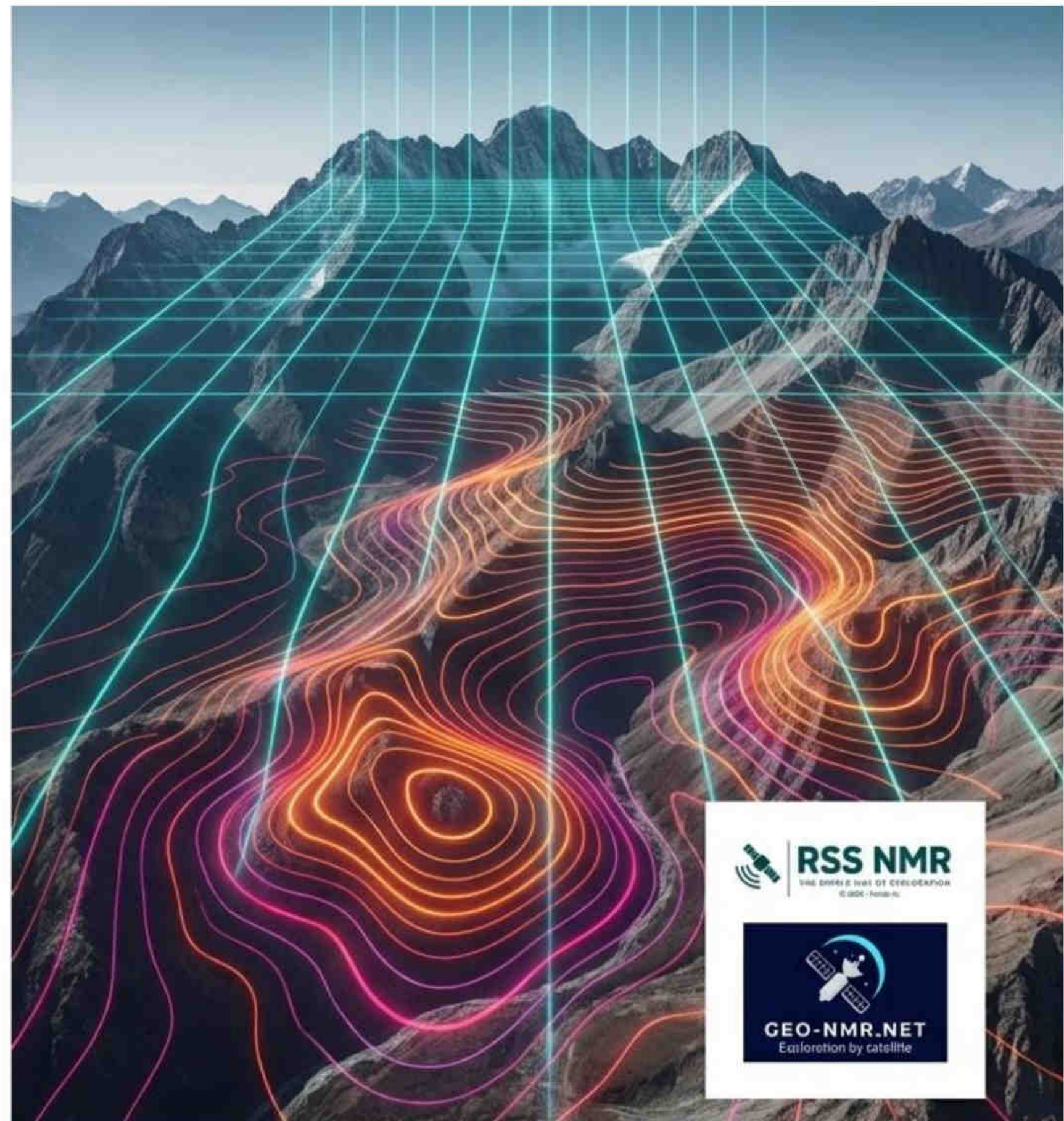


Outsmarting the Anomaly

A New Era for Hydrocarbon Exploration.

Overcoming the South Atlantic
Magnetic Anomaly with RSS-NMR
technology.

Prepared by Fands-LLC | GEO-NMR.NET





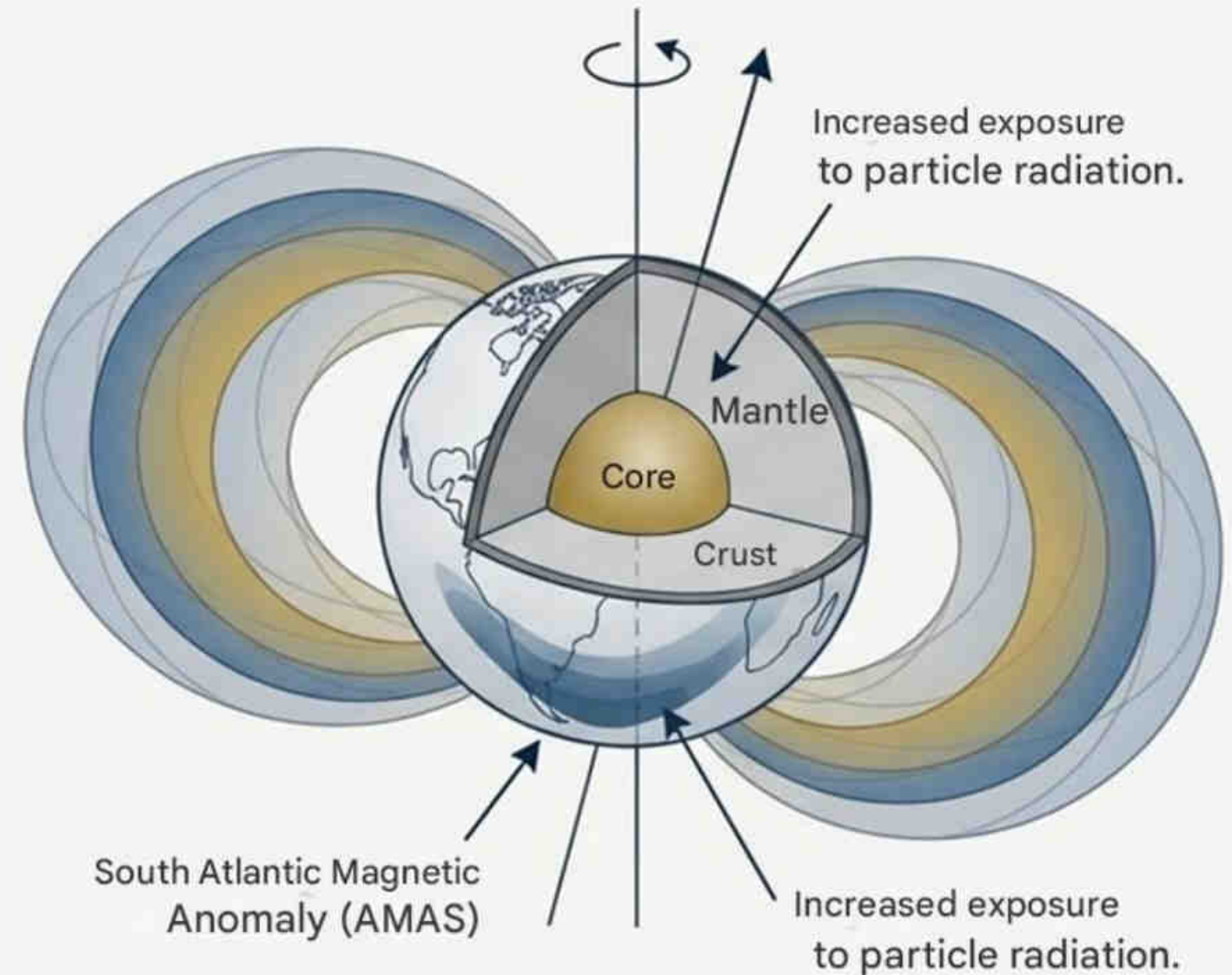
AMAS: A Scientific Reality with Global Consequences

What is AMAS?

