



PERFORM - Drilling Mechanics

2 in / hr Time Based

Real Time Log

Company: ExxonMobil Oil Corporation

Well: PCU 297 11C3

Field: Piceance Creek

County: Rio Blanco

State: Colorado

Country: United States

Section: 11 APIN: 051031147300

Township: 2S Rig Name: H & P 326

Range: 97W Rig Type: Land Rig Flex 4

FL: NAD 27 Colorado State Planes, Northern Zone, US Feet

FL1: Latitude: 39° 53' 45.794" N Y: 216976.00 ft

FL2: Longitude: 108° 15' 13.977" W X: 1227418 ft

Log Measured From - Drill Floor: 6993.2 ft

Ground Level: 6963.0 ft

Permanent Datum - Mean Sea Level

Other Services:

Directional Drilling

PERFORM

Acquisition Dates: 25 Jan 10 to 10 Apr 10

Print Interval: 1/25/2010 9:38:22 PM to 4/10/2010 2:19:20 PM

Index Types: Time

Index Scales: 2" / 3600 secs

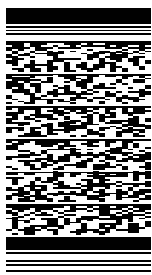
Depth Source: Driller Depth

Depth Sensor: 3rd Party Depth

Conveyance: Drill Pipe

Print Type: Final

Spud Date: 1-25-2010



## Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

## Contents

1. Header
2. Disclaimer
3. Contents
4. 001 Real Time Log
  - 4.1 Software Version
  - 4.2 Pass Summary
  - 4.3 Log ( DrillMech\_Time\_RT )
5. 002 Real Time Log
  - 5.1 Software Version
  - 5.2 Pass Summary
  - 5.3 Log ( DrillMech\_Time\_RT )
  - 5.4 Parameter Listing
6. Tail

001

### Real Time Log

#### Software Version

<b>Acquisition System</b>		<b>Version</b>	
MaxWell		1.2.8706.0	
Framework Patch		FWK-BGC-20100105-1.2.8706.1067	
Application Patch		APL-SRPC-DnM-1.2.8706.1045	
<b>Tool Elements</b>	<b>Description</b>	<b>Software Version</b>	<b>Firmware Version</b>
DRILLING_SURFACE	DRILLING_SURFACE	1.2.8706.0	

#### Pass Summary


Run Name	Pass Objective	Direction	Start	Stop	Acquisition Start Date	Acquisition Start Time
001	TimeLogicalAcq	Down	25-Jan-2010 21:38:22	29-Jan-2010 04:24:18	25-Jan-2010	21:38:22

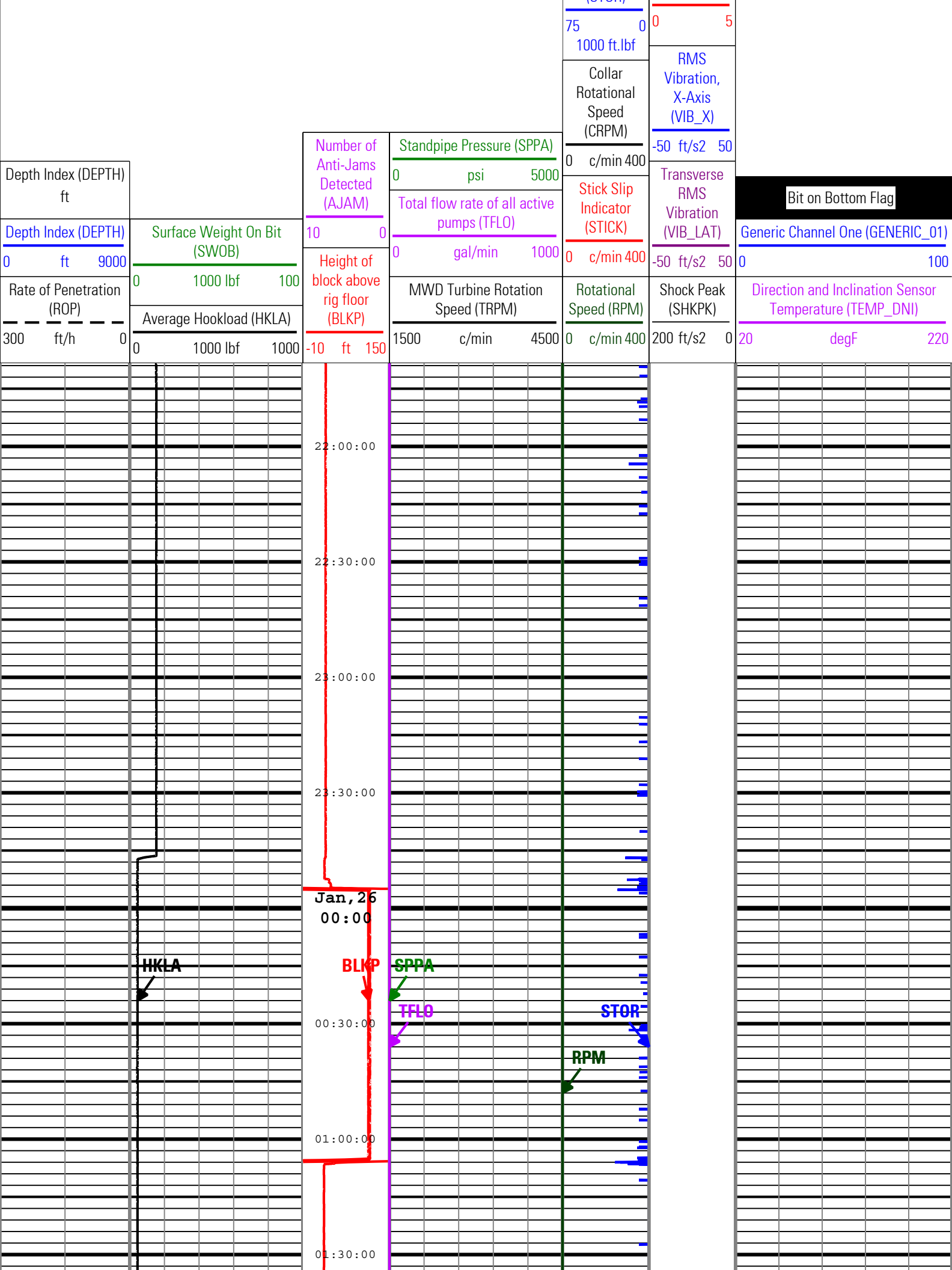
#### Log

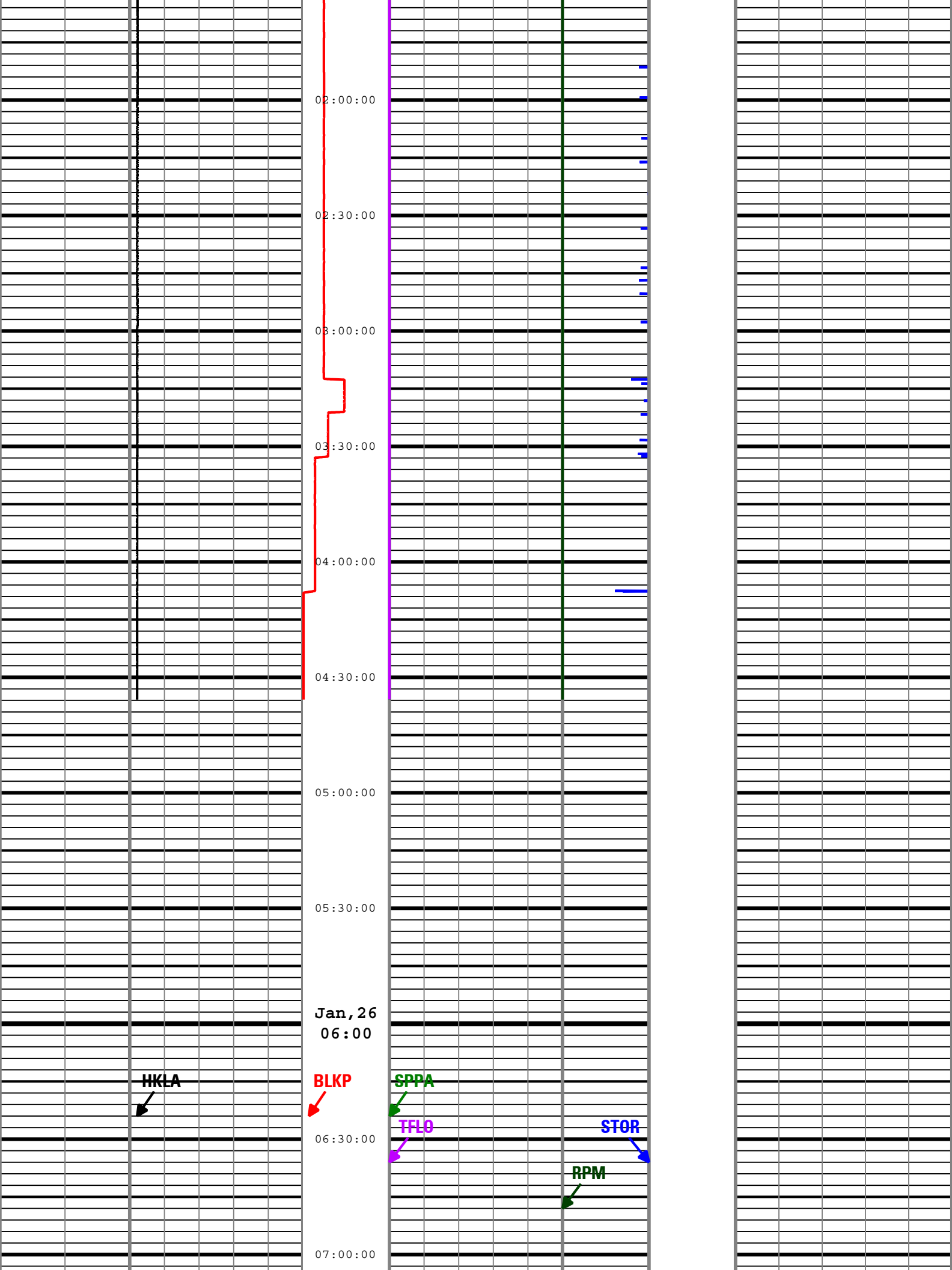
001: TimeLogicalAcq 5AF44986-DED8-4E65-B088-F11504924A1A

Description: TeleScope + ARC Drilling Mechanics Time RT Format: Log ( DrillMech\_Time\_RT ) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 10-Apr-2010 17:04:06

AJAM	TELE825:TELE825	ACQ - RT
BLKP	DRILLING_SURFACE	ACQ - RT
CRPM	TELE825:TELE825	ACQ - RT
DEPTH	DnMWorkflow	ACQ - RT
GENERIC_01	DRILLING_SURFACE	ACQ - RT
HKLA	DRILLING_SURFACE	ACQ - RT
OBTM	DnMWorkflow	ACQ - RT
ROP	DRILLING_SURFACE	ACQ - RT
RPM	DRILLING_SURFACE	ACQ - RT
SHKPK	TELE825:TELE825	ACQ - RT
SHKRSK	TELE825:TELE825	ACQ - RT
SPPA	DRILLING_SURFACE	ACQ - RT
STICK	TELE825:TELE825	ACQ - RT
STOR	DRILLING_SURFACE	ACQ - RT
SWOB	DRILLING_SURFACE	ACQ - RT
TEMP_DNI	TELE825:TELE825	ACQ - RT
TFLO	DRILLING_SURFACE	ACQ - RT
TRPM	TELE825:TELE825	ACQ - RT
VIB_LAT	TELE825:TELE825	ACQ - RT
VIB_X	TELE825:TELE825	ACQ - RT

High Stick	 Shock Risk
	Shock Peak
Surface Torque (STOR)	Shock Risk (SHKRSK)





