HUMBLE ENGINEERING ADVISORS

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Alan A. Burzlaff, P.E.

Partner, Reservoir Engineering Consultant

Summary

Alan is a Partner and Reservoir Engineering Consultant with over 45 years of industry experience. Alan has participated in many complex oil & gas projects in the United States, the North Sea, the Middle East, Russia, and South America. He is a qualified reserves evaluator, reserves auditor, and mineral interest appraiser. His interests and experience include Enhanced Oil Recovery, Carbon Capture, and renewable energy technologies such as Compressed Air Energy Storage.

Key Attributes

Qualified Reserves Evaluator and Auditor as defined by SPE-PRMS

Preparation and certification of annual reserves estimates and reports in U.S. (California) and South America (Ecuador) and evaluation of major CA asset sales for acquisition

Reserves evaluations, reporting and reservoir simulation

Waterflood evaluation, design, surveillance, and optimization

Steamflood design and optimization

Gas Storage and Compressed Air Energy Storage (CAES)

Well test design, UIC testing and pressure transient test analysis

Unitization and equity determination studies

Thermal Recovery Process Selection and Application

International Petroleum Development Studies

Property Evaluation and Economic Analysis

Education

B.Sc. (Honors), Engineering Physics, Colorado School of Mines.

Professional Memberships

Registered Professional Petroleum Engineer, California #1386

Society of Petroleum Engineer (SPE)

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Experience

2022 to Present: Humble Engineering Advisors, Inc., Partner

Provided reservoir engineering support, oil & gas appraisals, and reserves certifications to HEA clients.

2019 to 2022: Sproule, Sr. Manager, Engineering

2009 to 2019: MHA Petroleum Consultants, Managing Partner

Directed various consulting projects providing expertise in geoscience, reservoir engineering, thermal recovery, reservoir simulation and reserves reporting.

1995 to 2009: SERCO, Inc. and SI International Inc., Director

Coordinated petroleum engineering work and quality control. Prepared annual year-end reserves reports and audits. Engineering consultant on numerous property acquisitions, reserves studies, thermal recovery projects and petroleum exploitation evaluations.

1990 to 1995: INTERA Information Technologies Inc.

1993 to 1995: Manager

Managed office staff of seven professionals. Responsible for management of Department of Energy contract providing reservoir engineering support services to the Naval petroleum reserves in California, Elk Hills Field.

1990 to 1993: Senior Consultant

Project manager and industry course instructor (Pressure Transient Analysis, Advanced Well Testing). Analyzed pressure transient tests for wells in U.S., North Sea, Middle East (Arabian Oil Company) and South America, including horizontal well buildup tests. Performed horizontal well simulation study (Eclipse) of a fractured shale reservoir. Prepared study of current horizontal well technology and a manual of standard methods for horizontal well transient testing. Conducted studies for assets in Kazakh, S.S.R and Vietnamese offshore blocks. Performed reservoir simulation study of light oil steamflood project for the Department of Energy.

1989 to 1990: Jerry R. Bergeson & Associates, Inc., Senior Petroleum Engineer

Conducted numerous field studies and reserve evaluations in the Rocky Mountain region. Evaluated Stevens Zone reservoir waterflood in Elk Hills Field for Department of Energy. Built 2-D and 3-D simulation models of a waterflood project to understand historical performance and predict ultimate oil recovery. Performed study of future petroleum discoveries in targeted area of Williston Basin for gas transmission company.

1977 to 1989: Tenneco Oil E&P, Sr. Petroleum Engineering Specialist

Directed reservoir engineering effort in the San Juan Basin. Prepared acquisition evaluations and conducted field studies for the Rocky Mountain region. Designed and forecasted recovery for a major Stevens sand waterflood (Yowlumne field, California). Responsible for the reservoir engineering of steam drive projects in Kern River Field, California.

Select Client Projects in North America

Conducted reservoir engineering tasks associated with preparation of equity redetermination studies for the U.S. Department of Energy (DOE) at Naval Petroleum Reserve No. 1 (NPR-1), Elk Hills Field, CA. Supported DOE NPR-1 office in planning and arranging for privatization of NPR-1. Resulted in the largest government privatization in history.

Directed engineering aspects of large feasibility study associated with using a depleted natural gas reservoir for air storage in a CAES application. Provided well site support for well testing and EPA UIC regulatory compliance testing. Designed and analysed pressure transient and step rate tests. Project was funded in part by the U.S. DOE.

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Publications

1. Burzlaff, Alan A., “Unitizing and Waterflooding the California Yowlumne Oil Field”, SPE paper #11685 presented at the 1983 California Regional Meeting, Ventura, CA; 23-25 March 1983.
2. Burzlaff, Alan A., Harris Jr., B.R, “Thermal Simulation of Elk Hills Light-Oil Steamflood Pilot”, SPE paper #24036 presented at the 1992 Western Regional Meeting, Bakersfield, CA; 30 March – 1 April 1992.
3. Burzlaff, Alan A., “Unconventional Oil from California's Monterey Formation - Exploitation Results”, SPE paper #169508 presented at the 2014 Western North American and Rocky Mountain Joint Meeting, Denver, CO, April 17-18.
4. Sarwaruddin, Mohammad, Burzlaff, Alan A., “Effect of In Situ Emulsification on Heavy Oil and Water Relative Permeability”, SPE-185657 Conference Paper for the SPE Western Regional Meeting, Bakersfield, CA, April 23-27, 2017.