



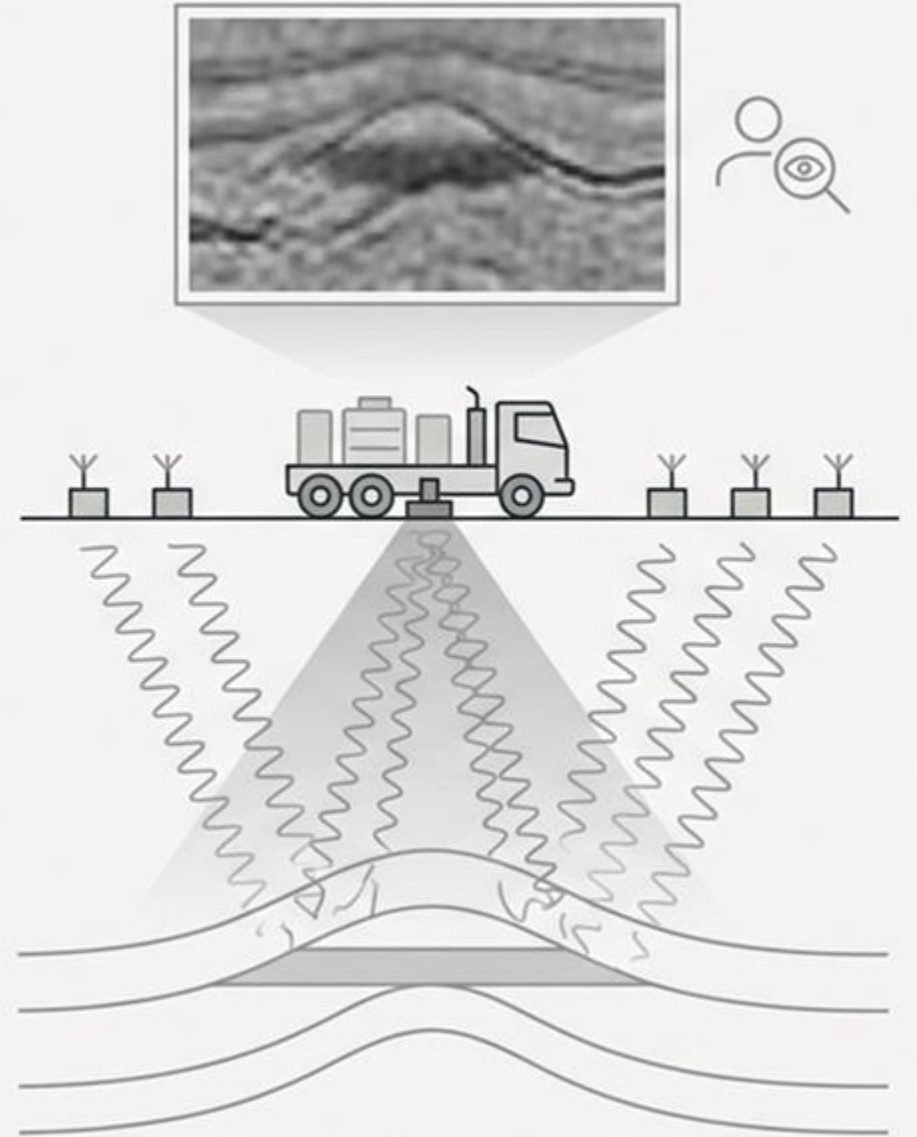
Direct Detection: A Paradigm Shift in Resource Exploration

The RSS/NMR Method for **De-risking and Accelerating Discovery**

For Decades, Exploration Has Relied on Indirect Methods

3D Seismography has been the industry standard, but its methodology is fundamentally based on inference. It doesn't find the resource; it finds geological structures where resources ***might*** be.

- Seismic technology generates a high-powered, 'faceless' signal directed underground.
- The signal reflects off boundaries between different rock layers and is captured by surface receivers.
- This process identifies geological **anomalies**—structures favorable to oil and gas accumulation—which then require extensive **interpretation**.
- The main property of seismic is **reflection**.



The Inherent Risks of an Indirect Approach

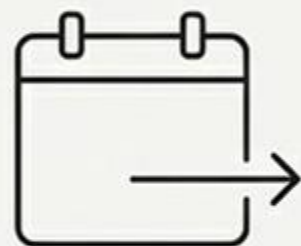
A methodology based on inference leads to significant inefficiencies and financial risk.



60-70%

Failure Rate

Success rate of only 30-40% in new territories, leading to costly 'dry' wells.



>1-2 Years

Project Timeline

Typical duration for a 1,000 sq. km project, delaying time-to-production.



