



Santa Rosa, CA

COMPANY Calpine Corporation
 WELL Cal State 92-6ST1-Fork, ST1
 FIELD Geysers
 COUNTY/STATE Lake County, California
 WELL HEAD COORDINATES
 932'S 2190'W of NE corner of Sec.6, T11N, R8W
 ELEVATION 2827
 SPUD DATE 8/24/08
 TD DATE 10/13/08
 TOTAL DEPTH 10,923'
 TRUE VERTICAL DEPTH 10732'
 TD LOCATION 553'S 1136'W
 CONTRACTOR/RIG Kenai Rig #3
 COMPANY REPRESENTATIVE Silva, Gamble

LOG INTERVAL

DATE LOGGED 8/24/08 TO
 DEPTH LOGGED 6527' TO 10,923'
 MUD DRILLING 6527' TO 6855'
 AIR DRILLING 6855' TO 10,923'
 LOG SCALE 1:600 UNIT NO. 324

LOGGING GEOLOGISTS
 D. Dunlap, T. Blazina, P. Broderick, M. Dobbs
 A. Schepflin

HOLE

10.775 TO 6520
 8.5 TO 10920
 0 TO 0
 0 TO 0
 0 TO 0

CASING

11.75 FROM 0 TO 5898
 9.625 FROM 5938 TO 6520
 0 FROM 0 TO 0
 0 FROM 0 TO 0
 0 FROM 0 TO 0
 0 FROM 0 TO 0

ABBREVIATIONS

NB New Bit **BHT** Bottom Hole Temp
RRB Re-run Bit **C** Carbide Test
CB Core Bit **NR** No Returns
WOB Weight On Bit **LAT** Logged After Trip
SPM Strokes per Minute **CFM** Cubic Feet per Min
PP Pump Pressure **BUT** Bottoms Up Temp
RPM Revolutions per Min

SYMBOLS

Wireline Log Casing Shoe
 Steam/Water Entry Flow Test
 Deviation Survey Cored Interval
 No Recovery

LITHOLOGY

	Argillite		Argillaceous Grywcke
	Chert		Volcanic Graywacke
	Phyllite		Siliceous Graywacke
	Greenstone		Weak Foliation
	Serpentine		Strong Foliation
	Blueschist		Marginal Alteration
	Felsite		Pervasive Alteration
	Rhyolite		Weakly Hornfelsic
	Andesite		Strongly Hornfelsic
	Lithic Graywacke		

REMARKS

All depths from Kelly Bushing.
 KB = 30'
 cnx = connection

SECONDARY MINERALS

Q = Quartz		Rare	<< 1%
C = Calcite		Trace	< 1%
P = Pyrite		Minor	1% to 4%
E = Epidote		Common	4% to 7%
R = Pyrrhotite		Abundant	7% to 10%
Ch = Chlorite			> 10%
X = Axinite			
A = Actinolite			
T = Tourmaline			

Tecton Geologic

CAST92-6ST1-Fork,ST1

Scale 1: 600

Drilling Data		Lithology	Minerals	Temperatures		Circulation		Descriptions	
ROP				Temperature In		Pit Total			
100	ft/hr			0	50	deg F	250		200
Weight on Bit									
0	k lbs	80							
		Depth	Tourmaline Actinolite Axinite Chlorite Pyrrhotite Epidote Pyrite Calcite Quartz						
				100					
NB #1 STC F47YPS				BUT=162 degF cnx 16.25 deg N89.0W		no losses		Install 11 3/4" whipstock f/5894' t/5916'. Mill window f/5898' t/5930'. Begin dir drillig 10 5/8" hole 8/5/2008 with MWD. KOP = 5919'. Argillite:med-dk gry,firm-mod hd,com britt,aphan,loc silty, loc fiss txt,com wk-mod phyll	
RR B#1 W/MM & MWD		cement Argillite Argillite Argillite cement		BUT=166 degF cnx 146/159					
Rotate 8/6 slide rotate		60							

RR B#1 W/MM & MW

rotate 8/6

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

rotate

slide

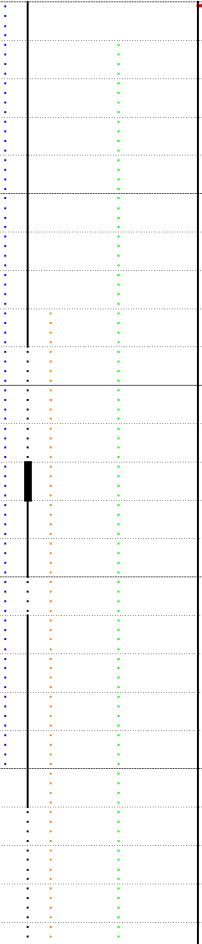
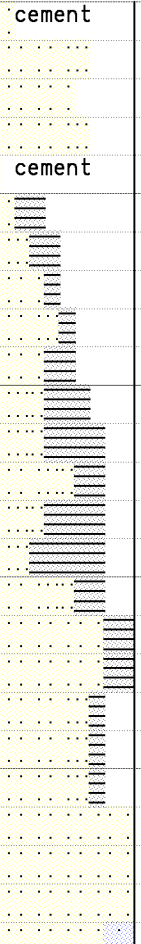
rotate

slide

rotate

slide

50
6000
6050
6100
6150
6200



BUT=166 deg
 cnx
 146/159
 cnx
 cnx
 146/157
 cnx
 cnx
 142/151

14.74 deg
 S82.7W

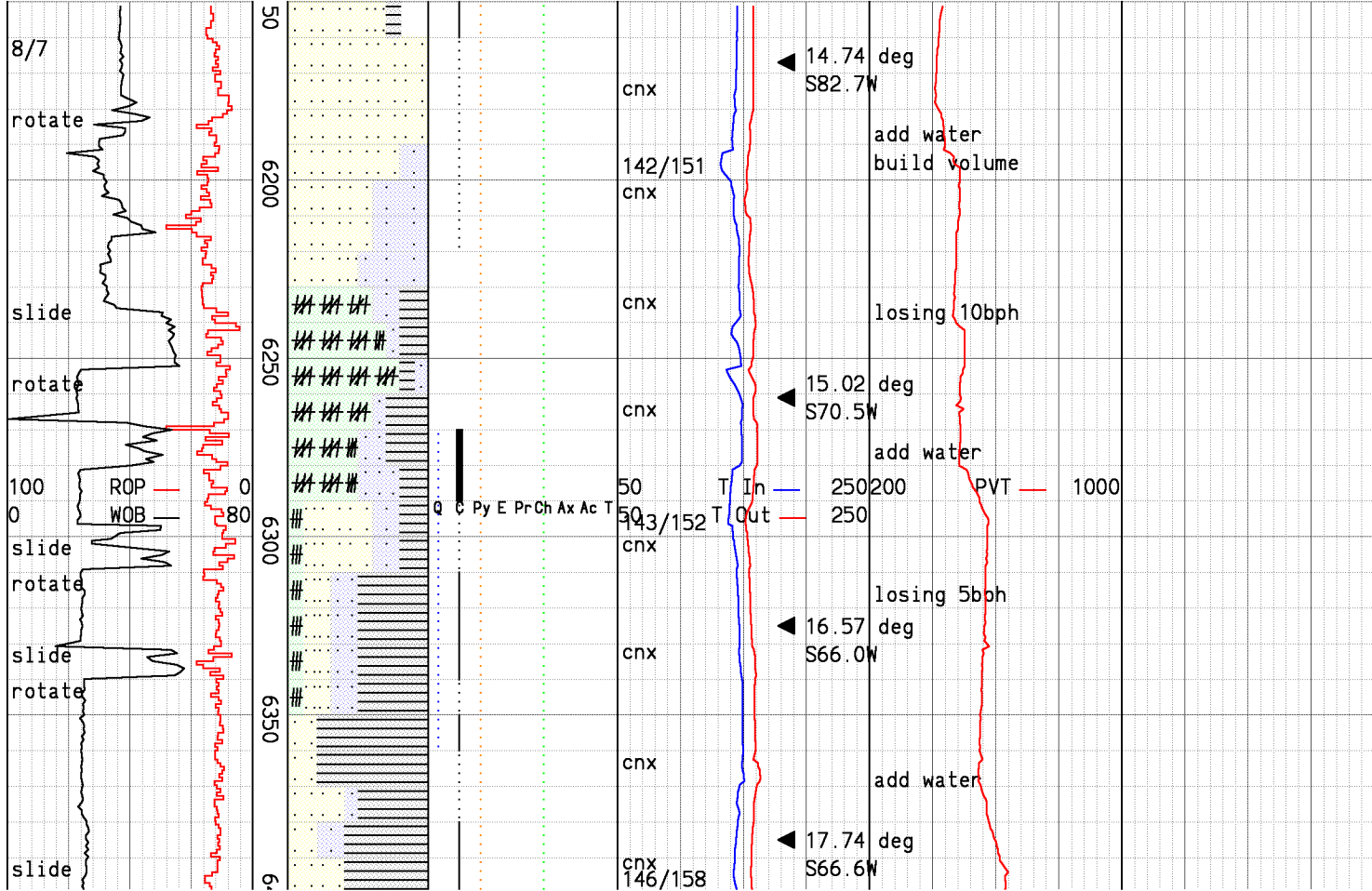
losing 10bph
 losing 10bph
 add water
 build volume

with mud. RQI = 515

Argillite: med-dk gry, firm-mod hd, com britt, aphan, loc silty, loc fiss txt, com wk-mod phyll sheen, r calc vng.

Silicic Graywacke: lt-dk gry, mod hd-hd, brittle, pred fresh app, loc wk rexln, v fn-fn grn, mod well-well def grn bndrs, loc wk fol, r clr-milky wht qtz and qtz vng, r calc, r disem pyr, r chlor.

Silicic Graywacke: lt-med gry, loc pale grn wash, med gry in sample, hd, brit, fresh, good vis gr bndrs, pred rexln, loc r relic tex, prly srted, loc wk fol, epid and chlor as gr in sample (not second), r pyr microvng, r-tr

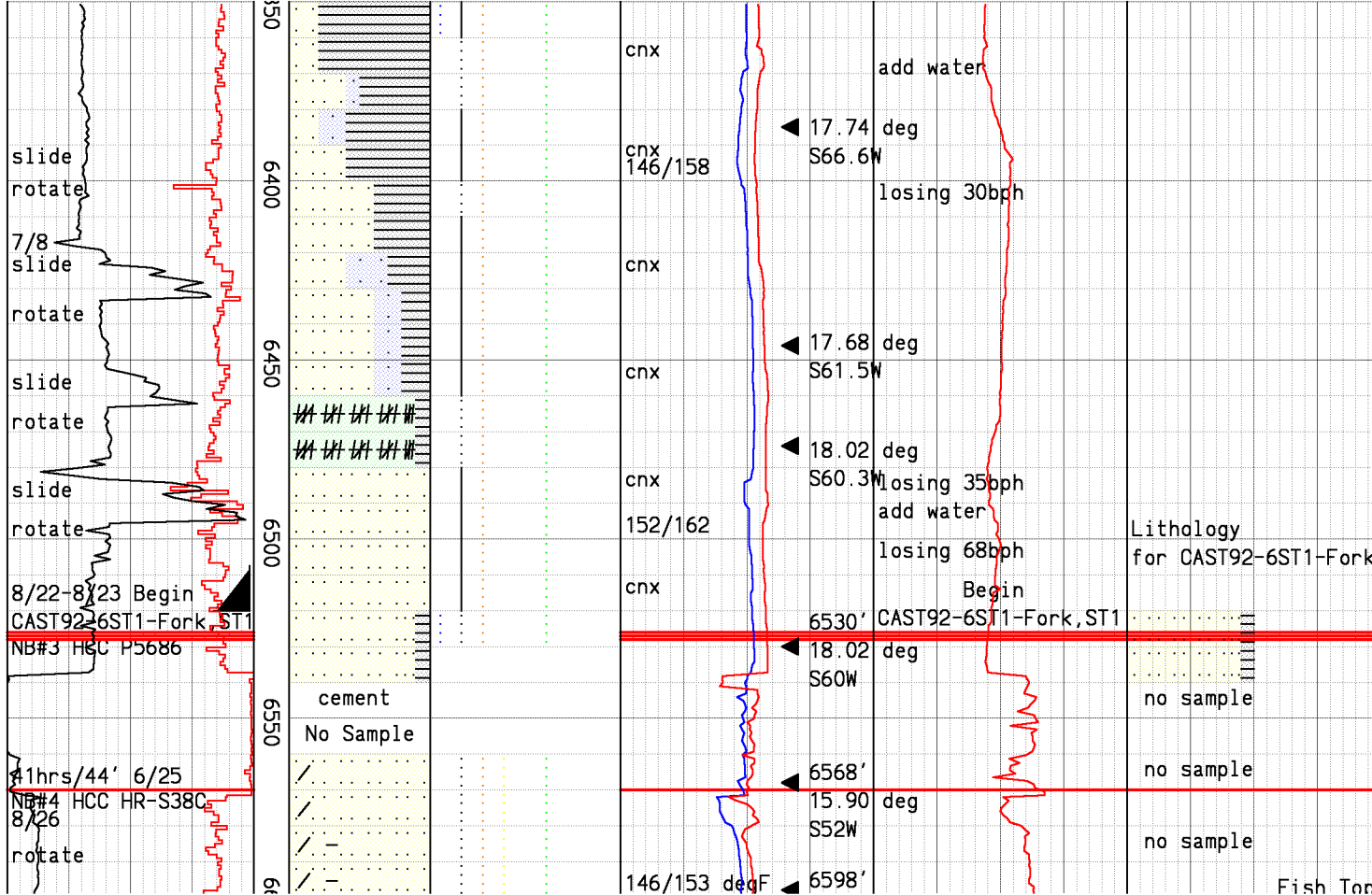


loc pale grn wash, med gry in sample, hd, brit, fresh, good vis gr bndrs, pred rexln, loc r relic tex, prly srted, loc wk fol, epid and chlor as gr in sample (not second), r pyr microvng, r-tr intrstit calc, intrcltd w/ thin Argillite lams, loc grd to med gry Lithic Graywacke.

