# **Rigwatch User Guide**

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## Introduction

## Procedure

Assuming the Rigwatch system is functional, the following steps have to be taken to run it reliably.

- 1. Connect to the Master.
- 2. Start a Hole (Job) on the Rigwatch Master Computer.
- 3. Set Slips Set Point and Depths.
- 4. Reset Draw Works Encoder after Line Slip and cut.
- 5. Check Key Expiration Date.

### 1) CONNECT TO THE MASTER AND/OR DRILLER STATION

Only one connection is allowed with the Remote Desktop while Radmin allows multiple users to connect to one PC. The Radmin servers require a license, but readers are free. The Marine Computer Specialists can provide help connecting to the Master. **192.168.1.7** Krakatoa/admin (Master is on the Krakatoa server) **192.168.1.40** (Driller station is located in the computer server room)

Username: **ops** Password: **see credential store** 

Rigwatch application passwords:

Setup see credential store

Security settings see credential store

<b>Rig</b> wat	ch <b>ann</b>	SYNC: Getting Variable Defi	Feb 2, 20101 Gt	nit Drill Mote	Key ? Click
1120000	Toolface Offset: 0.0 Security: 252 days	and 3 hours Block Position	12:59:11	moder patarmi	Pail 3 Lock
577.312	No	.19	176	Yes	.25
26.499 22	RPM O Revition		577.312	Pit Volume 17	ртсн .3
Capito Former Stant 26 Temperature (Text)	(v34)	.006	Weight On Bit	524	ROLL 4
V Treatment Growthy O	500			Motion Compensator	CEM Pump Pressure
176	Pit Volume 12	Pit Volume 13	.983		
Division 2 Division 2 Division Fri visione 17	Strokos Per Minute 1	Strokes Per Minute 2			
	Strokes 1	Strokes 2	Strokes (Total)		
F8	Strokes	Strokes	Strokes		

**Rigwatch Screen** 

### 2) START A HOLE (JOB) ON THE RIGWATCH MASTER COMPUTER

Notify the Driller of your intention to start a new hole. On the *Rigwatch* Master computer, perform these steps:

- 1. If Rigwatch is running, make sure you backup the Setup file (MENU > SETUP). If Rigwatch is not running, go to Step 4.
- 2. Press the F1 Key to open the exit/return menu.
- 3. Click Exit (the program automatically saves and close the current job data in the Jobs folder).
- 4. Double-click the Rigwatch icon on the Master computer to start Rigwatch to set up the new hole.



#### 1. Click the Start New Well button (Fig. 1).

RIGWATCH	™ v8.3.0 C	: 10		Well Selected:
		and the second se	6666666_OR	G_05050614_0000
				REGISTRATION
				Lockdown
Ric	M	ato	h™	
Ple	ease select one of t	he options below	for starting RIGWA	TCH™.
Start New Well	Start Sidetrack	Browse Wells	Use Current	Well Exit

1. Click the Configure AS Master button (Fig. 2).

RIGWAT	CH™ v8.7.12_C_2	Well Select	ed:
Oct 21 2008		EXPEDITION 320	
			_
		1	
	<b>0</b>	0	
	Configure	Configure	
	AS	AS	
	Master	Remote	
	(Will start New Well Setup)	Remote	
	Please select a button below	or a configuration above.	
Cancel New	Well	Exit	

1. Click the **Options <<< Back** button (Fig. 3).

RIGWATCH™ v8.7.12_C_2		Well Selected:
Oct 21 2008 15:06:27	T	RANSIT 09B
	(None)	
	318 Master	
Please sele	ct a button below or a setup file above.	
Cancel New Well Options <<< Back		Exit

1. Complete the Well information:

Operator Company Name: (example) IODP-USIO Well Name: (example) EXP. 323 Job ID: Site/Hole Number U1339A (UMK-4D) Operator Representative: Operations Superintendant: A N Other Location: Operating Area (example) Bering Sea Spud Date: Date on site (when switch to DP control): dd/month/yyyy Contractor: Transocean

1. Select Next >>> Setup when done (Fig. 4).

RIGWATCH™ v8.7.12_C_2	2	Well Selected:
Oct 21 2008 15:06:27		EXPEDITION 320
REQUIRED: Operator Company Name		IODP-USIO
REQUIRED: Well Name		U1331A
REQUIRED: Job ID		EXPEDITION 320
Operator Representative #1		Ron Grout
Operator Representative #2		
Location		PEAT-01C
API/UWI		
Spud Date		
Contractor		Transocean
Please select a	button below or an option above to o	
Cancel New Well	Next >>> Setup	Exit

1. The master must have only one **SETUP** file containing the current calibration and other parameters. Should there be more than one file, be sure to select the most current file and move the remainder to an archive folder or delete (Fig. 5).

