



## **PROSPECTUS**

**OXIDANE WATER TREATMENT PRODUCTS**

**FOR COMMERCIAL USE**



## **Product Developers/Founders**

*Résumés attached*

Maureen Boddy  
Grant Davis

## **Participating Committee**

Michelle Beecroft

## **VISION:**

A better world where everyone can have access to safe drinking water.

## **MISSION STATEMENT:**

In a world where people are dying due to lack of safe drinking water, Oxidane Water Treatment products are the solution.

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## Executive Summary

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### **Oxidane (Pty) Ltd (Registration Number: 2016/012253/07)**

We are a registered company dedicated to enabling all citizens of the world, in particular, citizens of third world countries, to have the basic human right of access to safe drinking water.

**Oxidane Water Treatment Product** has been formulated within the South African National Standard for Drinking Water (SANS 241), therefore no element in the product compound exceeds the permitted levels of the standard.

### **Patent**

Adams & Adams Patent Attorneys in South Africa is handling the Intellectual Property (IP) and have now registered the temporary patent of Oxidane.

**Oxidane is Proven** The product has been proven to sanitize contaminated water by reducing bacteria, viruses and protozoa rendering the treated water safe to drink. Water treated has no odor or unpleasant taste, making it palatable. Laboratory tests (attached) have proven that Oxidane is more effective than Chlorine and without any of the dangerous side effects.

### **Oxidane is Unique**

After intensive research and development, we have formulated an innovative product, which is highly soluble, in powder form, cost effective, non-volatile, ozone and chlorine free. The outstanding feature of our product is that it can replace chlorine, and does not contain any Chlorine, or Ozone therefore it cannot form disinfectant by-products (DBP) or chloramines. Oxidane can also replace the now insidious use of bottled water.

### **Bottled Water- precious water wasted**

Bottling companies pump 500 gallons per minute, or even more, from each well, and many wells run 24 hours a day, 365 days a year. For every six water bottles we use, only one makes it to the recycling bin. Americans buy more bottled water than any other nation in the world, adding 29 billion water bottles a year to the environmental problem.

In 2006 Producing the bottles for American consumption required the equivalent of more than 17 million barrels of oil, not including the energy for transportation.

It takes 3 liters of water to produce 1 liter of bottled water

### **Oxidane has tremendous potential for many Commercial Uses**

Hospitals – Clinics – Abattoirs – Agriculture – Swimming Pools - Cooling Towers – Water Storage Tanks – Potable Water – Food Preservation.

### **Sachets: -**

Supermarkets – Armed Forces – Airports – Water Dispensers – Sport shops – Camping Sites.

## CHLORINE

It is undeniable that the benefits of disinfecting water, even if through chlorination, outweigh the potential risks incurred if water is not disinfected at all. However, there is a downside to Chlorine as spelled out in the WHO report below:

### 3. World Health Organization (WHO) Report on chlorine

Ref: [WHO/SDE/WSH/03.04/45 report](#).

*'The taste and odour thresholds for chlorine in distilled water are 5 and 2 mg/litre, respectively. In air, chlorine has a pungent and disagreeable odour.'*

*Major uses: Large amounts of chlorine are produced for use as disinfectants and bleach for both domestic and industrial purposes, and it is also widely used to disinfect drinking-water and swimming pool water and to control bacteria and odours in the food industry*

*Environmental fate In water, chlorine reacts to form hypochlorous acid and hypochlorites.*

*Chlorine can react with ammonia or amines in water to form chloramines.'*

*'Chlorine is present in most disinfected drinking-water at concentrations of 0.2–1 mg/litre Estimated total exposure and relative contribution of drinking-water The major routes of exposure to chlorine are through drinking-water, food, and contact with items either bleached or disinfected with it.'*

### 4. Comparative tests with Oxidane Water Treatment product and chlorine

A series of tests were conducted by submitting samples of contaminated water to South African National Accreditation System (SANAS) approved Laboratories for them to treat the submitted water samples. They analyzed the raw and treated water with Oxidane Water Treatment product and Chlorine comparatively.