Greenstone: wht, pale grn, med grn overall lt grn in sample, loc mott, perv altd bleached app, sft-hd, mass, com argill altn, r-tr calc, r pyr, intcltd with 10-20% black phyllitic Argillite.

Argillite: lt-dk gry, blk, brn, firm-mod hd, britt, aphan, loc silty, loc fiss txt, com sheared app, qtz vng, r calc vng, r disem pyr, r disem calc and calc vng.

Silicic Graywacke: lt-med gry, med gry in sample, hd, brit, fresh, well def gr bndrs, prly srted, loc



pyr, r disem calc and calc vng.

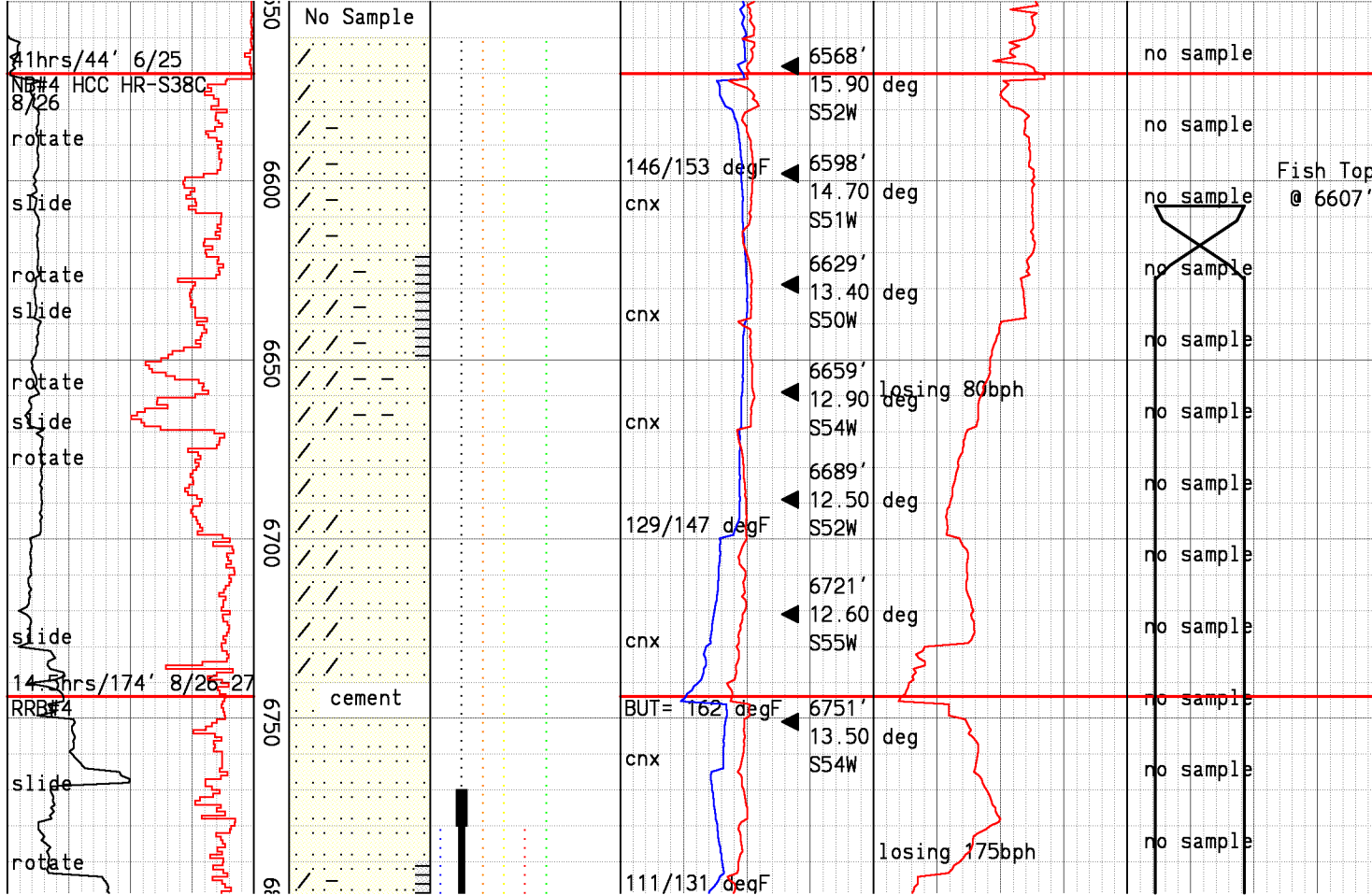
Silicic Graywacke: lt-med gry, med gry in sample, hd, brit, fresh, well def gr bndrs, prly srted, loc rexln, r relic tex, loc wk fol, r disagg pyr, r pyrite druse and microvng, r-tr disem calc, intrbdd w/Argillite lams, loc grdng to crs gr Lithic Graywacke, intrcltd with Greenstone 6460'-6480': med grn, frm-hd, predom fresh with loc str hydrotherm altn, < 5% Argill.

Kick off of cement plug from CAST92-6 ST1-Fork at 6527' on 8/24/2008. Make up directional tools and time drill ahead with 10 5/8" bit. Begin CAST92-6ST1-Fork, St1.

In CAST92-6ST1-Fork: Drill t/6545' losing 160+ bph. Set cmt plug @ 6545'. Polish plug to 6520'. Run & cement 9 5/8" casing f/6520' t/5938'. Drill ahead 8 1/2" hole w/air.

Silicic Graywacke: lt gry, med gry, lt gry in sample, loc pale app cast fri-med indur, loc wk

Fish Top



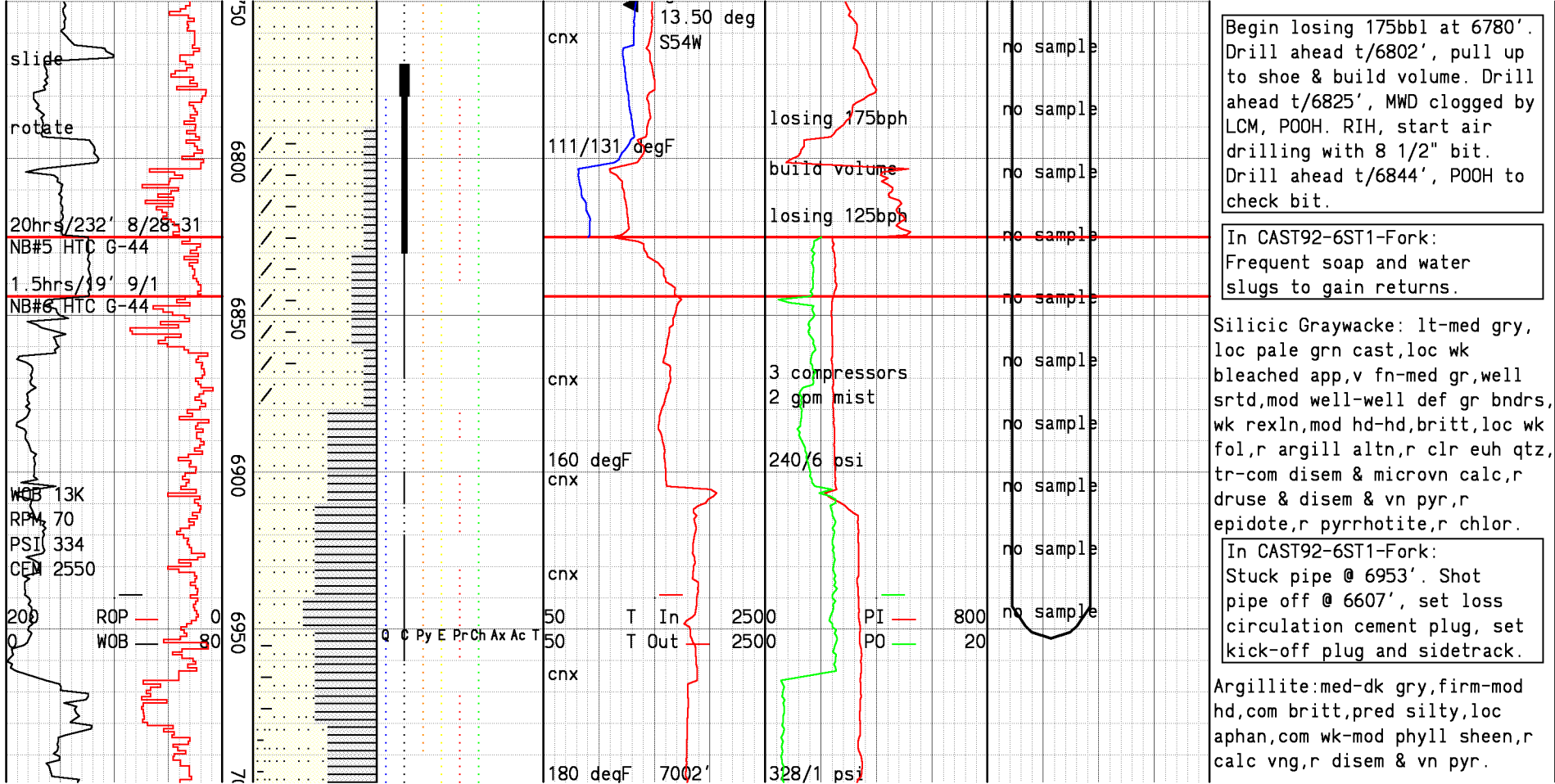
Set cement plug to 6520'. Polish plug to 6520'. Run & cement 9 5/8" casing f/6520' t/5938'. Drill ahead 8 1/2" hole w/air

Silicic Graywacke: lt gry, med gry, lt gry in sample, loc pale grn cast, fri-mod indur, loc wk bleached app, v fn-med gr, well srted, well def gr bndrs, wk rexln, r argill altn, r clr euh qtz, r disem & microvn calcr pyr vn, r pyr druse, r bornite, r magnetite, r epidote, r chlor, r serp.

In CAST92-6ST1-Fork:
No returns f/6545' t/6953'.

Begin losing 80bph at 6638'. Drill ahead t/6744', pull up to shoe & build volume. Attempt to fill hole, lose 340bbls with no returns, POOH. Set cement plug, RIH. Tag cement at 6554', polish & drill ahead.

