ISSUES

VIT

SUBC DVR

We installed the upgraded SubC DVR/Overlay PCs in the DP room VIT rack.
After connecting the video sources to the inputs, I used trial and error to find the proper video channel inputs, which were not called out in the SubC manual or labeled on the machine. The HD video source functioned properly. I have now labeled the channels in the IODP manual.
After some time I came to the realization that composite video input was not supported on the upgraded DVR. I confirmed with SubC that they had made a mistake and left out one of the video cards. SubC shipped two Osprey SD Composite cards to be transferred by boat.
I installed the Osprey SD composite video capture cards into main DVR/overlay unit as well as the backup unit. I installed drivers from the Osprey website on both units.
I installed the Black magic SDI video to Composite video converters in the VIT rack in DP and connected these to the output of the Blackmagic SDI cards of the SubC DVR/Overlay computer. I had to installed black magic converter software on the SubC computer. This software allowed me to set up output video aspect ratio for each of the converters using the converter software via USB interface. Each converter must be set up individually, swapping the usb cable between the two.

TENSIOMETER

The Tensiometer was calibrated in port call and the display box was re-installed on the winch operator's console.
The tensiometer was run with the first VIT deployment because of my specific request. It is unclear as to whether or not the core techs have been instructed to use the tensiometer as standard operating procedure even on shallow seawater depths when cable tensions are likely to be very low.
Installing the tensiometer sensor can be accomplished outside the safety rails around the moon pool, however the mounting the articulating arm to the guide below the VIT wench required a person to stand on and straddle the safety rail.
When retrieving the VIT frame, the tensiometer sensor became stuck on some cable ties which had been placed over some type of sheathing on the last several meters of umbilical. This caused the tensiometer to ride up on the umbilical putting pressure on the sensor and cable. To complete retrieve the VIT these cable ties were removed. Though I do not believe the cable ties are necessary, and thus will eliminate this particular problem if not used in the future, it might be prudent to look into either lengthening the articulating arm or adding some type of hold down cables or chains to prevent the sensor from riding up in similar circumstances.

VIT FAILURE

- 17:20:00 Deployed VIT with color SD camera, HD camera with Pan/Tilt, Sonar and complete compliment of LED lights
- 17:21:38 Stopped decent at a depth of 90.1 M
- 17:24:46 started pulling up
- 17:25:15 Stopped at 77.4 meters
- 17:29:40 lost communication

After trying to reboot the system by cycling power from the surface, we retrieved the VIT for inspection. On deck we removed the main fiber optic connector from the pod, and could smell burning rubber or plastic. A small amount of water was present in the connector. Part of the female fiber optic sockets was not in place. The face of connector showed signs of melting and the electrical pins had burn marks. Further investigation of the opto-electrical pigtail connector show a dislodged O-ring that was badly pinched.

We removed the POD electronics to the subsea work bench and began testing.

We replaced the opto-electric bulkhead connector on the VIT POD cap and then tested the electronics with the bench adapter. The bench adapter is a box with the spare opto-electrical pigtail connector and an Ethernet to fiber media converter, which allows us to use the subsea 480 volt electrical outlet and ships Ethernet with the POD electronics. We were able to communicate with both video encoders, and both serial port servers.

We attached the black and white low light camera to the pod electronics for testing. No video was broadcast via the SD encoder. We tested the HD Video encoder using our HD-SDI video test pattern generator. HD broadcast was good. We tested voltages in the POD electronics and found a blown fuse on the power circuit for the SD camera connector. We replaced the fuse and reconnected the SD camera cable but left the device end of the cable unconnected. When screwing on the connector smoke began to develop from the pod camera connector. Further investigation found that the POD bulkhead connector was damaged in such a way that the pins shorted when a mating connector was installed.

We replaced the bulkhead connector with a spare and the system tested good. We then replaced the umbilical opto-electrical pigtail connector with the spare one from the bench test adapter installing new o-rings. After remounting the POD electronics and umbilical on the VIT frame all systems tested good.

DHML

OPERATOR USING OUTDATED MANUALS AND UN-OFFICIAL GUIDES

Early in the expedition I was told by the Downhole tech, that they had had a problem with WinTemp, but the MCS had fixed it. Their problem was that the user could not "download or export Wintemp data", these options were grayed out. This is because the data is automatically downloaded and exported when data is read from the tool.

When Antares is run while logged in as administrator, these options are available. Therefore the MCS moved all the programs including TPfit to the administrator account.

