

Pressure Test Record

Equations:

$$1\text{Ft} = 0.328\text{M}$$

$$\text{PSI/Ft (Seawater)} = .44$$

$$\text{PSI/Ft (Freshwater)} = .43$$

$$\text{PSI/M (Seawater)} = 1.46$$

$$\text{PSI/M (Freshwater)} = 1.42$$

Test Date:	1/31/2020, 2/1/2020, 2/12/2020
Description of Item Tested:	569200 Assembly (Titanium enclosure, chemically strengthened BK7 domes, connectors)
Serial Number:	9301843
Test For/ Items Owned By:	MBARI (Eric Martin, Ben Erwin)
Test Pressure (PSI):	6550 psi

Cycle Number	Pressure	Start Time (Zero Pressure)	Stop Time (Full Pressure)
1	6550 psi	9:15am	9:49am
2	6550 psi	10:16am	10:54am
3	6550 psi	12:18pm	12:59pm
4	6550 psi	1:09pm	1:37pm
5	6550 psi	1:47pm	2:14pm
6	6550 psi	2:23pm	3:00pm (hold overnight 24hrs)
7	6550 psi	10:01am (2/12)	10:27am
8	6550 psi	10:43am	11:07am
9	6550 psi	11:15am	11:34am
10	6550 psi	11:43am	12:04pm

Results and Remarks:

Pressure vessel designed for use at 4000m (depth rating of Doc Ricketts ROV). Test pressure equivalent to 4500m. 10 tests were conducted with one 24-hour hold. Housing was visually inspected 3 times during the process and there were no signs of damage to the domes or dome seats (weak point of design).

Operator Name: Jeremy Childress

Date: 2/12/2020

Facility Used: Oregon State University, CEOAS Western Lab