Begin losing 175bbl at 6780'. Drill ahead t/6802', pull up to shoe & build volume. Drill ahead t/6825', MWD clogged by LCM, POOH. RIH, start air drilling with 8 1/2" bit



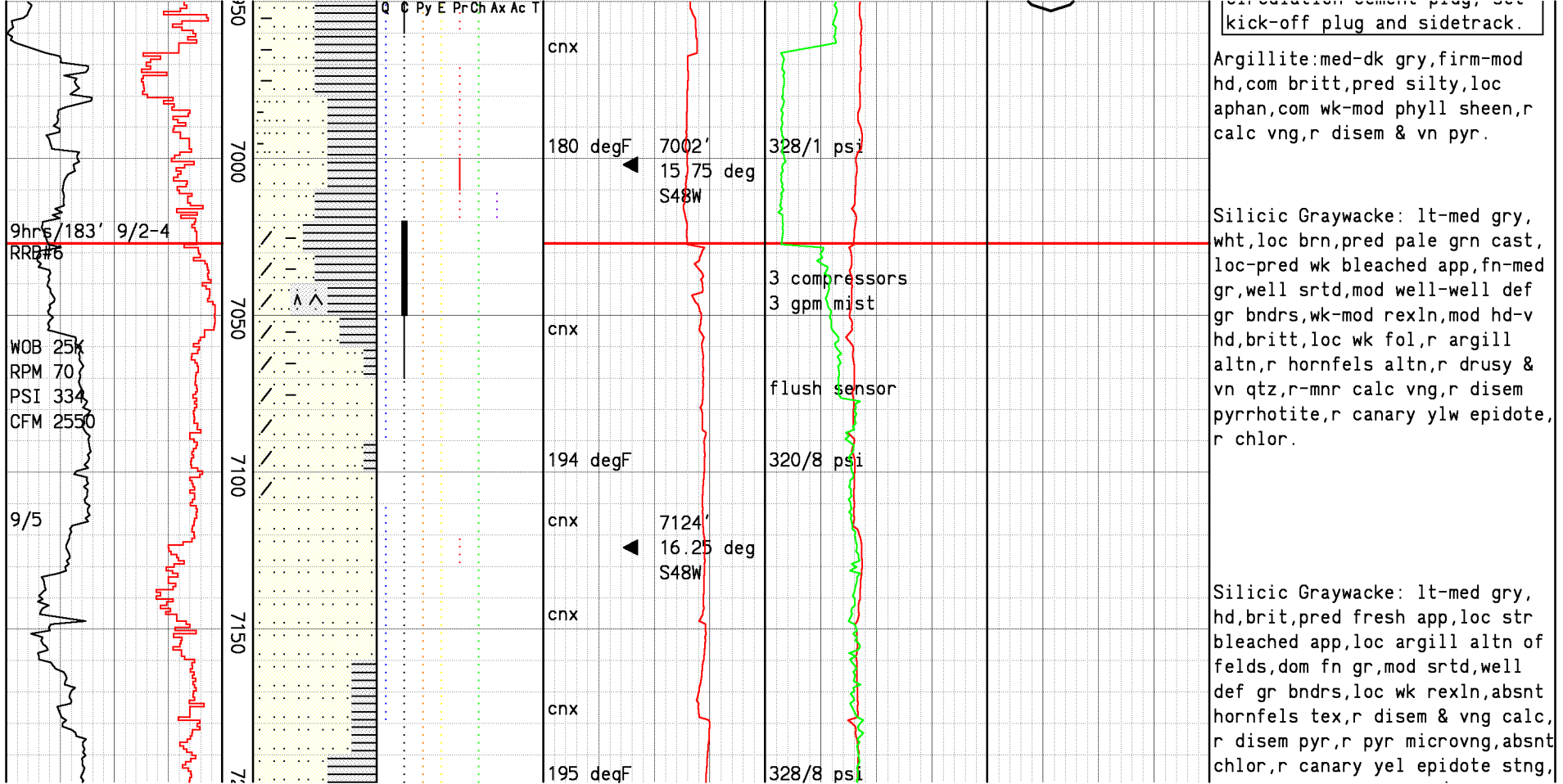
Begin losing 175bbl at 6780'. Drill ahead t/6802', pull up to shoe & build volume. Drill ahead t/6825', MWD clogged by LCM, POOH. RIH, start air drilling with 8 1/2" bit. Drill ahead t/6844', POOH to check bit.

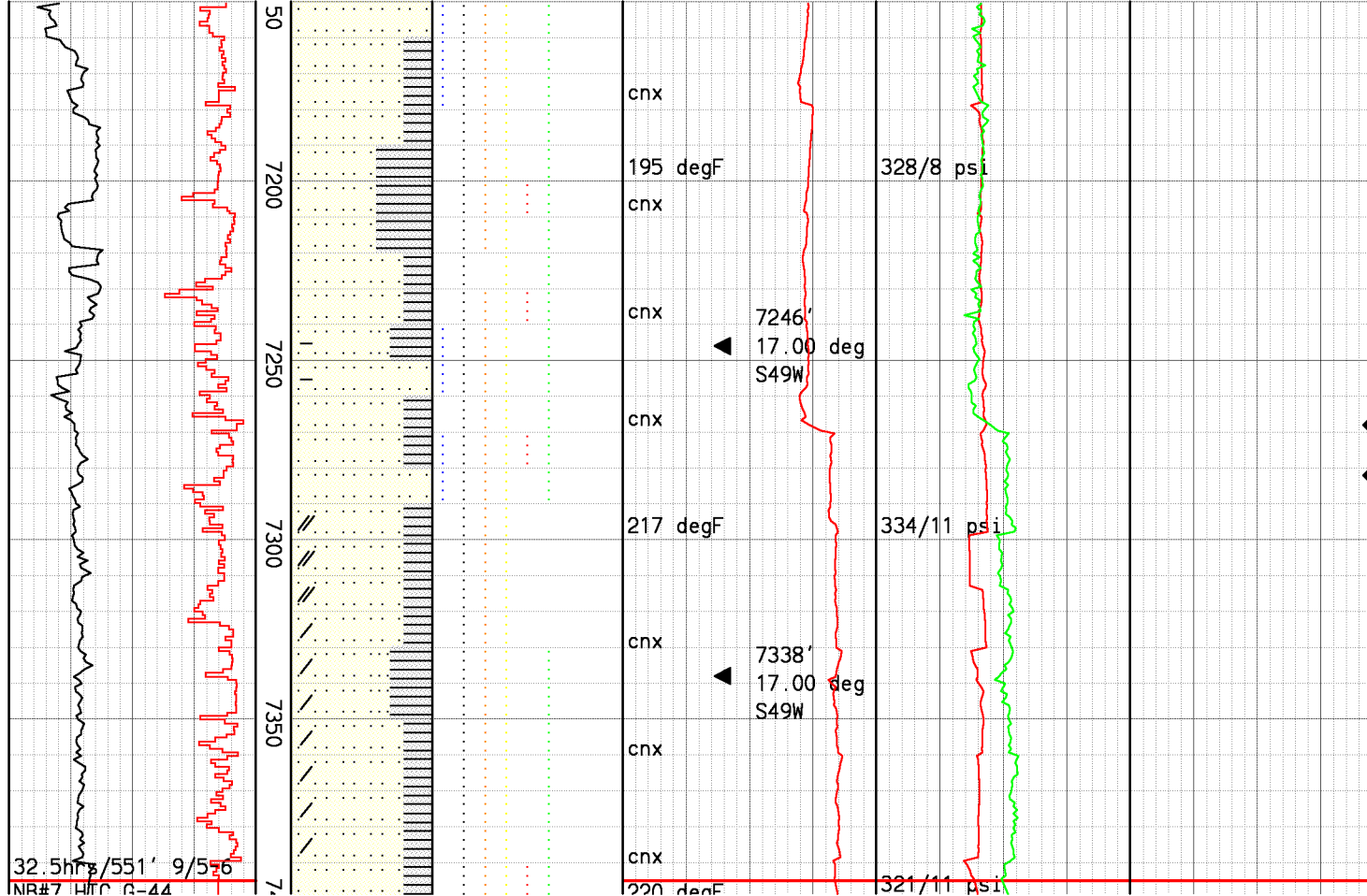
In CAST92-6ST1-Fork: Frequent soap and water slugs to gain returns.

Silicic Graywacke: lt-med gry, loc pale grn cast, loc wk bleached app, v fn-med gr, well srted, mod well-well def gr bndrs, wk rexln, mod hd-hd, britt, loc wk fol, r argill altn, r clr euh qtz, tr-com disem & microvn calc, r druse & disem & vn pyr, r epidote, r pyrrhotite, r chlor.

In CAST92-6ST1-Fork: Stuck pipe @ 6953'. Shot pipe off @ 6607', set loss circulation cement plug, set kick-off plug and sidetrack.

Argillite: med-dk gry, firm-mod hd, com britt, pred silty, loc aphan, com wk-mod phyll sheen, r calc vng, r disem & vn pyr.

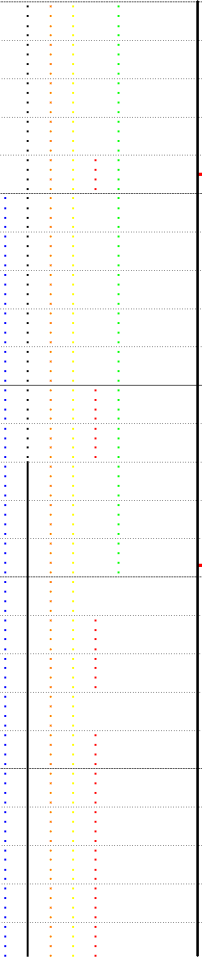
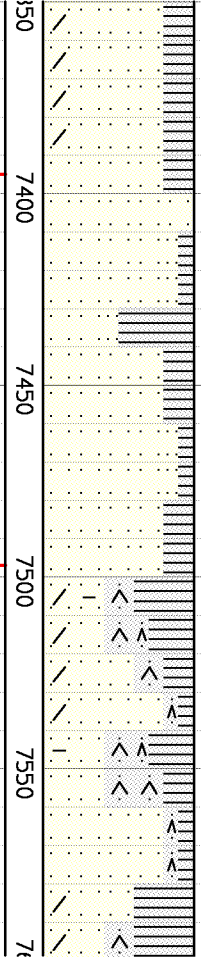
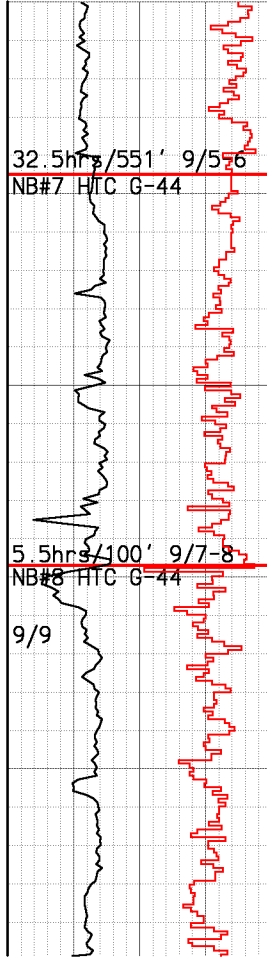




bleached app, loc argill altn of felds, dom fn gr, mod srted, well def gr bndrs, loc wk rexln, absnt hornfels tex, r disem & vng calc, r disem pyr, r pyr microvng, absnt chlor, r canary yel epidote stng, r magnt, loc intrbdd w/Argillite: blk, dk gry, pred silty, loc phyll shn, grd to Argillaceous Gwyke.

Steam entries at 7268' and 7282'. Minimal steam increase. 20 degF sustained incr, no sustained pressure increase.

Silicic Graywacke: lt-med gry, hd, brit, pred fresh app, loc str bleached app, loc v pale grn cast, loc argill altn of felds, dom fn gr, mod srted, well def gr bndrs, loc wk rexln, absnt hornfels tex, r disem & vng calc, r disem pyr, r pyr microvng, r chlor, r canary yel epidote stng, r magnt, loc intrbdd w/Argillite:



cnx

cnx

220 degF

cnx

cnx

7464'
17.00 deg
S50W

cnx

218 degF

cnx

cnx

cnx

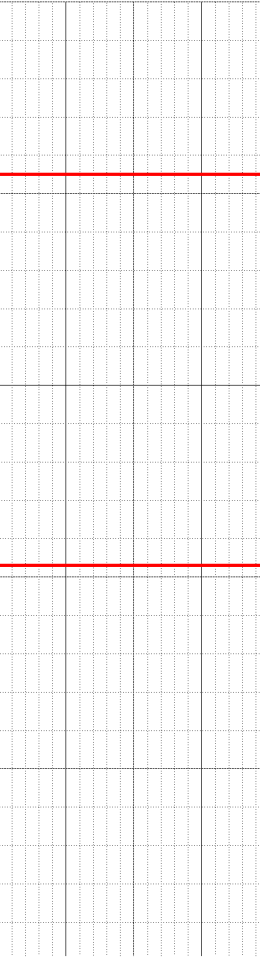
7588'
17.50 deg
S40W

219 degF

321/11 psi

313/10 psi

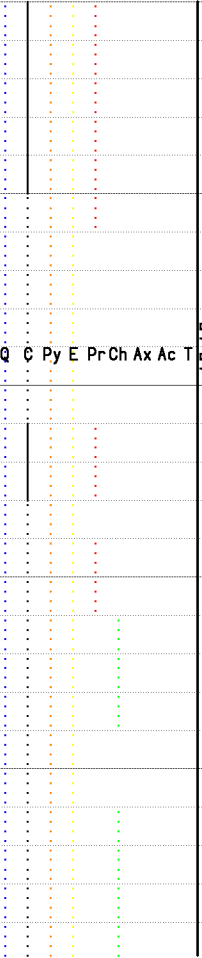
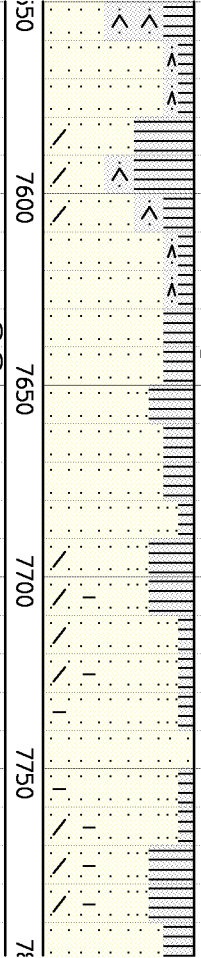
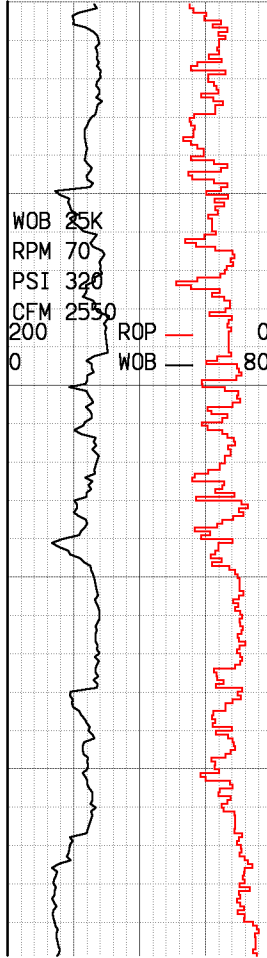
320/11 psi



cast, loc argill altn of felds,
dom fn gr, mod srted, well def gr
bndrs, loc wk rexln, absnt
hornfels tex, r dise & vng calc,
r dise pyr, r pyr microvng, r
chlor, r canary yel epidote stng,
r magnt, loc intrbdd w/Argillite:
blk, dk gry, pred silty, loc phyll
shn, grd to Argillaceous Gwyke.

