

PACKAGE ID - 001258IBMPC00 DWELL

KWIC TITLE - Dipole Well Location

AUTHORS - Newman, G.
Sandia National Labs., Albuquerque, NM (United States)

Avdeev, D.B.
Russian Academy of Science, Moscow (Russia)

Kuvshinov, A.A.
Russian Academy of Science, Moscow (Russia)

Pankratov, O.V.
Russian Academy of Science, Moscow (Russia)

LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 06/01/1998 **PUBLICATION DATE** - 06/01/1998

DESCRIPTION - The problem here is to model the three-dimensional response of an electromagnetic logging tool to a practical situation which is often encountered in oil and gas exploration. The DWELL code provide the electromagnetic fields on the axis of a borehole due to either an electric or a magnetic dipole located on the same axis. The borehole is cylindrical, and is located within a stratified formation in which the bedding planes are not horizontal. The angle between the normal to the bedding planes and the axis of the borehole may assume any value, or in other words, the borehole axis may be tilted with respect to the bedding planes. Additionally, all of the formation layers may have invasive zones of drilling mud. The operating frequency of the source dipole(s) extends from a few Hertz to hundreds of Megahertz.

PACKAGE CONTENTS - Media Directory; Software Abstract; DWELL Code Instructions; Media Includes Source Code;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 3.5 Diskette

METHOD OF SOLUTION - An integral equation approach which uses modified Neumann series.

COMPUTER - IBM PC

OPERATING SYSTEMS - Machine dependent

PROGRAMMING LANGUAGES - Fortran 77, Version 11

SOURCE CODE AVAILABLE (Y/N) - Y

HARDWARE REQS - This code checks for errors and inconsistencies in the input files, and provides advice on corrections. The code also

PACKAGE ID - 001258IBMPC00 DWELL

HARDWARE REQS - (CONT) evaluates the storage space needed for temporary work files and output, and gives the user a relevant message. minimum requirements 133MHz Pentium processor, 3MB RAM, 1GB Disk space.

ABSTRACT STATUS - Released AS-IS 11/9/1998

SUBJECT CLASS CODE - Z

KEYWORDS -
COMPUTER PROGRAM DOCUMENTATION
D CODES
PETROLEUM
NATURAL GAS

EDB SUBJECT CATEGORIES -
990200

SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS