

# Case Study - Global SantaFe drilling rig - Gulf of Thailand

## *Airborne Tea Tree Oil Used for Treatment of Air Quality Aboard an Offshore Oil Rig*

Global SantaFe Corp. was an offshore oil and gas drilling contractor, and provided offshore drilling services to the world's leading oil and gas companies. The company is now merged with Transocean.



**Symptoms** - During 2004 managers recognized a growing issue with respiratory illnesses among the workforce while living and working in the offshore communal environment of a deep water drilling rig. Worker downtime and reduced productivity were costly and unsafe.

**Discovering the problem** - An outside cleaning firm was commissioned to clean all air handling units and duct systems onboard the rig. This appeared to improve the situation but it did not cure it. Illnesses and respiratory discomfort continued to be noted by the workforce.

The search for a more comprehensive solution led to IAQ Technologies in Bangkok Thailand. The first thing IAQ did was take sample cultures from AHU's and random locations in living and indoor work areas. These tests confirmed the presence of high levels of molds and bacteria.

**The solution** - IAQ deployed tea tree oil gel dispensers in all AHU's onboard the rig. GermXit™ brand gel contains tea tree oil in a water based suspension that is designed to evaporate<sup>[1]</sup>. Being water based as air flows over the gel, vapor containing the tea tree oil rises from the dispenser and is circulated throughout interior areas of the rig. Tea tree oil has been shown to effectively control all types of molds, bacteria and other organisms including legionella and the MERS virus in the air and on surfaces<sup>[2]</sup>.

New test cultures taken 10 days after treatment with GermXit™ airborne tea tree and then again 30 days later show contaminant levels dropping to near zero<sup>[3]</sup>.

***"There is no doubt the product [GermXit™] has not only improved the air quality throughout the living facility it continues to neutralize and disperse all Bacteria, Fungi, etc. from the system."*** - Mr. Terry Brown, Rig Manager<sup>[4]</sup>

IAQ trained onboard maintenance people to check and replenish the GermXit™ gel dispensers in the air handling system. Regular checks are carried out to ensure the levels of contaminants remains low.

***"I have used the product ever since [first installed] and will continue to do so."*** - Mr. Terry Brown, Rig Manager<sup>[4]</sup>

The photo at right shows actual **before and after** test cultures showing the near elimination of fungus, mold and bacteria in a typical system newly protected by GermXit™. (File photo, may not be test vials from this case study.)



To learn more about GermXit™ tea tree oil gel and how it will completely change the way you think about indoor air quality in your building or your home - please call us at numbers below or email to [contact.us@germxit.com](mailto:contact.us@germxit.com)

## **Global use-**

GermXit™ is now in use onboard a number of FSO ships and almost 100 oil and gas rigs and platforms around the globe. Additionally GermXit™ is used in hundreds of homes, factories, hospitals, hotels, shopping centers and schools throughout Asia, Africa and the Middle East.

## **About GermXit™ and Tea Tree Oil-**

IAQ Technologies is a commercial ventilation cleaning service with offices in Melbourne, Australia and Bangkok Thailand. Regular cleaning of ducts and air handling systems is an essential maintenance item in any commercial building but IAQ wanted to go one step further. An effective air treatment system was needed to finish the job and keep working between cleanings so, GermXit™ was developed. Tea tree oil was chosen because of its proven effectiveness, it is all natural and it is renewable.

IAQ chemists infused tea tree oil in a water based gel designed to evaporate. As water in the gel evaporates; the tea tree oil itself is carried in an airborne vapor that permeates the entire area where it is deployed. Either forced air (fans, HVAC) or simple air movement circulates it. Within hours the tea tree oil is doing its job controlling germs, yeasts, molds, fungi and bacteria - which in turn controls odors, insects and other pests. There is even strong evidence showing tea tree oil controls a number of viruses. As long as GermXit™ is maintained in an area, undesirable organisms are controlled. The tea tree oil is always in the environment.

### **What is Tea Tree Oil?**

*By definition it is a broad spectrum antimicrobial, natural antiseptic, bactericidal anti viral, essential oil. Tea Tree Oil is effective against mold/mildew/bacteria/pollen/fungus/yeast.*

### **What is Melaleuca Alternifolia?**

*It is the Latin name for the tree that produces the essential tea tree oil from its leaves.*

### **How does Tea Tree Oil work?**

*It destroys the spores membrane - the spore (mold/mildew/bacteria/pollen/ fungus/yeast, becomes inert.*

United States National Institute of Health - [nih.gov](http://nih.gov)

- [www.ncbi.nlm.nih.gov/pubmed/10735256](http://www.ncbi.nlm.nih.gov/pubmed/10735256) (What it does)
- [www.ncbi.nlm.nih.gov/pubmed/16854063](http://www.ncbi.nlm.nih.gov/pubmed/16854063) (How it does it)
- [www.ncbi.nlm.nih.gov/pubmed/10399193](http://www.ncbi.nlm.nih.gov/pubmed/10399193) (What it is effective against)
- [www.ncbi.nlm.nih.gov/pubmed/9791953](http://www.ncbi.nlm.nih.gov/pubmed/9791953) (What it is effective against-expanded)

More information -

<http://www.teatree.org.au> (educational)

<http://www.ncbi.nlm.nih.gov/pubmed?term=tea%20tree%20oil> (for 446 labs/white papers)

[IAQ Technologies \(Thailand\) Co., Ltd. report](#)

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