6 to 1

Drilling Ratio

An industry average of 6 exploratory wells are drilled for every 1 commercial discovery.



\$50k+/km²

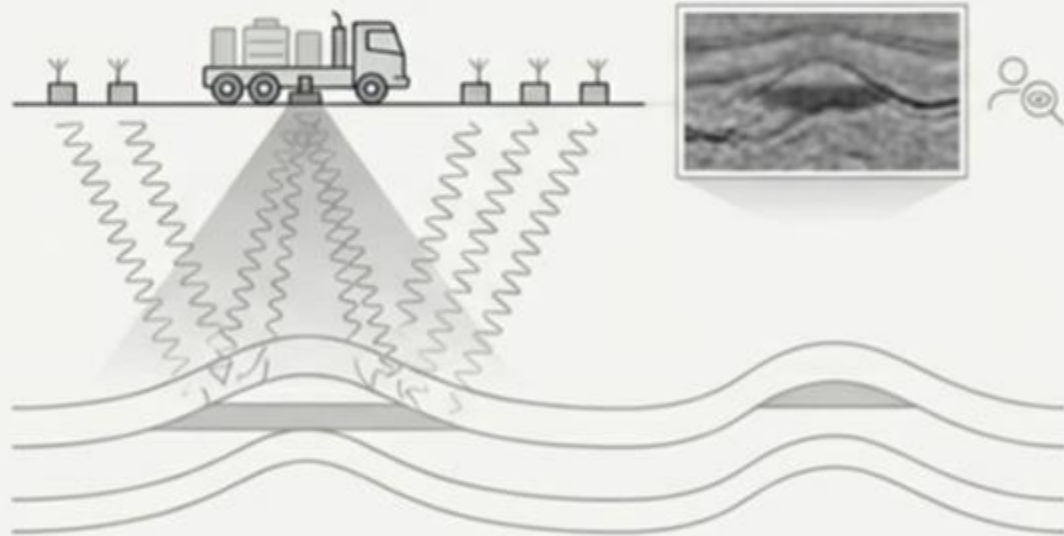
Exploration Cost

Ranging from \$25,000 to over \$70,000 per square kilometer for 3D seismic.

The Breakthrough: From Interpreting Reflections to Detecting Resonance

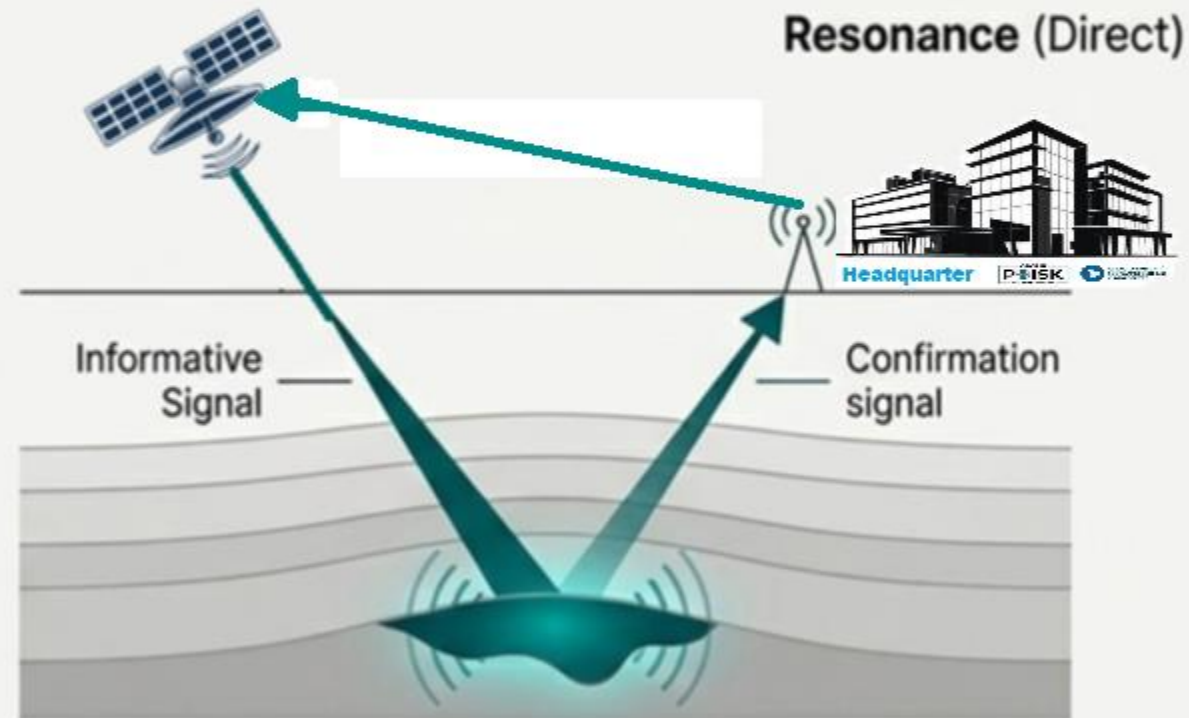
RSS/NMR is a direct detection method. Instead of interpreting echoes, we tune **into the specific signature of the target substance itself**, like tuning a radio.