07:30:00

08:00:00

08:30:00

09:00:00

09:30:00

10:00:00

10:30:00

11:00:00

11:30:00

Jan, 26  
12:00

12:30:00

SWOB

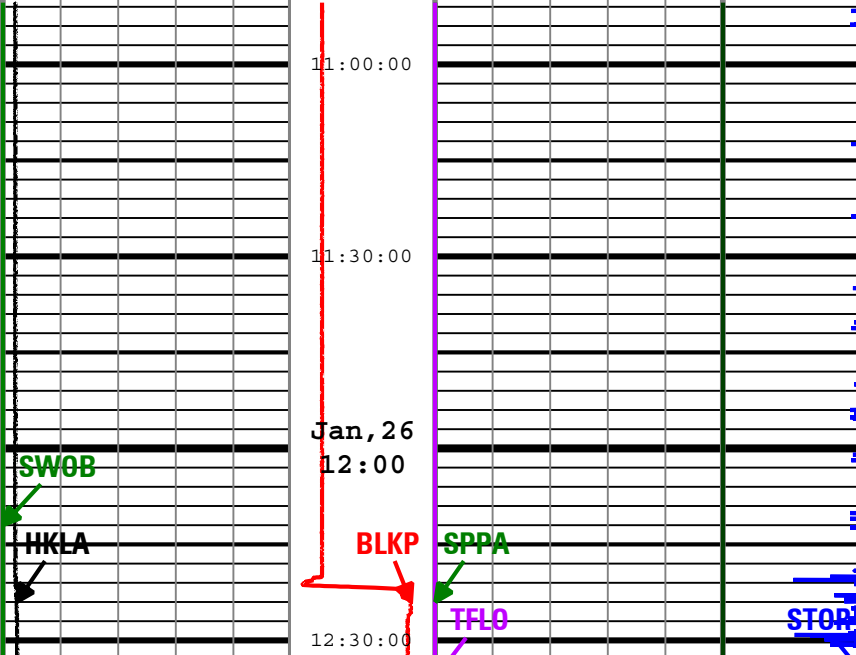
HKLA

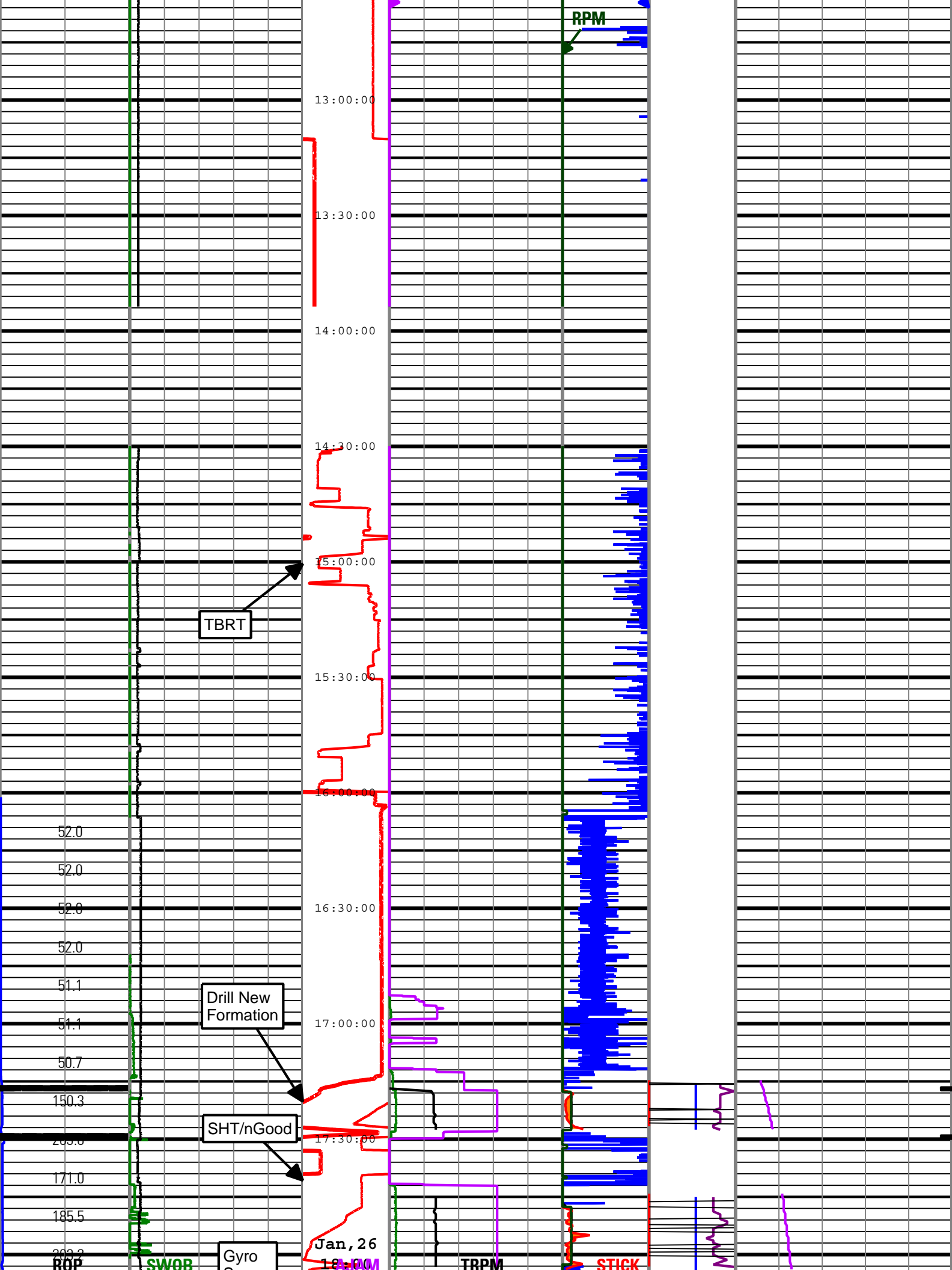
BLKP

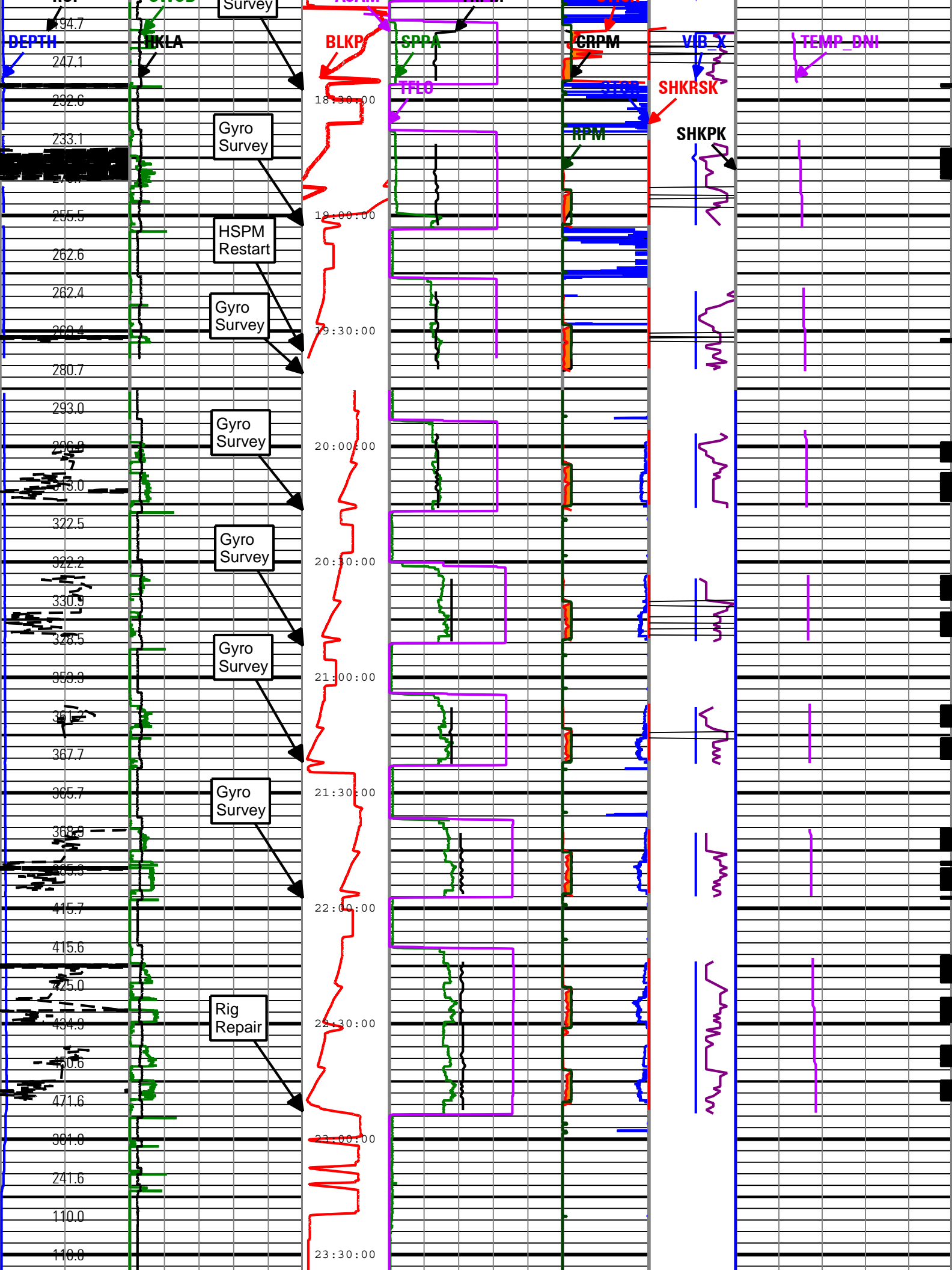
SPPA

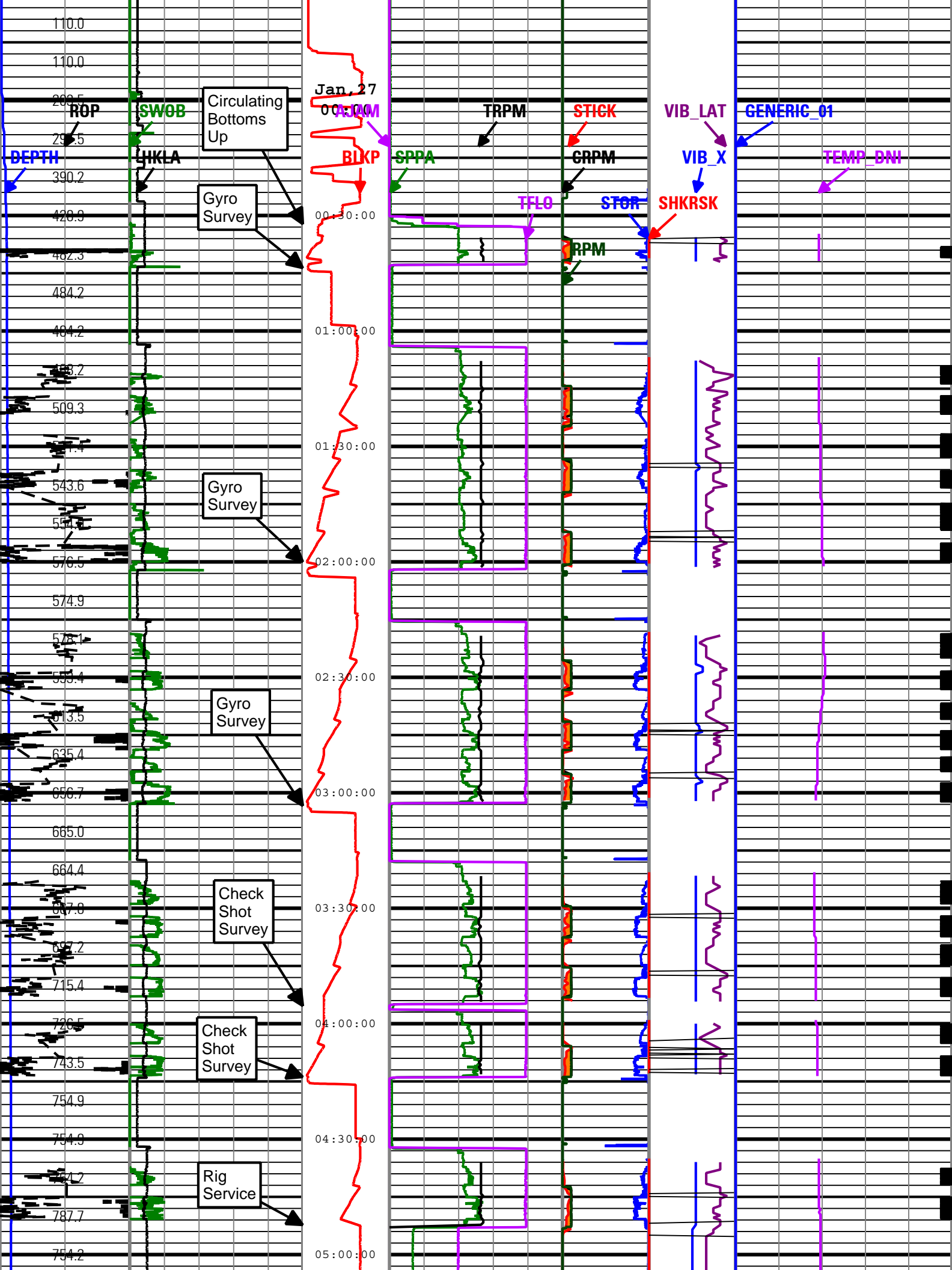
TFLO

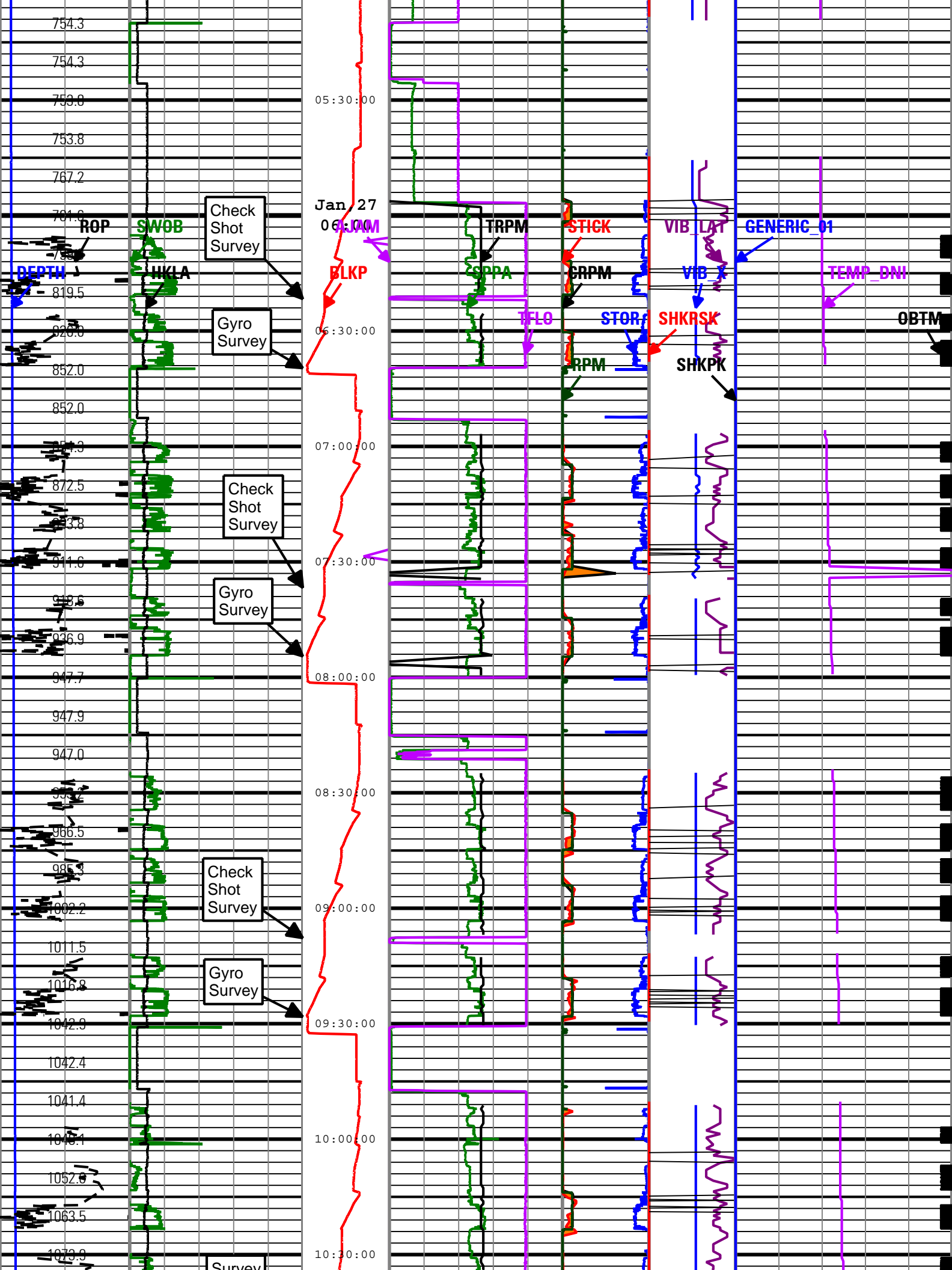
STOP

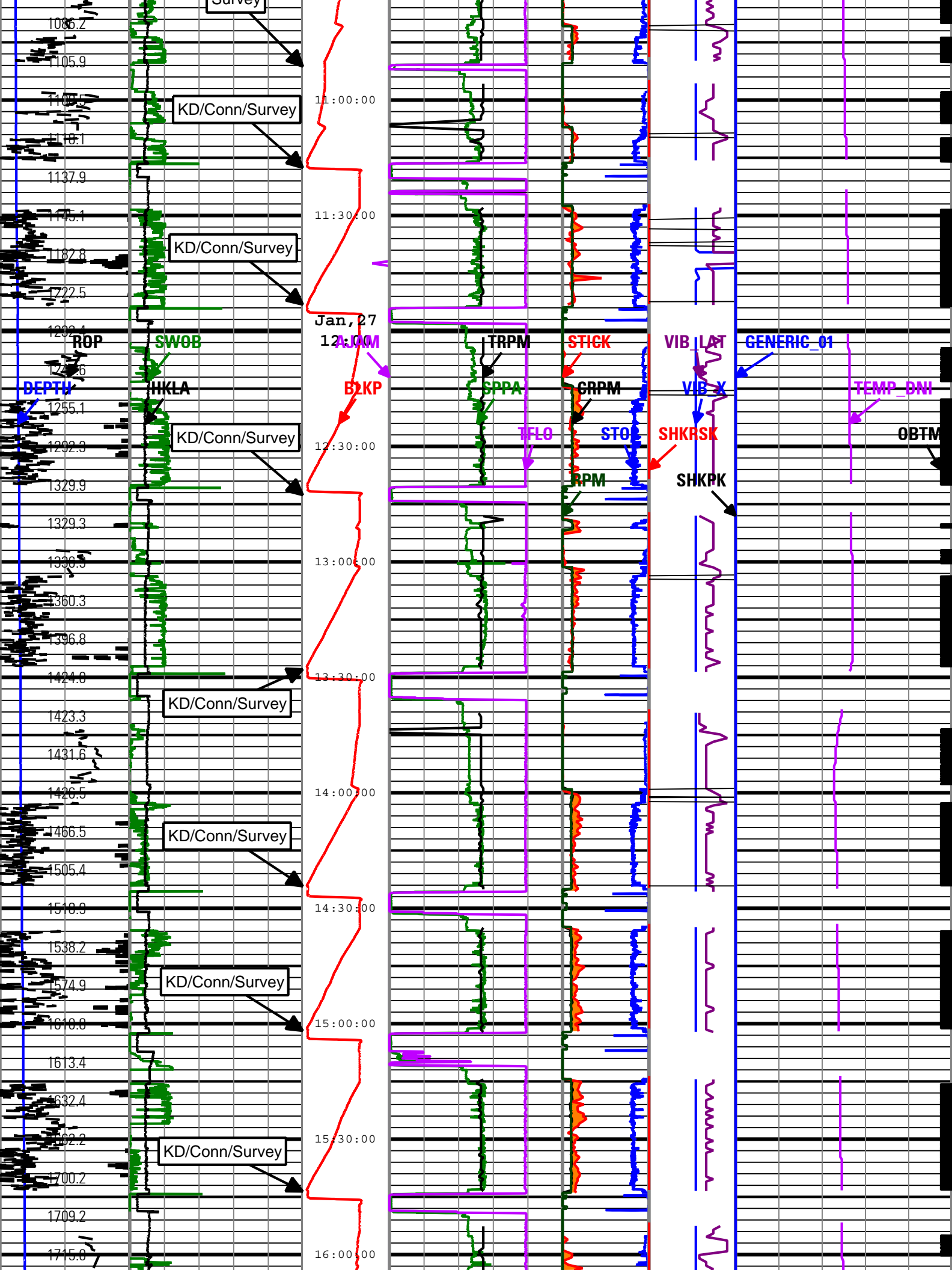