RIGWATCH™ v8.7.12_C_2			Well Selected:
Oct 21 2008 15:06:27		1	FRANSIT 09B
	(None)		
	318 Master		
Please selec	t a button below or a se	tup file above.	
Cancel New Well Options <<< Back	Next >>> Review		Exit

1. Review all entries for accuracy and click the Finish New Well button (Fig. 6).

RIGWATCH™ v8.7.12_C_2		Well Selec	
Oct 21 2008 15:06:27	EXF	PEDITION 3	320
REQUIRED: Operator Company Name		IODP-USIO	
REQUIRED: Well Name		U1331A	
REQUIRED: Job ID		EXPEDITION 320	
Operator Representative #1		Ron Grout	
Operator Representative #2			
Location		PEAT-01C	
API/UWI			
Spud Date			
Contractor		Transocean	Page Down
Please select a button below after reviewing the	e settings listed above.		
Cancel New Well Setup <<< Back	Finish New Well	Exit	

The new well is now setup. The Live Data screen should open streaming live data (Fig. 7).

<u>Rig</u> wal	Well ID: TRANSIT ADEL-01B Proposed Direction Total Correction: 0 Toolface Offset: 0.0	.00	Feb 2, 2010 12:21:13	Chat Drill Mute Alarm	Key Pad ? Click Lock
Static Hook Load	On / Off Bottom	Block Position	Hook Load	Slips Set	HEAVE (m)
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26	on bott TD RPM	m	kibs Static Hook Load	on/off Coreline Depth	m PITCH
mbrf Depth - Bit	ID RPW			Coreilne Deptn	PITCH
22	0		577	0	1
Depth-Penetration	rpm TD AMPS	Compensator Stroke	klbs AD Hook Load	mbrf Motion Counter Compensator	deg ROLL
26	TD AMES	Compensator Stroke		motion counter compensator	KOLL
mbisf		0		2	- 2
Core Number	<b>v</b>	V	$\mathbf{\vee}$	• 4	4
0	amps Pipe Counter	ft	WOB klb	m Motion Compensator	deg CEM Pump Pressure
number (V63)				wouldn compensator	
0	-1			0	0
Deg Hook Load	stands			m	psi
183	Mud Pump #1 Press.	Mud Pump #2 Press.	Stand Pipe Pressure		
Kites Mud pump #1 STKS	1	0	1		
0	psi	psi	psi		
stks	Mud pump #1-SPM	Mud pump #2-SPM	MUD TOT VOL		
Mud pump #2 STKS	0	0	0		
stks Coreline Depth	spm	spm	bbls		
0	Mud pump #1 STKS	Mud pump #2 STKS	MUD Pmps TOT STKS		
MENU	0	0	0		
	Program Hies/FireDae	Clivecap Q <sup>a</sup> g Serial Port Splitter - www	v 🤐 XBob 🧧 RagWatchill	LabWare LIMS for Wi	😮 < 12:21 PM

3) SET SLIPS SET POINT AND DEPTHSThe new well is now setup. The **Live Data** screen should open streaming live data (Fig. 7).

### **Tripping In**

After the BHA is made up and hung off in the elevator on the stool:

- 1. Set Slips Set point:
- 2. Touch Key Pad/Slips Set point.
- 3. Set Slips Set point = 165 Klbs.
- 1. Set Depths:
- 2. Enter SEA FLOOR = PDR value
- 3. Enter BIT DEPTH (actual) (meters below rig floor)

NOTE: Verify that SLIPS variable reads No while tripping and Yes during connections.

#### **Drilling Ahead/Coring**

- 1. Just before starting to drill, with drill string hung off in the elevator on the stool and TD picked up reset:
- 2. Set Slips Set Point to 210 Klbs.
- 3. Set SEAFLOOR, HOLE, and BIT Depths to the actual values (meters below rig floor) at that point in time.
- 4. Before drilling, with bit just off-bottom, set WOB (AD-Hookload) to 0 Klbs.

**NOTE**: Verify that **SLIPS** variable reads **No** while drilling and **Yes** when slips are set. Reset HOLE and BIT DEPTHS as appropriate

### 4) RESET DRAW WORKS ENCODER AFTER LINE SLIP AND CUT.

#### Overview

It is necessary to Reset (sync) the drum position with the Rigwatch counter every time the line has been slipped and cut.

