

# Compañía geofísica de investigación y desarrollo de Siberia S.R.L.

[www.dnme.ru](http://www.dnme.ru)



La empresa se constituyó en el año 2003, usa métodos científicos de la prospección geoelectrica en la exploración de hidrocarburos. Este método se llama Diferencialmente Normalizado Método de Electro-prospección (DNME) y se lo aplican durante la fase de trabajos exploratorios en combinación con la prospección sísmica. DNME también se usa para determinar los contornos de campos conocidos, independientemente del tipo de trampas y de características de facies de reservorios.

**La ultima modificación de DNME en combinación con la exploración sísmica permite identificar yacimientos de hidrocarburos en áreas de estudio y reducir en más del 90 % fracasos en perforación de pozos, así como permite determinar los contornos de campos conocidos, independientemente del tipo de trampas y de características de facies de reservorios.**

**Compañía geofísica de investigación y desarrollo de Siberia**

# FUNCIONAMIENTO Y CAMPO DE APLICACIÓN

**Compañía de investigación y desarrollo geofísica de Siberia** es contratada por la producción de trabajos de electroprospección para la exploración de depósitos de petróleo y de gas. La compañía es la oficina central en desarrollo e introducción de la tecnología, que basado en estudiar de los espaciales y la estructura de tiempo de un campo electromagnético y efectúa la distribución Polarización Inducida (IP). El método está basado en la asignación de anomalías IP relacionadas con auras de la dispersión encima de depósitos de hidrocarburos.

## CLIENTES PRINCIPALES

- ❖ LUKOIL
- ❖ GAZPROM
- ❖ ROSNEFT
- ❖ Ministerio de Recursos Naturales e Ecología de Rusia

**Ventas anuales de la compañía son  
más de 7 000 000 euros**

**La geografía de trabajos de la compañía cubre todo el territorio de Rusia, de la isla Sakhalin en el Este hasta el área de Kaliningrado en el Oeste, y de Mar Caspio en el Sur hasta mares Karskoye y Barentsevo en el Norte, y también el antiguas Repúblicas soviéticas y tros países extranjeros**



**Áreas de investigación por DNME en Rusia (1997-2008)**



**Compañía geofísica de investigación y desarrollo de Siberia**

## NIVEL DE FUNCION DE LA COMPAÑÍA

- ❖ La compañía posee los Patentes Nro. 2301431 (Rusia) y PCT/RU/2006/000081 (Internacional), para los países de Comunidad Europea - EP 1876473 A1, para China - 200680009599.9 en método de prospección geoelectrica para investigación de petróleo-y-gas directa. Se espera que los patentes para Venezuela y Perú sean obtenidas en el futuro más cercano.
- ❖ La compañía se conforma a la ISO estándar internacional 9001:2000
- ❖ Este método fue probado con éxito por especialistas de **Schlumberger company** en 2006

RUSIA

РОССИЙСКАЯ ФЕДЕРАЦИЯ



**ПАТЕНТ**

НА ИЗОБРЕТЕНИЕ  
№ 2301431

**СПОСОБ ЭЛЕКТРОРАЗВЕДКИ С ИСПОЛЬЗОВАНИЕМ  
ПРОСТРАНСТВЕННОГО ДИФФЕРЕНЦИРОВАНИЯ  
ПОЛЯ СТАНОВЛЕНИЯ НА НЕСКОЛЬКИХ РАЗНОСАХ**

Патентообладатель(ли): **Общество с ограниченной  
ответственностью "Сибирская геофизическая научно-  
производственная компания" (RU)**

Автор(ы): **см. на обороте**

Заявка № 2005108185

Приоритет изобретения **24 марта 2005 г.**

Зарегистрировано в Государственном реестре  
изобретений Российской Федерации **20 июня 2007 г.**

Срок действия патента истекает **24 марта 2025 г.**

Руководитель Федеральной службы по интеллектуальной  
собственности, патентам и товарным знакам

Б.И. Симонов

INTERNACIONAL

PATENT COOPERATION TREATY

PCT/RU2006/000081

From the INTERNATIONAL BUREAU:

**PCT**

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

To:	KHMELEVSKAYA, Natalya Alekseevna arya 48 St. Petersburg, 190013 FEDERATION DE RUSSIE
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(PCT Administrative Instructions, Section 411)

Date of mailing date month year 01 June 2006 (01.06.2006)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference	
International application No. PCT/RU2006/000081	International filing date date month year 21 February 2006 (21.02.2006)
International publication date date month year Not yet published	Priority date date month year 24 March 2005 (24.03.2005)
Applicant OBSHCHESTVO S OGRANICHENNOY OTVETSTVENNOSTYU "SIBIRSKAYA GEOFIZICHESKAYA NAUCHNO-PROIZVODSTVENNAYA KOMPANIYA" et al	