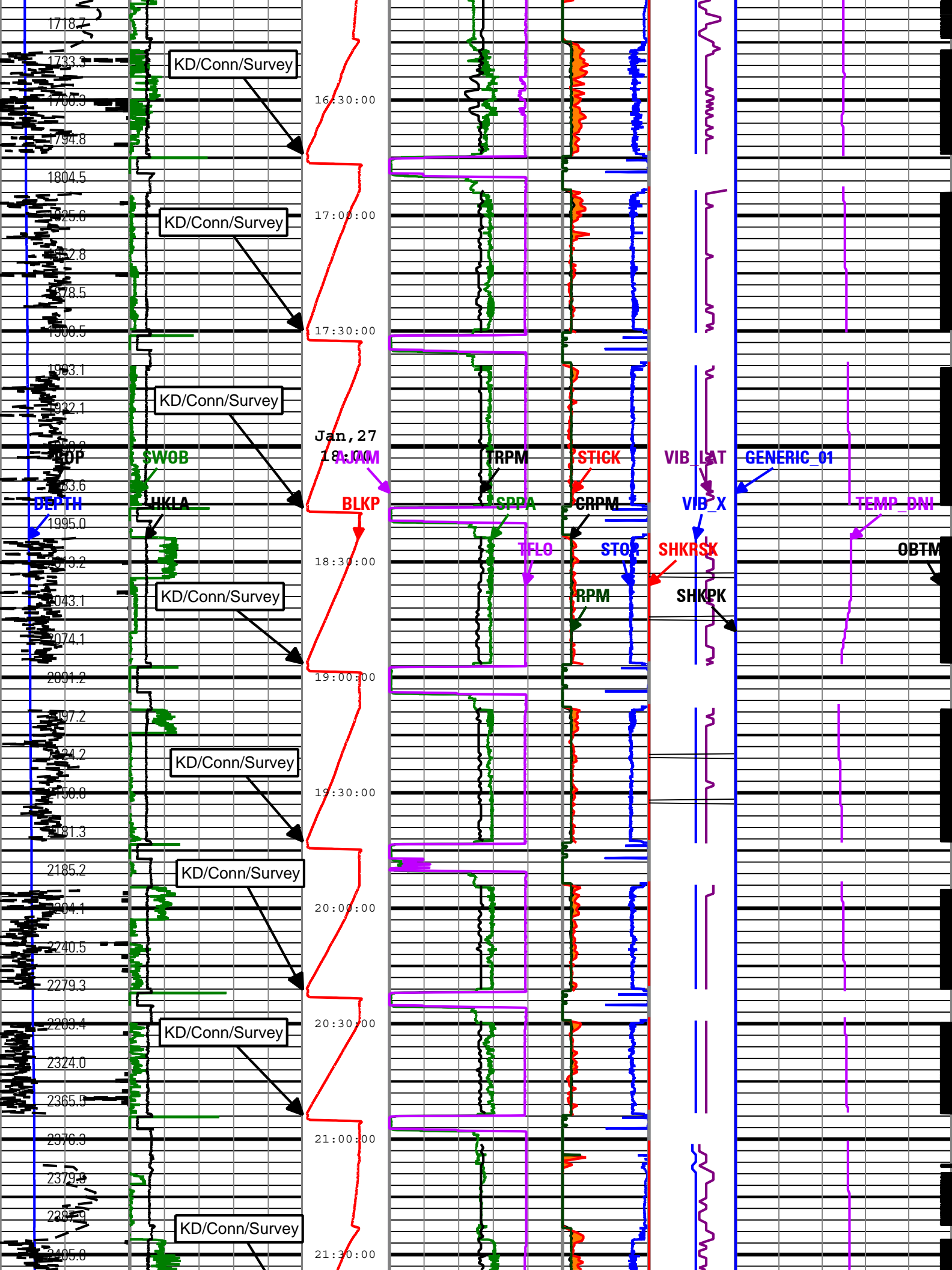


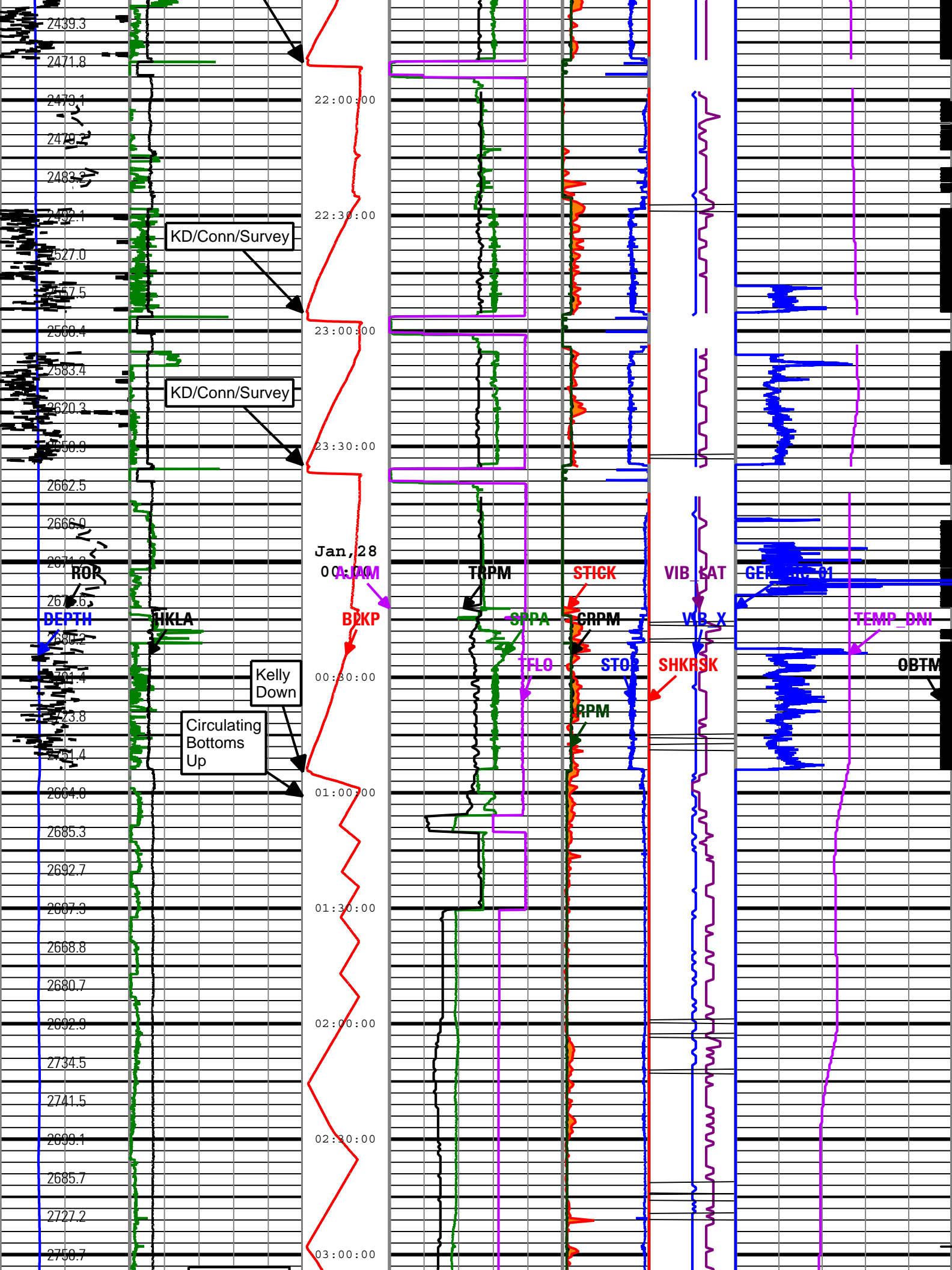


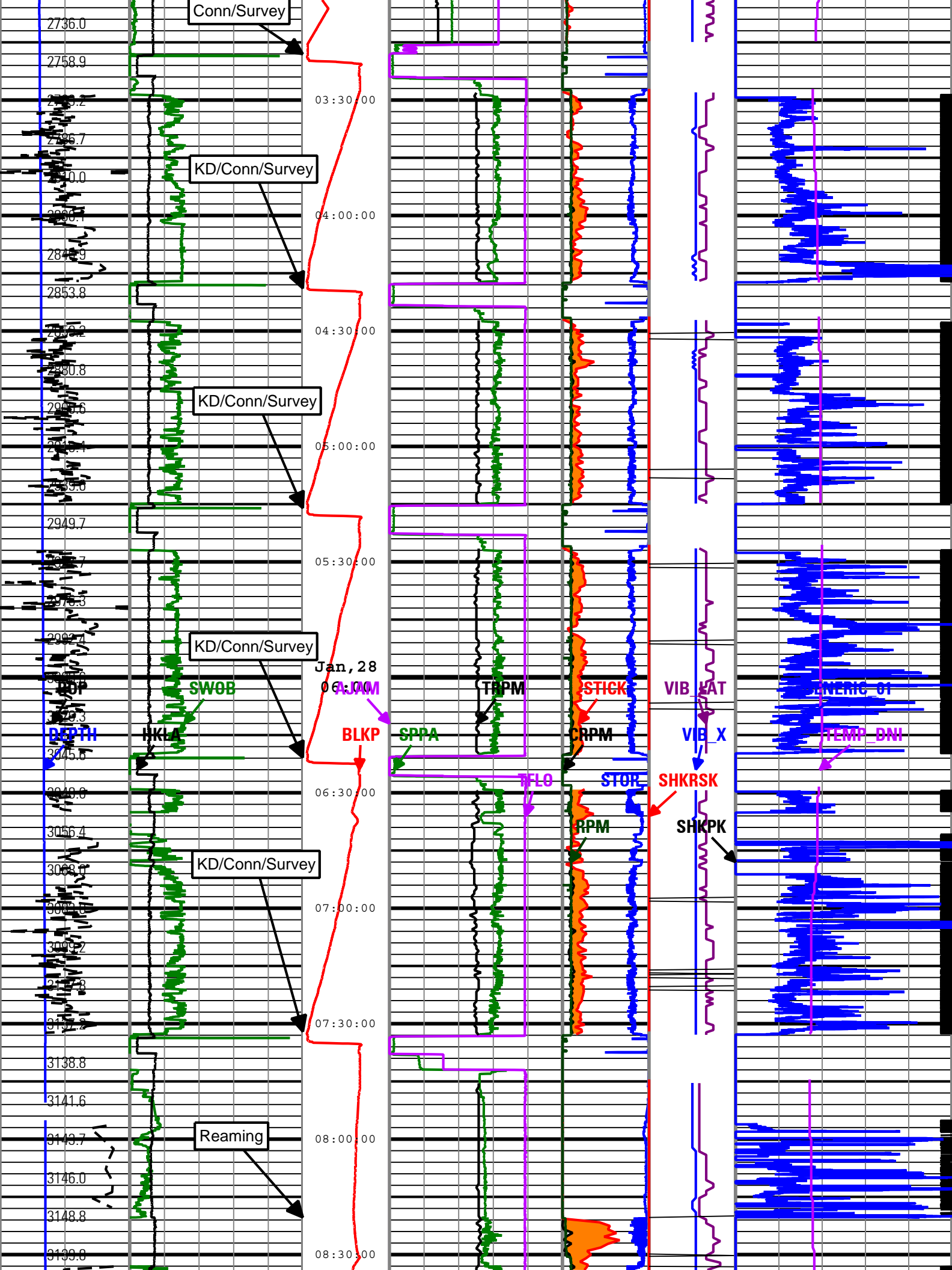


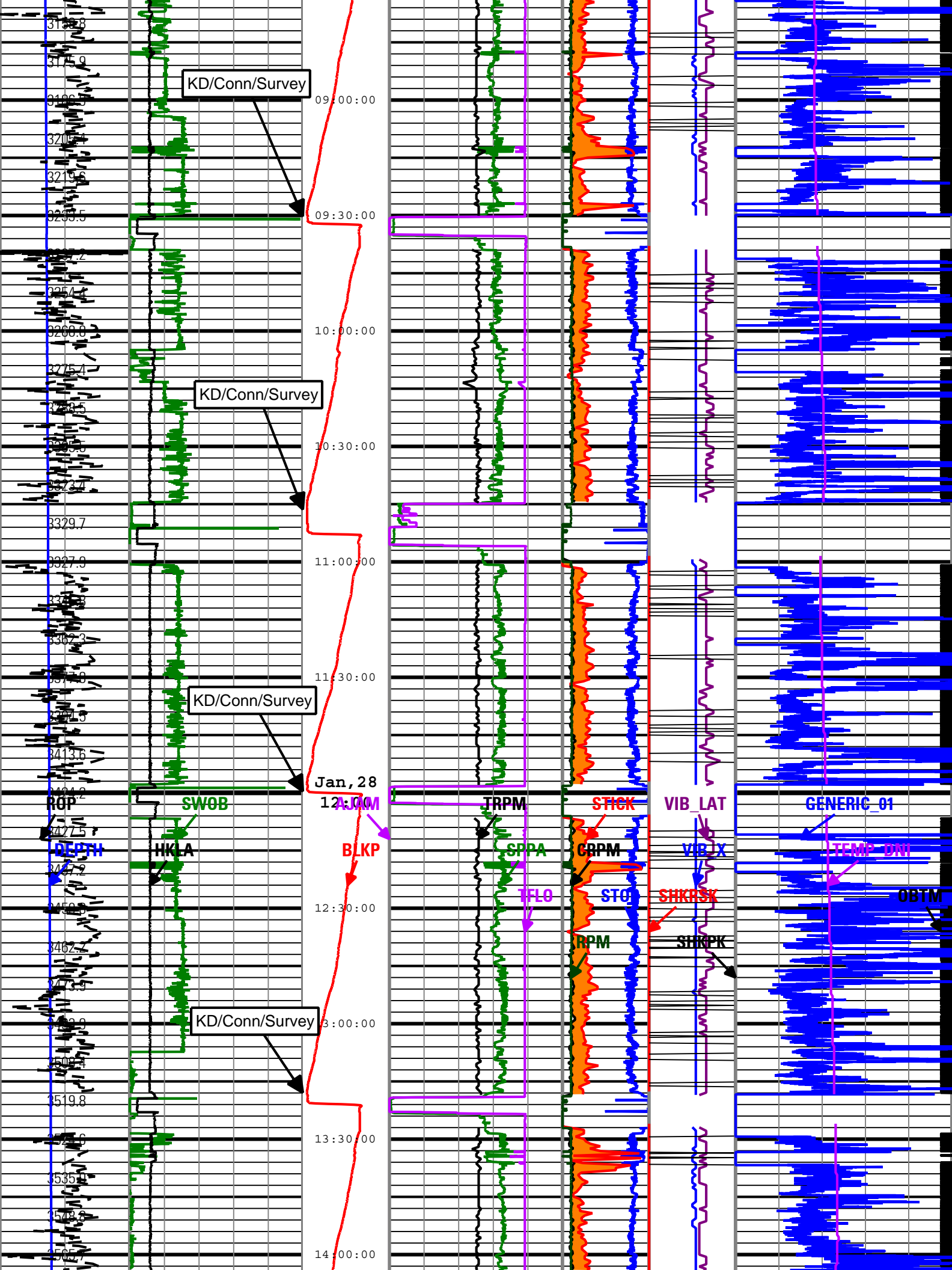


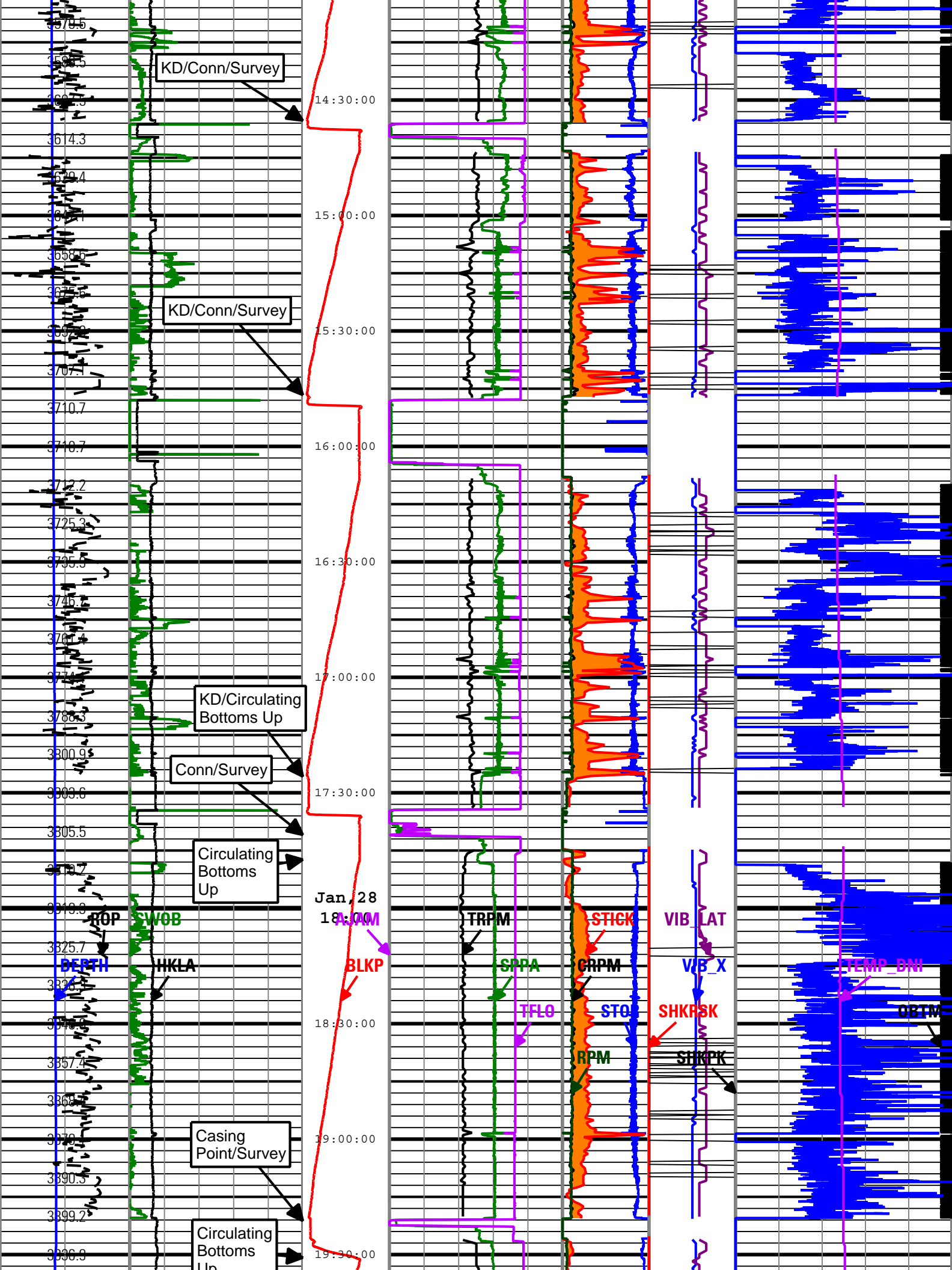


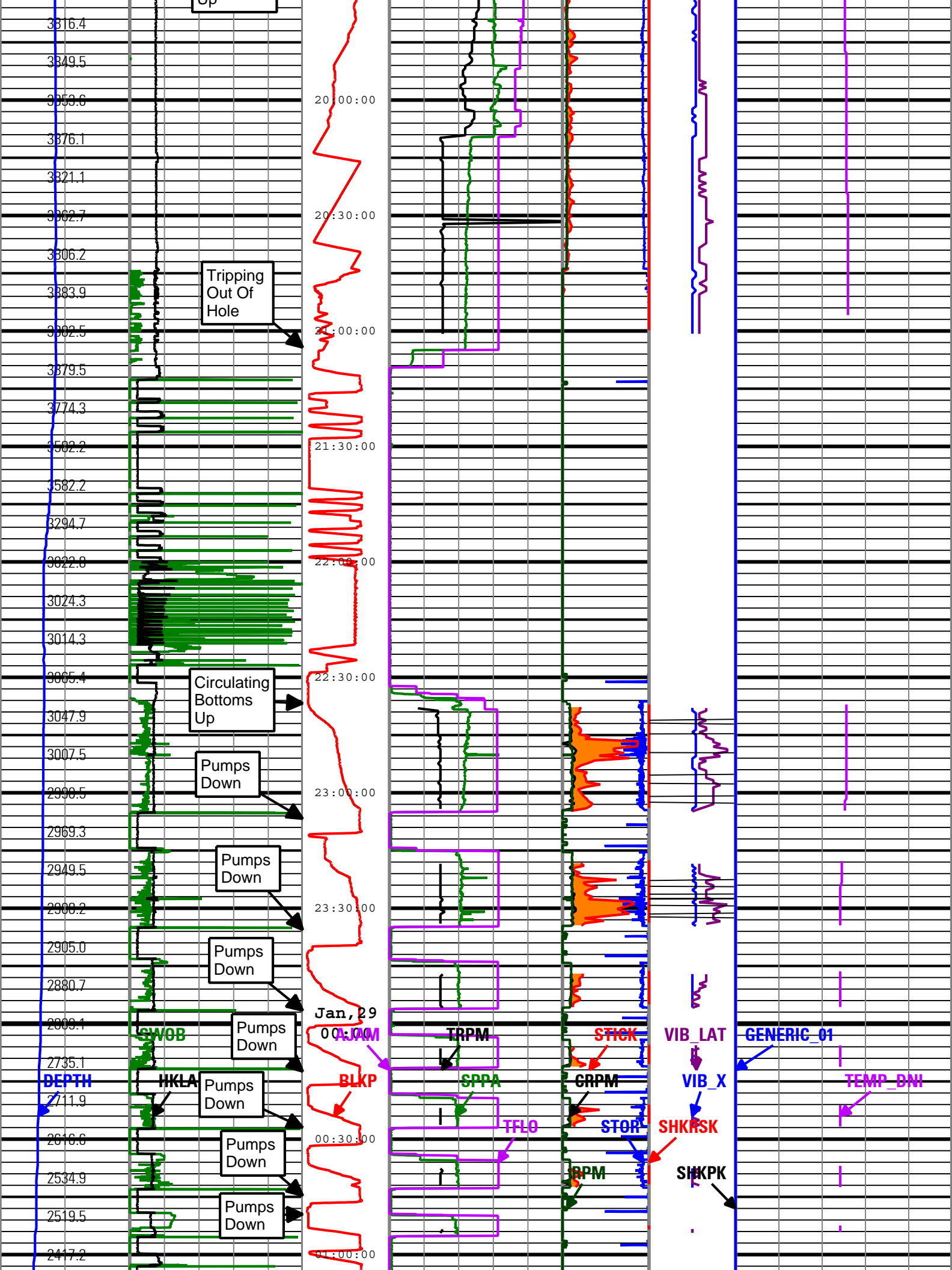


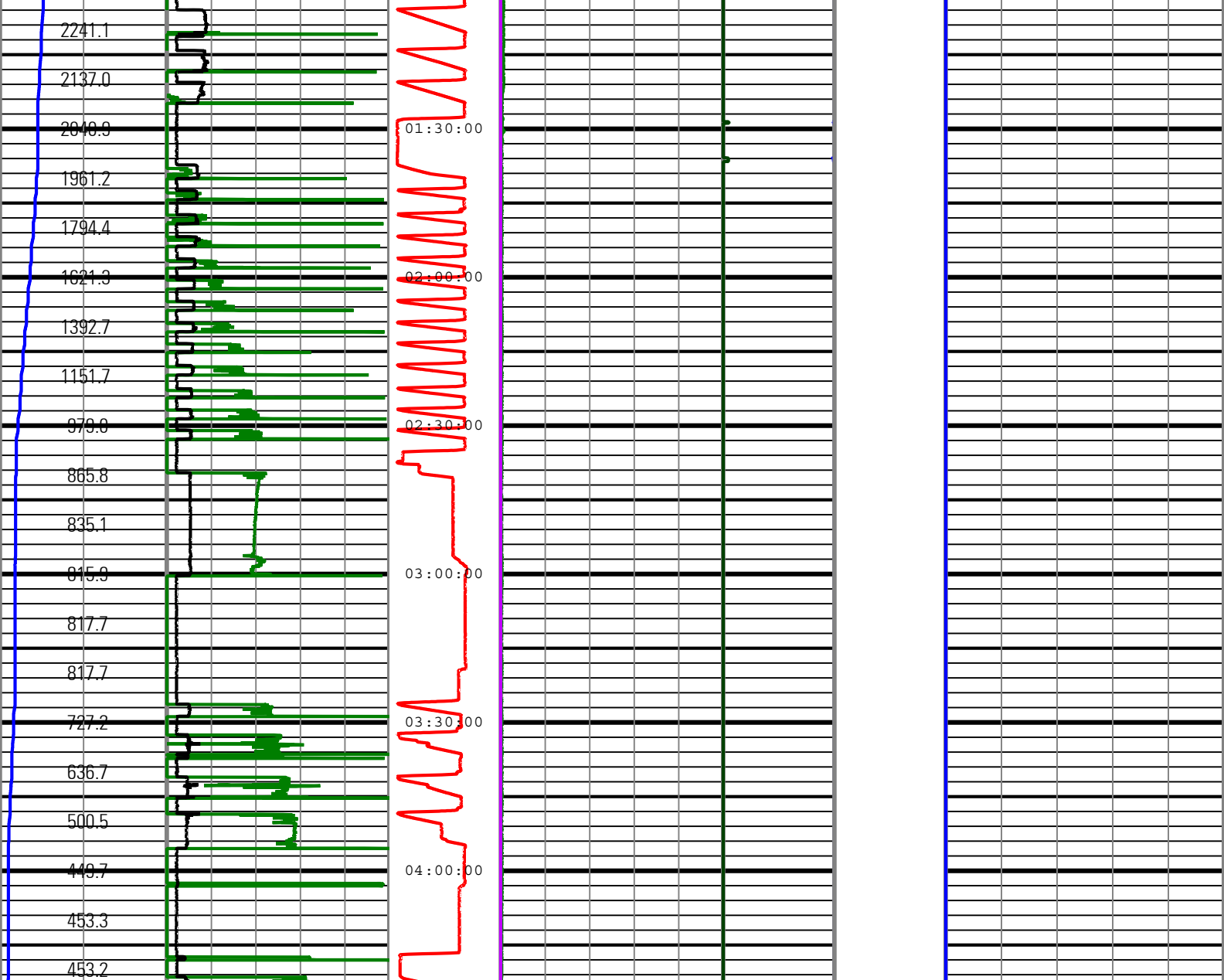












Depth Index (DEPTH) ft	Surface Weight On Bit (SWOB)	Number of Anti-Jams Detected (AJAM)	Standpipe Pressure (SPPA)	High Stick	Shock Risk	Bit on Bottom Flag
0 ft 9000	0 1000 lbf 100	10 0	0 psi 5000	Surface Torque (STOR)	Shock Peak	Generic Channel One (GENERIC_01)
Rate of Penetration (ROP)	Average Hookload (HKLA)	Height of block above rig floor (BLKP)	Total flow rate of all active pumps (TFLO)	75 0	Shock Risk (SHKRSK)	Direction and Inclination Sensor Temperature (TEMP_DNI)
300 ft/h 0	0 1000 lbf 1000	-10 ft 150	0 gal/min 1000	1000 ft.lbf	0 5	20 degF 220
			MWD Turbine Rotation Speed (TRPM)	Collar Rotational Speed (CRPM)	RMS Vibration, X-Axis (VIB_X)	
			1500 c/min 4500	0 c/min 400	-50 ft/s <sup>2</sup> 50	
				Stick Slip Indicator (STICK)	Transverse RMS Vibration (VIB_LAT)	
				0 c/min 400	-50 ft/s <sup>2</sup> 50	
				Rotational Speed (RPM)	Shock Peak (SHKPK)	
				0 c/min 400	200 ft/s <sup>2</sup> 0	

