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بسم الله الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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Cairo University

EFFECT OF UNCERTAINTY IN ROCK AND FLUID PROPERTIES ON PRESSURE - BUILDUP WELL TEST RESULTS

By

Omalsaad Faraj Hafad Faraj

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Petroleum Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the Supervision of

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Title of Thesis:

Effect of Uncertainty in Rock and Fluid Properties on Pressure-Buildup Well Test Results

Key Words:

Petrophysical analysis, Well test, Reservoir characterization, Uncertainty analysis, Pressure build up test.

Summary:

This research aims to determine the effect of uncertainty in petrophysical parameters derived from well logs analysis in potential hydrocarbon zones, on the analysis of pressure build up tests. In the present study, well log data and well test data of six wells are investigated in detail using Interactive Petrophysics (IP 3.6) software and Pan system (V 3.5) software to examine the reservoir properties and characterize the reservoir architecture. In addition, uncertainty analyses are executed on the output of the petrophysical analysis and pressure build up analysis.

DISCLAIMER

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the reference section.

Name: Omalsaad Faraj Hafad Faraj

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DEDICATION

I dedicate my thesis to my husband Abdulsalam Ali, my daughter Mariam, my son Abdel Wahab and all my family.

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TABLE OF CONTENT

DISCLAIMER	i
DEDICATION	ii
ACKNOWLEDGMENTS.....	iii
TABLE OF CONTENTS	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	ix
NOMENCLATURES	xiv
ABSTRACT	xvii
CHAPTER 1: INTRODUCTIN	1
1.1 Preface	1
1.2 Monte Carlo Simulation Error Analysis	2
1.3 Statement of the problem.....	2
CHAPTER 2: LITERATURE REVIEW	5
2.1 Historical background to the Well Test Analysis	6
2.2 Average reservoir pressure	8
2.3 Uncertainty of well test.....	9
CHAPTER 3: THEORETICAL BACKGROUND	11
3.1 Basic Fluid Flow Equations.....	11
3.1.1 Type of fluids	11
3.1.1.1 Slightly compressible fluids.....	11
3.1.1.1.1 Constant-terminal-pressure solution.....	11
3.1.1.1.2 Constant-terminal-rate solution	11
3.1.1.2 Compressible fluids.....	12
3.1.1.3 Solutions to diffusivity equation used in gas well test analysis	12
3.1.1.3.1 Pseudopressure and Pseudo time variables	12
3.1.1.3.2 Pressure and Time variables	12
3.1.1.3.3 Pressure-squared and Time variables	12
3.1.1.3.4 Pseudopressure and Time	12
3.1.1.3.5 Summary of working equations for Gas well- test analysis.....	13
3.1.2 Radius of investigation.....	14
3.2 Principle of Superposition	14
3.2.1 Superposition in time.....	14
3.2.2 Superposition in space.....	15
3.3 Bourdet derivative	15
3.4 Early-time region	15
3.4.1 Wellbore storage.....	15

3.4.2 Skin factor	16
3.5 Middle- time region	17
3.5.1 Infinite Acting Radial Flow.....	17
3.6 Late-time region.....	18
3.6.1 Constant pressure boundaries	18
3.6.2 No flow Boundaries.....	18
3.6.2.1 A single sealing Fault.....	18
3.6.3 Closed System	19
CHAPTER 4: GEOLOGICAL SETTING.....	21
4.1 The Nile Delta.....	21
4.1.1. The Early Miocene “Moghra Formation”	23
4.1.2. The Middel Miocene “Sidi Salem Formation”.....	23
4.1.3 The Qawasim Formation	23
4.1.4 The Rosetta Formation	24
4.1.5. The Early Pliocene “Abu Madi Formation”	24
4.1.6. The Early–middle pliocene Kafr El Sheikh Formation.....	24
4.1.7. El Wastani Formation (Late pliocene)	24
4.1.8. Mit Ghamr Formation)	25
4.1.9. The Holocene Bilqas Formation	25
4.2 Hydrocarbon Habitat	25
4.3 The Western Desert	25
4.4 Jurassic Units	26
4.4.1 Wadi Natrun Formation.....	26
4.4.2 Khatataba Formation	27
4.4.3 Masajid Formation	27
4.5 The Cretaceous Units.....	27
4.5.1 The Lower Cretaceous Units.....	27
4.5.1.1. Burg El Arab Formation	27
4.5.1.2 Alam El Bueb member.....	27
4.5.1.3 Alamein member	27
4.5.1.4 Dahab member	27
4.5.1.5 Kharita member.....	28
4.5.2 The Upper Cretaceous Units	28
4.5.2.1 Bahariya Formation.....	28
4.5.2.2 Abo Roash Formation	28
4.5.2.3 Khoman Formation	28
CHAPTER 5: METHODOLOGY	29
5.1. Petrophysical analysis.....	29
5.1.1 Lithology Identification.....	29
5.1.2 Clay volume Calculations	29
5.1.3 Porosity Calculations.....	29