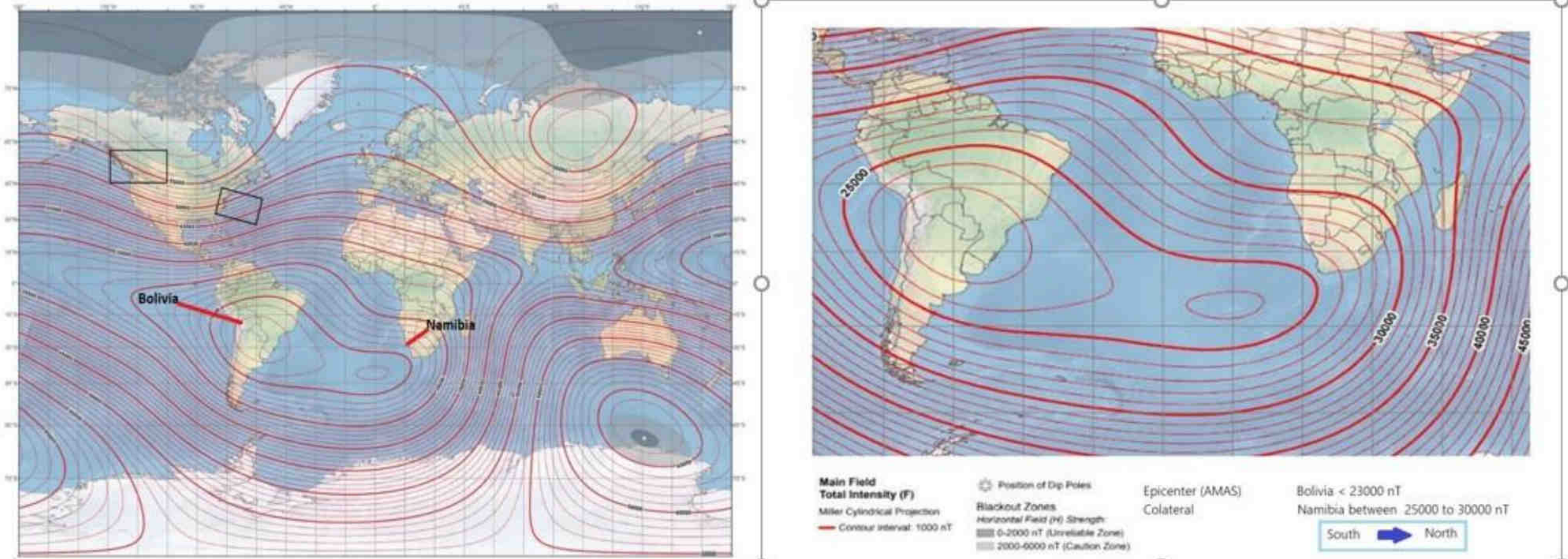
A vast region where the intensity of Earth's magnetic field is abnormally weak. It is a phenomenon monitored by global space agencies such as the European Space Agency (ESA).

Proven Impact:

-  **Satellite Interference:** Satellites such as the Hubble Space Telescope must turn off sensitive instruments when passing through this region to avoid damage from the high radiation.
-  **Constant Evolution:** ESA data show that the anomaly is weakening and splitting, with centers over South America and southwest Africa.



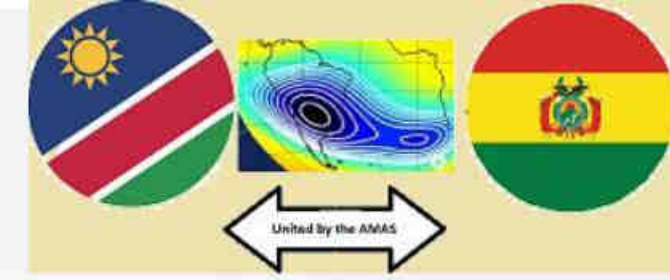
The AMAS Phenomenon: Bolivia and Namibia in AMAS (SAMA)



The AMAS is a vast region where Earth's magnetic field is substantially weaker than the global average.

Origin in Bolivia/South America: The core of the anomaly is centered over South America, with intense magnetic weakening observed over **Bolivia**. It is caused by the Earth's inner Van Allen radiation belt dipping closest to the planet's surface in this region, allowing high-energy particles to penetrate deeper into the atmosphere.

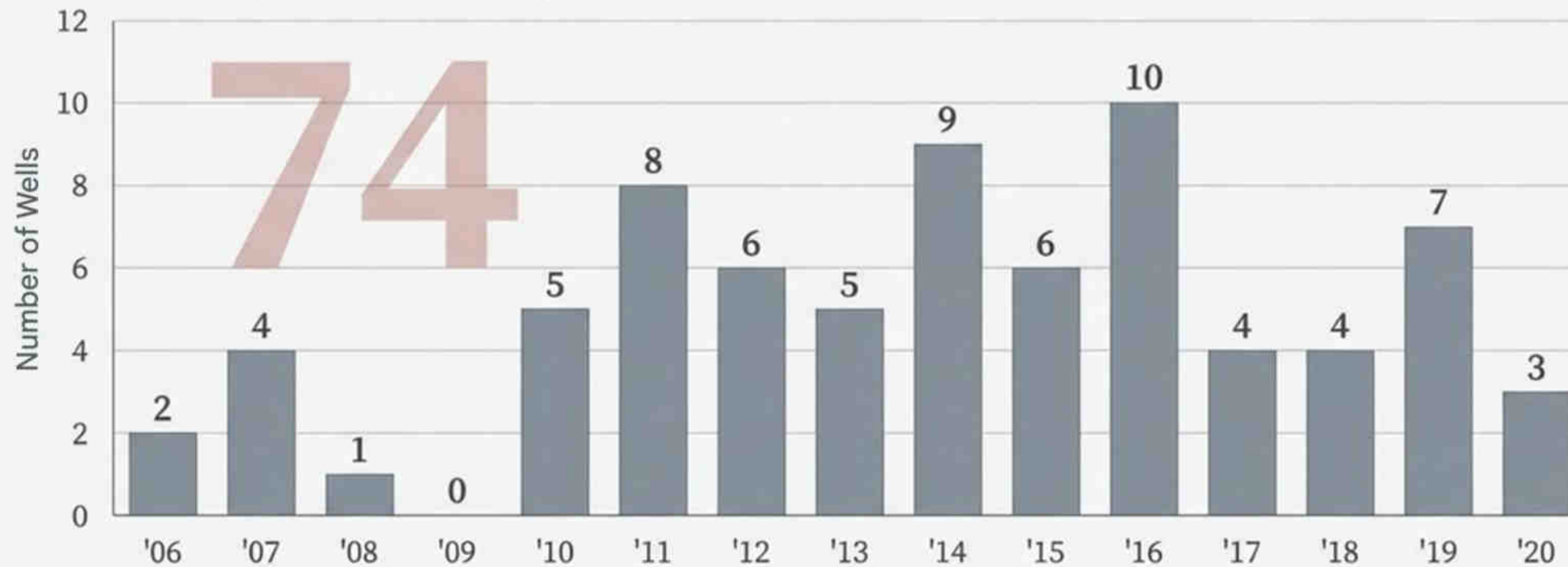
Repercussions in Namibia: As of 2026, the anomaly is expanding and moving westward. A second center of intensity has intensified southwest of **Africa**, specifically impacting the offshore waters of **Namibia**. This "split" or expansion creates a magnetic corridor between the two continents that complicates satellite and surface-level data acquisition.



74 wells explored. 16 years. Zero discoveries.