Chlorine, (at the recommended dosage of 5 ml (0.0258 oz. /gallon) of a 3.5% Sodium hypochlorite solution), was found to be considerably less effective than Oxidane Water Treatment product. Chlorine also decays very quickly, and does not sufficiently reduce 'Chlorine resistant bacteria'.

Chlorine treated water also has a far greater chance of recontamination compared to Oxidane Water Treatment product treated water.

## 5. Point of Use

Oxidane Water Treatment product is designed for, (but not limited to), easy point-of-use treatment of water drawn from contaminated rivers, boreholes, wells etc.

Initially, water treated was rendered safe to drink within one hour, but subsequent laboratory tests demonstrate a considerable reduction in time and once again prove the unique strength of Oxidane Water Treatment product versus other chlorine-based products.

Oxidane Water Treatment product will be produced in sachets for economical production and cost effective transportation. A sachet of 1.5g (0.053 oz.) will purify 25 liters (6.604 gallons) of contaminated water, which equates to 60 mg/liter (0.008 oz. /gallon). Oxidane Water Treatment product can also be packed in bulk for 'Emergencies' and 'Disaster Areas', according to requirements.

With all technical issues complete, the company is ready to commence manufacturing and the Technical Director operates a registered laboratory in Cape Town, which has the requisite staff, the premises and expertise to commence start up small-scale manufacture of Oxidane Water Treatment product. We may make use of an established factory, which has been offered to us, and is more conveniently situated, and use the laboratory for research and development (R&D) purposes only.

The startup team; have funded the research and development to get to this stage. We had little capital and minimal resources, but we had a huge vision.

This was driven by a passion to make a difference in the lives of millions of people throughout the world, who are dying from polluted water.

We have worked tirelessly and will continue to do so until the vision is fulfilled.

## 6. For Humanitarian and Commercial Use

Guided by the UNICEF 'Handbook on Water Quality' the aim was to develop a product, which would solve the many water related problems being experienced in third world countries, an 'ideal' product which until Oxidane was developed, was unavailable.

**With reference to page 107 of the UNICEF Handbook, "the properties of an ideal water disinfectant product would have the following attributes" Quote**

- *inexpensive and widely available in rural areas of developing countries*
- *easy to handle, with a long shelf life*
- *highly toxic to bacteria, viruses, helminths and parasite cysts under a range of water conditions*
- *non-toxic to humans and animals*
- *does not produce any unwanted disinfection by-products*
- *stable in water, to provide a residual protection against recontamination*

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## 7. Oxidane The 'ideal' Water Treatment Product : -

- *Is Inexpensive and can easily be made widely available in rural areas of developing countries*
- *Easy to handle and transport, with a long shelf life*
- *Is highly toxic to bacteria, viruses, helminthes and parasite cysts under a range of water conditions*
- *Is non-toxic to humans and animals*
- *Does not produce any unwanted disinfection by-products*
- *Stable in water, to provide a residual protection against recontamination*
- *Is non volatile*

**The Oxidane tagline is**



**Oxidane Water Treatment product**

**Ticks all the Unicef 'Ideal Product' boxes.**

We do not denigrate any other water purification product or process,

***'We just perfected it'***

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## 8. Description of the product Oxidane Water Treatment product

- It is unique
- It does not contain chlorine or ozone
- Cannot form disinfectant by-products (DBP) or Chloramines
- Is not volatile
- Has no odor
- Is palatable
- Is stable
- Is ideal for point of use treatment
- Light, safe and easy to transport
- It is cost effective
- Can be produced in sachet form
- Is available in bulk
- Has multi-purpose use commercially.

## 9. Objectives Commercial

To present our product, which we, the founders know, has massive humanitarian and commercial potential, to interested parties,

We have chosen to approach, potential business partners, ideally with retail outlets, or an existing established water business, which could be the ideal commercial and humanitarian outlet for the sachets.

If properly advertised and distributed, the sachets should take the place of most bottled water in supermarkets.

We decided that rather than produce a manufacturing business plan with our limited means, we would rather approach such retail and distribution experts, to set up a meeting.

Initially we would ask only for sufficient time to meet with them and their chosen executives, to view and test the product. After that if you feel there is interest and they would want to take the discussions to the next stage, we could discuss the business, and perhaps formulate a business plan.

