Grupo POISK – FANDS LLC

Re-Exploración adicional en campos maduros y productores

muestras de proyectos

Estudio de caso I. Rusia. campo productor

Propósito del estudio

Identificación y delimitación de anomalías de hidrocarburos asociadas con reservorios descubiertos o no y /no perforadas en el campo productor de gas condensado

1) Determinar las anomalías de hidrocarburos en el área estudiada mediante el procesamiento de datos satelitales (Etapa I) y mediante un examen detallado de las áreas anómalas utilizando equipo de campo de prueba resonancia Magnetica móvil (Etapa II);
2) Medir las profundidades de los yacimientos de hidrocarburos en las anomalías
3) Estimar el espesor de los yacimientos de hidrocarburos;
4) Estimar el espesor promedio de la parte porosa de la formación gasífera y la presión del gas en cada horizonte;
5) Mapear las rutas de migración de hidrocarburos a través de rocas permeables al gas;
6) Determinar el tipo de rocas reservorio de horizontes de hidrocarburos;
7) Construir perfiles de profundidad de yacimientos de hidrocarburos sobre anomalías con un paso de medición no mayor a 500 m;
8) Estimar los recursos de hidrocarburos en las anomalías identificadas.

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Etapa I (detección remota). Disposición

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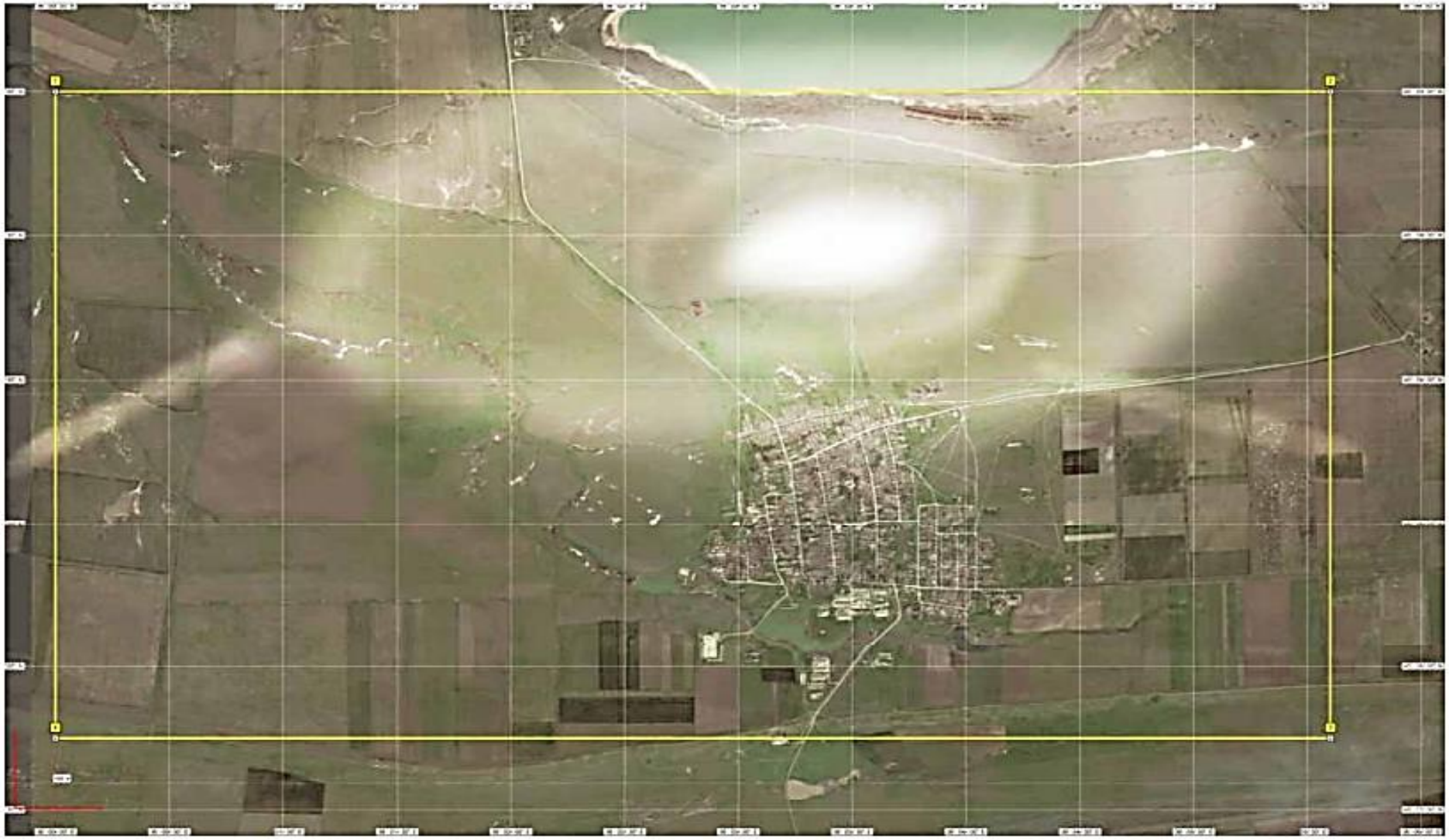
Etapa I (detección remota). Anomalías mapeadas



