

Pressure Test Record

(for implodable items to be carried aboard Alvin)

Certification of implodable volumes to be installed on, or manipulated by, DSV *Alvin* requires a submergence pressure test to **14,600 psi** (1.5 x 6,500m) for 10 cycles; held 10 minutes at greatest pressure for cycles 1 through 9, held 1 hour at greatest pressure for cycle 10. This includes any and all equipment to be installed on the submersible, an elevator to be moved by the submersible or a free vehicle or instrument that will be manipulated by the submersible. For volumes which are intended for use at depths shallower than 6,500m, an acceptable alternative procedure involves substituting a different maximum test pressure in the same cycling sequence according to the following equation:

$$\text{Test pressure (psi)} = 1.5 \times (\text{maximum pressure (psi) expected during applicable dives}),$$

where maximum pressure = maximum water depth (meters) x 1.487 (psi/meter)

Any volume tested to a depth other than 6,500m must have the maximum allowable depth clearly indicated on the exterior of the pressure vessel.

Damage shall be cause for test failure. The following data shall be recorded, with a separate record for each item tested.

Test Date: 2 - MAY - 2016
Description of Item Tested (Make/Model): PPS CONTROLLER AND WTS-LV PUMP HOUSINGS
Serial Number (or other unique ID): 14028
Tested For/Item Owned By: SUSAN LANG U. SOUTH CAROLINA
Test Pressure (PSI): 8200 PSI

Test Equipment

	Gauge 1	Gauge 2 (if installed)
Gauge Make:	<u>OMEGA</u>	
Gauge Model:	<u>PX0151 - 20KGV</u>	
Serial Number:	<u>331650</u>	
Calibration Date:	<u>1-29-2016</u>	
Next Cal Due Date:	<u>1-29-2017</u>	
Gauge Pressure Range:	<u>20,000 PSI</u>	

Note: Test pressure shall be within middle two-thirds of gauge pressure range. Test facility gauges must have been calibrated to NIST standards within 12 months of the test.

Test Medium Temperature: _____

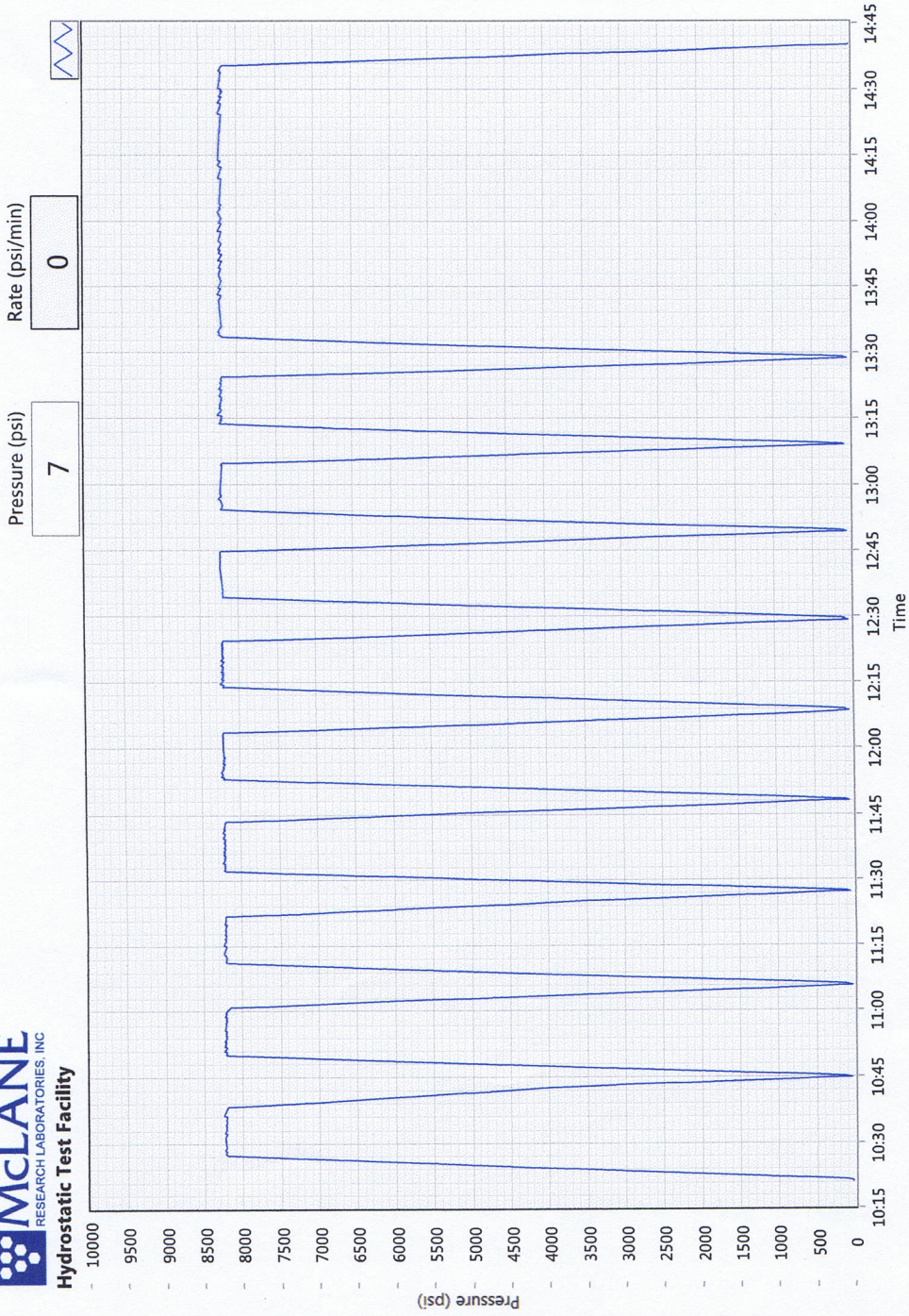
Test Data

Cycle No.	PSI Pressure	Start Time (Full Pressure)	Stop Time (Full Pressure)
1	<u>8214</u>	<u>10:27</u>	<u>10:38</u>
2	<u>8220</u>	<u>10:50</u>	<u>11:00</u>
3	<u>8210</u>	<u>11:11</u>	<u>11:21</u>
4	<u>8215</u>	<u>11:33</u>	<u>10:43</u>
5	<u>8220</u>	<u>11:53</u>	<u>12:03</u>
6	<u>8220</u>	<u>12:14</u>	<u>12:24</u>
7	<u>8210</u>	<u>12:34</u>	<u>12:44</u>
8	<u>8213</u>	<u>12:54</u>	<u>13:04</u>
9	<u>8226</u>	<u>13:14</u>	<u>13:24</u>
10	<u>8200</u>	<u>13:34</u>	<u>14:35</u>

Results and Remarks:

Test Operator

Name (print): TIMOTHY SHANAHAN
Signature: TMS
Date: 2 - MAY - 2016
Facility Used: McLane Research Pressure Chamber



Date: May 02, 2016

Test Number: 2251

Customer: USC S. Lang

Model & Serial Number: RAS-500 Controller Housing& 4LPM WTS-LV Pump S/N 14028

P.O. Number:

Notes: Pressure transducer
Omega PX0151-20KGV
s/n 331650
Cal Date 1/29/2016
MRL

File name: C:\Users\mclane\Documents\ PressTestData\McLane\14028 Alvin Test.txt

Tested By: Tim Shanahan