



## Kumpulan POISK

**Penerokaan Semula dalam bidang Matang dalam pengeluaran**

*Contoh projek*

# Kajian kes I. Rusia. Bidang pengeluaran

## Tujuan kajian

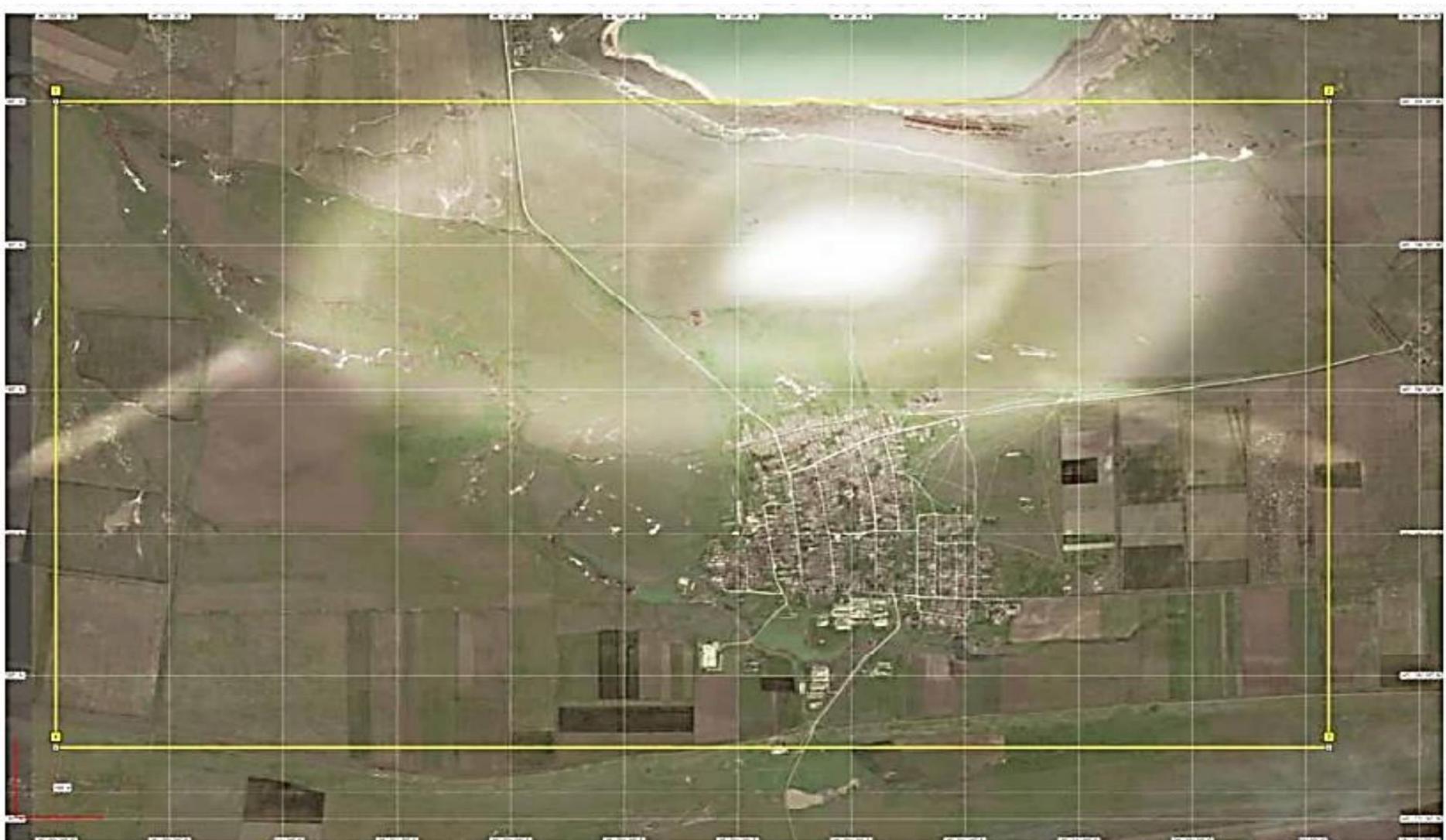
Pengenalpastian dan persempadan semula anomali hidrokarbon yang berkaitan dengan mendapan yang belum digerudi atau ditemui dalam medan pengeluaran kondensat gas

- 1) Tentukan anomali hidrokarbon di kawasan kajian dengan memproses data satelit (langkah I) dan meneliti kawasan anomali secara terperinci menggunakan peralatan tanah pembuktian resonans mudah alih (langkah II);
- 2) Ukur kedalaman takungan hidrokarbon dalam anomali;
- 3) Anggarkan ketebalan takungan hidrokarbon;
- 4) Anggarkan ketebalan purata bahagian berliang pembentukan gas dan tekanan gas di setiap ufuk;
- 5) Memetakan laluan migrasi hidrokarbon melalui batuan telap gas;
- 6) Tentukan jenis batu takungan untuk ufuk hidrokarbon;
- 7) Membina profil kedalaman takungan hidrokarbon pada anomali dengan langkah pengukuran tidak melebihi 500 m;
- 8) Anggarkan sumber hidrokarbon dalam anomali yang dikenal pasti.

