OLD MUTUAL TWO OCEANS ULTRA MARATHON TRAINING PROGRAMMES:

[Always seek advice and clearance from your medical professional before commencing or amending any training programme.]

There are four different levels of Old Mutual Virtual Coach training programmes for the 2012 Two Oceans 56km race:

- The novice schedule which assists runners who have a basic background in running or have qualified for the race between 4 hours 15 and 4 hours 59 minutes. The runners on this schedule are looking to earn the Blue Medal which is awarded for a finish over 6 hours and less than 7 hours after the start.
- The Bronze medal schedule. Here the runner will be capable of a 3 hour 30 minute to 4 hour 15 minute marathon. This could also be a schedule for the faster Two Oceans novice to follow, particularly if they have the experience of a few marathons behind them. The finish time will be between 5 hours and 6 hours.
- The Sainsbury medal programme for the more accomplished runner who can finish the marathon distance between 2 hours 50 and 3 hours 25 minutes. This runner will most probably be experienced in marathons and can finish a 10km race in 37 to 45 minutes.
- The Old Mutual Two Oceans Silver medal is one of the hardest medal standards in the country and requires the runner to be able to run faster than 2 hours 50 minutes for the marathon and faster than 37 minutes for 10km. Only around 5% of the field achieves this standard in a typical year. This runner not only requires having an ability to handle regular quality sessions, but also in peak training weeks needs to cope with a few double session days per week.

These programmes will run from 5 October 2011 through to race day on Saturday 7 April 2012 and are designed to take the runner to a peak performance on race day.

The following are short explanations of the critical concepts behind the programme, clarification on how to perform some various types of session and general advice relevant to the training programme.

These explanations are intentionally short as the runner who requires additional information can search the Wisdom chest on the web site.

The Wisdom Chest is a treasure trove of information for the runner. The Wisdom Chest will continually be updated to include new articles, definitions, explanations or details on all aspects of training, equipment, nutrition and preparation that applies to any runner, training or race. Over the months this will become a useful source of assistance.

SELECTING THE SCHEDULE:

Selecting your schedule is like driving a car – there are two things you need to know. Where you want to go and where you are now.

Where you want to go is your desired goal: A finish; going under 5 hours; or a silver medal. Of course your desire must be realistic to your potential and that means you need to know where you are at the present.

One of the easiest ways to get a feel for where you are is to look at your personal best times for various distances over the last 3 months. These are an indication of your current ability and tell you where you can start. Of course your best times over the last 18 months may be significantly better (than the last 3 months) and if so will give an idea of your ability in the immediate short term.

These two times indicate your potential form the immediate future and will assist in your choice of your goal and your training schedule.

Steps to Selecting Your Schedule:

- Browse the training pace table
- Locate your best recent 10km and marathon times in top rows of the tables
- Use the training schedule (Novice, Sub 6 hours, sub 5 hours or Silver) relevant to the table

THE PRIMARY PRINCIPLES OF TRAINING (Overload and Recovery):

Probably the least appreciated aspect of training is the need to balance the stress of overload with recuperative and beneficial periods of recovery. Too often training focuses on quantity and not the alternating between stressing and recovery.

When, for instance, we run fast downhill we inflict micro-muscle tears, which with the correct amount of blood circulation, rest, and nutrition not only repair but also allow the muscles to become stronger capable of handling greater load. This is the principle used by body builders who will train one particular part of the body on say Monday and not train the same muscles again until Wednesday or Thursday. With running we have little option to swap muscle use, (unless you take up triathlon or multi-sport) but we can change the intensity and duration of training. That is the purpose of the short easy recovery run.

Many runners go out every day to aimlessly 'clock up the kilometres' so the training log total looks good at the end of the week. This means they rarely work just outside their current ability and so never inflict the micro tears required for improvement.

Alternatively others believe virtually every session has to be challenging and so never include short easy runs. Another common mistake is to run all runs, and recovery runs in particular, at a pace that is too close to their current race pace. Either way they are inflicting more micro-muscle damage on already damaged muscles which results in poor performance or injury.

Training and recovery work together like a pendulum: If you want to be able to run fast in one session, you need to run very slow to allow the circulation, recovery, and energy restoration in others. In this way before you go out the door you should know, and stick to, the objective for each session.

The number of intense sessions you can handle per week will depend on your training age (the number of years you have been training), your chronological age and current ability.

