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EDUCATION

China University of Petroleum (East China) **09/2014-06/2017**

M.Sc. in Petroleum Engineering, Overall GPA: 88.7/100; Major GPA: 90.7/100; Grade Ranking: 9/100
Thesis: Study on the Real-Time Intelligent Diagnosis and Optimization System to Manage ESP Lifted Well

China University of Petroleum (East China) **09/2010-06/2014**

B.Sc. in Petroleum Engineering, Overall GPA: 89.8/100; Major GPA: 93.4/100; Grade Ranking: 20/517

Core Coursework Completed

Reservoir Engineering, Drilling Engineering, Production Engineering, Well Stimulation, Modern Well Test Analysis, Reservoir Simulation, Artificial Lift, Petroleum Geology, Logging Interpretation, Fluid Mechanics, Rock Mechanics, Reservoir Physics, Oilfield Chemistry, Sand Control, Gas Production Engineering, Offshore Petroleum Engineering.

SELECTED PUBLICATIONS

● *Peer-Reviewed Journal Articles* (* denotes corresponding author)

- 1) Dechun Chen, **Ya Yao***, *et al.* (2016). A new model for predicting liquid loading in deviated gas wells, *Journal of Natural Gas Science and Engineering*, 34, 178-184. (SCI, IF=2.045)
- 2) Dechun Chen, **Ya Yao***, *et al.* (2016). A new prediction model for critical liquid-carrying flow rate of directional gas wells, *Natural Gas Industry*, 36(6), 40-44.
- 3) Dechun Chen, **Ya Yao***, *et al.* (2017). A new model based on electrical parameters to calculate dynamic fluid level in electrical submersible pump wells, *Special Oil & Gas Reservoirs*, 24 (4), 156-160.
- 4) Dechun Chen, **Ya Yao***, *et al.* (2016). Effective length of vortex tools for liquid discharge in gas wells, *Fault-block Oil & Gas Field*, 23(4), 537-540.
- 5) Dechun Chen, **Ya Yao***, *et al.* (2016). Optimizing experiment on the liquid discharge effects and its structural parameters for gas-well vortex tool, *Petroleum Geology and Oilfield Development in Daqing*, 35(4), 109-112.
- 6) Dechun Chen, **Ya Yao***, *et al.* (2015). Numerical simulation on fluid-carrying mechanism and efficiency of vortex flow in gas wells, *China Petroleum Machinery*, 43(9), 91-94.
- 7) Dechun Chen, **Ya Yao***, *et al.* (2017). A new model based on pump diagram for measuring liquid production rate of oil wells in real-time, *Bulletin of Science and Technology*, accepted and will be published in Nov. 2017.
- 8) Dechun Chen, Hao Han, **Ya Yao**, *et al.* (2015). An experimental study on the effect of the vortex tool and its influence on critical velocity, *Natural Gas Geoscience*, 26(11), 2137-2141.
- 9) Dechun Chen, Fei Lv, **Ya Yao**, *et al.* (2017). A new model based on electrical diagrams to diagnose working status of belt-pump-units wells, *Petroleum Geology and Oilfield Development in Daqing*, 36(5), 119-123.
- 10) Dechun Chen, Liangfei Xiao, Ruichao Zhang, **Ya Yao**, *et al.* (2017). A diagnosis model on working condition of pumping unit in oil wells based on electrical diagrams, *Journal of China University of Petroleum*, 41(2), 108-115.

● *Conference Papers*

- 1) **Ya Yao***, Dechun Chen. Factor analysis affecting unloading liquids efficiency of vortex flow in gas wells, *International Field Exploration and Development Conference*, Sep 20-21, 2015, Xi'an, China.

● *Invention Patent filed in China*

- 1) Dechun Chen, Fei Lv, **Ya Yao**, *et al.* An improved method to calculate the dynamic fluid level in electrical submersible pump (ESP) wells based on the electrical parameters obtained from the surface monitoring system. Under review.

