

Multidimensional Seismic Conversion Analysis

**Technology Applied to
Oil & Gas**



PENTATEX GROUP

Construction | Consulting | Engineering



PENTATEX GROUP

Construction | Consulting | Engineering

PENTATEX GROUP is an American company specialized in the Integration of Industrial Projects, Business Intelligence and Project Management.

Our focus areas:

SPECIAL PROCESSING OF GEOPHYSICAL DATA

Equipment Manufacturing(OEM)

Mechanical Integrity Rehabilitation

Procurement Solutions for Industrial Processes

Our markets are:

Oil and Gas Industry

Petrochemical Industry

Mining

Storage terminals

We consolidate more than 35 years of Experience backed by our Qualified and Certified Personnel. We distinguish ourselves for our Responsiveness, Commitment and Ethics.

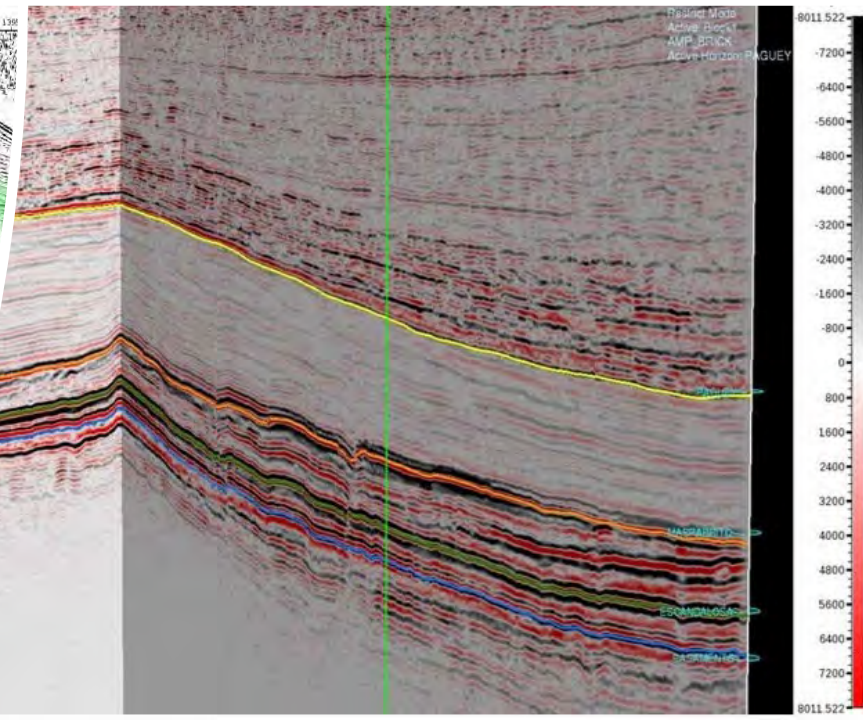
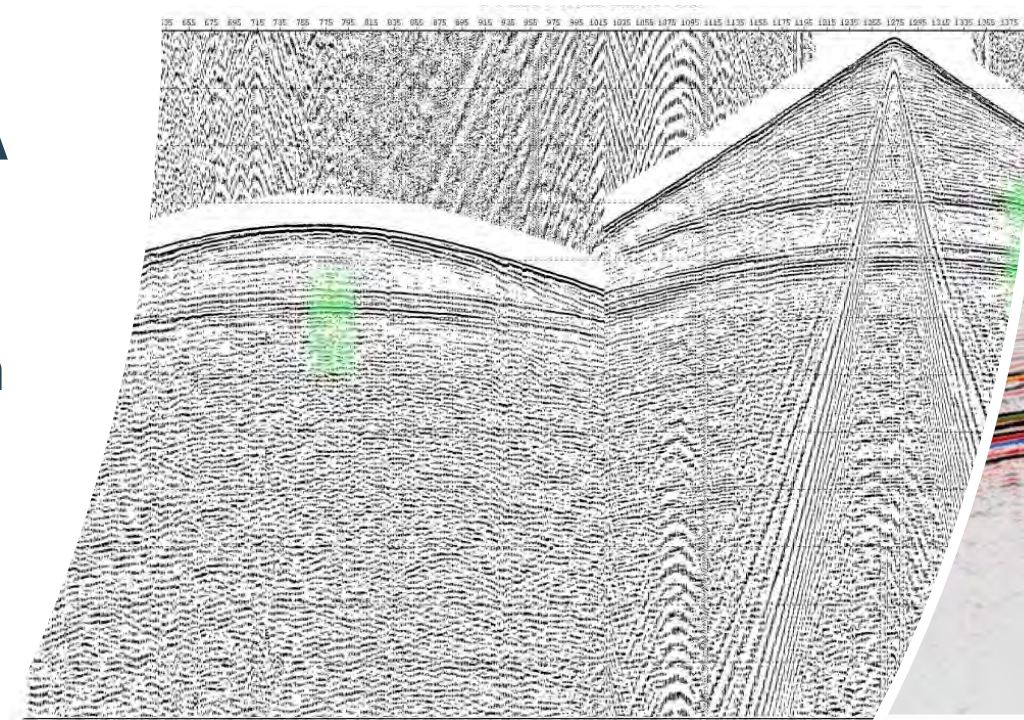
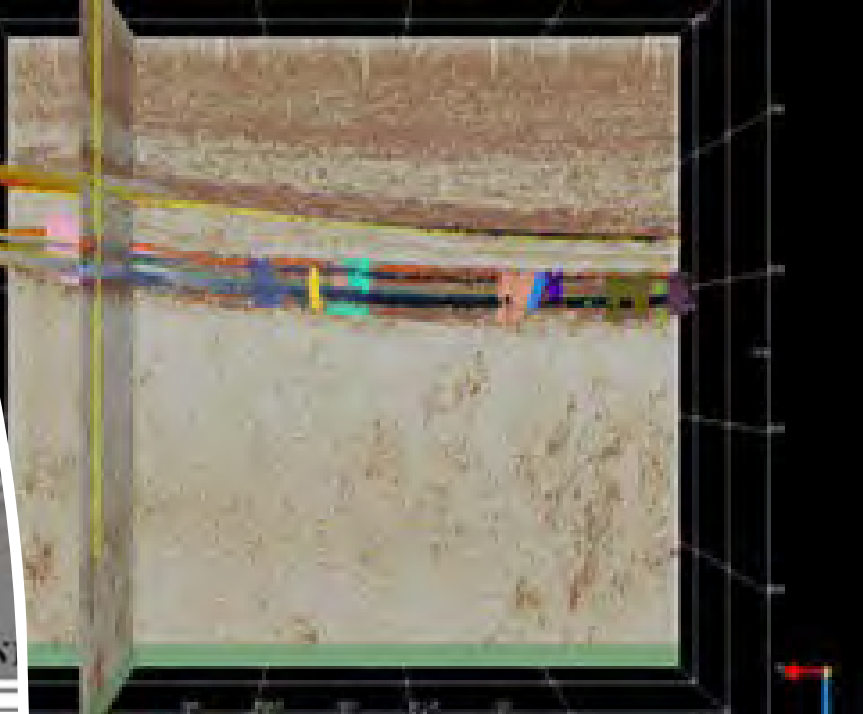
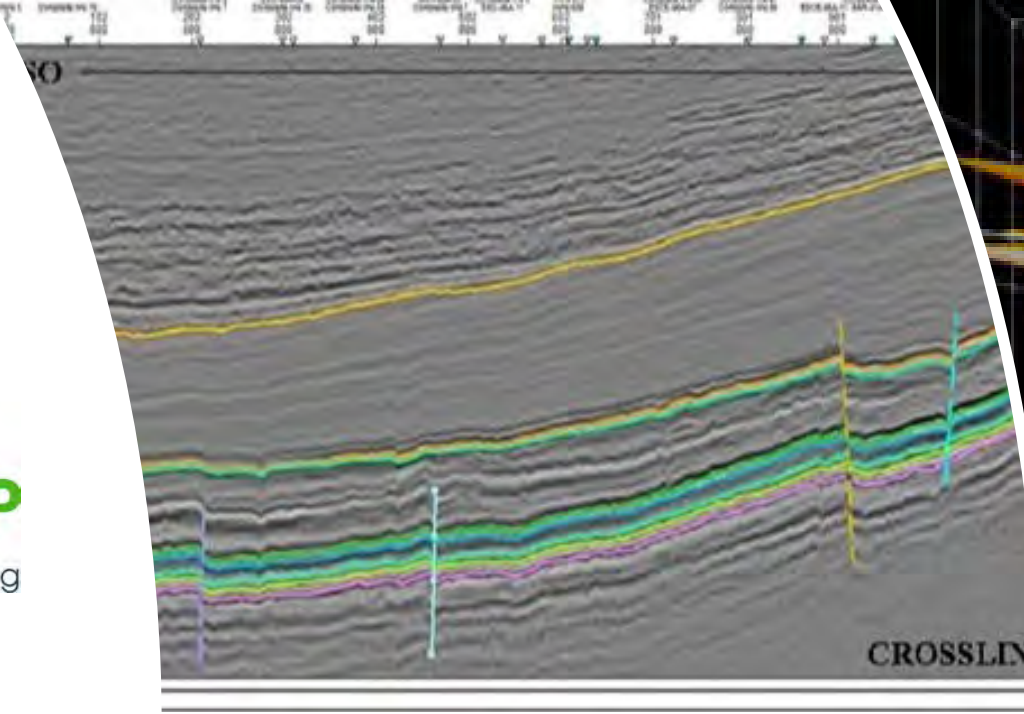