#### **Slipped Line Reset**

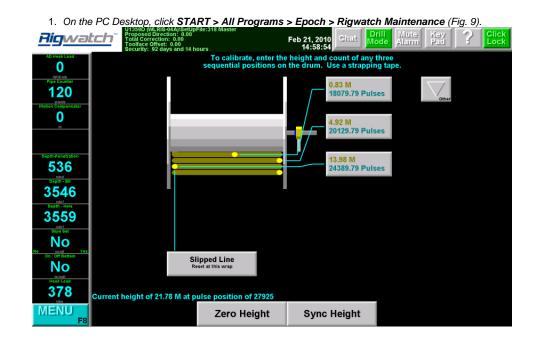
#### Key Pad/Configure Blocks

To reset the draw works counter after the line is slipped and cut, perform these steps.

1. Ask the Driller to lift the Blocks for a total of two full wraps on the draw works drum, with the third wrap just starting.

- 2. Apply the brake.
- 3. Click the **Slipped Line** button (Fig. 8).
- 4. Enter the height of the blocks (30 m).
- 5. Click OK.
- 6. Click the Save button (should appear at the bottom right corner). The draw works encoder will now track.

### 5) CHECK KEY EXPIRATION DATE OR REQUEST RENEWAL CODE

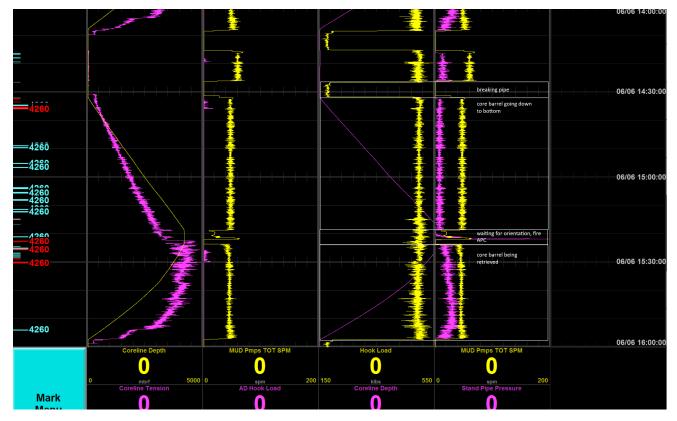


1. Check if there is sufficient time on the KEY (Fig. 10). If not, see JR Rigwatch User Guide; section Check Key Expiration Date or Request Renewal Code for renewal instructions

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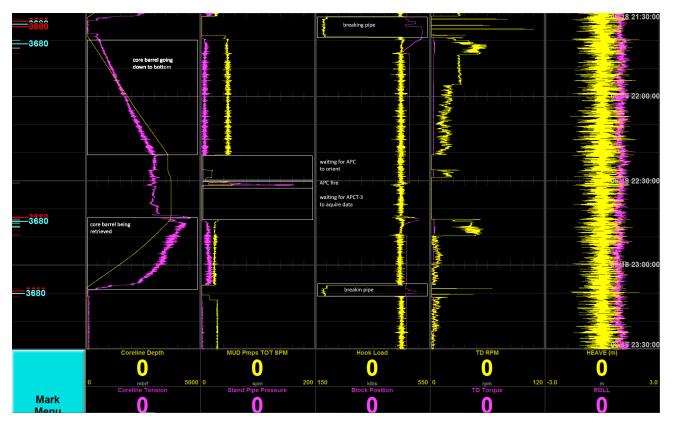
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6) EXAMPLES FROM APC, XCB AND RCB

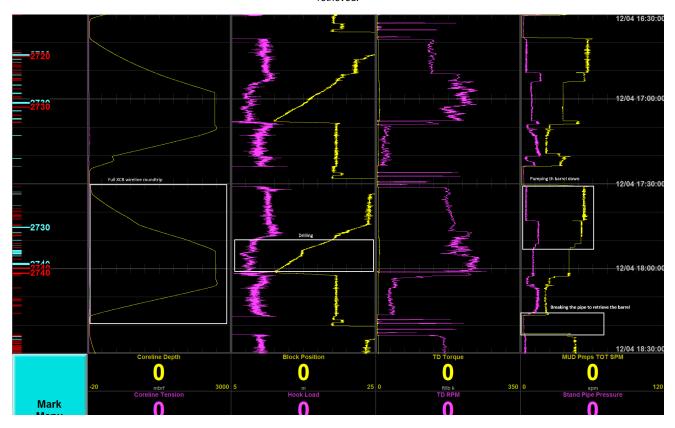


APC coring: Breaking pipe = Hook load is zero because the pipe is held by the elevators, making a connection, then the barrel gets lowered to the bottom of the hole (coreline depth increases and hook load carries the pipe). Before the piston gets fired into the sediment the core barrels gets oriented, the standpipe pressure rises and spikes when the fire occurs.

