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**ELECTRICAL CHARACTERIZATION OF THE  
MAGELLAN BATTERIES AFTER STORAGE**

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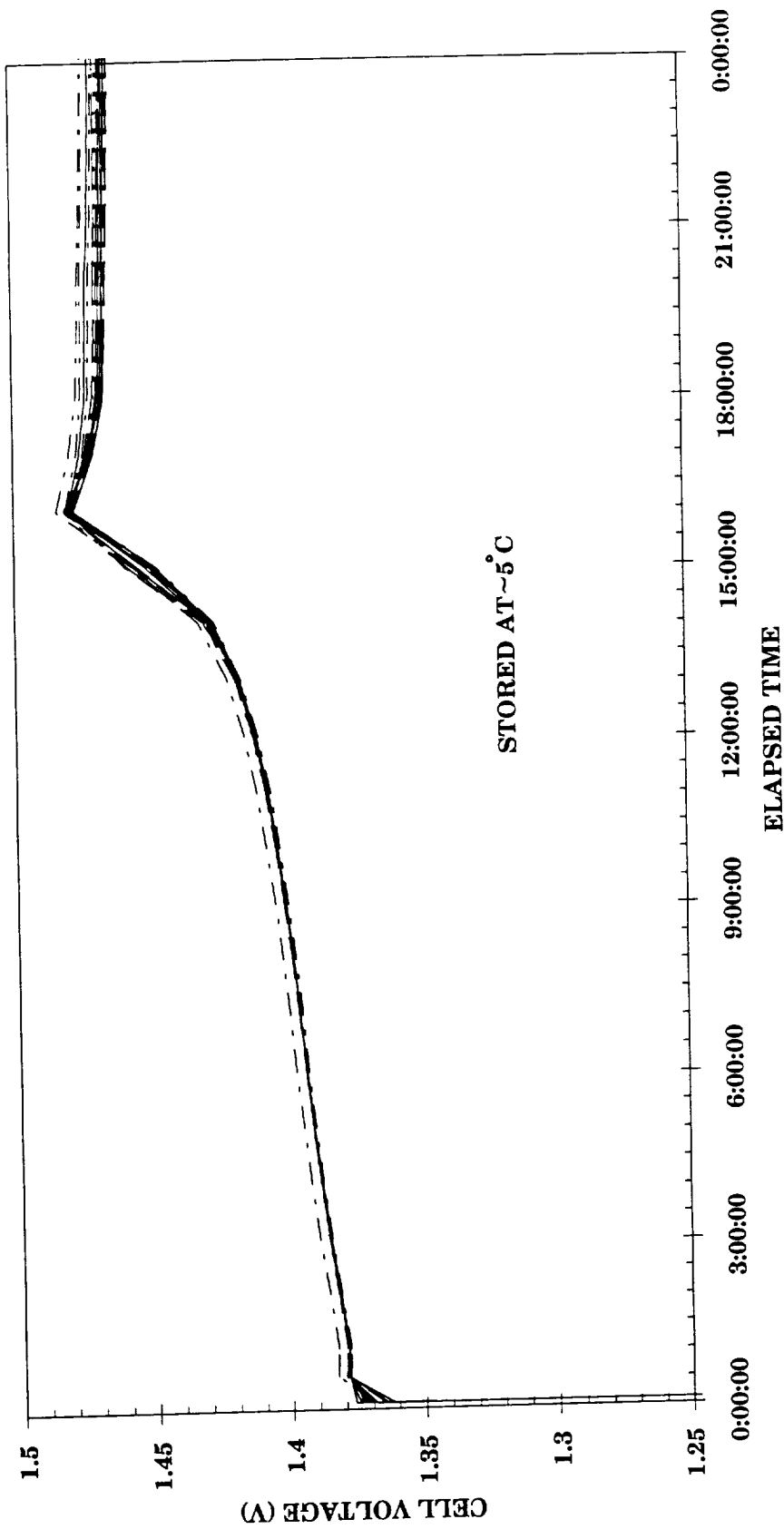


