Big bang modelling in core of the Earth and origin of oil and gas

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In 1879 Professor George H. Darwin propounded the view that the Moon formed a part of the Earth [Pickering, 1907]. In 1957 Professor W. B. Porfir'ev has reported new conception on the youthful Neogene time of migration and formation of oil fields. He has promulgated, that petroleum erupted from great depths [Porfir'ev, 1968]. Since 1973 author has been working in the department of aca-

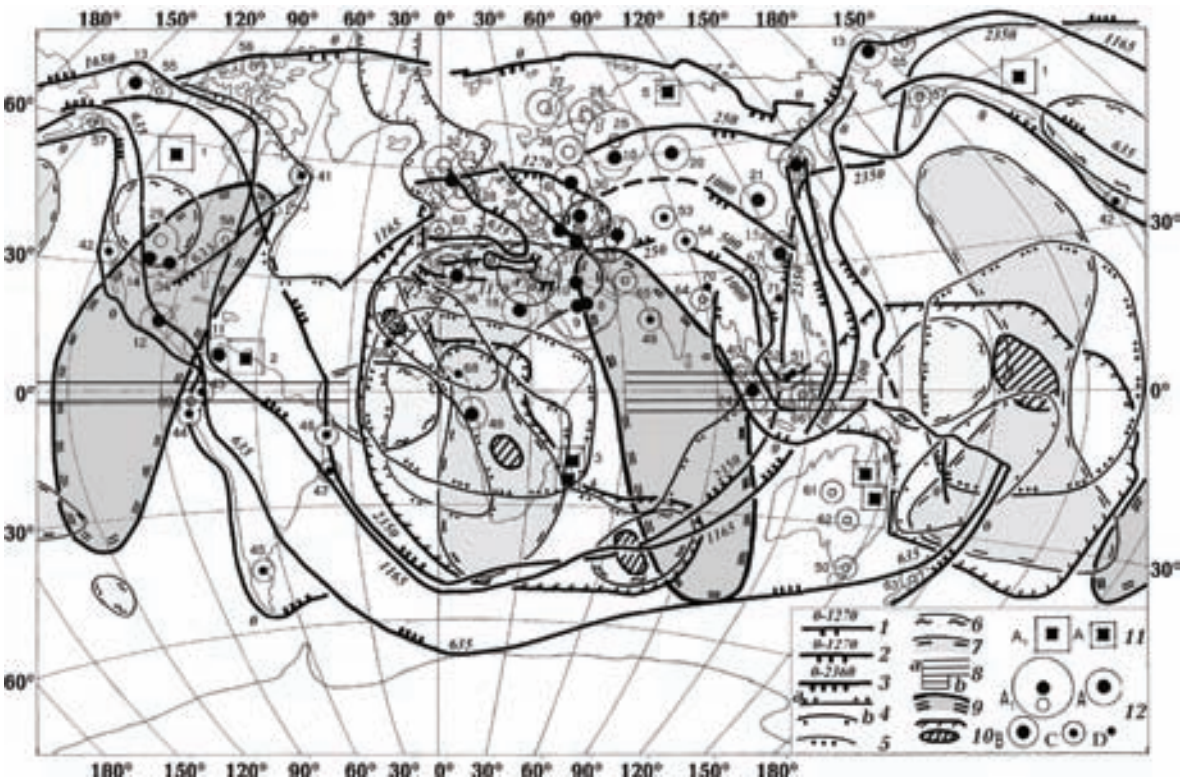

Fig. 1. Map the deep structure of the Earth and distribution of main oil and gas fields [Muraveynyk, 2000; 2003]. Zawaritski-Benioff zones — margin zones of continent — eugeosynclinale, depth (km): *1* — Tethis, Proterozoic, 1990 m. y.; *2* — Arctic Ocean, Proterozoic, 1115 m. y.; *3* — Pacific Ocean, Mesozoic, 240 m. y. *4* — upper mantle (*a* — slow anomalies — 0,2 % of *P*-wave velocities (V_P) at 1165 km depth [Zhou, 1996]. Slow anomalies — 0,2 % V_P (splitting-functions of free oscillations of the Earth)); *5* — lower mantle; *6* — outer core; *7* — inner core [Giardini et al., 1988]; *8* — isotropic layer (*a* — as large as 400 km in thickness at the top of the inner core (60°—140° E), *b* — 200 km in thickness at the top of the inner core (30—130° W) [Garcia, Sourian, 2000]); *9* — slow anomalies — 0,2 % V_P at 370 km of the inner core radius [Morelli et al., 1986]; *10* — low velocity anomalies V_S of S_{diff} phases (SH) in D" layer [To, Romanowich, 2009]; *11* — bitumen (very heavy oil) fields (geological reserves) (A_1 — 100 billion tons, A — 1 billion tons)); *12* — *fields (recoverable reserves):* A_1 — unique (10 000) (*a* — oil (million tons), *b* — gas (billion m^3)), A — supergiant (1000), B — giant (1000—500), C — largest (500—100), D — large (100—50). See the list of main oil and gas fields [Muraveynyk, 2000; 2003].