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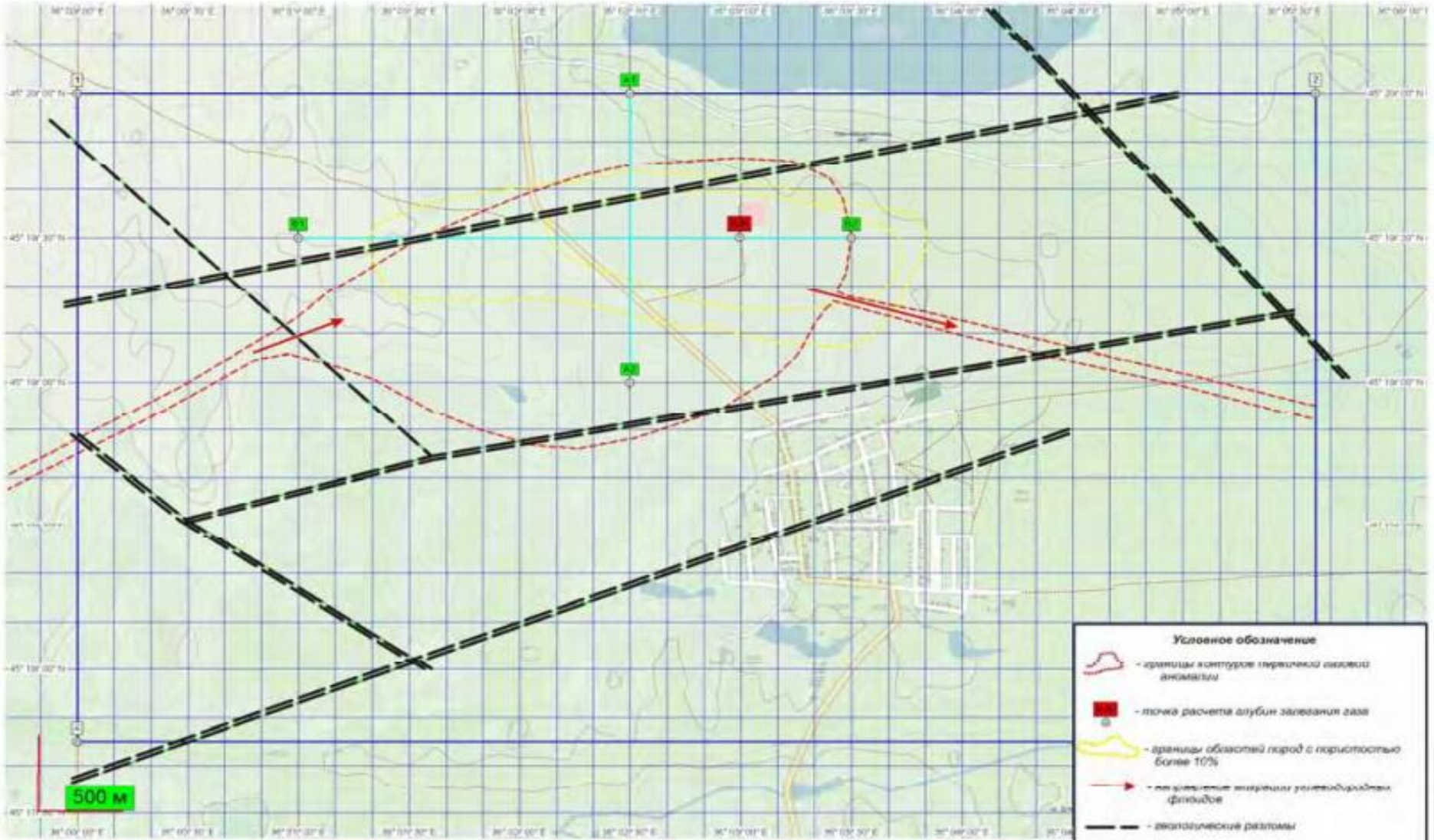
Etapa I (detección remota). fallas



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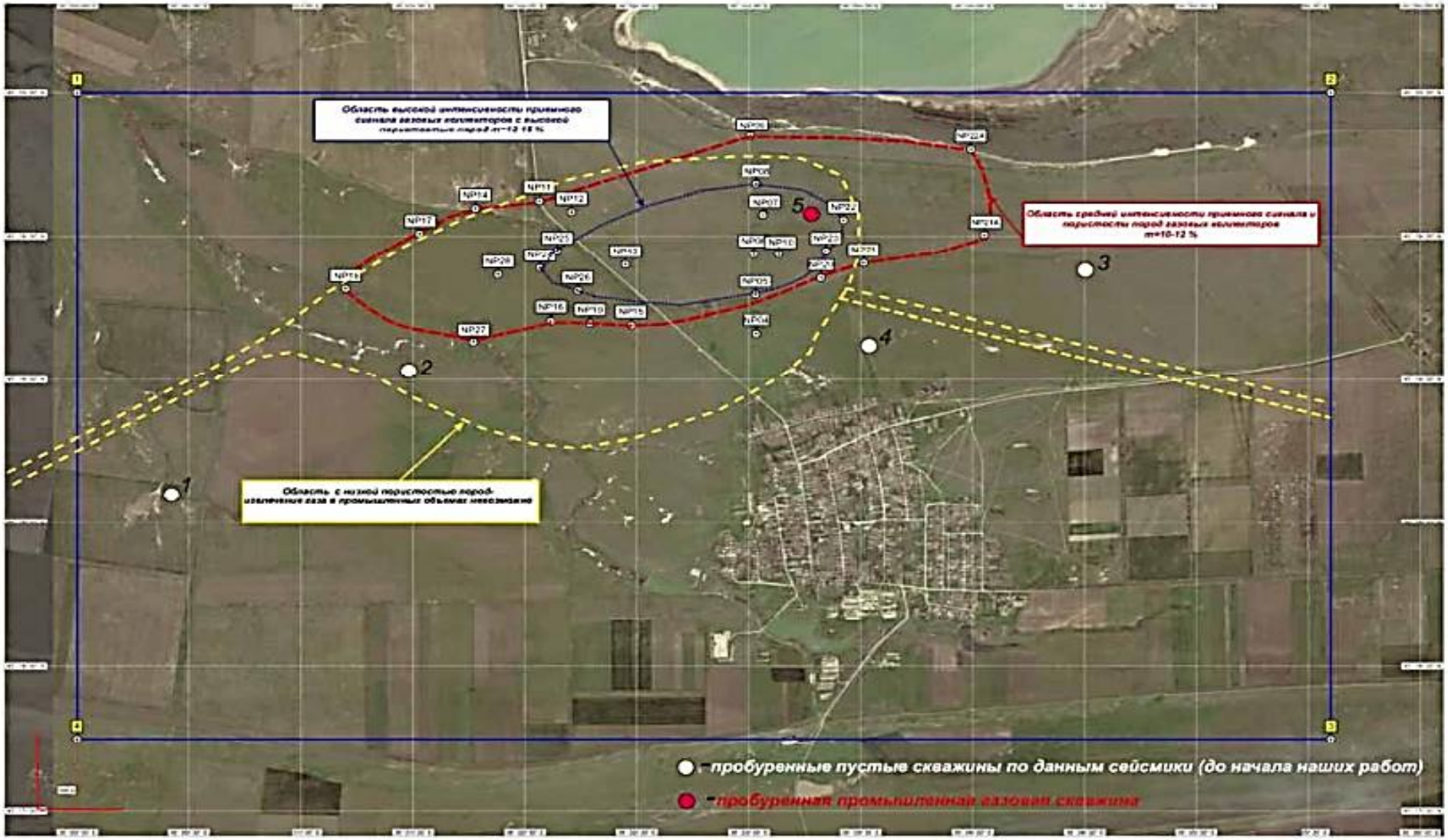
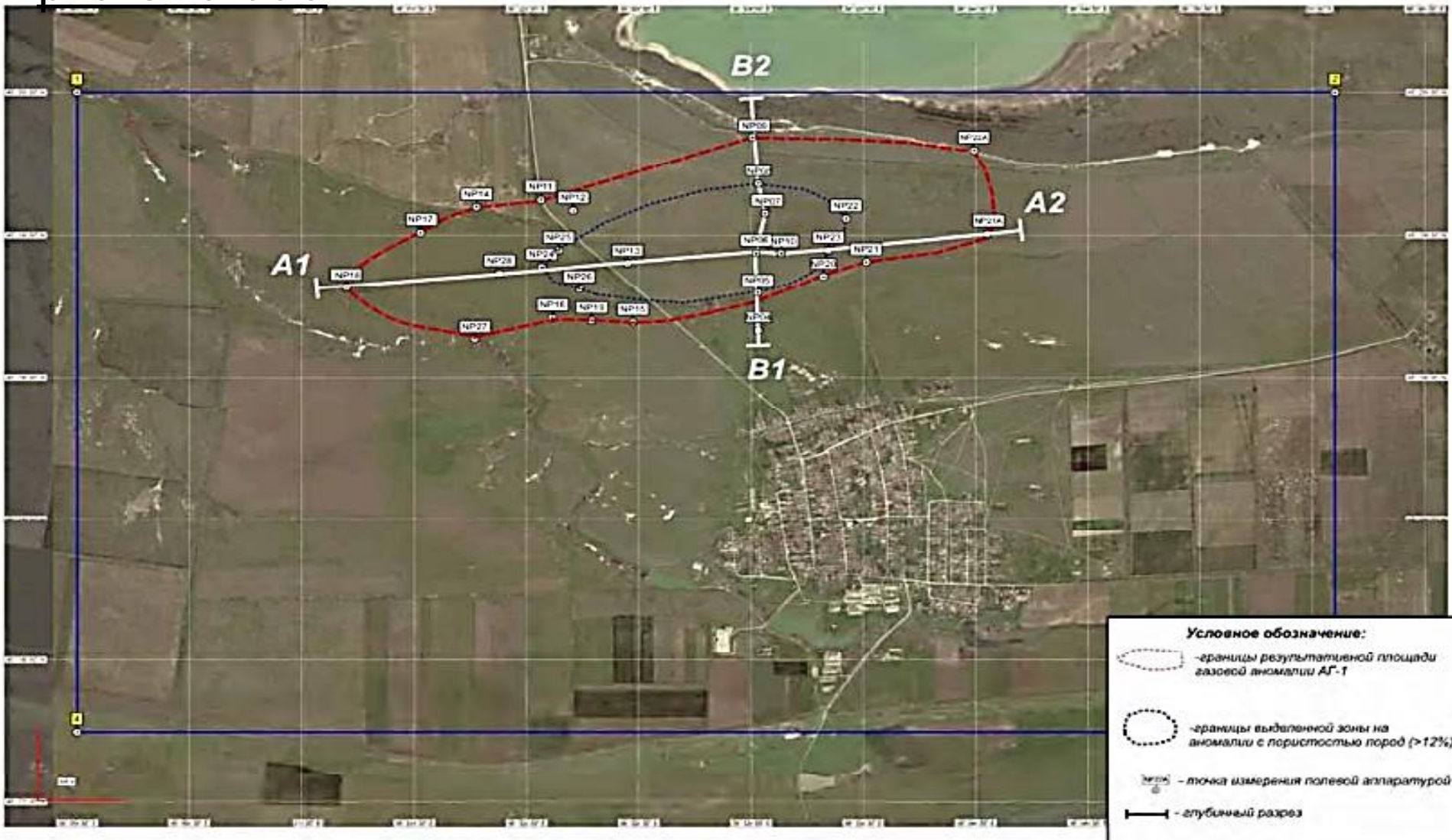
Etapa II (relevamiento de campo). Anomalías confirmadas