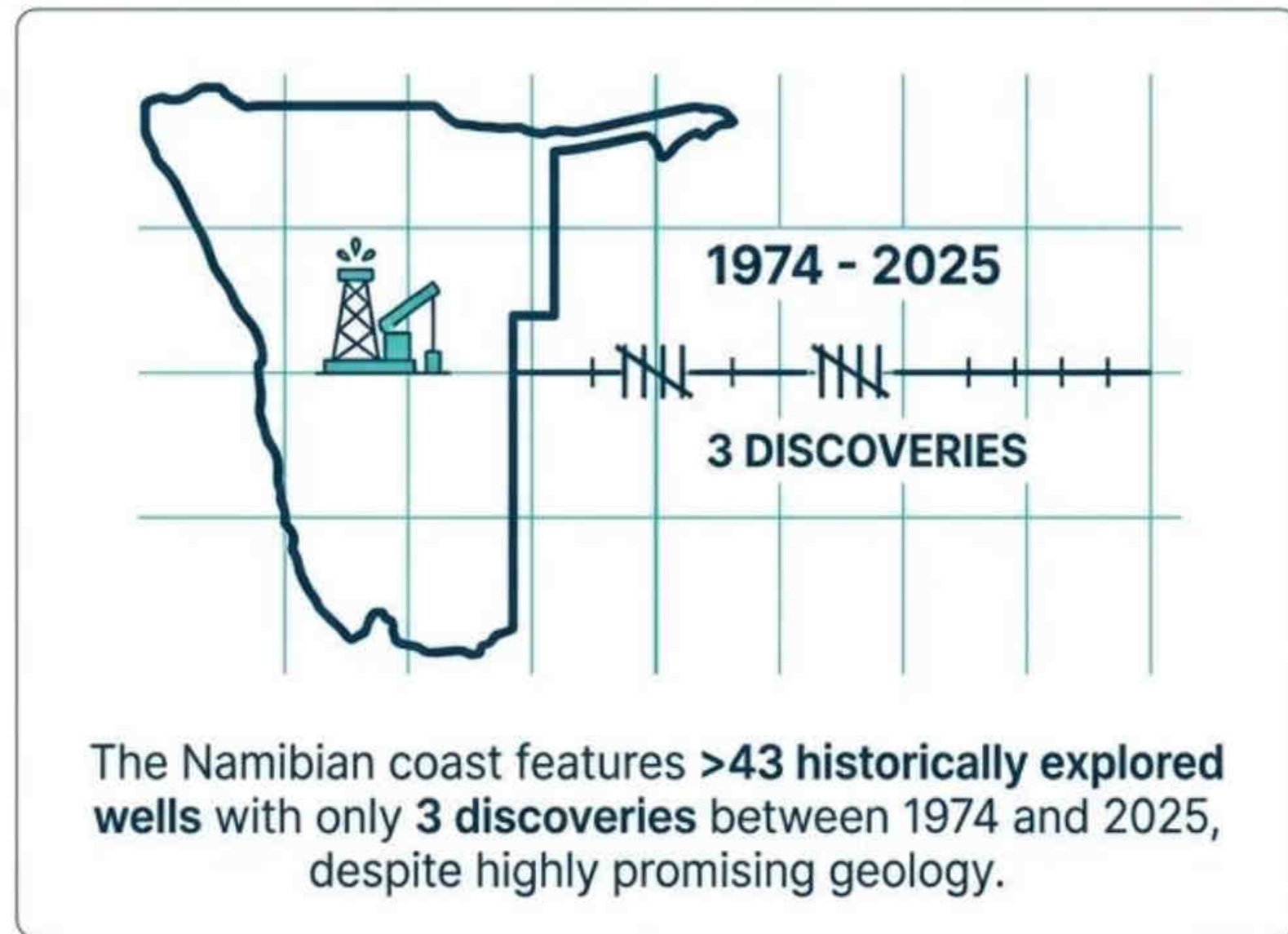
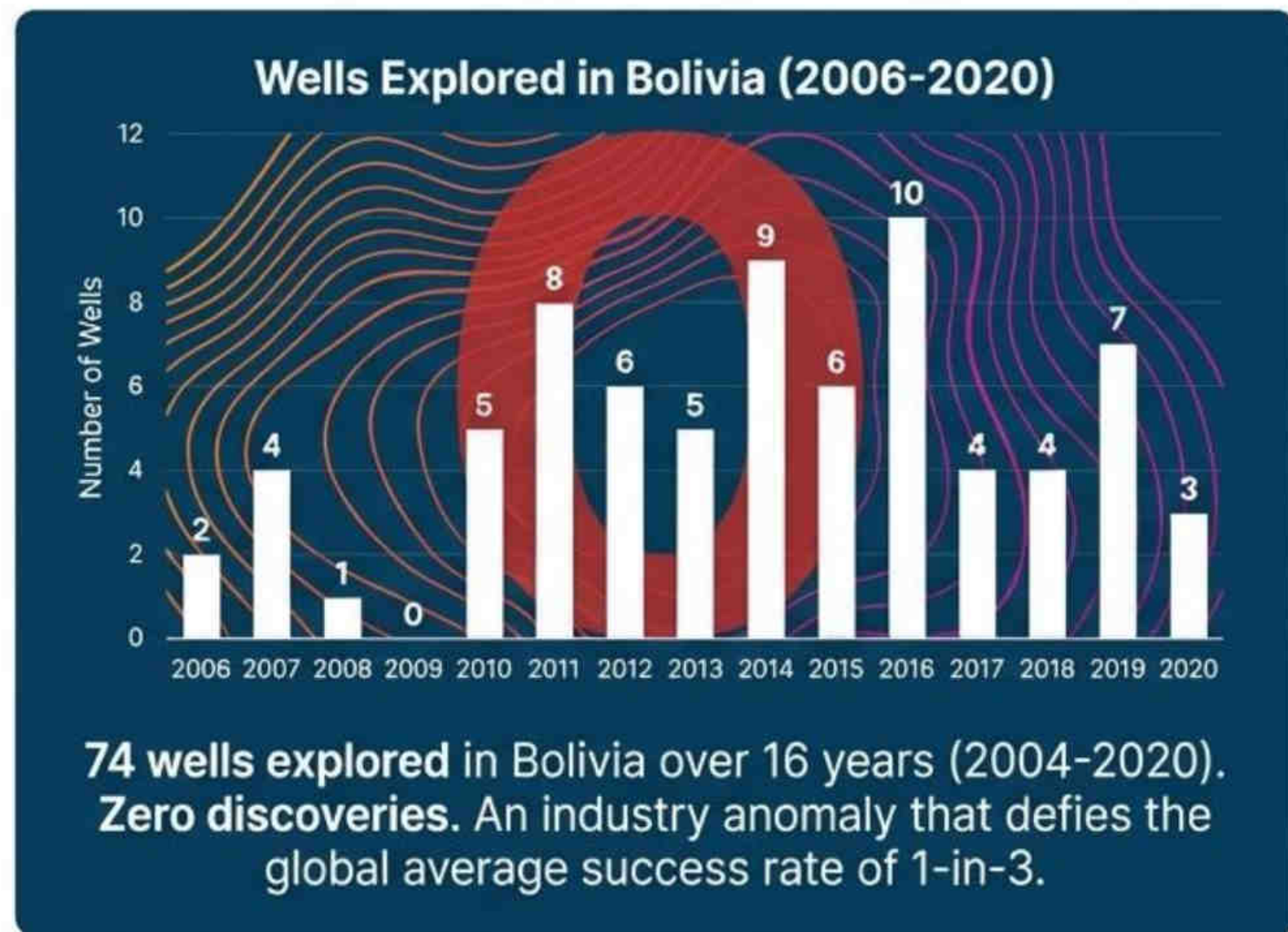
Why aren't your exploration investments paying off?

