

Al and IAGEN Application Use Case Analysis and motivation on extraction sites Report Writing in Vaca Muerta, Neuquén

Executive Summary – Generative Al Application for Report Writing in Dead Cow

This executive summary presents an innovative application of generative artificial intelligence (IAGEN) in the strategic and operational reporting sector.

within the oil and gas industry, specifically in the Vaca Muerta region.

This solution represents a significant opportunity to strengthen decision-making. decisions, optimize processes and reduce costs in a highly competitive environment.

The report classifies the use case based on four criteria:

- 1) By main resource: Oil (main) and gas (secondary).
- 2) By activity: Information management and decision making.
- 3) By technology: Generative AI models such as ChatGPT, DALL-E, Random Forest Survival, among others.
- 4) By strategic impact: Improvement in strategic decision making and in the data analysis.
- 1. Specific opportunities for using AI and IAGEN in the sector.

Generative Al application enables automation of custom report generation, analysis of seismic, drilling and maintenance data in real time

real, detect anomalies, predict equipment failures, and generate textual and

image for reports and presentations. Monitoring systems are also highlighted. smart as the Digital Well Assistant.

2. Highlighted benefits.

Among the main benefits are greater efficiency and productivity in Report writing, reduced operating costs, improved safety through predictive and real-time analytics, and a significant contribution to the environmental sustainability of the sector.

3. Application of Al.

All is implemented through generative models that automate key processes: from data collection and analysis to the generation of actionable reports.

These solutions allow you to anticipate failures, optimize operations and facilitate decisions based on accurate and up-to-date information.

4. Proposed AI agent and its function.

The report proposes an agentic flow of generative artificial intelligence, composed of five phases: data collection, intelligent processing, model generation predictive, scenario assessment, and production of actionable reports. This agent's main function is to optimize strategic decision making, through complete, timely, and contextualized information. Its main benefit is transform reporting into a tool of operational value and competitive in real time.

5. Conclusion.

Generative AI has the potential to revolutionize the energy industry in Vaca

Dead, especially in report writing, by providing efficiency, accuracy and
strategic vision. Despite challenges such as bias, privacy and ethical governance, its
Responsible implementation can turn Vaca Muerta into a technological hub

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key in Latin America, integrating energy, innovation and sustainable development.