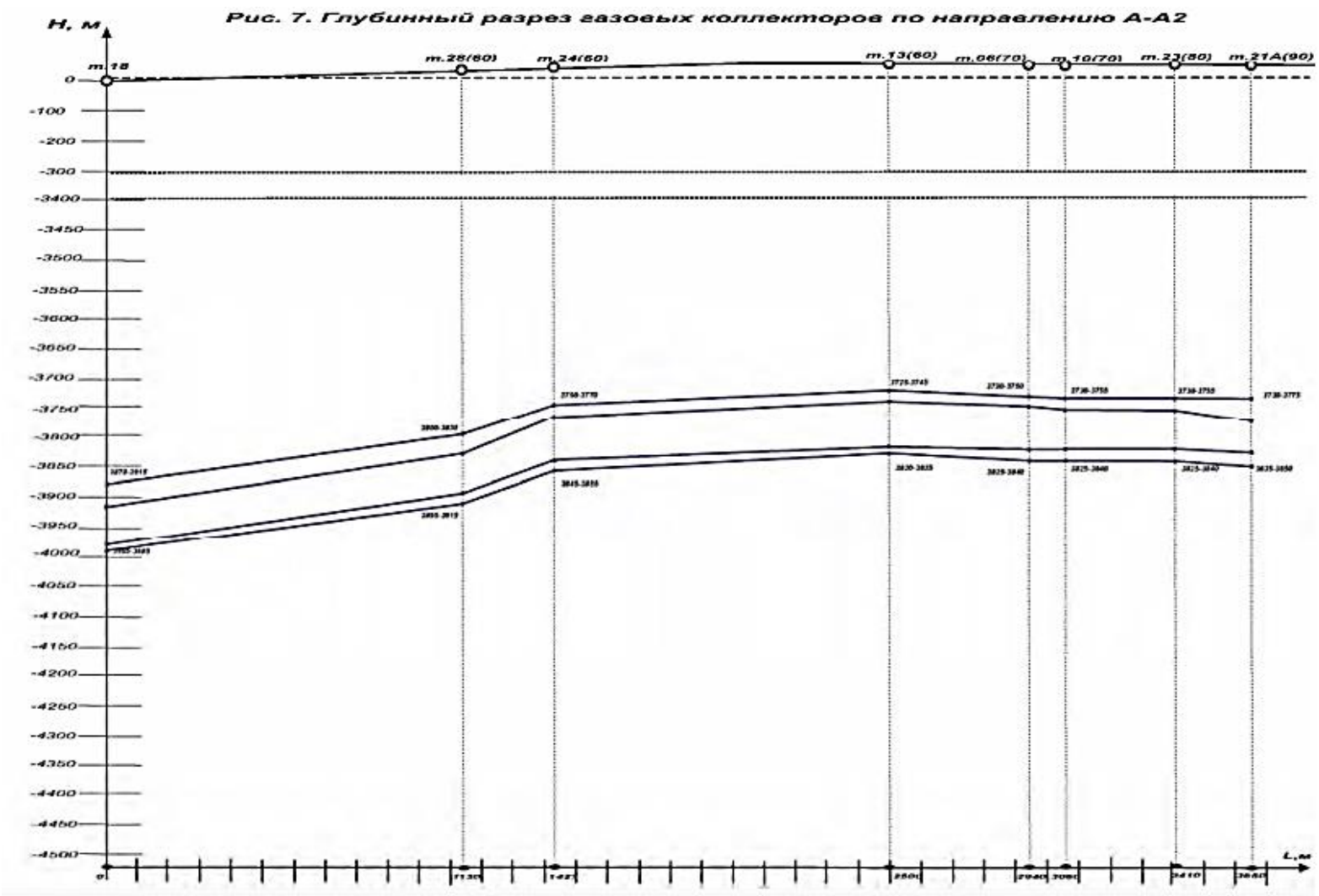
Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Líneas de estimación de profundidad



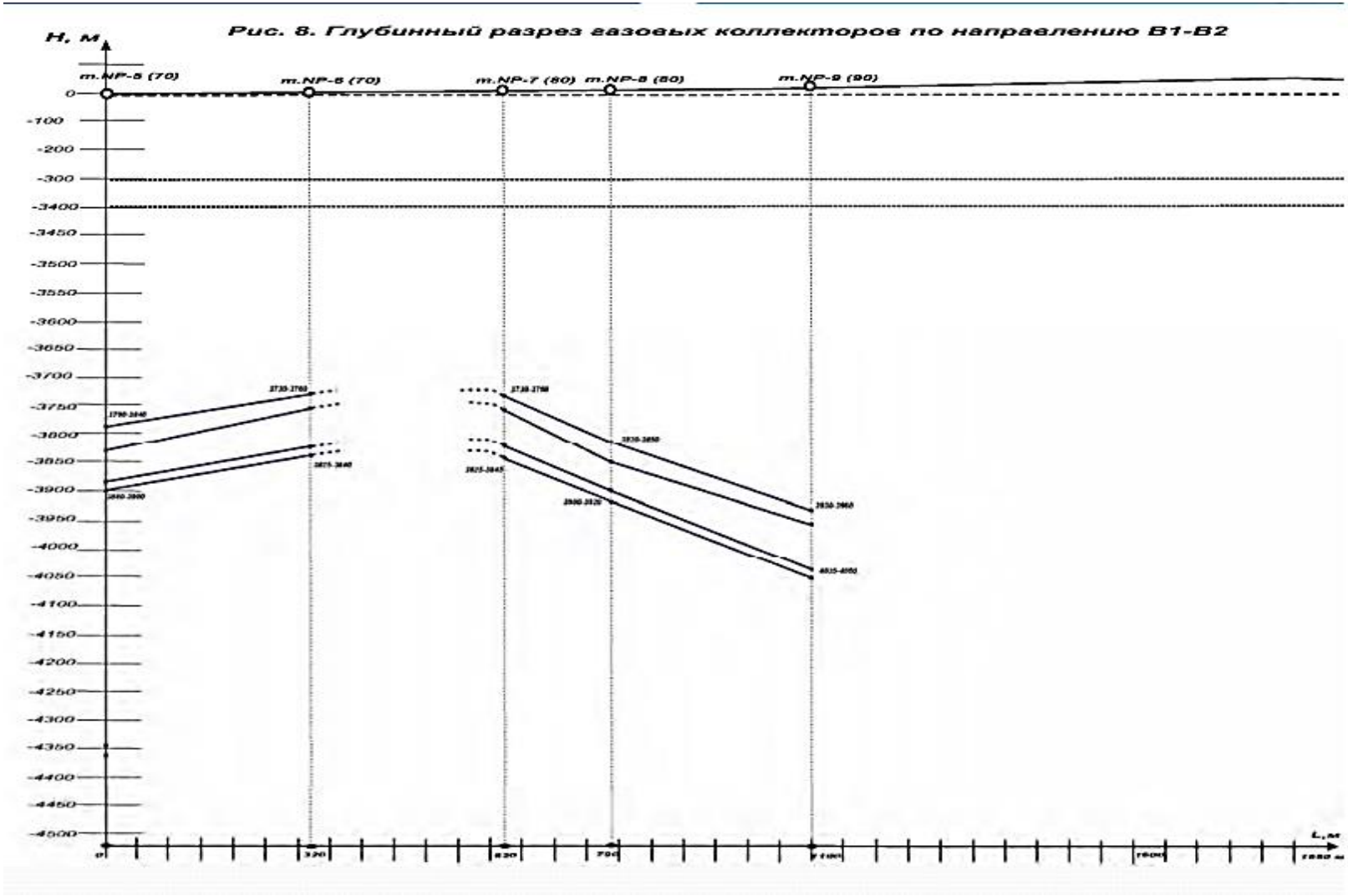
Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Estimación de profundidad



Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Estimación de profundidad



Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Propiedades del yacimiento

Location	Lat, N Long, E	Signal features	Altitude above sea level (m)	Gas reservoirs depth $-H_1$, $-H_2$ (m)	Rock types. Pressure (P, MPa)	Gas reservoir thickness, Δh (m)
1	2	3	4	5	6	7
NP04	45°19'9,7" 36°3'2,0"	The "gas" signal, the background values of the signal. Of no commercial value	70	-	-	-
NP05	45°19'17,7" 36°3'1,8"	Gas. The southern tip of the productive anomaly. Maximum signal intensity. Measurement of gas reservoir occurrence parameters.	70	(I) -3790÷3830; (II) -3880÷3900.	Porous sandstone, P_1=50; P_2=55	30 10
NP06	45°19'26,2" 36°3'1,4"	Gas. The maximum amplitude of the signal. Measurement of gas reservoir occurrence parameters.	70	(I) -3730÷3760; (II) -3825÷3840.	Porous sandstone, P_1=50; P_2=55	25 10
NP07	45°19'34,4" 36°3'3,8"	Gas. The maximum amplitude of the signal. Measurement of gas reservoir occurrence parameters.	80	(I) -3730÷3750; (II) -3825÷3845.	Porous sandstone, P_1=50; P_2=55	25 10
NP08	45°19'40,7" 36°3'2,0"	The boundary of the intense signal at the northern part of the anomaly.	80	(I) -3820÷3850; (II) -3930÷3950.	Porous sandstone, P_1=50; P_2=55	25 10
NP09	45°19'51" 36°03'00"	Gas. Average signal intensity. The northern part of the anomaly. Measurement of gas reservoir occurrence parameters.	90	(I) -3930÷3960; (II) -4035÷4050.	-//-	25 10
NP10	45°19'25,9" 36°03'7,1"	Gas. Maximum signal intensity. Measurement of gas reservoir occurrence parameters.	70	(I) -3730÷3755; (II) -3825÷3840.	-//-	25 10

Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Datos de profundidad y yacimiento

№	Location	Altitude above sea level (m)	The depth of occurrence of gas reservoirs from the sea level	Effective thickness of the gas reservoirs (m)
1	P-18	50	3870-3915 3965-3985	30 10
2	P-28	60	3800-3830 3895-3915	25 8
3	P-24	60	3750-3770 3845-3855	25 10
4	P-13	60	3725-3745 3820-3835	20 10
5	P-06	70	3730-3750 3825-3840	20 8
6	P-10	70	3730-3755 3825-3840	25 9
7	P-23	80	3730-3755 3825-3840	25 10
8	P-21A	90	37503775 38353850	20 8

Estudio de caso I. Rusia. campo productor

Etapa II (relevamiento de campo). Estimación de recursos

Horizon	Gas reservoir size			Depth, H (м)			Average effective thickness h (м)	Porosity m (%)	Water saturation, %	Pressure P (МПа)	Resources ($\cdot 10^6$ м^3)	
	Width (м)	Length (м)	Area S(м^2)	Min	Average	Max					In-place	Recoverable
I	1,3	3,8	$3,2 \cdot 10^6$	3725	3820	3930	20	12÷15	30	50	582,4	416,0
II	1,3	3,8	$3,2 \cdot 10^6$	3820	3930	4048	10	10÷12	40	55	147,84	105,6
Total:			$6,4 \cdot 10^6$								730,24	521,6

Volúmenes recuperables:

$$V_{rec} = S \cdot \Delta h \cdot P \cdot \eta_{CP};$$

donde η_{CP} – el factor integral de porosidad, temperatura, saturación de agua, recuperación de gas

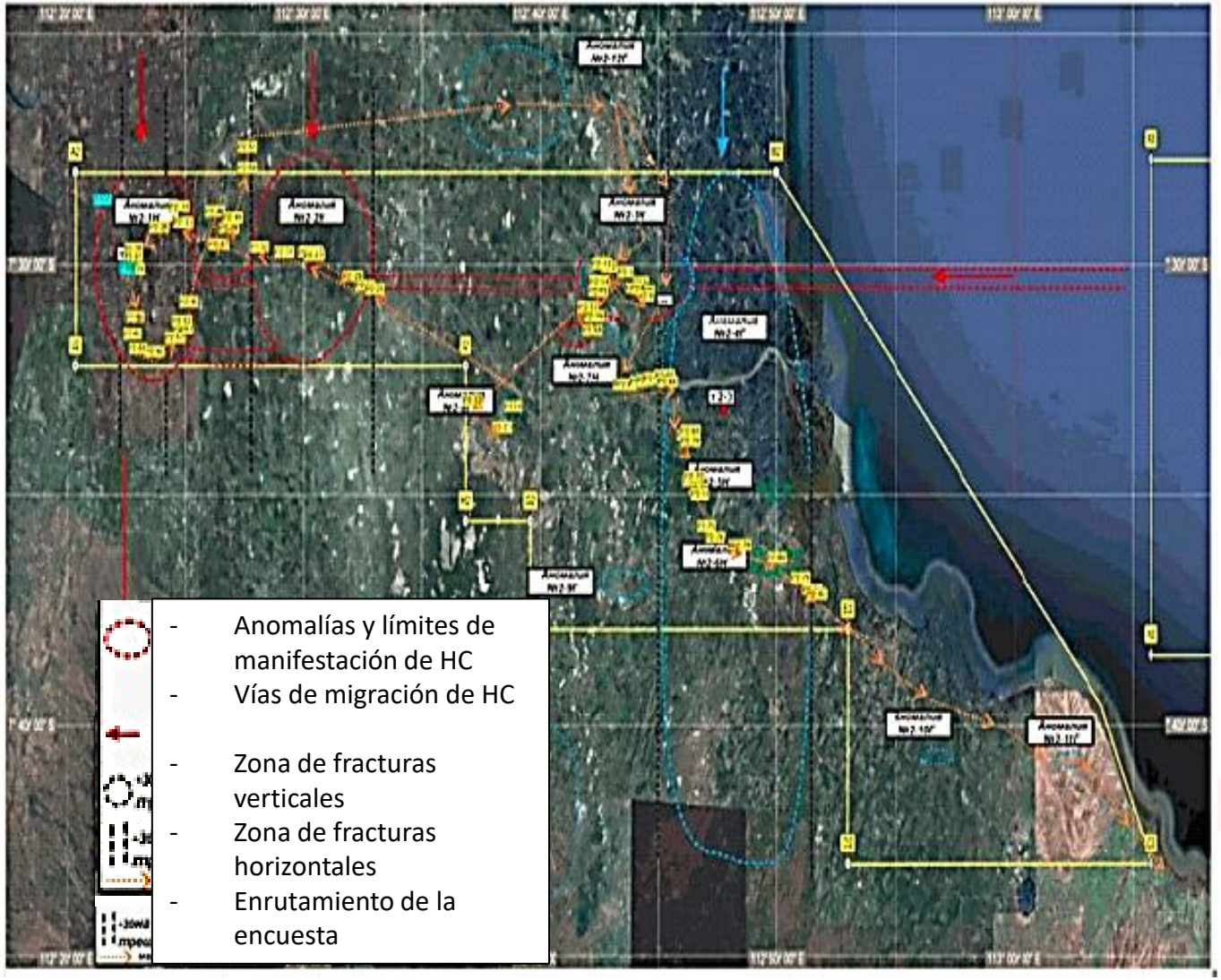
- η_{CP} – para el horizonte I – 0,13
- η_{CP} – para el horizonte II– 0,06