● *Copyright of Computer Software*

- 1) Dechun Chen, Liangfei Xiao, Ruichao Zhang, **Ya Yao**, *et al.*, A diagnosis software for the analysis of the working conditions of the rod-pumped wells by integrating of electrical diagrams and dynamometer card, Aug. 29th 2016. Software registration No.: 2016SR316850.
- 2) Dechun Chen, Fei Lv, **Ya Yao**, *et al.* A software to predict the dynamic fluid level in Electrical Submersible Pump (ESP) operated wells based on the electrical parameters obtained from surface facilities, Mar. 19th 2017, Software registration No.: 2017SR224880.
- 3) Liangfei Xiao, Dechun Chen, Ruichao Zhang, Yuandong Peng, **Ya Yao**, *et al.* A software to screen dynamometer card and production data of rod-pumped wells, Mar. 16th 2017, Software registration No.: 2017SR225103.

RESEARCH & PROFESSIONAL EXPERIENCE

- **Fundamental Research of Multiphase Flow in Gas Wells** (Funded by China National Offshore Oil Corporation, i.e. CNOOC)

As a **principal investigator** in the following sub-projects (09/2014-12/2015)

- 1) Established a multiphase flow model using Computational Fluid Dynamics (CFD) method to simulate flow process and analyze flow characteristics in gas wells.
- 2) Developed experimental devices to observe and analyze multiphase flow mechanisms, and validated the CFD modeling results with the experimental data.
- 3) Proposed a new model to calculate the critical liquid-carrying flow rate in gas wells.

- **Optimizing Production Parameters and Predicting Dynamic Fluid Level in Electrical Submersible Pump Operated Wells** (Funded by China Petroleum & Chemical Corporation, i.e. Sinopec)

As a **principal investigator** in the following sub-projects (09/2015-present)

- 1) Developed numerical models (software) to calculate wellbore temperature & pressure and optimize the production parameters in electrical submersible pump (ESP) - operated wells.
- 2) Proposed a new method based on surface electrical parameters to calculate the dynamic fluid level in electrical submersible pump-operated wells.

- **Exploitation of a Deepwater Oil-Gas Field in South China Sea** (Funded by China Petroleum Engineering Design Competition, i.e. CPEDC)

As team leader in a multidisciplinary team of 5 people (01/2016-05/2016)

- 1) Provided an integrated solution for a deep-water production project, including flowing production, artificial lift with electrical submersible pump, and etc., project in a multidisciplinary team approach by integrating of all relevant engineering and geology disciplines.
- 2) Tackled a flow assurance issue, including prediction and prevention of wax deposition.
- 3) Presented project reports to nearly 80 judges including Chinese Academy of Engineers, and others all over China.

- **Exploitation of Fuling Shale Gas Field in China** (Funded by CPEDC, 01/2015-05/2015)

- 1) Initiated a shale gas production project, including productivity analysis & production parameters (e.g. tubing diameter, choke diameter, etc.) optimization.
- 2) Investigated the flow assurance problems, and prediction and prevention of gas hydrate and corrosion in pipes.

INTERNSHIP EXPERIENCE

Engineering Internship, Shengli Oilfield, China 07/2013-08/2013

- Attended field practice of reservoir engineering, drilling engineering and production engineering.

Geology Internship, Xintai County, China 07/2012

- Attended field practice of geological structure, formation lithology and topography.

HONORS & AWARDS

- **Recipient, National First Prize (Top 3/2879)**, China Petroleum Engineering Design Competition (CPEDC) 05/2016
The CPEDC is considered as the Olympics game of petroleum industry and most practical competition in China.

- **Recipient, National Graduate Scholarship (Top 2/818)** 10/2016
Ranked 2nd based on the comprehensive performance (academic and non-academic), China University of Petroleum.

- **Awardee, Meritorious Winner**, Mathematics Contest in Modeling of North America 03/2014

- **Awardee, National Second Prize**, China Post-Graduate Mathematical Contest in Modeling 12/2014

- **Awardee, National Third Prize**, National College Students Oil Science and Technology Innovation Forum 11/2014

TECHNICAL SKILLS

Software: ANSYS, PIPESIM, ECLIPSE, AutoCAD, CorelDraw, Microsoft Office

Programming Language: MATLAB, Visual C, Visual B, C++

Strong communication and presentation skill, and interpersonal skills.

EXTRA-CURRICULAR

- **Vice-Captain of a Survey Team, awarded the title of "Excellent Survey Team"** 07/2012-08/2012
Team investigated and provided solutions to current technologies of waste sorting & recycling in rural areas of China.

- **Vice Chairman**, Science and Technology Association of School of Petroleum Engineering 09/2012-09/2013
Promoted the Campus-wide Science & Technology Festival; Organized the Contest of Drilling Model Design in School.