

Schlumberger

PERFORM - Drilling Mechanics

2 in / hr Time Based

Real Time Log

Company: ExxonMobil Oil Corporation

Well: Piceance Creek Unit 297 11B1 ST01BP00

Field: Piceance Creek

County: Rio Blanco

State: Colorado

Country: USA

Section: Intermediate

Township: 2S

Range: 97W

FL: NAD 27 Colorado Northern Zone

FL1: Y: 212916.22 ft Latitude: N 39° 53' 6.898"

FL2: X: 1231361.37 ft Longitude: W 108° 14' 21.798"

APIN: 051031137801

Rig Name: H&P 215

Rig Type: Flex 3

Log Measured From - Drill Floor: 7158.0 ft
Ground Level: 7131.0 ft



Permanent Datum - Mean Sea Level

Acquisition Dates: 27 Sep 09 to 28 Sep 09

Print Interval: 9/27/2009 10:41:33 AM to 9/29/2009 3:55:48 PM

Index Types: Time

Index Scales: 2" / 3600 secs

Depth Source: Driller's Depth

Depth Sensor: 3rd Party Depth

Conveyance: Drill Pipe

Print Type: Final

Spud Date: 4/10/2009

Other Services:

Directional Drilling



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.

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Run 1

Software Version

| | | | |
|---------------------------|--------------------|--------------------------------|-------------------------|
| Acquisition System | | Version | |
| MaxWell | | 1.2.8706.0 | |
| Framework Patch | | FWK-BGC-20090709-1.2.8706.1016 | |
| Application Patch | | APL-BGC-DnM-1.2.8706.1021 | |
| Tool Elements | Description | Software Version | Firmware Version |
| DRILLING_SURFACE | DRILLING_SURFACE | 1.2.8706.1016 | |

Pass Summary

| Run Name | Pass Objective | Direction | Start | Stop | Acquisition Start Date | Acquisition Start Time |
|----------|----------------|-----------|-------------------------|-------------------------|------------------------|------------------------|
| Run 1 | TimeLogicalAcq | Down | 27-Sep-2009 10:41:25 | 28-Sep-2009 05:31:02 | 27-Sep-2009 | 10:41:25 |

Log

Run 1: TimeLogicalAcq 01C98A77-0F7F-4220-A07C-CF74730A9EB6

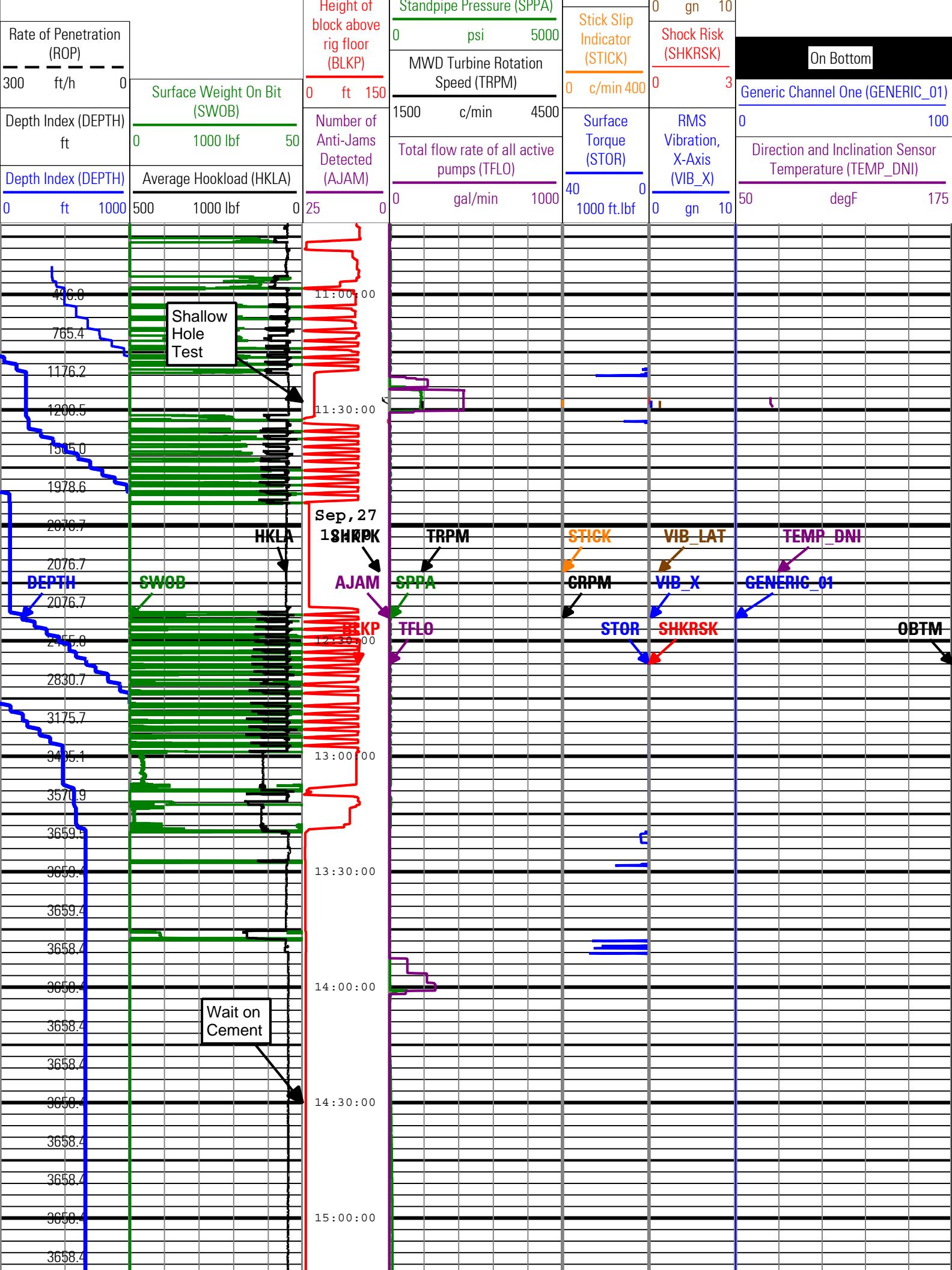
Description: PowerPulse/APWD Drilling Mechanics Time Format: Log (APWD Log) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 29-Sep-2009 16:37:58