Estudio de caso I. Rusia. campo productor

Conclusiones

- Como resultado del estudio del área licenciada utilizando Tecnología RS-NMR y el procesamiento de imágenes espaciales con el equipo POISK (Etapa I), se identificaron y mapearon anomalías de gases.
- Se estimaron las profundidades aproximadas de ocurrencia de los yacimientos de gas.
- Se identificaron los tipos de rocas de yacimiento de los horizontes de gas y se registraron los espectros característicos de los campos electromagnéticos resonantes por encima de la anomalía mediante los cuales se determinan los espesores efectivos de la parte porosa de los yacimientos saturados de gas.
- Se predijeron algunas propiedades del yacimiento y se estimaron los recursos de gas
- Los pozos perforados en las ubicaciones recomendadas produjeron una entrada de gas que demostró la confiabilidad del método

Estudio de caso II. Indonesia. campo productor



License block in Indonesia

Productive wells are sitting within the areas outlined marked with red color

Caso II. Indonesia. Testimonial

Russ Techno
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CV RussTechno Indonesia
Ruko Permata Boulevard Blok BA, No.1
Jl Pos Pengumben Raya Jakarta Barat 11550 – INDONESIA

Date : 1 June, 2012 r.

Re: SBRDSS report reference

In accordance Contract No.1, 28.11.2011 between RussTechno Indonesia and Sevastopol State University, Sevastopol's specialists (head of team - Ph.D. Kovalev N.I.) were involved with a set of equipment "Poisk" for remote search for oil and gas with identification its depth and deposit on Brantas Block in Java, Indonesia total area 3050 km2. Off-shore – 2 blocks and On-shore – 3 blocks.

Previously, these areas were studied by traditional seismic methods and have more then 30 wells.

The study was performed in February 2012. Based on the results of study on Brantas Block by using remote method SBRDSS Sevastopol specialists discovered total 31 hydrocarbon anomalies.

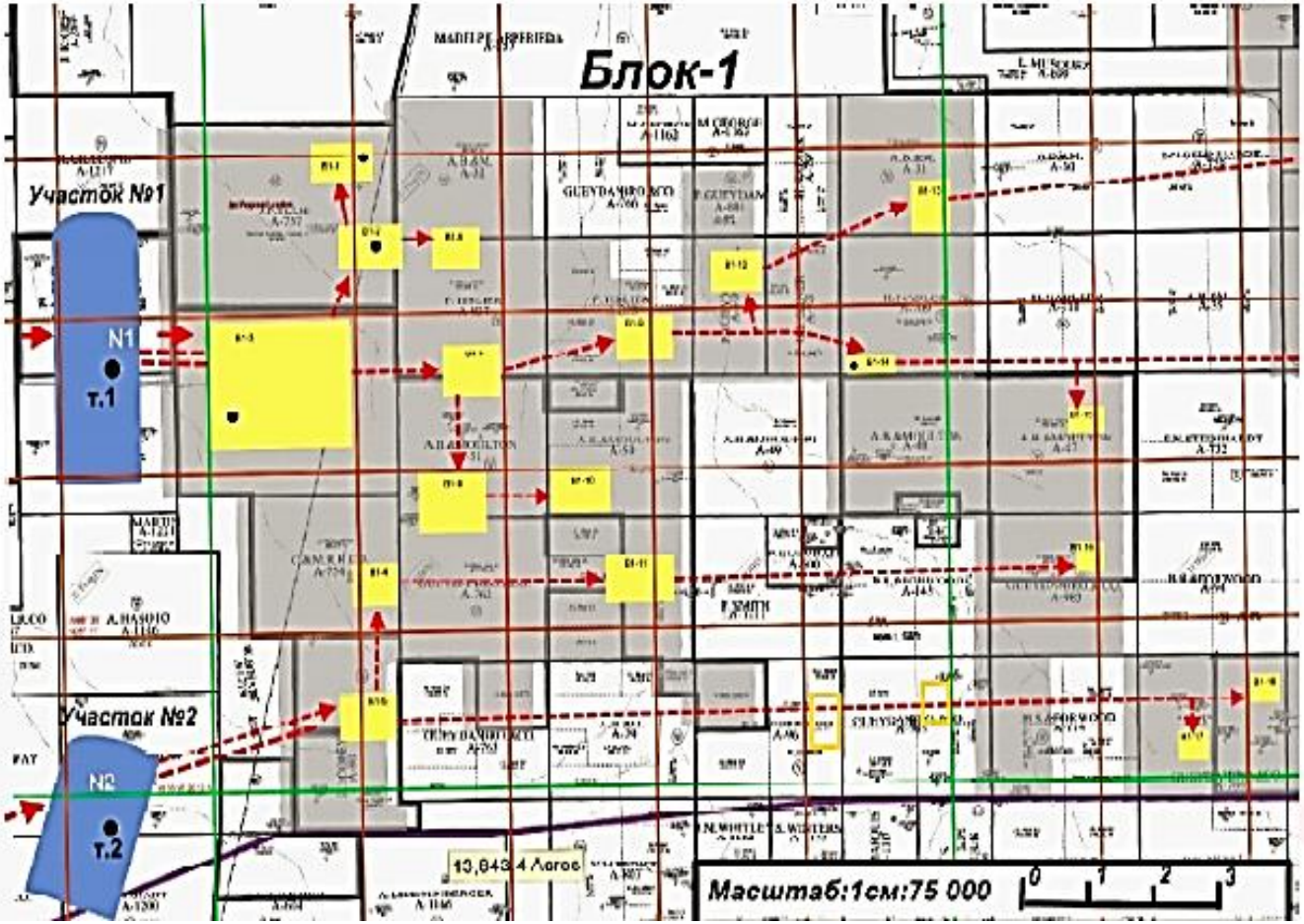
SBDRSS remote method was proven by compare with seismic date available in Lapindo Brantas company. This method is cost effective and very accurate in depth and deposit result.