Additional Guidelines

With this knowledge and primary principle in mind read the following notes and explanations to get the most out of your Two Oceans Ultra Marathon training schedules:

- *The combination of quality and distance makes the training schedules more difficult than it may seem at first sight. If, after the initial four to six weeks, you feel tired legged or generally fatigued then do not be afraid to replace one of the quality sessions with a short easier run. If you need more recovery reduce, or take off, any of the 6-10km easy days as these are primarily for recovery*
- DO NOT add distance to the schedule as this will increase the risk of over-training and injury
- Remember stress in other areas of your life, such as work or emotional stress can have a far greater effect on your ability to train. Where this happens, be prepared to reduce the overall training load in the week.

- Do NOT go faster in training (track or long runs) than the paces shown. These paces are specific to your ability and will improve key physiological aspects in your training. If you feel the session is too easy simply reduce the recovery time between efforts, as opposed to increasing the speed of the run.
- If you become injured start back at one level below the one you were on for the first 2 weeks, then go back to your normal level.
- The ***AIM*** of training is create microscopic tears in the muscles so that with the correct amount of ***REST*** and the correct ***NUTRITION***, the muscle will repair stronger. Stronger muscles, for the same bodyweight, will make us faster.
- The faster you can race a 5 or 10km, the faster time you can achieve over 21km or a marathon or even 56kms. The quality sessions are amongst the most important sessions as they increase your overall capacity.
- Any new training will take 4 to 6 weeks to experience the benefit. Initially expect to experience 'heavy legs", which will disappear as training adaptation takes place.

TRAINING SCHEDULES AND SESSIONS:

Quality versus Speed Sessions:
I refer to all change of pace or faster paced sessions, such as track, hill or fartlek as 'Quality sessions,' because they are used to improve the quality of your running. I do not like calling them 'Speed' sessions as this puts the incorrect emphasis on the objective. It is not about running these as fast as you can, but rather running them at a pace that is relevant to your current ability so that you will be able to handle a small improvement over the race pace and distance.

Running these sessions as fast as you can has no relevance to the distance you are training for and so simply tires you out. It is one of the quickest ways to over-train and increase the risk of injury.

Warm up and Cool Down:
Every 'quality' session (where there is speed) should be preceded by a warm up of about 15 to 20 minutes very easy running followed by some general light movement of joints (shoulders, hips, knees, and ankles) and any easing off of any tight muscles. Follow this with 2-3 gradual increase in speed over 60-80 metres then decelerate and walk back as recovery. This will prepare you for faster work to follow. After the faster work jog easily for 10-15 minutes

Develop a standard warm up: The above is a brief outline of a simple warm-up. Develop your own that you can use not only for sessions, but also before races. Keeping the same warm-up / pre-race routine will improve confidence and relaxation before races.

Track Sessions:
Many road runners are apprehensive of track because they feel they must go as fast as possible. This is NOT the case. The attached tables give specific paces relevant to each target time / current ability. It is important NOT to go faster than these paces, but improvement comes from reducing the specified recovery (rec) time.

For instance a runner capable of a 54 minute 10km and targeting a 6 hour Two Oceans may be facing a track session of 10 x 400m in 2 minutes 2 seconds with 90 sec recovery. It is best to stick to this pace and reduce the recovery from 90 seconds to 75 seconds between the 400m. If that is still easy do the next with 65 seconds recovery: if that is now too hard then drop recovery back to 75 or 90 seconds for the next. This teaches us to get more and more used to running at relevant paces, and makes the track sessions more enjoyable.

Fartlek: Primarily there are two types of Fartlek in the schedules:

Fartlek strides: After the easy warm up pick up the pace for the count of 10 left foot strides, then go easy for the count of 10 strides, then fast for 20 strides, then easy for 20 strides, continue in this fashion until you reach 60

fast strides, then have around 3 minutes of easy running. This completes one set. The schedule will tell you how many sets to do in the session.

Timed Fartlek: This is typically shown as: Fartlek 5x 1min hard 3min easy. After the warm up pick up the pace for 1 minute then run easy for 3 mins, then repeat this 4 more times before commencing the cool down.

30 second session:
This is an incredibly powerful session and a personal favourite. From the chart you are given two dimensions for instance 115m / 55m. This means measure out on grass or other suitable flat surface a rectangle with long side 115m and ***curved*** short side ends of 55 metres. Now after a warm up run the length of the long side in 30 seconds, then slow to a jog to cover the short side also in 30 seconds. This takes you to the next long side which you do again in 30 seconds and then the next short side. The curve simply helps keep the continuous motion going, alternating between fast and slow running. Complete for the required number of laps.

High Octane Session:
This is a variation of the 30 Second session in that it alternates short fast work with recovery periods however on this occasion the distance is fixed and the time for running each distance is varied. These are typically 200metres fast with a 100 metre recovery run in the same time that was allocated to the 200m distance. The novice programme also uses the 100 metre distance.
A further variation is to use repeats of the 300 metre distance

Hills:
Hill sessions are an excellent session for improving leg strength, speed and hill running style. Two types of hills are used:

Short steep hills:
These focus on strength and should be done on around an 8-10% gradient. After the warm up, run hard up the hill for 35 seconds, noting where you got to on the path. Jog very easily down to the start (ideally on grass), have about 15 seconds recovery and run hard up for 35 seconds trying to get at least as far as the first one. Repeat this for the required number of times in a set, and then have the full recovery period specified before starting the next set. Then complete the required number of sets.
This is always a hard session as you are going as far as you can, but being short it is easy to focus on each run and pays great strength benefits.

Example – 3 x 4 x 35 seconds with 3 minutes between sets.

This means 3 sets of 4 repeats each being a 35 second hard run uphill, Jog down between repeats. After 4 repeats have 3 minutes recovery then do the remaining sets.

Longer shallower 200-300m hills – 5-8% gradient
This develops muscle endurance and hill running style. The same principles are applied to how the sets are done but here the idea is to run with a rhythm rather than push as hard as you can. Run the uphill about 5-10 seconds per kilometre faster than your best 5km race pace.

Pace Runs:
Those runs that alternate in running speed throwing in sections at marathon pace should be run on flat or very gently undulating areas. The idea is to get a feel for the relevant marathon pace and these will build up in distance and number as the programme evolves.

The Long Run:
The long run is probably the training session most abused by runners. Far too frequently the long training run is run too fast. You will find considerable information and guidance on the Long training run in the Wisdom Chest, but as

an overview this session should be undertaken at an easy pace where your heart rate rarely goes above 70% of maximum.

There are many benefits of the long training run but some of the key focuses include:

- The low intensity running enhanced energy production using fat burning.
- Improved blood flow to and through the muscles
- Improved confidence to cover extended distances
- The training of muscles as they act at lower running paces – This helps reduce the risk of cramping in longer event.

Enjoy the sessions: Training should not leave you totally exhausted, but should challenge you to finish the last effort in a quality session. Once the recovery period is over you should feel you could manage one more if required to. On the other hand easy runs / recovery runs should leave you almost re-energised so take them EASY. The Longer runs are designed to enhance particular energy systems so will leave you pleasantly fatigued. The length of the long run will increase considerably from around June. Don't worry about the ultra marathon distance of 56km at this time; Focus on comfortable easy running that will set a foundation.

Typical 10km time	33.00	35:45	37.25	41.40	45.50	50.00	54.30	58.20	60.20	62:50
Best 42.2km Time	2hr 35min	2hr 45 min	2 hr 55 min	3 hr 15 min	3hr 35min	3 hr 55min	4 hr 15min	4 hr 35min	4hr 44min	4 hour 55 min
Indication of Two Oceans 56k Finish	3hr 35min	3hr 55 min	4hr 10 min	4 hour 35min	5 hours	5 hour 35 min	6 hour	6 hour 27 min	6 hour 45 min	7 hour
Indication of Two Oceans Half marathon	1 hour 15 min	1 hour 20 min	1 hour 24 min	1 hour 34 min	1 hour 44 min	1 hour 54 min	2 hour 5 minutes	2 hour 15 min	2 hour 20 min	2 hour 25 min
400m Intervals (per Lap)	1 min 12 sec	1 min 17 sec	1min 22 sec	1 min 31 sec	1 min 42 sec	1 min 52 sec	2 mins 2 sec	2 mins 13 secs	2 min 17 sec	2 min 35 sec
1000m intervals Per km	3 min 8 sec	3 min 20 sec	3 min 33 secs	3 min 55 sec	4 min 20 sec	4 min 50 sec	5 min 20 sec	5 min 45 sec	5 min 55 sec	6 min 05 sec
Mod 8-12km run per km	3 min 45 sec	3 min 58 sec	4 min 12 sec	4 min 22 secs	5 min	5 min 30 sec	5 min 55 secs	6 min 20 sec	6 min 35 sec	6 min 55 sec
Training 35-45km per km	4 mins	4 min 15 sec	4 min 30 sec	4 min 44 sec	5 min 25 secs	6 min	6 min 30 secs	7 mins	7 min 15 sec	7 min 30 sec