5.1.4 Water Saturation.....	30
5.1.5 Net pay and Cut-offs	30
5.1.6 Cross plots	30
5.1.7 Uncertainty Analysis to petrophysical parameters	30
5.1.8 Sensitivity Analysis: A Tornado Plot for Reservoir Characteristics	34
5.2 Pressure build up analysis.....	34
5.2.1 Data preparation	34
5.2.1.1. Well and Reservoir Description	35
5.2.1.2 Gauge Data	35
5.2.2 Diagnostic tools	35
5.2.3 Model Generation	37
5.2.4 Post modeling (output)	37
5.3. Uncertainty Analysis to the pressure build up analysis.....	38
CHAPTER 6: RESULTS AND DISCUSSION	43
6.1 Petrophysical analysis results	43
6.1.1 ND-1 well	44
6.1.2 ND-2 well	44
6.1.3 ND-3 well	44
6.1.4 ND-4 well	45
6.1.5 WD-1 well	45
6.1.6 WD-2 well	45
6.1.7 Uncertainty Analysis to Petrophysical data.....	48
6.1.8 Sensitivity Analysis to Petrophysical Calculation (Tornado plots).....	54
6.2 Well Test Results.....	56
6.2.1 Build-Up Analysis for Well ND-1	57
6.2.2 Build-Up Analysis for Well ND-2	57
6.2.3 Build-Up Analysis for Well ND-3	58
6.2.4 Build-Up Analysis for Well ND-4	58
6.2.5 Build-Up Analysis for Well WD-1.....	58
6.2.6 Build-Up Analysis for Well WD-2.....	59
6.2.7 Uncertainty Analysis to pressure build up analysis using VOSO Monte Carlo Simulation.....	59
6.2.8 Sensitivity analysis to well test calculations (Tornado plots).....	66
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS	71
REFERENCES	73
APPENDIX A.....	79
APPENDIX B.....	97
APPENDIX C.....	157

LIST OF TABLES

Table 2.1: History of the Well Test Analysis	7
Table 3.1: Summary of working equations for pressure transient test analysis in gas Wells	13
Table 5.1: PVT Correlations used for well ND-1.....	35
Table 5.2: List of Pressure transient equations.....	38
Table 6.1: Cut-offs value for average petrophysical parameters for all wells.....	43
Table 6.2: Summary of Measured Average Petrophysical Characteristics (Reservoir Results ND-1	46
Table 6.3: Summary of Measured Average Petrophysical Characteristics (Pay Results) ND-1.....	46
Table 6.4: Mean values of reservoir parameters derived from Monte Carlo uncertainty analysis with log derived data for all wells	51
Table 6.5: Reservoir Parameter Derived from Monte Carlo Simulation for All Well Zones at different probabilities	52
Table 6.6: Pressure Build Up Test Results for Well ND-1	57
Table 6.7: Mean values of parameters derived from Monte Carlo uncertainty analysis (UA) with pressure transient conventional analysis (PTA) for all well zones.....	60
Table 6.8: Pressure build up test results Derived from Monte Carlo Simulation for All Well Zones at different probabilities	61
Table 6.9: Error analysis results for all wells under full probability region (P0 to P100).....	67
Table A1.1: Summary of Measured Average Petrophysical Characteristics (Reservoir Results) ND-2.....	79
Table A1.2: Summary of Measured Average Petrophysical Characteristics (Pay Results) ND-2.....	79
Table A1.3: Summary of Measured Average Petrophysical Characteristics (Reservoir Results) ND-3.....	79
Table A1. 4: Summary of Measured Average Petrophysical Characteristics (Pay Results) ND- 3.....	80
Table A1.5: Summary of Measured Average Petrophysical Characteristics (Reservoir Results) ND-4.....	80
Table A1.6: Summary of Measured Average Petrophysical Characteristics (Pay Results) ND-4.....	80
Table A1.7: Summary of Measured Average Petrophysical Characteristics (Reservoir Results) WD-1	81
Table A1. 8: Summary of Measured Average Petrophysical Characteristics (Pay Results) WD-1.....	81
Table A1.9: Summary of Measured Average Petrophysical Characteristics (Reservoir Results) WD-2	82