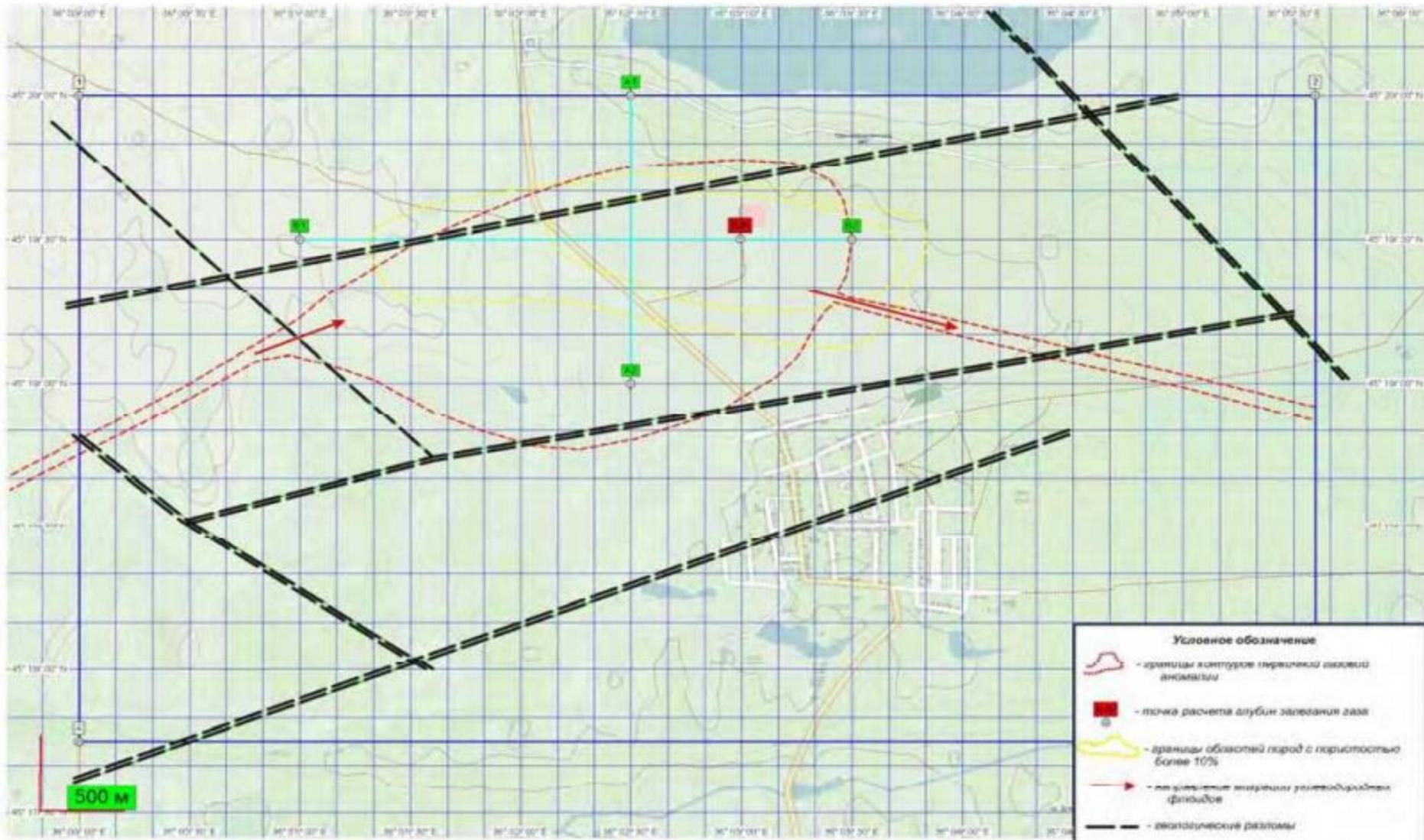
# Kajian kes I. Rusia. Medan pengeluaran fasa I (penderiaan jauh). Susun atur



