

**CASE STUDY**

V-LIFE technology  
supporting  
operators for  
over a decade

**10<sup>+</sup>**  
**YEARS**

# V-LIFE

**PROVIDING A  
200 TIMES INSULATION  
RESISTANCE INCREASE  
FOR OPERATOR IN  
THE GULF OF MEXICO**

**175+**  
Installations

**30+**  
Global Operators

**SINCE 2012**  
Proven in Field Operation

 **VIPER**  
**INNOVATIONS®**

# **V-LIFE<sup>®</sup>** **INSULATION RESISTANCE RECOVERY**

**Designed to recover the electrical integrity of failing subsea circuits.**

The most common cause of subsea electrical failures is the ingress of water into the cable insulation, which decreases the insulation resistance (IR) and may produce short circuits or leakage to earth. These faults often lead to loss of power, operability and production of the subsea system.

If you are experiencing low IR, a timely decision is essential, as ignoring the issue may result in expensive subsea fault-finding interventions and the replacement of cables, equipment and umbilicals; not to mention a very real risk of electric shock.

V-LIFE is a tried and tested preventative and active 'healing' solution for low IR caused by water ingress.

## **Key Benefits:**

- Increases IR without subsea intervention
- Recovers multiple IR failures throughout the system
- Extends the life of failing umbilicals and electrical distribution equipment
- 'Buys time' whilst a new umbilical is procured
- Used as an alternative to installing new, costly and long-lead time umbilicals
- Used to delay early field abandonment
- V-LIFE 'finds' the points of water ingress, no diagnostics required
- Environmentally friendly alternative to CO<sub>2</sub> heavy umbilical replacement methods



## CASE STUDY

# V-LIFE RECOVERS INSULATION RESISTANCE BY 200 TIMES, PROVIDING OPTIMUM OPERATIONAL LEVELS FOR OPERATOR IN THE GULF OF MEXICO.

Operators in North America have benefitted from Viper's V-LIFE insulation resistance (IR) recovery technology in a number of locations across the continent, with a major Operator now leading the charge in the Gulf of Mexico.

**This case study looks at how V-LIFE was used to avoid a threat to continued production of a subsea production control system, resulting in a 200 times increase in insulation resistance (IR) within a week. Six months later, the channel continues to provide strong and consistent IR results; providing a value-added solution.**

As part of their asset management process, an Operator in the Gulf of Mexico was keen to activate V-LIFE to help recover the electrical integrity of the umbilical; helping to avoid loss of communication after experiencing low IR levels of 460kΩ.

The subsea control system Original Equipment Manufacturer (OEM) was tasked with installing the V-LIM hardware topside into the subsea production control system. V-LIM, Viper's line insulation monitor, is an accurate and precise sensor which monitors electrical cable integrity and allows activation of V-LIFE via software config file. No subsea intervention is required.

Due to excellent collaboration between the Operator, the OEM and Viper, along with detailed planning and bespoke procedures prepared for the task, this process was completed efficiently and seamlessly with V-LIFE activated after only 2 hours.

The activation of V-LIFE resulted in an IR increase of almost 100 times on the same day, with the initial reading of 460kΩ increasing to 43.8MΩ within hours. Within a week, this had doubled again to over 200 times the initial readings, reaching in excess of 100MΩ. These strong results remain stable and consistent, avoiding the need for costly subsea repair or total umbilical replacement.

Following the success of the initial results, the Operator took the decision to continue using V-LIFE as part of their asset management strategy to mitigate the costly risk of loss of a production. 6 months later, the channel continues to provide strong and consistent IR results.



### THE OPERATOR COMMENTED:

**"V-LIFE was activated seamlessly and has delivered outstanding results, providing protection against subsea controls failures."**





Get in touch with one of our experts today and learn what V-LIFE could do for you.

For more information visit:

[\*\*www.viperinnovations.com/v-life\*\*](http://www.viperinnovations.com/v-life)

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