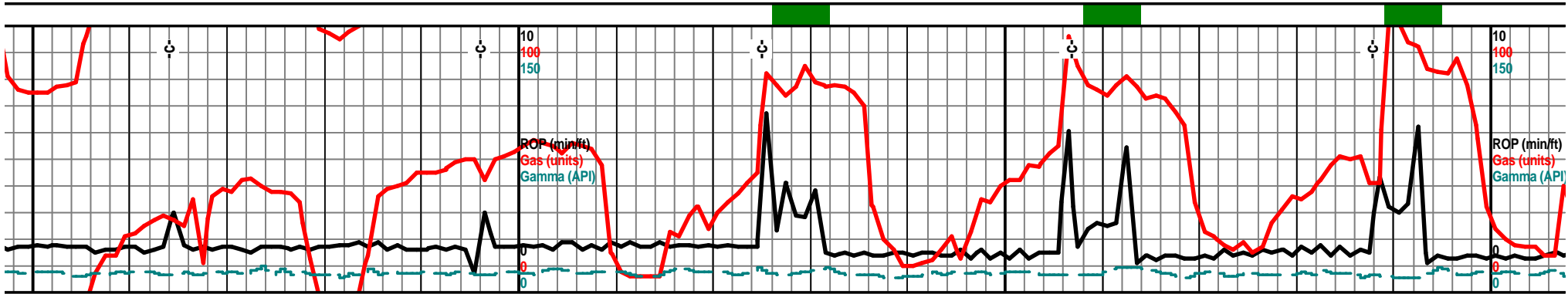
chrt off wht lt gry tr smokey, shrp frsh opa trans,  
 shrp ang shards, chrt tan lt brn weath trip text, pp  
 moldic por, tan brn stain, dull UV, incr lst wht off  
 wht f xln chlyk, gran, chrty

chrt off wht lt gry shrp frsh opa blk ang shrp  
 shards, with weath edge text tan lt brn stain,  
 lst/dolo wht off wht f xln gran chlyk soft chrty

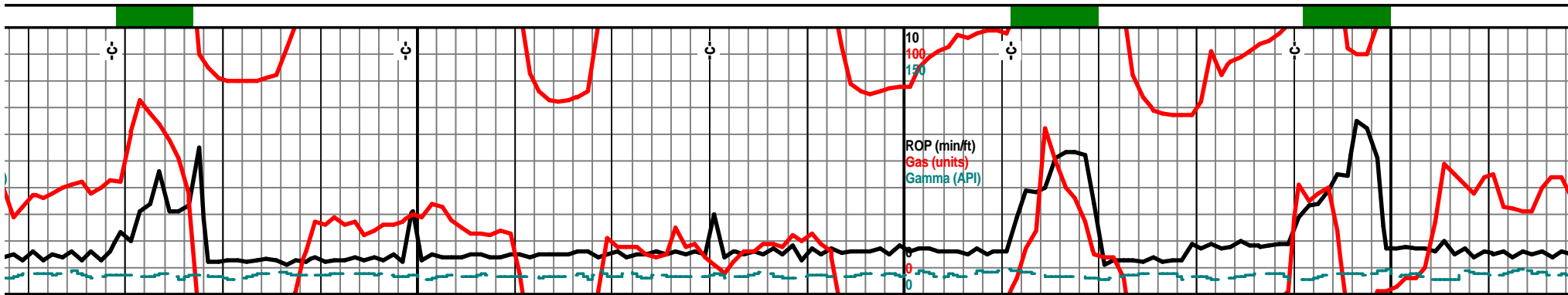
chrty dolo, gry smokey frsh chrt with tan lt brn  
 weath dolo edge, pp moldic por, tan brn stain, tr  
 lst off wht tan sub chlyk gran soft

chrt off wht lt gry smokey shrp frsh opa with  
 dolo, gry smokey chrt with tan lt brn weath dolo  
 edge, pp moldic por vug por tan  
 odor, gas bubs, dull UV.