Reflection (Indirect)



Sends a powerful, information-less "faceless signal" and interprets the echo from underground geological structures.

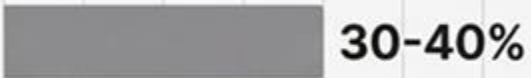



Resonance (Direct)



Transmits a narrowly focused signal tuned to the target substance (e.g., The target re-emits a confirmation signal that we detect with certainty.

"The main thing in our approach...is that we do not use the interpretation of indirect data, but directly determine the presence of the desired mineral in the subsurface."

Certainty vs. Probability: A Head-to-Head Comparison

	3D Seismography	RSS/NMR
Effectiveness / Success Rate	 30-40%	 >80-90%
Result	Identifies contours of anomalies	Identifies contours of deposits (±10m accuracy)
Exploratory Wells per Discovery	 6	 1
Drilling Savings	N/A	Potential savings of >\$20 Million by avoiding a single dry well

Months vs. Years: The Efficiency Advantage

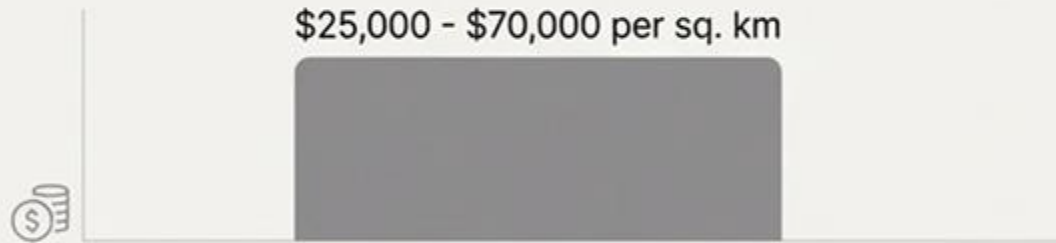
3D Seismography

RSS/NMR



Metric 1: Project Duration (1,000 sq. km area)



Metric 2: Specific Cost of Works



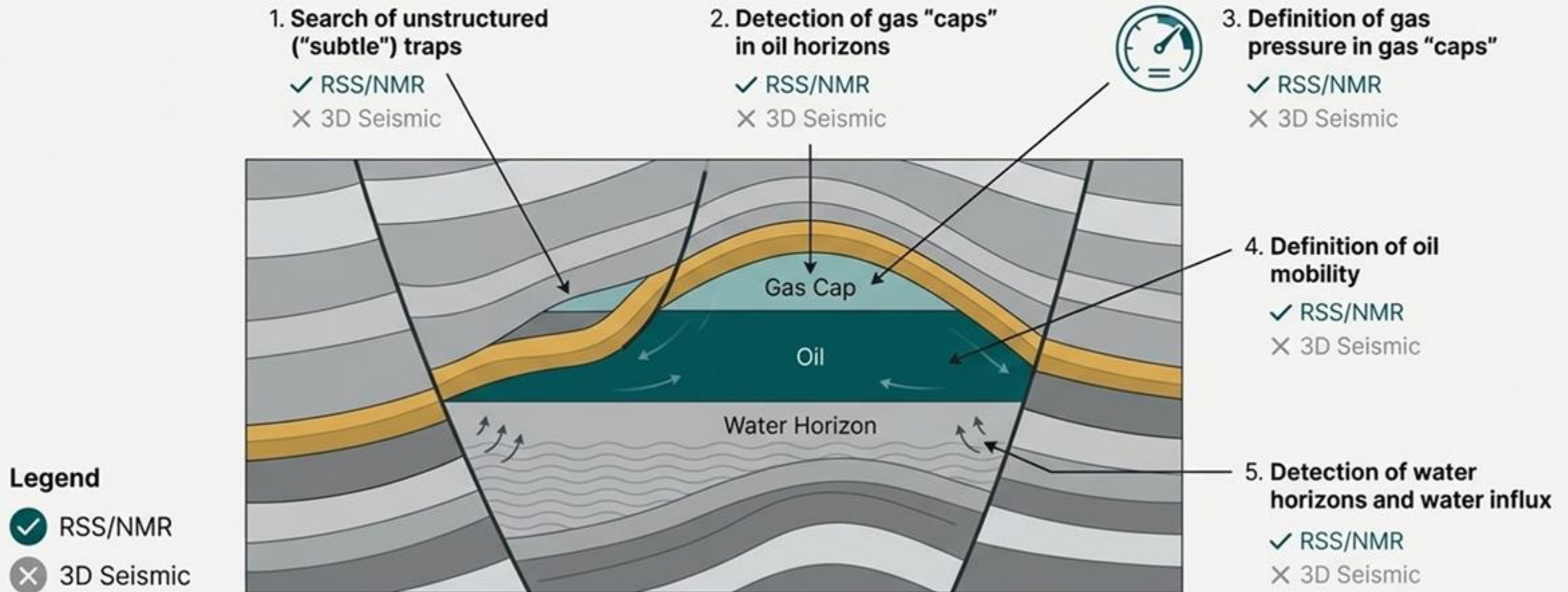
Metric 3: Environmental & Logistical Impact

