

7-23-02  
16:45  $T = 41.9^{\circ}\text{C}$  ~~49.1~~ <sup>JPL 7-31-02</sup>

7-25-02  
9:05  $T = 41.9^{\circ}\text{C}$  ~~49.1~~ <sup>JPL 7-31-02</sup>

7-26-02  
10:00  $T = 49.1^{\circ}\text{C}$  ~~41.9~~ <sup>JPL 7-26-02 JPL 7-31-02</sup>

7-31-02  
13:20  $T = 49.1^{\circ}\text{C}$  Thermometer SN 183301.  
8-6-02 Cal. Jun 11, 02.

8/26/02  
13:45  $T = 49.2^{\circ}\text{C}$ . one of the  
Filtration paper transferred to  
the humidity chamber for the  
Del. point test. ~~at~~ 2-12-8/26/02  
See page 16, bk # 533

8/27/02. Formation of ammonia products using test.  
lot #: 005573

15:36: Decicator placed in oven,  $T = 50^{\circ}\text{C}$

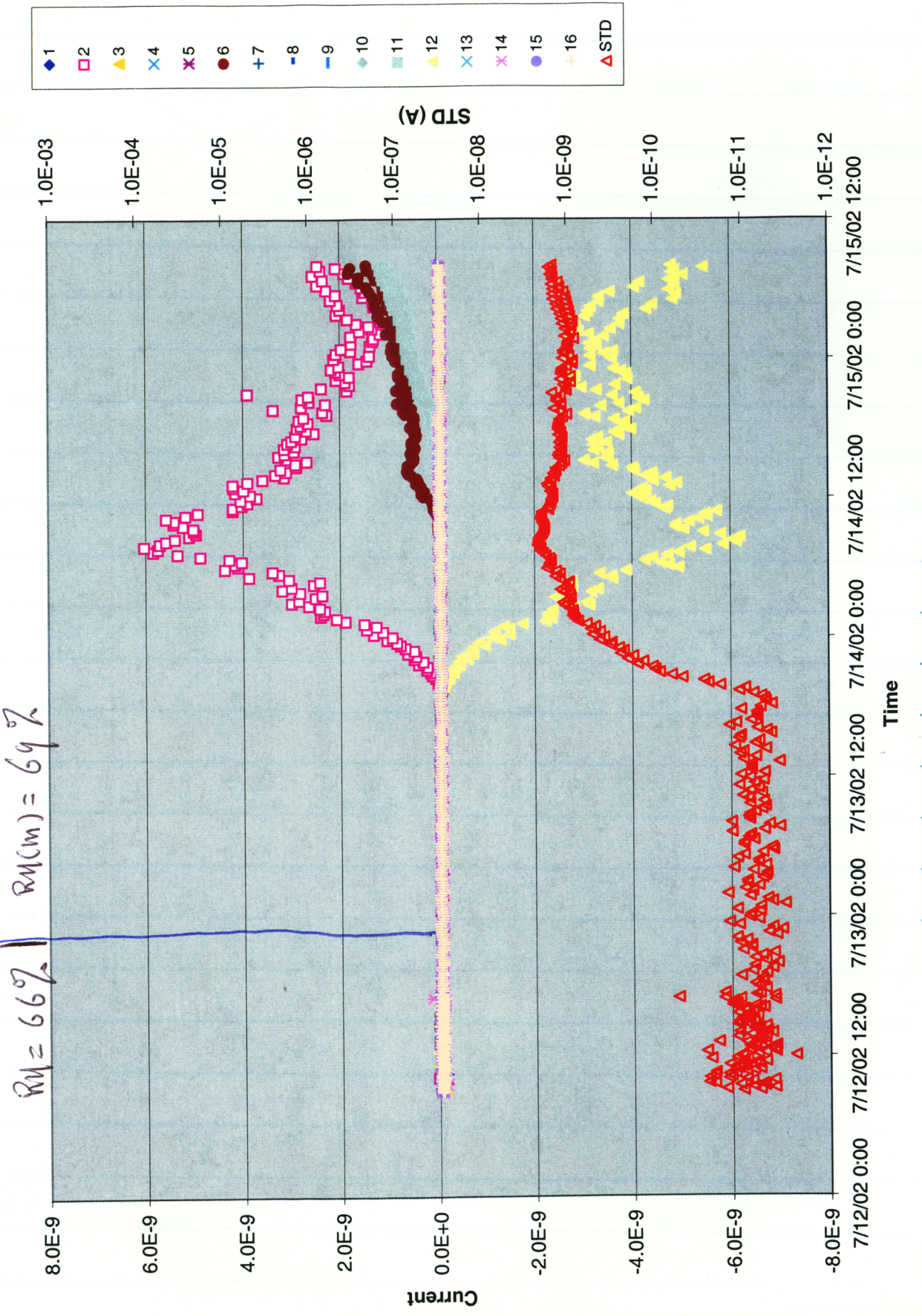
8/28/02  $T = 49.6^{\circ}\text{C}$  Thermometer SN# 183301 cal Jun 11/02 due 12/11/02  
over set point Temp  $50^{\circ}\text{C}$

