

### **Objectives**

- Learn post run dump procedures
- Evaluate tool physical components for re-run
- Understand Post Run PTK



# xBolt Real Time Operations



- Open Launcher
- Select "Memory Dump"



	JOB MENU	19MLD4399 Red Lodge C20 - 115 6H
	NEW	Active Run : 2
ACTIVATE RUN FOR REALTIME LOGGING	IMPORT	Start Date : 29-Jul-2019 Current Depth : 22469ft
2 3	EXPORT	File Size : 838 MB



- Select path for archive
  - Option to open archive path when dump complete
- Load memory from dump file
  - Used for loading memory data of previously dumped tool into run
- Time Zone
  - Select time zone used in EDR data
  - Can be reprocessed if time zone is incorrect
- Verify/select all node present that contain memory and begin dump
- Select "Download"





- Complete post run diagnostics and check what failed diagnostics if any
- Save post run report
- Send post run report and dump files to OSC for rerun QC

File     Unzip/Share     Edit     Backup     Tools     Settings     View     Help       Name     XDTMBIN File     &     XDTMBIN File     &       Xdt133_h&p.g.393_2.dtmbin     XDTMBIN File     &     PPPBIN File     &       Matt149_c.h&p.393_2.bmbin     BMBIN File     &     BMBIN File     &       Matt149_c.h&p.393_2.bmbin     BMBIN File     &     BMBIN File     &       Matt149_c.h&p.393_2.bmbin     BMBIN File     &     BMBIN File     &       Backup 393_2.bmbin     BMBIN File     &     BMBIN File     &       BMBIN File     &     BMBIN File     &     BMBIN File     &       BMBIN File     &     BMBIN File     &     BMBIN File     &       BMBIN File     BMBIN File     BMBIN File     &     BMBIN File     &       BMBIN File     BMBIN File     BMBIN File     BMBIN File     &     BMBIN File     &       Selected 0 files, 0 bytes     Total 5 files, 913KB     O     O     O     O <th>🍕   🖹 🦉 順 🔻   WinZip - 19MLD4399_H&amp;P393_Red Lodge C20 - 11F 6H_RUN2_DUMPS.zip</th> <th>- 0</th> <th><math>\times</math></th>	🍕   🖹 🦉 順 🔻   WinZip - 19MLD4399_H&P393_Red Lodge C20 - 11F 6H_RUN2_DUMPS.zip	- 0	$\times$
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batt149_c_h&cp_393_2.bmbin     batt149_c_h&cp_393_2.bmbin     batt147_a_h&cp_393_2.bmbin     batt147_a_h&cp_393_2.bmbin     compared by the second seco	🕑 xdt133_h&p_393_2.pppbin	PPPBIN File	8/
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<u>File Edit V</u> iew	Run Help				)C
Bad: 3 G	pod: 54 Pending: 0				TTM C
XDTM	Temperature Measured by Telemetry		Pass	·	PPP
XDTM	Total Amp Hours Remaining		Pass		7 Firmware 0.4.0.26
⊙ XDTM	Battery Current Measured by Telemetry		Pass		Firmware 40.01
⊘ XDTM	Configuration Number		Pass		CO DDR 0
	EM Telemetry Power Target		Pass		Flow Switch
⊘ XDTM	Telemetry Safety Error Flag		Pass		Firmware 2001
PPP	Temperature Measured by PPP (Bore)		Pass		Firmwave 22.05
PPP	Pressure Measured by PPP (Bore)		Pass		Battery B
ODR	DDR Listening Frequency (Hz)		Pass		5* XJDI
ODR	DDR Listening Bit Rate (bps)		Pass		Firmulare 0.1.41
S Flow Switch	Flow Status		Pass		Firmware 0.0123
Battery A	Configuration Number		Pass		Gamma
Battery A	Measured Current		Pass		String XDT
Battery A	Measured Voltage		Pass		Firmware
Battery A	Amp Hours Remaining		Pass		
Battery A	Bus Voltage		Pass		
Battery A	Cell 1 Voltage		Pass		
Battery A	Cell 2 Voltage	()	Pass		
Battery A	Calibration Low Offset		Pass		
Battery A	Calibration Low Coefficient	6	Pass		
Battery A	Calibration High Offset		Pass		
Battery A	Calibration High Coefficient		Pass		
Battery A	Measured G_Total		Pass		
<ul> <li>Battery A</li> </ul>	Battery Type		Pass		
<ul> <li>Battery B</li> </ul>	Configuration Number		Pass		
Battery B	Measured Current		Pass		
Battery B	Measured Voltage		Pass		
Battery B	Amp Hours Remaining		Pass	· ·	
Diagnostics Pro	gress	Constant	Dun All	-	
		Cancel	Kun All	Next	
Run Info	Logs Dingnostics Report				Run Menu (Run 1, Active)
PCAN Idle					Tools: 11



# xBolt Real Time Operations

xBolt Physical Re-Run Checklist



- Ensure that the gap between rib protector and housing shoulder is 0.002 – 0.015"
- Check area around flow switch for flow switch blank for leaking oil, do not re-run if oil is leaking







- Remove mud screen
- Check O-Ring/Polypack for signs of damage and replace if necessary
- Clean area around upper bearing and main shaft while activating flow switch (use water if WBM application, LPT contact cleaner if OBM)







- Clean area around poppet and rib protector (use water or WBM, LPT contact cleaner for OBM)
- Coat upper bearing, main shaft, poppet and rib protector with grease 000-66016)









- In WBM application, if MOP is sitting on bank for more than 3 days, it must be flushed and packed with grease
- In OBM application, if MOP is sitting on bank for more than 4 days, it must be sent back to shop for maintenance
- Refer to ITC# <u>7011282</u> for detailed procedure

Sr. No	Criterion	Limit	PASS/FAIL
1.	Visual inspection show any	N/A	
	damage/wash		
2.	Circulating Hours		
	High Flow MOP	<300	
	Low Flow MOP	<250	
	Mini MOP	<200	
3.	Sand Concentration	<1%	
4.	Solids Content (Low Gravity)	<8%	
5.	pH Range	9.5-12	
6.	Does the MOP pulse when the	N/A	
	flow switch is pulled		

CAUTION: The MOP needs to pass all the above criterion to be fit for rerun. These are only guidelines. In addition local drilling conditions (including high shock and vibe/abrasive drilling conditions) need be taken into consideration before re running a MOP.