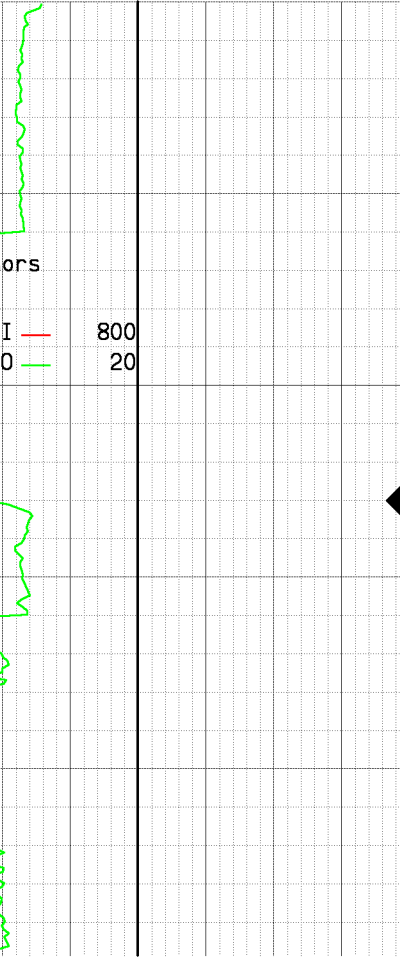
Twist off, POOH. RIH with
fishing tools, grab fish,
POOH. RIH & drill ahead.

Silicic Graywacke: lt-med gry,
hd, brit, pred fresh app, loc str
bleached app, dom fn gr, mod
srted, indst-mod well def gr
bndrs, loc wk rexln, r dise &
vng calc, r dise pyr, r pyr
microvng, r chlor, r canary yel
epidote stng, r magnt, Argillite:
blk, dk gry, pred silty, loc phyll
shn, r dise pyr and pyr rh
arda to Argillaceous Gwyke.



cnx
7588'
17.50 deg
S49W
219 degF
cnx
320/11 psi
3 compressors
3 gpm mist
cnx
cnx
230 degF
7711'
19.00 deg
S48W
cnx
cnx
230 degF
323/10 psi

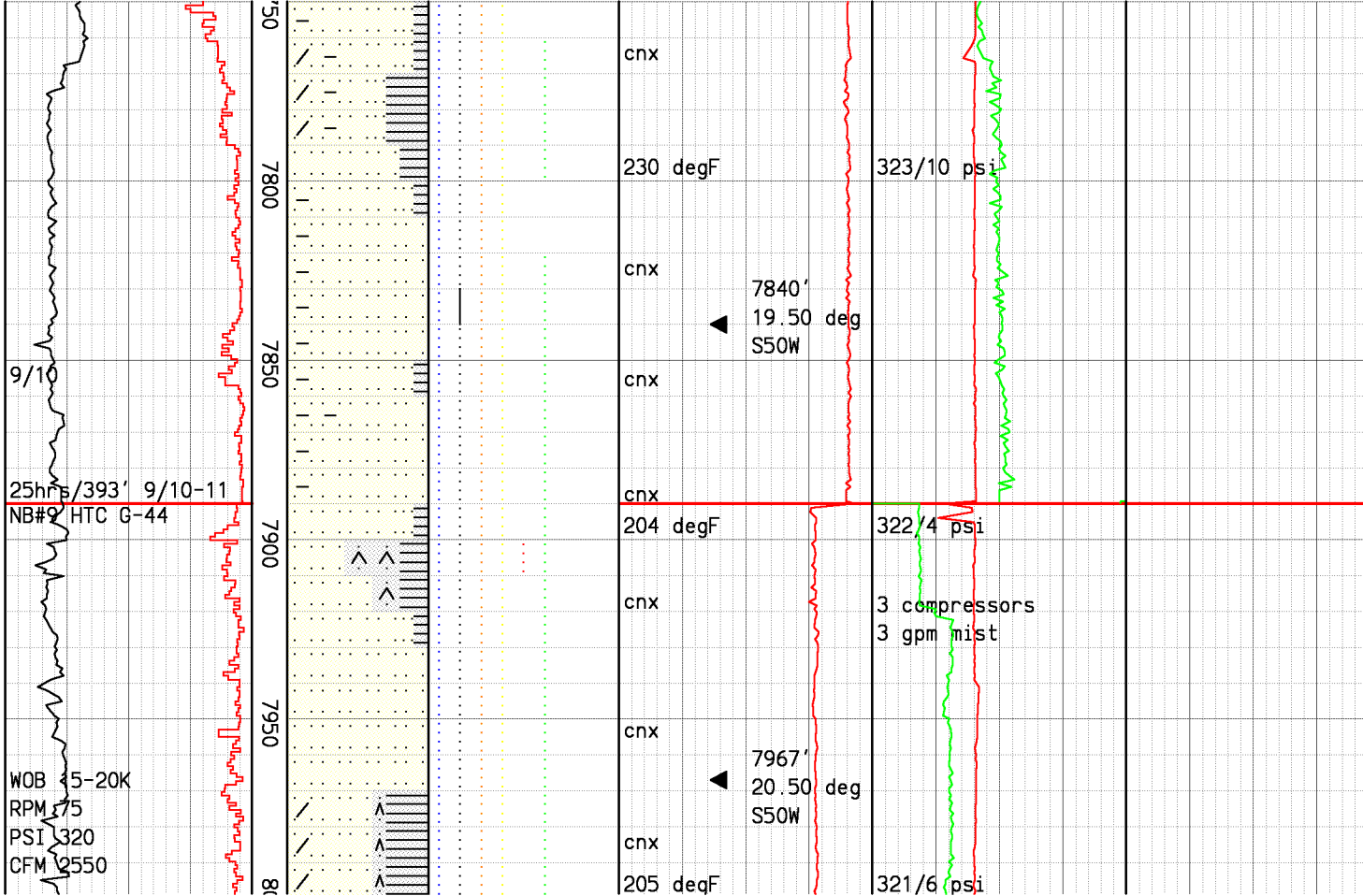
7500
7600
7650
7700
7750
7800



blks, loc wk rexln, r disem & vng calc, r disem pyr, r pyr microvng, r chlor, r canary yel epidote stng, r magnt, Argillite: blk, dk gry, pred silty, loc phyll shn, r disem pyr and pyr rh grdg to Argillaceous Gwyke.

Steam entry at 7680'.
10 degF sustained incr,
1 psi sustained pressure incr.

Silicic Graywacke: lt-med gry, loc brn, loc v pale grn cast, hd-v hd, brit, pred fresh app, loc str bleached app, fn-med gr, mod srted, indst-mod well def gr bndrs, loc wk-mod rexln, r qtz vng, r disem & vng calc, r disem pyr, r pyr microvng, r chlor, r disem canary yel epidote & stng, r chlor, intrbdd w/Argillite: med-dk gry, firm-hd, r qtz vng, r calc vng, r disem epidote.



pyr,r pyr microvng,rchlor,r
 disem canary yel epidote & stng,
 r chlor,intrbdd w/Argillite:
 med-dk gry,firm-hd,r qtz vng,r
 calc vng,r disem epidote.

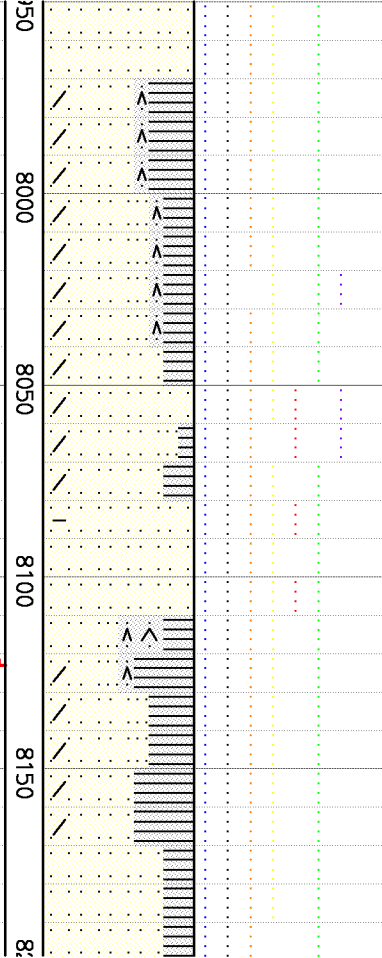
Take out venturi spool.

Silicic Graywacke: lt-med gry,
 hd-v hd,loc brn,loc str bleached
 app,loc v pale grn cast,
 dom fn gr,prly-mod srted,prly-
 mod well def gr bndrs,dom mod
 rexln,loc str rexln,loc
 hornfels tex,r qtz vng,r calc
 vng,r disem pyr,r disem pyr,r
 chlor,r canary yel epidote
 stng and frags,intrbdd w/

WOB 15-20K
RPM 75
PSI 320
CFM 2550

9/12

24 hrs/233' 9/11-13
NB#1 HTC G-44



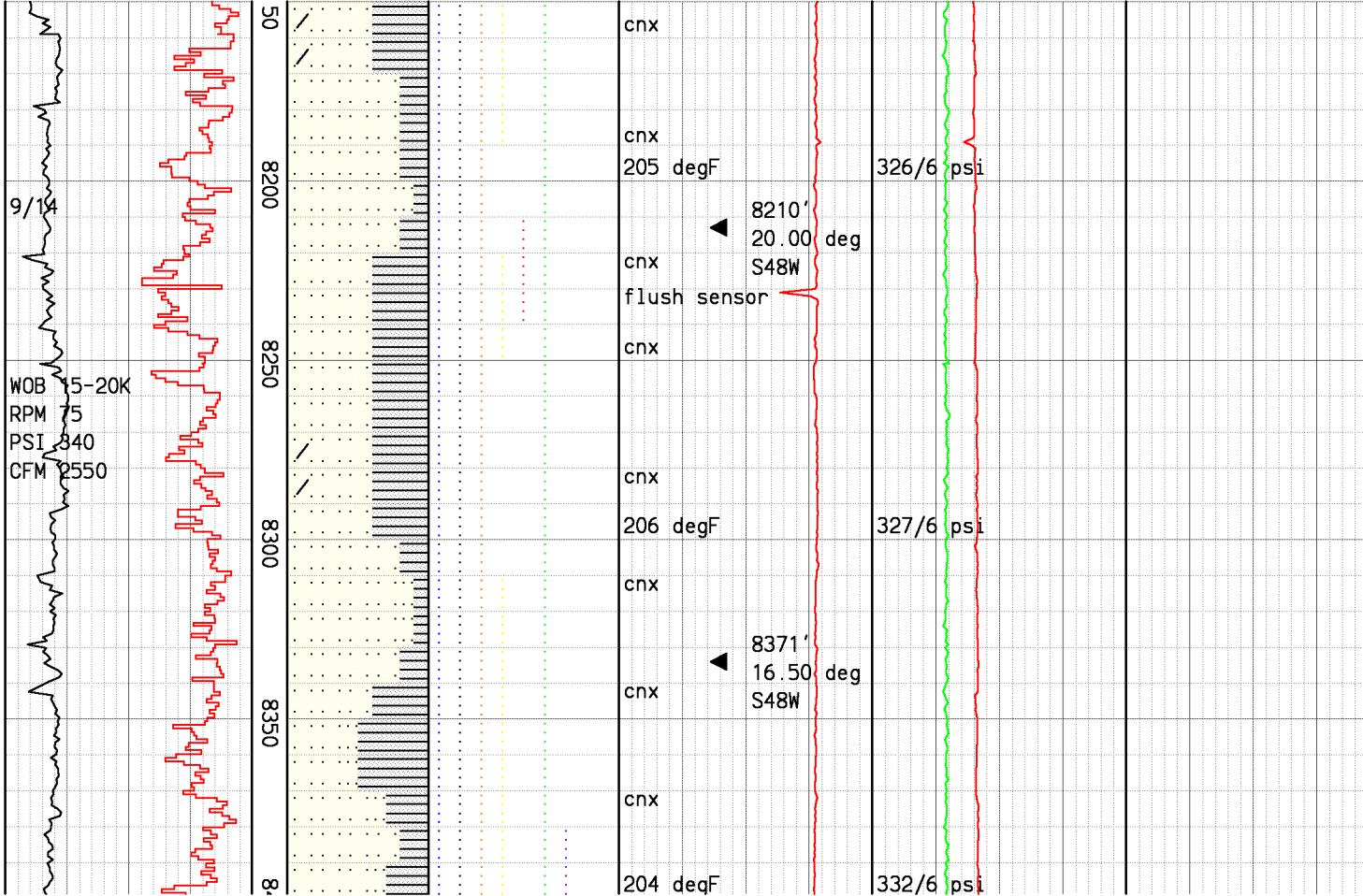
cnx
7967' 20.50 deg S50W
cnx
205 degF
cnx
flush sensor
cnx
cnx
cnx
8089' 21.00 deg S50W
cnx
205 degF
cnx
cnx
cnx
205 degF

321/6 psi
320/6 psi
3 compressors
3 gpm mist
326/6 psi

mod well def gr bndrs, dom
rexln, loc str rexln, loc
hornfels tex, r qtz vng, r calc
vng, r disem pyr, r disem pyr, r
chlor, r canary yel epidote
stng and frags, intrbddd w/
Argillite: med-dk, aphan, mod hard,
loc phyll shn, loc fiss txt,
r qtz vng, r calc vng, r disem
pyr, grd to Argillaceous Gwyke.