- By means of this form which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR" in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- If applicable, the letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- If applicable, an asterisk (\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was received after the applicable time limit under Rule 17.1(b)) even though the priority document was not furnished in compliance with Rule 17.1(a) or (b). The International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or I.P.T. receiving Office	Date of receipt of priority document
24 March 2005 (24.03.2005)	2005108185	RU	16 May 2006 (16.05.2006)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70 Form PCT/IB/504 (1 October 2005)	Authorized officer Beate Giffo-Schmitt Facsimile No. +41 22 338 87 20 Telephone No. +41 22 338 92 41
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IA/VA/19/20



中华人民共和国国家知识产权局

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发信人: 国家知识产权局



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国家申请号通知书

发文日期 2007年10月26日

代理人案卷号: PCTRU07-46Q

国际申请日(年/月/日): 2006年02月21日

国际申请号: PCT/RU2006/100081



最早优先权日(年/月/日): 2005年03月24日

申请人: 电话勘探有限公司俄罗斯联邦

发明名称: 一种使用空间微分法和梯度场分解若干区段的电话勘探方法

1. 申请人提交的译文及缴纳的费用已于(年/月/日)2007年9月24日收到
2. 经审查, 上述手续不存在专利法实施细则第102条列举的缺陷。
3. 国家知识产权局专利局对上述申请给出下列国家申请号:

200680009599.9

4. 自收到本通知书之日起, 申请人向国家知识产权局专利局办理各种手续时, 均须使用上述国家申请号。
5. 请申请人核对上述各案项目, 发现与申请不符的情形, 请在上述发文日起一个月内向国家知识产权局专利局提出。
6. 国家知识产权局专利局对上述申请进一步审查之后, 将通知申请人。

所交文件已核实

中华人民共和国国家知识产权局  
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传真号: (86-10)62019451

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PCT/CH/503 表(C)

1



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(30) Priority: 24.03.2006 RU 2005108185

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Irkutsk, 664088 (RU)(74) Representative: Urizar Anasagasti, José Antonio  
C/ Victor de la Serna 3-6, Parking  
28016 Madrid (ES)(54) ELECTROMAGNETIC SOUNDING METHOD USING A TRANSIENT FIELD SPATIAL  
DERIVATION ON SEVERAL SEPARATIONS

(57) The invention relates to electromagnetic prospecting and is used for surface and marine electromagnetic sounding by means of controllable electromagnetic field sources and is applied in a package oil and gas prospecting works for searching and outlining oil and gas fields. The inventive method is based on the selection of a response from earth materials which are secondary modified by hydrocarbons migration. Said invention makes it possible to ensure a set of processing technologies enabling to layer-by-layer determine an electrical resistivity and process characteristics of a medium induced polarisation: a polarizability coefficient, a time con-

stant and a relaxation spectrum width. The inventive method consists in carrying out a measurement by several receiving lines, wherein the position of two feeding lines of a sounding plant is substantially symmetrical with respect to the receiving lines which are located within a 30° sector from the feeding line extension, in recording a transient signal by land axial-dipole sounding devices or by marine sounding devices associated with a continuous signal recording during a ship travel and in calculating the population of interpretable parameters  $P_1$ ,  $D_0$ ,  $\Delta U_{11}$ ,  $P_2$  using recorded potential difference curves ( $\Delta U(i)$ ,  $\Delta U'(i)$ ) which are preliminarily processed, contracted in the form of time gates and differentiated.

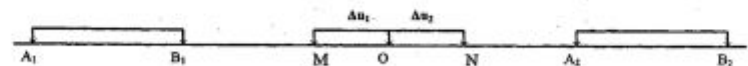


Fig. 1a

EP 1 876 473 A1

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Certification



Certification

Awarded to

## LLC "Siberian geophysical research developed company"

9a, Clara Zetkin st., Irkutsk  
RUSSIA

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

### ISO 9001:2000

Scope of supply

**GEOPHYSICAL SUBSURFACE RESEARCH FOR EXPLORATION AND PROSPECTING MINERAL DEPOSITS**

Original Approval Date: **17 May 2007**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until:

**27 April 2010**

To check this certificate validity please call +7 495 937 5777

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by contacting the organisation

Date: **17 May 2007**

Certificate Number: **215153**

Bureau Veritas Certification  
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FAX CER/RU-02

Date / Дата: 14.05.2007

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Company:

Г-же Велма Н.А.

ООО "Сибирская  
геофизическая научно-  
производственная компания"

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Number of pages including cover sheet / Количество страниц, включая титульный лист: 1

Уважаемая Нина Александровна!