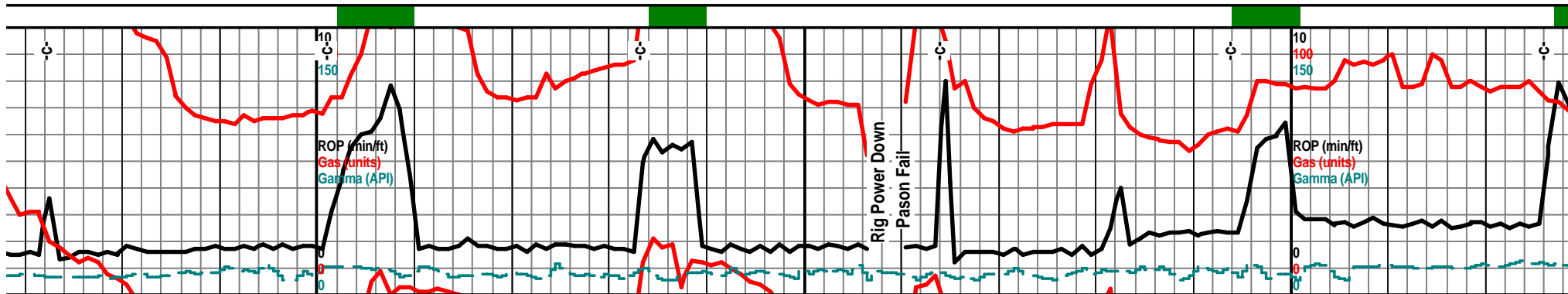
4650 4650



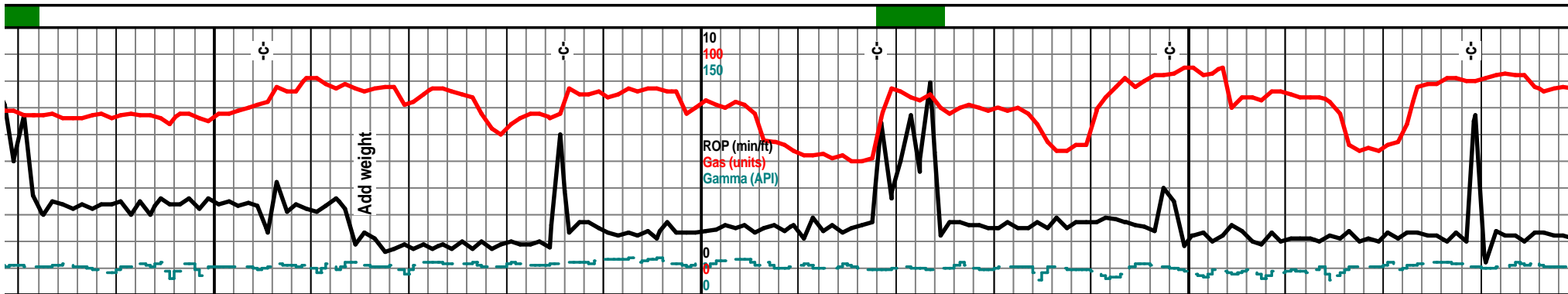
7060	7080	7100	7120	7140	7160	7180	7200
		4550 TVD					4550 TVD
chrt lt gry smoke color shrp frsh opa q blk ang shrds with chrt dolo, tan lt brn mott dolo w/chrt inclu, pp moldic por, inter xln por, tan brn stain, tr gas bubs, dull UV		chrt off wht lt gry smokey shrp frsh opa q with weath gran dolo edges, tan lt crm lt brn f xln gran soft tr suc text, gd inter xln, pp por, tan brn stain, blk stain, grsy stain, filmy SFO, tr gas bubs sli odor		chrt off wht lt/med r smokey, shrp frhs, opa q, with dolo edges, chrt dolo tan lt brn f xln sli suc text, chrt inclu, inter lxn por pp vug por, tan blk stain, gas bubs, filmy SFO		chrt off wht lt gry shrp frsh opa q with weath gran trip text edge, tr dolo in prt, pp moldic por, tan brn stain, fair odor, filmy SFO, dull UV	
4613' 91.2 deg @ 1.0 az	4612' 91.3 deg @ 0.6 az	4600 4611' 91.2 deg @ 0.1 az		4611' 91.2 deg @ 359.6 az		4610' 91.4 deg @ 358.3 az	4609' 90.9 deg @ 358.5 az
frsh opa q, chrt t brn weath dolo lt brn stain, sli	chrt off wht lt gry smoke, chrt dolo, off with tan crm f xln gran sli suc, with lt gry smokey chrt inclu, weath gran sli trip edge, pp moldic por, inter xln por, tan brn stain, blk hvy stain tr gas bubs	chrt off wht lt/med gry smokey, shrp frsh, opa q, with dolo edges, chrt dolo tan lt brn f xln sli suc text, chrt inclu, inter xln por, pp vug por, tan/blk stain gas bubs odor? dull UV		chrt off wht lt gry mstly smokey, shrp frsh opa q trans with tan lt brn dolo edge, chrt dolo, tan lt brn f xln gran, sub chlky, chrt inclu, pp moldic por, vug por tan brn stain, blk SFO, gas bubs		lnr off wht lt gry smokey colo frsh opa q opa q trans, chrt lt gry smokey with v trip edge, tr dolo edges, pp moldic p stain, filmy SFO, sli odor, tr gas bub	
		4650					4650



7220	7240	7260	7280	7300	7320	7340	7360
				4550 TVD			
ncr frsh lt gry smokey shrp frsh opa q blky ang :hrt, with weath gran sli trip text edges, weath gran dolo text edges, with inter xln por, moldic/vug por, tan brn stain, filmy SFO, tr gas bubs, dull UV		chrt off wht lt gry tr smokey color shrp frsh opa q with weath gran trip text, pp moldic por, vug por, tan brn stained, tan brn tr blk stain, tr filmy SFO, odor, tr gas bubs		chrt off wht lt gry smoke color, shrp frsh opa q blky ang pcs, with weath sli trip text, weath gran text, tan lt brn stained weath text, tan brn stain, pp moldic por, sli odor, filmy SFO, dull UV		chrt off wht lt gry smokey color, shrp frsh opa q, transl, with weath gran trip text, pp moldic por, tan lt brn to brn stain, tr hvy blk stain, filmy SFO, odor, tr gas bubs, dull UV	
	4609' 90.0 deg @ 358.2 az	4609' 91.1 deg @ 358.7 az		4608' 91.9 deg @ 358.5 az	4608' 88.8 deg @ 357.8 az		4609' 87.3 deg @ 357.6 az
g @ iz							
chrt, shrp frsh weath gran sli or, tan brn s.	chrt lt gry smokey shrp frsh opa q with weath gran sli trip text, tr dolo weath gran text, pp moldic vug por, tan brn, tr blk hvy stain, odor, filmy SFO, dull UV	chrt off wht lt gry shrp frsh with weath gran trip text, tan lt brn mott color, tan lt brn stain, pp moldic vug por, filmy SFO, gas bubs, sli odor dull UV		chrt off wht lt gry med gry shrp frsh opa q trans, blky ang pcs, chrt aa with weath gran trip edge text, pp moldic por, vug por, tan lt brn stain, dull UV, odor		chrt lt gry off wht smokey color, shi semi transl, blky ang shrds with we text, tan brn mott color, pp moldic p tan lt brn tr blk stain, odor, filmy SF UV, tr crm tan dolo edge	
				4650			



7380	7400	7420	7440	7460	7480	7500	7520
	4550 TVD			7 am 7450' October 1, 2012		4550 TVD	
chrt lt gry of wht smokey color, shrp frsh opaq semi transl, blk ang shards with weath gran trip text, tan brn mott color pp moldic por, vug por tan lt brn tr blk stain, odor, filmy SFO tr gas dull UV		chrt crm tan lt brn mott, gran weath sli trip text, pp moldic por, vug por, tan lt brn mott stain, tr blk stain, tr gas bubs, chrt off wht lt gry smokey, shrp frsh opaq with weath gran sli trip edge		chrt crm tan brn mott weath gran sli trip text, pp moldic por, vug por, chrt lt gry off wht smokey shrp frsh opaq with weath gran trip text edge, pp moldic por, tan brn stain, blk stain, sli odor, 1st wht off wht f xln soft chlky chrt		chrt lt gry smokey shrp frsh opaq blk ang hrd pcs with weath gran trip text/dolo edges, pp moldic por, vug por, tan brn stained, tan brn tr blk stain, sli odor, filmy SFO,	c s tr b
	4610' 87.5 deg @ 358.5 az	4611' 89.3 deg @ 358.9 az		4611' 90.8 deg @ 357.8 az	4611' 91.4 deg @ 357.5 az	4600 4610' 90.7 deg @ 358.0 az	
shrp frsh opaq ath gran trip or, vug por, O, tr gas dull		chrt off wht lt gry shrp frsh opaq, semi transl, with weath gran sli trip edge, pp moldic, vug por, tan lt brn stain, tr blk stain, sli odor, tr gas dull UV		chrt lt gry off wht smokey shrp frsh blk with weath gran sli trip edge, tan brn mott color, tan lt brn stain, tr blk stain, pp moldic por, sli odor, 1st/dolo tan crm off with, f xln gran soft chrt chlky		chrt lt gry smokey shrp frsh opaq blk ang with weath gran trip dolo text edges, pp moldic por, vug por, tan brn mott color, tan lt brn tr blk stain, odor, dull UV tr filmy SFO	chrt off wht lt gry smokey, shrp fr with weath gran trip text edges, ta color, pp moldic por, vug por, tan SFO, sli odor, dull uv
	4650					4650	



