

CASE STUDY 2

CypherCrescent

Driving Successful Well Intervention through WRM Data Digitalisation

Success Stories

April 2026

About CypherCrescent

CypherCrescent is an integrated energy technology company focused on engineering innovation, digital technology development and capacity building. We are committed to providing innovative and cost-effective business solutions/services to E&P companies across Africa to increase production, reduce cost, improve operational efficiency, and enhance HSE across their asset management value chain.



Energy and technology company



100% in-country solutions, globally competitive

Our Services

Energy Services



Digital Services



Innovation Services



Learning Services



As a technology partner, we support E&P firms to:



Increase Production



Reduce Cost



Improve Efficiency



Improve HSE



Reduce Carbon Footprint

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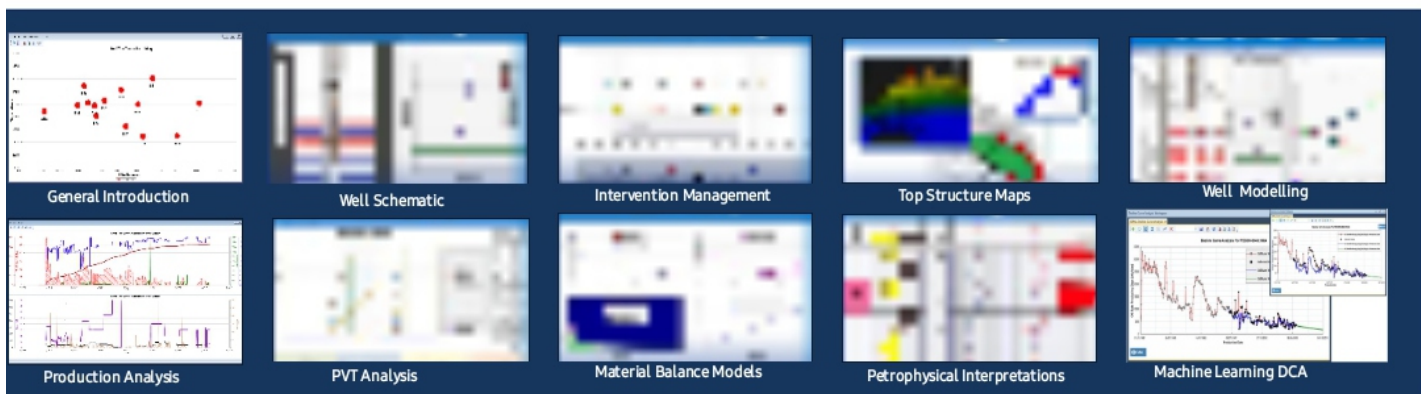
Driving Well Intervention Success

SEPAL WRM Technology



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SEPAL WRM: One-Stop-Shop for Key WRM Data



Integrated single version of truth digital database for key information driving effective WRM



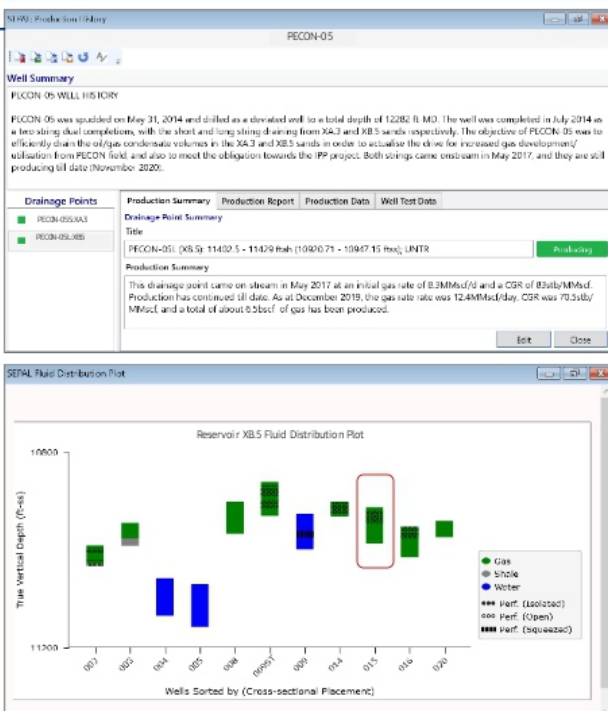
Structured evolution of WRM interpretations (from inception to current)

- Well status diagrams
- Intervention histories
- Fluid contacts
- Well and reservoir models (material balance), etc.