## MAGELLAN / MSTI BATTERY SUMMARY

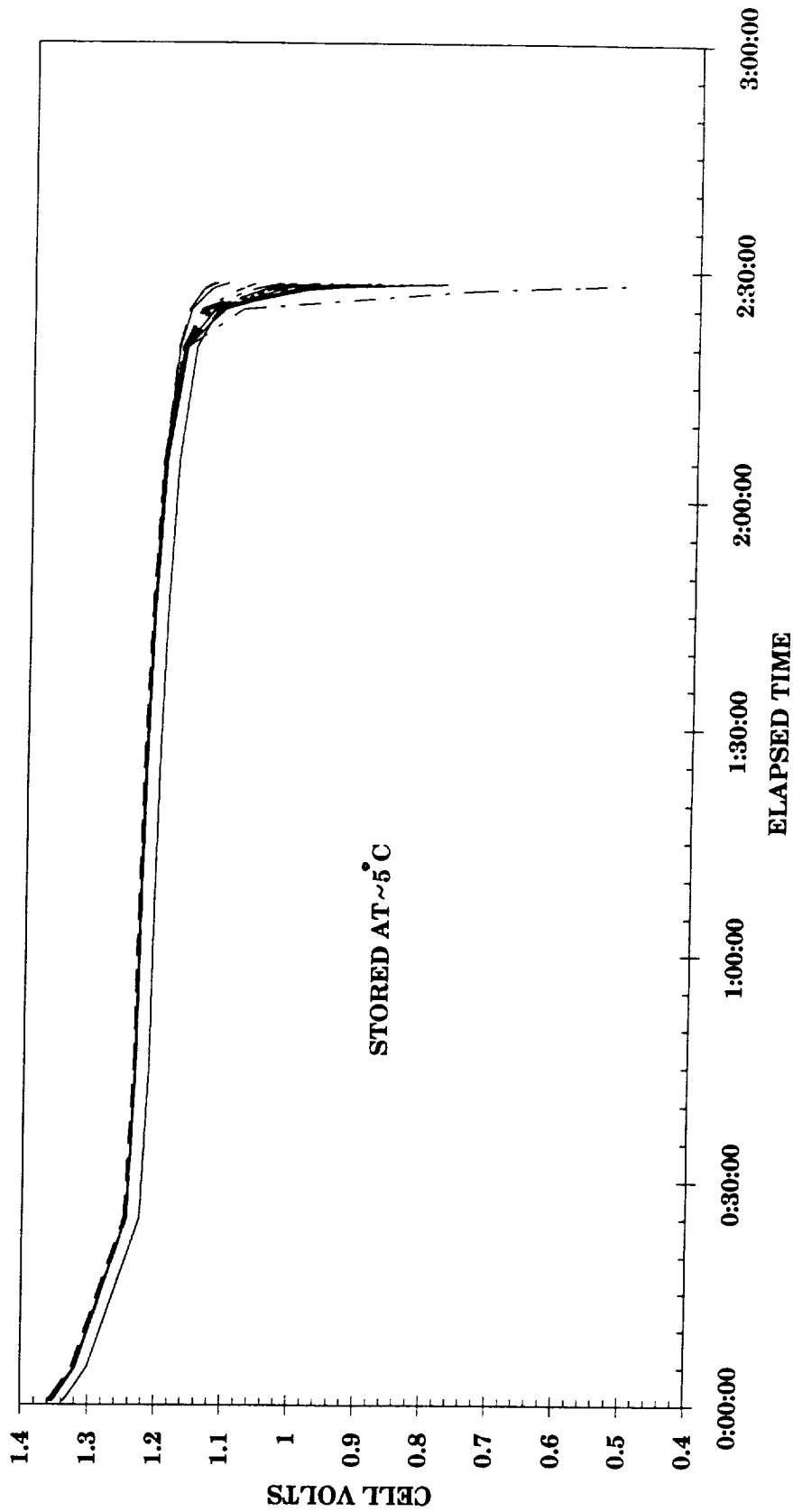
- PRIME CONTRACTOR - MARTIN MARIETTA
- BATTERY DESIGN
  - TWO 22 CELL / 26.5 Amp-Hr BATTERIES
  - CELL DESIGN
    - GATES AEROSPACE 42B030AB15
    - 11 POS / 12 NEG
    - PELLON 2536 SEPARATOR
    - PASSIVATED POS / TEFLONATED NEG
- BATTERY CYCLE REGIME
  - 15 MONTH CRUISE PERIOD
  - HIGHLY ELLIPTICAL VENUSIAN POLAR ORBIT (3.25 Hr)
  - 6.5 Amp 200 ms pulse @ 1.1 Hz DURING MAPPING CYCLE ( 37 min)