7540 7560 7580 7600 7620 7640 7660 7680

Mud-Co. 7586'  
wt. 8.4 vis. 27  
wl. N/C chl. 900

4550 TVD

chrt off wht lt gry smokey shrp frsh opa semi  
transl, chrt tan brn mott shrp frsh with weath sli  
trip text, tan brn stain, pp moldic por, filmy SFO,  
dolo tan lt grn tint f xln gran soft chiky tr glau tr  
chrt with chrt inclu

chrt off wht lt gry smokey as before, mstly chrt  
gry smokey shrp frsh with drk tan drk brn stained  
sli weath trip text edges/sides, gran weath  
pp/moldic por, tan drk brn stain dull UV, sli odor,  
lst/dolo wht off wht lt grn tint f xln gran sub chiky  
with stained chrt edges,

chrt  
gry :  
trip :  
tan :  
as b

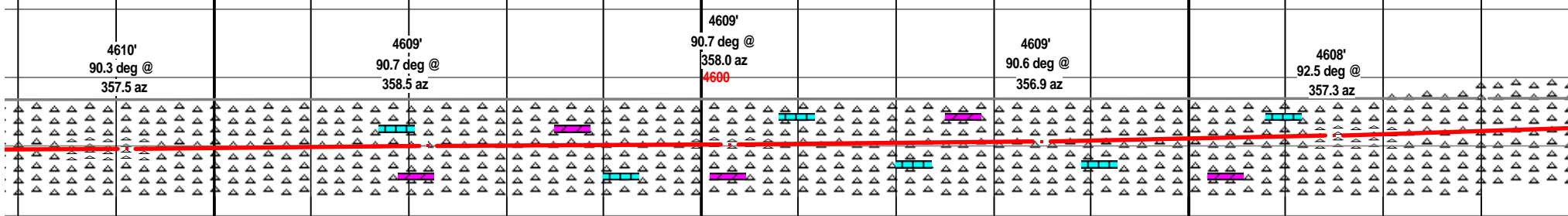
hrt lt gry off wht, gry/smokey, shrp frsh opa  
ub transl, chrt tan gry brn mott, weath gran trip  
ext, pp moldic por, vug por, odor, tan brn stain, tr  
ilk hvy stain dull UV, VSSFO/broken

chrt off wht lt gry/smokey color, shrp frsh opa  
transl, blk ang pcs with chrt tan gry mott weath  
gran trip text, pp moldic, vug por, tan brn stain tr  
blk stain, sli odor, dull UV

chrt off wht lt gry smokey shrp frsh opaq  
sub transl, chrt tan gry brn mott, weath gran trip  
ext, pp moldic por, vug por, odor, tan brn stain, tr  
ilk hvy stain dull UV, VSSFO/broken

chrt off wht lt gry/smokey shrp frsh opaq sub  
transl, blk ang pcs with chrt tan gry mott weath  
gran trip text, pp moldic, vug por, tan brn stain, tr  
blk stain, sli odor, dull UV

Good visible shows!



sh opaq transl  
in brn mott  
brn stain, filmy

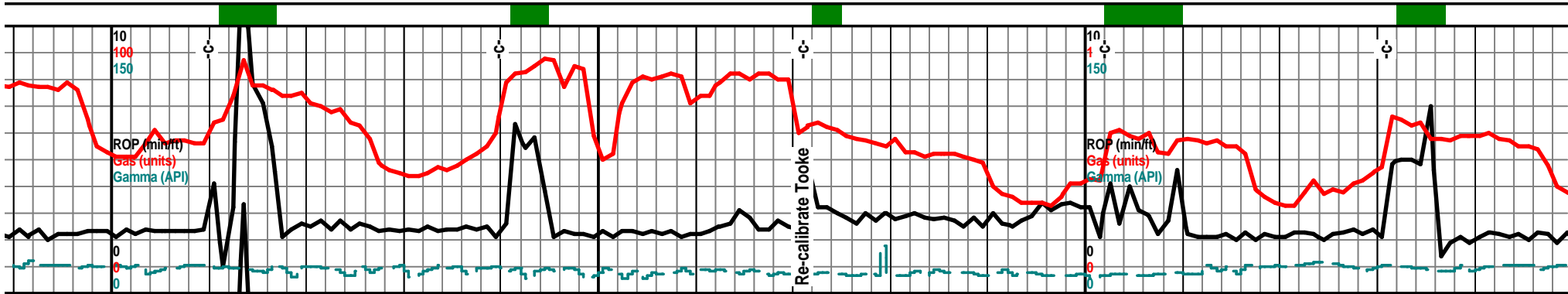
chrt off wht lt gry/smokey shrp frsh opaq sub  
transl, with tan gry brn mott weath sli trip text, pp  
moldic por, vug por, tan lt brn stain, tr blk stain,  
sli odor, dull UV, filmy SFO

chrt off wht lt gry smokey shrp frsh opaq semi  
transl, blk ang pcs, with chrt tan gry brn mott  
weath trip gran text, pp moldic por, vug por, tan  
brn stain, sli odor, filmy SFO, lst/dolo crm tan wht  
f xln gran soft chiky tr chrt inclu

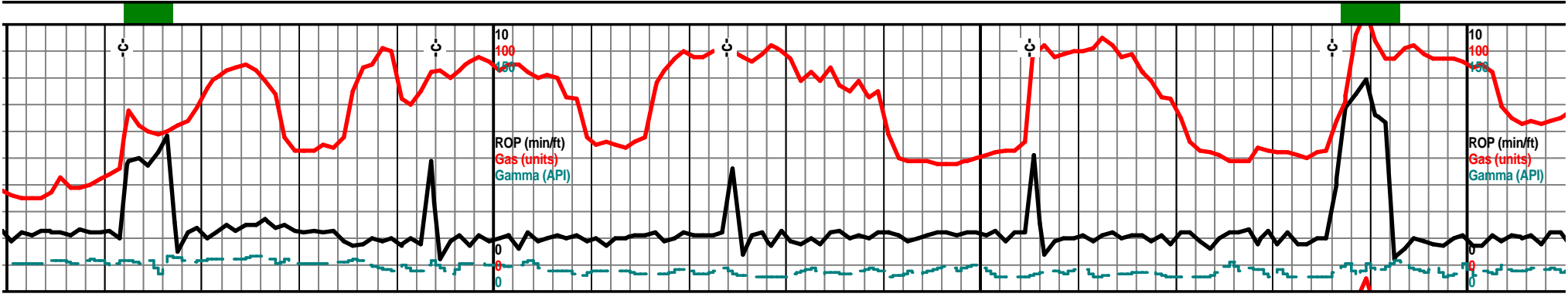
chrt off wht smokey as before, chrt drk tan brn,  
drk brn stained, sli weath trip text edges/sides, pp  
moldic por, vug por, tan brn stain, tr drk brn stain,  
sli odor, dull UV, lst/dolo crm tan lt grn tint f xln  
sub chiky, chrt, chrt inclu, chrt aa with grn tint  
off wht dolo edge with stain