Drilling break of 55'/hr
f/8032' t/8034'.

Silicic Graywacke: lt-dk gry,
hd-v hd, loc lt grn cast, dom
fn gr, prly-mod srtd, prly-mod
well def gr bndrs, dom modloc wk
fol, rexln, loc str rexln, loc wk
hornfels tex, r qtz vng, r calc

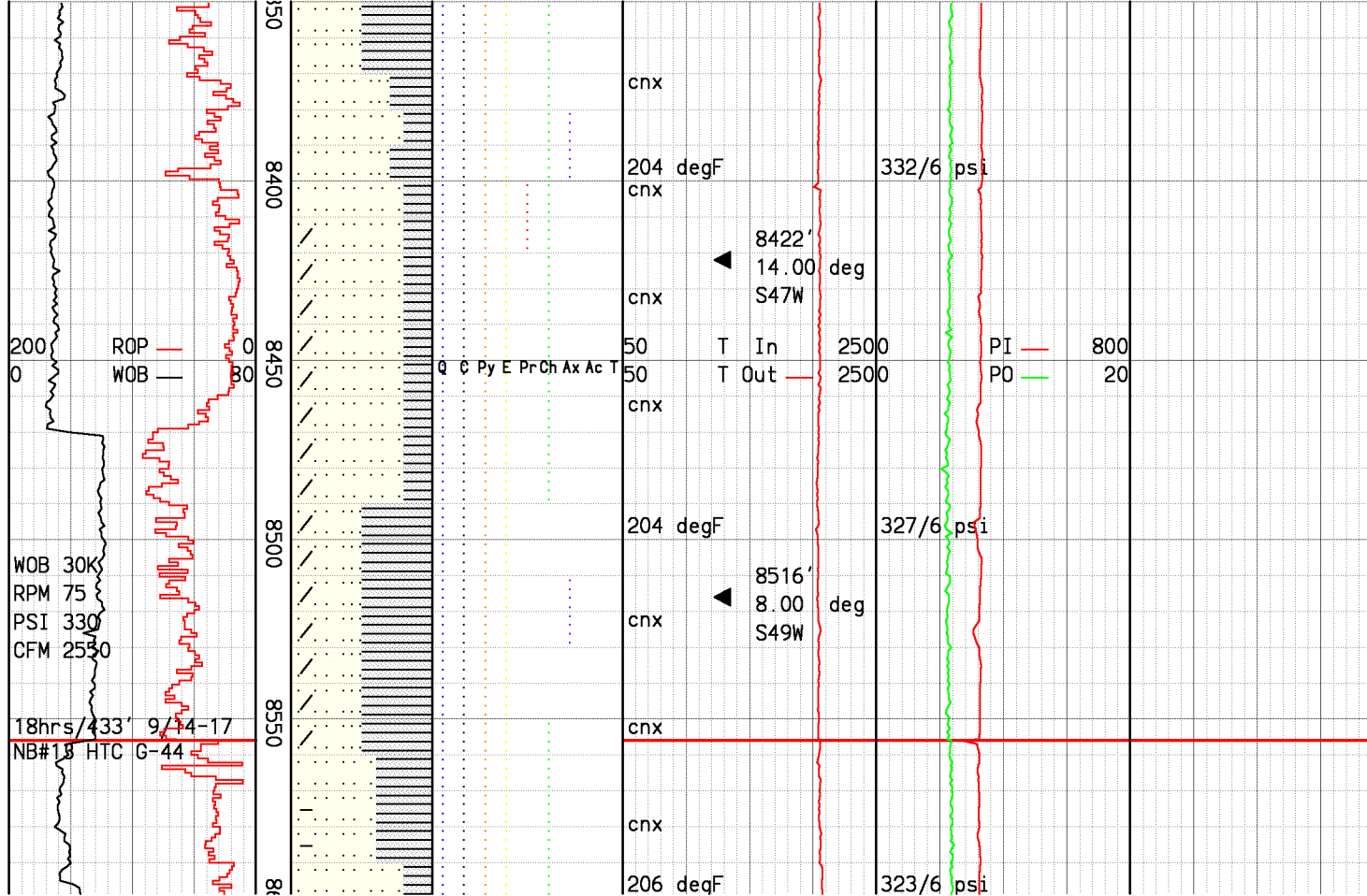


Silicic Graywacke: lt-dk gry, hd-v hd, loc lt grn cast, dom fn gr, prly-mod srtd, prly-mod well def gr bndrs, dom modloc wk fol, rexln, loc str rexln, loc wk hornfels tex, r qtz vng, r calc vng, r disem pyr, r chlor.

Drilling break of 85'/hr f/8226' t/8230'.

Silicic Graywacke: lt-dk gry, hd-v hd, loc lt grn cast, fn-crs grn, indist-mod well def gr bndrs, loc marg alt, loc str rexln, loc blchd, loc wk fol, r qtz vng, r disem pyr, r chlor, r bright yellow-green epidote, intrbdd w/ Argillite: med-dk, aphan, loc phyll shn, wk-mod hd, r qtz vng, r disem pyr.

Drilling break of 75'/hr



aphan, loc phyll shn, wk-mod hd,
 r qtz vng, r disem pyr.

Drilling break of 75'/hr
 f/8398' t/8400'.

Silicic Graywacke: lt gry-blk,
 hd-v hd, fn-crs grn, prly def gr
 bndrs, loc marg alt, loc
 mod rexln, loc strng blchd, loc
 wkfol, r disem pyr, r chlor, r
 bright yellow-green epidote,
 Argillite: med-dk, aphan, loc
 wk phyll shn, mod hd-hd, r qtz
 vng.

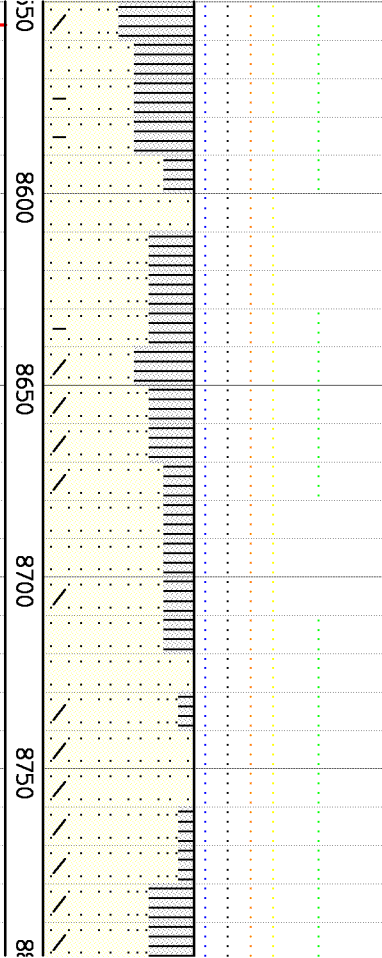
No evident steam entry, but
 bit run C/NC shows 10,200lb
 increase in unrestricted
 steam flow. Losing angle,
 POOH for new BHA. GAMP alerts
 at 21:45 on 9/14 (restricted,
 air off) and 03:48 on 9/17
 (restricted, air off).

Silicic Graywacke: lt-dk gry,

18hrs/433 9/14-17

NB#13 HTC G-44

WOB
15-20K
RPM 65
PSI 340
CFM 2550



cnx			
cnx			
206 degF		323/6 psi	
cnx		3 compressors	
		3 gpm mist	
cnx	8652'		
	6.00 deg		
	S54W		
cnx			
206 degF		312/6 psi	
cnx			
cnx			
cnx	8778'		
	6.00 deg		
	S50W		
206 degF		316/6 psi	

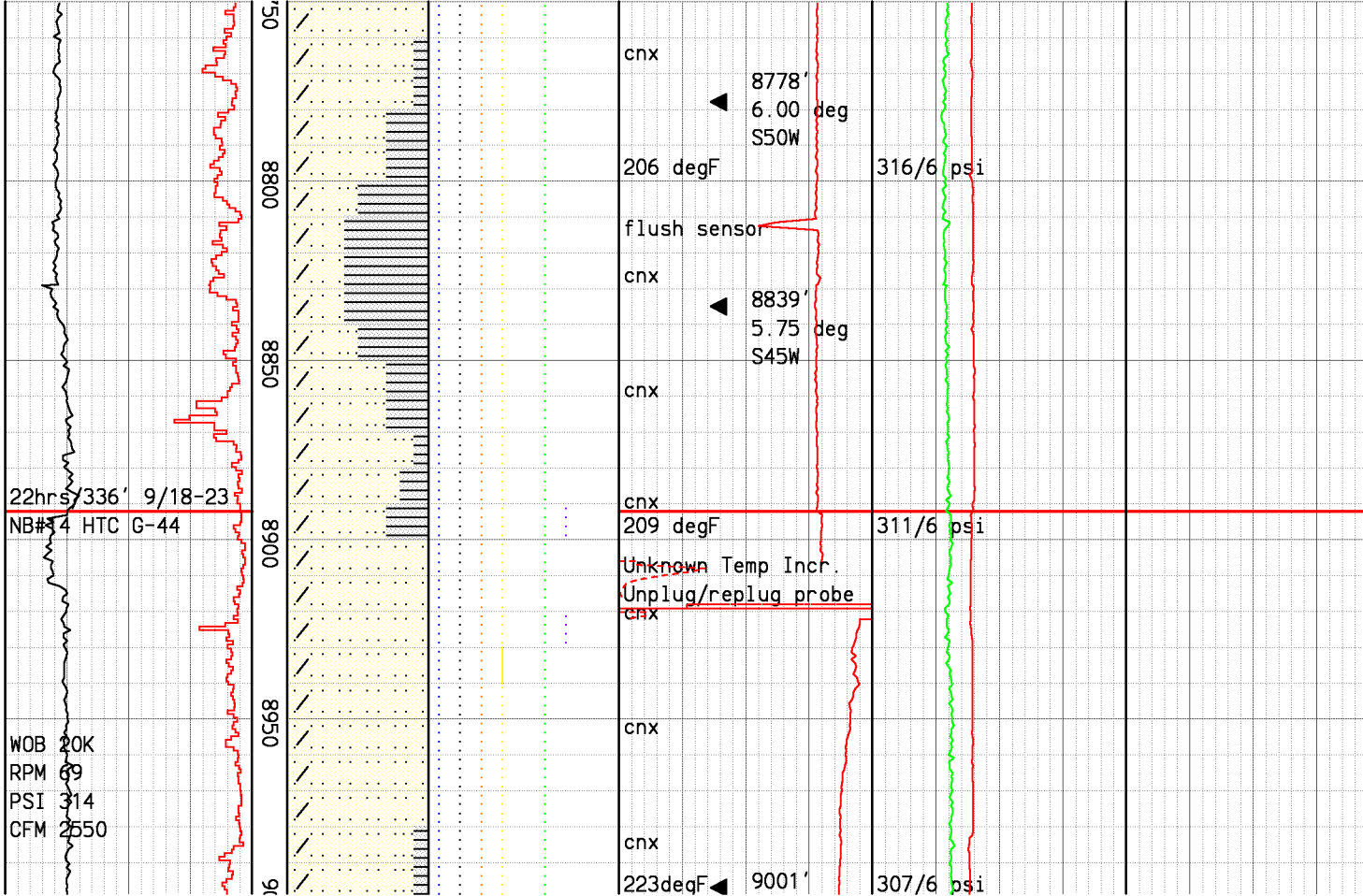
steam flow. Losing angle, POOH for new BHA. GAMP alerts at 21:45 on 9/14 (restricted, air off) and 03:48 on 9/17 (restricted, air off).

Silicic Graywacke: lt-dk gry, hd-v hd,brtle,indist-mod well def grn bndrs,loc marg alt,loc wk fol,loc strng blchd,r qtz vng,r disem pyr,r epidote,r chlor,loc intrbdd w/ Argillite: med-dk,loc wk phyll shn,mod hd-hd,r qtz vng.