# Kajian kes I. Rusia. Medan pengeluaran fasa I (penderiaan jauh). Anomali dipetakan

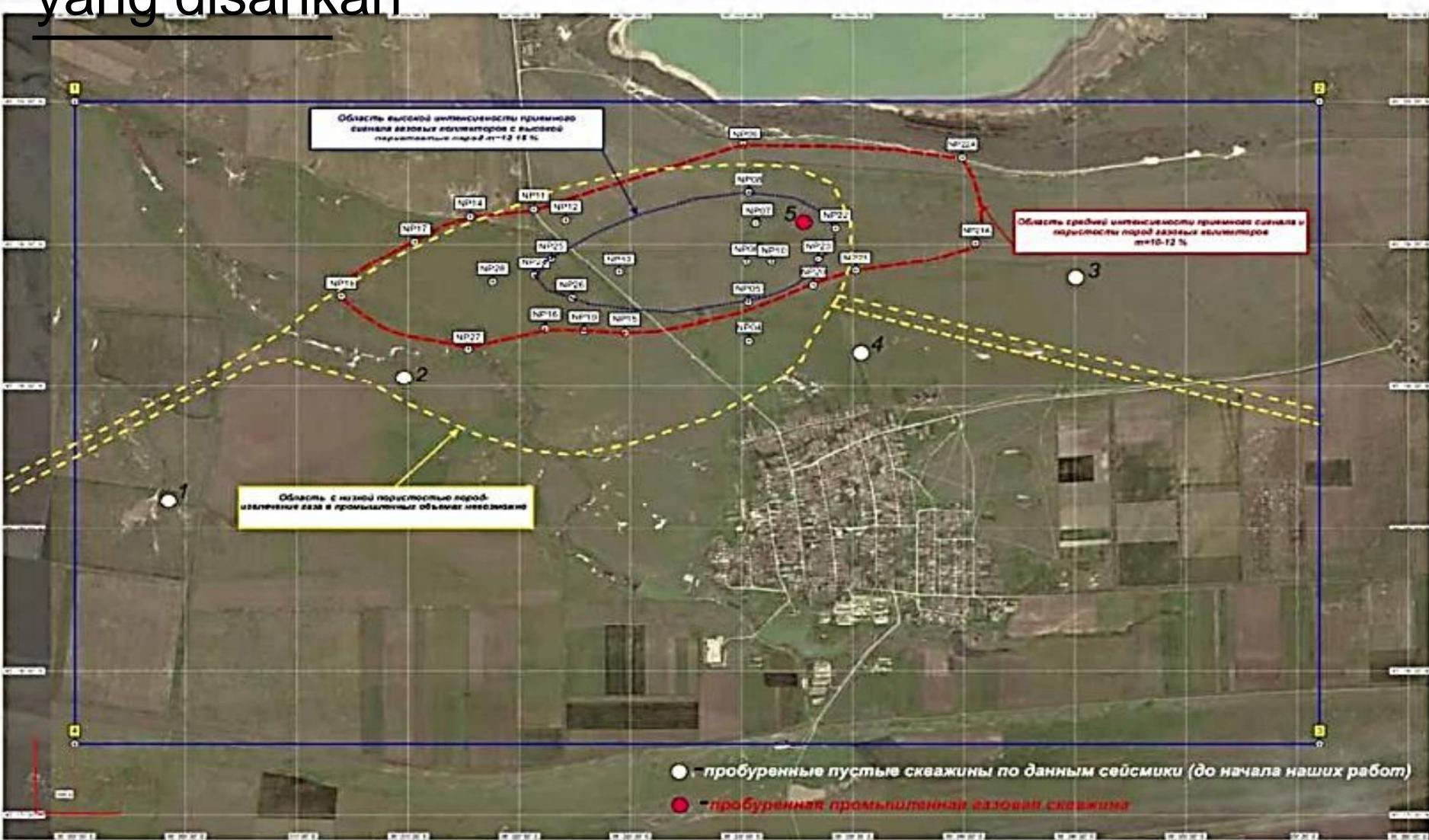


# Kajian kes I. Rusia. Medan pengeluaran fasa I (penderiaan