8/29/02 over set point  $50^{\circ}\text{C}$  Thermometer reads  $51.2^{\circ}\text{C}$

9/3/02 Thermometer reads  $50.6^{\circ}\text{C}$  9/23/02 HyThermometer reads  $52^{\circ}\text{C}$

9/23/02 Removes from oven @ 3:10 pm. This product is used on 9/23/02  
See page 43, Book # 533. J. Yang 2/14/06

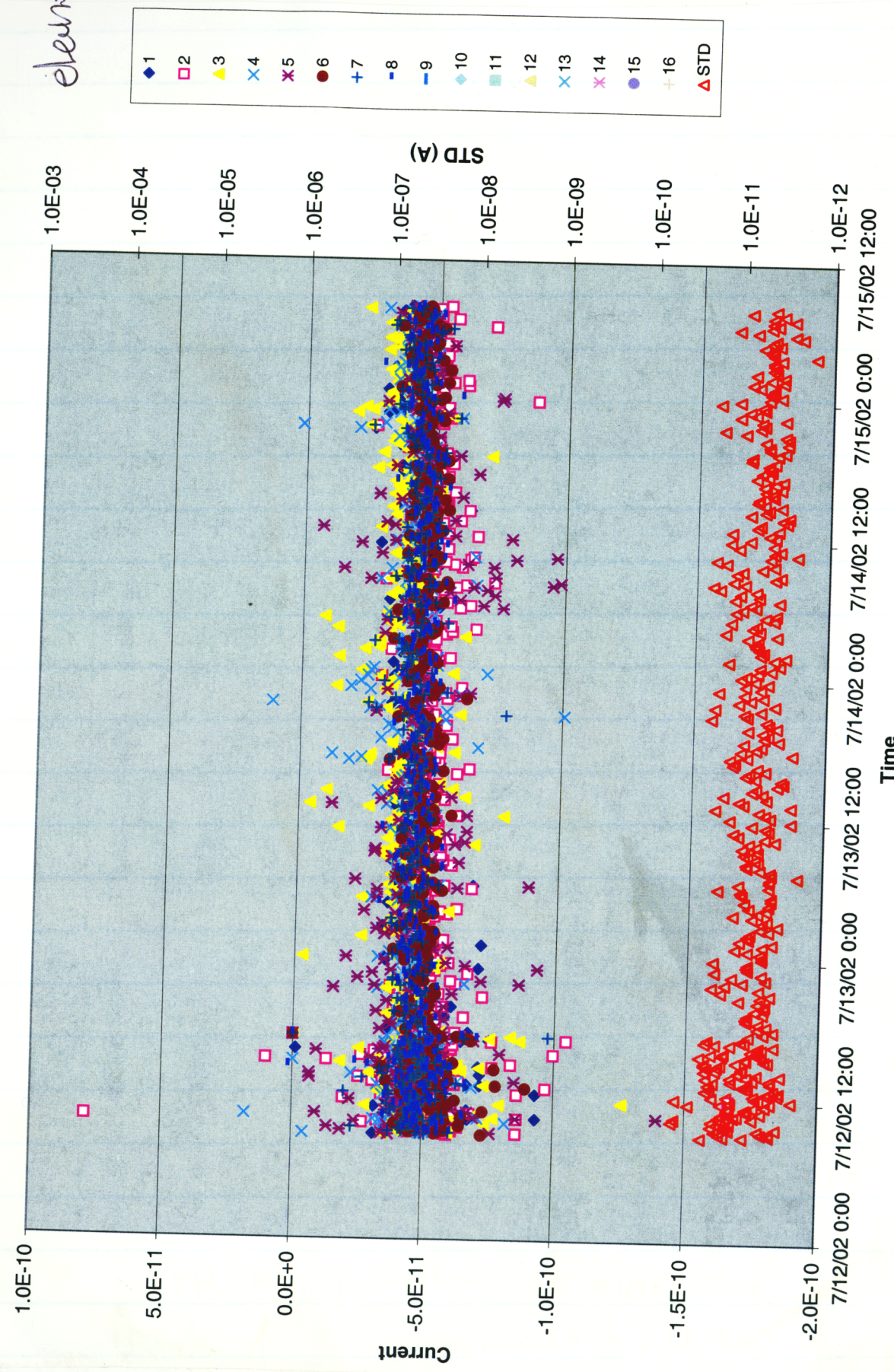
electrode



J. Yang  
7/15/02

eleven

02\_0712a00\_12b02\_salt.xls Chart\_SS316-1



J. Young 7/18/02

7/16/02 12:33  $T_d/T_w = 5/42$  RH(m) =  $\frac{71.44}{70.14}$  T(M) = 47.7

All connectors except II-4 removed for MIC test.

17:09 II-2, II-3, II-5 returned Data #100

17:15 Data #102

SS -18.673 - -11.296 mV

CS -957.462 - +547.246

$T_d/T_w = 5/42$  RH(m) = 69.63 - 70.80% T(M) = 47.80°C

8:27, 7/17/02 Program Restarted. 02-0717a. Results See pages 37-39 Book # 533

JPL 7-17-02

10:16  $T_d/T_w = 5/43$  RH(m) = 72.78 - 74.46% T(M) = 47.84°C

Data #20