PENTATEX GROUP

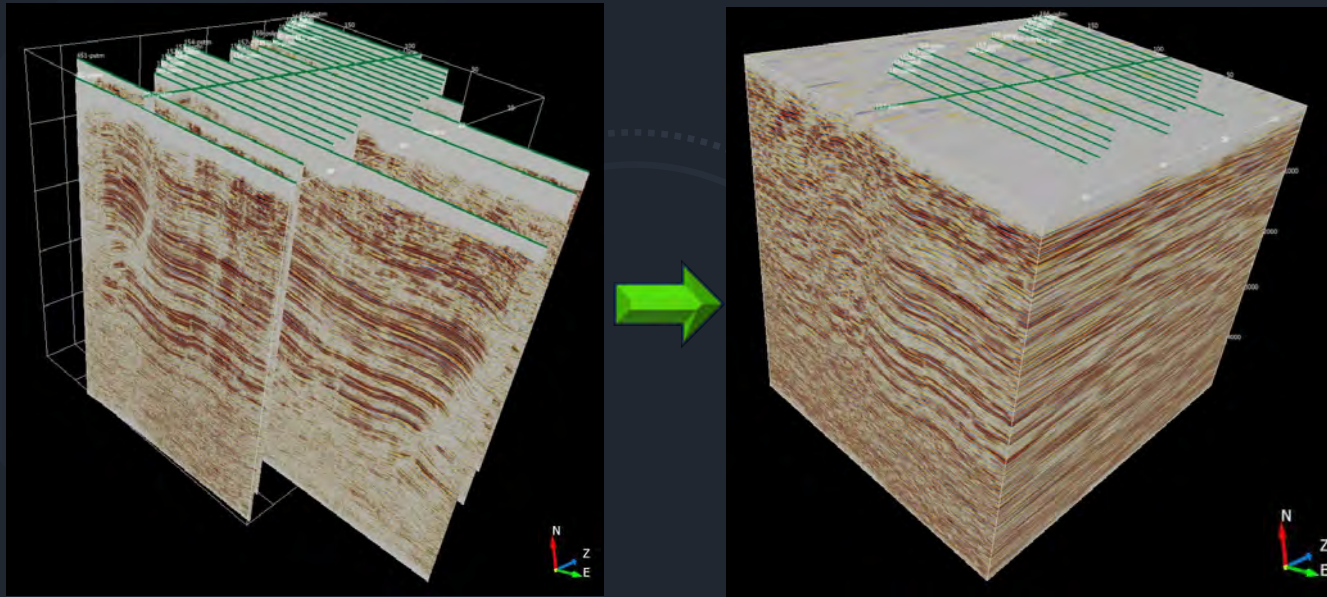
Construction | Consulting | Engineering

GEOPHYSICAL DATA ANALYSIS

Multidimensional Seismic Conversion Analysis



Multidimensional Seismic Conversion Analysis*



Our **Multidimensional Seismic Conversion Analysis** service specializes in generating high-resolution models for exploration and early production studies, consolidating them into a comprehensive 3D seismic data volume. This approach enables optimal visualization and enhances data interpretation based on seismic horizons with high precision.