# xBolt-R Pulser Physical Checks

- Inspect pulser for wash/damage especially on key seat.
- If R-Pulser has more than 200 circulating hours, return for service
- If R-Pulser is run OOS for sand concentration (>1%), low gravity solids (>8%) or PH (9.5-12) or jarring, return pulser for maintenance
- All pulser cavities should be flushed post run when pulling tool
- Verify tool passes post run calibration and is able to pulse when flow is simulated

N≘	Question	Expected Value	Current Value	Result			
MOP / Pulser Re Run Criteria							
MOP / Pulser							
1	Visual Inspection show any damage or wash?	NO					
2	Circulating Hours (accumulated since last service).						
3	High Flow MOP	<300					
4	Low Flow MOP	<250					
5	Mini MOP	<200					
6	R Pulser	<200					
7	Sand Concentration %	<1					
8	Solids Content (Low Gravity)	<b>&lt;8</b> %					
9	pH Range	9.5 - 12					
TCM/DAS/UGS Re Run Criteria							
Previous Run observations (Real Time)							
1	Jarring occur on run?	NO					



# **xBolt Bow Springs**

- Inspect bow springs for wash or damage post run
- Use Go-No-Go Gauge to verify bow springs maintain proper OD for re-run in collar size





# xBolt Real Time Operations

xBolt Post Run PTK



### xBolt Post Run PTK



DynamX Cross Plot





**Pressure Cross Plot** 

Revie

From 03-Aug-2019 15:04:04

Error Cross Plot





(44-

EAS

Amp

WH2

1-5

0-

From 03-Aug-2019 14:56:36

18:00

23:00

04:00

09:00

14:00

19:00

00:00

05:00

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20:00

Time

01:00

06:00

11:00

16:00

21:00

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17:00

22:00

Temperature 🛦 Config Number — BMGR\_Temp — Min\_Bk2\_Volts — Min\_Bk1\_Volts — Bus\_Volts Min — BMGR\_Amps\_Max\_S — BMGR\_Amps\_Max — BMGR\_Amp\_Hours 🔵 BMGR\_Power 6-30 --10 -60 5--50 25. 8 15-20--40 -6 Z ... 003- 0015 File Config -20UB > 10 -10 1-5 -01 0 -0 L 0 16:00 21:00 17:00 22:00 18:00 23:00 04:00 09:00 14:00 19:00 00:00 05:00 10:00 15:00 20:00 01:00 06:00 11:00 02:00 07:00 12:00 6-30 --10 -30 - 60 5-25 --25 8 S Contig File Nur BMGR B Prove 8 -10 MG ALL ARD - 5 1-5. 4+++ 1 1 01 0. -22:00 18:00 23:00 04:00 09:00 14:00 19:00 00:00 05:00 10:00 15:00 20:00 01:00 06:00 11:00 16:00 21:00 02:00 07:00 12:00 17:00 30 --10 -60 6 -5-25 --50 8 U. 4-Sale\_C(A) -40 ~20 6 2 I Ĩ @ 15 -File -30 8 The superior of the superior o A 4 Bit

**Battery Cross Plot** 



BMGR

.50

20%

-10

Lo

-20BMB

-10

To 08-Aug-2019 01:40:37

0

BM

**Formation Cross Plot** 





**Class D Output** 







Accelerometer Cross Plot



700 -90 -0.8 --2 88 0.78 --1.5 650 -86-0.76 600 -0.74 -84 ---0.5 82 -0.72 -· X 550 . ·¥ 0.7 80 -:... 500 -.. 78-0.68 - 0.5 . 76 -0.66 450 --74-0.64 -400 1.5 e 72 S 0.62 XW 2 ×W UZP 180 300 - NO 66 - T NO 10.58 2.5 W 081 0.56 250-64 -0.54 - 3.5 62 -0.52 200-60 -0.5 \*\*\*\*\*\*\*\*\*\*\*\*\* -----150 -58 -0.48-....... -----56 -0.46 100 -54 -0.44 50 -- 5.5 52 -0.42 0\_\_ 50 -0.4 18:00 23:00 04:00 09:00 01:00 06:00 16:00 21:00 02:00 07:00 12:00 17:00 22:00 14:00 19:00 00:00 05:00 10:00 15:00 20:00 11:00 Time 🔁 Temperature ----- MTotal\_Min ----- MTotal\_Max ----- Dip\_Min ----- Dip\_Max 🗕 D&I\_Temperature -— Mag\_Dip\_Angle 🔵 MZ 🔵 MY 🛑 MX — MTotal 🔺 AZI From 03-Aug-2019 14:56:36 To 08-Aug-2019 01:38:05

Magnetometer Cross Plot





#### **Tool Face Cross Plot**





- Learn post run dump procedures
- Evaluate tool physical components for re-run
- Understand Post Run PTK