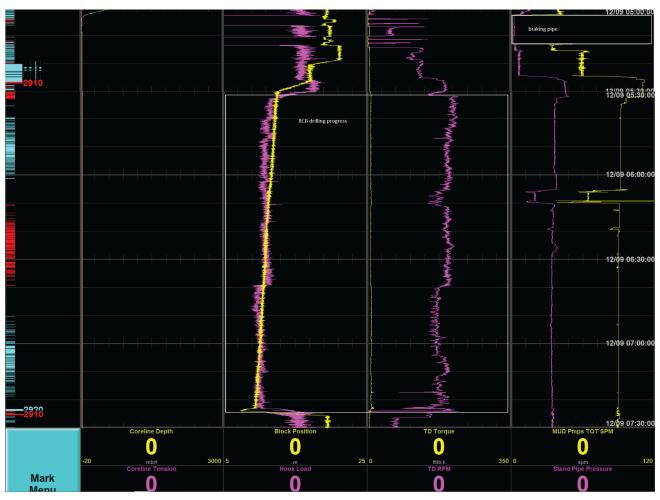
The pressure gets bled off and the core barrel gets retrieved with the core inside.



APCT-3 (down hole temperature) measurement: The usual APC coring steps occur. For the APCT-3 shoe, the orientation on the bottom of the hole (before the APC fire) takes longer. Once the APC is fired, the shoe sits in the sediment for a given amount of time before the core barrel is being retrieved.

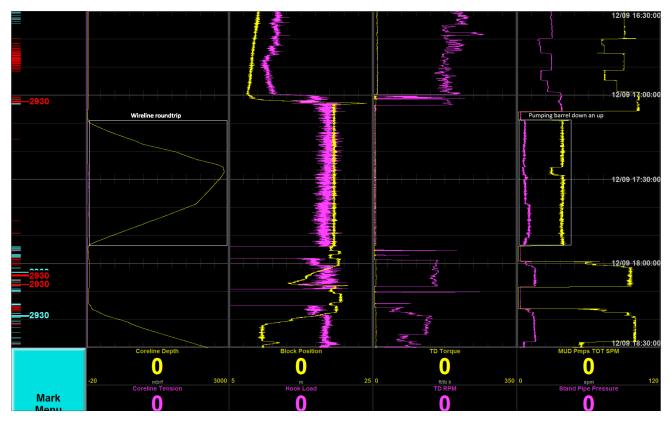


XCB coring: The mud pumps are at zero when the connection on the pipe gets made (see far right). Once the connection is made, the core barrel gets pumped down the hole (increase in mud pump - see far right; increase in coreline depth - see far left). When the core gets drilled the torque increases and the block position is slowly decreasing.

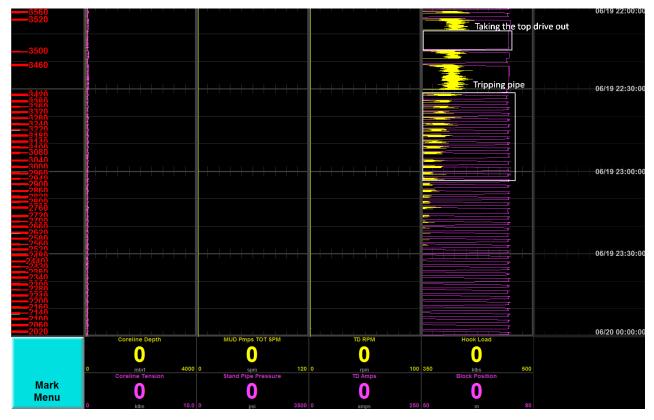


When the core is drilled, the core barrel is retrieved and brought up to surface (coreline depth decrease, low torque and mud pump rate.

RCB coring 1: This image shows the progress of an RCB core being drilled (increased steady torque and mud pump rate). The period of higher mud pump rates between making the pipe connection and the coring is the interval that the core barrel needs to reach bottom (it free falls and mud/water gets pumped to increase the speed).



RCB coring 2: After coring, the coreline gets send down to the bottom of the hole to pick up the core barrel (see wireline depth increase). It latches onto the barrel and pulls the barrel up (latch is shown where the coreline is at its deepest point and the mud pump rate drops).



Tripping out of the hole: On top of the image, a break in activity (zero hook load) shows the time it took to get the top drive disconnected. For each connection, the pipe gets broken and put away (block position at zero, short increase, zero again). The hook load (holding the pipe) decreases as less and less pipe is weighing it down.

Credits

## Archive Versions

RigwatchUserGuide.pdf - Feb. 24, 2020