chrt off wht lt gry shrp frsh opaq, m  
med gry shrp frsh with drk tan drk l  
weath trip text edges/sides, gran w  
por tan drk brn stain, dull UV, sli od  
before

4650

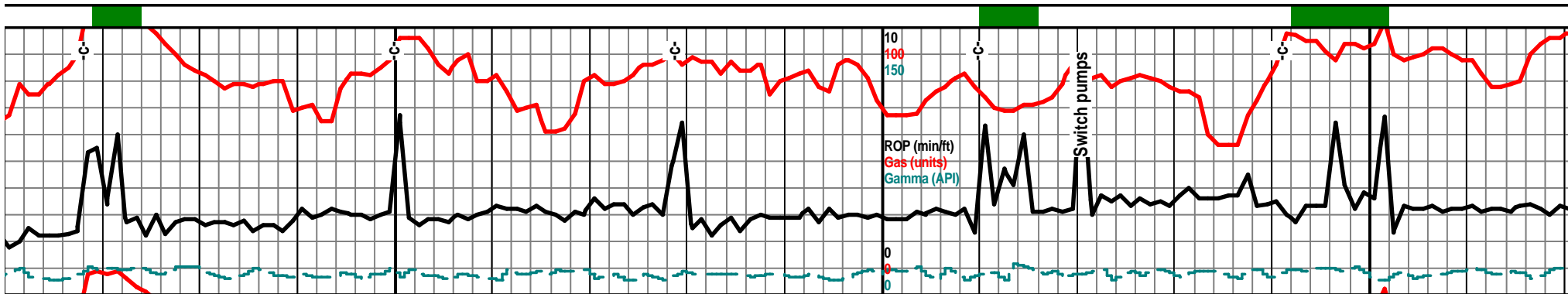


7700	7720	7740	7760	7780	7800	7820	7840
4550 TVD				Bit Trip 7771' 7 am October 2, 2012		4550 TVD	
off wht lt gry smokey as before, mstly chrt shrp frsh with drk tan brn stained sli weath text edge/sides, gran weath pp/moldic por, drk brn stain, dull UV, sli odor, lst/dolo frags before		chrt lt gry smokey shrp frsh opa with tan brn mstly drk brn stained with weath sli trip text edges/sides, tan brn drk brn stain, pp moldic por, sli odor, dull UV,		chrt lt gry smokey to tan brn mott, shrp frsh opa, with sli weath sub trip text, tr soft gran weath edges, tan brn drk brn stained, pp moldic por, sli odor, dull UV		chrt lt med gry, smokey shrp frsh opa, semi transl, chrt gry smokey shrp frsh with weath tan brn stained sli trip text edges, tan brn stain, pp moldic por, dull UV, lst/dolo crm off wht lt f xln gran flky sub chiky, chrty edges with sho aa	ch sh w m U
4607' 92.2 deg @ 356.8 az	4606' 90.0 deg @ 356.9 az		4606' 91.2 deg @ 357.3 az	4605' 91.6 deg @ 357.8 az	4600	4605' 90.5 deg @ 357.6 az	4605' 89.0 deg @ 358.0 az
istly chrt gry brn stained, sli eath pp moldic lor, lst/dol as	chrt off wht lt gry shrp frsh opa blk ang shards, chrt lt gry smokey shrp frsh with weath tan brn stained trip text, gran weath pp moldic por tan brn mstly drk brn stain, sli odor, dull UV		chrt off wht lt gry shrp frsh opa mstly tl gry smokey frsh with weath tan brn stained sli trip text edges, pp moldic por, tan brn stain, dull UV, lst/dolo wht off wht lt grn tint f xln soft chrty, tr glau		chrt lt gry, gry tan brn mott, tan brn stained sli weath trip text edges/sides, pp moldic por, tan brn drk brn stain, dull UV		trace chrt lt gry smokey shrp frsh op transl, mstly tan brn drk brn mott ser text chrt, tan brn stain, pp moldic, vu SFO, sli odor,
4650					4650		