Regards,

Thanigasalam
President Director

CV RUSSTECHNO INDONESIA

Estudio de caso III. EE.UU. campo productor de gas



License block in Texas, USA

Well N-1 penetrated shale oil formation as indicated by the corresponding anomaly

Caso III. EE.UU. Testimonial

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Founded in 2007

Outgoing # 11/10-03 15.11. 2010

Conclusion

on the results of prospecting works performed by specialists of the «Sevastopol National University of Nuclear Energy and Industry» in the territory of Texas, USA

Commissioned by the Institute of Geophysics and Problems of the Earth (Kiev, Ukraine) in 2010 specialists (Ph.D. Goh V.A., Ph.D. Kovalev N.I., Doctor of Geological and Mineralogical Sciences Filippov E.M., etc.) performed a search and exploration of natural gas deposits on the territory of Texas, USA using the equipment of the remote complex "Search". At the same time, remote search facilities were used to study the territory in the south of Texas, with an area of about 500 km2.

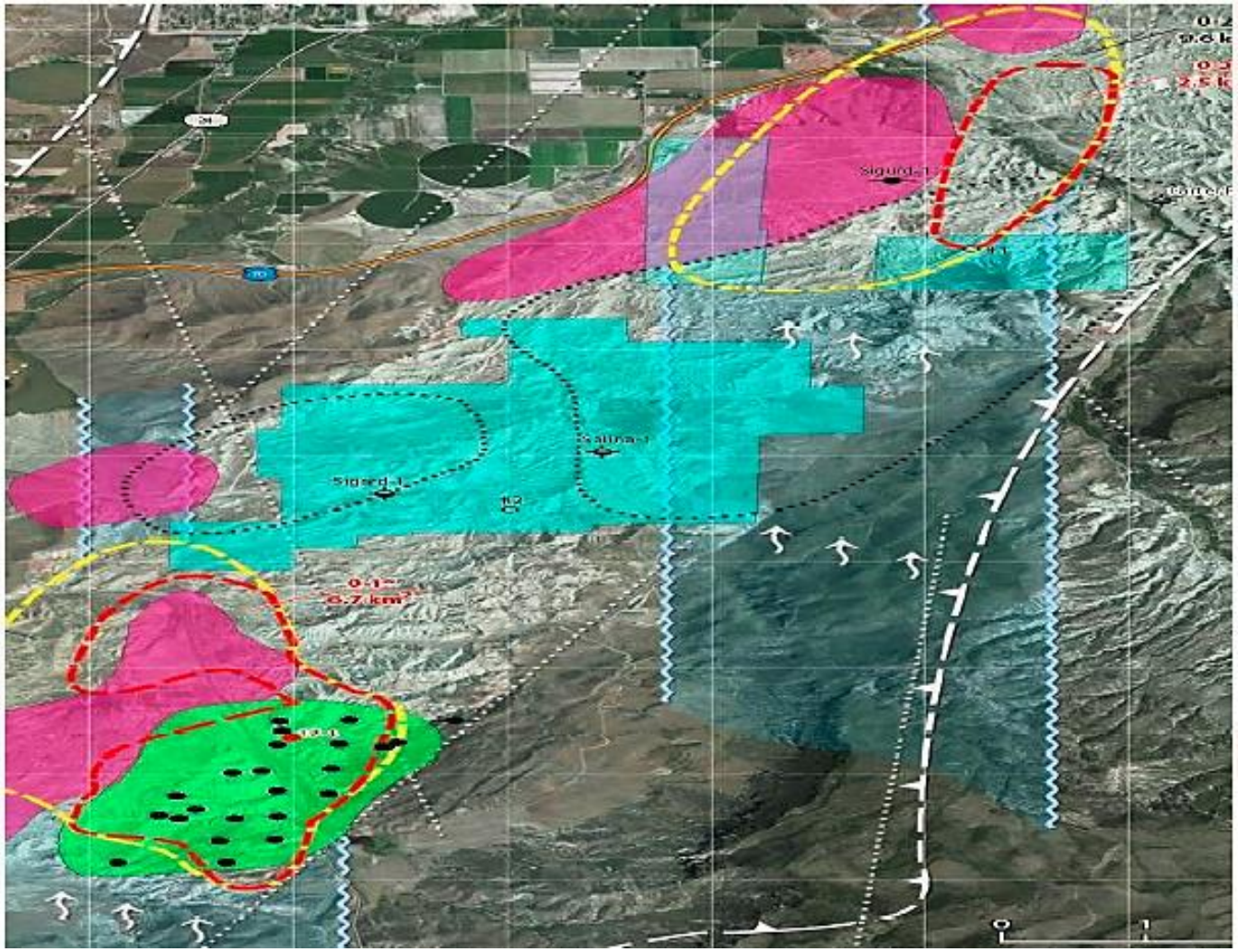
Based on the results of work on a given territory, underground natural gas accumulations were discovered having industrial significance, 3 points for drilling industrial wells were selected and surveyed.

The results of drilling a well at one of the proposed points confirmed the presence of a natural gas reservoir. The gas pressure in the deposit proved to be abnormally high, 620 atm., in accordance with the survey data.

