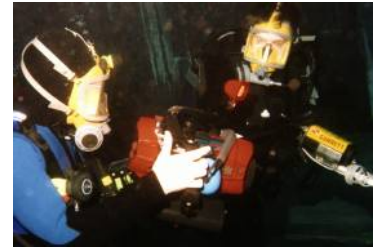


# **PONY BOTTLE (Redundant Air Supply)**

Lewis Thompson  
Training Lt.  
Travis County Dive Team  
January 10, 2008



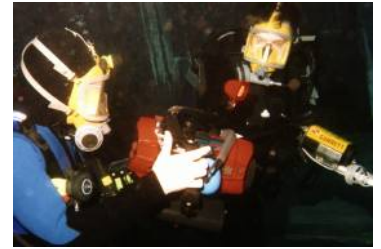
# PURPOSE



- **Independent, redundant air supply**
- **Required for tethered diving**
- **Good idea in low vis search operations**



# LOCATION

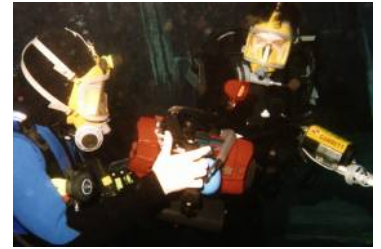


- **Tethered Diving Operation – under left arm, clipped to BC harness**





# LOCATION (cont)

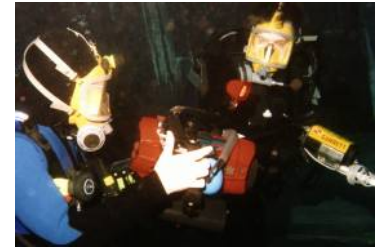


- **Low vis diving:**
  - Clipped on under left arm
  - Mounted to main tank
    - Fixed
    - Quick release





# PONY TANK CAPABILITY



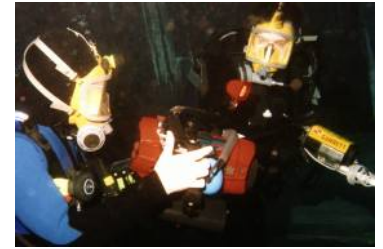
DEPTH	ATM	RATE	TIME	06 cu/ft	13 cu/ft	19 cu/ft	30 cu/ft
0 FT	1 ATM	0.75 cfm	0.0 min	8.0 min	17 min	25 min	40 min
33 FT	2 ATM	1.50 cfm	1.1 min	4.0 min	8.6 min	12 min	20 min
66 FT	3 ATM	2.25 cfm	2.2 min	2.6 min	5.7 min	8.4 min	13 min
99 FT	4 ATM	3.00 cfm	3.3 min	2.0 min	4.3 min	6.3 min	10 min
132 FT	5 ATM	3.75 cfm	4.4 min	1.6 min	3.4 min	5.0 min	8.0 min
165 FT	6 ATM	4.50 cfm	5.5 min	1.3 min	2.8 min	4.2 min	6.6 min

**RATE** – Breathing rate at “Depth” (0.75 cfm SAC rate)

**TIME** – Time to reach surface from “Depth”



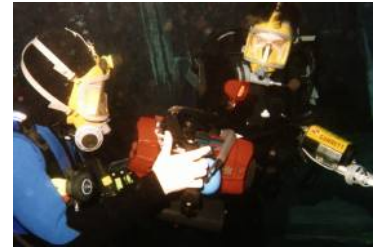
# PONY TANK SIZE/WEIGHT



Aluminum Cylinders							
Manufacturer & Nominal Capacity	Service pressure, psi	Actual air capac ity, ft3	Outer diameter, in	Length without valve, in	Empty weight, lbs (w/o valve)	Buoyancy Empty, lbs (w/valve)	Buoyancy Full, lbs (w/valve)
Catallina S6	3000	6	3.21	10.8	2.6	-1.1	-1.5
Luxfer 6	3000	6	3.21	10.87	2.72	-1.03	-1.49
Catalina S13	3000	13	4.38	12.8	5.7	-0.8	-1.7
Luxfer 13	3000	13.2	4.37	12.87	5.94	-0.72	-1.71
Luxfer 14	2015	13.7	4.4	16.5	5.4	1.7	0.7
Catalina S19	3000	19	4.38	17.4	7.8	0	-1.3
Luxfer 19	3000	19.9	4.37	18.56	8.09	0.12	-1.37
Luxfer 27	3000	27.9	5.3	18	11.4	0.6	-1.5
Catalina S30	3000	30	5.25	20	13.7	-0.2	-2.4
Luxfer 30	3000	30	4.87	21.85	11.61	1.2	-1