Wells Explored in Bolivia (2006-2020)



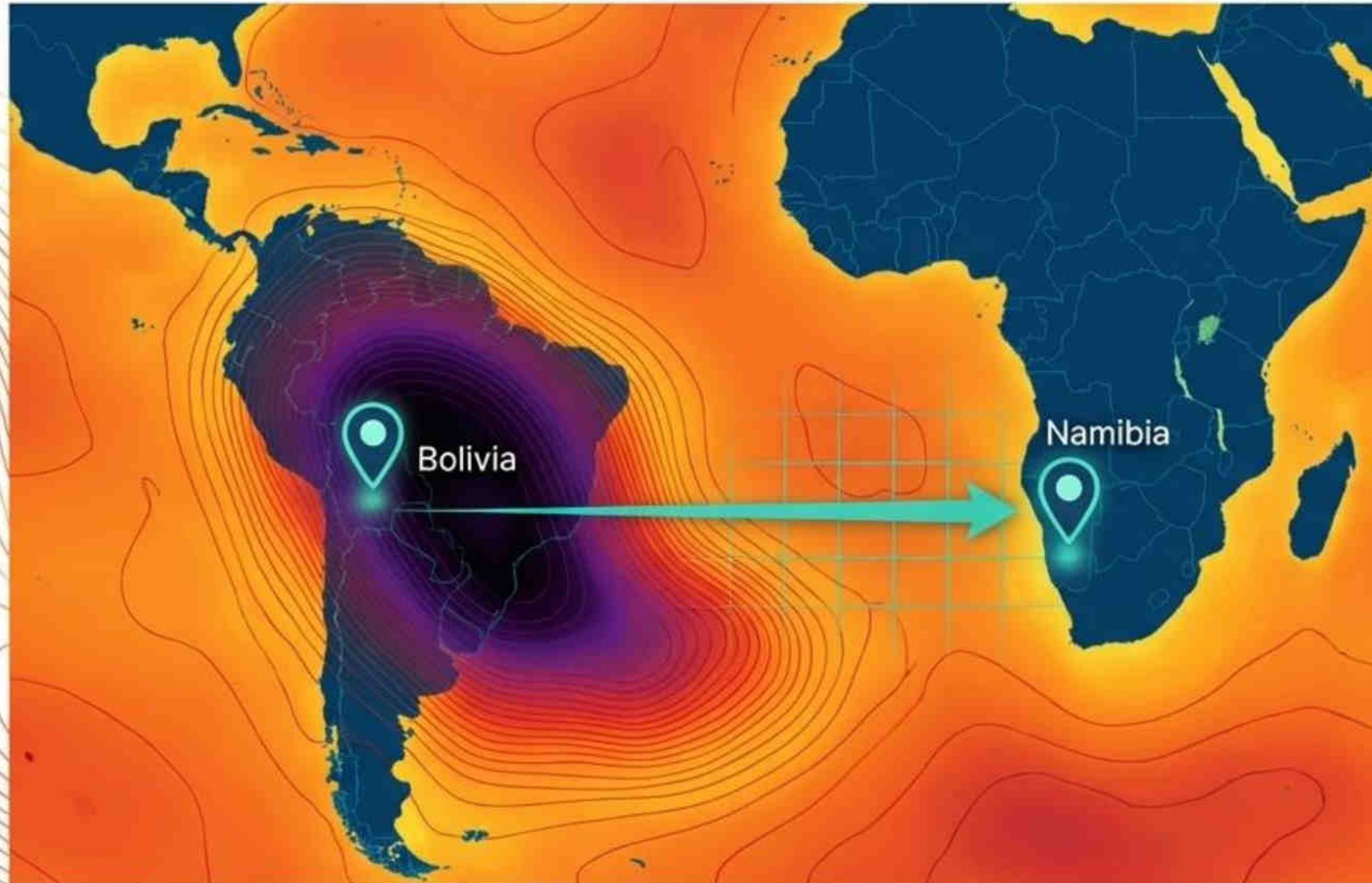
Since 2004, of the 74 wells explored, none have been positive. The last significant discovery was the Incahuasi-Aquio field in 2004. This is an industry enigma that defies the average global success rate of one in three.

The Multi-Billion Dollar Exploration Enigma



**Systematic exploration failure at this scale is not bad luck.
It is not bad geology. It is the signature of an invisible saboteur.**

The Common Denominator Unmasked



The Culprit

The South Atlantic Magnetic Anomaly (SAMA/AMAS).

The Mechanism

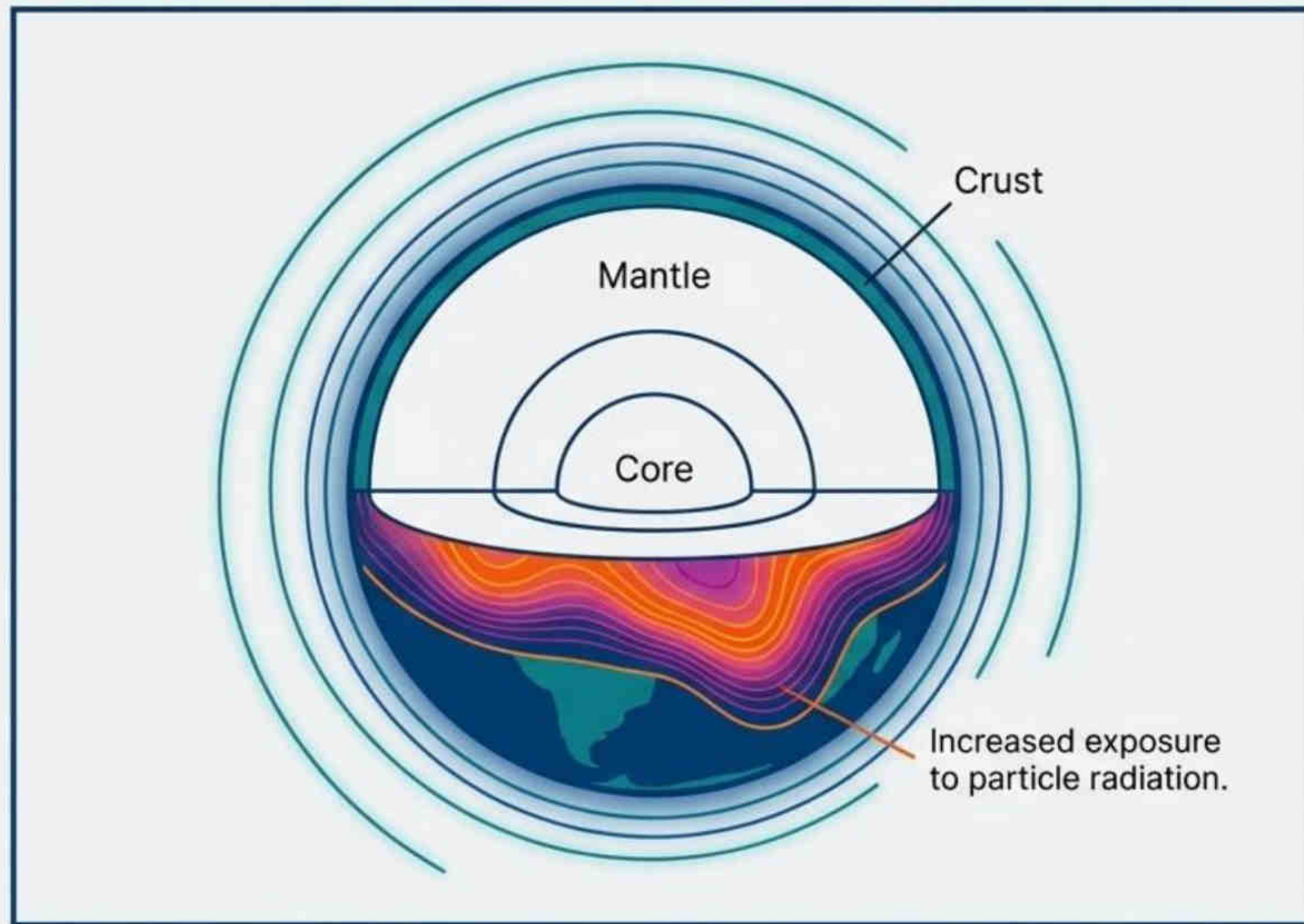
An expansive region where the Earth's magnetic field is abnormally weak, directly linking the world's most frustrating exploration frontiers.

The Repercussion

This massive magnetic void fundamentally disrupts the technologies that modern E&P companies rely on to find and map deep-water and sub-Andean hydrocarbons.

A Documented Scientific Reality with Global Consequences

Definition: The AMAS is a vast area monitored by the European Space Agency (ESA) where the Earth's magnetic shield is failing.



-9%

Weakening of the global magnetic field over the last 200 years.