SS: -14.149 - -8.324 mV

CS: -2218.285 - +127.087 mV

17:05  $T_d/T_w = 5/43$  RH(m) = 74.83 - 76.42 T(M) = 47.82°C

Data: 106 SS: -24.478 - -5.272 mV

CS: -3947.323 - +1575.76 mV

7/18/02  $T_d/T_w = 5/42$  RH(m) = 72.39 - 73.51% T(M) = 47.44°C

8:07 SS: -22.253 - -7.394 mV

Data #293 CS: -1508.492 - +263.941 mV

J. Young 7/22/02

16:30 II-5 Removed

16:43 II-3 Removed  $T_d/T_w = 5/40$  too low!  $RH(m) = 67.21$   
 $\rightarrow 68.18$

JPL 7-19-02  
~~7-18-02~~ 7-19-02

7:59  $T_d/T_w = 5/40$   $RH(m) = 65.34 - 66.55\%$   $T(m) = 47.76^\circ C$  Data# 567

8:25 II-3 + II-5 Returned  
cooling water valve  $\frac{1}{4}$  open.

JPL 7-19-02  
8:47  $T_d/T_w = 5/43$   $RH(m) = 75.23 - 75.73\%$   $T(m) = 48.07^\circ C$

JPL 7-19-02  
Data# ~~576~~ 576 SS: -35.498 - -1.428  $\mu V$   
CS: -3059.124 - +1932.083  $\mu V$

9:13  $T_d/T_w = 5/44$   $RH(m) = 76.42 - 77.01\%$   $T(m) = 48.11^\circ C$  Data# 581