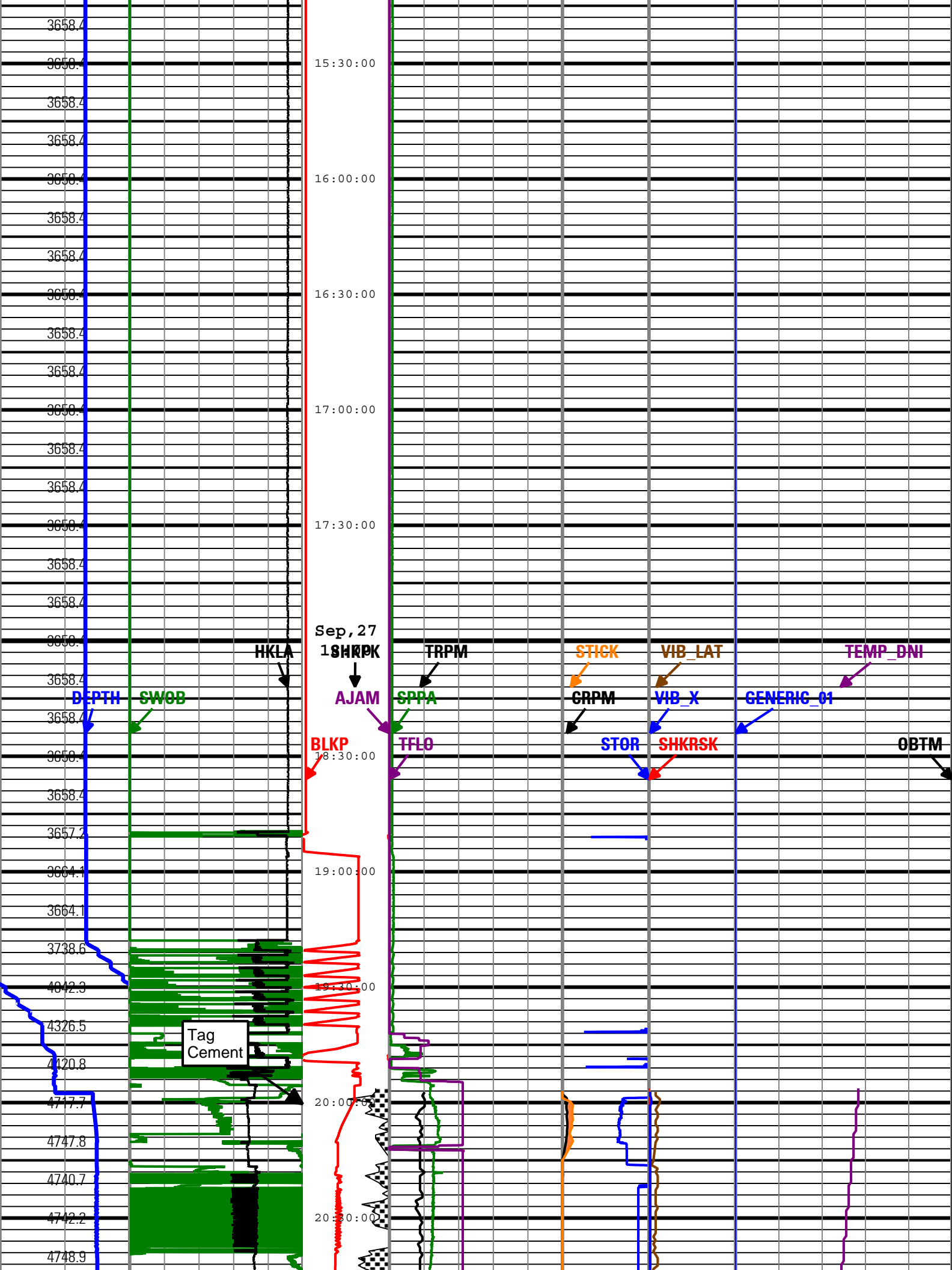
| | | |
|------------|------------------|----------|
| AJAM | TELE675:TELE675 | ACQ - RT |
| BLKP | DRILLING_SURFACE | ACQ - RT |
| CRPM | TELE675:TELE675 | ACQ - RT |
| DEPTH | DnMWorkflow | ACQ - RT |
| GENERIC_01 | DRILLING_SURFACE | ACQ - RT |
| HKLA | DRILLING_SURFACE | ACQ - RT |
| OBTM | DnMWorkflow | ACQ - RT |
| ROP | DRILLING_SURFACE | ACQ - RT |
| SHKPK | TELE675:TELE675 | ACQ - RT |
| SHKRSK | 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 |