jauh). Lalai

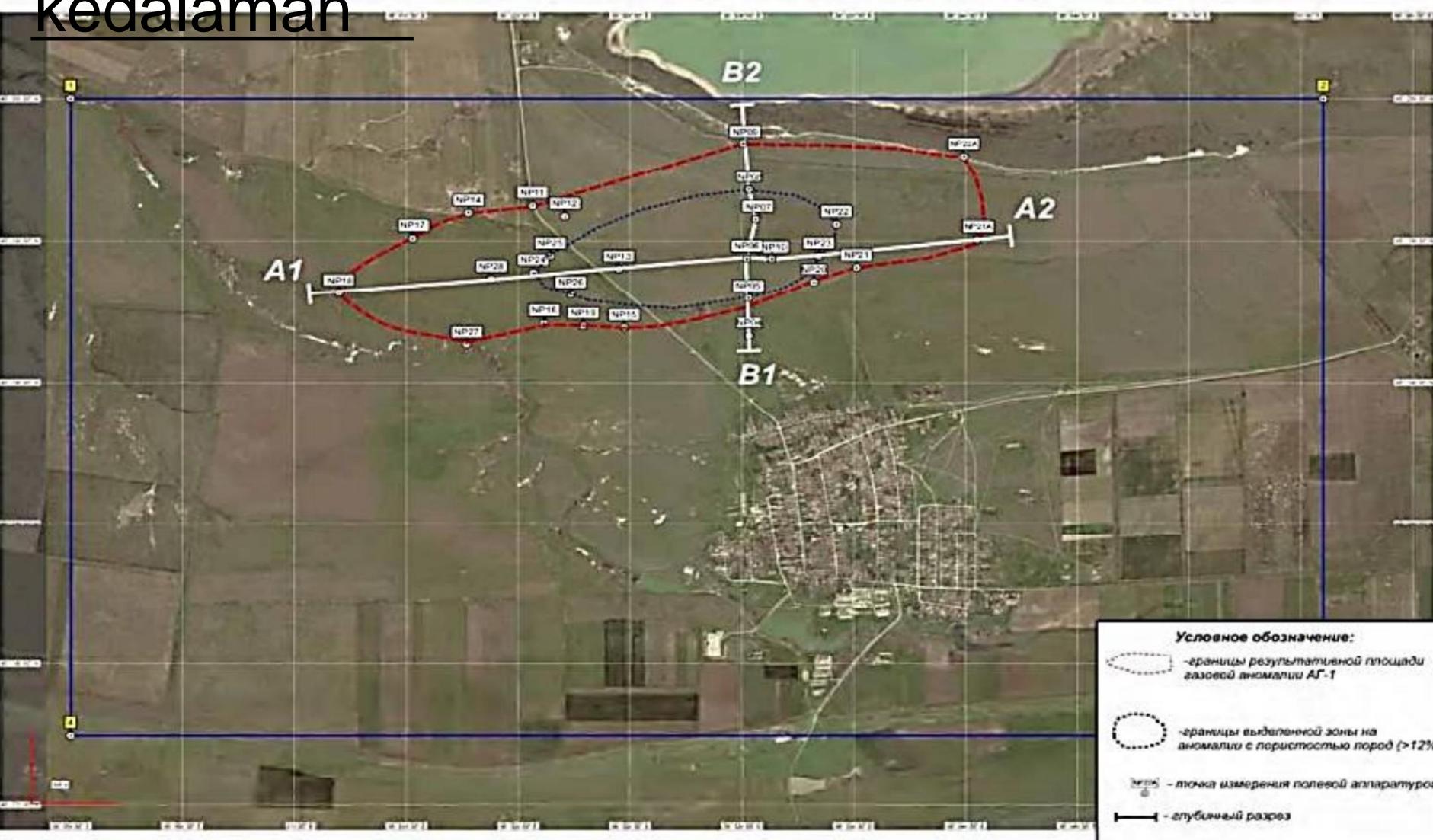


# Kajian kes I. Rusia. Bidang pengeluaran

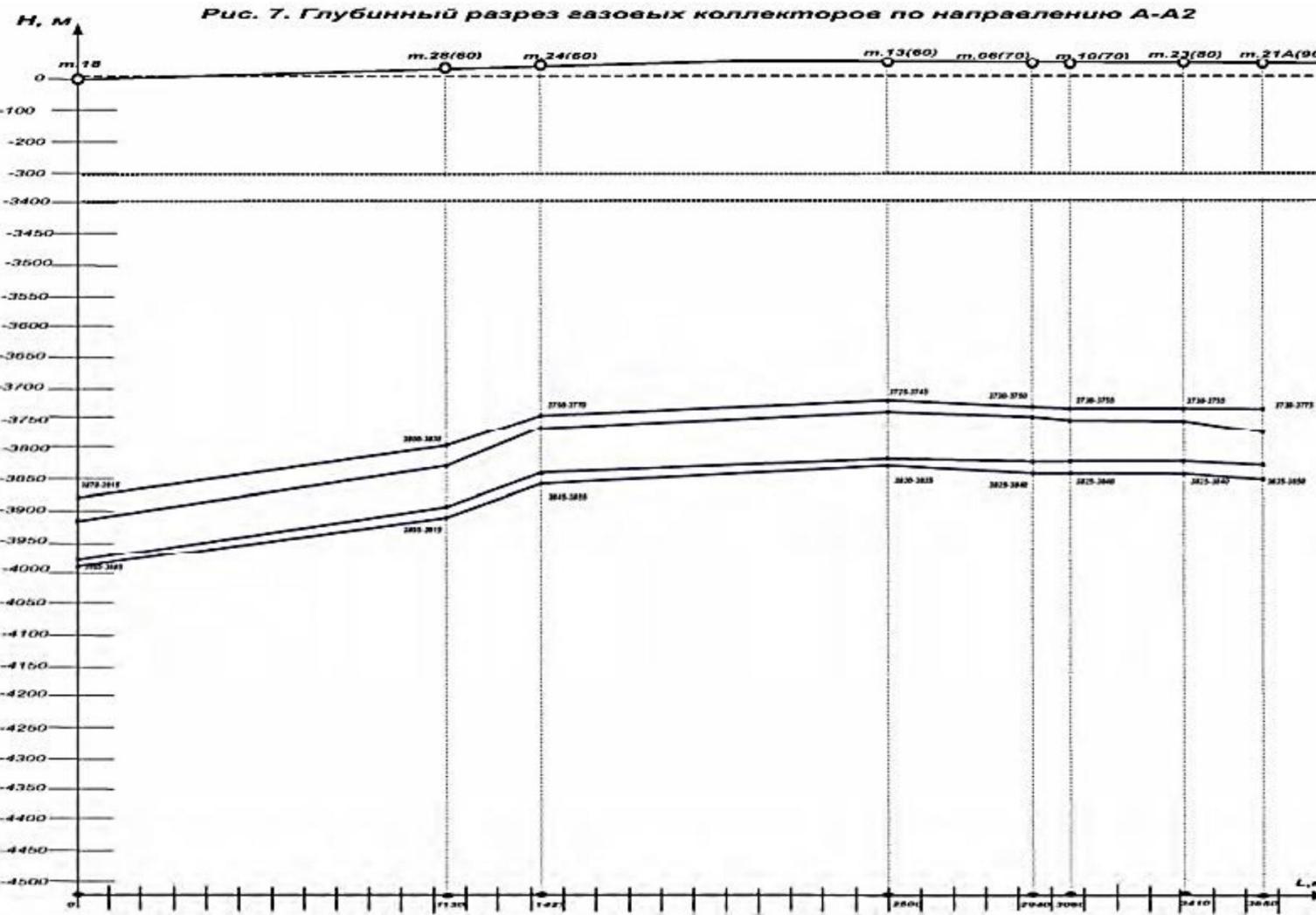
## Fasa II (kaji selidik lapangan). Anomali yang disahkan