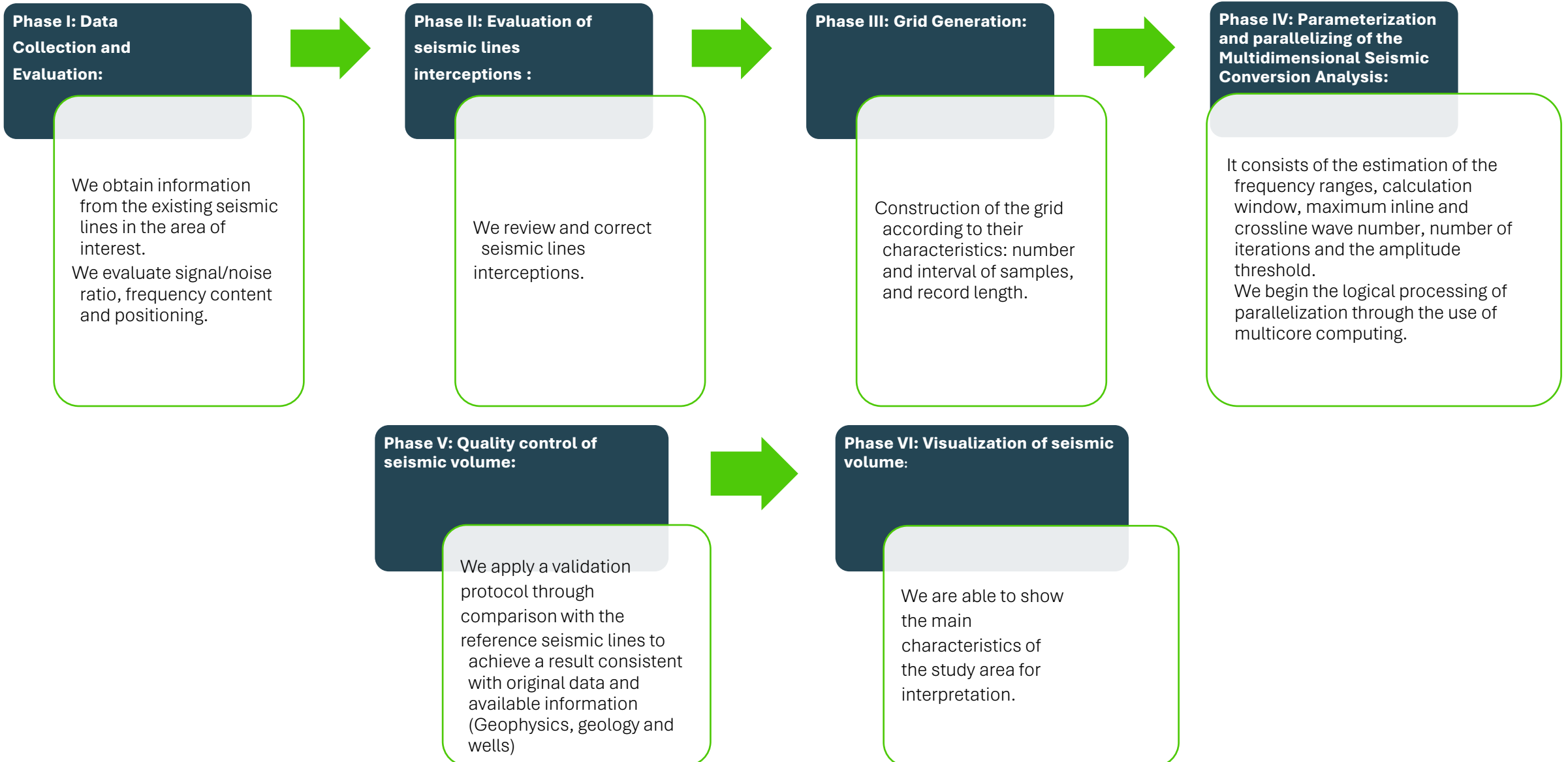
The process begins with a seismic line analysis, where mathematical computations determine the minimum grid spacing required to capture radiated energy (**seismic trace amplitude**). This step enables the construct of a detailed 3D seismic volume. Next, we apply relevant seismic attributes using the available data, enhancing visualization and providing a more precise and accurate representation of the study area.