Please see attached documents, which fully describes the attributes of the product, and our perceived uses for it.

## 10. Must win Battles

<b>Must win Battles</b>	<b>Enablers</b>		<b>Status to date</b>
<b>Battle 1</b> Protective legal patents in place for product.	Grant Maureen	Adams and Adams Patent Attorneys.	Temporary patent now registered
<b>Battle 2</b> Prospectus and Latest Lab results	Team	Final Prospectus with latest results and Lab reports	Prospectuses and Latest Lab reports completed.
<b>Battle 3</b> Modus Operandi	Team	Approach, retail and distribution experts, or an existing established water business, which could be the ideal commercial and humanitarian outlet for the sachets.	In Progress
<b>Battle 4</b> Future Growth	Grant Maureen	Our technical director manages a laboratory In Cape Town. Research and development essential to expand the company in the many areas we envisage.	Sample sachets are made for demonstration purposes
<b>Battle 5</b>	Team	Initially to meet with the companies chosen executives, to answer questions and demonstrate our product.	In progress

## 11. Attachments

Attachment 1:

A report illustrating the potential of Oxidane Water Treatment product, Water Treatment product (compiled from the above reports) by Bettina Genthe of the Natural Resources and the Environment Department of the Council for Scientific and Industrial Research (CSIR);

Evaluating the performance criteria of Oxidane Water Treatment product by the World Health Organization's (WHO) *International Scheme to Evaluate Household Water Treatment*.

Attachment 2:

Are four graphs comparing Oxidane Water Treatment Product to Chlorine for the relevant Microbiological tests conducted on water from the Plankenberg River in Stellenbosch. The raw water samples were intentionally drawn less than a kilometer (0.6 miles) from an informal settlement; hence the bacteria levels are very high.

Attachment 3:

Résumés



## 12. The Global Situation

Without water, the existence of the human race on this earth would not be possible. Every day we turn on the tap the water flows. Perhaps make a drink, then take a shower and give little thought to life's most important commodity; **WATER**. We assume it will always be there awaiting our command. In our busy crowded lives we give even less thought to how privileged we are; at the same time we are enjoying our first cup of coffee one thousand million souls will wake thirsty with no access to clean, safe, drinking water, lacking even enough water to simply meet their basic need. The average American uses approximately 150 gallons of water per day, whilst those in rural areas don't even utilize five.



### 13. Sanitation

We use the bathroom, flush the toilet, and again give little thought to the fact that we are in a privileged minority group who has access to adequate sanitation. In fact few people think about water shortages unless it inconveniences them directly or is a local problem. With few exceptions, water has always been a natural resource that people take for granted. Today, the situation has changed dramatically. Only 63% of the world's population has access to improved sanitation – defined as a sanitation facility that ensures hygienic separation of human excreta from human contact.



### 14. World Water Situation today

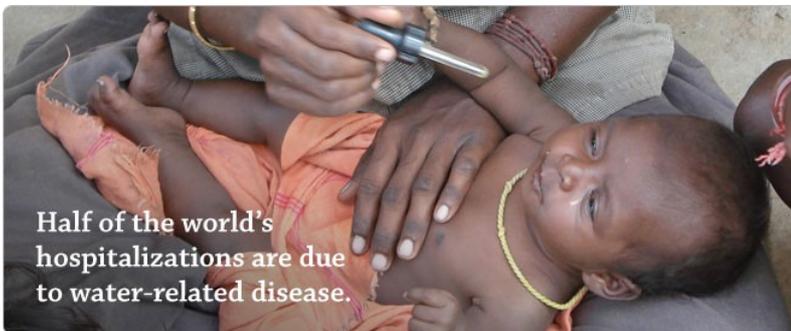
In the last century, the human population has increased from 1.7 billion people to 6.6 billion people, while the total amount of potable water has slightly decreased. Much of the population growth and economic development experienced in the last fifty years has been supported by subterranean water reserves called groundwater. There are approximately 11 trillion cubic meters of freshwater available. Groundwater aquifers contain over 95% of this water, while rain, rivers, and lakes make up the remaining 5% these non-renewable reserves are being consumed at an unsustainable rate. Population growth and groundwater depletion present the two most significant dangers to global water stability. 80 countries now have water shortages.