- ✓  Cutting Lines
- ✓  Heavy Crew Presence
- ✓  Explosives/Vibrators
- ✓  Permits & EIA
- ✓  Difficult in Complex Terrain

- ✓  Environmentally Friendly
- ✓  No Ground Disturbance
- ✓  **Zero** Footprint

Seeing What Others Can't: Enhanced Qualitative Insights

RSS/NMR provides direct measurements of reservoir characteristics that seismic methods can only infer or cannot detect at all.



Proof in Action: Indian Ocean Shelf Survey

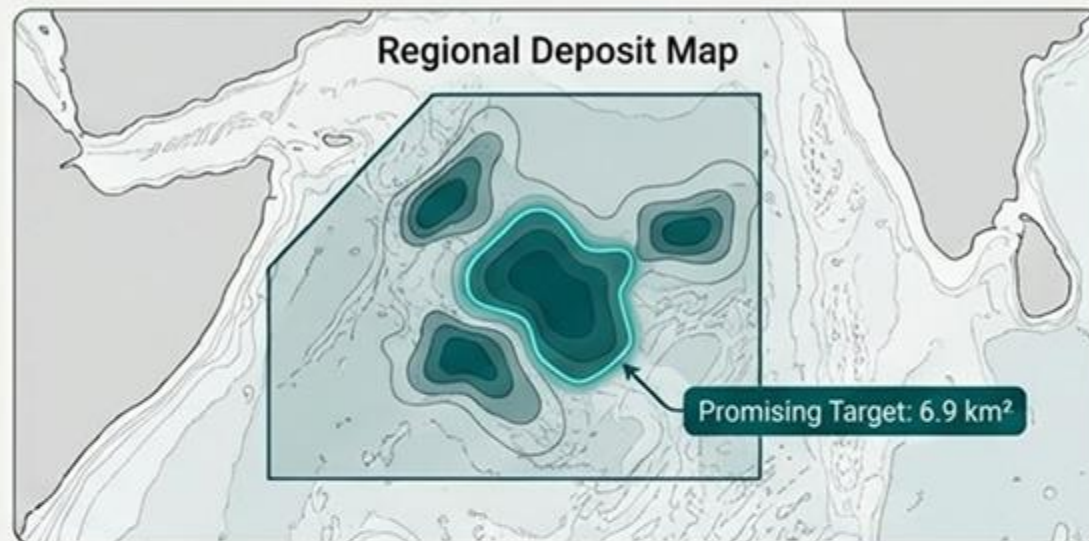
Total duration of both stages was **5** months.

Stage 1: "Diagnostics" (Remote Survey)



Action: Surveyed a large offshore area.

Result: Identified 4 oil and gas deposits; one flagged as having industrial perspective with an area of 6.9 sq. km.