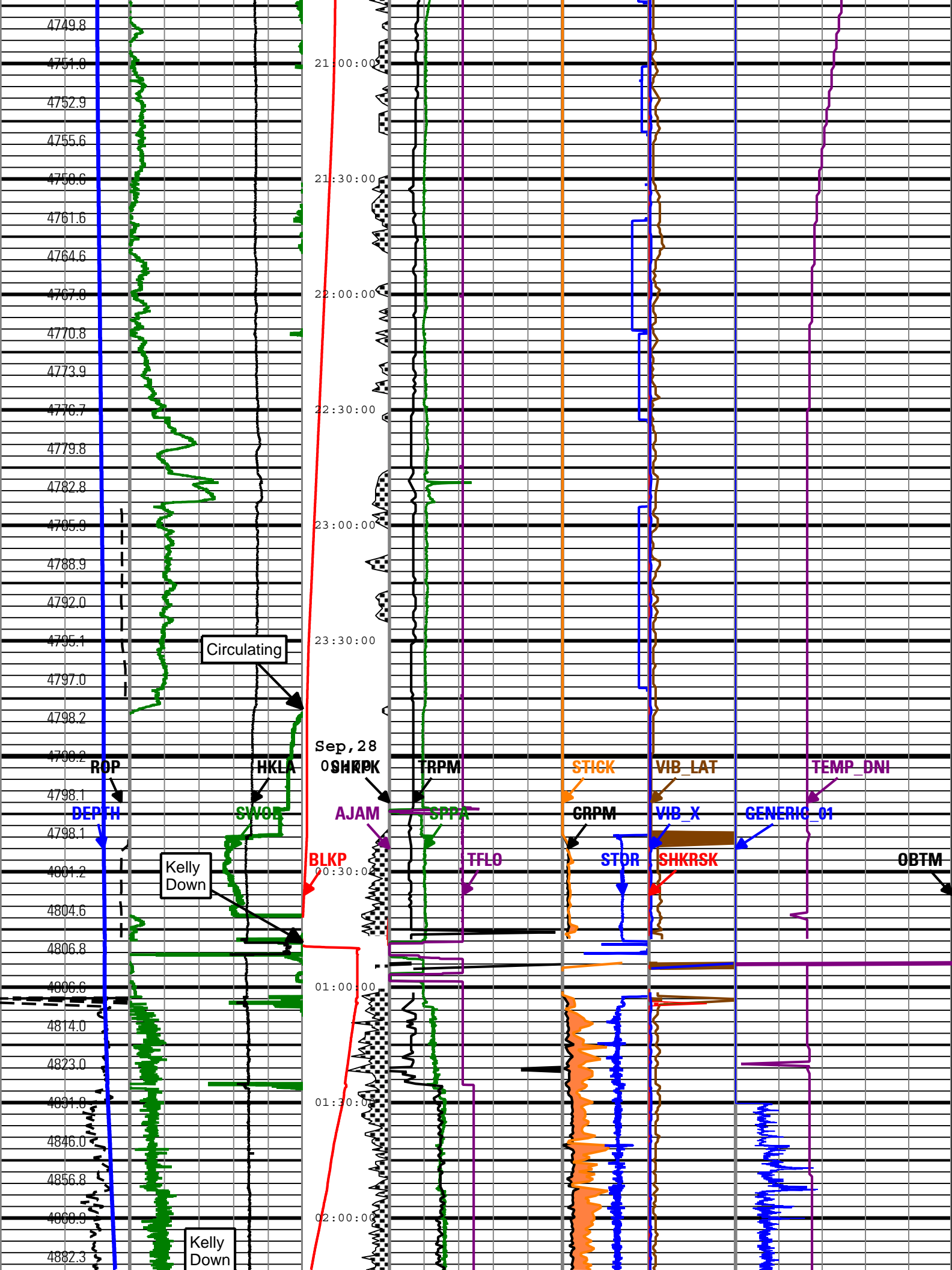
| |
|--------------------|
| Shock Peak |
| Shock Peak (SHKPK) |
| 200 gn 0 |

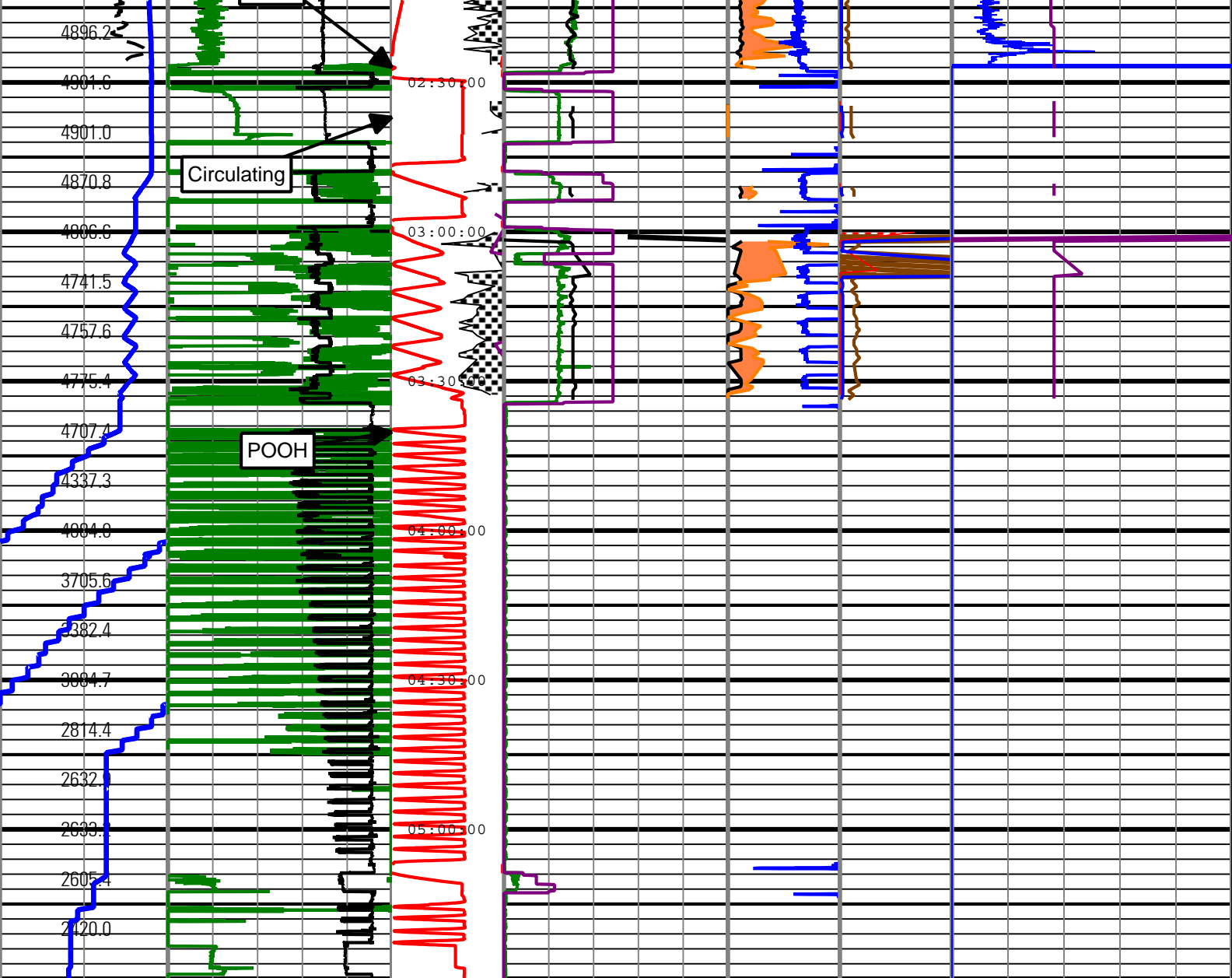
| |
|--------------------------------|
| High Stick |
| Collar Rotational Speed (CRPM) |
| 0 c/min 400 |