The problem started when the operators were using an outdated User Manual that was found on the DHML PC. This user manual instructed the operator to manually save and export the data,

which is no longer necessary. There was also a one page typed list of steps that looked to have been written by someone outside the engineering group. This list of steps also indicated old procedures. After explaining the way the program works, the MCS moved WinTemp back to the C:/ drive of the daq account.

I downloaded from onshore cumulus a pdf entitled, "APCT-3 Operations Manual 20150408". This manual is current and details the proper operating steps.

REPEAT

Later in the expedition, after the ETs had arrived, I was told by the ET that they had had a problem with WinTemp but they had gotten the MCS to fix it. I pointed out the changes and the section of the current manual.

USER UNFRIENDLINESS

A confusing element that led to this problem, there is no indication or popup message to acknowledge that the file has been saved or exported. This should be a good addition to the program and something that should be brought up to Antares.

Multiple copies of WinTemp and TP fit were found on the DHML PC. I removed all the old files that I could find.

TPFIT / UPLOADER PROGRAM TITLES

The TPFit fit program and the uploader program for the fit files are both named TPfit which causes great confusion.

RIG INSTRUMENTATION

TOP DRIVE RPM PROBLEM

Top Drive (TD) RPM was reading zero all the time. I discovered that there was no formula entered into RigWatch (RW) for TD RPM. I found old 2 point formula and entered it into RW and verified calibrated output visually.

SCHLUMBERGER WINCH DATA ISSUES

Many of the LabView VIs that I reinstalled on the PXI box in the Telemetry Lab during the Subic Bay tie-up in 2014, were missing.

I copied all the LabView Vis that I had on my external hard drive back to the PXI box, but could not make them operate. There seemed to be several Vis labeled , "Logging Tool Software Suite.vi" and I found a version which front page had the Title "WPD-WITS DEPTH SYSTEM" and it seemed to be the appropriate VI. I tried changing settings, then modifying sub Vis, but I could not make it work.

I found a VI named, Serial Depth reader [LTSS2.0a].vi, which was a sub vi used in the Logging Tool Software Suite.vi. It took some manipulating to get working. I had to open "Constants, LTSS [LTSS2.0a[.vi" and change the depthdata port to COM8.

Every time I started Serial Depth reader [LTSS2.0a].vi, I had to change the port setting in the constants file. Then I would have to stop and restart "Serial Depth reader [LTSS2.0a].vi". Then, the VI would read WPS data on COM8. I could not find where the Vis were loading different values from.

Serial Depth reader [LTSS2.0a].vi only read and converted the WPD depth data, with no WITS output. I wrote a VI named "WPS to WITs.vi" to take in the WPD data, change the force units from Newtons to pounds, and then re-format the data into a WITS stream while outputting this stream to COM5. COM5 is connected to another com port which is read in by the remote Rig Watch.

To make the system easier to operate and more stable, I took pieces of the modified Serial Depth reader [LTSS2.0a].vi as well as associated vis and deleted portions of the code that could be modified to be more simple. I also incorporated my WPS to WITs.vi into this modified code. I compiled this code into an executable and installed it on the DAQ box.

To operate the SLB data to RigWatch system, the user only needs to click on the "SLB Winch WPS to WITS RigWatchb1" icon on the DAQ box desktop to start the application and run RigWatch as normal. Further information is available in the Manual "Schlumberger Winch WPS to RigWatch WITS Transfer System" which is on the desktop of the DAQ box as well as on the network in the VOL1 > Operations/2-Engineering/RIS Software/SLB to RW Software folder.

DONGLE KEYS

RigWatch dongle keys were renewed. New expiration date for all dongles is Jun 3, 2015.

Computer	Location	Key #	Key Expire
Master	Krakatoa server	8079	3-Jun-15
Eng. Workstation	Eng. Work Station	8088	3-Jun-15
DHML	DHML	8082	3-Jun-15
PC-51109	Core lab Network locker	8080	3-Jun-15
CO-Chief Scientists	Co Chiefs Office	7303	3-Jun-15
OIM	OIM Office	8081	3-Jun-15
LDEO DAQ	Telemetry Lab (Core deck)	8084	3-Jun-15
Core Tech Shop	Core Tech Shop	8078	3-Jun-15
Ops Office	Ops Office-Big Screen	8083	3-Jun-15
Driller	Computer server room (driller)	8077	3-Jun-15