———— BATTERY SYSTEMS GROUP ————

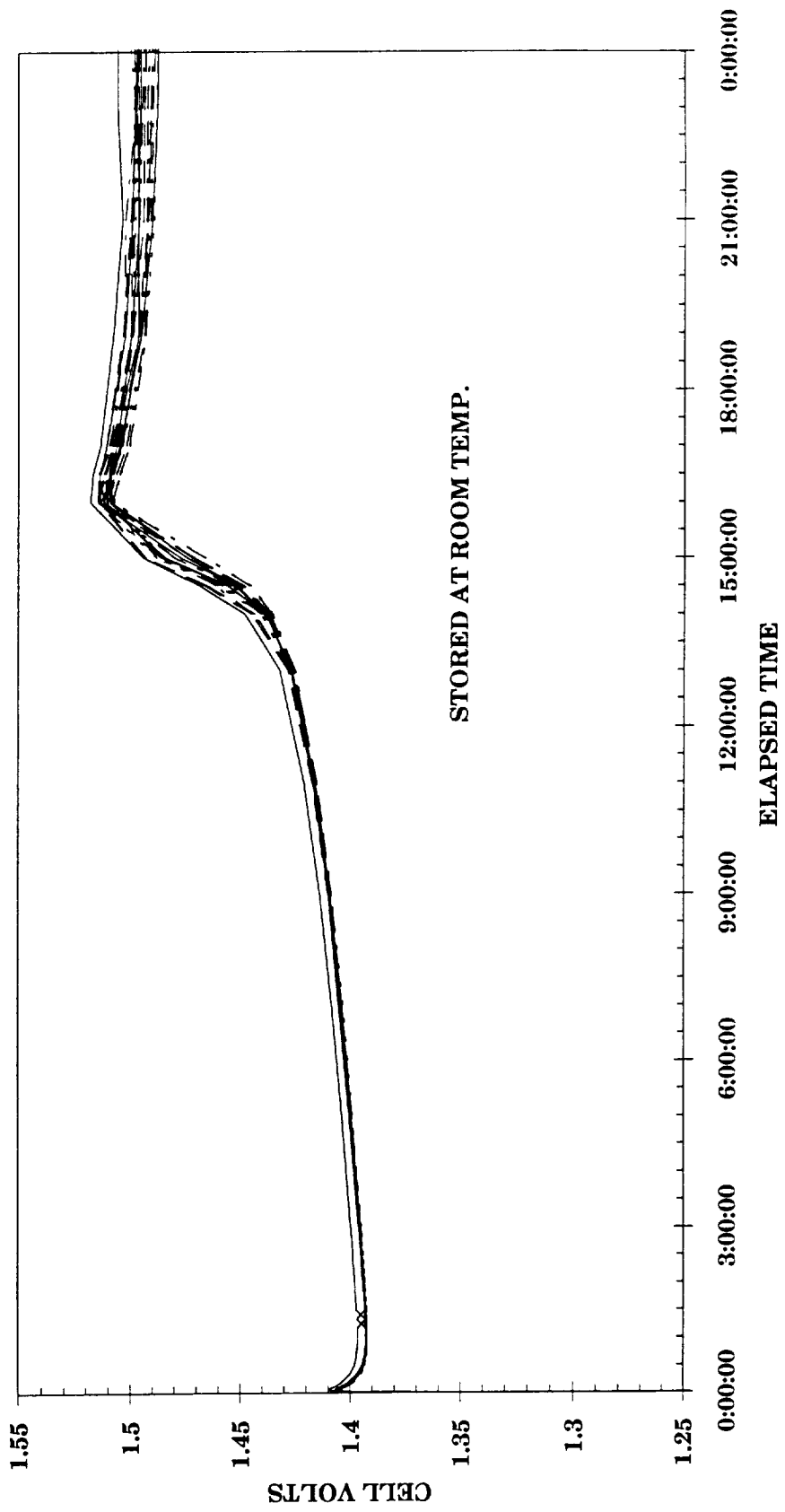
**MSTI FLIGHT BATTERY  
CYCLE #1 - C/10 CHARGE (2.65 A)**