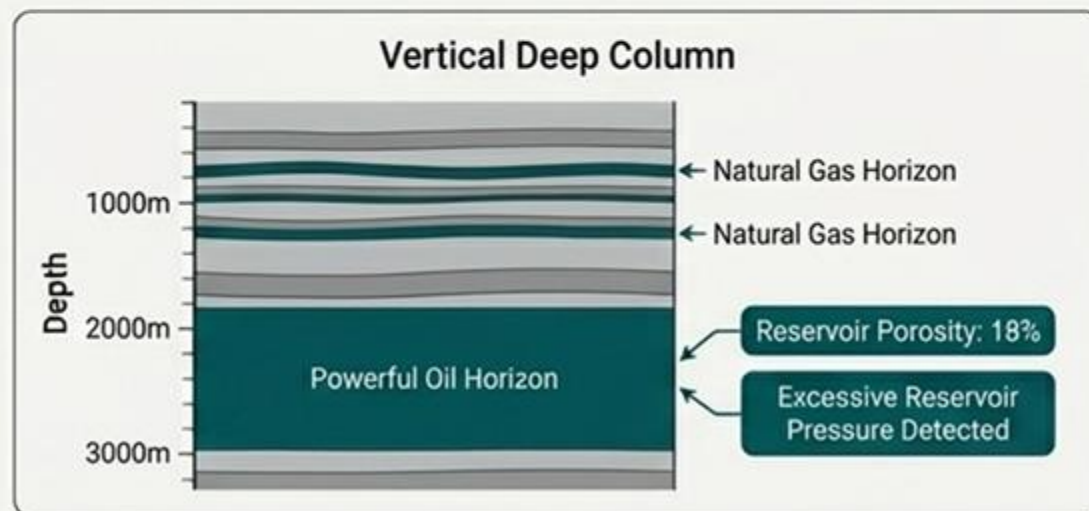


Stage 2: "Detailed Survey"



Action: Performed in-depth scans (deep sections) over the promising deposit.

The Result: A detailed vertical deep column was produced, revealing critical reservoir data.

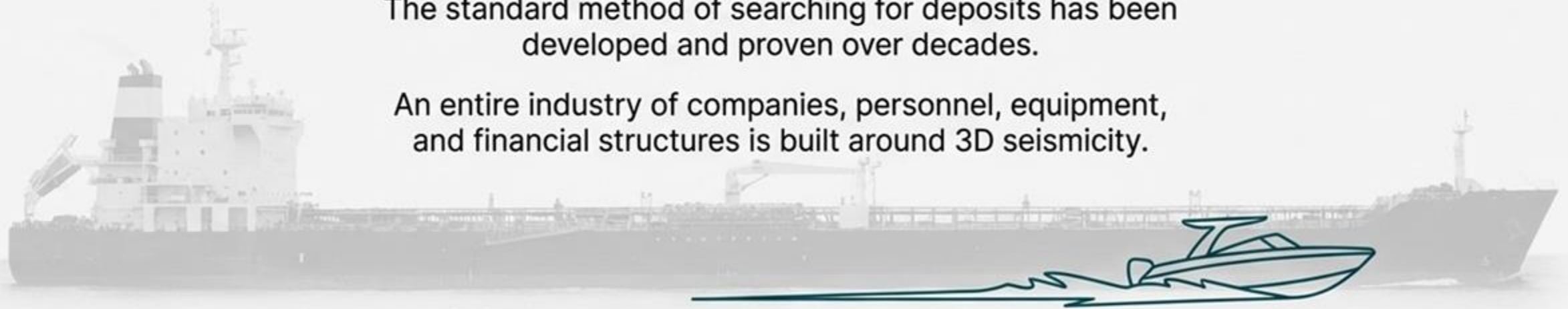


The Innovator's Challenge: Why Isn't This Mainstream?

The traditional geophysical sector is a massive, established ecosystem built around 3D seismic. Our technology represents a fundamental disruption to that established order.

The standard method of searching for deposits has been developed and proven over decades.

An entire industry of companies, personnel, equipment, and financial structures is built around 3D seismicity.



“For big [service] companies the application of our service would mean... radical changes... From this point of view **we are competitors to the settled order and traditions.**”

A Versatile Tool for the Entire Asset Lifecycle

RSS/NMR delivers value whether you are exploring new frontiers, verifying existing targets, or maximizing production from mature assets.



Greenfield (New Fields)

Use as a **pre-exploration tool** to drastically **reduce seismic costs** by focusing only on high-potential areas.



Well Verification

Confirm or challenge drilling points identified by 2D/3D **seismic before** committing capital. Re-examine dry wells to find nearby missed targets.



Brownfield (Mature Fields)

Re-explore producing or abandoned blocks to **identify undiscovered reservoirs**, re-draw field maps, and **optimize** the production network without disrupting operations.

The Economic Imperative: A Smarter Path to Reserves

In an era of increasing extraction difficulty, improving your Energy Return on Investment (EROI) is critical. **RSS/NMR** is the tool to achieve this.

The EROI Challenge

1 inverted barrel produced 100 barrels in 1900. By 2020, it produced only 18. Improving this ratio is a strategic necessity.

The Business Impact

By dramatically **increasing success rates** and **reducing timelines**, RSS/NMR directly **improves your EROI**. It provides the high-certainty data needed for the recertification of reserves—the core asset that underpins company value and access to capital.