| |
|------------------------------------|
| Shock Risk |
| Transverse RMS Vibration (VIB_LAT) |









| | | | | | | |
|---|---|--|--|---|---|--|
| Rate of Penetration (ROP) 300 ft/h 0 | Surface Weight On Bit (SWOB) 0 1000 lbf 50 | Shock Peak (SHKPK) 200 gn 0 | Standpipe Pressure (SPPA) 0 psi 5000 | High Stick 0 c/min 400 | Shock Risk 0 gn 10 | On Bottom Generic Channel One (GENERIC_01) 0 100 |
| Depth Index (DEPTH) ft | Average Hookload (HKLA) 500 1000 lbf 0 | Height of block above rig floor (BLKP) 0 ft 150 | MWD Turbine Rotation Speed (TRPM) 1500 c/min 4500 | Stick Slip Indicator (STICK) 0 c/min 400 | Transverse RMS Vibration (VIB_LAT) 0 gn 10 | Direction and Inclination Sensor Temperature (TEMP_DNI) 50 degF 175 |
| Depth Index (DEPTH) 0 ft 1000 | | Number of Anti-Jams Detected (AJAM) 25 0 | Total flow rate of all active pumps (TFLO) 0 gal/min 1000 | Surface Torque (STOR) 40 1000 ft.lbf 0 | Shock Risk (SHKRSK) 0 3 | |
| | | | | | RMS Vibration, X-Axis (VIB_X) 0 gn 10 | |

Description: PowerPulse/APWD Drilling Mechanics Time Format: Log (APWD Log) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 29-Sep-2009 16:37:58

| Tool Control Parameters | | | | |
|-------------------------|--|----------|-------|------|
| Parameter | Description | ToolPath | Value | Unit |
| OFFBTM_TH | Threshold for deciding whether the bit is off bottom | | 0 | ft |

Software Version

| | | | |
|---------------------------|--------------------|--------------------------------|-------------------------|
| Acquisition System | | Version | |
| MaxWell | | 1.2.8706.0 | |
| Framework Patch | | FWK-BGC-20090709-1.2.8706.1016 | |
| Application Patch | | APL-BGC-DnM-1.2.8706.1021 | |
| Tool Elements | Description | Software Version | Firmware Version |
| APWD | M10 APWD | 1.2.8706.1021 | |
| DRILLING_SURFACE | DRILLING_SURFACE | 1.2.8706.1016 | |

Pass Summary

| Run Name | Pass Objective | Direction | Start | Stop | Acquisition Start Date | Acquisition Start Time |
|----------|----------------|-----------|-------------------------|------|------------------------|------------------------|
| Run 2 | TimeLogicalAcq | Down | 28-Sep-2009 10:04:27 | | 28-Sep-2009 | 10:04:27 |