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PECON-05

PECON-05 Stimulation and Zone Switch



Overview of Well & Interval

- Initial Completion: July 23, 2014
- Configuration: TSD
Long String: XB.5
Short String: XA.3
- Secondary Opportunity: XA.9 (on long string)

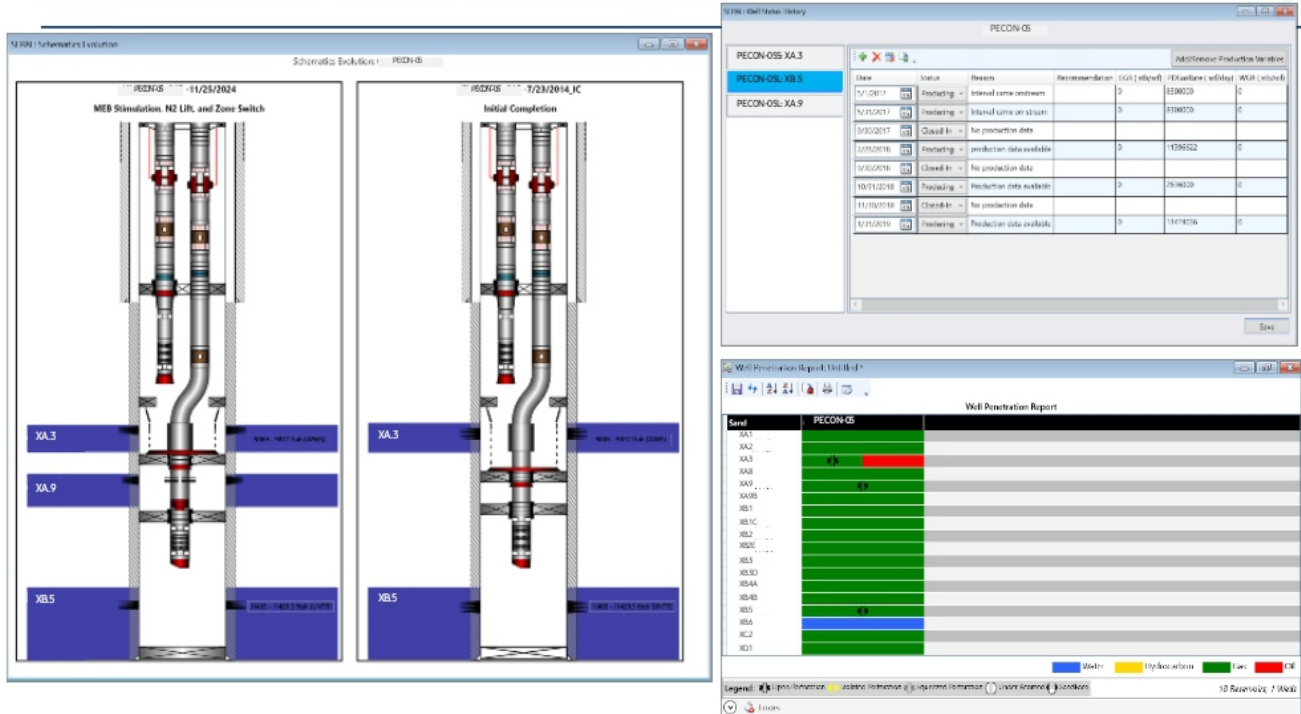
Production Rates on Intervals

- Initial Onstream Date: May 2017
- Initial Rates: 8.3 MMscf/d | 83 stb/MMscf
- Peak Rates:
- Last Production Date: March 2022
- Last Rates: 9.1 MMscf/d
- Bean (/64): -