Drill break at 8668, 78'/hr no associated steam entry.

GAMP alert at 08:55 (restricted, air on).

Silicic Graywacke: lt-med gry, abun-pred blchd,loc v pale grn cast,hd-v hd,fn-med grn,indist-mod well def gr bndrs,loc marg alt,dom mod rexln,loc wk fol,loc wk hornfels tex,r qtz vng,r calc vng,r disem pyr,r chlor,r canary yellow epidote,intrbdd w/ Argillite:med-dk gray,aphan,loc silty,loc wk phyll shn med



mod well def gr bndrs, loc marg alt, dom mod rexln, loc wk fol, loc wk hornfels tex, r qtz vng, r calc vng, r disem pyr, r chlor, r canary yellow epidote, intrbdd w/ Argillite: med-dk gray, aphan, loc silty, loc wk phyll shn, mod hd-hd, r qtz vng, r calc vng, r disem & pyr & pyr vng.

Drilling break of 67'/hr f/8865' t/8867'.

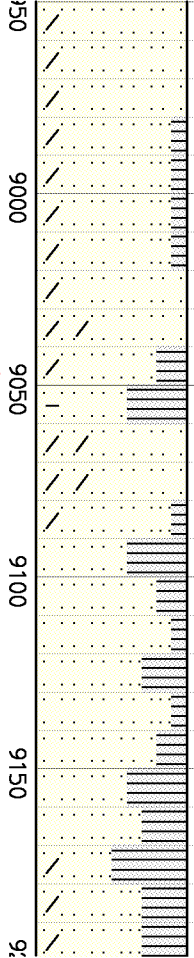
Silicic Graywacke: lt-med gry, abun-pred blchd, loc v pale grn cast, hd-v hd, fn-med grn, indist-mod well def gr bndrs, loc marg alt, dom mod rexln, r qtz vng, r pyr vng, r disem pyr, r chlor, r epid, intrbdd w/ Argillite: med-dk gry, dom slty, r sndy, r aphan, mod hd, r qtz vng, r disem pyr, r axinite.

Silicic Graywacke: lt-dk gry

WOB 20K
RPM 69
PSI 314
CFM 2550

9/24

14 hrs / 155' 9/24
NB#15 HTC G-44
9/25

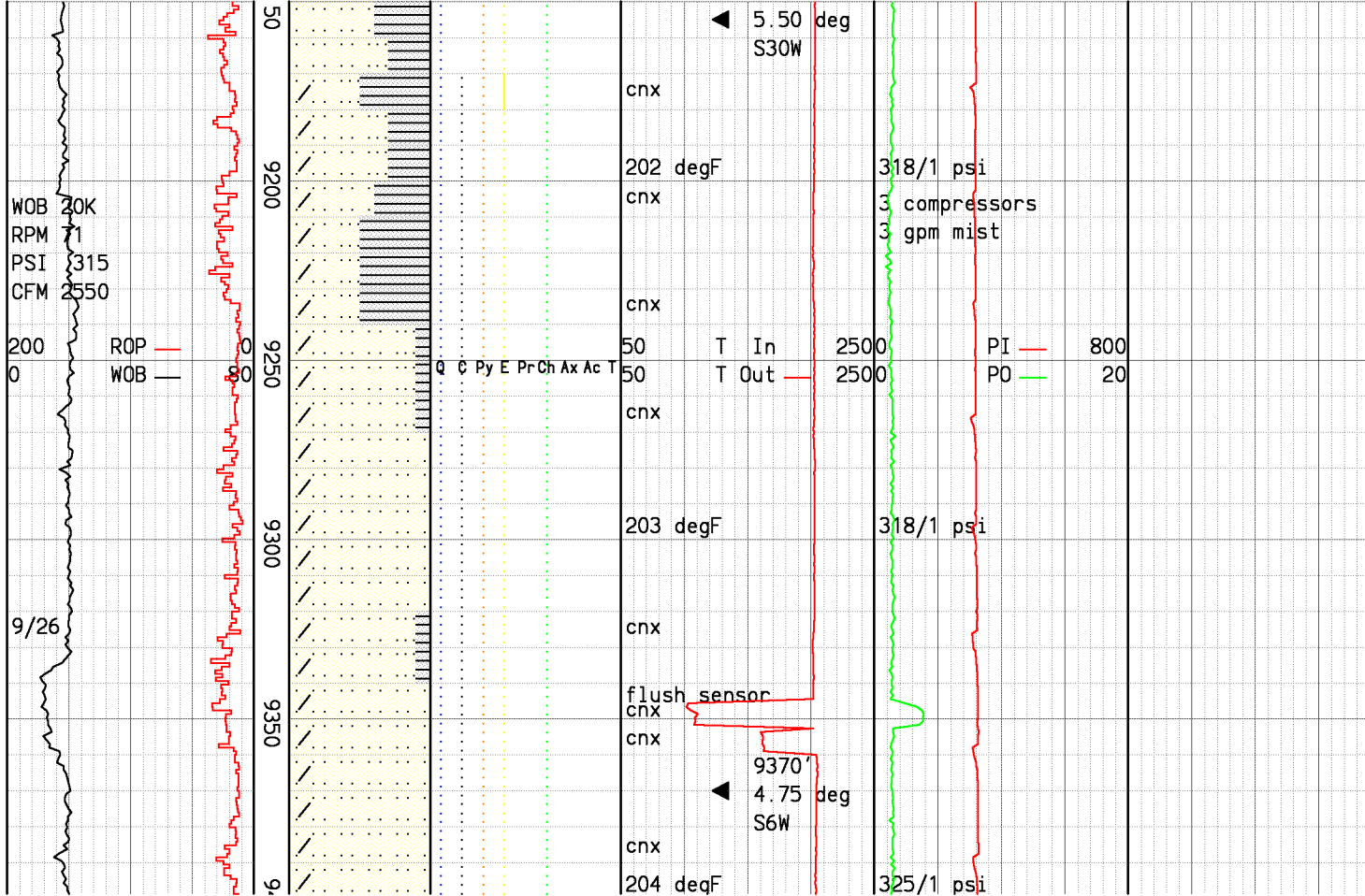


cnx
cnx
223degF ◀ 9001' 5.00 deg S37W 307/6 psi
cnx
cnx
203 degF 318/1 psi
cnx
9155' ◀ 5.50 deg S30W
cnx
202 degF 318/1 psi

mod hd,r qtz vng,r disem pyr,r axinite.

Silicic Graywacke: lt-dk gry, abun-pred blchd,hd-v hd,brittle indist-mod well def gr bndrs,r wk chlor altn,r wk epidote altn,loc marg alt,loc wk fol, fn-med grnd,dom mod rexln,r qtz vng,r disem pyr,r chlor,r epid, intrbdd w/ Argillite:med-dk gry, dom slty,r aphan,mod hd-hd, r striations, r qtz vng,r axinite.

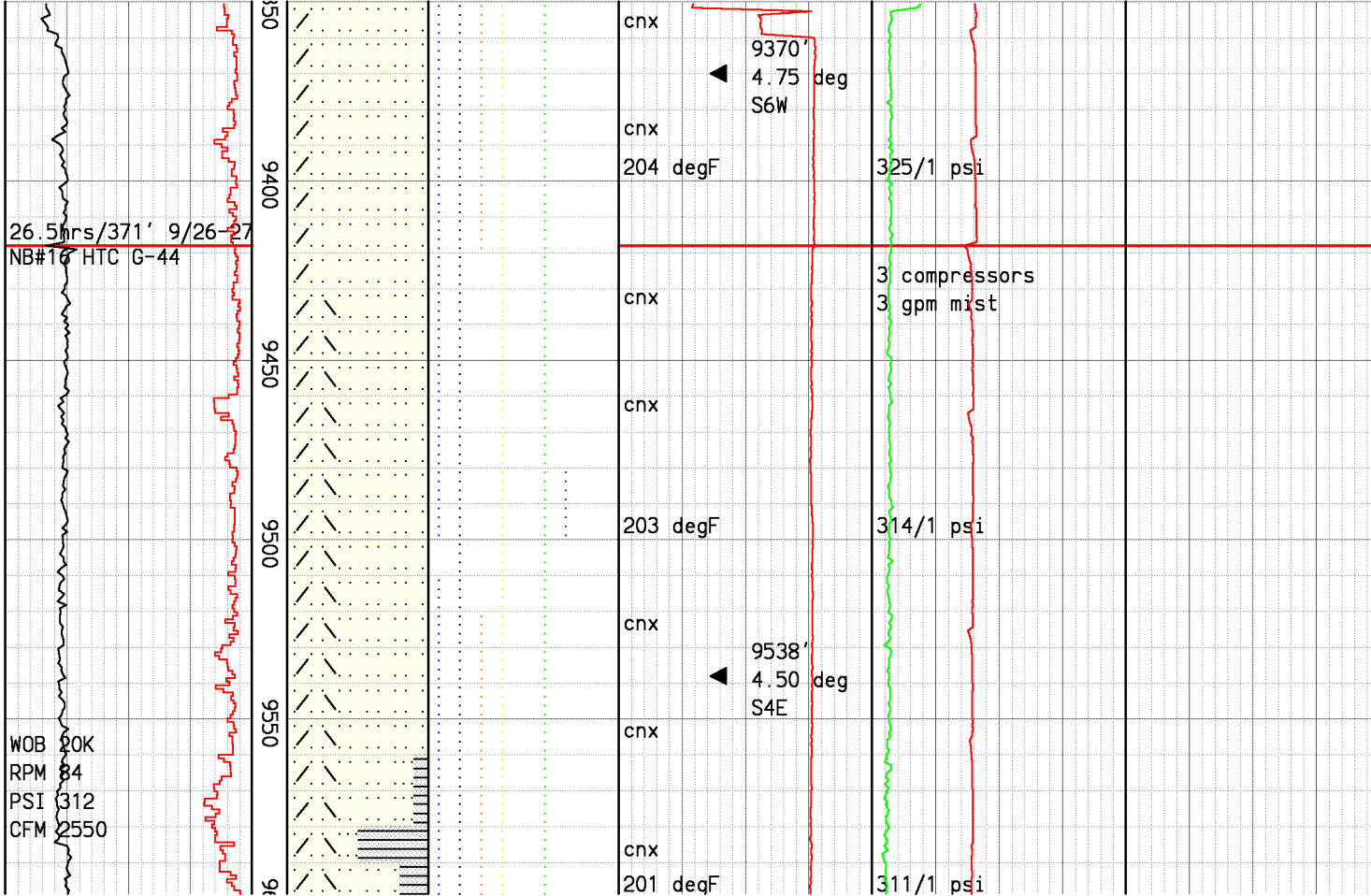
Silicic Graywacke: lt-dk gry, wht,mnr-abund pred blchd,loc v pale grn cast,hd-v hd,fn-crs gr,indist-mod well def gr bndrs, loc marg alt,dom mod rexln,r qtz vng,r pyr vng,r druzey qtz,r disem pyr,r chlor,r epid, intrbdd w/ Argillite:med-dk gry, dom slty,r sndy,r aphan,mod hd, r qtz vng,r disem pyr,r axinite, r bornite.



disem pyr,r chlor,r epid,
 intrbdd w/ Argillite:med-dk gry,
 dom slty,r sndy,r aphan,mod hd,
 r qtz vng,r disem pyr,r axinite,
 r bornite.

Silicic Graywacke: lt-med gry,
 com-pred blchd,loc v pale grn
 cast,hd-v hd,fn-med grn,indist-
 mod well def gr bndrs,loc marg
 alt,mod-str rexln,loc-com wk
 hornfels tex,r qtz vng & drusy
 qtz,r calc vng,r disem pyr,r
 chlor,r canary yellow epidote,
 loc intrbdd w/ Argillite:med-dk
 gry,aphan,loc silty,loc wk
 phyll shn,mod hd-hd,r qtz vng,
 r calc vng,r disem pyr & pyr
 vng,r chlor vng.

Silicic Graywacke: lt gry,pred
 slight blchd,loc-com str blchd,
 loc v pale grn cast,com-pred v



Silicic Graywacke: lt gry, pred slight blchd, loc-com str blchd, loc v pale grn cast, com-pred v lt brn cast, hd-v hd, fn-med grn, indist-mod well def gr bndrs, loc marg alt, mod-str rexln, loc-abun wk hornfels tex, r qtz vng & drusy qtz, r calc vng, r disem pyr, r chlor, r canary yellow epidote, r pink axinite frags.

Drilling break of 33'/hr (from 10'/hr) f/9460' t/9464'.

GAMP alert at 8:49 (restricted, air on).