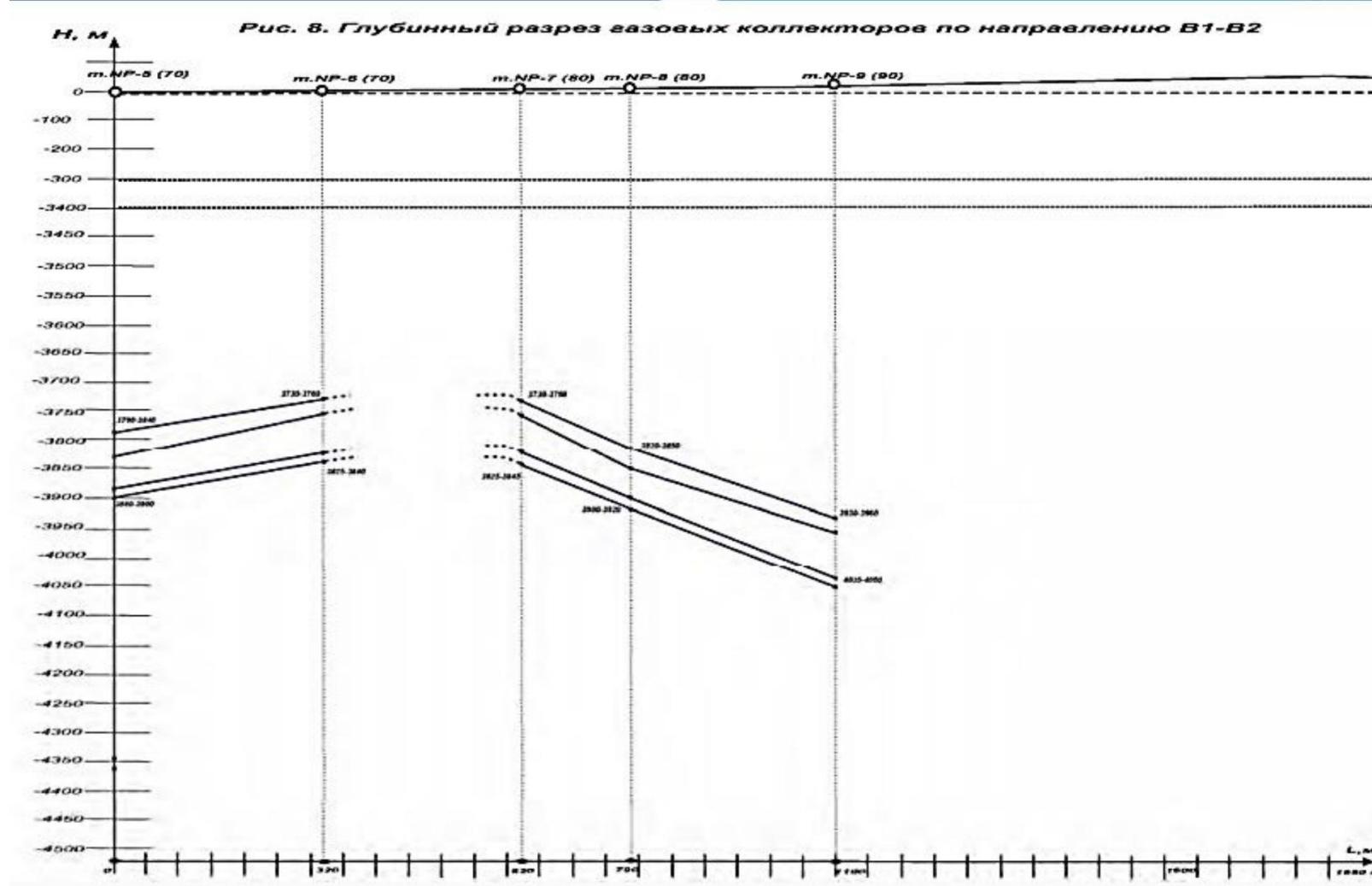
# Kajian kes I. Rusia. Bidang pengeluaran Fasa II (kaji selidik lapangan). Garis anggaran kedalaman



