



ANDREW CAO, M.Sc., P.Geol.

Associate

Phone: 1-403-294-5155

Fax: 1-403-294-5570

E-Mail: andrew.cao@sproule.com

Andrew Cao is an Associate of Sproule has been a Sproule professional since 2006. Andrew has a strong geological background and problem-solving abilities and is skilled in Petrel and GeoGraphix Discovery. He has experience in Argentina, Canada, China, Egypt, Indonesia and the United Kingdom, with extensive knowledge in the HuZhuangji oilfield, Bohaiwan Basin, China. Andrew is fluent in Mandarin.

Diplomas and Degrees

- ❖ B.Sc. Geology (1994), Daqing Petroleum Institute, Daqing, People's Republic of China
- ❖ M.Sc. (Honors) Geology (1999), University of Petroleum, Beijing, People's Republic of China

Continuing Education

- ❖ Petrel User Training, Schlumberger, Beijing, People's Republic of China, 2004

Memberships

- ❖ Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)
- ❖ Canadian Society of Petroleum Geologists (CSPG)

Work Responsibilities

- ❖ Reservoir characterization, modelling and mapping
- ❖ EOR studies, secondary/tertiary oil recovery
- ❖ Oil sands projects, including SAGD and mining projects
- ❖ Reserve growth (revision and addition)
- ❖ Prospect generation and reserve evaluations
- ❖ Sedimentary facies studies and well correlations
- ❖ Petrophysical interpretations and geological modelling

Previous Employers

- ❖ 2002-2005 **Beijing Geological Modeling Ltd.**, People's Republic of China—
Geoscientist
 - ❖ Conducted reservoir characterization and geostatistics studies and geological modelling.
 - ❖ Carried out seismic data interpretation (structure and attribute)
 - ❖ Managed geological and geophysical software training, support and marketing.

- ❖ 1999-2002 **E&E Research Institute, Chinese National Offshore Oil Corp.**, People's Republic of China —*Geologist*
 - ❖ Managed detailed gas field characterizations, stochastic modelling, reserve-detailed calculations, production trends analyses, and developed a plan proposing progressive exploration.
 - ❖ Designed numerous new perforations and exploitation wells, which increased production rates and resulted in the discovery of structural and stratigraphic gas pools.
 - ❖ Conducted geological research and designed secondary recovery plans. Characterized heterogeneity wells and proposed and implemented development plan, with a resultant enhanced recovery factor of 16 percent.
 - ❖ Used advanced geophysical and geological techniques to evaluate stratigraphic targets which were proved to be economic gas fields.
 - ❖ Managed deep formation exploration, which proved to be the largest carbon dioxide gas field in the South China Sea.

- ❖ 1994-1996 **Zhongyuan E&E Research Institute, PetroChina**, People's Republic of China —*Geologist*
 - ❖ Studied a typical fault block and one of the most complicated reservoirs in China, conducting 350 square kilometres of seismic data interpretation and log data interpretation.
 - ❖ Sedimentary basin analysis, rock and facies analysis, well stratigraphic correlation and analysis, trap analysis, hydrocarbon source and migration analysis, and reservoir protection analysis.

Special Expertise

- ❖ Reservoir characterization, geostatistics studies, geological modelling and 3D visualization and interpretation, oil sands research.
- ❖ Enhancing the recovery of existing pools and discovering new prospects.
- ❖ Proficient in log/seismic data integration and interpretation, with specialties in petrophysical interpretation and reserve calculations.
- ❖ Studying reservoir heterogeneity and proposing development tactics
- ❖ AccuMap, Petrel, GeoGraphix Discovery, Jason, Surfer and Global Mapper

Publications

- ❖ Master's Thesis: "Reservoir Characterization and Stochastic Modelling of Qujia Fractured Basement Reservoir", University of Petroleum, Beijing, People's Republic of China, 1999.
- ❖ Using Fuzzy Mathematics and Truncated Gaussian Simulation to Study the Fractured Reservoir, New Evolvement of Petroleum Geology, China Petroleum Publication, 2000.
- ❖ An Analysis of E3213 Sedimentary System in YC13-1 Gas Field With Geostatistics and Seismic Data, China Offshore Oil and Gas (Geology), 2001.