# 002

## Real Time Log

### Software Version

<b>Acquisition System</b>		<b>Version</b>	
MaxWell		1.2.8706.0	
Framework Patch		FWK-BGC-20100105-1.2.8706.1067	
Application Patch		APL-SRPC-DnM-1.2.8706.1045	
<b>Tool Elements</b>	<b>Description</b>	<b>Software Version</b>	<b>Firmware Version</b>
DRILLING_SURFACE	DRILLING_SURFACE	1.2.8706.1067	

### Pass Summary

Run Name	Pass Objective	Direction	Start	Stop	Acquisition Start Date	Acquisition Start Time
002	TimeLogicalAcq	Down	08-Apr-2010 21:56:31		08-Apr-2010	21:56:31

### Log 002: TimeLogicalAcq 4D908CDF-C0DD-452D-8352-7DDA927407BD

Description: TeleScope + ARC Drilling Mechanics Time RT Format: Log ( DrillMech\_Time\_RT ) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 10-Apr-2010 17:04:15

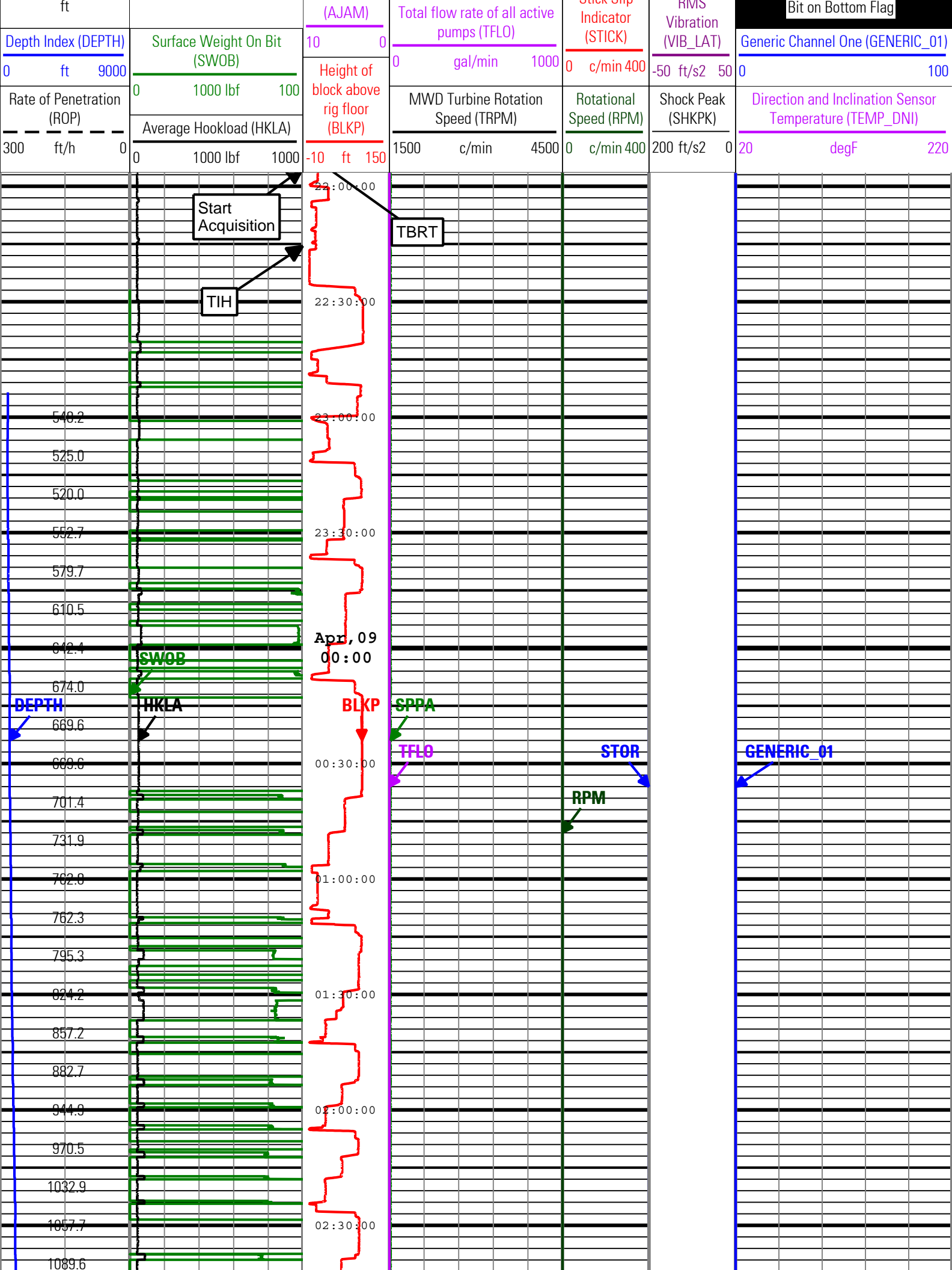
AJAM	TELE675:TELE675	ACQ - RT
BLKP	DRILLING_SURFACE	ACQ - RT
CRPM	TELE675:TELE675	ACQ - RT
DEPTH	DnMWorkflow	ACQ - RT
GENERIC_01	DRILLING_SURFACE	ACQ - RT
HKLA	DRILLING_SURFACE	ACQ - RT
OBTM	DnMWorkflow	ACQ - RT
ROP	DRILLING_SURFACE	ACQ - RT
RPM	DRILLING_SURFACE	ACQ - RT
SHKPK	TELE675:TELE675	ACQ - RT
SPPA	DRILLING_SURFACE	ACQ - RT
STICK	TELE675:TELE675	ACQ - RT
STOR	DRILLING_SURFACE	ACQ - RT
SWOB	DRILLING_SURFACE	ACQ - RT
TEMP_DNI	TELE675:TELE675	ACQ - RT
TFLO	DRILLING_SURFACE	ACQ - RT
TRPM	TELE675:TELE675	ACQ - RT
VIB_LAT	TELE675:TELE675	ACQ - RT
VIB_X	TELE675:TELE675	ACQ - RT

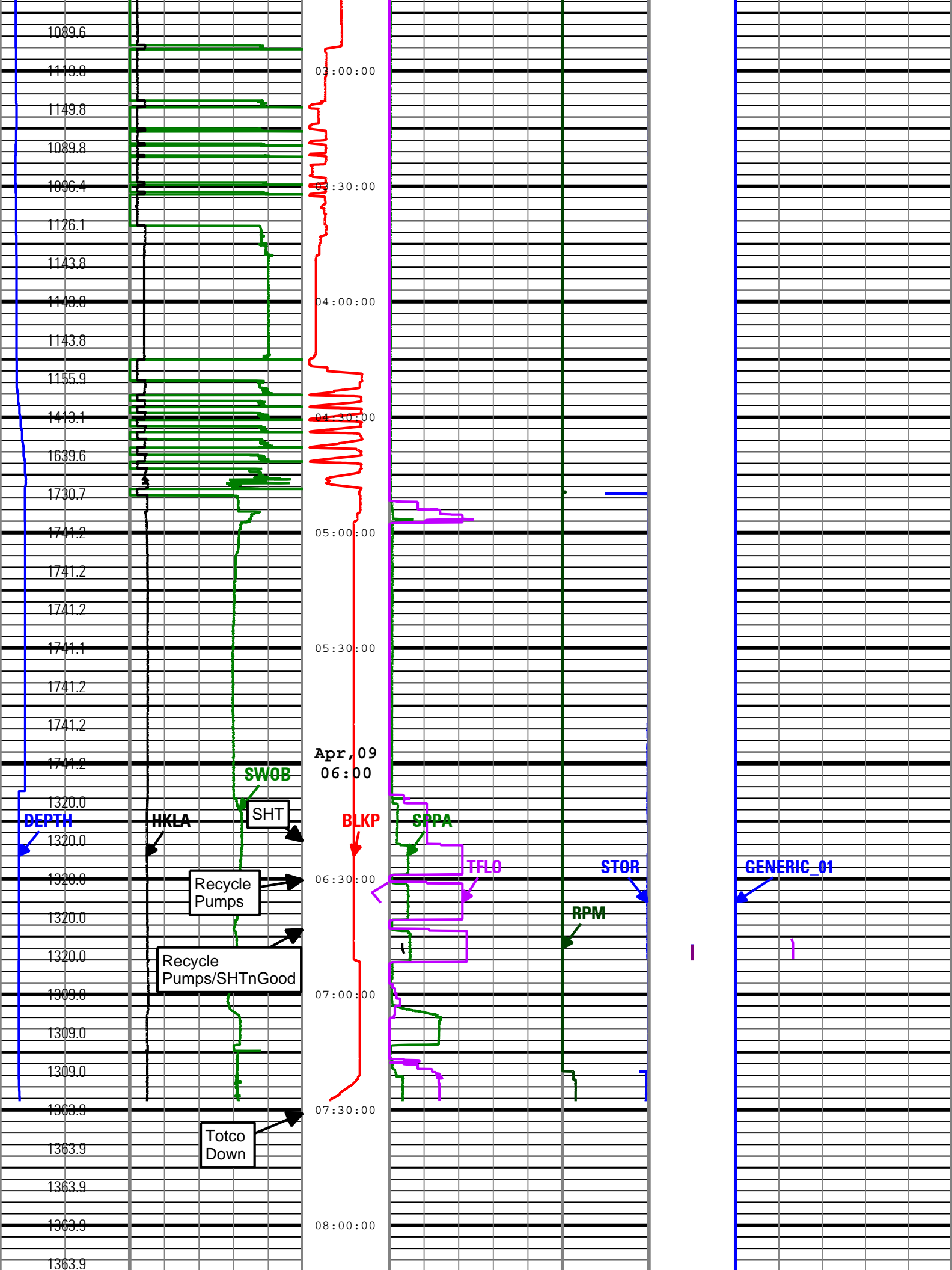
<b>High Stick</b>
Surface Torque (STOR)
75 0 1000 ft.lbf
Collar Rotational Speed (CRPM)
0 c/min 400
Stick Slip

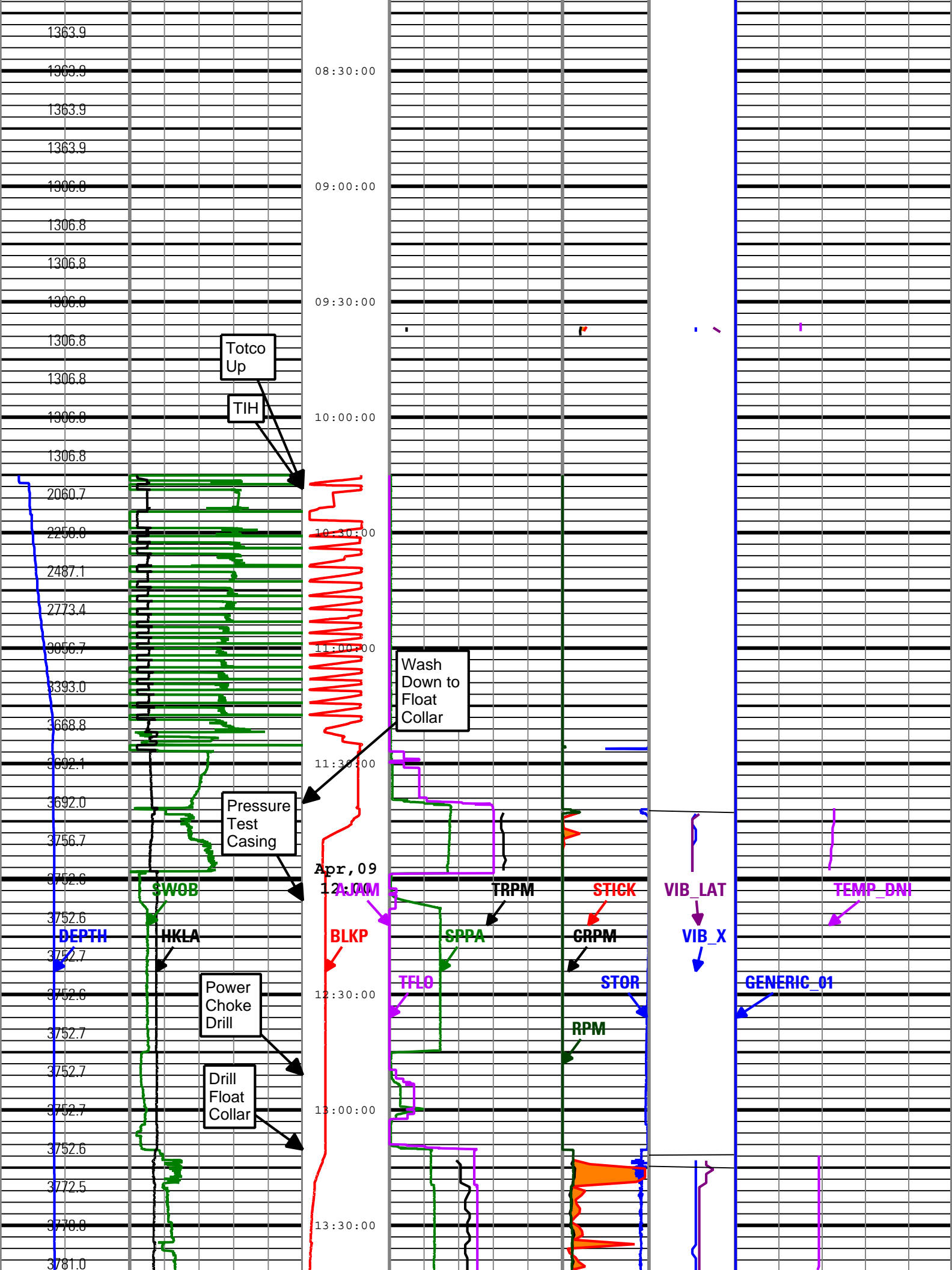
<b>Shock Risk</b>
Shock Peak
RMS Vibration, X-Axis (VIB_X)
-50 ft/s <sup>2</sup> 50
Transverse RMS