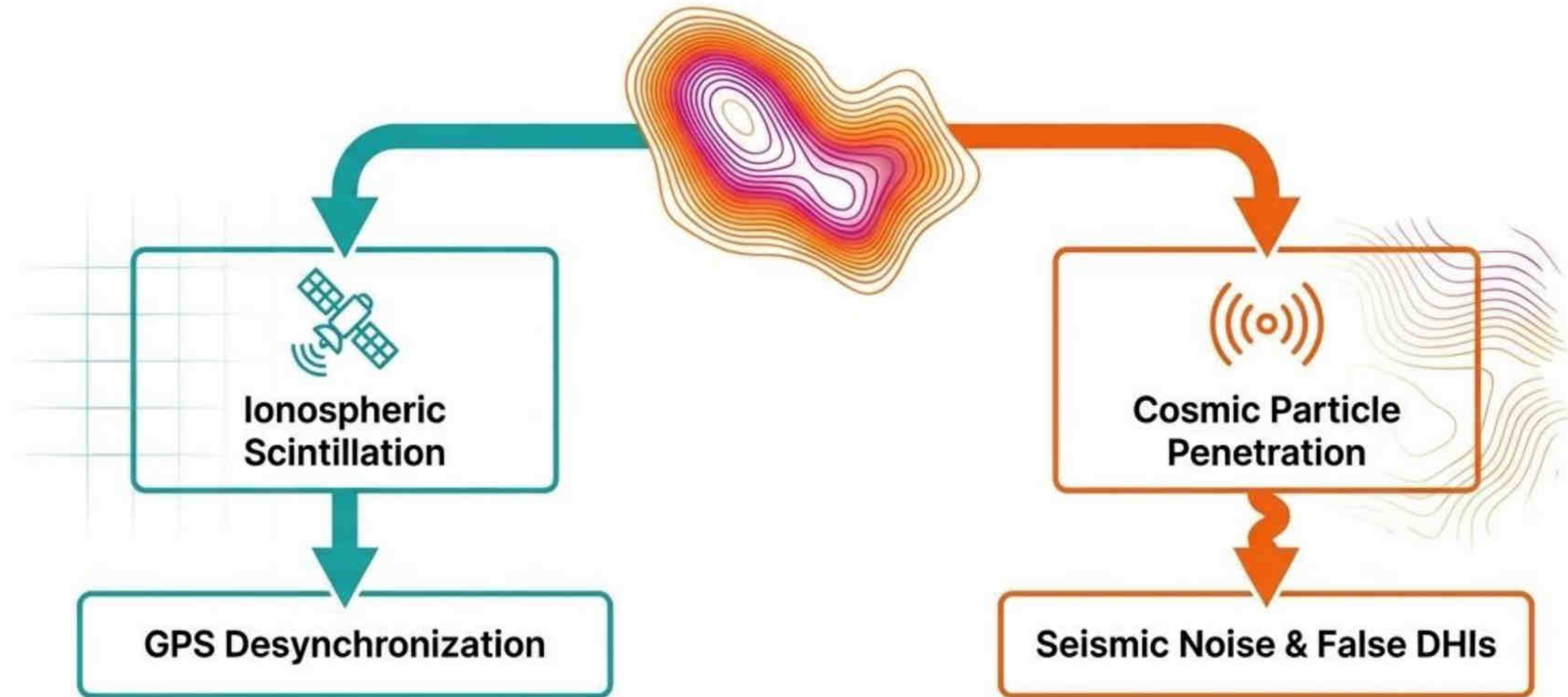
22,000 nT

Minimum intensity at the core (a drop of 24,000 nT in 50 years).

0.3°/year

The westward drift velocity, actively expanding the threat corridor.

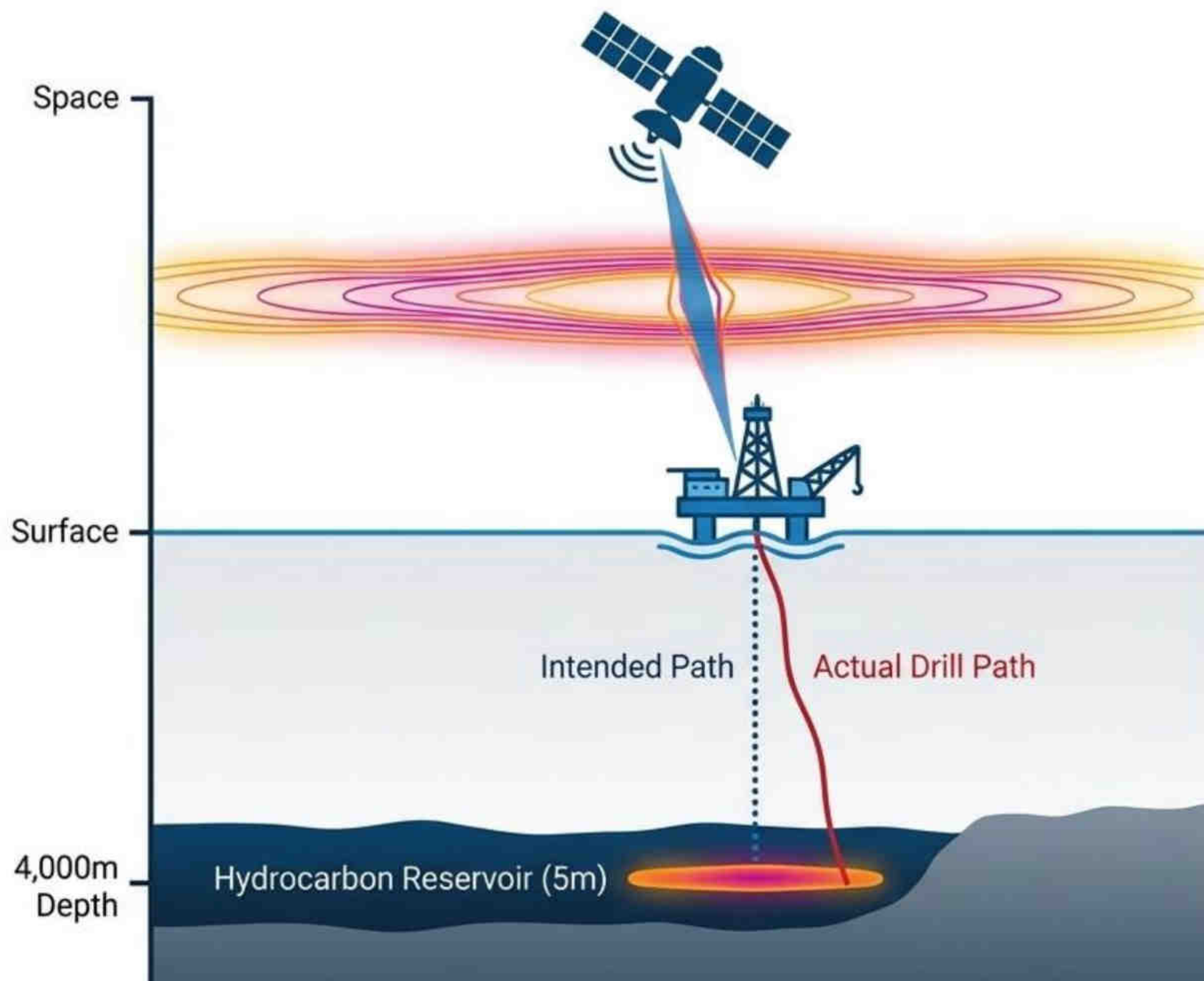
The Dual Threat to Traditional Exploration Methodologies



Increased flux of energetic particles disrupts satellite radio signals, causing critical delays in GPS response times.

Heightened cosmic ray interference mimics Direct Hydrocarbon Indicators (DHIs), creating noise that standard processing algorithms fail to fully correct.

Mechanism 1: The Butterfly Effect of a Single Nanosecond



A 10-nanosecond magnetic delay in space.



Translates to a 3-meter surface positioning error.