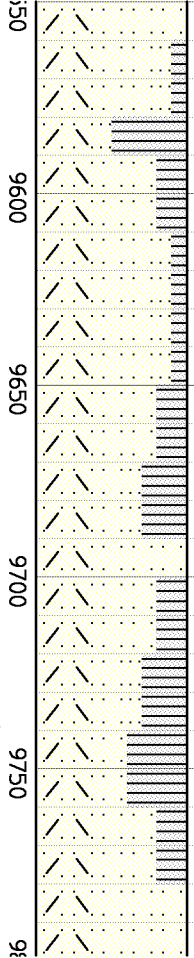
Silicic Graywacke: lt gry, mnr slight blchd, loc-mnr str blchd, loc v pale grn cast, com-pred v lt brn cast, hd-v hd, britt, fn-ops app mod well def gr bndrs

WOB 20K
RPM 84
PSI 312
CFM 2550

9/28

24hrs/321' 9/28-29
NB#17 HTC G-44

WOB 20K
RPM 75
PSI 318
CFM 2550



cnx
cnx
201 degF
cnx
cnx
cnx
cnx
202 degF
cnx
9691' 4.50 deg S6W
cnx
cnx
202 degF

311/1 psi

316/1 psi

3 compressors
3 gpm mist

316/1 psi

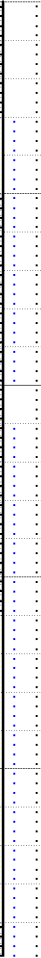
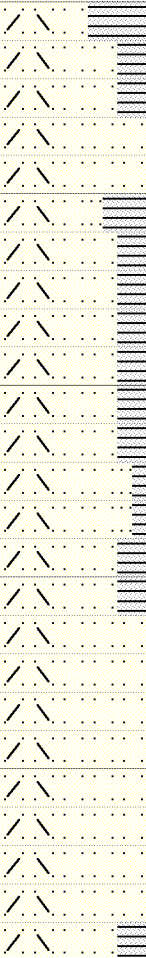
Silicic Graywacke: lt gry,mnr slight blchd,loc-mnr str blchd, loc v pale grn cast,com-pred v lt brn cast,hd-v hd,britt,fn-crs grn,mod well def gr bndrs, loc marg alt,mod-str rexln, loc-abun wk hornfels tex,r qtz vng & drusy qtz,v r calc,r disem pyr,r chlor,r canary yellow epidote,interbdd w/ Argillite:med-dk gry,pred slty, r-mnr sndy app,r loc aphan,mod hd,r qtz vng,r disem pyr.

Silicic Graywacke: lt gry,com-pred str blchd,com-pred v lt brn-brn cast,hd-v hd,britt,fn-crs grn,indist-prly def gr bndrs,dom marg alt,mod-str rexln,com-dom wk hornfels tex, r qtz vng & drusy qtz,v r calc, r disem pyr,r chlor,r canary yellow epidote,interbdd w/ Argillite:med-dk gry,aphan,loc siltv.mod hd,r qtz vng,r disem

WOB 200K
RPM 75
PSI 118
CFM 2550

9/30

9850
9800
9950
10000



cnx
202 degF
cnx
cnx
201 degF
cnx
cnx
cnx
202 degF

9845'
4.00 deg
S7W

3 compressors
3 gpm mist
316/1 psi
315/1 psi
319/1 psi

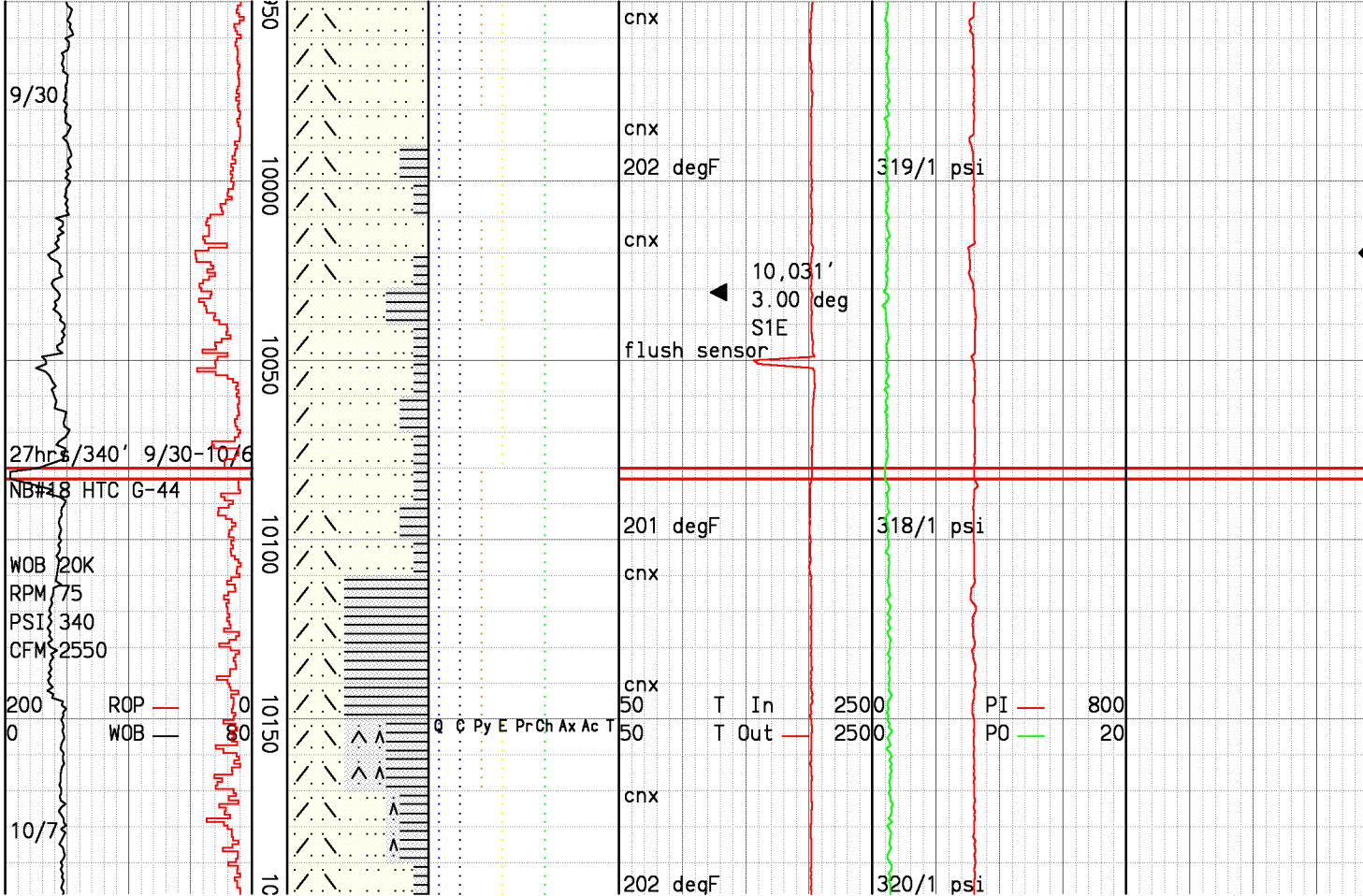
compressor down/up

bnrds, dom marg alt, mod str
rxln, com-dom wk hornfels tex,
r qtz vng & drusy qtz, v r calc,
r disem pyr, r chlor, r canary
yellow epidote, interbdd w/
Argillite: med-dk gry, aphan, loc
silty, mod hd, r qtz vng, r disem
pyr.

Drilling break of 49'/hr at
9871'.

Silicic Graywacke: lt gry, com-
abund str blchd, com-pred v lt
brn cast, hd-v hd, britt, fn-crs
grn, prly-mod def gr bndrs, dom
marg alt, mod-str rxln, com-dom
wk hornfels tex, r qtz vng &
drusy qtz, v r calc, r disem
pyr, r chlor, r canary yellow
epidote, interbdd w/Argillite:
med-dk gry, dom slty, loc aphan,
mod hd, r qtz vng, r disem pyr.

Steam entry between 10 015' &



drusy qtz, v r calc, r disem pyr, r chlor, r canary yellow epidote, interbdd w/Argillite: med-dk gry, dom slty, loc aphan, mod hd, r qtz vng, r disem pyr.

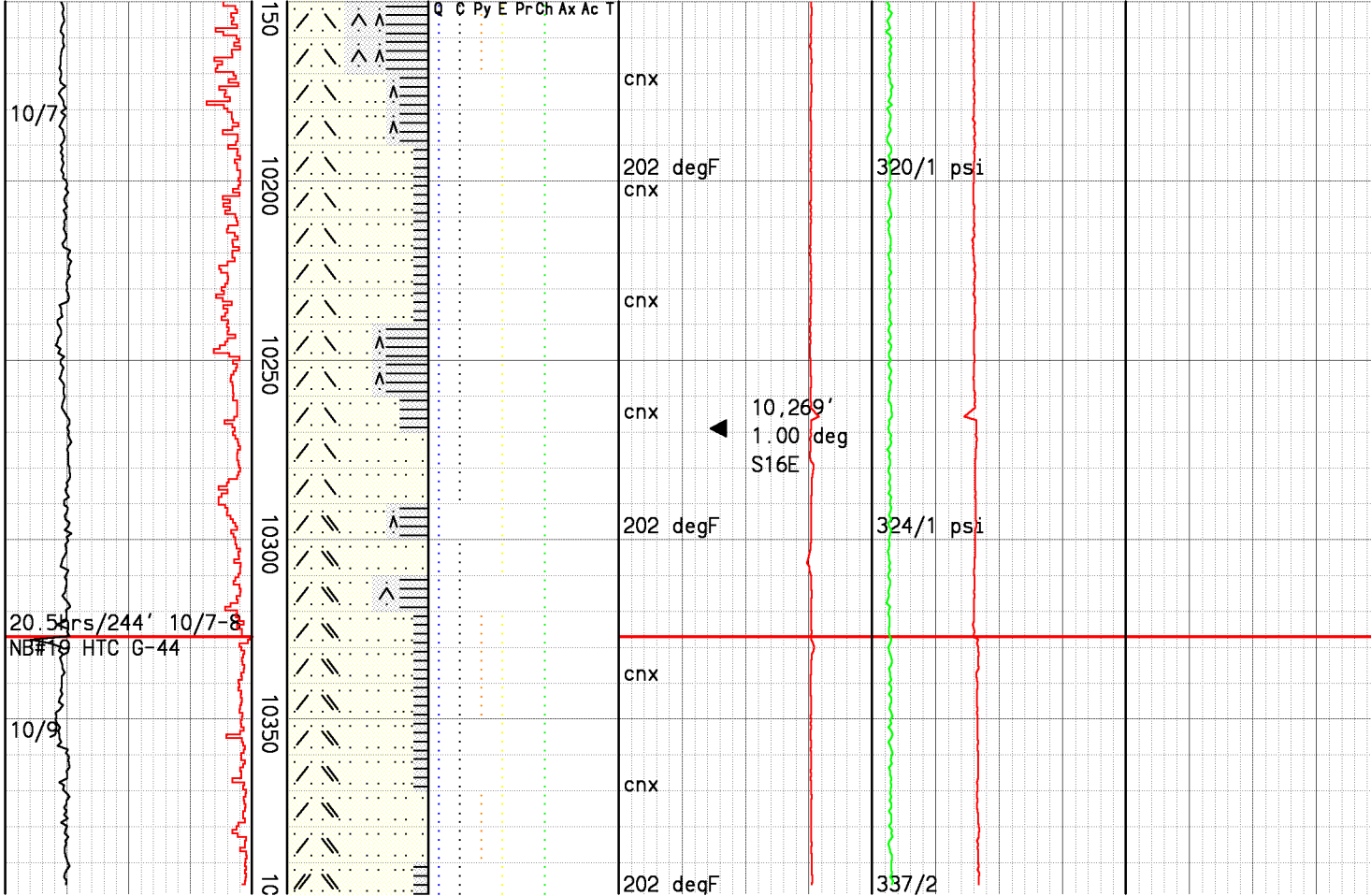
Steam entry between 10,015' & 10,035'. 8 psi & 2 degF init increase, 5 psi and 2 degF stable increase.

Drilling break of 40'/hr (from 12'/hr) f/10,073' t/10,075'.

Lose fish down hole. Make several magnet and mill runs. Mill ahead f/10079' t/10083'. Run in hole with 8 1/2" bit on 10/6 and drill ahead.

Drilling break zone f/10128' t/10170' ranging f/ 26'/hr t/ 36'/hr (from 7'/hr to 16'/hr).