Waterborne diseases  
cause 1.4 million  
children's deaths  
every year

### 15. Polluted Water Death and water Borne Disease

The water and sanitation crisis claims more lives through disease than any war claims through guns. It is estimated 3.575 million people die each year from water-related disease,



Half of the world's  
hospitalizations are due  
to water-related disease.

### 16. Child Deaths

Every 20 seconds, a child dies from a water-related disease. Diarrhea is more prevalent in the developing world due, in large part, to the lack of safe drinking water, sanitation and hygiene, as well as poorer overall health and nutritional status. The United Nations Environmental Program (UNEP), that **dirty water contributes to 15 million child deaths every year**. Diarrhea remains in the second leading cause of death among children under five globally. Nearly one in five child deaths – about 1.5 million each year – are due to diarrhea. It kills more young children than AIDS, malaria and measles combined. In Bolivia nearly one out of every ten children will die before the age of five. **Most of those deaths are related to illnesses that come from a lack of clean drinking water.**



## 17. Natural Disasters and War Zones

Natural disasters such as earthquakes, tsunamis, and floods can often come at the least expected time. Others, such as hurricanes and cyclones are increasing in severity and destruction, they inevitably bring a shortage of pure safe drinking water, and all the horrific statistics of death and disease that follow. Diarrhea, and cholera, is common; statistics show more people die of the water borne diseases that follow the disaster than the disaster itself. In war zones shortage of safe drinking water often arises, as is the situation in war torn Aleppo currently.



photo: by Nunuk

## 18. Water Pollution Rivers and Dams

Water pollution is reaching epic proportions. In the U.S. 40% of rivers and lakes are considered too polluted to support normal activities. In China 80% of the rivers are so polluted that fish cannot survive in them. In Japan 30% of groundwater has been contaminated by industrial pollution. The Ganges River, which supports around 500 million people, is considered one of the most polluted rivers in the world. The list is endless.



## 19. Lack of Water – Lack of Food

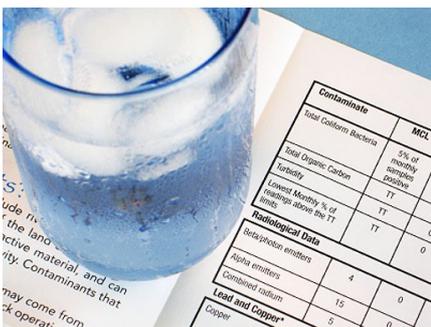
According to the International Food Policy Research Institute (IFPRI), if current water consumption trends continue, by 2025 the agricultural sector will experience serious water shortages, and crop losses due to water scarcity could be as high as 350 million metric tons per year, slightly more than the entire crop yield of the U.S. This massive water crisis will be caused by water contamination, diverting water for industrial purposes, the

depletion of aquifers, and climate change. The Himalayan glaciers, which feed the rivers that support billions of people, are shrinking in size every year. Their disappearance would cause a major humanitarian disaster.



## 20. World Water Wars

It has been postulated that wars over oil and land will be infinitesimal in comparison to future wars looming for the possession of water. There are 263 rivers in the world that either cross or mark international boundaries of which 158 have no international legislation, and many are the source of conflict. Water has always been a central issue in Arab-Israeli situation. Ariel Sharon once said the Six Days War actually began the day that Israel stopped Syria from diverting the Jordan River in 1964.



## 21. The disgrace of the most 'Expensive Tap Water on Earth'

CBS NEWS reported that bottled water is '*The Most Expensive Tap Water on Earth*' In fact; nearly half of all bottled water is reprocessed tap water, sold at prices up to 3,000 times higher than consumers pay for normal tap water. According to the National Resources Defense Council, in a scientific study in which more than 1,000 bottles of 103 brands of water were tested, about one-third of the bottles contained synthetic organic chemicals, bacteria, and arsenic. Bottled water bars have sprung up in the hipper districts, from Paris to Los Angeles. The message is clear: Bottled water is "good" water, as opposed to that nasty, unsafe stuff that comes out of the tap. But in most cases tap water adheres to stricter purity standards than bottled water, whose source is not from a mountain spring or glacier displayed on the label in fact 40% of bottled water began life as, **tap water**.

