Mohamed Elhussien Eldessouky

Well Intervention Engineer

No. 27, Bortex block, El-Dawahi District
Port-Said, Egypt
+201003506045
m.elhussien89@gmail.com
linkedin.com/in/mohamed-eldessouky-107
github.com/Mohamed-Eldessouky

PROFILE

I am enthusiastic and dedicated professional well intervention engineer with master's degree in petroleum engineering and eleven years of experience in diverse disciplines including all rigless well intervention work scope (Slick line, E-line, Coiled tubing, acid stimulation, and scale inhibition), production optimization, well modeling, surveillance, measurements, flow assurance and well integrity.

PROFESSIONAL EXPERIENCE

Well Intervention Engineer
Gulf of Suez Petroleum company (GUPCO)
October 2013 - present

- Designed, supervised, and analyzed the following operations:
  - Stimulation and Pumping operations (Matrix stimulation, scale inhibition, well bore cleaning, ESP cleaning).
  - Coiled tubing (N2 unloading, scale cleaning, stimulation, perforation).
  - Wireline (static survey, gas lift survey, tubing gauging…etc.).
  - Perforation jobs (TCP, Through Tubing Perforation).
  - Well flow back and troubleshooting (gas lift, natural flow, ESP).
  - Well testing (using test package, MPFM, test separator).
  - Well logging (MPLT, PSP, RST (Sigma & C/O mode), CBL-VDL, USIT, MFCL, water flow log (WFL), GR-CCL Correlation.
  - Water shut off (Mechanical, Chemical & Ice plugs).
  - Valve milling & hot tapping.
  - Well test (RFT, PBU, PFOT, SRT).
  - Echometer Surveys.
- Analyzed the following well logs qualitatively:
  - Open-hole logs (Resistivity, LDL, CNL, Sonic, MDT, Caliper).
  - Cased-hole logs (MFCL, USIT, CBL-VDL).
- Analyzed PLT & RST logs both quantitatively and qualitatively and perform time lapse technique; execute remedial well activity as required.
- Designed, witnessed and reviewed artificial lift systems including gas lift and ESP wells in order to optimize/restore well productivity, troubleshoot artificial lift systems, evaluate root causes of ESP failures through pump teardowns, recommend the appropriate well intervention remedial action using wireline or coiled tubing tools.
- Managed well intervention jobs through all work scope stages including programming, planning, execution, and post-job evaluation.

- Participated in saving more than 5,000 BOPD by developing a new scale inhibition strategy for wells with high tendency of precipitating scale deposits using Squeeze VIII Software and recommended the optimized chemical types and quantities based on design results.

- Act as HSE well site team leader to discuss and ensure that both job procedure and emergency plan are fully understood by all involved persons via two-way communication, job risk assessment or job safety analysis tools. Ensure that all crews' members are competent and qualified for the job and exclude the nonqualified members.

- Updated the integrity status of more than 50 wells using CBL, VDL, USIT, natural flow, communication tests and Echo-meter to identify the risk based on the analysis results.

- Updated and reviewed all field data in order to prioritize producer wells according to injection gas availability.

- Participated in adding more than 7,000 BOPD in addition to saving more than 10 MMSCFD of injection gas by applying a new gas lift management strategy to 70 candidate gas lift wells. This new strategy involved using innovative gas lift design/re-design methodologies of changing valves from normal unloading valves to dummy ones, downsizing to smaller port sizes, changing valves from edge-orifice operating to Venturi valves and considering the ambient temperature effect on the design.

- Participated in planning yearly reservoir surveillance strategy with the office team through Identifying oil winning opportunities and following-up the execution of the plan through weekly meetings to meet the standard KPI's and suggesting further improvement if required to maximize field productivity.

- Played a key role in saving more than 10,000 BOPD using integrated production optimization and nodal analysis models of Prosper/Gap software. The project aimed to evaluate the impact of rerouting gas lift pipeline feeding one of the main Gupco complexes. Applying the recommendations of this study prevented oil losses resulting from injection gas lift shortage during rig approach.

- Created an innovative and robust decision-making tool using Power bi dashboards for wells/field performance analysis. The newly developed dashboards provide an easy and user-friendly interface technique to evaluate offset wells performance, determine oil winning potential in just a few minutes instead of spending days using old traditional methods and evaluate injector/producer wells connectivity and subsequent optimization of water flooding strategy.

- Cooperated with drilling and production departments to monitor post-drilling/work over performance and ensure that the wells are hooked up and optimized as planned.

Offshore Production Engineer
Gulf of Suez Petroleum company (GUPCO)
October 2012 - November 2013

- Prepare daily production reports and allocate production losses.
- Plan, prepare and execute offshore complex shutdown.
- Plan and execute routine pipeline pigging operations.
- Follow up daily complex maintenance work with job supervisors.
- Evaluate production performance and detect/remedy any flow assurance problems.
- Ensure that the plant, equipment and processes are working efficiently.
- Work as a permit holder responsible for issuing permit to work (PTW) and risk assessment.

EDUCTION

M.SC. in Petroleum Engineering , 2018
Faculty of Engineering, Cairo University

Thesis Title: Evaluation of Multi-Phase Mechanistic Models for Vertical and Deviated Wells

B.SC. in Petroleum Engineering, 2011
Faculty of Petroleum and Mining Engineering, Suez Canal University

Grade: Very Good
Graduation Project: Belayim Marine Field (Excellent grade)

PUBLICATIONS

El-Dessouky, M. et al. "Preventing Halite Scaling in Offshore Pipelines Using Integrated Scale Management System and Modeling – Case Study from Gulf of Suez, Egypt". Paper presented at the Offshore Technology Conference Asia, Kuala Lumpur, Malaysia. OTC-31455-MS. https://doi.org/10.4043/31455-MS

El-Dessouky, M. et al. "Gas Lift Performance Enhancement Strategies by Downsizing and Using Dummy and Venturi Valves: A Paradigm Shift in Gas Lift Systems Management Philosophy". Paper presented at the Gas & Oil Technology Showcase and Conference, Dubai, UAE. SPE-213975-MS. https://doi.org/10.2118/213975-MS

SKILLS & ABILITIES

- Proficient in software modeling using Prosper, Gap and Pipesim.
- Intermediate level in Emeraude PLT analysis software.
- Intermediate level in Squeeze VIII Software.
- Advanced level in C# and Python programming languages.
- Intermediate level in machine learning and neural networks.
- Intermediate level in Power BI, Tableau and MySQL.
- Proficient leadership, self-learning, communication and presentation skills.
- English: Full Professional working proficiency both speaking and writing.
- Arabic: Native language

TECHNICAL BACKGROUND COURSES

International Well Control Forum School (IWCF)
Advanced ESP Management
Helicopter Underwater Escape Training (HUET)
Advanced Wireline Tools
Well Integrity Management
Advanced Subsurface Safety Valves
Well Stimulation
Scale Management
Cement Evaluation Logging
Production Logging tools
Advanced Production Optimization
Coiled Tubing Operations
Technical Report Writing
Performing Authority