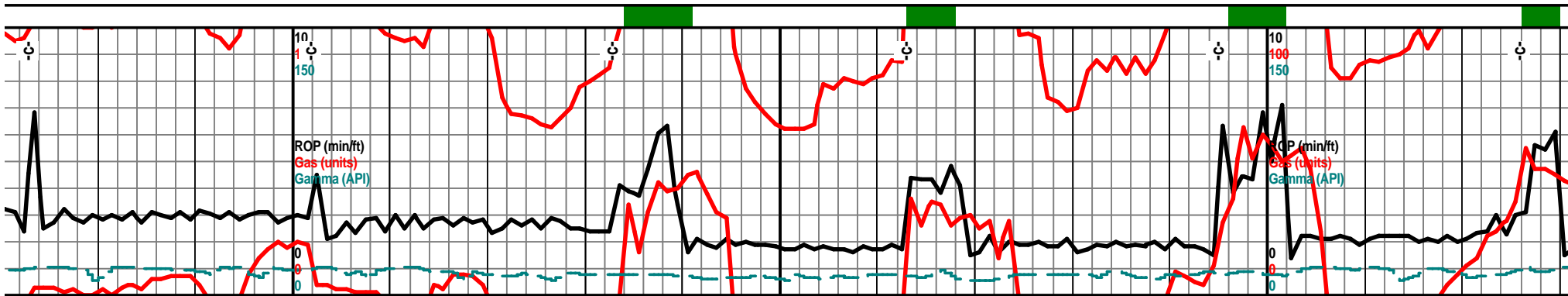


7860	7880	7900	7920	7940	7960	7980	8000	
		4550 TVD					4550 TVD	
rt lt gry, smokey shrp frsh opa sub transl, rp blk ang shards, chrt tan brn drk brn mott, aath gran sli trip text, weath edges/sides, pp oldic por, vug por, tan brn stain, filmy SFO, dull /, sli odor		chrt off wht lt gry smoke color, shrp frsh opa, blk ang shrds, semi transl, chrt tan brn stained with weath gran sli trip text edges, crm tan brn stained dolo edges, pp moldic por, vug por, tan brn stain, filmy SFO, odor, dull UV		chrt off wht lt gry smokey color shrp frsh opa blk ang shards, chrt tan lt gry w/ tan brn stained sli weath edges, w/ tan crm dolo edges, tan brn stain pp moldic por, sli odor, dull UV		chrt lt gry lt smokey shrp frsh opa semi transl with weath sli trip text edges sides, gran, pp moldic por, tan brn stained, dolo tan crm f xln blk sub chiky, with weath tan grn staine chrt inclu, sli odor		chr shr chr dol brn
	4605' 87.9 deg @ 358.0 az	4607' 88.1 deg @ 357.3 az		4607' 89.3 deg @ 358.0 az		4607' 90.3 deg @ 357.8 az	4607' 90.1 deg @ 358.9 az	
		4600					4600	
aq sub ni weath trip g, por, filmy	chrt off wht lt gry smokey, shrp frsh opa, semi transl, chrt lt gry smokey with tan brn drk brn stained weath gran sli trip text edges, pp moldic por, vug por, tan brn drk brn stain, dull UV, sli odor, tr filmy SFO	chrt off wht lt gry smoke color, shrp frsh opa semi transl, chrt lt gry tan brn mott, tan brn stained sli weath sli trip text edges, pp moldic por, tan brn stain, chrt aa with tan crm off wht f xln dolo edges with tan brn stain, odor, filmy SFO		chrt lt gry lt smokey color shrp frsh opa, with tan brn stained weath sli trip edges, with dolo tan crm off wht f xln gran sub chiky, with weath trip chrt edges, tan brn stain sli odor dull UV		chrt lt gry med gry smokey color, shrp fr semi transl with weath gran trip text ed gry smokey with tan crm off wht dolo ed brn stain tr gas bubs pp moldic por, dull		
		4650					4650	



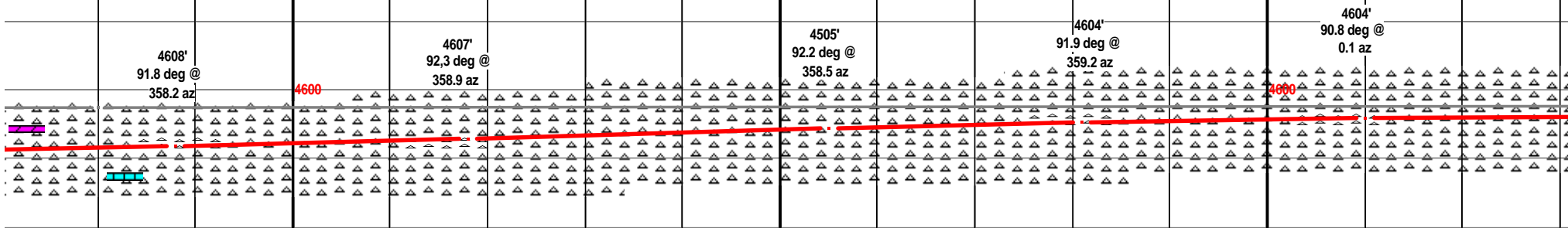


8020	8040	8060	8080	8100	8120	8140	8160
8 am 8073' October 3, 2012				4550 TVD	Mud-Co. 8120' wt. 8.5 vis. 27 wl. N/C chl. 950		
<p>lt gry med gry smokey color, frsh ang, blkys with weath gran sli trip text edges/sides, lt gry smokey with tan crm f xln dolo edges, o tan brn mott f xln chrty, pp moldic por, tan stain, odor, tr gas bubs, dull UV</p>	<p>chrt lt gry lt smokey color, shrp frsh opa, transl, blkys ang shards, chrt tan lt gry brn mott color, weath gran sli trip text, pp moldic por, tan brn drk brn stain, odor? dull UV</p>		<p>chrt lt gry smokey shrp frsh opa sub transl, shrp blkys shards, chrt tan gry brn mott weath sli trip text, tan brn stained edges/sides, pp moldic por, tan brn stain tr gas bubs, dull UV, lst/dolo as before</p>		<p>chrt lt/med gry, smokey, shrp frsh opa, with weath sli trip edge, pp moldic por, tan brn stain, dolo tan crm f xln gran soft chrty glau, with chrty edges, tan brn mott stain odor? dull UV</p>		<p>chrt tran brn inclu</p>
	4607' 89.3 deg @ 358.8 az	4608' 89.4 deg @ 357.6 az	4608' 88.5 deg @ 358.7 az	4600	4609' 89.9 deg @ 358.0 az	4609' 91.1 deg @ 358.7 az	
sh opaques, chrt lt ges, tan UV	chrt lt gry med gry smokey shrp frsh opa transl with weath gran trip edge text, chrt tan brn mott stained color, pp moldic por, tr gas, chrt gry with tan brn mott stained dolo, f xln gran sub chiky		chrt lt gry smokey color, shrp frsh opa transl, shrp blkys ang shrds, chrt tan gry brn mott, weath gran trip text, pp moldic por, tan brn stain, dull UV, weath chrt aa with crm tan dolo edge, tan brn stain		chrt lt gry lt smokey shrp frsh opa with weath gran sli trip text, tan brn mott stain, pp moldic por, tan brn stain tr gas, filmy SFO, dolo/lst wht crm f xln soft chiky chrty, glau, chrt inclu		chrt lt gry smokey shrp frsh opa with trip text edges, pp moldic por, tan brn crm tan f xln, glau, with weath trip text c tan brn stain, pp moldic por, dull UV
				4650			