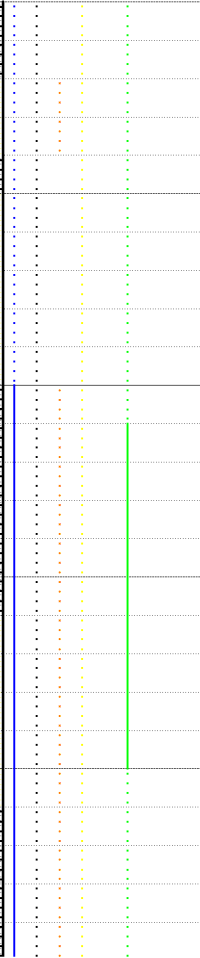
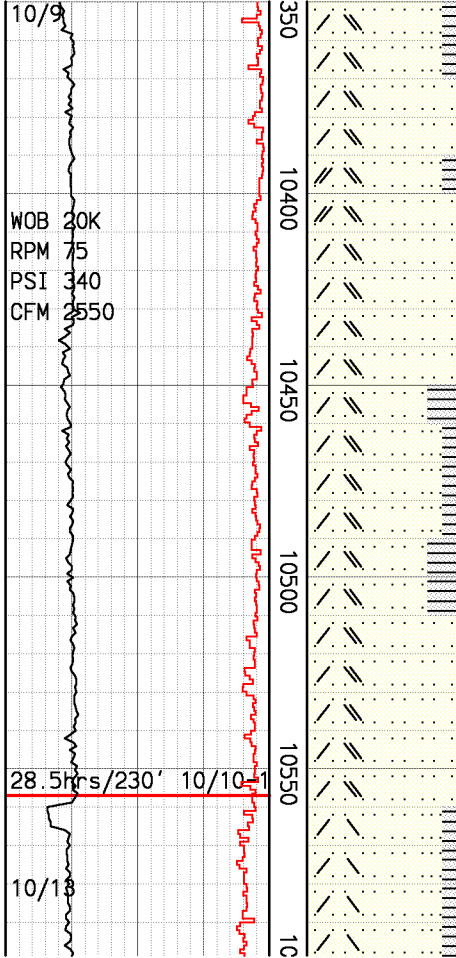
Silicic Graywacke: lt-med gry, pred brn, com-abund str blchd, hd-v hd, britt, v fn-fn grn, prly-mod def gr bndrs, dom marg alt, dom str rxln, com-dom wk hornfels tex, r qtz vng & drusy



Silicic Graywacke: lt-med gry, pred brn, com-abund str blchd, hd-v hd, britt, v fn-fn grn, prly-mod def gr bndrs, dom marg alt, dom str rxln, com-dom wk hornfels tex, r qtz vng & drusy qtz, v r calc, vr disem pyr, r chlor, r canary yellow epidote, interbdd w/Argillite: med-dk gry, silver, apahn, mod hd, loc fiss txt, loc phyll sheen, r qtz vng, vr disem pyr.

Possible steam entry at 10,265'. 7 psi and 0 degF init increase, 3 psi and 0 degF stable increase.

Silicic Graywacke: lt-med gry, pred brn, mnr-com str blchd, hd-v hd, britt, v fn-fn grn, indist-prly def gr bndrs, dom marg alt, loc perv altn, dom str rxln, dom wk hornfels tex, loc str hornfels tex, r qtz vng & drusy qtz, r calc, vr disem pyr, r chlor, r canary yellow epidote, interbdd w/Argillite: med-dk gry,



cnx

202 degF

flush sensor

cnx

cnx

cnx

202 degF

cnx

cnx

flush sensor

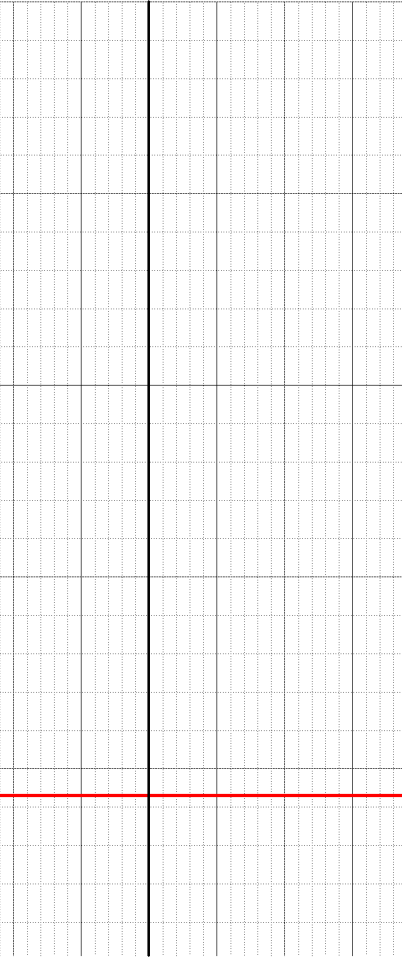
cnx

201 deg

337/2

331/1 psi

336/1 psi



marg alt,loc perv altn,dom str rxln,dom wk hornfels tex,loc str hornfels tex,r qtz vng & drusy qtz,r calc,vr disem pyr, r chlor,r canary yellow epidote, interbdd w/Argillite:med-dk gry, silver,apahn,loc silty,mod hd, loc fiss txt,loc wk phyll sheen, r qtz vng,vr disem pyr.

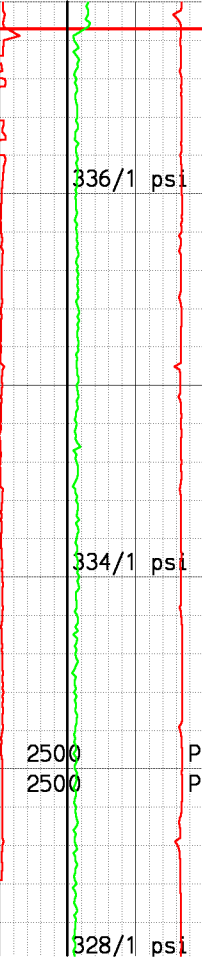
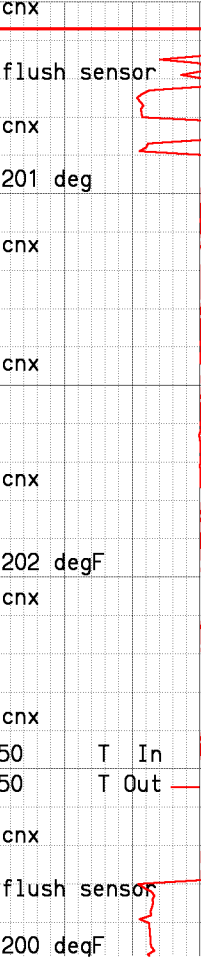
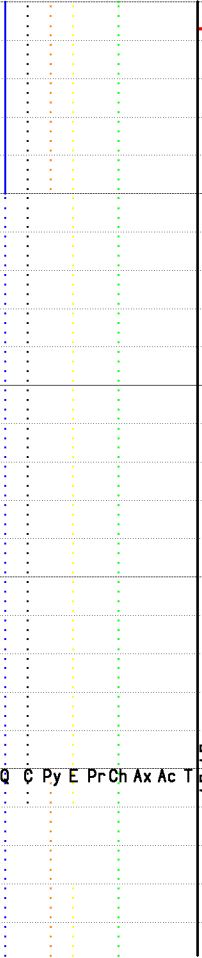
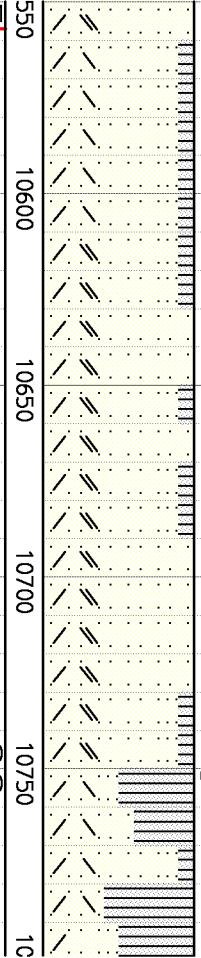
Silicic Graywacke: lt-med gry, pred brn,hd-v hd,britt,v fn-med grn,indist-prly def gr bndrs,dom marg alt,loc perv altn,dom str hornfels,dom str rxln,r-tr qtz vng,r-tr drusy qtz,r chlor altd grs,v r calc,r disem & agg pyr, r epid,interbedd w/Argillite:lt gry,mod hd-hd,slty,r loc sndy, loc fiss txt,r qtz vng,w/ r-tr Felsite:mlky wht-lt gry,opq,loc pale grn,hd,brit,frsh-sl altd, aphan mxln grndmass,r-tr anhed qtz,r biot vng.

28.5 hrs / 230' 10/10-1

10/13

WOB 20K
RPM 75
PSI 330
CFM 5550

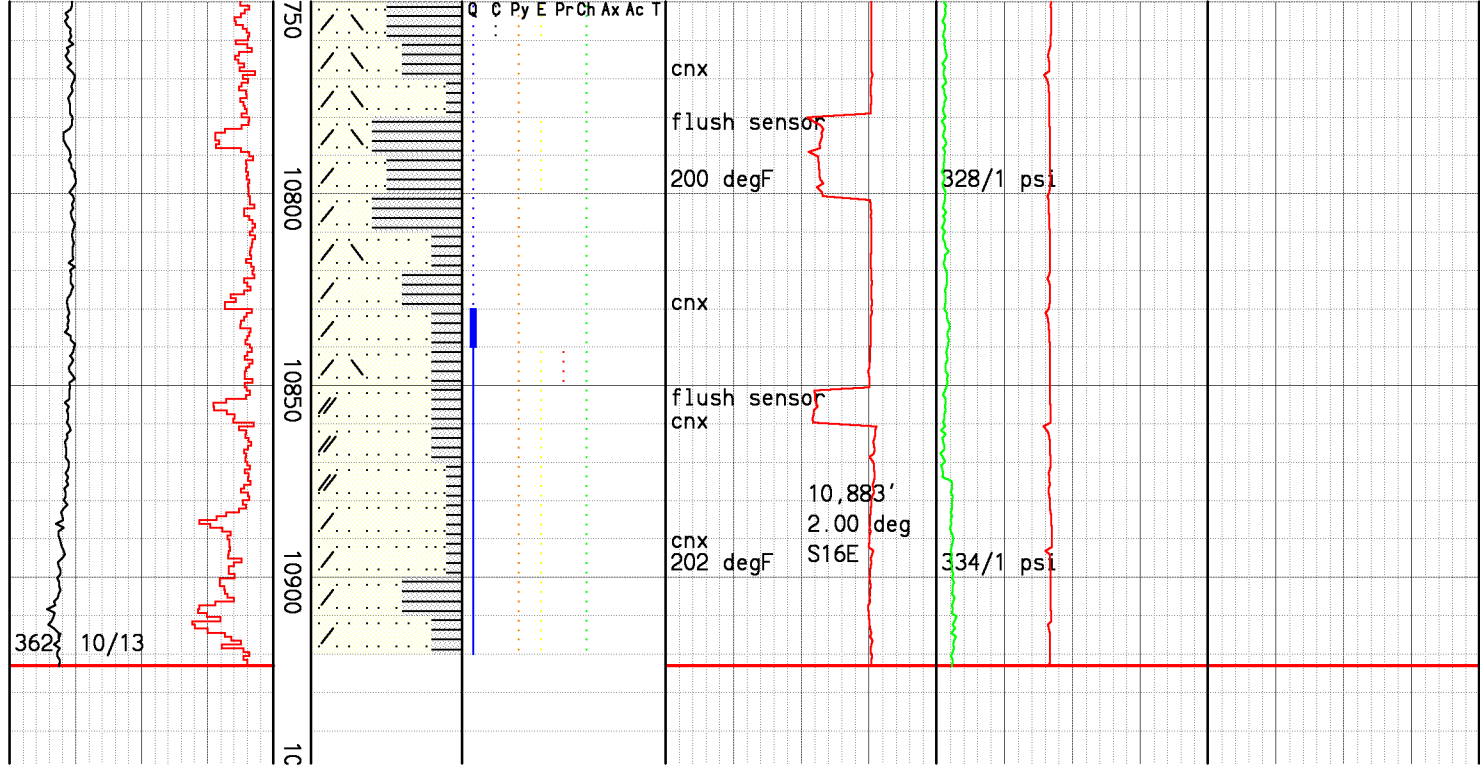
200 ROP — 0
0 WOB — 80



pale grn,hd,brtt,flsh sl altrd,
aphan mxln grndmass,r-tr anhed
qtz,r biot vng.

Silicic Graywacke: brn,loc med
gry,mnr-com str blchd,v hd,
britt,v fn-fn grn,indist-prly
def gr bndrs,dm marg altm,loc
perv altn,dm str rxln,dm wk-
str hornfels tex,r-tr qtz vng &
drusy qtz,r calc,vr disem pyr,
r chlor,r canary yellow epidote,
interbdd w/Argillite:med-dk gry,
silver,apahn,loc silty,mod hd,
loc-com fiss txt,loc wk phyll
sheen,r qtz vng,vr disem pyr.

Drilling breaks:
f/10,785' t/10,790',
f/10,855' t/10,858',
f/10,885' t/10,886',
f/10,908' t/10,914'.



f/10,785' t/10,790',
 f/10,855' t/10,858',
 f/10,885' t/10,886',
 f/10,908' t/10,914'.

Silicic Graywacke: lt-med gry, pred brn, com blchd, loc pink, v hd, fn-med grn, indist-prly def gr bndrs, com marg alt, loc perv altn, loc wk hornfels, str rxln, r-tr milky white qtz vng, r-tr clr qtz, r chlor altd grs, loc r pist grn epid, interbedd w/Argillite: med- dk gry, mod hd-hd, silty, com phyll sheen, loc r disem pyr

TD CAST92-6ST1-Fork, ST1
 10/13/08 @ 10,923'.