* **PENTATEX GROUP Proprietary Methodology**

HOW DO WE DO IT



PENTATEX GROUP



**Successful
Executed Projects
Country: Argentina**

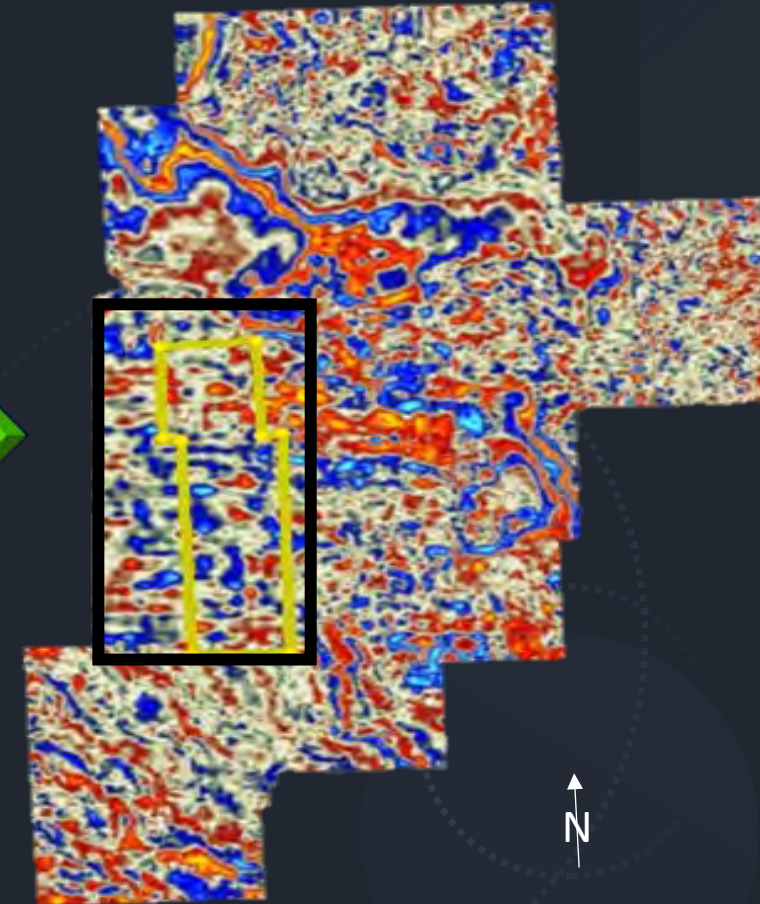
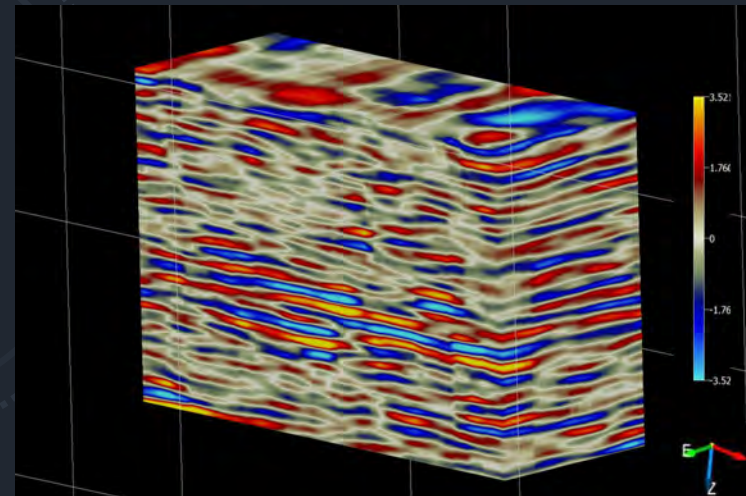
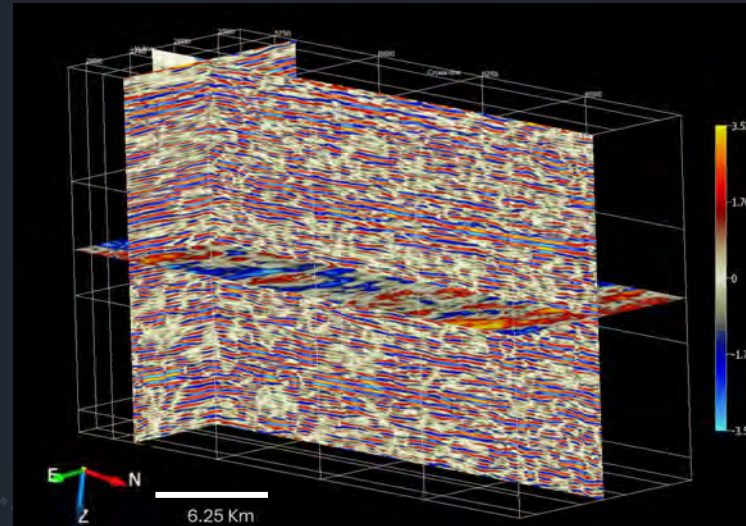
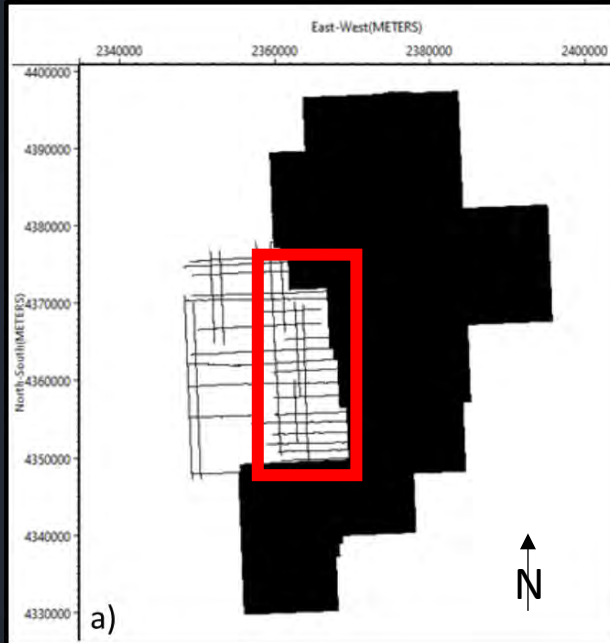


