HUB TECH IA

AI and IAGEN Application Use Case

Continuous Improvement in the Vaca Muerta Oil Industry

Classification of report deliverable 33: "Continuous Improvement in the Oil Industry" from Vaca Muerta":

Classification 1: By Main Resource

• Selected option: Oil, ÿ Gas,   Water + energy (approach)

     comprehensive).

• Justification:

     The report addresses drilling, extraction, transportation,

exploration and regulatory compliance, applicable to both oil and gas

gas. In addition, it explicitly addresses the optimization of water and energy use,

as well as the reduction of carbon emissions, so it should be considered

a proposal with a comprehensive approach to the three main resources.

Classification 2: By Activity within Vaca Muerta

• Selected option: Information Management and Decision Making
• Justification:

     Although continuous improvement has an impact on multiple areas, the focus of the

report is on the use of IAGEN for large volume analysis

data, pattern identification, recommendation generation

customized, reservoir simulation, regulatory compliance and strategic decision-

making in operations and maintenance.

Classification 3: Type of AI Technology Used

- Main selected option:

    1ÿÿGenerative AI Models,

    2ÿÿMachine Learning Algorithms, 6ÿÿAI

    Platforms for Data Integration and Big Data, 3ÿÿNatural

    Language Processing (NLP) Systems.

- Justification:

    The report explicitly details the use of generative AI for analytics

    predictive, report generation, reservoir simulation,

    document automation and alert generation. It also describes

    the use of machine learning for predictive maintenance, processing

    massive real-time data and NLP models to automate queries and

    documentation.

Classification 4: By Strategic Impact on the Industry

- Selected option: Strategic Decision Making and Data Analysis
- Justification:

    The strategic impact of the report is based on strengthening the

    operational efficiency, failure reduction, resource optimization, improvement of

    security and sustainability, all thanks to decision-making based on

    in data analysis. IAGEN is presented as an engine to sustain

    competitive advantages in a highly complex environment.