Strength, Weight and Core training and steps

Ideally some run specific strength work should be included once or twice a week. This should augment and not replace running.
While Weight Training may be an integral component of injury rehabilitation process under the guidance of your medical adviser, the more beneficial investment of time or strength training for most runners will be to target your Core, and Agility.
Gym work should focus on the core muscles groups used in running
If you do use a weight training session opt for a Step or Toning circuit aiming for 15-20 repetitions in each work period. As a change you can do 10-20 minutes of stair work, but start slowly and build up to 20 minutes.

- Reduce to 1 session per week in Peak week training.
- Gym should be placed on the easy days or after completion of quality sessions so that you still have the recovery or rest day for exactly that – Recovery!
- Do not combine weight training with long run days.

BODY WEIGHT (and weight loss)

Weight is irrelevant: Rather focus on **Lean Muscle Mass and % Body fat**.

- Beware of excessively low body fat readings (men less than 8% and women less than 10%) as this can upset your hormone balance / production.
- An increase in your body fat % and reduction in lean muscle mass during peak training may be a first indication of over training.
- Weight loss is greater from the quality sessions than long slow runs.

NUTRITION AND TRAINING
Without the correct food and nutrition your training is wasted.
Read the general nutritional guidelines in the Wisdom Chest. There is little point in undertaking a disciplined structured training programme if you are going to fill your body with totally inappropriate energy and building blocks to gain the benefit of your hard work.
Some of the major influences on each runner's daily energy requirement are:

- Lean muscle mass,
- Age,
- Amount of training and work activity
- Gender

Only a full assessment of your current diet can assess if you are getting enough calories, in the correct proportion to maximize the benefits of your training.

One key principle of daily nutrition is to adopt a low GI approach to carbohydrate and eating in general. The GI of carbohydrate is a measure of how fast the sugar is absorbed into the blood. Fast absorption results in a spike in blood sugar followed by a countering influx of insulin that is often considered as the anti-exercise hormone as it brings on fatigue. Lower GI foods and products help to maintain even energy – blood sugar levels. Not only has this been shown to assist with performance in everyday living, but also as a means of stabilizing body weight.
In short, the only time you would want to consider high GI foods and drinks is immediately after a training session (first 30 mins) when the influx of insulin helps with the absorption of protein and recovery nutrients into the muscles. Other than this attempt to stick to low GI foods (available as natural foods and also as pre-prepared meals) and use the 32GI range of drinks and chews as sports aids.
There is a greater explanation of GI in the wisdom chest and www.gifoundation.co.za has the ranking of many SA foods.

Fluid intake during and after exercise:
Take about 250ml of fluid for every 30 minutes of training. Ideally this should have about 20-25grms of carbohydrate, and some electrolytes to help absorption.

A refreshing option is to use one of the flavoured mineral water drinks that are available in tearooms, and garage forecourts when training. These contain carbohydrate, and minerals and come in a variety of flavours. The effervescence provides a refreshing change and the lite versions are also suitable for diabetics.
In normal conditions consuming 250 to 300ml per 30 minutes is a good starting point but be guided by conditions and your desire to drink. Experiment in training to determine your individual needs.
It is important to ensure drink contains a good level of sodium to ensure fluid absorption.
Hydration does not stop at the end of the training session, particularly during the hotter months or after a race. One of the best ways to ensure daily hydration is the regular use of a semi-medical hydration drink that can be mixed and taken after a session or regularly during the week.
Hydrassist is currently the only drink of this nature available in South Africa that exactly matches the World Health Organisation formulation. This is available in small convenient sachets that fit in all shorts pockets making it easy to have straight after a run. Furthermore there are buffering benefits to be had in taking this drink during the longer training runs and races after three hours of exercise. Hydrassist's slight alkaline formulation helps to combat the acidity of long runs where most of the sports drinks and gels have been acidic.