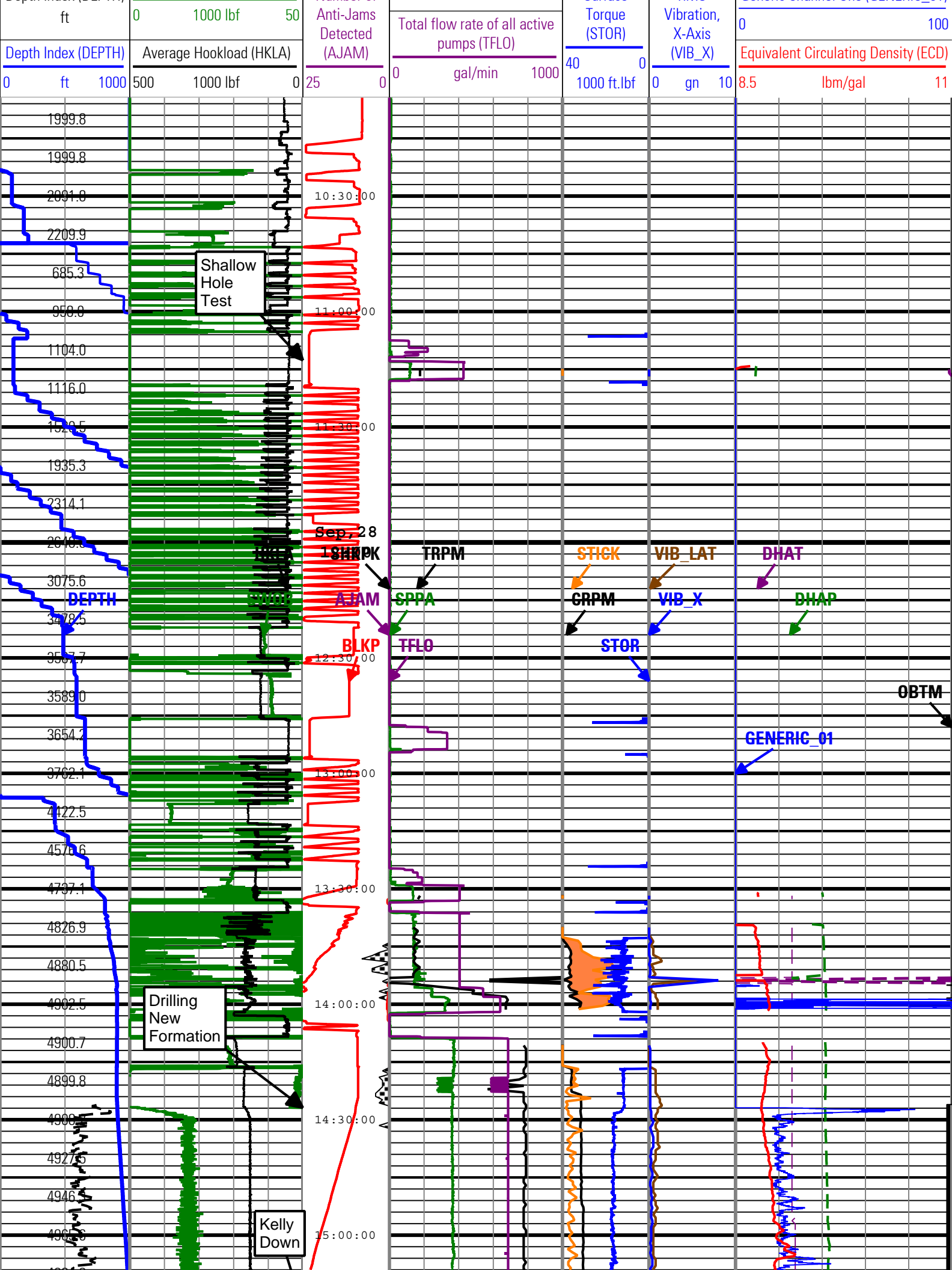
Log

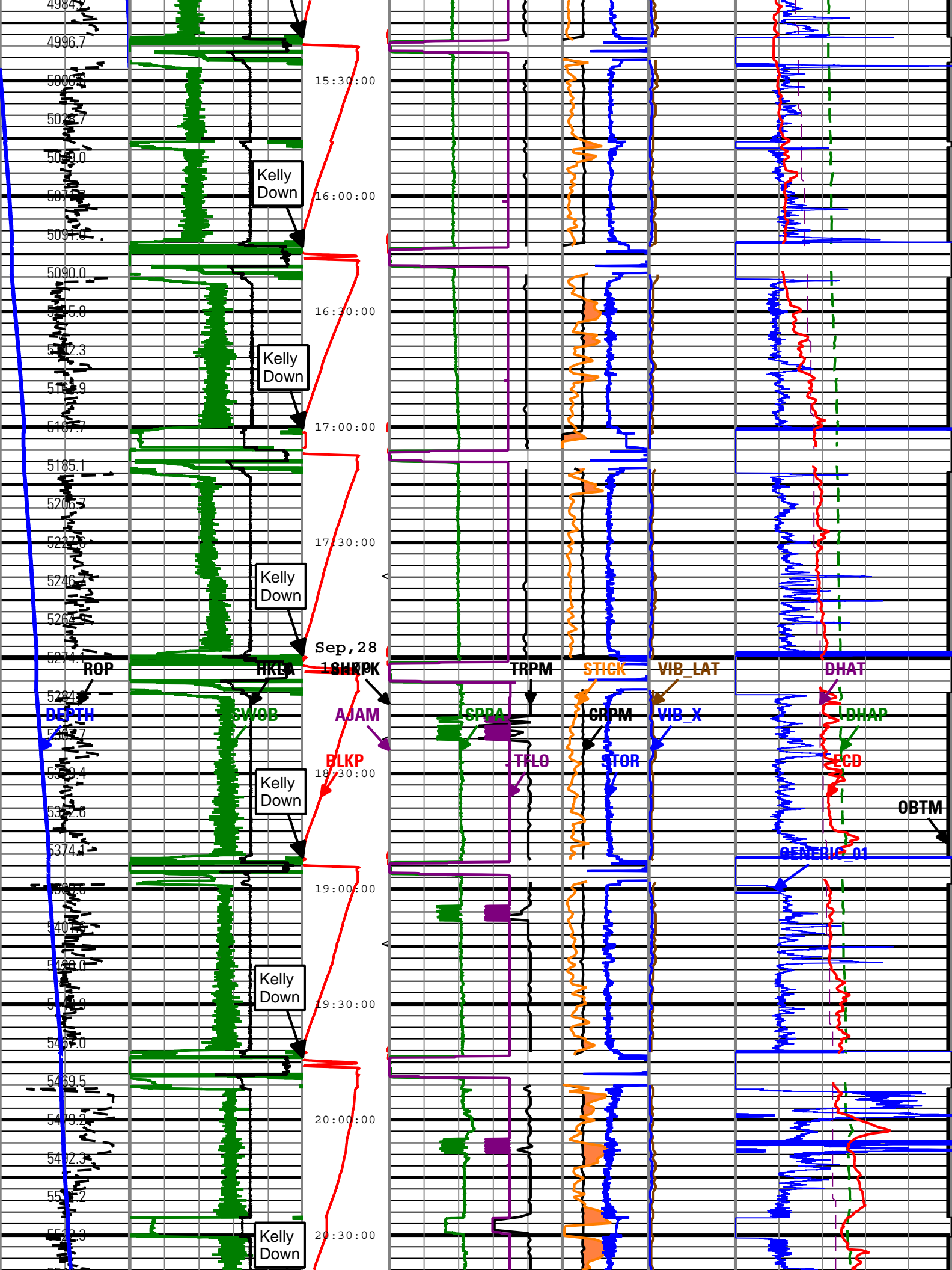
Run 2: TimeLogicalAcq 060E8A5F-FE86-46FB-8062-C4CC537420CB