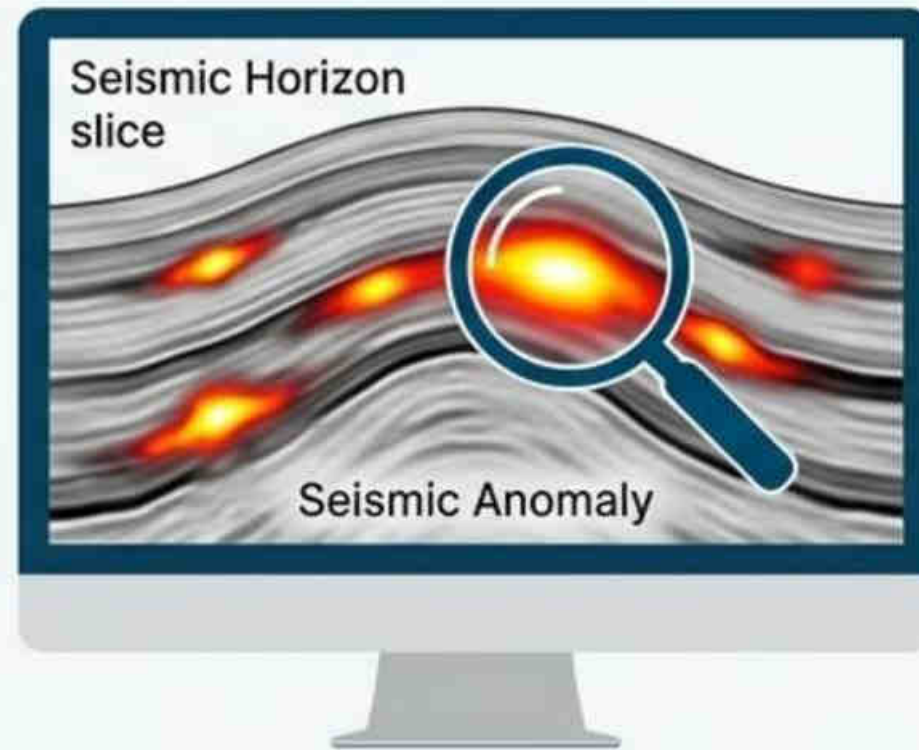
At 4,000m depth, the rig completely misses the 5-meter target.

The Accumulation of Error: Even with modern directional drilling, a surface coordinate error caused by AMAS ionospheric interference compounds exponentially with well path length, resulting in missing a thin reservoir completely.

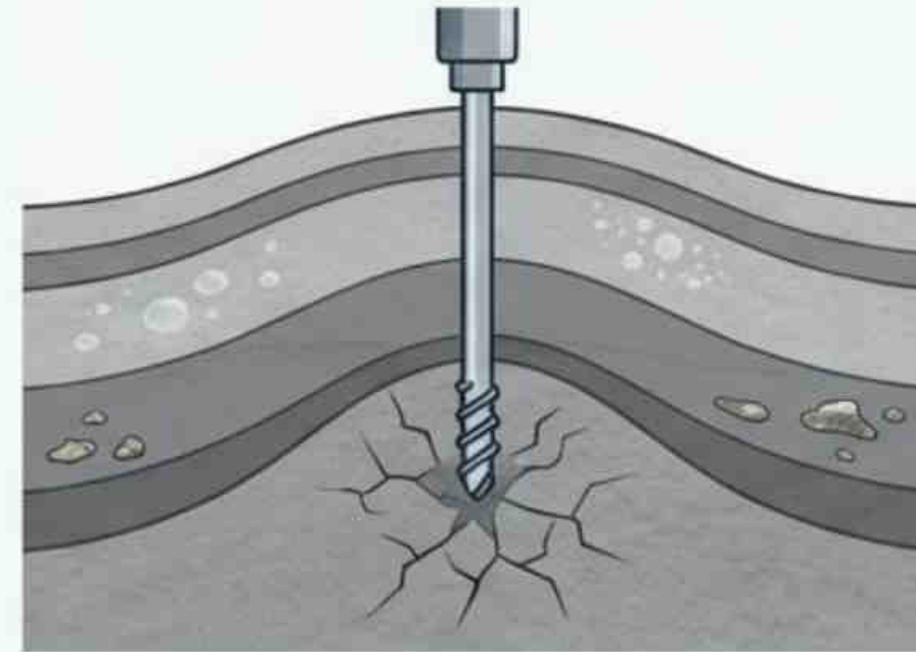
Mechanism 2: The Anatomy of a Ghost Trap

Illusion vs. Reality

The Illusion



The Reality



The False Positive:

AMAS does not magically create oil. It creates noise. Particle-induced anomalies from low magnetic shielding simulate the presence of fluids.

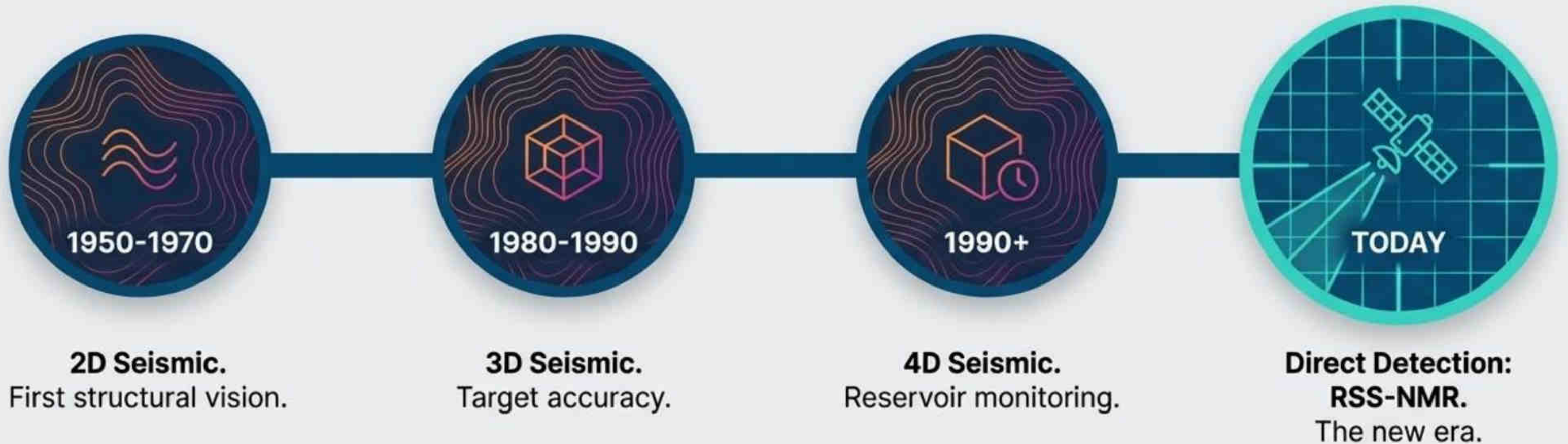
The Processing Flaw:

Standard processing software interprets this cosmic radiation noise as bright spots, flat spots, or low-velocity zones on the monitor.

The Result:

A perfectly executed, multi-million dollar drilling operation into a phantasmagorical trap that never existed.

The Inevitable Evolution of Exploration Technology



- For decades, the industry has spent billions perfecting the detection of structural anomalies (traps).
- Inside the AMAS zone, those structural anomalies are compromised by magnetic distortion.
- The next necessary leap is moving past indirect structural guessing to the direct detection of physical product.

The Golden Rule of the AMAS Zone

If drilling is planned in an area affected by magnetic anomalies, you must utilize a technique that is 100% independent of magnetic fields.