EQUIPMENT

Shoes:
The extremely high proportion of running injuries can be traced back to runners being sold the wrong shoes. Consider this: less than 10% of the population suffers from Diabetes, asthma, or most other illnesses, and yet South African shoe sales would suggest that over 60% of the population suffer from 'over-pronation'! – Somewhere, someone has got it wrong!

It is no co-incidence that most leading manufacturers are now moving towards more flexible shoes, some replicating the flexible actions of 'bare-foot' running!

With many shoes restricting the running style it is important to have your style correctly appraised to reduce the risk of injury. This can best be offered on a one on one basis by contacting the virtual coach directly.

Unless subject to extreme pronation or supination problems your shoe choice should be towards purchasing a neutral shoe, which can then, (only if necessary), have minor adjustments and inserts made to suit your individual needs. [See shoe and running style information in the Wisdom Chest]

Socks: Socks are the second most important item of running kit. Select socks that are made from wicking materials that remove the moisture from the feet and that reduce the risk of blisters.

Compression wear:
Although we have known about the power of compression in treating injury for years, it is only recently that the full potential of compression clothing to improve sports performance has come to light. In the same way that compression socks improve circulation and help prevent DVT when flying, compression clothing offers substantial benefits to runners:

- Compression of an injury – speeding up return to training
- Speeding up recovery from hard sessions
- Preventing muscle breakdown in racing
- Reduced sweating rates and better cooling
- Reduced chaffing
- Better recovery from flying

In short researched the use of compression tights have been shown to provide significant improvement in endurance performance. By improving your rate of recovery, you can train sooner and achieve more.

A more detailed explanation on why compression works can be found in the Wisdom Chest.

SAFE RUNNING:

Wherever possible

- Run on pavements or facing on-coming vehicles
- Wear reflectors when the light fades
- Wear bright coloured (white, yellows or fluorescent) clothing
- Consider using a small lightweight flashing cycle light when running in dark.
- Run in groups – but not more than 2 abreast
- Keep off freeways
- If alone carry a cell phone (women particularly) with an emergency number in speed dial
- Use a dry-pack to keep sweat and water from the phone

ILLNESS INJURIES & MUSCLE SORENESS

Whatever you do get early attention to any injury or illness.

- Immediate self help with:
    - **PRICED**
        - **Protection** to prevent further injury,
        - **Rest** of injured part,
        - **Ice** regularly,
        - **Compression** around injured limb (see clothing),
        - **Elevate** to minimize swelling,
        - make **Doctor** appointment (appropriate medical professional)
- Be extremely careful of running while taking any medicine
- Try to avoid anti-biotic medicine. Expect a 3-week drop in performance after completing anti-biotic treatment.
- Many homeopathic remedies can assist, if taken at the first symptoms of illness.
- **Colds & Flu:** Have a flu jab – train in the morning, have injection at lunch, do not train until the evening of the following day
- **If you have Cold or Flu symptoms in the chest –** or below the head – then **do not train or race.**

MONITORING EFFORT: GPS &HEARTRATE

The combination of GPS and Heart Rate provides runners with direct step by step feedback of "EFFORT" and teaches pacing, both of which are vital to the successful distance racer.
GPS technology displays pace (in mins per km), the current distance (km), your heart rate, altitude and lap and split time every step of the way.

The most efficient way to race is to maintain constant EFFORT throughout a race. Automatic lap alerts notify the runner after each kilometre, eliminating the need to press buttons or search for km marks, making it ideal feedback during training.

With the leading GPS sports watches providing an 8m per km accuracy any venue can be turned into a track for interval sessions, and post session download provides detailed analysis of the session or race in graphic and tabular format.

Many of the sessions in the schedules have been colour coded to indicate the recommended intensity (and heart zones) to be used in the session as follows:

TRAINING PACE EFFORT & INTENSITY		
ZONE	**HEART RATE CALCULATION**	**DESCRIPTION**

A	Lesser of 55 - 65% max HR or 180-age	Long slow distance or recovery runs.
B	65 - 80% Max HR	Medium distance steady / runs.
C	85% Max HR	Time trial or threshold training.
D	85 - 90% Max HR	Interval sessions longer than 400m.
E	90 - 95% Max HR	Quality work of 400m or less.

Consult the Wisdom Chest to find out more on Heart Rate monitoring, and determining minimum, maximum and percentage effort heart rates.