# Kajian kes I. Rusia. Bidang pengeluaran Fasa II (kaji selidik lapangan). Anggaran kedalaman



# Kajian kes I. Rusia. Bidang pengeluaran Fasa II (kaji selidik lapangan). Anggaran kedalaman



# Kajian kes I. Rusia. Bidang pengeluaran

## Fasa II (kaji selidik lapangan). Hartanah Takungan

Locat ion	Lat, N Long, E	Signal features	Altitude above sea level (m)	Gas reservoirs depth -H <sub>1</sub> , - H <sub>2</sub> (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, <u>P<sub>1</sub>=50</u> ; <u>P<sub>2</sub>=55</u>	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, <u>P<sub>1</sub>=50</u> ; <u>P<sub>2</sub>=55</u>	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, <u>P<sub>1</sub>=50</u> ; <u>P<sub>2</sub>=55</u>	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, <u>P<sub>1</sub>=50</u> ; <u>P<sub>2</sub>=55</u>	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

# Kajian kes I. Rusia. Bidang pengeluaran

## Fasa II (kaji selidik lapangan). Data kedalaman dan takungan

Nº	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	30
			3965-3985	10
2	P-28	60	3800-3830	25
			3895-3915	8
3	P-24	60	3750-3770	25
			3845-3855	10
4	P-13	60	3725-3745	20
			3820-3835	10
5	P-06	70	3730-3750	20
			3825-3840	8
6	P-10	70	3730-3755	25
			3825-3840	9
7	P-23	80	3730-3755	25
			3825-3840	10
8	P-21A	90	37503775	20
			38353850	8

# Kajian kes I. Rusia. Bidang pengeluaran

## Fasa II (kaji selidik lapangan). Anggaran sumber

Horizon	Gas reservoir size			Depth, H (m)			Average effective thickness h (m)	Porosity m (%)	Water saturation, %	Pressure P (MPa)	Resources ( $\cdot 10^6$ m $^3$ )	
	Width (m)	Length (m)	Area S(m $^2$ )	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
<b>Total:</b>		$6,4 \cdot 10^6$									730,24	521,6

Jumlah yang boleh dipulihkan:

$$V_{rec} = S \cdot h \cdot P \cdot \gamma_w ;$$

di mana  $\gamma_w$  – faktor integral keliangan, suhu, ketepuan air, pemulihan gas

- $\gamma_w$  – untuk ufuk I – 0.13
- $\gamma_w$  – untuk ufuk II – 0.06

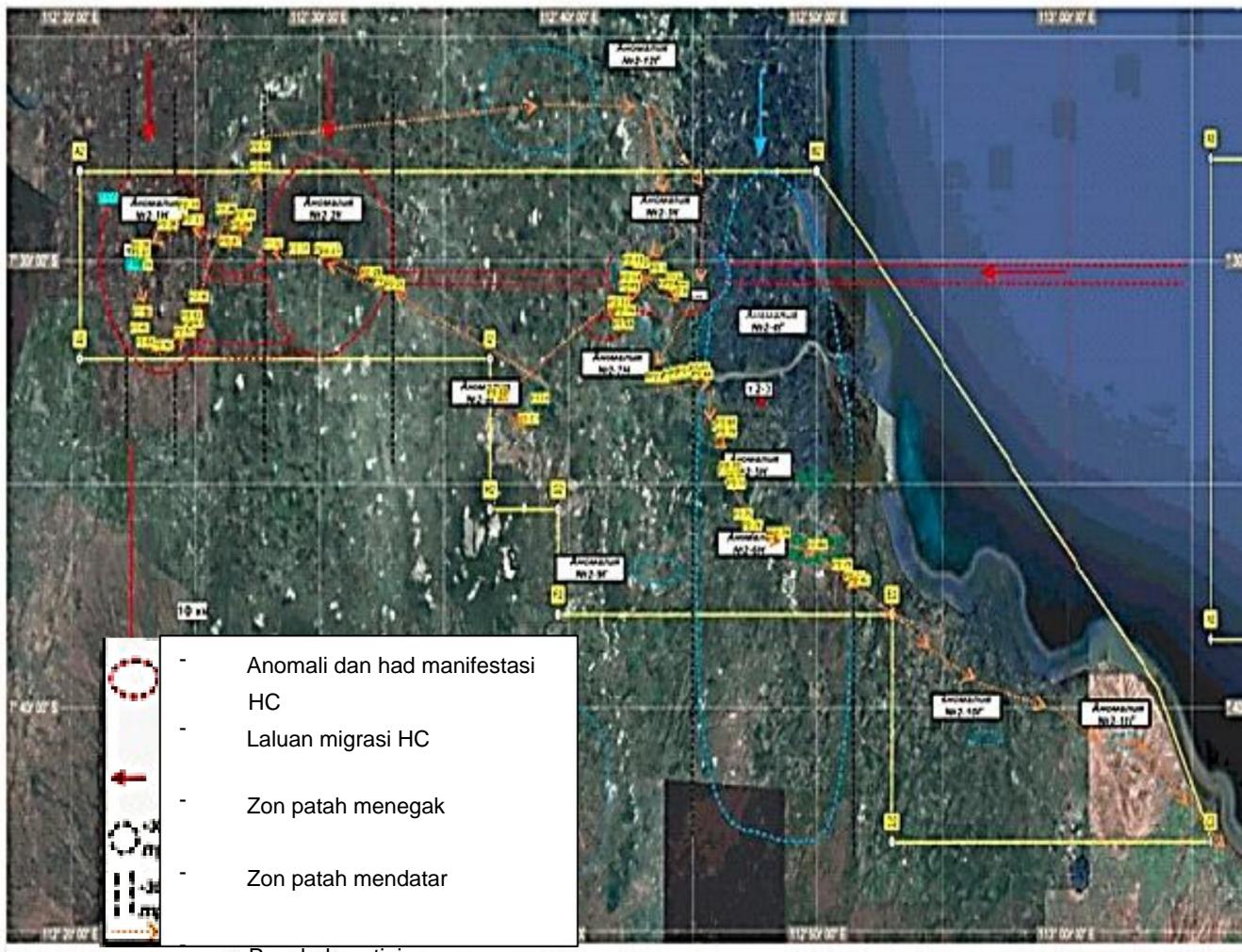
# Kajian kes I. Rusia. Bidang pengeluaran