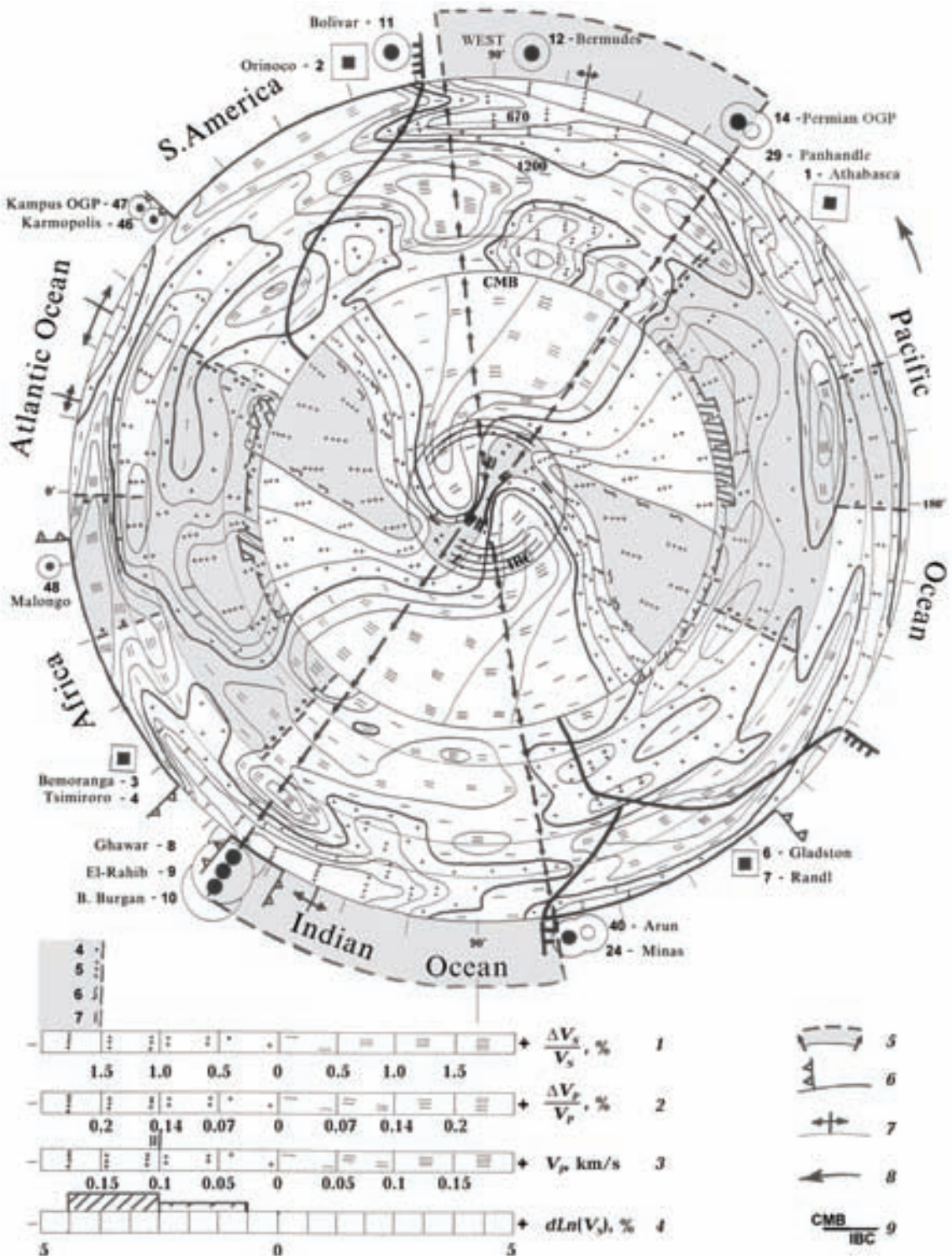

Fig. 2. Equatorial section of the Earth [Muraveynyk, 2000; 2003]: *1* — scale of anomalies of *S*-wave velocities (V_S) [Su et al., 1994]; *2* — scale of anomalies of V_P (splitting-functions of free oscillations of the Earth) [Giardini et al., 1988]; *3* — scale of anomalies of V_P at 370 km of the inner core radius [Morelli et al., 1986]; *4* — scale of anomalies of V_S S_{diff} phase (SH) in the D" layer; *5* — vertical projection on the surface of the Earth of slow anomalies — 0,2 % V_P at 370 km of the inner core radius [Morelli et al., 1986]; *6* — continental slopes; *7* — mid-oceanic ridges; *8* — spin of the Earth; *9* — CMB — core mantle boundary in depth 2891 km, IBC — inner boundary core at radius 1221 km. See the rest of legend in Fig. 1.

demician W. B. Porfir'ev "Geology and origin of oil and gas fields" at the Institute of Geological Sciences of the National Academy of Sciences of Ukraine. This ideas have been developed and used for systematizing data about existing oil and gas fields and coordinating research of new ones [Muraveynyk, 2000; 2003].

The further development of this ideas, supported by the modern data about the Earth inner structure forms ground for a new hypothesis about the Earth history. Anomalies of low velocity seismic waves in the inner and outer core, lower and upper mantle allow to map relicts of big bang (explosion) in the inner core under the Indian Ocean and antipodal under the Pacific. The D" region is the most widely and globally sampled by diffracted waves, S_{diff} and P_{diff}, which typically travel along the CMB over more than 30 degrees of epicentral distance. Using these phases is essential for mapping the 3D structure in the D" layer. In particular, horizontal velocity jumps of 3—4.5 per cent have been reported in the D" layer at the border of the two large-scale low velocity provinces (LLV *P*), often also called 