# RECOMMENDATION

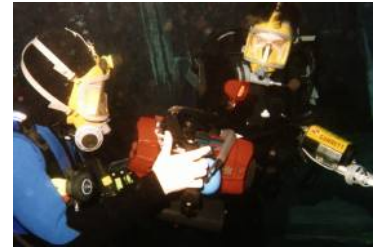


- **SIZE:**
  - Minimum – 19 cu. ft.
  - Depths of 60 ft to 100 ft – 30 cu. ft.
- **LOCATION:**
  - Under left arm
    - Easy hand-off
    - Easy access to valve
    - Can see SPG





# **USE (Under Arm Location)**

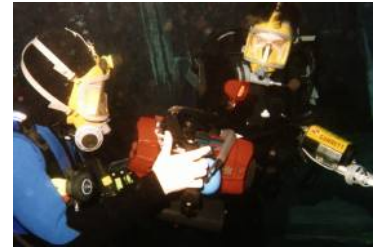


- **Remove full-face mask**
- **Grab 2<sup>nd</sup> stage with right hand**
- **Pull 2<sup>nd</sup> stage up then around back of neck and place in mouth.**
- **At same time, turn on air with left hand**
- **Clear 2<sup>nd</sup> stage and begin breathing**
- **Put on back-up mask and clear**
- **Check Pony SPG (Switch to buddy's Pony?)**
- **Signal for HELP**





# USE (Under Arm Location)



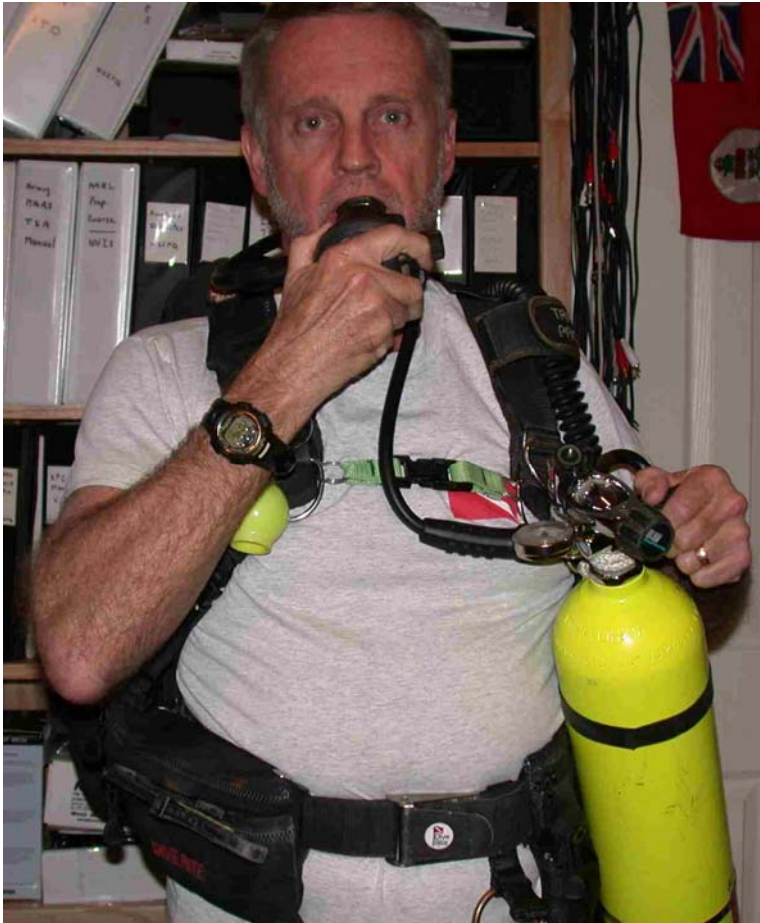
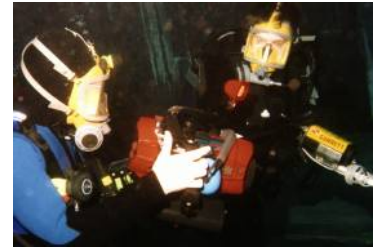
**STEP 1**