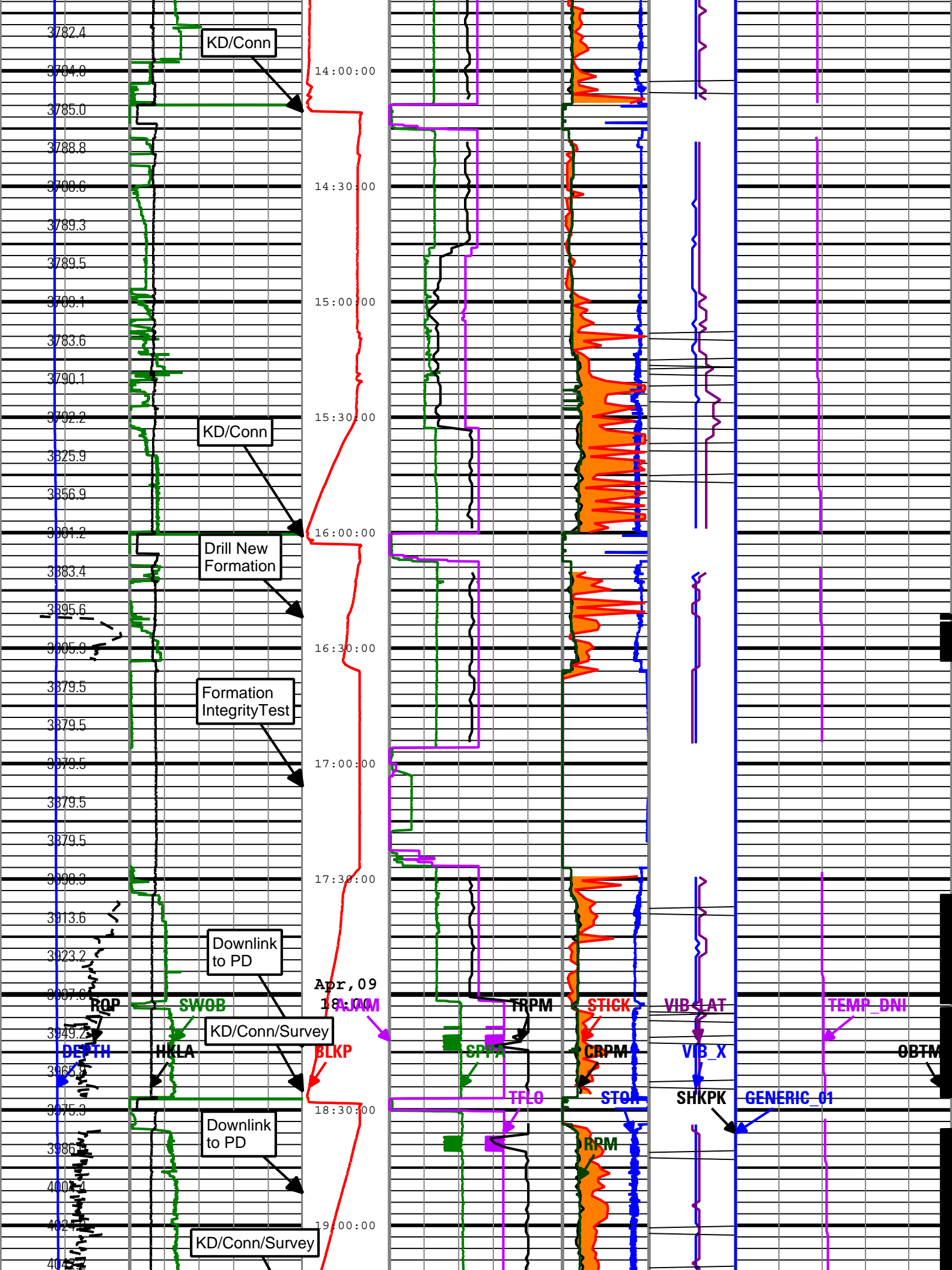
Number of Anti-Jams Detected	Standpipe Pressure (SPPA)
0	psi 5000

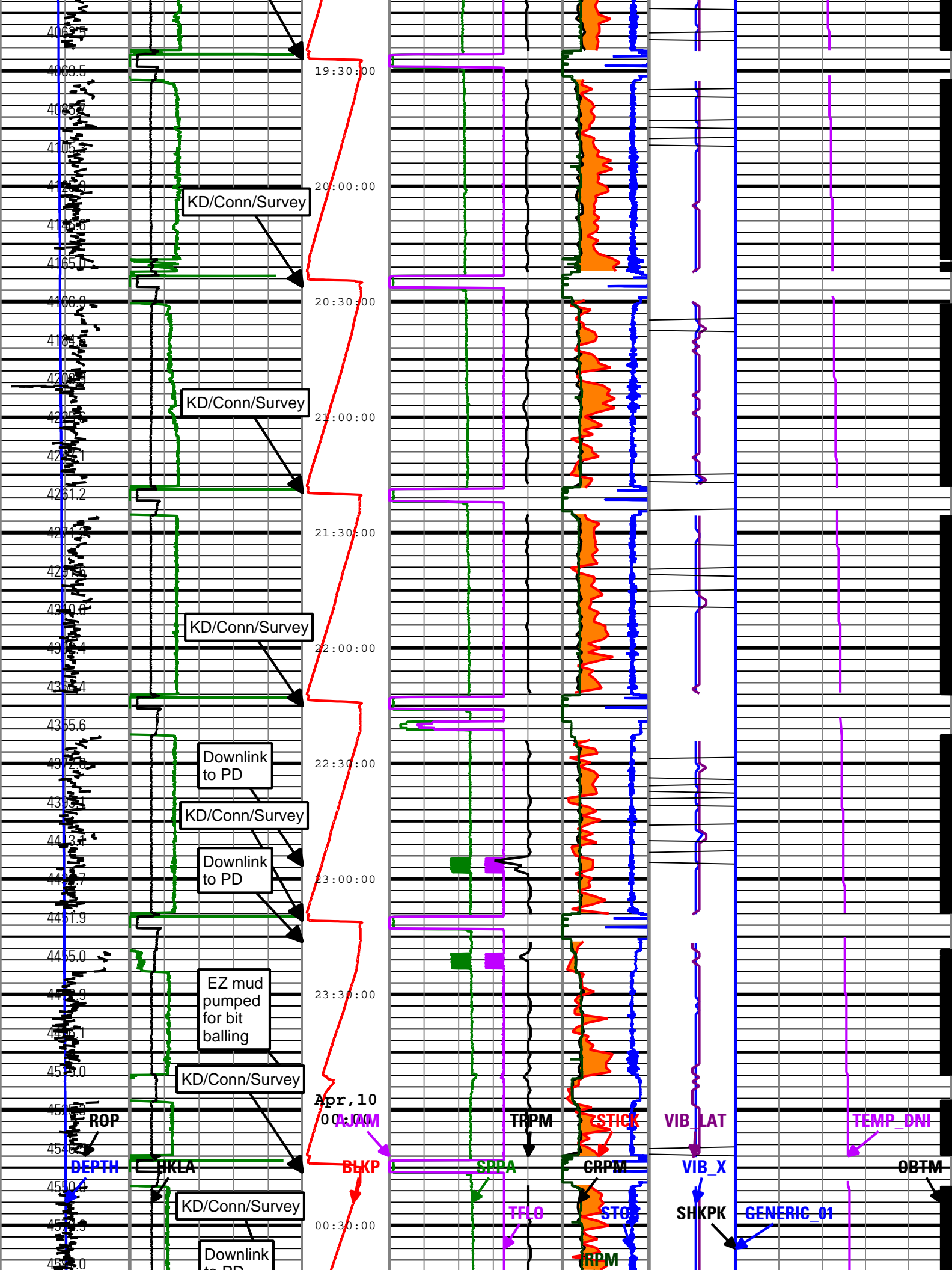
Depth Index (DEPTH)