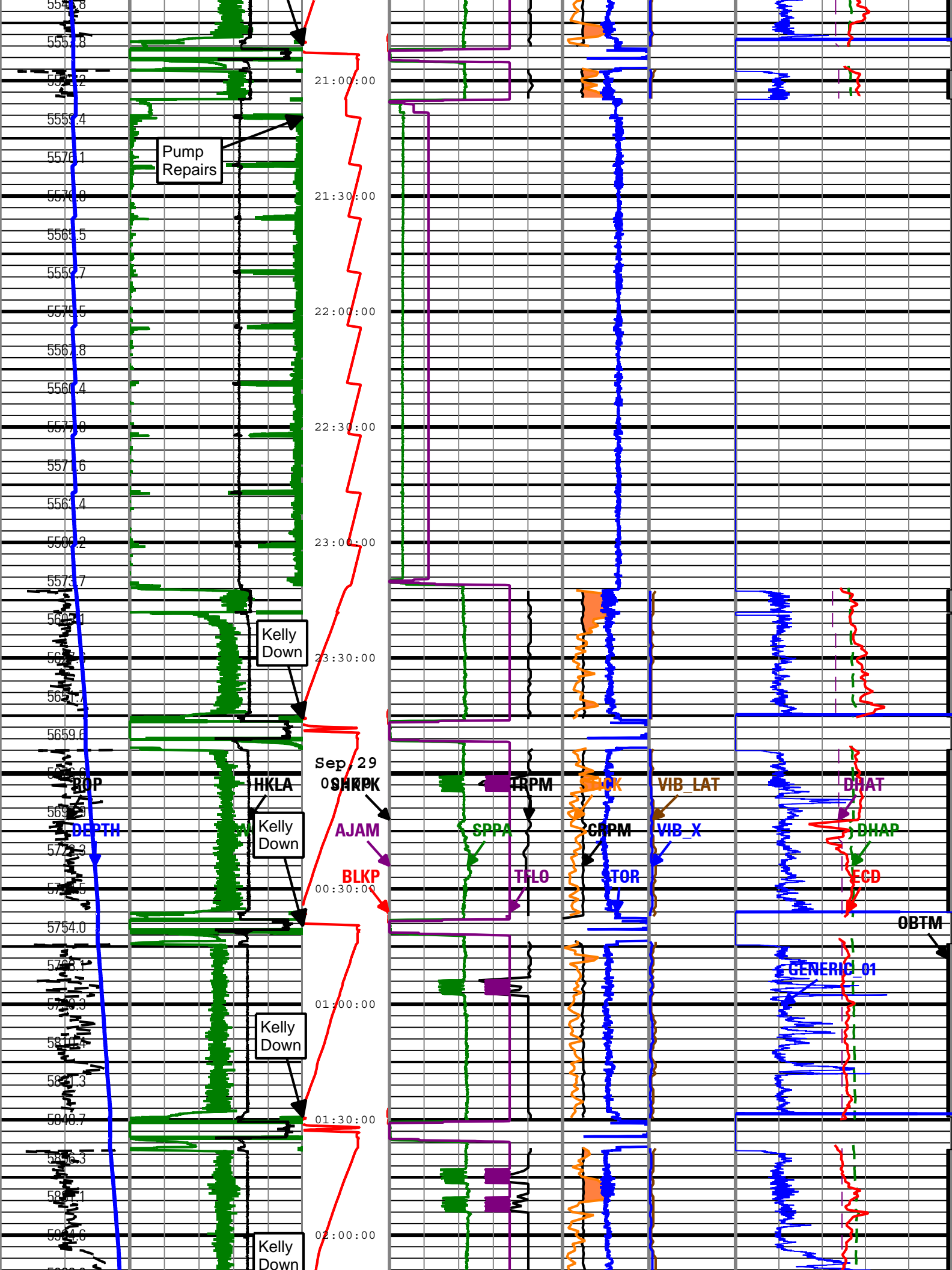
Description: PowerPulse/APWD Drilling Mechanics Time Format: Log (Import of APWD Log) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 29-Sep-2009 16:38:02

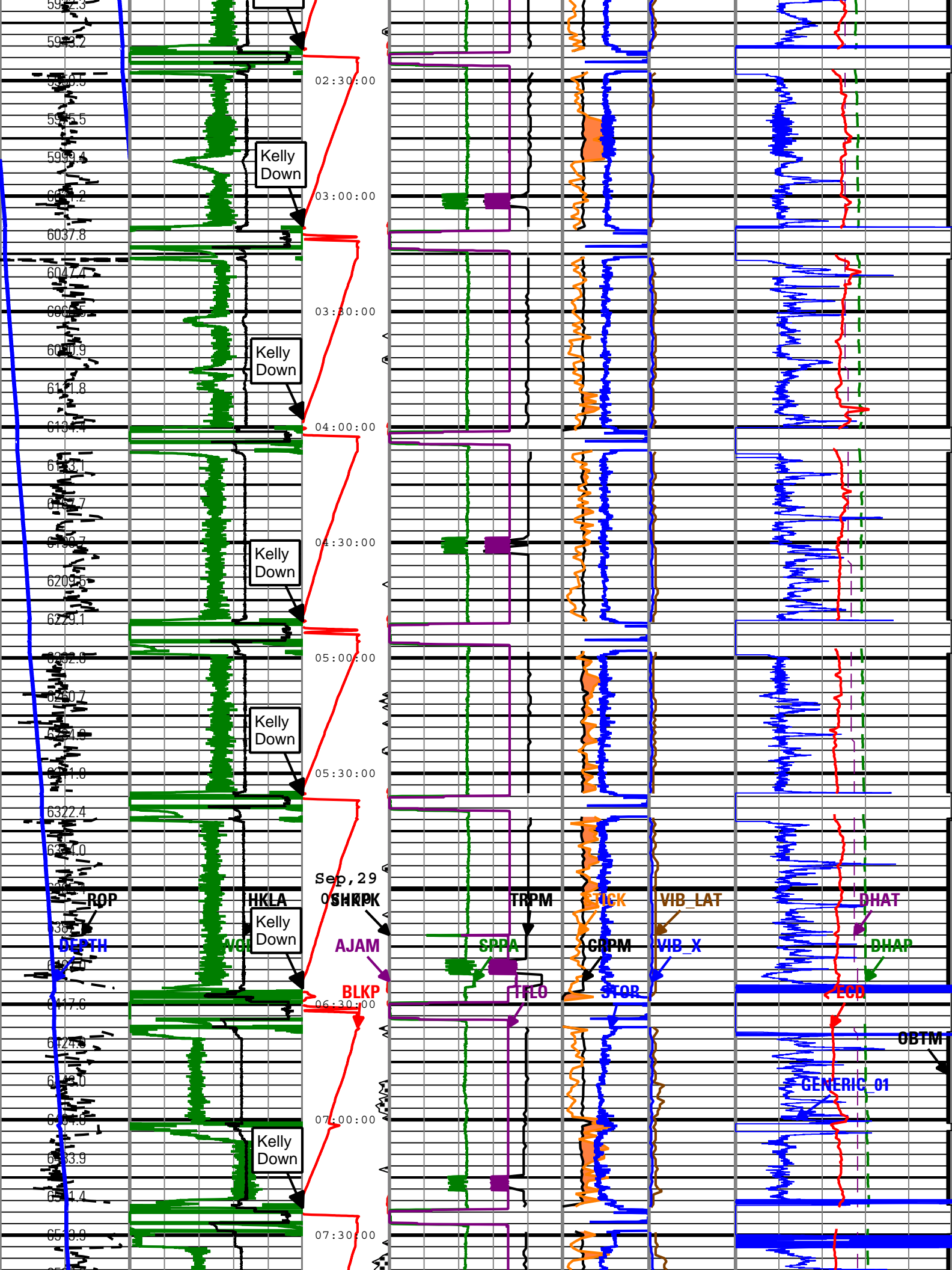
| | | |
|------------|--------------------|----------|
| AJAM | M10675:M10675 | ACQ - RT |
| BLKP | DRILLING_SURFACE | ACQ - RT |
| CRPM | M10675:M10675 | ACQ - RT |
| DEPTH | DnMWorkflow | ACQ - RT |
| DHAP | M10675:M10675 | ACQ - RT |
| DHAT | M10675:M10675 | ACQ - RT |
| ECD | M10675:M10675:APWD | ACQ - RT |
| GENERIC_01 | DRILLING_SURFACE | ACQ - RT |
| HKLA | DRILLING_SURFACE | ACQ - RT |
| OBTM | DnMWorkflow | ACQ - RT |
| ROP | DRILLING_SURFACE | ACQ - RT |
| SHKPK | M10675:M10675 | ACQ - RT |
| SPPA | DRILLING_SURFACE | ACQ - RT |
| STICK | M10675:M10675 | ACQ - RT |
| STOR | DRILLING_SURFACE | ACQ - RT |
| SWOB | DRILLING_SURFACE | ACQ - RT |
| TFLO | DRILLING_SURFACE | ACQ - RT |
| TRPM | M10675:M10675 | ACQ - RT |
| VIB_LAT | M10675:M10675 | ACQ - RT |
| VIB_X | M10675:M10675 | ACQ - RT |