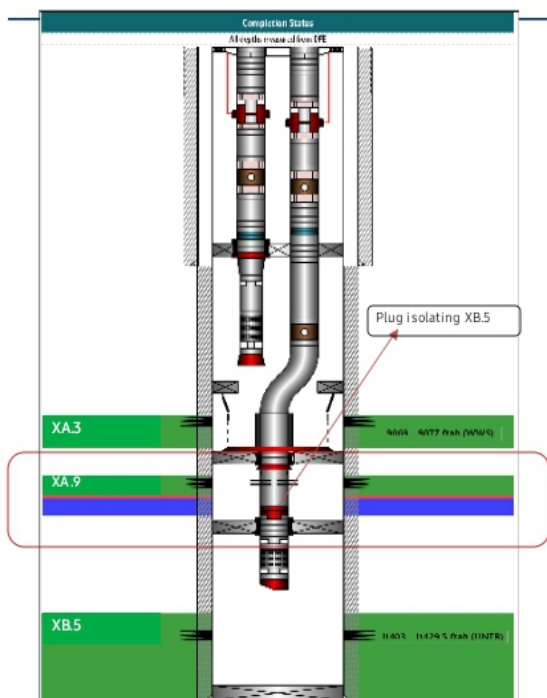
Identification of the Challenge

- Process: Seamless review of well and intervals
- Challenge: Shut-in due to condensate banking and liquid loading.
- Review Outcome: Primary objective to stimulate XB.5 and restore production. Consider behind sleeve opportunity on XA.9 when primary objective fails.

PECON-05 Stimulation and Zone Switch



PECON-05 Stimulation and Zone Switch



Intervention Objective

- Primary Objective: To carryout MEB stimulation on XB.5
- Secondary Objective: Isolate the XB.5 and switch production on long string to XA.9

Zone Switch Configuration

- Reservoir: XA.9
- Top: 10155 ftSS
- Base: 10263 ftSS
- Contacts: GOC – 10209 ftSS | OWC – 10216 ftSS
- Perforation: 10640 – 10650 ftMD

Offtake Rates After Intervention

- Gross: 969 bopd
- Net Oil: 967 bopd
- Gas Rate: 8.49 MMscf/d

PECON-13

PECON-13 Zone Switch



Overview of Well & Interval

- Initial Completion: June 1969
- Configuration: TSD
 - Long String (LS): DX.4
 - Short String (SS): DX.2
- Secondary Opportunity: DX.3A (Behind Sleeve on LS)

