



MATHEMATICAL MODEL OF TIME-LAPSE VERTICAL GRADIENT MICROGRAVITY MEASUREMENT AND APPLICATION FOR SUBSURFACE MASS CHANGE IDENTIFICATION, CASE STUDY: SEMARANG ALTAIR PLAIN, CENTRAL JAVA, INDONESIA

WAWAN G. A. KADIR, DJOKO SANTOSO and MUH SARKOWI

Geophysical Engineering Department
 Bandung Institute of Technology
 Indonesia
 e-mail: wawan@gf.itb.ac.id

Abstract

Application of microgravity survey by measuring gravity change in had been used extensively in many fields. The major causes of gravity change are mass change in reservoir including ground water level change (subsurface) and vertical ground movement (subsidence). While observed gravity change, called as time-lapse microgravity anomaly, superposition of all the causes, hence how to identify each source is important one because some of causes could have similar response example is increase in subsurface density shows similar gravimetric response with that of ground subsidence.

In order to distinguish this similarity, time-lapse microgravity along its vertical gradient analysis is effective. Theoretical background of

2010 Mathematics Subject Classification: 86-XX.

Keywords and phrases: time-lapse, vertical gradient, microgravity, subsurface subsidence.

This research is supported by RUT 2002-2004 projects, KRT under 029.12/SK/RUT/2002, 14.28/SK/RUT/2003 and 14.09/SK/RUT/2004.

Received September 30, 2009

Sources Overview

3 Similarity Exclusions

14%

OVERALL SIMILARITY

- 1 fgb.itb.ac.id INTERNET 5%
- 2 eprints.unram.ac.id INTERNET 2%
- 3 docshare.tips INTERNET 1%
- 4 www.hagi.or.id INTERNET 1%
- 5 Universitas Muham... SUBMITTED WORKS <1%
- 6 math.stu.edu.cn INTERNET <1%
- 7 www.niscair.res.in INTERNET <1%
- 8 S Supriyadi, K Khum... CROSSREF <1%
- 9 sintadev.ristekdikti... INTERNET <1%
- 10 www.researchgate... INTERNET <1%
- 11 journals.ums.ac.id INTERNET <1%
- 12 jurnal.unej.ac.id INTERNET <1%

14%

Overall Similarity



Document Details

0%

AI