The Equation for Higher EROI



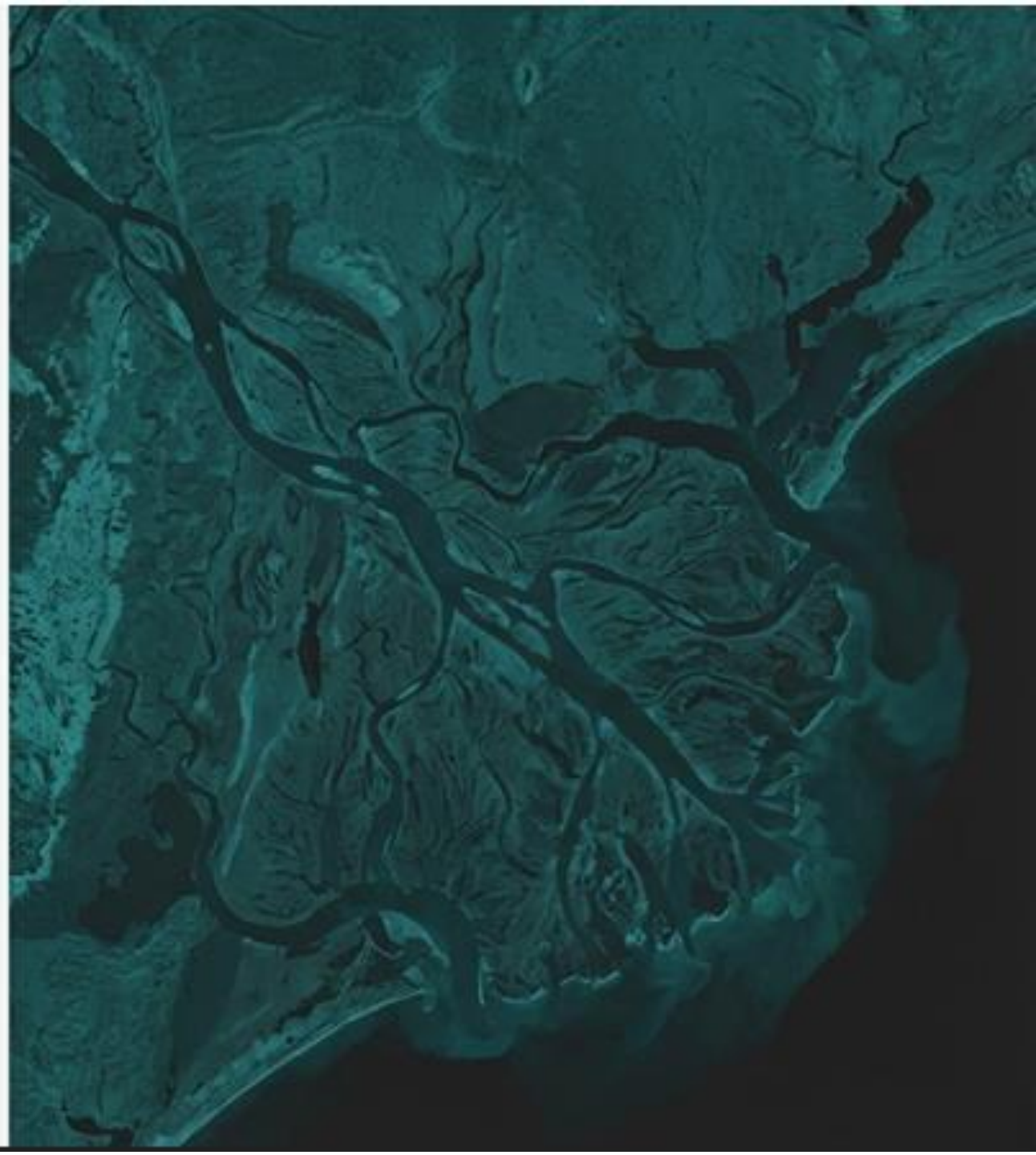
Redefine Your Exploration Strategy

Let's discuss how RSS/NMR can de-risk your portfolio and accelerate your path to production.

Combining RSS data with existing seismic and lithological data can achieve well-drilling efficiency close to 100% reliability.

