AGOCO Shut-in Wells Re-activation & Production Enhancement – Libya

Schlumberger Digital Forum 2022, September 2022
AGOCO Shut-in Wells (2019-2021) – Overview

AGOCO Shut-In Wells Re-activation is part of AGOCO Production Enhancement Objectives which comes with study, analysis and engineering solutions to reactivate (+469) shut-in wells at different fields.

Shut-in well reactivation campaign, included candidate selection, engineering solutions and execution started in July-2019 with Messla Field, and then Sarir, Nafoora,…etc.

An Exceptional Budget for Development & Drilling was approved during November-2019; To reactivate (100) Shut-In Wells (as PHASE-1) with the objectives to increase Oil Production to 48,622 BOPD (Expected Production).
AGOCO Shut-in Wells % By Field,  As per 31-July-2019

Main reasons for Shut-in Wells:

- High Water Cut, Low fluid entry, Reservoir evaluation, No Flow to Surface, Pump change out, Initial Completion...etc. (Shut-in Wells requiring Workover, 199 wells out of 469)

- Power problems, Gas compressor, No Flow Lines/Flow Lines Repair, Work at Station, Surface facility...etc. (Shut-in Wells not requiring Workover, 270 wells out of 469)
Two Steps Analysis - Primary Pool Analysis

Funnel selection of candidates and candidate technical proposals Integration in Workover / Intervention

Step ONE
Primary pool analysis
+469 wells review and selection

Step TWO
Short-listed wells Proposals
Technical evaluation and solution per well

AGOCO SIW
+469
Messla & Magid
49 & 11
Pumps Change out
15 & 3
High WC & Res. Eval
12 & 6

SARIR FIELD

National Oil Corporation
Well By Well Methodology

Well By Well Review Workflow

- Regional Background and Geological Summary
- Nearby Well Correlation With Similar Wells
- GOR and WC, PI, Q, P Porosity and Water Saturation Maps
- Production Performance of Neighbor Wells
- Production History of Selected Well
- Wellbore Schematic and Completion
- Historical intervention and Results
- New Technical Proposal
AGOCO SIWs Project Timeline & Execution

- **Jul. 19 Validation**
  - Data Gathering
  - Well Screening

- **Sep. 19 Engineering**
  - Wells Ranking
  - Technical Proposals

- **Oct. 19 Execution**
  - 6 Rigs moved to locations
  - Execute 1st wells batch

6-13 Rigs Assigned
AGOCO Shut-in Wells Project - Accomplishments & Achievements YTD
AGOCO Shut-In Wells Project – (100 Wells with Exceptional Budget 2019-2020)

Executive Summary

✓ (100) Shut-in Wells Technical Proposals prepared and completed.

✓ (85) Wells already completed and operationally executed.

✓ (77) wells have been already tested after intervention and results into a significant increase of oil production

Execution To Date
AGOCO SHUT-IN WELLS PROJECT RESULTS (PHASE-1)
AGOCO Shut-in Wells Project - Results YTD
AGOCO Shut-In Wells (100 Wells) Project – (Exceptional Budget Development-Drilling 2019-2020)

- Oil Production Incremental Reached 61,442 BOPD.
- Unwanted Water Production Reduced by 29,754 BWPD.
- 3 seconded junior engineers from AGOCO part of APS Team.
- 1st Time Experience for AGOCO Engineers in Fields
- AGOCO Shut-in- Wells is FIRST project with Integrated Services Management approach in (Libya) for Production Enhancement.

Results To Date

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\begin{align*}
\text{Expected} & : 48,622 \\
\text{Achievements} & : 61,442 \\
\text{Increase} & : +26\% \\
\end{align*}
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(Expected Production From 100 wells) (Actual Production)
AGOCO Shut-in Wells Project - Well by Well Production Test Results

- Unwanted Water Production Reduced by 29,754 BWPD.
- Project Oil Production Reached 61,442 BOPD.
Thank You