

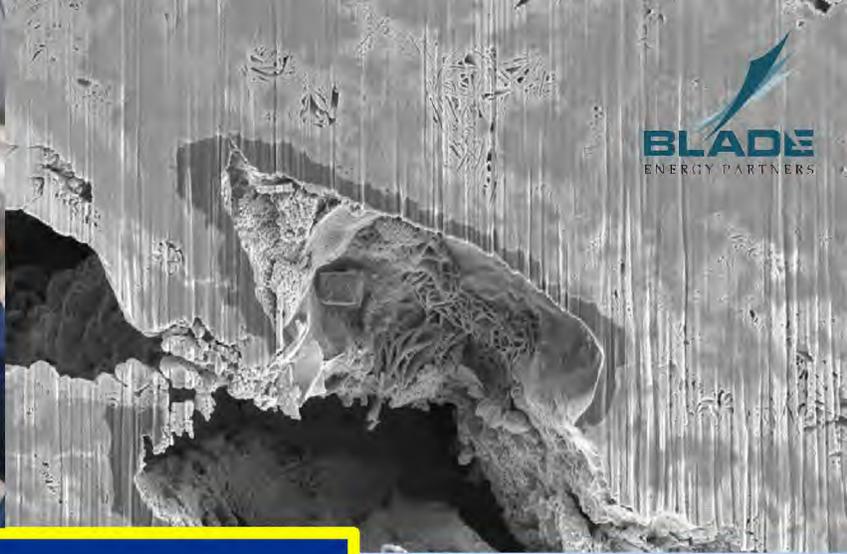
SoCalGas-75

**Excerpt of Blade Energy Partners' Root Cause Analysis of Uncontrolled
Hydrocarbon Release from Alison Canyon SS-25**

I.19-06-016

ALJs: Hecht/Poirier

Date Served: March 15, 2021



Root Cause Analysis of the Uncontrolled Hydrocarbon Release from Aliso Canyon SS-25

May 16, 2019



MAIN REPORT

Main Report

The RCA work necessitated a substantial amount of testing, analyses, modeling, and interpretations. All of the technical details and discussions are provided in four volumes of supplementary reports. The integrated work is reflected in this Main Report.

MAIN REPORT

Root Cause Analysis of the Uncontrolled Hydrocarbon Release from Aliso Canyon SS-25

SUPPLEMENTARY REPORTS

Volume 1: Approach

- Phase 0 Summary
- Phase 1 Summary
- Phase 2 Summary
- Phase 3 Summary
- Phase 4 Summary

Volume 2: SS-25 Well Failure Causes

- SS-25 Casing Failure Analysis
- SS-25 7 in. Speedtite Connection Testing and 11 3/4 in. STC Assessment
- SS-25 Analysis of Microbial Organisms on 7 in. Production Casing
- SS-25 7 in. Casing Internal Corrosion Assessment
- SS-25 Inspection Log Analyses
- SS-25 Temperature, Pressure, and Noise Log Analysis
- Aliso Canyon Field: Hydrology
- SS-25 Geology Summary
- SS-25 7 in. Casing Load Analysis
- SS-25 Tubulars NDE Analyses
- SS-25 Annular Flow Safety System Review

Volume 3: Post-SS-25 Leak Events

- SS-25 Nodal Analysis with Uncontrolled Leak Estimation
- Aliso Canyon Injection Network Deliverability Analysis Prior to Uncontrolled Leak
- Analysis of the Post-Failure Gas Pathway and Temperature Anomalies at the SS-25 Site
- SS-25 Transient Well Kill Analysis

Volume 4: Aliso Canyon Casing Integrity

- Analysis of Aliso Canyon Wells with Casing Failures
- Aliso Canyon Shallow Corrosion Analysis
- Aliso Canyon Surface Casing Evaluation
- Review of the 1988 Candidate Wells for Casing Inspection
- Gas Storage Well Regulations Review
- Aliso Canyon Field Withdrawal/Injection Analysis
- Aliso Canyon: Regional and Local Seismic Events Analysis