**STEP 2**



# USE (Under Arm Location)



**STEP 3**

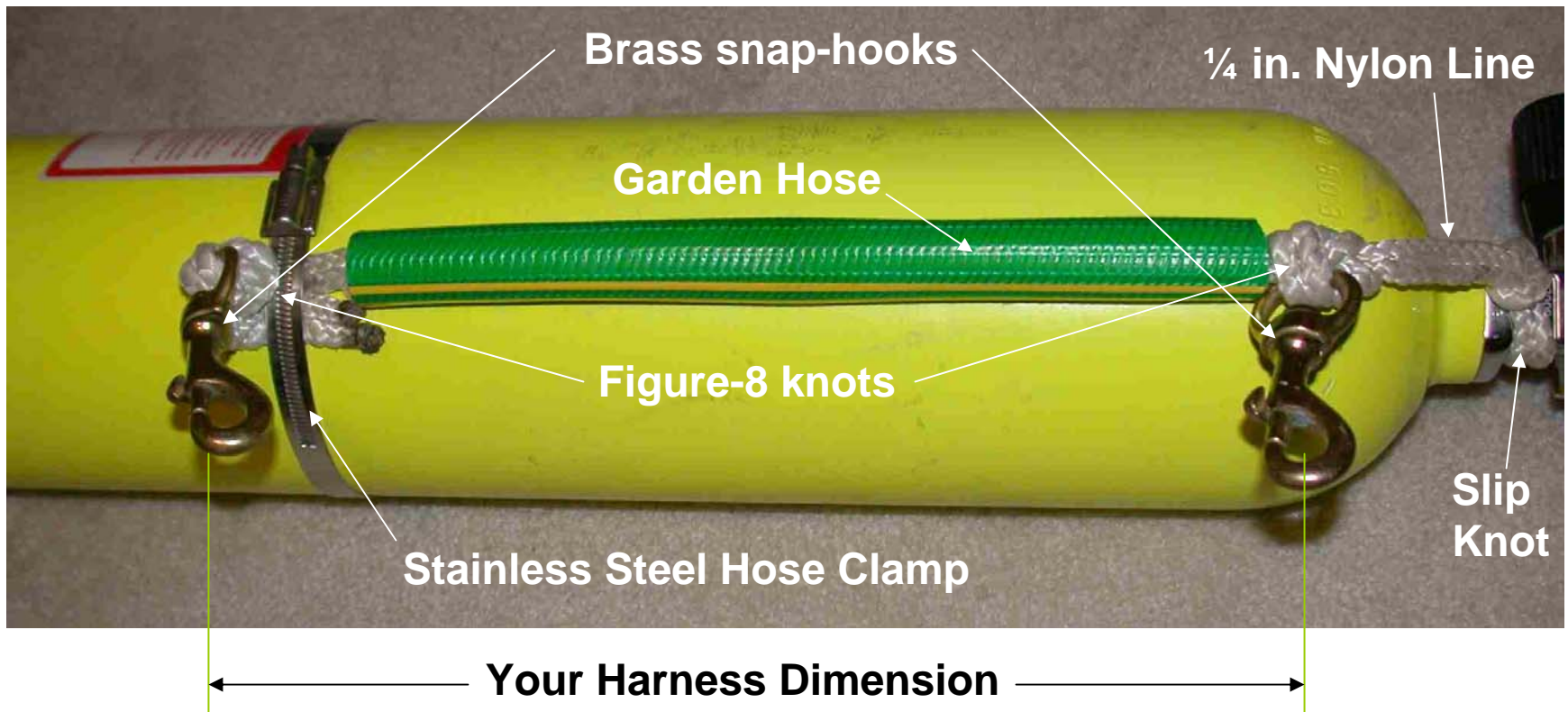
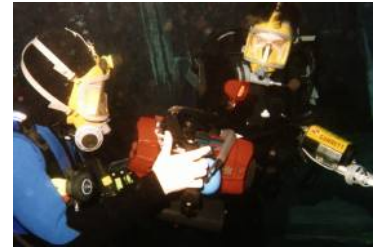