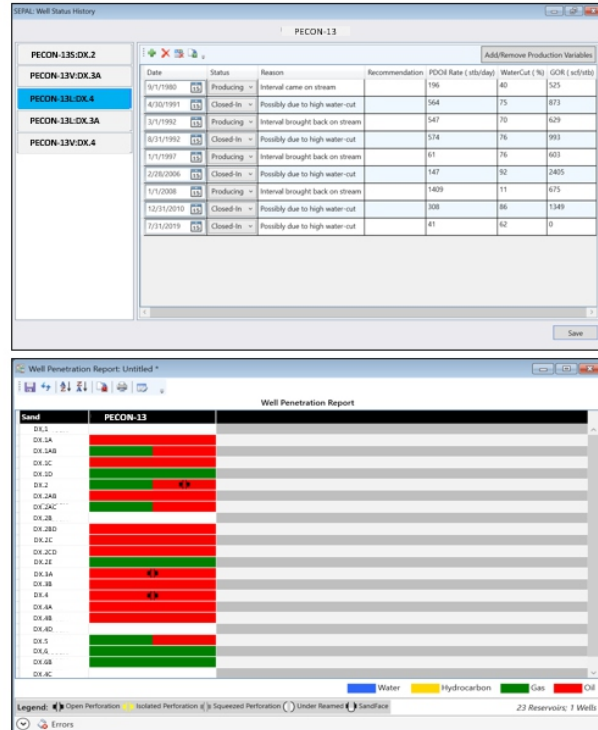
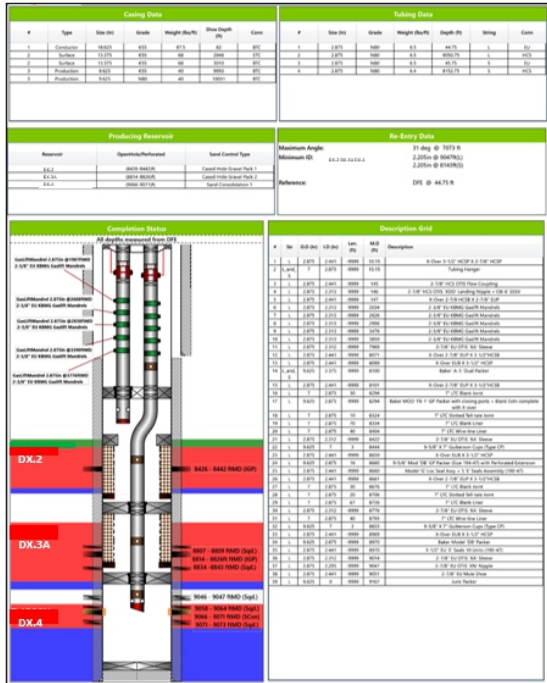
Production Rates on LS Intervals

- Initial Onstream Date: September 1980
- Initial Rates: 196 bopd | 525 scf/stb | 40% Water
- Peak Oil Rate: 1409 bopd (January 2008)
- Last Production Date: December 2021
- Last Rates: 224 bopd | 981 scf/stb | 74% Water
- Bean (/64): -

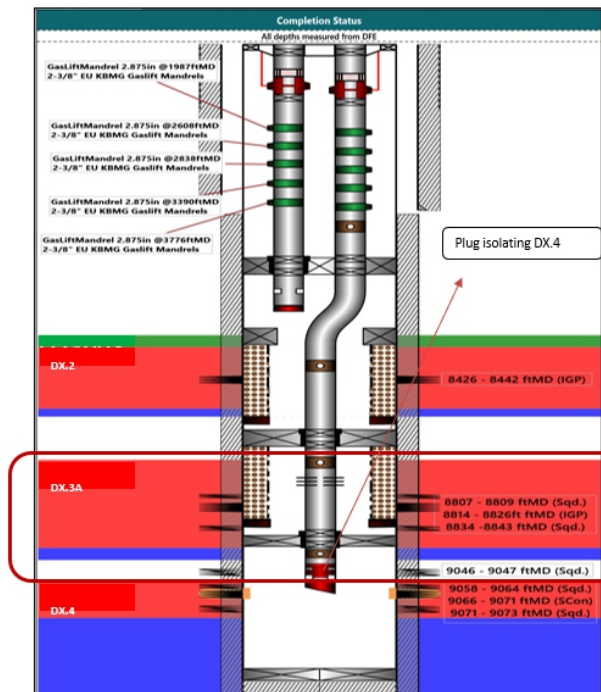
Identification of the Challenge

- Process:** Seamless review of well and intervals
- Challenge:** High water, and low oil despite gas lifting.
- Review Outcome:** Isolate the long string production from DX.4 and switch zone to DX.3A

