

# **Kerry Sandhu**

Reservoir Engineer  
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## **SUMMARY OF EXPERIENCE**

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- Reservoir Engineer with 3+ years experience in reservoir engineering and simulation.
- Work experience includes oil and gas reservoir simulation, waterflood optimization, CO<sub>2</sub> flooding, decline analysis, and material balance.
- Graduated with distinction (and on Deans List) from the University of Calgary in April 2003 with a B.Sc. Degree in Oil and Gas Engineering (3.98/4.0 GPA) and was the recipient of the gold medal (Oil and Gas Engineering) in 2003.

## **EMPLOYMENT HISTORY**

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### **Reservoir Engineer**

May 2003 – Present

*Epic Consulting Services Ltd., Calgary*

Conduct analytical reservoir analysis and reservoir simulation for a variety of oil and gas reservoirs:

#### **Youngstown Arcs Pool**

- Waterflood optimization analytical and simulation study
- Performed volumetric calculations, material balance, decline analysis, examined watercut trends, conformance plots, recovery factor vs. hydrocarbon pore volume injected plots, examined analog pools.
- Constructed 3D eclipse model, input production/injection/location data for 90 wells, performed history match, conducted forecasts examining injector conversions/infills to improve waterflood efficiency

#### **Battrum Roseray Pool**

- Waterflood optimization streamline simulation study
- Created 3D streamline model containing 360+ wells and obtained field level history match and forecasts

#### **Bonanza Boundary A Pool**

- Analytical performance and reservoir simulation study
- Constructed 70 well 3D Eclipse model and obtained a history match on an individual well level
- Evaluated waterflood optimization forecast scenarios involving infill injectors and producer-injector conversions
- Performed injector-pressure falloff test analysis, analytical pattern analysis (VRR and pressure maintenance), evaluated field performance using analog pools

#### **Wildmere Lloydminster Pool**

- Conducted reservoir simulation study to determine optimum production strategy
- Created eclipse 3D simulation model with 150+ wells and obtained a history match on an individual well level
- Analytical Study – examining heavy oil pools and determining a correlation for recovery factor vs. spacing
- Material balance, decline analysis, and volumetrics

### **CO<sub>2</sub> screening study**

- Conducted CO<sub>2</sub> screening study of all Alberta oil pools based on certain criteria and ranked the top pools that would benefit from CO<sub>2</sub> flooding.

### **Evaluation of Alderson Arcs D, Lower Mannville D4D, D3D, E3E, M4M, P3P, and WW QQ pools**

- Evaluated waterflood performance and upside of each pool
- Material balance, decline analysis, conformance plots, analog pools analysis, analytical forecasting

### **Kakut Banff and C Pool**

- Conducted reservoir simulation study to determine original gas in place by matching individual well pressures

### **Virginia Hills Beaverhill Lake - Freeman Unit**

- Material balance, decline analysis study, pressure data analysis, hall plot analysis for injectors

### **Golden Spike D2A (Nisku)**

- Analytical Study - evaluation of waterflood opportunity
- Reservoir characterization, material balance, performance analysis, and analog pool study

### **Various Gas Pools**

- Performed reservoir simulation studies on Esther Viking, Worsley, Simmonette, and Stanmore gas pools (history match and forecasting)

### **Westerose Banff C Pool**

- Material balance and decline analysis study

### **Garrington Cardium Unit**

- Waterflood optimization study (identification for potential)
- Material balance, volumetrics, decline analysis, waterflood evaluation, and analog pool/unit comparison

### **Reagan Livingston Pool**

- Reservoir simulation study to determine original gas and place and forecasts

### **Kakwa Falher B Gas Pool**

- Analyzed pressure build up tests to determine permeability of pool
- Gas material balance
- Conducted reservoir simulation to determine original gas in place, geometry of pool, and generate production forecast

### **Mooney Bluesky A Pool**

- Waterflood feasibility study

### **Internship Student**

*Epic Consulting Services Ltd., Calgary*

May 2001 – August 2002

## **EDUCATION**

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### **B.Sc. Degree**

**University of Calgary**

April 2003

- Graduated in April 2003 with a Bachelor of Science degree in Oil and Gas Engineering from University of Calgary
- Graduated on dean's list with distinction and internship designation – G.P.A = 3.98/4.0

### **Relevant Courses**

- Reservoir Engineering
- Drilling and Well Completions
- Petroleum Engineering Geology
- Waterflooding
- Design for Oil and Gas Engineering
- Production Engineering

### **Achievements/Awards**

- Gold Medal (Oil and Gas Engineering) for academic excellence (April 2003)
- Premier Internship Merrit Award (awarded to most outstanding internship student, Sept 2002)
- Alexander Rutherford Scholarship (1997)

## **SPECIAL SKILLS**

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- Experience with ECLIPSE and 3DSL reservoir simulation software
- 3D modeling experience with FloGrid.
- Ample experience with formal technical presentations, software presentations and demonstrations, and client project presentations.
- Public production and pressure data gathering using GeoScout.
- Capable working individually and in a team environment.
- Excellent written and oral communication skills.

## **PROFESSIONAL MEMBERSHIPS**

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- Association of Professional Engineers, Geologists and Geophysicists of Alberta
- Society of Petroleum Engineers