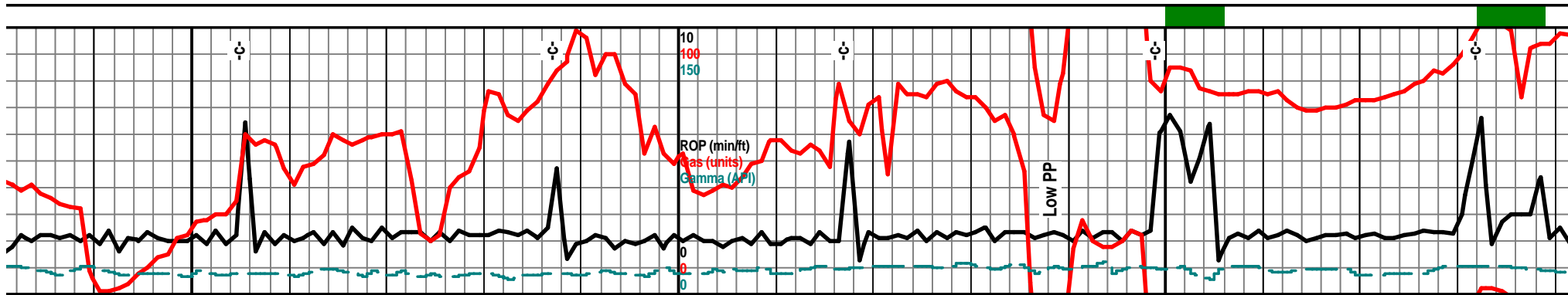
8180                      8200                      8220                      8240                      8260                      8280                      8300                      8320

		4550 TVD							4550 TVD		
lt gry off wht lt smokey shrp frsh opa q blky sl shards, with weath sli trip text edges, tan stain, filmy SFO/brkn, dolo tan crm with dolo u, tan brn stain tr glau, sli odor			chrt off wht lt gry smokey shrp frsh opa q, transl shards, weath trip text edges/sides, tan brn stain sli odor, filmy SFO, tr tan crm dolo with chrty inclu, tan brn stain.			chrt lt gry lt smokey shrp frsh opa q transl with weath sli trip text edges/sides, tan brn stained surface, pp moldic por, tan brn stain, film SFO, gas? dull UV			chrt off wht lt gry shrp frsh opa q transl, shrp blk ang shards, with tr weath sli trip edge, stain, chrt lt tan lt brn mott weath gran trip text pp moldic por, tan lt brn stain, filmy SFO/brkn		chrt sha lt br lt br

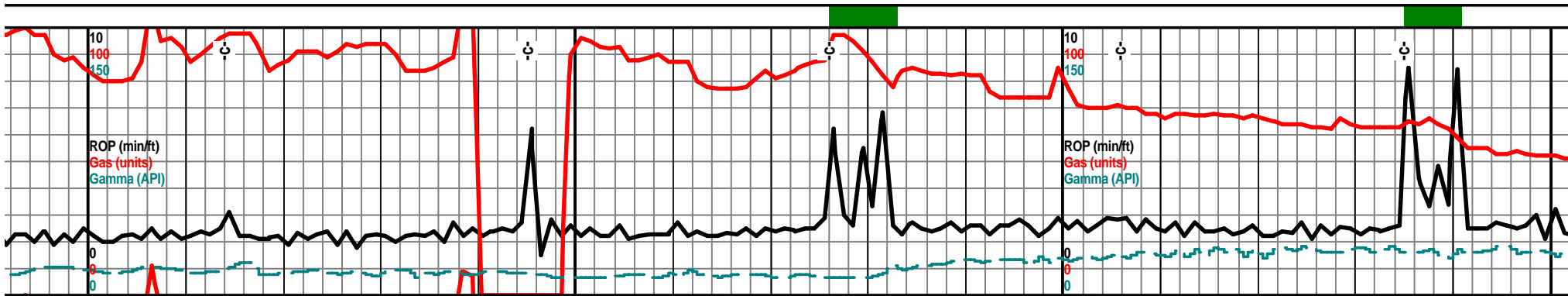


weath gran tain, dolo chrt inclu,	chrt lt gry lt smokey shrp ang opa q transl shards, with weath sli trip text edges, pp moldic por, tan brn stain, dolo tan crm f lxn glau, chrty, with chrty lt gry opa q weath sli trip edges, tan brn stain sli odor, dull UV		chrt lt gry off wht lt smokey color, shrp frhs opa q transl with weath grn trip text edges, pp moldic por, tan brn stain, filmy SFO, dull UV, incr frsh chrt with weath edges, less dolo/carbonate		chrt off wht lt gry shrp frsh opa q transl, shrp blk ang shards, (spl 80% frsh), with tr weath sli trip edges, pp moldic por, lt tan lt brn stain, dull UV, chrt lt tan lt brn mott, weath gran trip text, pp moldic por tan brn stain filmy SFO/brkn		chrt off wht lt gry tr lt smoke color, frsh s ang transl shards with tr weath edges w/ chrt tan lt brn mott, weath trip text, pp mc tr vug por, tan lt brn stain, dull UV
-----------------------------------	---	--	--	--	---	--	---