Data# 581 SS: -37.405 - -0.608  $\mu V$   
CS: -2991.519 - +1863.073  $\mu V$

II-2, II-3, II-5 Removed

10:59  $RH(m) 78.66 - 79.31\%$   $T(m) = 48.05$  Data# 602

11:23 II-2 Returned

13:07  $T_d/T_w$  set to  $5/43.5$  Data# 626  
Current Reading  $T_d/T_w = 5/44$   $RH(m) = 80.07 - 80.70\%$   
 $T(m) = 47.95^\circ C$

J. Jany  
7/23/02

15:53 II-3 + II-5 Returned

~~II-3~~ II-4 + II-5 Resistors changed to 1kr  
Jy 12/14/02

7-22-01

7:18  $T_d/T_w = 5/44$   $RH(m) = 83.92 - 84.32$   $T(m) = 47.94^\circ C$   
~~83.80~~ JPL 7-22-01

Data# 1416 SS: -60.187 - +21.54  $\mu V$   
CS: -231.827 - +175.439  $\mu V$

7:23 II-3 + II-5 Removed

10:12 II-2 Removed

7-23-01

8:25 II-2, II-3, II-5 Returned

9:06  $T_d/T_w = 5/42 - 5/43$   $RH(m) = 76.25 - 76.58\%$   $T(m) = 47.67^\circ C$   
JPL 7-23-01

Data# 1728 SS: -36.592 - +17.515  $\mu V$   
CS: ~~+77.125~~ -236.224 - +136.324  $\mu V$

9:20 II-3 + II-5 Removed

14:15 II-3 + II-5 Returned

J. Jany  
7/23/02

14:42 II-3 + II-5 Removed

II-2 Removed

14:56  $T_d/T_w = 5/43$  RH(M) = 81.21 - 81.27% T(M) = 47.93°C

Data # 17A7 Current setting is  $T_d/T_w = 5/42.5$  Previous setting was altered

New Setting  $T_d/T_w = 5/43$  Target RH = 85%

15:25 New setting  $T_d/T_w = 5/43.5$

16:10 New setting  $T_d/T_w = 5/44$   
RH(M) = 82.25 - 82.88%

17:26 II-2 returned. Carbon steel sensor "S" and "L" has been not coupled. → coupled at 17:28

7-24-02

8:04 II-2 removed

8:54 II-2, II-3, II-5 Returned

9:46 Data # 2025

SS: -45.703 - +15.785 mV

CS -667.104 - +254.974 mV

RH(M) = 84.48 - 84.97%  $T_d/T_w = 5/44$  T(M) = 48.16°C

16:47  $T_d/T_w = 5/44$  RH(M) = 85.59 - 86.17%

II-2, II-3, + II-5 Removed

JPL 7-24-02

17:03 II-2, II-3 and II-5 Removed Returned

7-25-02

7:13 RH(M) = 89.21 - 89.86%  $T_d/T_w = 5/44 - 5/45$  T(M) = 48.06°C

II-2, II-3, + II-5 Removed New Setting  $T_d/T_w = 5/43.5$

continued to Notebook #533

metric study 7-25-02

J. Yang  
2/14/06

The following papers were published based on the work in this scientific notebook (#464)

L. Yang, R. T. Pabalan, L. Browning and D.S. Dunn, "Corrosion Behavior of Carbon Steel and Stainless Steel Materials under Salt Deposits in Simulated Dry Repository Environments", in Scientific Basis for Nuclear Waste Management XXVI, R. J. Finch and D. B. Bullen, eds, Warrendale, PA: Materials Research Society, M.R.S. Symposium Proceedings, Vol. 757; pp.791-797, 2003.

Lietai Yang, Roberto T. Pabalan and Lauren Browning, "Experimental Determination of the Deliquescence Relative Humidity and Conductivity of Multicomponent Salt Mixtures" in Scientific Basis for Nuclear Waste Management XXV, B. P. McGrail and G.A. Cragnolino eds, Warrendale, PA: Materials Research Society, Symposium Proceedings Vol. 713, pp. 135-142, 2002.

J. Yang  
4/1/06

I have reviewed this scientific notebook and find it in compliance with QAP-001. There is sufficient information regarding procedures used for conducting tests, acquiring and analyzing data so that another qualified individual could repeat the activity.

*[Signature]*

4/11/06

**ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 464**

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