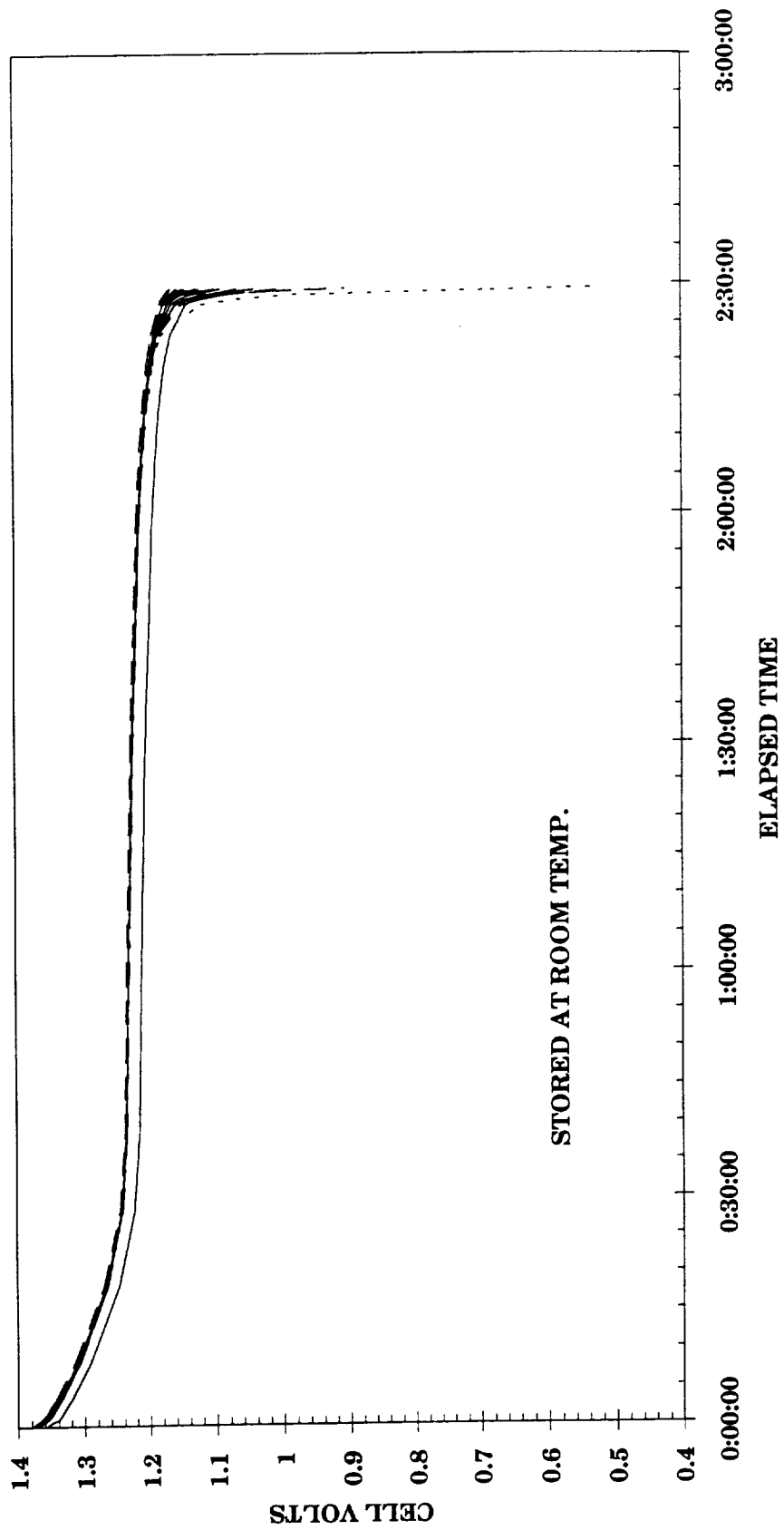
**MSTI FLIGHT BATTERY  
CYCLE #1 - C/2 DISCHARGE (13.25 A)**



**MSTI TEST BATTERY  
CYCLE #1- C/10 CHARGE (2.65 A)**



**MSTI TEST BATTERY  
CYCLE #1 - C/2 DISCHARGE (13.25 A)**



**FLIGHT BATTERY CAPACITY**

	<b>BEFORE STORAGE</b>	<b>AFTER STORAGE</b>
<b>C/20 CH. &amp; C/2 DISCH.</b>	<b>33.87</b>	<b>30.91</b>
<b>C/10 CH. &amp; C/2 DISCH.</b>	<b>31.79</b>	<b>32.02</b>

**STORED AT -5°C**

**TEST BATTERY CAPACITY**

	<b>BEFORE STORAGE</b>	<b>AFTER STORAGE</b>
<b>C/20 CH. &amp; C/2 DISCH.</b>	<b>33.06</b>	<b>32.57</b>
<b>C/10 CH. &amp; C/2 DISCH.</b>	<b>32.77</b>	<b>32.91</b>

**STORED AT ROOM TEMP.**

# **SUMMARY**

- **NO NOTICEABLE CAPACITY LOSS AFTER STORAGE PERIOD AT BOTH TEMPERATURES.**
- **TEST BATTERY EXHIBITED LARGER NON-UNIFORMITY OF CELL VOLTAGES DURING CONSTANT CURRENT CHARGE.**