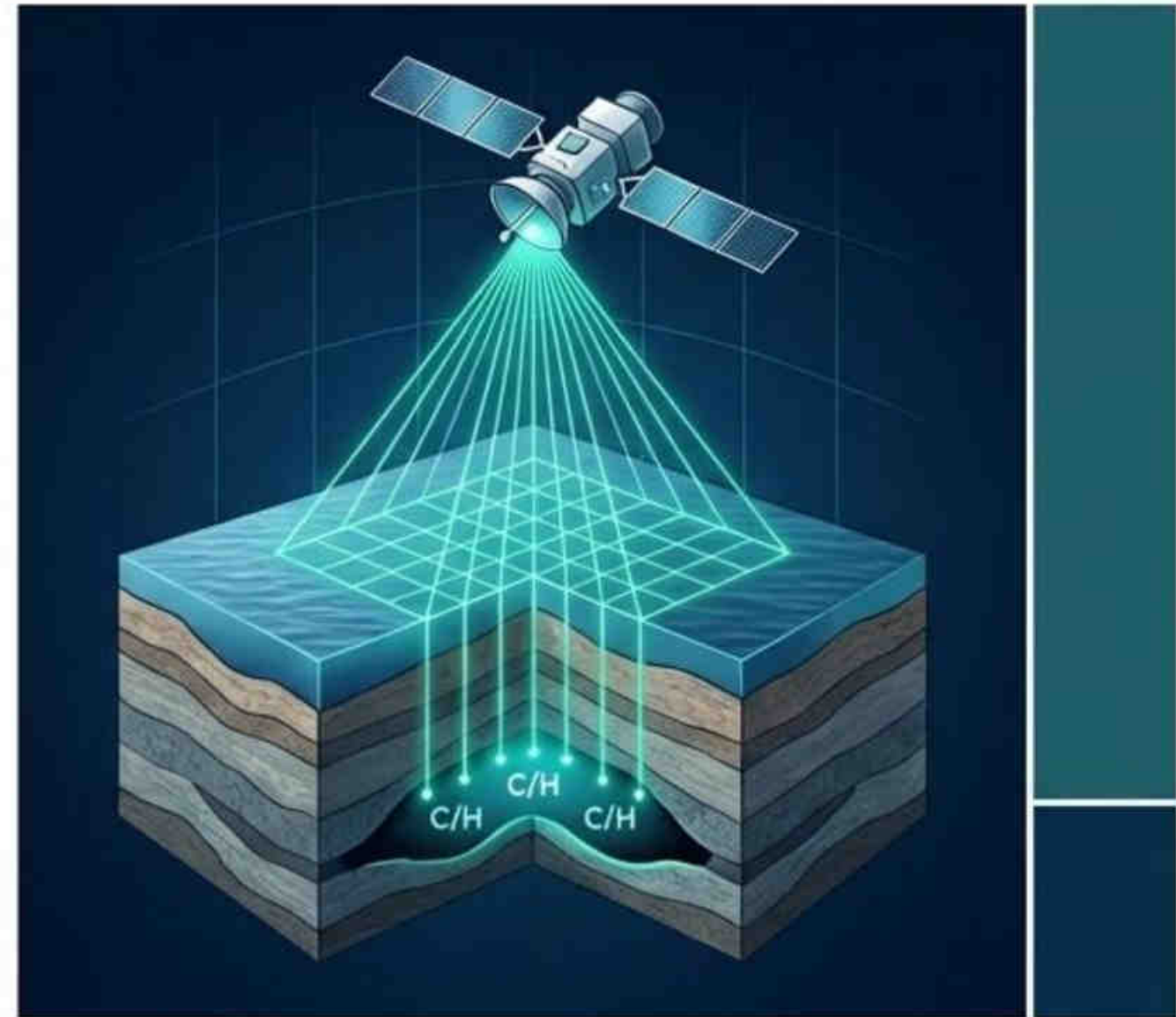
Traditional 2D, 3D, 4D, and OBN seismic arrays rely on precise magnetic and GPS synchronization. In Bolivia and Namibia, relying on them is a calculated risk with an 87% failure rate.

Enter RSS-NMR: The Definitive Solution

RSS NMR



Remote Sensing Spectroscopy combined with Nuclear Magnetic Resonance.

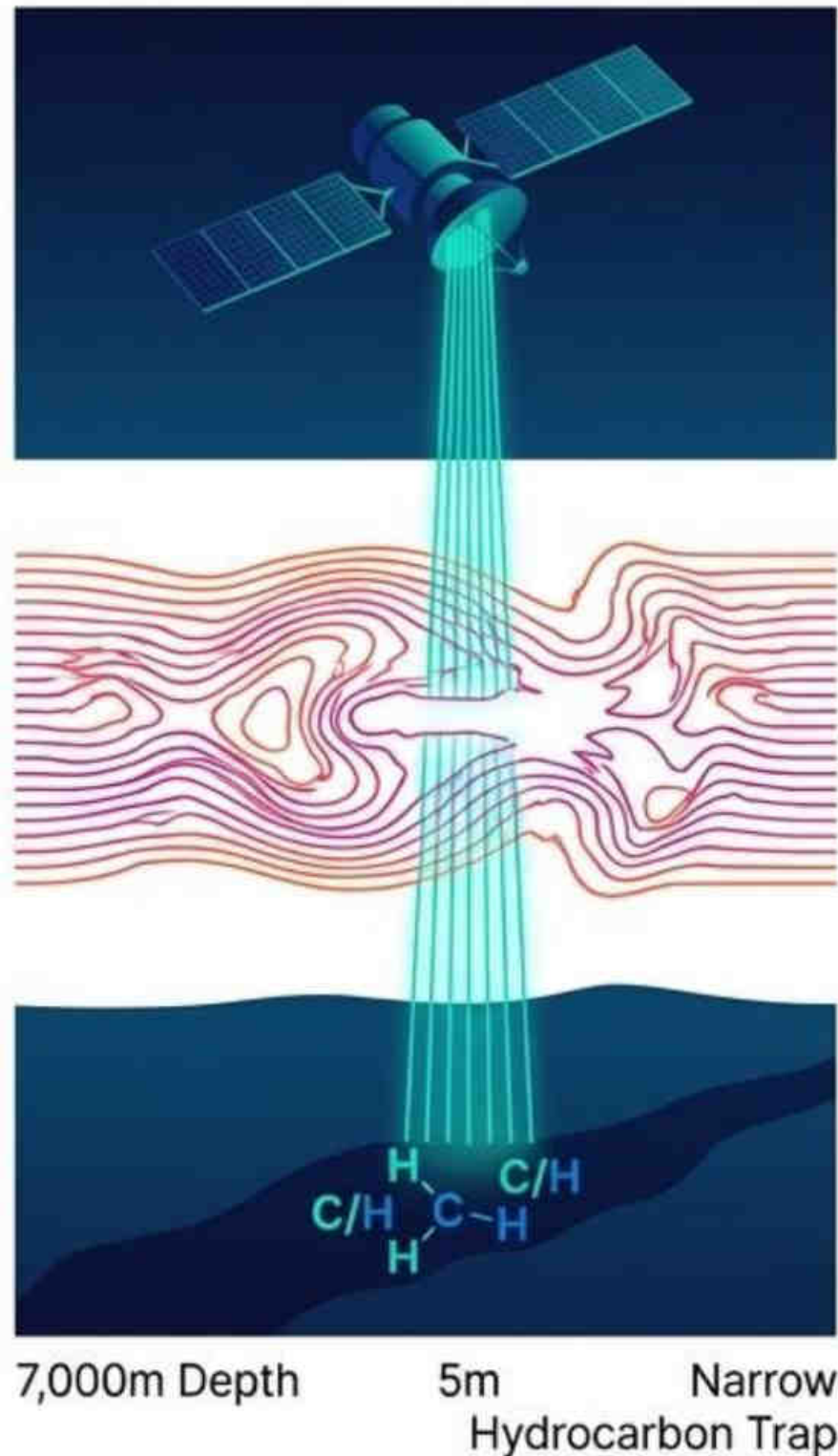


Independent Framework:
A satellite-driven exploration technology that completely bypasses magnetic and acoustic interference.

Direct Product Detection:
Instead of mapping the shape of the rock and hoping for oil, RSS-NMR remotely identifies actual hydrocarbon anomalies (C/H atoms).

Unprecedented Depth:
Delineates geometry and assesses economic viability down to 6,000m – 7,000m without deploying a single ship or ground crew.

Cutting Through the Noise



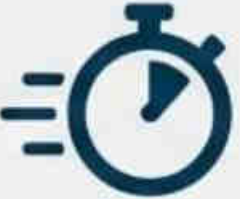



Immune to Desynchronization

RSS-NMR relies on spectroscopy and nuclear magnetic resonance, entirely independent of the ionospheric scintillation that ruins GPS positioning.

