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(74) Agent: HÅMSØ PATENTBYRÅ ANS; P.O. Box 171,
NO-4302 Sandnes (NO).

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(71) Applicant (for all designated States except US): **ADVANCED HYDROCARBON MAPPING AS** [NO/NO];
Skogstøstraen 37 (4. etg.), N-4029 Stavanger (NO).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FAINBERG, Eduard, B.** [RU/NL]; Longkruid 16, NL-3824 PD Amersfoort (NL). **BARSUKOV, Pavel** [RU/NL]; Longkruid 16, NL-3824 PD Amersfoort (NL). **KJERSTAD, Jostein, Kåre** [NO/NO]; Magnus Vigrestadsv. 8, N-4023 Stavanger (NO).

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(54) Title: METHOD AND DEVICE FOR INDUCED POLARIZATION MAPPING OF SUBMARINE HYDROCARBON RESERVOIRS

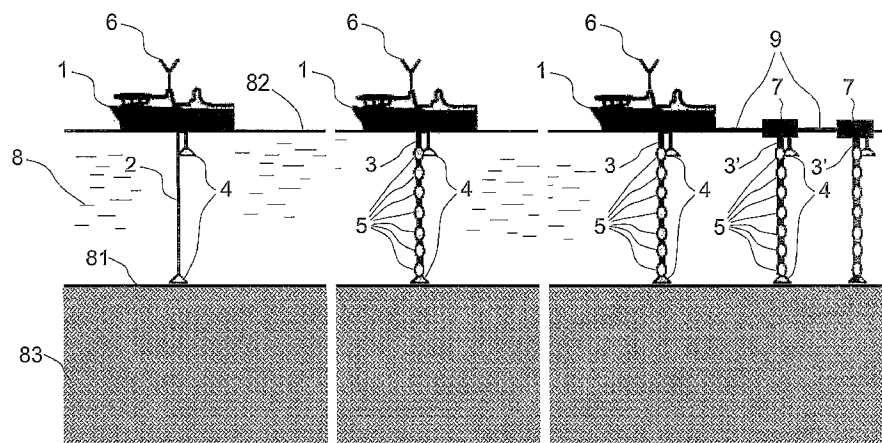


Fig. 1a

Fig. 1b

Fig. 1c

(57) Abstract: An electromagnetic surveying method based on the detection of induced polarization effect and evaluation of its characteristics for mapping marine hydrocarbon targets, is characterized by a) the vertical deployment in a body of water (8) of at least one electric wire (2, 3, 3') which forms an electromagnetic transmitter which emits electromagnetic energy arranged to excite an electromagnetic field in the body of water (8) and underlying medium (83), the same wire (2, 3, 3') being used as a receiver for measurements of the vertical component of the electric field; the method including: b) providing survey data as the spatial distribution of the vertical component of the electric field and the medium response in the form of apparent resistivity versus time in the body of water (8); c) performing a space/time analysis of the vertical component of the electric field and response with the purpose of detecting induced polarization effect and d) mapping the anomalous zones.