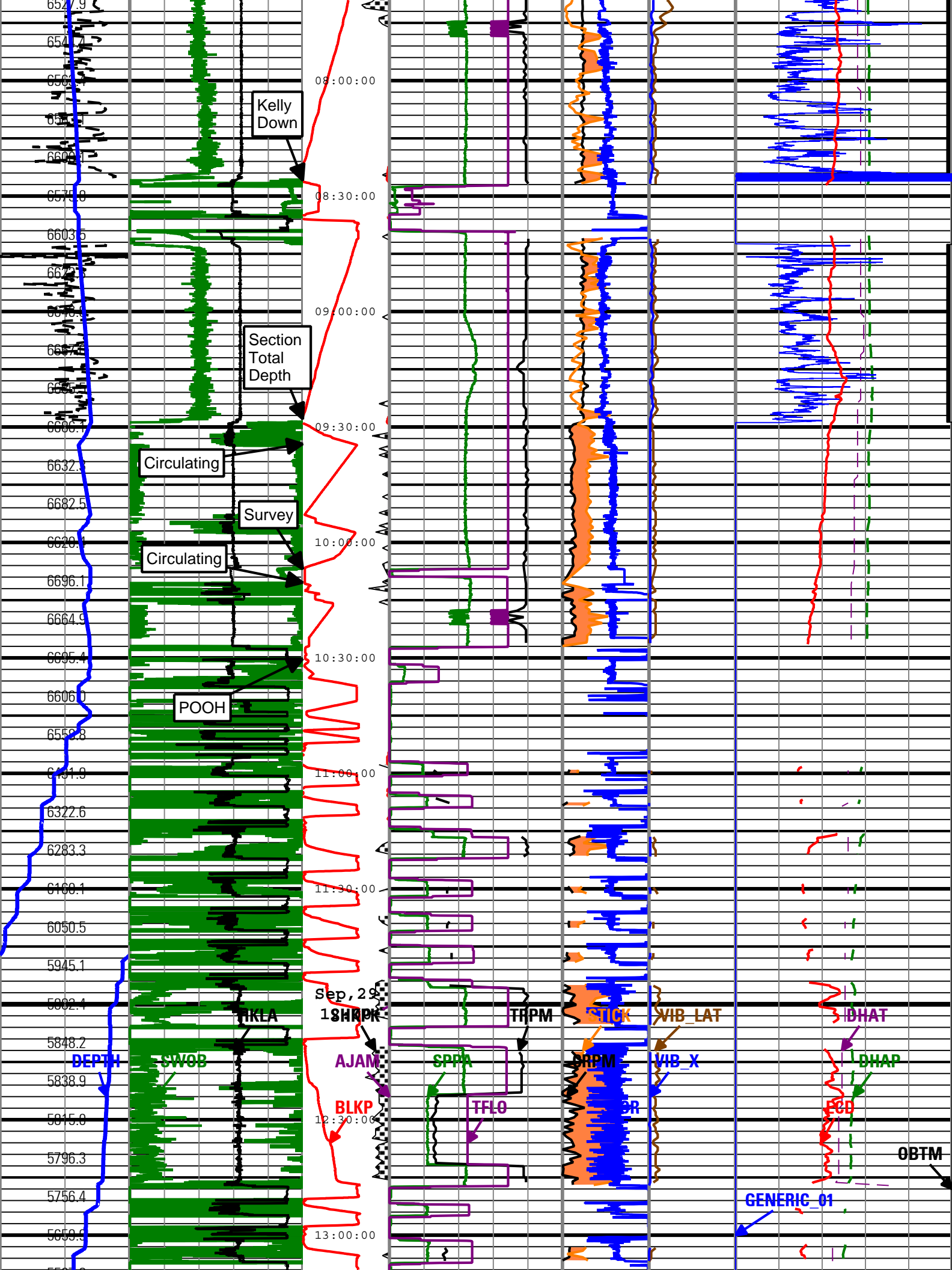
| | | | | | |
|---|--|--|---|---|---|
| Rate of Penetration (ROP) 300 ft/h 0 | Surface Weight On Bit (SWOB) 0 ft 150 | Shock Peak (SHKPK) 200 gn 0 | High Stick Collar Rotational Speed (CRPM) 0 c/min 400 | Shock Risk Transverse RMS Vibration (VIB_LAT) 0 gn 10 | On Bottom Downhole Annulus Temperature (DHAT) 75 degF 200 |
| | | Height of block above rig floor (BLKP) 0 psi 5000 | Stick Slip Indicator (STICK) 0 c/min 400 | | |
| Depth Index (DEPTH) | | MWD Turbine Rotation Speed (TRPM) 1500 c/min 4500 | Surface | RMS | Generic Channel One (GENERIC_01) |