Director of
Institute of Geophysics and
Problems of the Earth
Pavel Ivashchenko

Україна
«ІНСТИТУТ ГЕОФІЗИКИ ТА ПРОБЛЕМ ЗЕМЛІ»

Estudio de caso IV. EE.UU. Campo productor de petróleo



License block in Utah, USA

The oil accumulations and wells locations have proved the delineated anomalies. Recommendations were made to drill new wells at the identified anomalies to the north-east.

Caso IV. EE.UU. Testimonial

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FINAL REPORT
On Presentation-Demonstration of "Deep Vision" Model

"CARPATHIA", LLC, represented by Vasyl Lyubarets, as a party representing "Deep Vision" Model of discovering natural resources that being tested, and Kelly Alvey, as a party participating in the test, have executed this Final Report concerning final results of testing unique Model "Deep Vision".

Results of inspection of objects, located on the territory of the state of Utah, USA **Dated 25 of February 2009**

Object #	Kelly Alvey's data	"Deep Vision" data	Comparison %	CONCLUSION
X "0"	Nothing	Nothing	100 %	Matching results
X 1	Nothing	Nothing	100 %	Matching results
X 9/1	6380	6150-6450	100 %	Matching results
X 9/2	6380	6150-6420	100 %	Matching results
X 9/3	6500 ; 9500-10000	6040-6420 ; 9450-9750	98 %	Matching results

Director of "Institute of Geophysics and Problems of the Earth",
Technical Director of "Benif International" Corporation — Pavlo N. Ivashchenko

Inventor of "Deep Vision" Model
Professor — Vitaly A. Gokh

Inventor of "Deep Vision" Model
Professor — Mykola I. Kovalyov

Signatures of Witnesses:

Vasyl O. Lyubarets, Leader-President of "CARPATHIA", LLC

Kelly Alvey

Rex W Hardy, Lawyer

Roy Moore, Wolverine Gas and Oil Company of Utah, LLC. Landman

Ray Beckham, BYU Professor

Jeffrey F. Chivers, "ENDEAVOR" Capital Group, LLC

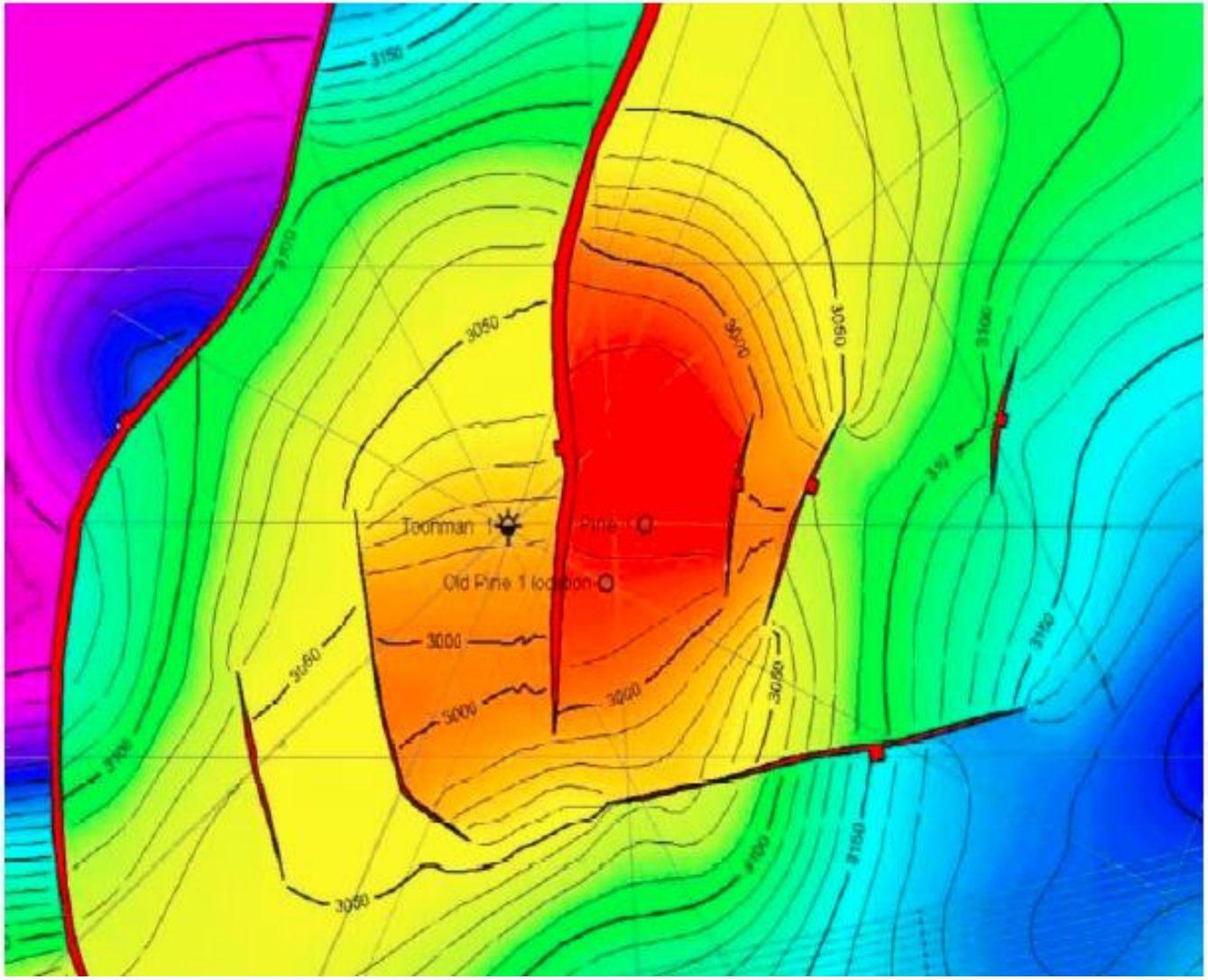
Brad Whittaker, CEDO Executive Director

Edward W. Fail, P.G.UT Government Department of Natural Resources

Arbitrator — Elizabeth Goryunova, Director of International Relations, Salt Lake Chamber of Commerce

Estudio de caso V.

Australia. Campo productor de petróleo



License block Pel-105 in Australia

Well Pine-1 location was changed as suggested the identified anomaly. The well has been drilled and proved to be productive.

FANDS-LLC
Inteligencia
Economica
Proactiva

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