SS-25 RCA Main Report

Root Cause Analysis of the Uncontrolled Hydrocarbon Release from Aliso Canyon SS-25



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Purpose:

Root Cause Analysis Report

Date:

May 16, 2019

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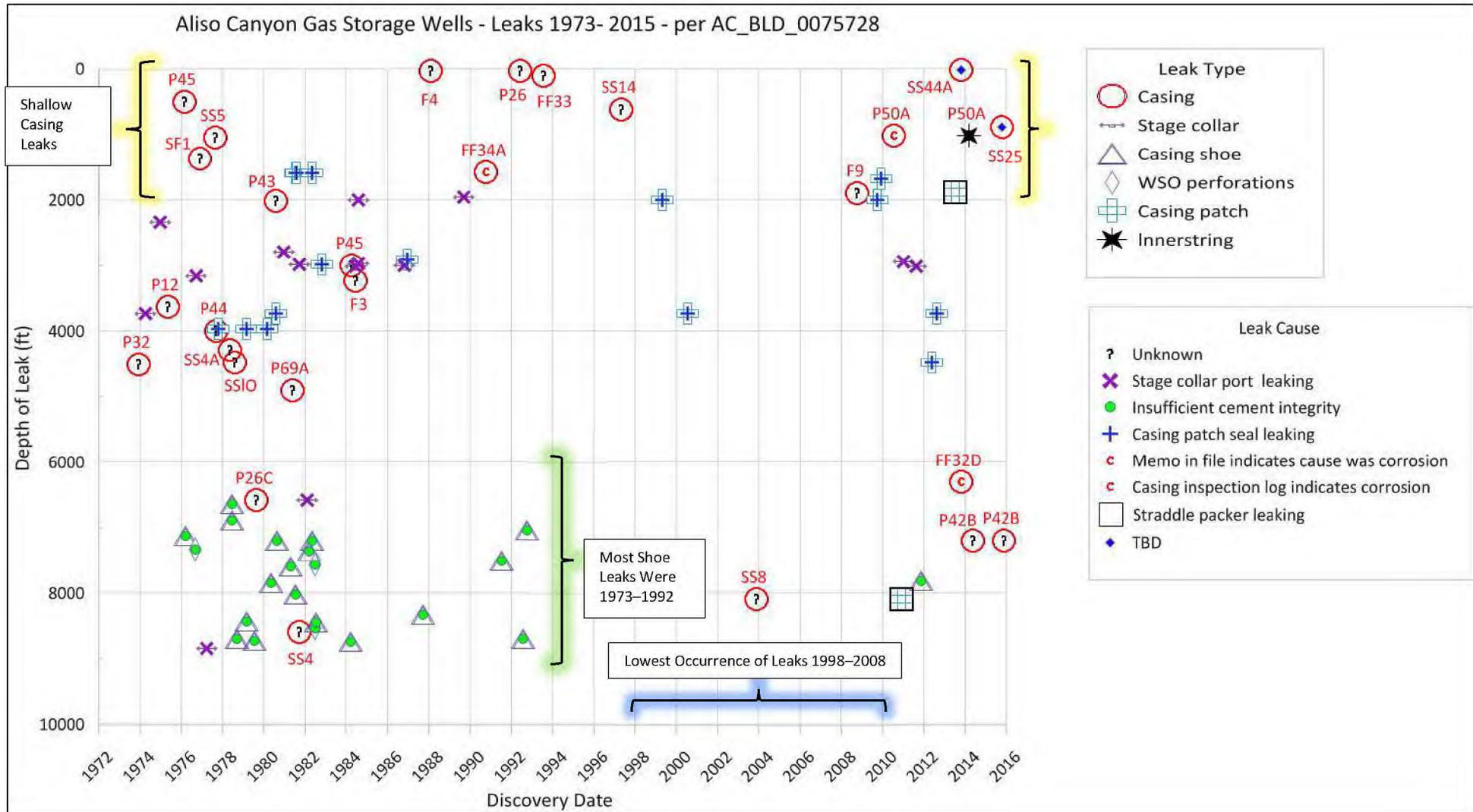


Figure 132: Leaks per SoCalGas Data [51]