TABLE 4

DEPTHS AND TIMES WHICH CAUSE MAXIMUM
TISSUE PRESSURE

Half-time tissue	Depth (feet)	Time (minutes)
80	32	281
100	30	360
120	28	487
160	26	723
200	25	929
240	24	1,265
360	23	1,892

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This is an edited transcript of a lecture given at the 1990 Annual Scientific Meeting of SPUMS.

A companion paper "Testing the Recreational Dive Planner" also edited from the lecture transcript will appear in a later issue.

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THE DITAA SURVEY A REPORT ON A STUDY OF THE AUSTRALIAN DIVING INDUSTRY

Warrick McDonald

DITAA (Diving Industry Travel Association of Australia) is not just an organization to run SCUBA EXPO, the annual dive show where wholesalers, manufacturers and retailers exhibit their goods. DITAA takes its representation of the diving industry seriously and now offers members a wide spectrum of benefits. This survey is just one.

The survey was undertaken by Arthur Young and Company to benefit the diving industry through improved knowledge and understanding of the market and thereby help the industry along the road to greater success resulting in some cases in better profits.

Once one has analysed the contents of the survey one will appreciate just how valuable the information can be. If used wisely, the survey will enable the diving industry to plan and manage their businesses for profit. The information contained not only will benefit divers, dive shops, instructors, charter boats and wholesalers but other allied industries such as travel consultants, medical practitioners and printers of associated products.

The survey was commissioned by DITAA in order to provide, for the first time, information about the diving industry on a national basis. Little or no market research has been done for the diving industry in Australia. As a result it has been difficult for most operators to estimate the level and nature of demand for equipment and services. Retailers could lose in two ways if these demands are not known, either by having an inadequate supply of products from under calculation of current needs or by overstocking and possibly having to sell, at cut-throat prices, goods in an effort to reduce stocks.

The report of the survey analysed the current diving environment in Australia and discussed the study findings in detail. This paper will cover just a few of the points in the DITAA survey.

The Australian diving industry is affected by such things as population, external competition, customer lifestyles, technology, environment, overseas trends, the economy, internal competition and regulations. In 1981 the Australian population was 14.6 million, by the year 2001 it is estimated that the population will be 20 million. Also the age groups are changing. By 2001 28% will be 19 years old or younger while the 40-59 group will be 25%. From this the market will lie in the latter, "Baby Boomers", age groups and attention should be channeled into introducing them to diving. Customer lifestyles are towards family orientated,

less strenuous forms of exercise. Many new sports have been introduced to schools and competitive pressure is on businesses to upgrade their facilities and their approach to the market. Environmental issues are increasingly of concern to Australians.

Scuba diving is uniquely positioned to take advantage of the popularity of environmental issues. Technology has influenced the industry through new equipment and materials. Internal competition is very strong. Store ownership turnover is very high as divers do not necessarily make good businessmen. In the course of the study, the researchers found a degree of suspicion and mistrust amongst some members of the association.

Arthur Young and Company, now Ernst and Young, had some harsh words about professionalism in the industry "Although all the people contacted by the researchers were very friendly, there is undoubtedly a strong current of mistrust among the members of the industry which prevented a few of the major operators from participating. There is an apparent lack of professionalism which needs to be addressed frankly and openly as such attitude will ultimately be detrimental to the individual operator". Overseas the trend is toward customer-service orientation. This is the need to listen and cater to customer needs. The diving industry currently has in place a number of government and industry-enforced regulations regarding safety and the level of instruction.

Australia's economic future is uncertain to many of us, with high interest rates, lowering of the Australian dollar and a decline in the standard of living. The general prognosis is bad. Because the overall effect makes it more expensive to travel overseas, it may mean more dollars will be spent on local leisure activities. However, the initial costs of becoming involved in diving are becoming more expensive.

Response to the study was high in some fields but low in others. 75% of diving business operate from only one outlet and 56.6% are owned by companies. In 1988 49% of the turnover of the average dive shop was from equipment sales and 28% from their scuba school. Retailers' turnover was largest in Queensland then NSW followed by Victoria.

Certification agencies reported an average 16% increase in numbers certified. The largest group of students was aged between 19 and 35 with consistently more males than females. The average cost of an Open Water or Entry Level Course was \$300, exclusive of any equipment hire or purchase which would be required to complete the course. To this must be added the medical and X-ray costs.

It is no wonder that diving instructors are becoming harder to find for the dive schools, as they only earn an average of \$18,564.

It was shown that, consistent with world figures, PADI was Australia's largest training agency with a 51% market share. In 1988 50,550 students were trained as new divers. This figure would mean that approximately \$122,330 was earned, on average, by each dive school from new divers. Some of these would purchase equipment and progress to continuing education courses, adding to the dive shop's income.

The Yellow Pages proved to be the next most popular form of advertising but had the lowest perceived effectiveness, whereas television, the least used medium, was considered the most effective. "Sportdiving in Australia and the South Pacific" was the most popular industry magazine. It was a shock to most people when it was revealed in the survey that the most popular dive travel destination was Queensland, not the Pacific Islands.

Many other facts and figures were gained through the study but they are far to numerous to mention here. The 32 page report of the study was sent to financial DITAA members and is on sale to non-members for \$75.00 a copy.

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DIVING TRENDS IN THE UNITED KINGDOM

Greg Adkisson

Accepting that man is a land, rather than an aquatic animal, man's excursions into the oceans, throughout history, have been limited more by technology than by human physiology. It is only within the last hundred and fifty years or so that technology has begun to outpace us. Today, we are faced with a new breed of diver armed with higher pressure bottles, warmer suits and an array of new equipment designed to allow deeper and longer diving while keeping decompression to a minimum. We know that sport diving groups are changing the way they dive and nowhere is this more evident than in the new BS-AC '88 decompression tables or in the new PADI wheel for multi-level diving. We must be aware of these trends and be knowledgeable in our efforts to express a considered, cautious alternative view.