## 22. Water Wastage – Reverse Osmosis

For one gallon of de-mineralized water to be produced, 2 -3 gallons is lost. Reverse Osmosis removes the extremely valuable trace minerals we need to stay healthy; such as calcium and magnesium, this loss can lead to long-term health problems. People pay inflated prices to become sick, wasting huge amounts of valuable water in the process.



## 23. Plastic Pollution - Photograph by Justin Sullivan/Staff, Getty Images

### Bottled Water- precious water wasted

Bottling companies pump 500 gallons per minute, or even more, from each well, and many wells run 24 hours a day, 365 days a year. For every six water bottles we use, only one makes it to the recycling bin. Americans buy more bottled water than any other nation in the world, adding 29 billion water bottles a year to the environmental problem.

In 2006 Producing the bottles for American consumption required the equivalent of more than 17 million barrels of oil, not including the energy for transportation.

**It takes 3 liters of water to produce 1 liter of bottled water**

## 24. Water the New Gold

Whilst millions of socially conditioned individuals pay \$90 billion annually to drink their exorbitantly priced mountain/ spring /glacier/**tap** water! The UN estimates it would require only one third of that amount, \$30 billion annually to provide safe drinking water to the entire planet. So why isn't this happening?

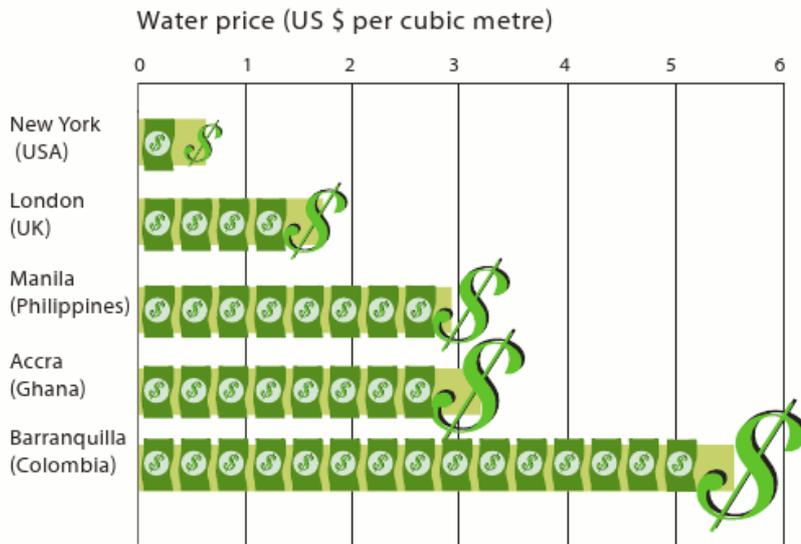


*'Water flows uphill towards money'* Anonymous

Water is a \$400 billion dollar global industry, the third largest behind electricity and oil. The question is, should private companies control our most precious natural resource? Corporate giants are forcing developing countries to privatize their water supply for profit.

**25. Water Privatization** promoted as a means to bring business efficiency into water service management, has instead led to reduce access for the poor around the world as prices for these essential services have risen.

**Shocking as this may seem. If you live in a slum in Manila, you pay more for your water than people living in New York. The rural poor cannot afford these inflated prices and so draw water from untreated wells and streams.**



## 26. Chemicals poisoning our water

Thousands of toxic human-made chemicals, detergents, cosmetics, medicines etc. are flushed into our sewage, which re enters our water supply without sufficient purification, which means whatever measures we take we cannot escape the 16,000 manmade chemicals in our tap water and which are ingested through our skin, each time shower, and the poison we are able to eliminate goes through our own water system and back into the water cycle. Atrazine is in our water supply, and is showing up thousands of miles from where the chemical is sprayed. This herbicide is so toxic its use is banned in Switzerland where it is made, but is used on U.S. corn crops!