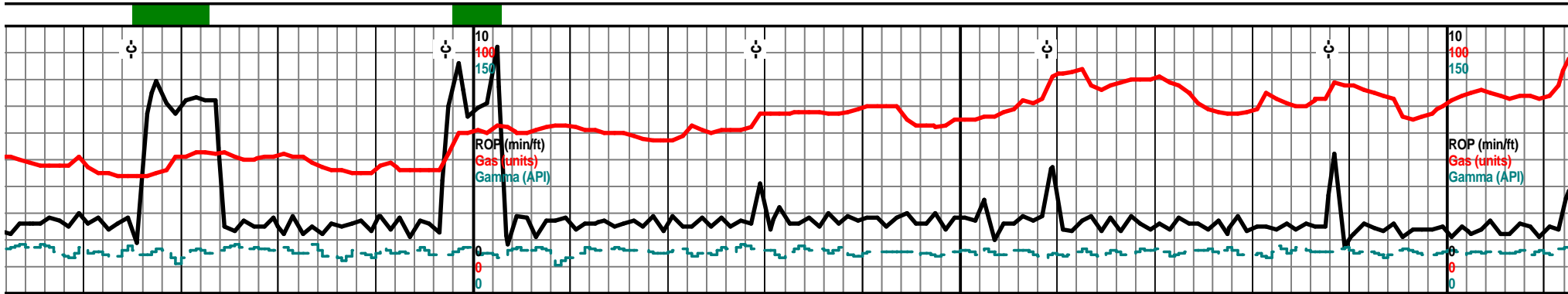
4650                      4650



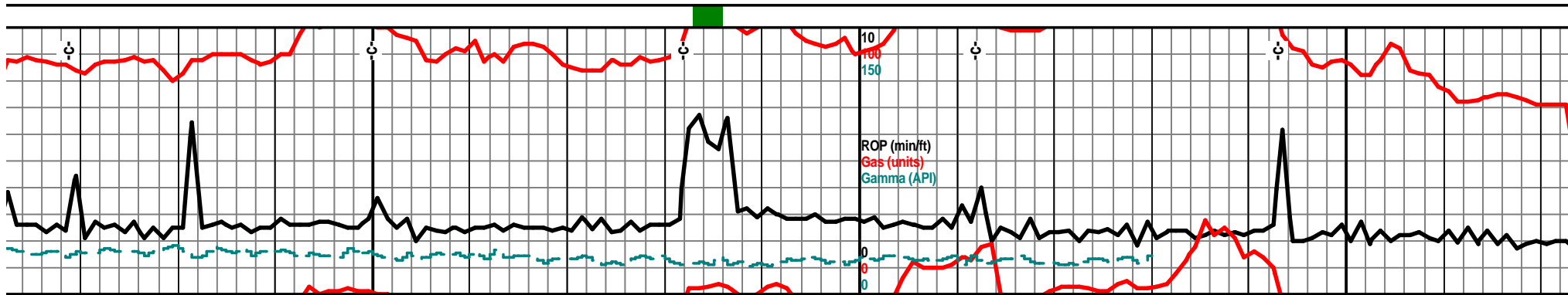
8340	8360	8380	8400	8420	8440	8460	8480	
			4550 TVD					
			Bit Trip 8449' 7 am October 4, 2012					
It gry lt smokey shrp frsh blkly ang shrp rds with weath sli trip stained edges, chrt tan n mott weath gran trip text, pp moldic por, tan n stain, filmy SFO/brkn, dull UV	chrt off wht, lt gry, smokey color, shrp frsh opa, transl, blkly ang pcs, with weath, gran sli trip text, pp moldic por, vug por, lt tan lt brn stain, dull UV		chrt off wht lt gry, lt smokey color, shrp frsh opa, semi transl, mstly transp, with weath sli trip edge, tan brn stained, chrt tan crm mott, weath gran text, tan lt brn stain, pp moldic por, sli odor, dull UV, tr filmy SFO		chrt off wht lt gry med gry shrp frsh opa transl, weath sli trip edges, with tan crm chrt f xln dolo edges, pp moldic por, tan brn stain, filmy SFO, poor spl		chrt o with v tan lt text w	
4603' 90.1 deg @ 1.0 az	4603' 90.8 deg @ 0.6 az	4603' 91.4 deg @ 1.0 az	4602' 92.1 deg @ 0.6 az	4601' 90.7 deg @ 0.4 az				
hrp blkly stain, moldic por,	chrt off wht lt gry lt smokey shrp frsh opa, transl, with tr weath trip edge text, lt tan lt brn stain edges, chrt lt tan crm mott pp moldic por, vug por, lt tan lt brn stain, dull UV		chrt off wht lt gry lt smokey, shrp frsh opa, semi transl, mstly transp, with weath sli trip text edge, tan brn stained, chrt tan crm mott, weath gran text, tan lt brn stain, pp moldic por, sli odor, filmy SFO		chrt off wht, lt gry, lt smokey gry, shrp frsh opa transl, transp, with sli weath text edges, lt tan/brn stain, chrt crm tan lt brn mott gran weath sli trip text, pp moldic por, tan stain, sli odor, dull UV		chrt off wht lt/med gry shrp frsh blkly opa w weath gran sli trip text, with tan crm weath g dolo edges, pp moldic por, tan brn stain tr VSSFO, tr floating droplets. sli odor, dull UV	
			4650					



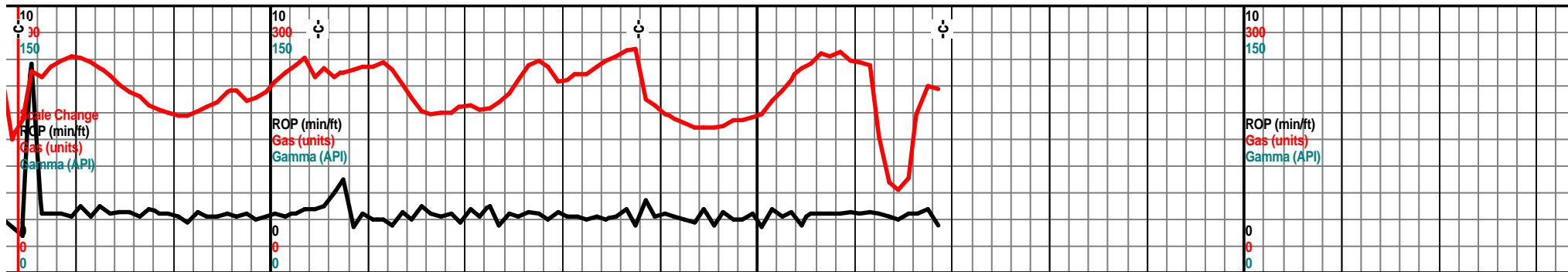
8500	8520	8540	8560	8580	8600	8620	8640	
4550 TVD					4550 TVD			
ff with lt gry lt smoke color frsh shrp blkly weath gran sli trip edge/sides, pp moldic por brn stain, chrt tan off wht lt gry weath gran ith dolo edge, stain filmy SFO odor?		chrt off wht lt gry clr shrds, shrp opaq semi transl with weath gran text, pp moldic por tan lt brn stain, filmy SFO, samples are very poor at best. chrt tan brn mott weath trip text, pp moldic por, tan brn stain, gry chrtly inclu		chrt lt gry lt smokey, clr, shrp frsh transl, with weath edges, tan brn stained edges, pp moldic por, chrtly dolo, glau, tan crm fn xln with lt gry chrtly inclu, tan brn stain pp moldic inter xln por, filmy SFO dull UV, odor?		dolo wht off wht crm tan f vf xln gran blkly dns, tr snd grn inclu, chrtly in prt, tr tan brn stain, chrt off wht smokey shrp frsh opaq tr weath edge, tr stain		dolo tan snd grn chrtly inc
Shale shaker off to preserve LCM, samples being caught in bucket at flow line, samples very poor, all LCM and pipe dope, very little cuttings								
4601' 89.3 deg @ 1.1 az	4601' 89.9 deg @ 0.4 az	4601' 89.9 deg @ 0.3 az	4601' 88.9 deg @ 359.6 az	4602' 87.8 deg @ 0.1 az	461'		461' 88.4 deg @ 0.9 az	
4600					4600			
ith ran gas	chrt off wht lt gry shrp frsh opaq semi transl, with weath gran sli trip text, pp moldic por, tan lt brn stain tr filmy SFO, chrt lt gry with chrtly gran weath dolo edge, tr glau, pp moldic por, stain, dull UV	chrt lt gry lt smokey, clr, shrp frsh opaq transl with weath sli trip edges, tan brn stained, chrtly dolo, dolo crm tan f vf xln blkly ang glau, with chrtly edges, tan brn stain, vssfo/brkn, chrt tan brn mott weath trip text, pp moldic por, tan brn stain tr drk brn hvy stain gas bubs	chrt off wht lt gry tr clr, shrp frsh opaq mstly trans, with weath gran sli trip edge text, chrt tan lt gry tan crm f xln dolo edges with tan brn stain, pp moldic por, dolo/lt crm wht f xln blkly ang gran glau dns tite with tan brn stain		dolo tan crm off wht f vf xln dns hrd blkly tr glau, tr snd grn inclu, tr tan brn edge st lt gry smokey shrp frsh opaq with tr weath text, tr pp moldic por, tr brn stain			
4650					4650			



