

Title (en)

GRAVITY TRANSDUCER AND APPLICATION TO HYDROCARBON EXPLORATION

Title (de)

SCHWERKRAFTWANDLER UND ANWENDUNG ZUR KOHLENWASSERSTOFFUNTERSUCHUNG

Title (fr)

TRANSDUCTEUR DE GRAVITÉ ET APPLICATION À L'EXPLORATION DES HYDROCARBURES

Publication

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Application

EP 13794555 A 20130522

Priority

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Abstract (en)

[origin: WO2013177340A1] A gravity transducer includes a particle system characterized by internal vibrations relating to its de Broglie wave, a resonant cavity for trapping the particle without holding it in a lattice structure; a source of a phonon wave, wherein the de Broglie wave and the phonon wave interact over a junction area; a power source for applying electrical power across the junction; a sensing system for measuring resistance, voltage, or current across the junction and for producing a sensed signal; and a recording system for recording the sensed signal. The transducer is used in a method of detecting potential hydrocarbon deposits, the method comprising: providing the transducer for sensing a change in a spatial orientation of gravity; flying the gravity transducer across the hydrocarbon deposit; sensing a change in spatial orientation of gravity to produce a signal indicative of geologic subsurface features, generally associated with hydrocarbon deposit; and recording the signal.

IPC 8 full level

G01V 3/15 (2006.01); **G01V 7/00** (2006.01)

CPC (source: EP RU)

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Citation (search report)

- [XYI] US 2007010946 A1 20070111 - MACFARLANE JOHN [GB], et al
- [Y] US 2005197773 A1 20050908 - BREWSTER JAMES [US], et al
- [A] US 4992656 A 19910212 - CLAUSER JOHN F [US]
- [A] R COLELLA ET AL: "Observation of gravitationally induced quantum interference", PHYSICAL REVIEW LETTERS, 9 June 1975 (1975-06-09), XP055327288, Retrieved from the Internet <URL:<http://www.rpi.edu/dept/phys/Courses/PHYS6510/PhysRevLett.34.1472.pdf>> [retrieved on 20161208]
- [A] MOODY M VOL ET AL: "Three-axis superconducting gravity gradiometer for sensitive gravity experiments", REVIEW OF SCIENTIFIC INSTRUMENTS, AIP, MELVILLE, NY, US, vol. 73, no. 11, 1 November 2002 (2002-11-01), pages 3957 - 3974, XP012039483, ISSN: 0034-6748, DOI: 10.1063/1.1511798
- [A] T. J. HAYES ET AL: "A gravity gradient method for characterizing the post-seismic deformation field for a finite fault", GEOPHYSICAL JOURNAL INTERNATIONAL., vol. 173, no. 3, 1 June 2008 (2008-06-01), GB, pages 802 - 805, XP055327234, ISSN: 0956-540X, DOI: 10.1111/j.1365-246X.2008.03795.x
- See references of WO 2013177340A1

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DOCDB simple family (application)

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