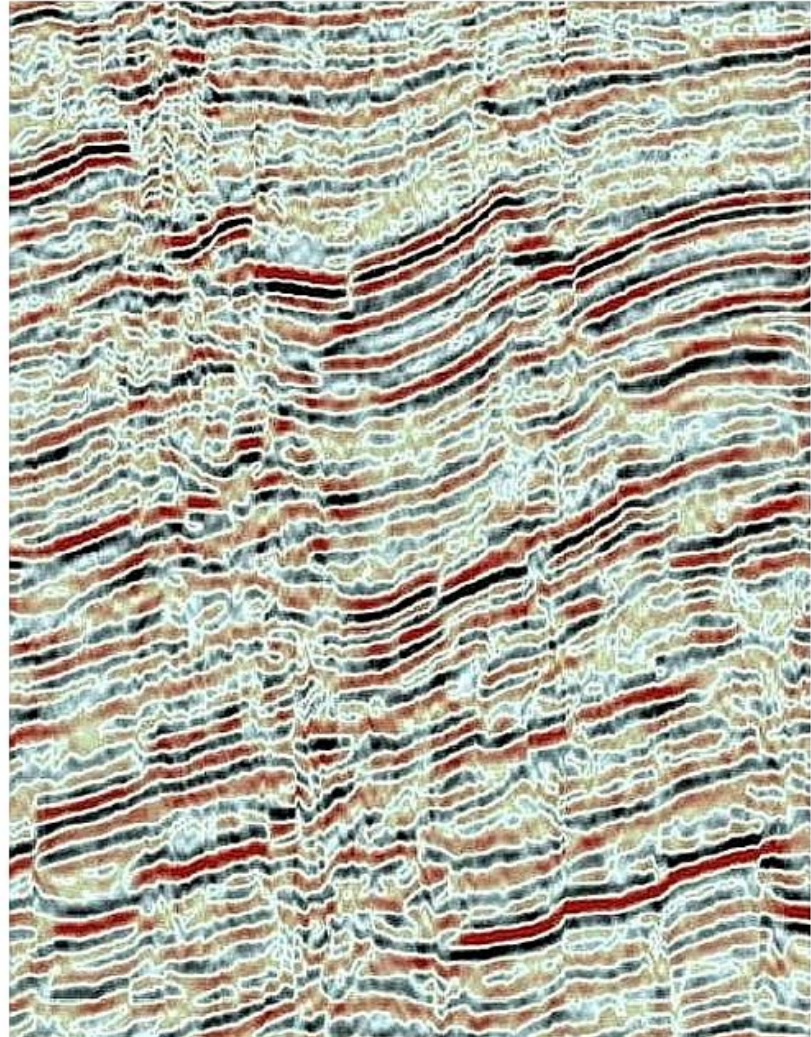
To begin, provide the coordinates of your exploration area (WGS84), the search target (e.g., hydrocarbons), and the depth interval for a preliminary assessment and quotation.

**Stop looking for anomalies
find oil and gas now !**

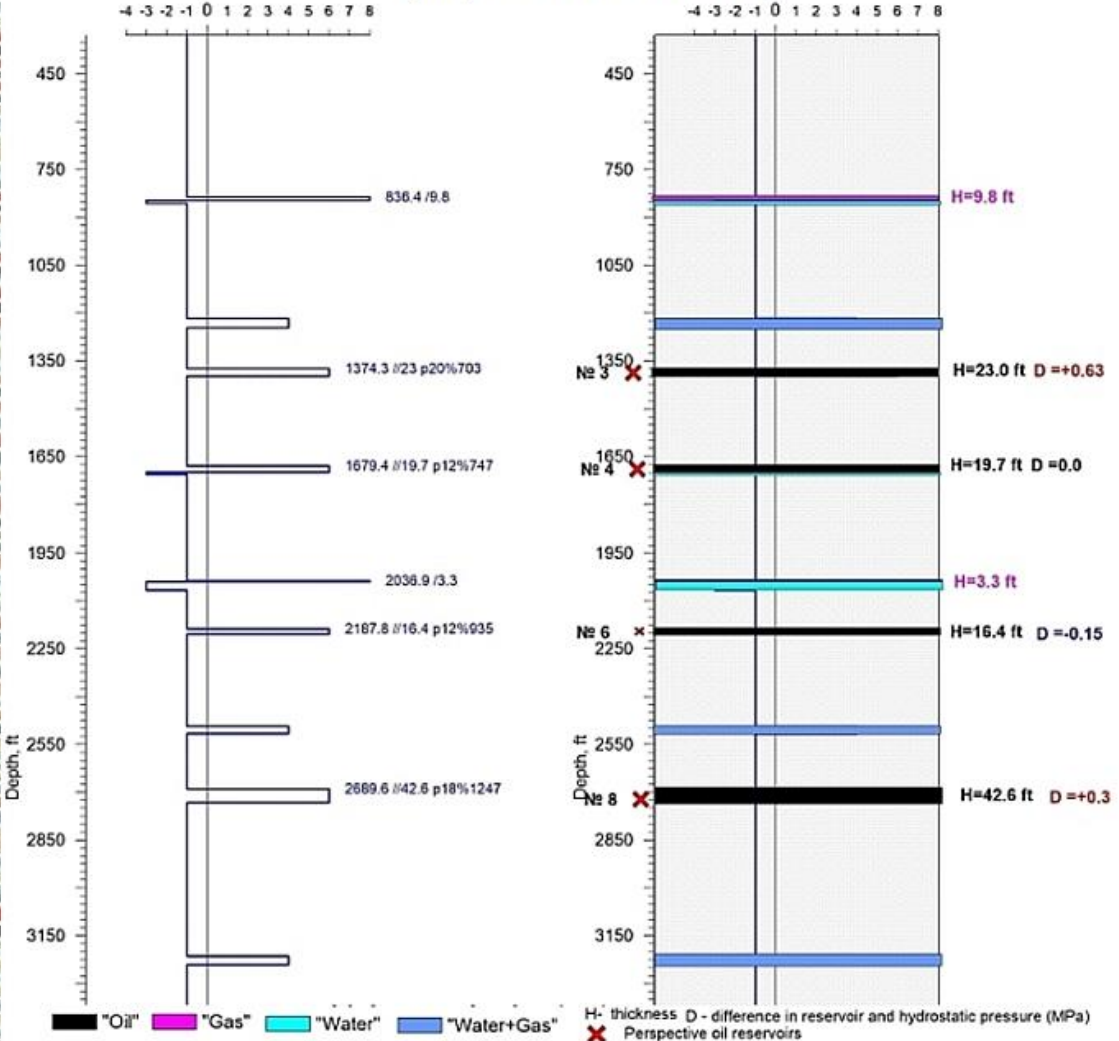


How 3D seismic and RSS-NMR are showing underground deposits:

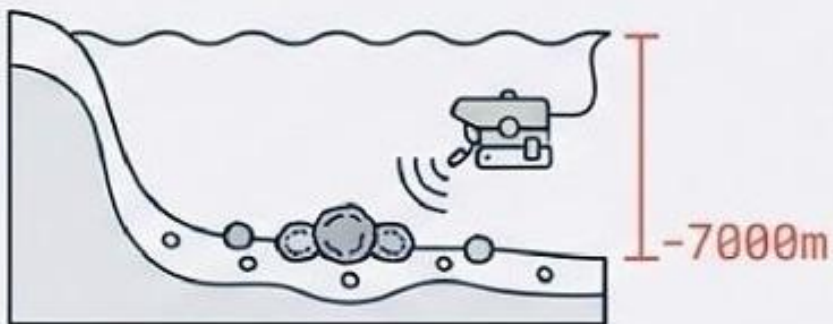
Seismic data
Interpretation is needed



RSS-NMR
Interpretation is not needed



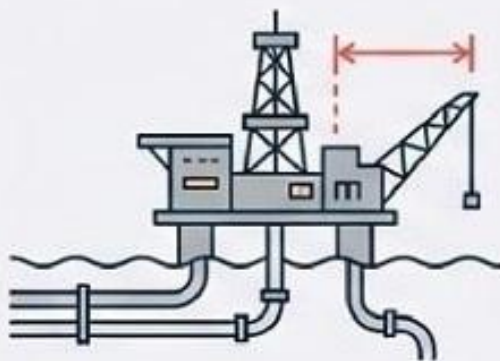
Multiple Applications of the RSS-NMR



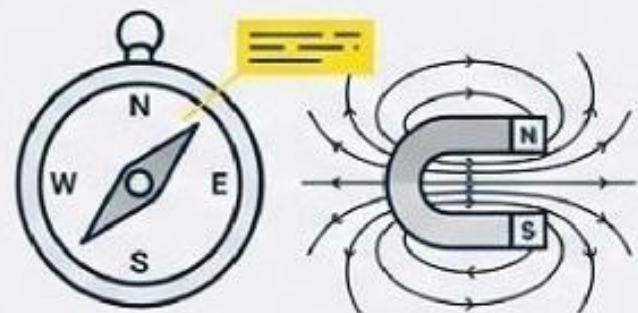
Polymetallic Nodules (Offshore to -7000m).



Archaeology and Shipwrecks.



Oil and Gas (Field Rehabilitation).



AMAS Zones (Overcomes Magnetic Disturbances).

SUSTAINABILITY: 100% Non-invasive. Ideal for national parks. No drilling permits required.

Police or military investigations only.

Explosives, coca leaf and precursor processing lab, insurgent camp, clandestine contraband depots, hazardous contamination to the community, unexploded bombs from World War II

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