'superplumes', in the south Pacific and under Africa, based primarily on the analysis of Sdiff phases [To, Romanowich, 2009]. Superplumes in the mantle under these oceans reflect termic influence of the closed big bang (without part separation of the planet) 65 m. y. ago. 240 m. y. ago at the beginning of the Mezozoic the big bang happened in the core with separation of the part of the planet under the Pacific Ocean with the forming of the Moon. Zawaritski-Benioff zones (subduction zones) mark edges of the bang cone in the lithosphere. These zones are recognized by the anomalies of low velocity seismic waves down to the core of the Earth. 1115 m. y. ago separation of satellite Mercury from theArctic Ocean happened. 1990 m. y. ago satellite Venus separated from Tethys. 3500 m. y. ago satellite Mars was formed from the suggested integral green stone eugeosynclinales of Aldan, Africanian, Australian, Indian, North and South America, Ukrainian cratons. The history of the Earth, Jupiter and Saturn was a history of brown dwarfs, separated after big bang of the Sun 5500 m. y. ago. Volcanic active satellite Io separated from Red Spot of the Jupiter 65 m. y. ago. The history of the Earth divided into 175 m. y. cycles (anomalistic galactic year) with big bangs in the beginning of the Cenozoic, Mezozoic, etc. The termic energy of this explosions affect lithosphere and atmosphere, determined interruptions in life evolution on the Earth, as well as distributions of ore deposits in margins of the bang cones in lithosphere. Oil and gas have been generated by closed big bang in the inner core of the Earth 65 m. y. ago. The heterogeneity of the Earth core controls oil-gas fields distribution in the Earth's crust. The 60 % of theWorld oil proved reserves are located in the Persian Bay Province — on the top of vertical heterogeneity in the inner and outer core (Fig. 1, 2).

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