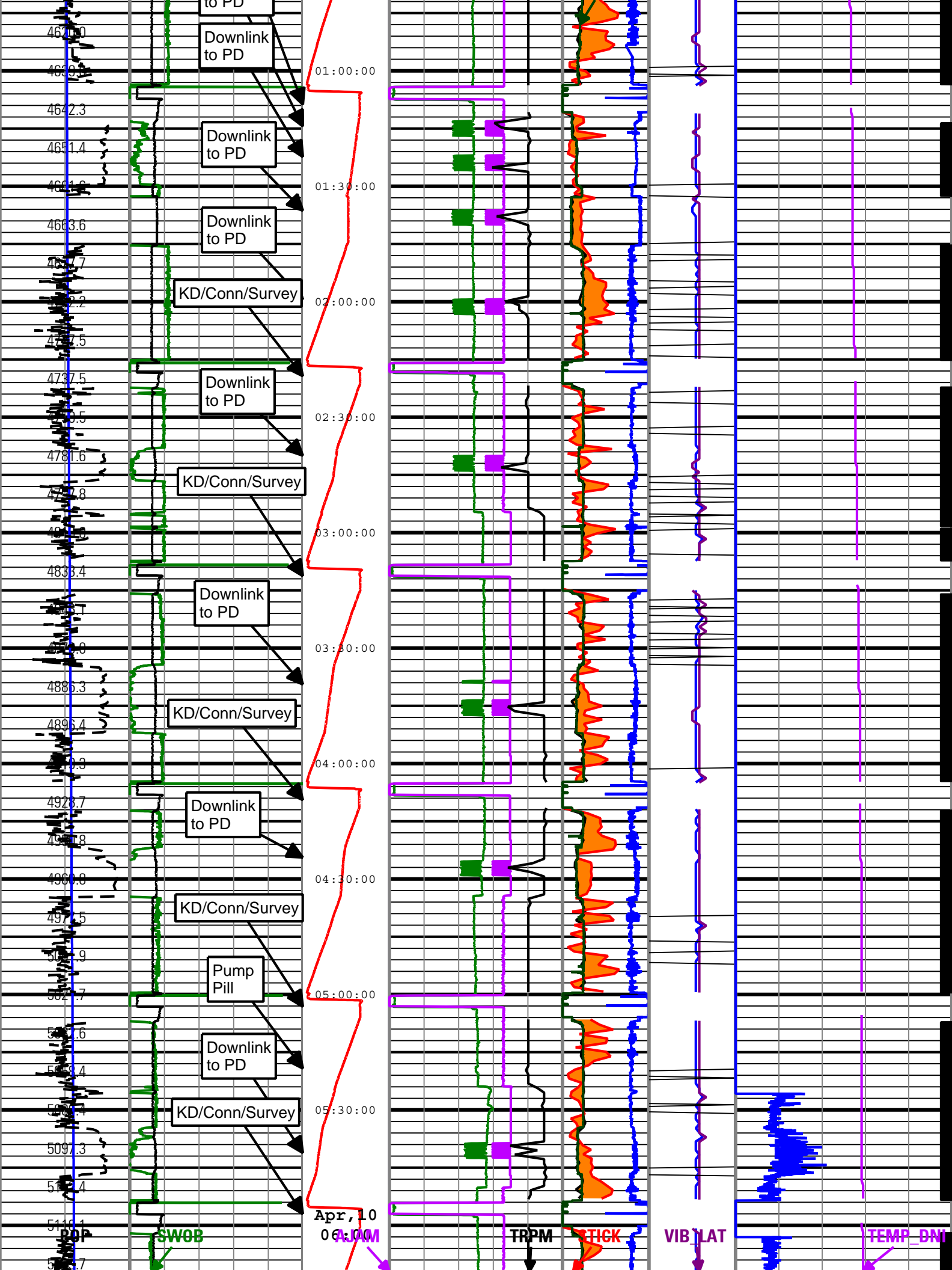












t0 PD

Downlink to PD

Downlink to PD

Downlink to PD

KD/Conn/Survey

Downlink to PD

KD/Conn/Survey

Downlink to PD

KD/Conn/Survey

Downlink to PD

KD/Conn/Survey

Pump Pill

Downlink to PD

KD/Conn/Survey

01:00:00

01:30:00

02:00:00

02:30:00

03:00:00

03:30:00

04:00:00

04:30:00

05:00:00

05:30:00

06:00:00

Apr, 10

4620.0

4639.5

4642.3

4651.4

4661.6

4663.6

4672.7

4682.2

4692.5

4737.5

4753.5

4781.6

4792.8

4811.6

4833.4

4842.1

4866.3

4886.3

4896.4

4917.3

4928.7

4950.8

4960.8

4972.5

5001.9

5022.7

5032.6

5042.4

5052.1

5097.3

5097.4

5110.1

5110.7

5110.7

POP

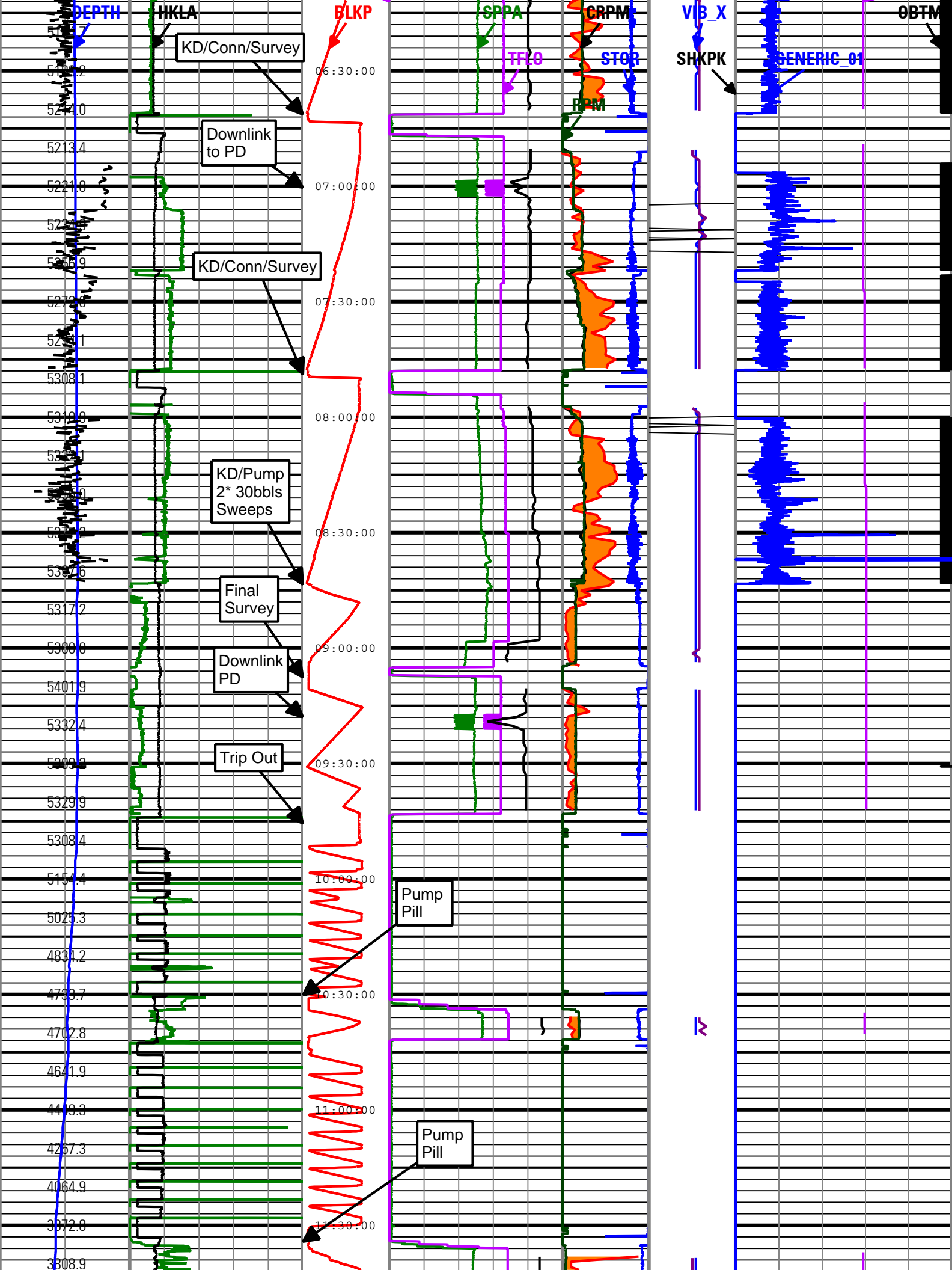
SWOB

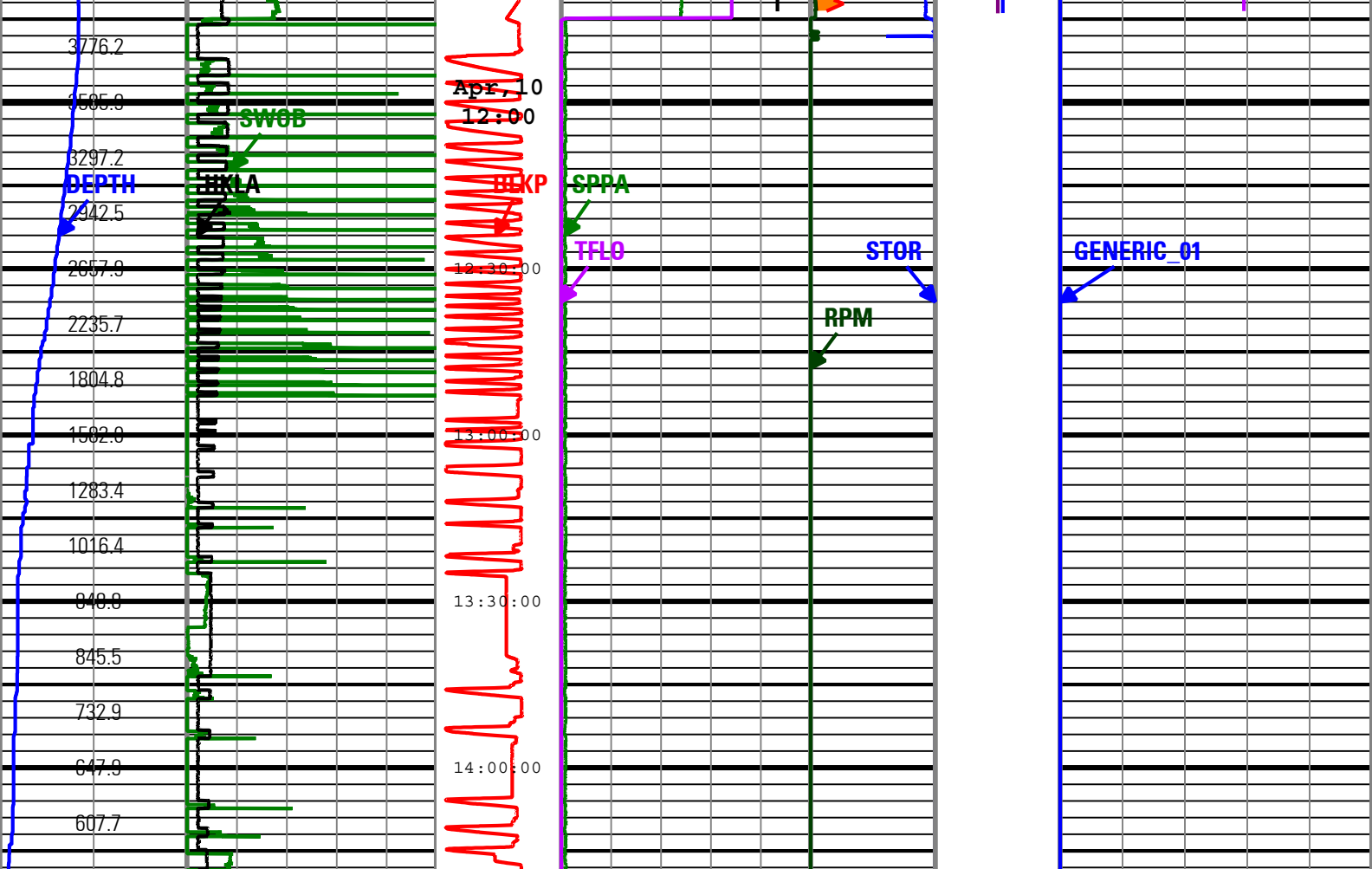
TRPM

TICK

VIB LAT

TEMP DNT





Depth Index (DEPTH) ft	Surface Weight On Bit (SWOB) 0 1000 lbf 100	Number of Anti-Jams Detected (AJAM) 10 0	Standpipe Pressure (SPPA) 0 psi 5000	High Stick	Shock Risk	Bit on Bottom Flag
Depth Index (DEPTH) 0 ft 9000	Average Hookload (HKLA) 0 1000 lbf 1000	Height of block above rig floor (BLKP) -10 ft 150	Total flow rate of all active pumps (TFLO) 0 gal/min 1000	Surface Torque (STOR) 75 0 1000 ft.lbf	Shock Peak	Generic Channel One (GENERIC_01) 0 100
Rate of Penetration (ROP) 300 ft/h 0			MWD Turbine Rotation Speed (TRPM) 1500 c/min 4500	Collar Rotational Speed (CRPM) 0 c/min 400	RMS Vibration, X-Axis (VIB_X) -50 ft/s <sup>2</sup> 50	Direction and Inclination Sensor Temperature (TEMP_DNI) 20 degF 220
				Stick Slip Indicator (STICK) 0 c/min 400	Transverse RMS Vibration (VIB_LAT) -50 ft/s <sup>2</sup> 50	
				Rotational Speed (RPM) 0 c/min 400	Shock Peak (SHKPK) 200 ft/s <sup>2</sup> 0	

Description: TeleScope + ARC Drilling Mechanics Time RT Format: Log ( DrillMech\_Time\_RT ) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 10-Apr-2010 17:04:15

Tool Control Parameters				
Parameter	Description	ToolPath	Value	Unit
OFFBTM_TH	Threshold for deciding whether the bit is off bottom		Time Zoned	ft

Time Zone Parameters			
Parameter	Value	Start	Stop
OFFBTM_TH	0	08 Apr 2010 21:56:21	08 Apr 2010 22:26:46

OFFBTM_TH	0	08-Apr-2010 21:56:31	08-Apr-2010 22:26:46
OFFBTM_TH	0.3	08-Apr-2010 22:26:46	10-Apr-2010 11:12:36

**Company:** ExxonMobil Oil Corporation

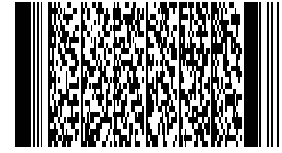
**Well:** PCU 297 11C3

**Field:** Piceance Creek

**County:** Rio Blanco

**State:** Colorado

**Country:** United States



**Schlumberger**

PERFORM - Drilling Mechanics

2 in / hr Time Based

Real Time Log