Настоящим сообщаем, что Ваша компания успешно прошла Сертификационный аудит на соответствие Международному стандарту (ISO 9001:2000), в объеме 5 человеко-дней с 23.04.2007 по 27.04.2007, в процессе которого не выявлено ни одного существенного несоответствия. На данный момент отчет по аудиту находится на одобрении в Холдинге компании «Бюро Веритас»

С уважением,

Технический директор

Вера Святкина

Обухова О. – координатор (доб 109)



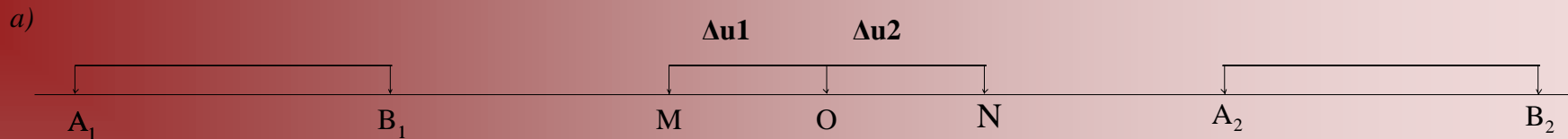
Las modificaciones de DNME son desarrolladas para

Tierra

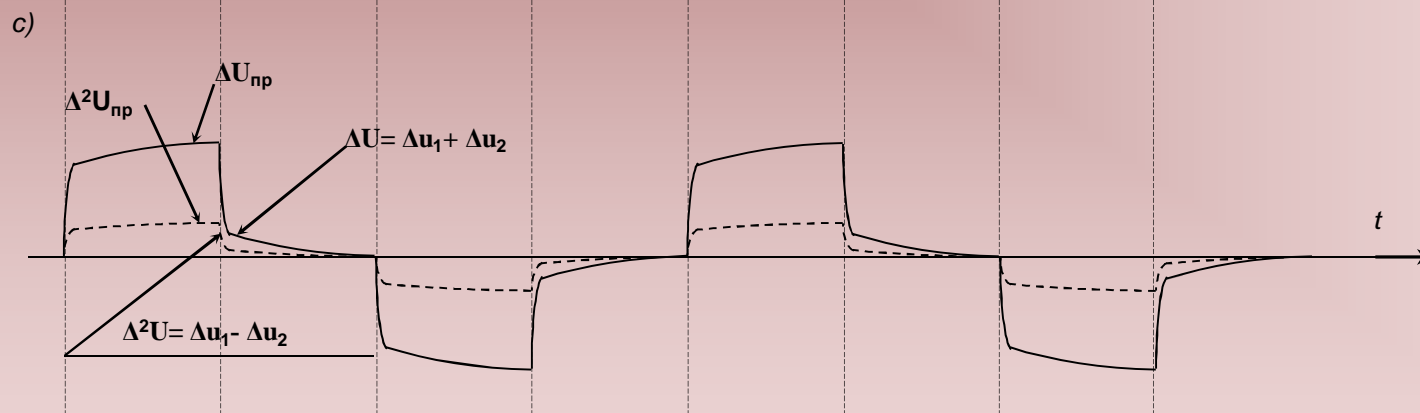
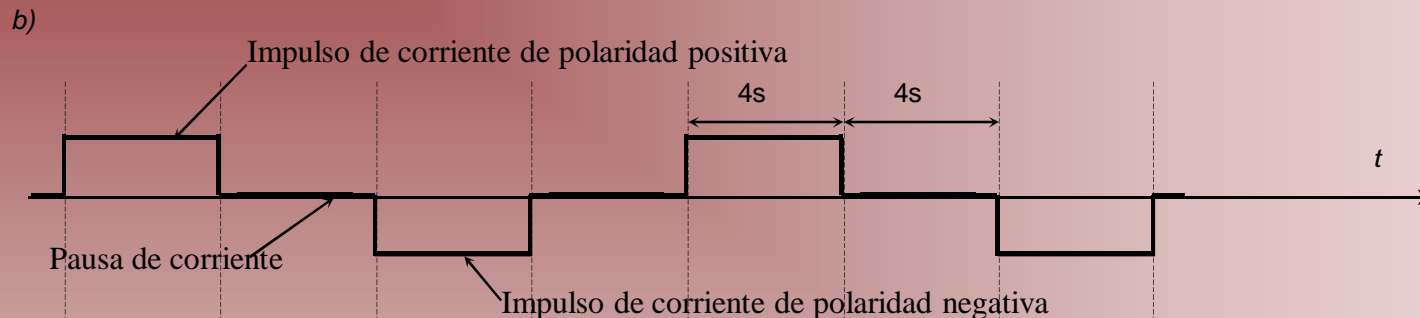
y Mar