PENTATEX GROUP

Construction | Consulting | Engineering

Multidimensional Seismic Conversion Analysis

Case 1
Southern Basin, Argentina



1.1 44 Seismic lines (Inland) Spacing approx. 1.8 km

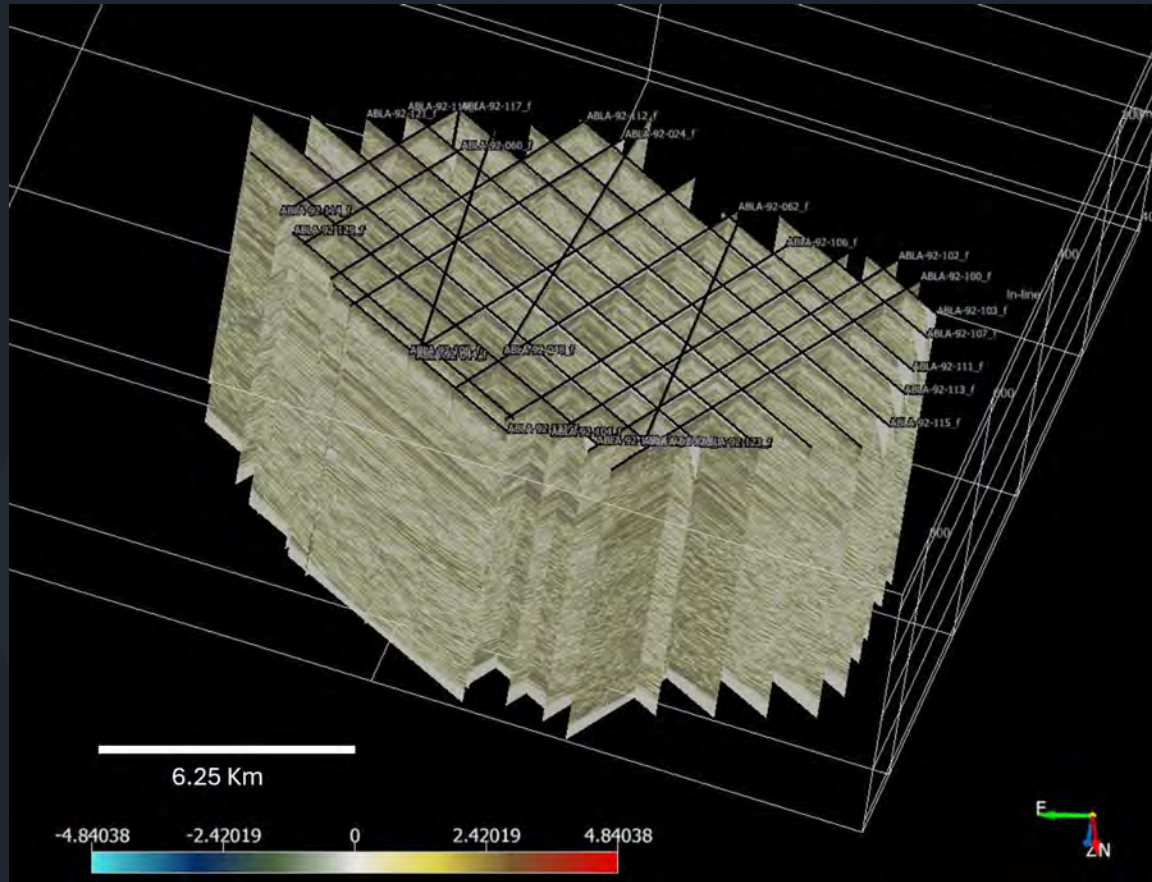
1.2 Seismic Volume generated (245 km²) -
bin (25m x 25m)