**STEP 4**



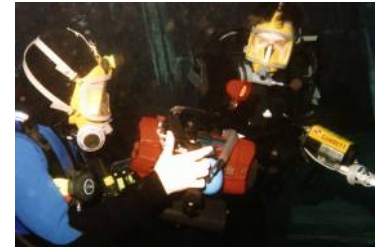


# CONSTRUCTION





# REGULATOR & SPG



**SPG – Scubapro 2" dia.  
Hose – HP 6" length**



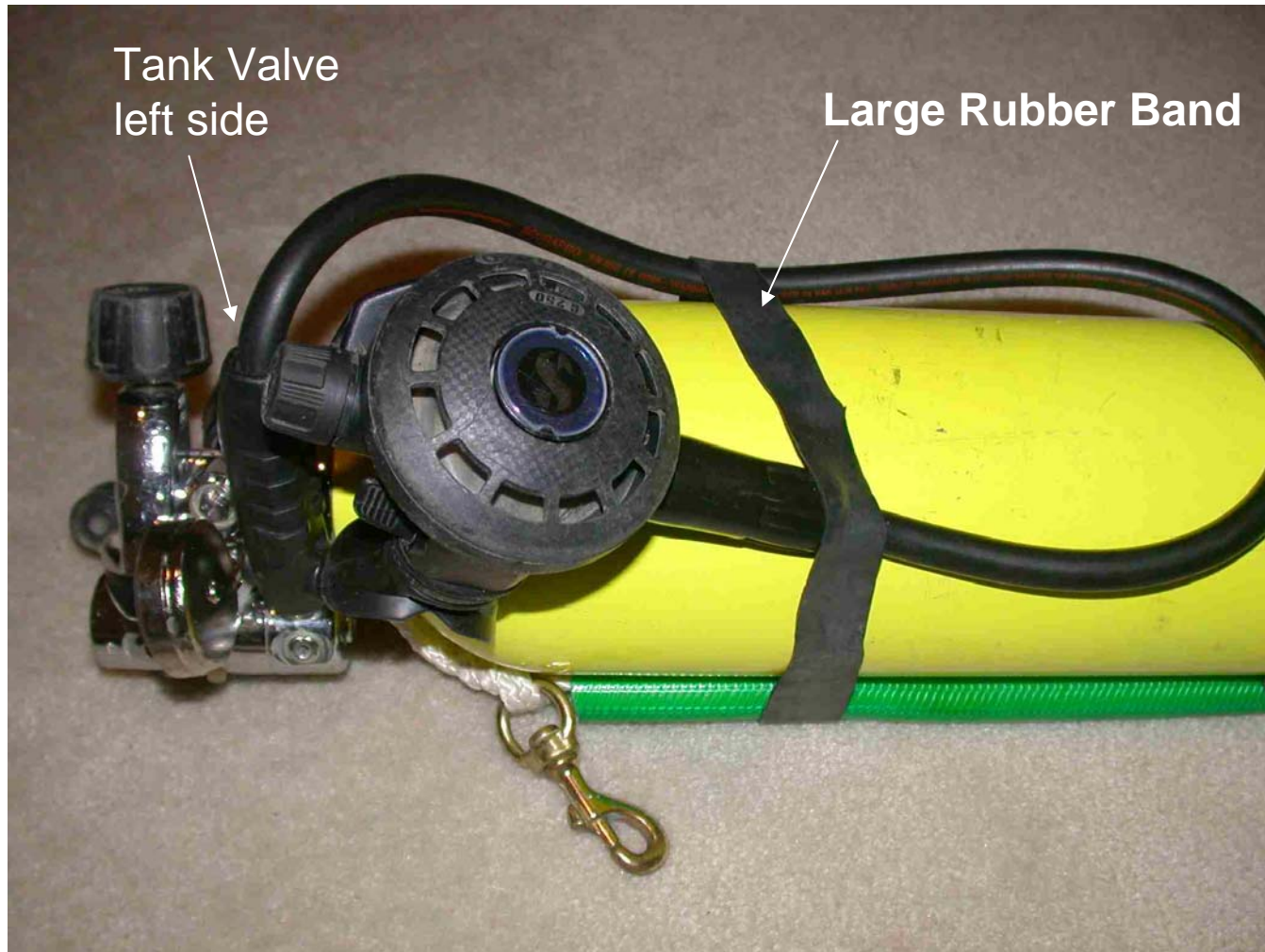
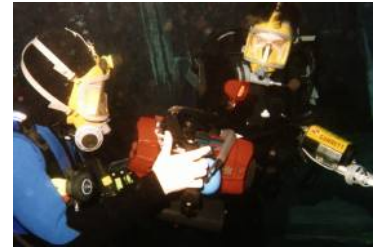
**Position to read from above tank**





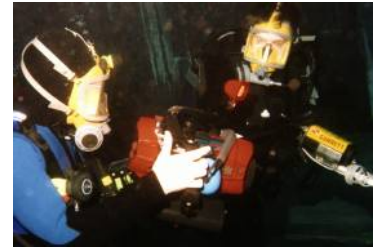


# 2<sup>nd</sup> STAGE REGULATOR POSITION





# QUESTIONS?



- Lewis Thompson
  - PADI OW & Specialty Instructor
  - ERDI 1 Diver
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  - Cell – 587-9944
  - W5IFQ@austin.rr.com