**Compañía geofísica de investigación y desarrollo de Siberia**

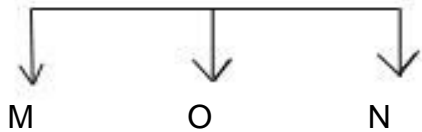


# LA METODOLOGÍA DE TRABAJOS DE TIERRA

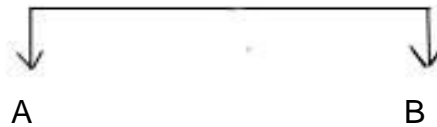


La metodología de trabajos de tierra DNME: a) sistema de investigación axial de dipolo bilateral AB-MON b) la forma de la corriente en la línea alimentadora c) voltaje en la entrada de Analógico-Digital Convertidor (ADC)

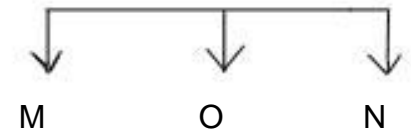
# Es ventajoso del punto de vista tecnológico usar dos estaciones de receptor y una estación para el suministro de energía



primera estación de receptor



estación de suministro de energía



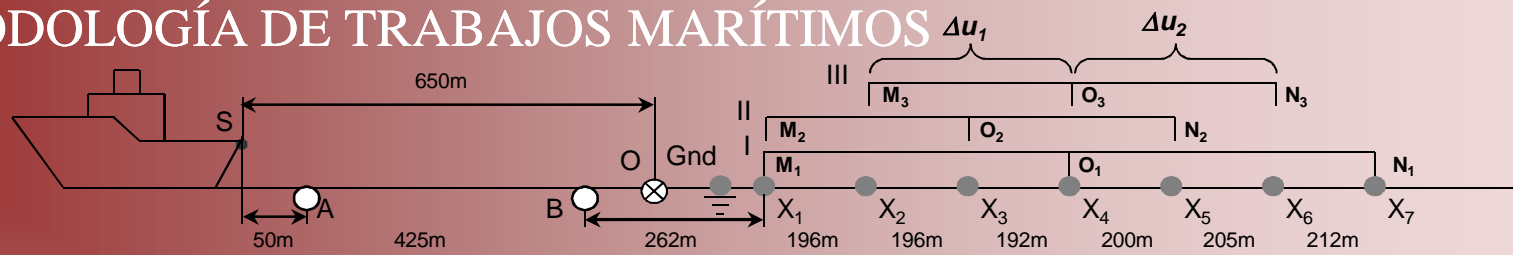
segunda estación de receptor

# ESTACIÓN DE SUMINISTRO DE ENERGÍA



**Compañía geofísica de investigación y desarrollo de Siberia**

# LA METODOLOGÍA DE TRABAJOS MARÍTIMOS



El buque “Sergey Kravkov” fue equipado para la investigación de DNME



Compañía geofísica de investigación y desarrollo de Siberia

**DIRECTOR GENERAL  
PETR Y. LEGEYDO, Ph. D.**



Departamento de Operaciones



Departamento Geológico



Departamento de Desarrollo



Departamento de Personal



Departamento de Contabilidad

# Lista de referencia de clientes principales de Compañía de investigación y desarrollo geofísica de Siberia

**Ministerio de Recursos Naturales e Ecología de Federación Rusa - 25 contratos**

**Compañía petrolera LUKOIL– 28 contratos, incluso:**

LUKOIL-Kaliningradmorneft, LUKOIL-Zapadnaya Sibir, LUKOIL-Nizhnevolzhskneft, LUKOIL-Komi,  
•Oficina Principal de LUKOIL, LUKbeloil, Tzentrucaspneftegas, Caspian Oil Company, Priazovneft.

**Compañía petrolera ROSNEFT– 19 contratos, incluso:**

Rosneft-Krasnodarneftegas, Sibirrosneft, Rosneft-Kazajstán

**GAZPROM – 17 contratos, incluso:**

•Gazflot LLC, Yamburggasdobicha, Severgazprom, Kavkaztransgas, Surgutgazprom.

**en República Kazakstán** nuestros clientes son tales compañías petroleras como Atash (2 contratos),  
Tjub-Karagan (2 contratos), Kurmangazy Petroleum.

**Además, nuestros clientes eran:** Wintershell (Alemania), Gold Oil PLC (UK) y compañías rusas :  
RITEC (2 contratos), Surgutneftegas (2 contratos), Petromir (5 contratos),  
Sibirskaya Neftegasovaya Co. (2 contratos), GeoPromTrans,  
Bratskecogas, Burgas (2 contratos) y muchos otros