## 27. Atrazine

University studies prove Atrazine causes male frogs to become female; sperm counts dwindle and ovaries appear. It causes decreased fertility, in human males, and ties to prostate and breast cancer.

## 28. The South African situation

AIDS, malnourishment, TB, and poverty ravage throughout South Africa. Despite this, water privatization was introduced in 1999 when five water privatization programs were initiated as part of government policy which aimed at making people pay the full cost of having running water in their homes, calling it 'total cost recovery',

**this forced millions of South Africans, to seek their water from polluted and lakes and rivers; The result: one of the largest outbreaks of cholera!** They are, according to the International Consortium of Investigative Journalists (ICIJ), **being 'metered to death'** People living in the slums often pay 5-10 times more per liter of water than wealthy people living in the same city. In Cape Town a representative from the International ICIJ was interviewed and asked about the claim that shortly 75% of public water will be in the hands of a virtual monopoly and other really shocking revelations correlated from case studies of nine countries. A Fedusa report showed that 90 dams across the country hold polluted water.



Dr Anthony Turton spoke out saying, 'acid mine drainage is South Africa's own Chernobyl'

### 29. Acid Mine Drainage in Johannesburg

An excellent documentary made by Carte Blanche covered this story in August 2010..

<http://www.waterrhapsody.co.za/2010/08/03/carte-blanche-story-on-acid-mine-drainage/>

### 30. Cry me a River <http://carteblanche.dstv.com/player/1101044/>

Carte Blanch made a great documentary depicting the plight of over two million people who are compelled to draw water from the Oliphant's River which runs from Witbank into the Kruger National Park and is the only source of water for two million people, livestock and wildlife. But, it's barely flowing. Thousands of soiled disposable nappies line its banks, blocking its natural course. Adding to the environmental and humanitarian disaster are raw sewage mining effluent entering the river from its tributaries, seemingly unnoticed.

Faulty sewerage works, acid mine drainage, people eating the fish from the river in order to survive causes much diarrhoea and even death to the population dependant on this river for survival. This is a highly complex problem, and we cannot change the status quo. However, people drawing water from the Crocodile river and treat the water with  could considerably reduce the cases of diarrhoea and deaths.

## 31. SWOT Analysis

### STRENGTHS



Can be transported by road rail or **air**.

Non-Volatile

Breaking technology, formulation never used before

Nullifies Ebola (faeces) without use of harmful chemicals

Ozone and Chlorine free

Soluble

Inexpensive

Easy to manufacture

Powder Form

Quick waiting time after adding Oxidane Water Treatment product, water is safe for Human consumption

### WEAKNESSES

Inventor and founders of product do not have the required capital to fully exploit the product potential

### OPPORTUNITIES

**Humanitarian-** Revolutionary formulated to alleviate the suffering of billions of people living with no access to clean water, and all the life threatening illnesses and hardship associated with water borne diseases

### THREATS

- Lack of capital may impede progress in getting the product into areas where it is needed for humanitarian purpose
- Competitors duplicate (to a lesser degree) as the unique formula is Patent protected.

## 32. Conclusion – Commercial

It is no insignificant undertaking to create a new market for a product from scratch. We are very aware that there will be a high level of interest from investors, municipal /government entities, and businesses, to grow a market solely focused on this product.

This ecosystem is like nothing else in the world and as technology disruption continues to evolve at a feverish pace, the market demand for this product can only continue to grow as its' economic and business value is understood.

This purpose of this document is to invite interest from related business concerns, to work with us or to unleash the potential of this product, to change the face of the world, by the provision of safe water and sanitation with this very portable and inexpensive product.

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The Recipient of this document agrees that the Confidential Information is to be considered confidential and proprietary to Oxidane (PTY) Ltd and the Recipient shall hold the same in confidence, shall not use the Confidential Information other than for the purposes of its business with Owner, and shall disclose it only to its officers, directors, or employees with a specific need to know. The Recipient will not disclose, publish or otherwise reveal any of the Confidential Information received from Oxidane(PTY)Ltd to any other party whatsoever except with the specific prior written authorization of Oxidane

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