8660	8680	8700	8720	8740	8760	8780	8800	
		4550 TVD					4550 TVD	
n off wht lt gry f vf xln dns hrd blkly ang, incl, tr glau, tr chrt, tr wht clr transl frsh :lu NS		dolo wht off wht crm f vf xln dns hrd blkly tr sub chky, tr glau, tr snd grn incl, chrt clr lt gry shrp frsh opaqt transl		dolo wht off wht crm f vf xln gran blkly ang dns pcs, tr glau, tr snd grn incl, chrt clr lt tan frsh shrp opaqt transp, tr brn stain		dolo crm tan off wht f vf xln dns blkly ang sub chky, tr glau, tr snd grn incl, chrt in prt, chrt lt gry clr shrp frsh transp, tr edge stain		dolo tan pcs, tr g brn stai transl, tr
03' g @ 1 az	4604' 89.4 deg @ 359.2 az	4604' 90.2 deg @ 358.7 az	4604' 90.4 deg @ 359.6 az	4604' 90.5 deg @ 359.0 az	4604' 90.5 deg @ 359.0 az	4604' 90.5 deg @ 359.0 az	4604' 90.5 deg @ 359.0 az	
		4600					4600	
ang pcs, tain, chrt :h trip	dolo crm tan sli lt gry, f vf xln blkly dns hrd, sub chky in prt, snd grn incl, tr chrt, tr lt gry clr transp, transl opaqt chrt	dolo wht off wht crm f vf xln dns hrd blkly ang pcs, tr glau, tr snd grn incl, tr chrt wht offwht clr transl, transp shrp frsh		dolo off wht crm tan f vf xln dns hrd blkly ang sub chky in prt, tr glau, snd grn incl, chrt, chrt clr lt gry shrp frsh opaqt, tr brn stain			dolo lt crm /gry tan f vf xln gran sub chl tr snd grn incl, chrt in prt, chrt lt gry/c blkly transl, transp, tr inter xln por, mstly tr brn some blk stain	
		4650					4650	



8820	8840	8860	8880	8900	8920	8940	8960
		7 am 8862' Saturday, Oct. 6, 2012		4550 TVD	Mud-Co. 8911' wt. 8.7 vis. 31 wl. N/C chl. 1050		Bit Sunday Lost return
lt gry/off wth f vf xln dns hrd blkly ang glau, tr snd grn inclu, tr edge stain, brn drk n, tr inter xln por, chrt lt gry/clr shrp frsh ransp		dolo lt tan/lt gry off wht f vf xln dns hrd blkly ang dns tr glau, tr snd grn inclu, tr chrtly in prt, chrt off wht lt gry shrp frsh transp, opaqa, tr inter xln por, mostly tite dns, incr tan brn stain poor show!		dolo crm off wht lt gry f vf xln dns hrd blkly ang pcs, tr snd grn inclu, tr glau, chrtly in prt, tr tan brn stain, chrt lt gry clr opaqa transp shrp frsh shards,		dolo crm tan off wht f vf xln blkly ang dns hrd, tr glau, tr snd grn inclu, chrt lt gry clr shrp frsh opaqa transp, tr tan brn stain	dolo crm tan lt tr glau, tr chrtly NSFO, No odo transp in most
	4603' 90.5 deg @ 358.9 az	4603' 90.4 deg @ 359.2 az	4603' 91.1 deg @ 358.7 az	4602' 91.2 deg @ 359.0 az			
				4680			
ky, tr glau, :lr shrp r dns tite,	dolo off wht lt gry/tan f vf xln dns hrd blkly ang pcs, tr glau, tr snd grn inclu, chrtly in prt, chrt lt gry/clr shrp frsh opaqa transp, incr tan brn stain in dolo, tr inter xln por, mstly dns tite	dolo tan crm off wht f vf xln blkly ang hrd dns, tr snd grn inclu, tr glau, some tan drk brn stain, chrt clr lt gry shrp opaqa transl,			dolo crm off wht tan f vf xln dns hrd blkly ang pcs, tr snd grn inclu, tr glau, tr tan brn stain, tr chrtly, chrt lt gry clr, transp, sli opaqa, shrp frsh shards	chrt off wht lt gry/crm f vf xln dns hrd blkly pcs, tr glau, tr snd grn inclu, tr tan brn stai chrtly, chrt lt gry clr transp, shrp frsh blkly shards	
				4650			



8980	9000	9020	9040	9060	9080	9100	9120
Trip 8974' Oct. 7, 2012 s, 36 hour trip							
: gry, f vf xln dns hrd blk ang pcs, r, tr inter xln por, tr tan brn stain, r, chrt lt gry/clr, shrp frsh opa		dolo off wth lt gry f vf xln dns hrd blk ang chrty pcs, tr glau, mst with snd grn inclu, chrt off wth clr shrp frsh opa, tr tan brn mstly brns stain, nodor, NSFO		dolo off wth tan lt gry, f vf xln dns hrd blk ang chrty pcs, tr glau, tr snd grn inclu, tan brn stain, no live show!, chrt lt gry clr opa transp shrp frsh blk shards			
<div style="text-align: right; margin-right: 100px;">             4599'              91.2 deg @              359.0 az           </div>							
ang in, ang		dolo crm off wth lt gry f vf xln dns hrd blk ang, tr glau, tr snd grn inclu, chrty in prt, chrt lt gry clr shrp frsh opa transl, transp, tr drk brn stain		dolo off wth tan crm f vf xln, dns hrd blk ang sli chrty pcs, tr glau, snd grn inclu, tan brn mstly drk brn stain, nodor, nsfo, chrt lt gry shrp frsh opa transp			

10  
300  
150

ROP (min/ft)  
Gas (units)  
Gamma (API)

0  
0  
0

9140

9160

9180

9200

9220

9240

9260

9280

4550 TVD

4600

4650





10

300

150

ROP (min/ft)

Gas (units)

Gamma (API)

0

0

0

9460

9480

9500

9520

9540

9560

9580

9600

4550 TVD

4600

4650