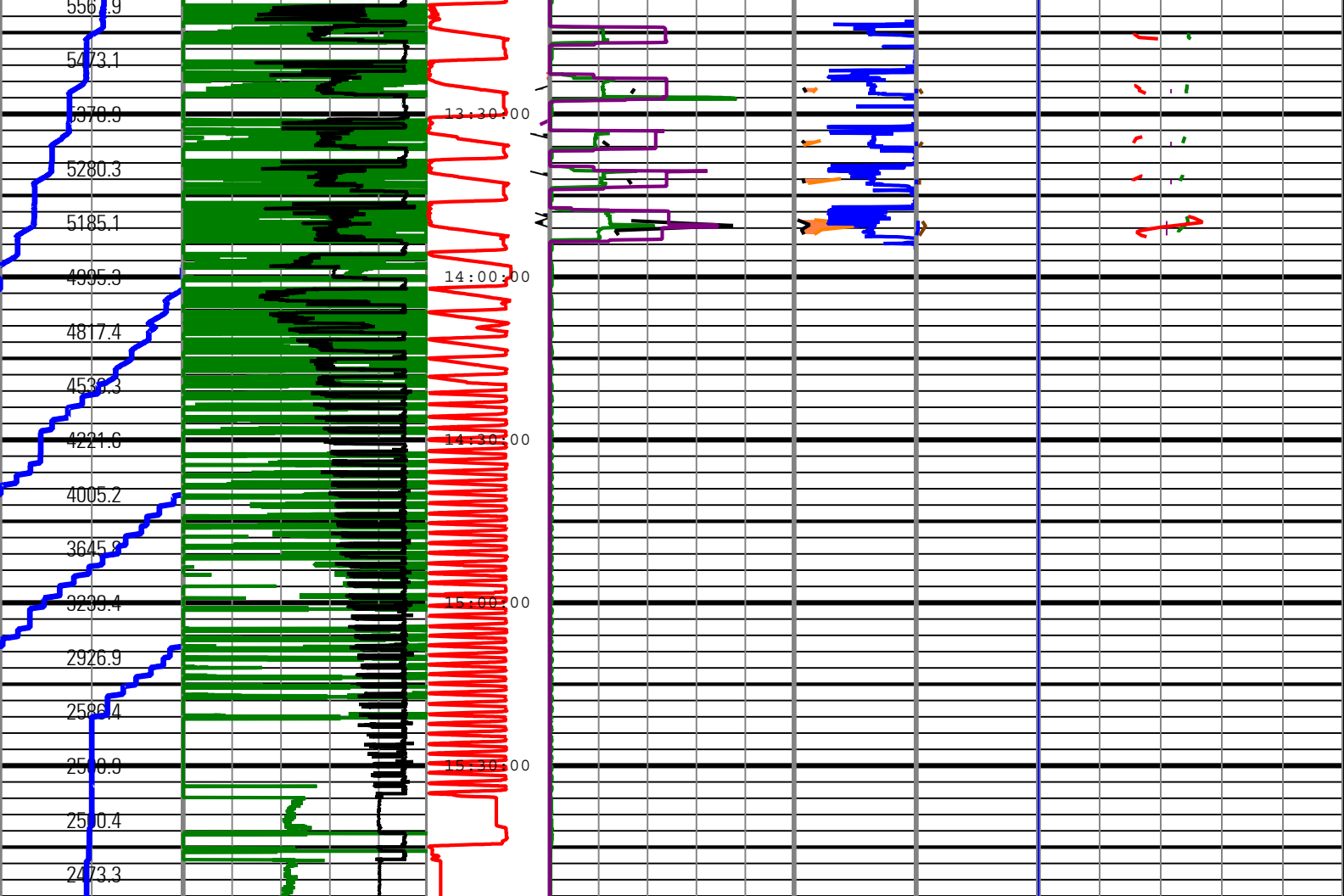












| | | | | | | |
|---|---|--|--|---|---|---|
| Rate of Penetration (ROP) 300 ft/h 0 | Surface Weight On Bit (SWOB) 0 1000 lbf 50 | Shock Peak (SHKPK) 200 gn 0 | Standpipe Pressure (SPPA) 0 psi 5000 | High Stick Collar Rotational Speed (CRPM) 0 c/min 400 | Shock Risk Transverse RMS Vibration (VIB_LAT) 0 gn 10 | On Bottom Downhole Annulus Temperature (DHAT) 75 degF 200 |
| Depth Index (DEPTH) ft | Average Hookload (HKLA) 500 1000 lbf 0 | Height of block above rig floor (BLKP) 0 ft 150 | MWD Turbine Rotation Speed (TRPM) 1500 c/min 4500 | Stick Slip Indicator (STICK) 0 c/min 400 | RMS Vibration, X-Axis (VIB_X) 0 gn 10 | Downhole Annulus Pressure (DHAP) 0 psi 5000 |
| Depth Index (DEPTH) 0 ft 1000 | | Number of Anti-Jams Detected (AJAM) 25 0 | Total flow rate of all active pumps (TFLO) 0 gal/min 1000 | Surface Torque (STOR) 40 0 1000 ft.lbf | | Generic Channel One (GENERIC_01) 0 100 |
| | | | | | | Equivalent Circulating Density (ECD) 8.5 lbm/gal 11 |

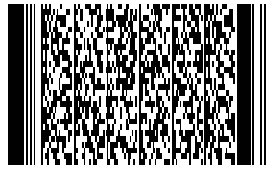
Description: PowerPulse/APWD Drilling Mechanics Time Format: Log (Import of APWD Log) Index Scale: 2 in per 3600 s Index Type: Time Creation Date: 29-Sep-2009 16:38:02

Channel Processing Parameters

| Parameter | Description | ToolPath | Value | Unit |
|--------------|--|----------|-------|-------|
| FLEV | Depth of Drilling Fluid Level to LMF (Log Measured From) | Borehole | 8 | ft |
| RHO_SEAWATER | Density of the Sea Water | Borehole | 1.02 | g/cm3 |
| SF_FLAG | Mud Return to Sea Floor (No Riser)? | Borehole | No | |

Tool Control Parameters

| Parameter | Description | ToolPath | Value | Unit |
|-----------|--|----------|-------|------|
| OFFBTM_TH | Threshold for deciding whether the bit is off bottom | | 0 | ft |

| | | | |
|-----------------|---|---|---|
| OPFBTW_TH | Threshold for deciding whether the bit is on bottom | 0 | it |
| Company: | ExxonMobil Oil Corporation | | |
| Well: | Piceance Creek Unit 297 11B1 ST01BP00 | | |
| Field: | Piceance Creek | | |
| County: | Rio Blanco | |  |
| State: | Colorado | | |
| Country: | USA | | |

Schlumberger

PERFORM - Drilling Mechanics

2 in / hr Time Based

Real Time Log