PECON-13 Zone Switch



PECON-13 Zone Switch



Intervention Objective

- Primary Objective: Zone switch from DX.4 to DX.3A
- Secondary Objective: -

Zone Switch Configuration

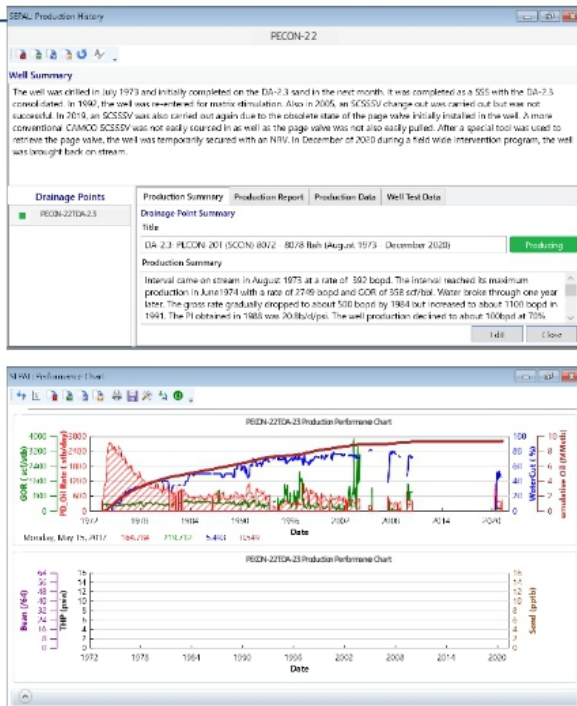
- Reservoir: DX.3A
- Top: 8405 ftSS
- Base: 8488 ftSS
- Contacts: OUT - 8405 ftSS | OWC - 8478 ftSS
- Perforation: 8814 - 8826 ftMD (IGP)

Offtake Rates After Intervention

- Gross: 1451 stb/d
- Net Oil: 354 bopd
- BS&W: 75.55%

PECON-22

PECON-22 Bring Back Onstream



Overview of Well & Interval

- Initial Completion: July 23, 2014
- Configuration: SSS
 - Tango: DA-2.3
- Secondary Opportunity: -