Table A1.10: Summary of Measured Average Petrophysical Characteristics (Pay Results) WD-2	82
Table A1.11: Summary of Monte Carlo simulation results (Reservoir results) ND-1	83
Table A1.12: Summary of Monte Carlo simulation results (Pay results) ND-1	83
Table A1.13: Summary of Monte Carlo simulation results (Reservoir results) ND-2	84
Table A1.14: Summary of Monte Carlo simulation results (pay results) ND-2	84
Table A1.15: Summary of Monte Carlo simulation results (Reservoir results) ND-3	85
Table A1.16: Summary of Monte Carlo simulation results (Pay results) ND-3	85
Table A1.17: Summary of Monte Carlo simulation results (Reservoir results) ND-4	86
Table A1.18: Summary of Monte Carlo simulation results (Pay results) ND-4	86
Table A1.19: Summary of Monte Carlo simulation results (Reservoir results) WD-1	87
Table A1.20: Summary of Monte Carlo simulation results (Pay results) WD-1	88
Table A1.21: Summary of Monte Carlo simulation results (Reservoir results) WD-2	89
Table A1.22: Summary of Monte Carlo simulation results (Pay results) WD-2	90
Table A1.23: Pressure Build Up Test Results for Well ND-2	91
Table A1.24: Pressure Build Up Test Results for Well ND-3	91
Table A1.25: Pressure Build Up Test Results for Well ND-4	92
Table A1.26: Pressure Build Up Test Results for Well WD-1	92
Table A1.27: Pressure Build Up Test Results for Well WD-2	93
Table A1.28: Summary of Monte Carlo simulation (Pressure build up test results for pay zones) for ND-1	94
Table A1.29: Summary of Monte Carlo simulation (Pressure build up test results for Pay zones) for ND-2	94
Table A1.30: Summary of Monte Carlo simulation (Pressure build up test results for Pay zones) for ND-3	95
Table A1.31: Summary of Monte Carlo simulation (Pressure build up test results for Pay zones) for ND-4	95
Table A1.32: Summary of Monte Carlo simulation (Pressure build up test results for Pay zones) for WD-1	96
Table A1.33: Summary of Monte Carlo simulation (Pressure build up test results for Pay zones) for WD-2	96

LIST OF FIGURES

Figure 3.1 Pressure distribution in the formation near a producing well	14
Figure 3.2: Illustration of Superposition concept	14
Figure 3.3: The principle of superposition in space	15
Figure 3.4: Surface and sand face flow rates VS Time	16
Figure 3.5: Pressure drawdown due to near wellbore formation damage	16
Figure 3.6: Radial geometry around the well	17
Figure 3.7: Profile near a constant pressure boundary	18
Figure 3.8: Pressure profile near no flow boundary	18
Figure 3.9: In the ground plan, pressure drop for a single sealing fault	19
Figure 3.10: Circular and Rectangular Reservoir	20
Figure 3.11: Semi Log analysis of drawdown and build up test for circular reservoirs	20
Figure 4.1: A block diagram portraying the Eonile Canyon.....	21
Figure 4.2: Geologic cross section to the west and middle Nile Delta (Bilqas - Kafr El Dawar) presenting Eocene and Cretaceous Formations	22
Figure 4.3: General lithostratigraphic column of the Nile Delta Area.	23
Figure 4.4: General lithostratigraphic column of the North Western Desert. E.G.P.C	26
Figure 5.1: Typical workflow applied in uncertainty analysis for petrophysical interpretation	31
Figure 5.2: Various petrophysical parameters analyzed by Monte Carlo Simulation in ND-1 well	32
Figure 5.3: The input parameters for clay volume uncertainty analysis in ND-1 well	32
Figure 5.4: The input curves showing their shift distribution and shift type ND1 well	33
Figure 5.5: Input parameters for porosity and water saturation uncertainty analysis in ND-1well	33
Figure 5.6: The output for each analyzed parameter with different available settings in ND-1 well	33
Figure 5.7: Tornado plot errors and results window	34
Figure 5.8: The pressure and production test data.....	36
Figure 5.9: Log-log plot of build up for ND-3 well	36
Figure 5.10: Radial flow plot (semi-log)	37
Figure 5.11: Type of distributions used in current Study	39
Figure 5.12: Typical workflow applied in uncertainty analysis for pressure buildup analysis	39
Figure 5.13 Selection of the input parameter distribution for Bahariya Formation WD-2 well	40