Zero False Positives

Because it detects Carbon/Hydrogen atoms directly, it cannot be fooled by fizz gas, pyrite, or cosmic ray noise. Ghost traps are eliminated.

The Business Case: Traditional Seismic vs. RSS-NMR

		Traditional 3D/OBN (in AMAS)	RSS-NMR Pre-Screening
	Time to Insight	6 to 24 months (or 1-4 years for extreme offshore).	<60 days.
	Financial Investment	Massive multi-million dollar CAPEX.	10x to 50x cost reduction.
	Logistics & Footprint	Massive OBN deployment, explosives, high carbon footprint, social opposition.	Zero field mobilization. Zero carbon footprint.
	Reliability	~30% success rate globally (near 0% in AMAS core zones).	60-80% initial reliability, scaling to >90% post-field validation.

The Pre-Screening Advantage



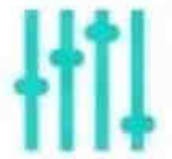
**Step 1:
Rapid Go/No-Go
Validation**

Deploy RSS-NMR by satellite to map physically validated C/H traps across the entire regional acreage before any field mobilization.



**Step 2:
Massive Area
Reduction**

Eliminate dead zones and ghost traps. Reduce the initial target exploration area by 70% to 80%.



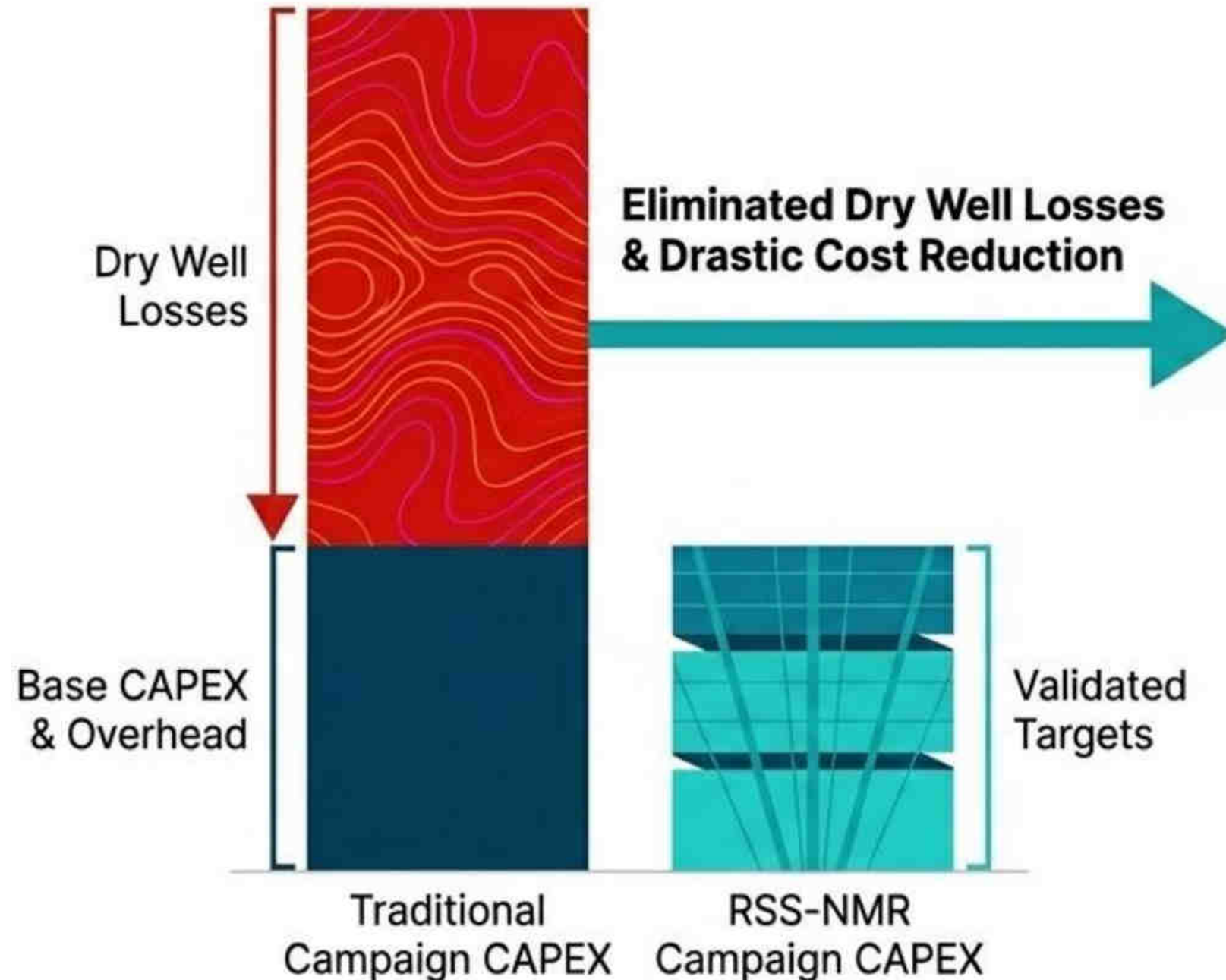
**Step 3:
Optimized Seismic
Scheduling Plan (SSP)**

Only deploy expensive 3D/OBN seismic grids over the exact, refined zones validated by RSS-NMR.

Result: Save 6-18 months of wasted exploration time and render empirical, risky approaches obsolete.

Multiplying Return on Investment

CAPEX Comparison: Traditional vs. RSS-NMR



Strategic Financial Impact

- The highest cost in exploration is the flawlessly executed drilling of a dry well.
- By utilizing RSS-NMR outputs (3D anomaly maps, geological profiles, reserve estimates) to direct the SSP, operators eliminate the financial risk of blind drilling.
- Refining the target area and avoiding multi-million dollar dry holes effectively multiplies total project ROI by 3 to 5 times.

Result: Transformed Financial Risk Profile and Maximized Project Profitability.

The Anomaly is Outsmarted.

The persistent failures in Bolivia and Namibia are not the limit of exploration; they are the limit of traditional technology.

RSS-NMR cuts through the distortion, turning an invisible saboteur into a bypassed irrelevancy.

Deploy satellite-driven direct detection for your next exploration campaign.



RSS NMR
THE SIMPLE WAY OF EXPLORATION



GEO-NMR.NET

Fands-LLC | GEO-NMR.NET | The Simple Way of Exploration



Copyright © Michel Louis Friedman, 01/2026. All rights reserved. No reproduction without permission.

Customized version

1. For translation costs, please contact us.
2. For the addition of company-specific documentation, please contact us.
3. For an editable option, please contact us.
4. Consultations available at **Michel.friedman@fands-llc.com** or **mlf10357@yahoo.com**.

- o All translations, logos, terms, and specific concepts are the property of Fands-llc worldwide.
- o RSS-NMR® is a registered trademark worldwide at the home address of Michel-Louis Friedman-Matarese.

Disclaimer

The opinions, analyses, and explanations expressed in this text are solely those of their author, Michel Louis Friedman. They do not represent the views of any institution, company, employer, or other entity. The author disclaims all liability for the use or interpretation of this material.

Copyright Law © March 11, 1957 Law No. 57-298 of March 11, 1957, concerning the ownership of literature and artists

- o Copyright © 2005-2026 Fands-LLC
- o Copyright © 2009-2026 Fands-LLC div. Proactive Economic Intelligence
- o All copyright © and trademark ® are protected under the U.S. Copyright Act of 1976 and subsequent amendments, and related laws contained in Title 17 of the United States Code.

All U.S. rights, © and registered trademarks ® are in accordance with applicable law.

Patents and Trademarks (December 12, 1980) <https://www.copyright.gov/>



Contacto

Michel L. Friedman-Matarese

Móvil / WhatsApp: +591-71696657

Email: michel@geo-nmr.net

Idiomas: FR-UK-ES-BR/PT

A Cargo de: África y Américas

Igor Kostelanetz

Tel / Móvil / WhatsApp: +79787155212

Email: igor@geo-nmr.net

Idiomas: RU-UK

A Cargo de: Mundo