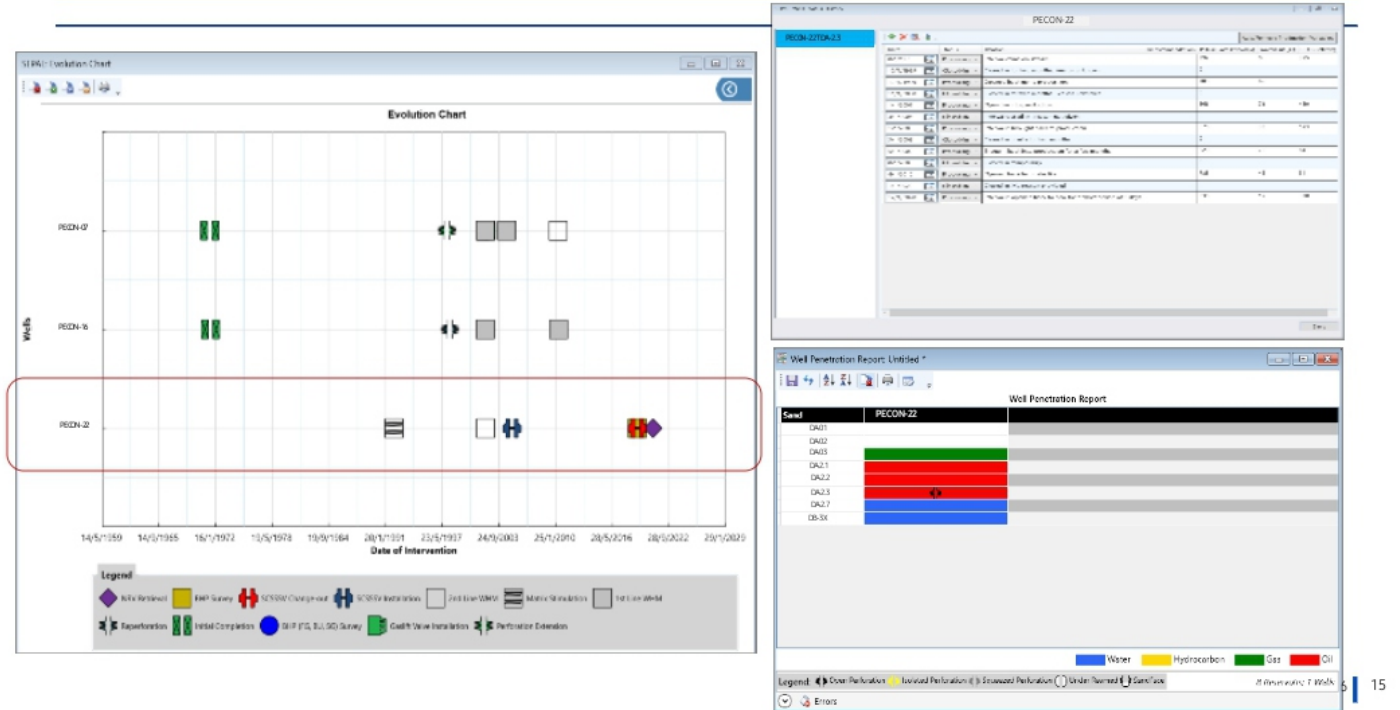
Production Rates on Intervals

- Initial Onstream Date: August 1973
- Initial Rates: 392 bopd | 395 scf/stb | 0% watercut
- Peak Oil Rate: 2749 bopd (June 1974)
- Last Production Date: December 2010
- Last Rates: 390 bopd | 1072 scf/stb | 73.7% watercut
- Bean (/64): -

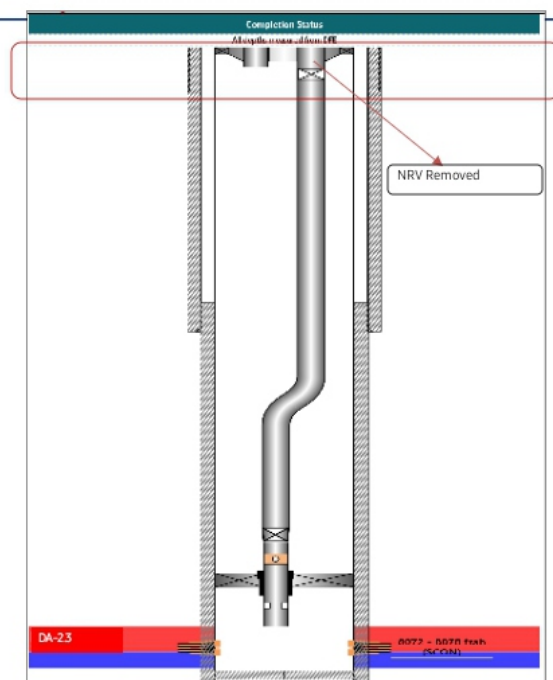
Identification of the Challenge

- **Process:** Seamless review of well and intervals
- **Challenge:** Interval closed-in due to HBSW/GOR, and temporary suspended in 2019 with an NRV.
- **Review Outcome:** Need to bring back the interval onstream to maximise recovery from DA-2.3 carried during a field wide intervention program.

■ PECON-22 Bring Back Onstream



■ PECON-22 Bring Back Onstream



Intervention Objective

- Primary Objective: To remove temporary suspension of an NRV.
- Secondary Objective: -

Sand Interval Configuration

- Reservoir: DA-2.3
- Top: 8016 ftSS
- Base: 8145 ftSS
- Contacts: OUT – 8016 ftSS | OWC – 8097 ftSS
- Perforation: 8072 – 8078 ftMD (SCon)

Offtake Rates After Intervention

- Oil Rate: 830 bopd
- GOR: 329.5 scf/stb
- Watercut: 18.9%