

CERTIFICADO DE CONCLUSÃO

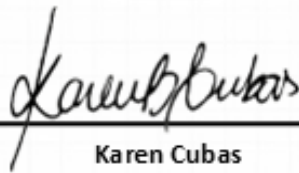
Instituto Brasileiro de Petróleo e Gás hereby grants this certificate to

CARLOS EDUARDO DE LIMA ANDRADE,

for participating in the **Overview of Pipeline Geohazards Management Considerations,**

on September 8th, 2025, with a total duration of 4 hours.

Rio de Janeiro, September 8th, 2025



Karen Cubas
Gerente UnIBP



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1. Introduction

2. Pipeline Construction & Geotechnical Design

3. Range of Geohazards - Impact of Climate Change

4. Data Sources and Management

5. Risk Assessment Methodologies

6. Monitoring Technologies

7. Mitigation Methods

8. Integrity Management Process - Machine Learning Methods