1.3 Merge (2500 km²) between seismic volume
generated (245 km²) and 3D seismic data -
bin (25m x 25m)

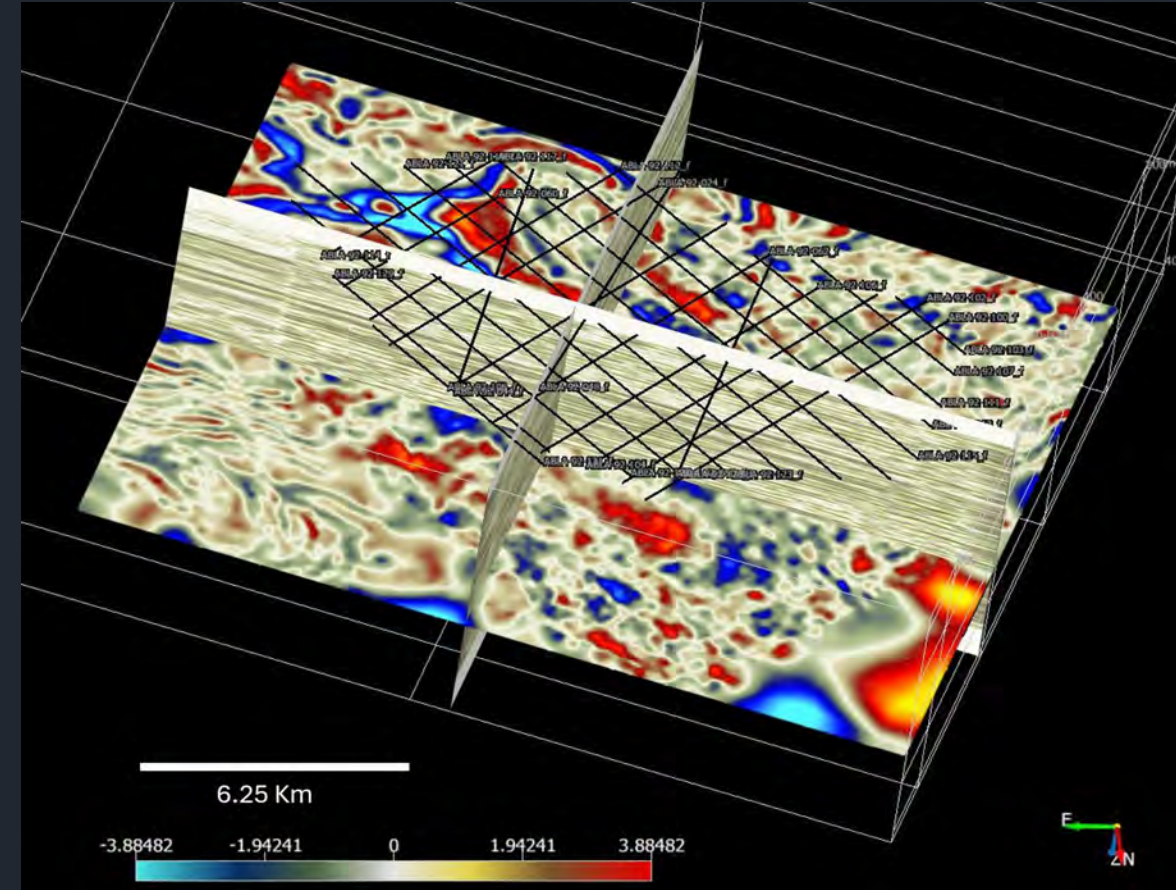
YPF

Multidimensional Seismic Conversion Analysis

Case 2
Lago Mari Menuco, Argentina



2.1 27 Seismic lines (Inland waterborne) Spacing approx. 1 km



2.2 Seismic Volume generated (200 km²) - bin (25m x 25m)

ADVANTAGE COMPARISON CHART



PENTATEX GROUP

Value added	Conventional Model	Our Model
Data Reliability	Interpreting 2D seismic lines has many visualization limitations between the lines.	Parameterization using an algorithm that we have developed. Once the data processing is executed, a reorganization and a 3D visualization model is automatically obtained, for their interpretation and application of seismic attributes .
Execution Time	The execution time of a new 3D seismic project in the study area would be approximately 2 years , which includes acquisition, processing, and interpretation.	The execution time based on this methodology in the study area would be approximately 1-3 month , starting from available information.
Financial Benefit	The cost for the execution of a 3D seismic project depending on the area complexity can vary between US\$50MM to US\$100MM .	The cost for the execution of this methodology would be approximately 10% of a conventional 3D seismic project .

CONCLUSIONS



PENTATEX GROUP

- ✓ Our methodology builds client confidence by demonstrating proven effectiveness. A pilot test using the client's own seismic data can be conducted to validate results and performance.
- ✓ Our service is applied in exploratory areas and re-exploration areas, to determine their economic potential.
- ✓ Our results demonstrate efficient performance, economic accessibility, and optimized delivery times—ensuring added value for our clients.
- ✓ We work in close synergy with the client, collaborating directly with operations personnel involved in exploratory activities. This approach ensures effective support and validation of the results achieved.
- ✓ Our specialists bring proven experience in the field, and our methodology is versatile and scalable—successfully applied across diverse projects and locations.

**For more information,
contact us**

Pedro Rodas

Executive Director

[M. rodasp@pentatexgroup.com](mailto:M.rodasp@pentatexgroup.com)

P. +1 352.356.8956 / +1 305.333.7027

<https://pentatexgroup.com/>

Thank you!



PENTATEX GROUP



PENTATEX GROUP