## kesimpulan

- Mengikuti kajian kawasan berlesen menggunakan teknologi RS-NMR dan pemprosesan imej spatial menggunakan peralatan POISK (peringkat I), anomali daripada gas telah dikenalpasti dan dipetakan.
- Kedalaman (anggaran) kejadian takungan gas dianggarkan.
- Jenis-jenis batuan takungan ufuk gas telah dikenalpasti dan spektrumnya ciri-ciri medan elektromagnet resonans di atas anomali mempunyai telah direkodkan yang mana ketebalan berkesan bahagian berliang takungan tepu dengan gas ditentukan.
- Beberapa sifat takungan telah diramalkan dan sumber gas telah dianggarkan
- Telaga yang digerudi di lokasi yang disyorkan menghasilkan kemasukan gas yang terbukti kebolehpercayaan kaedah

# Kajian kes II. Indonesia.

## Bidang pengeluaran



License block in Indonesia

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

# Kes II. Indonesia. Testimoni

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Techno  
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CV RussTechno Indonesia

Ruko Permata Boulevard Blok BA, No.1  
JI 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 than 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.

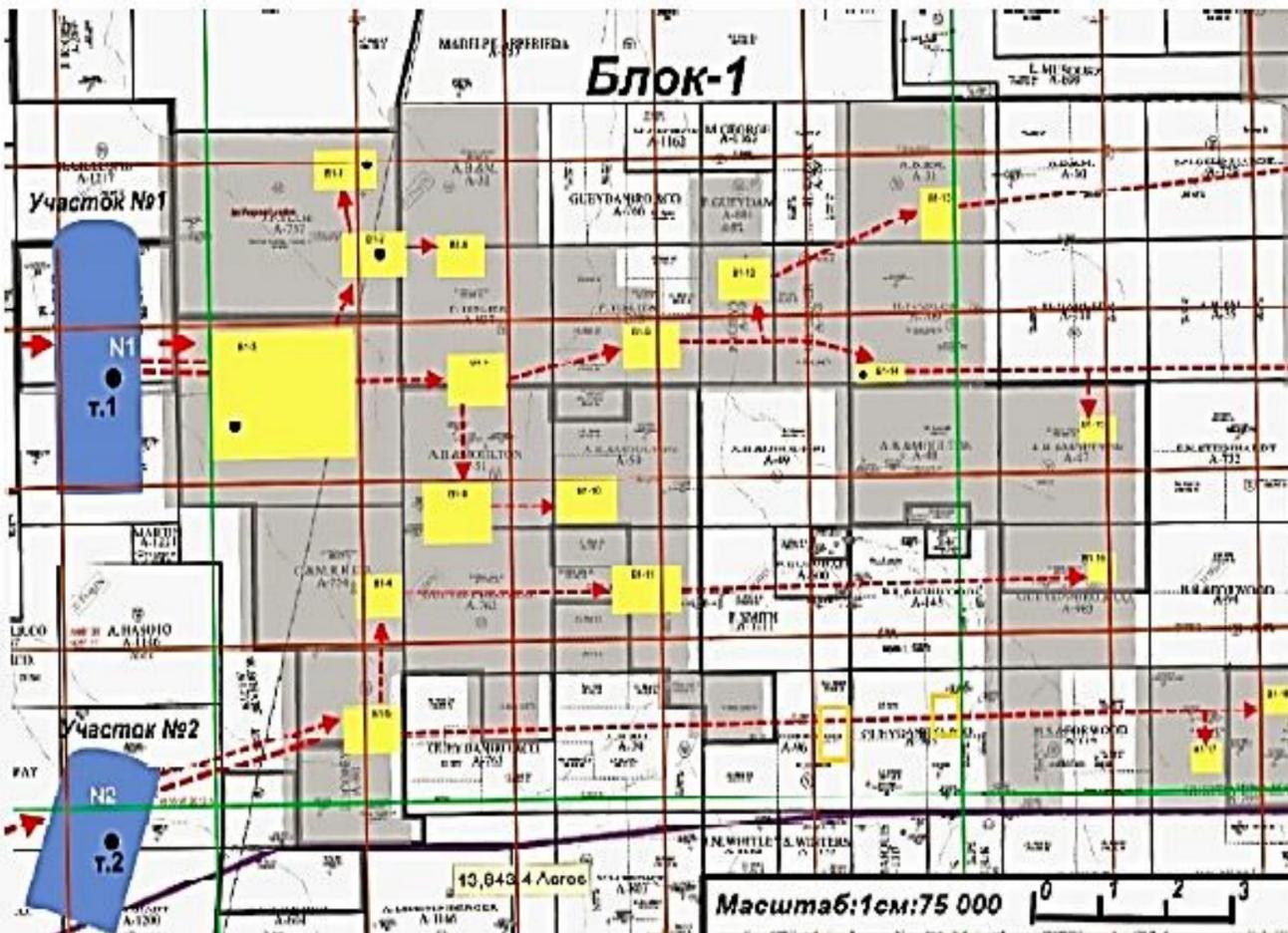
Regards,

Thanigasalam  
President Director



# Kajian kes III. AMERIKA SYARIKAT

## Bidang pengeluaran gas



## License block in Texas, USA

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

# Kes III. AMERIKA SYARIKAT. Testimoni



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 km<sup>2</sup>.

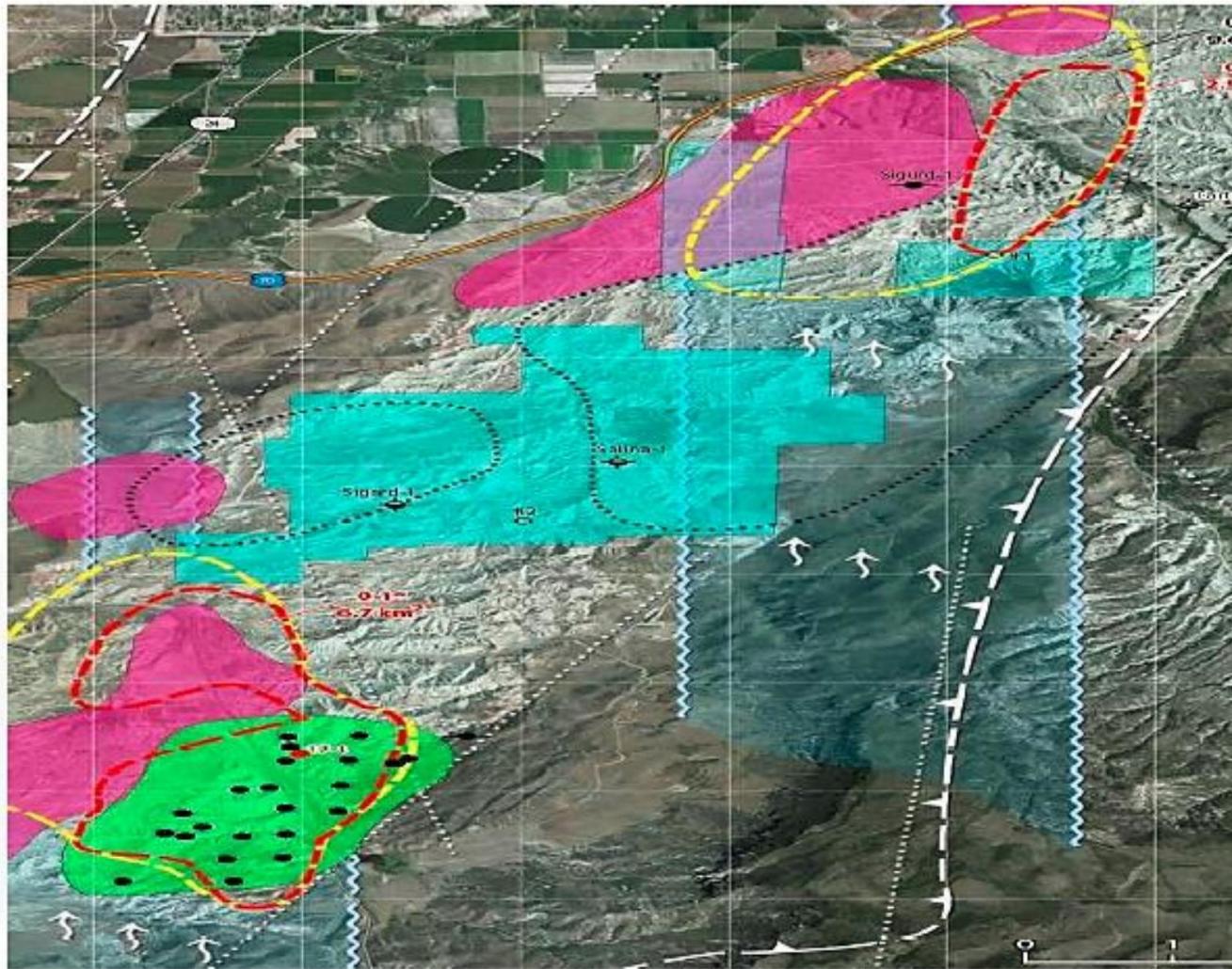
Based on the results of work on a given territory, underground natural gas accumulations were discovered having industrial significance, 3 points for drilling industrial wells were selected and surveyed.

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



# Kajian kes IV. AMERIKA SYARIKAT. Medan pengeluaran minyak



License block in  
Utah, USA

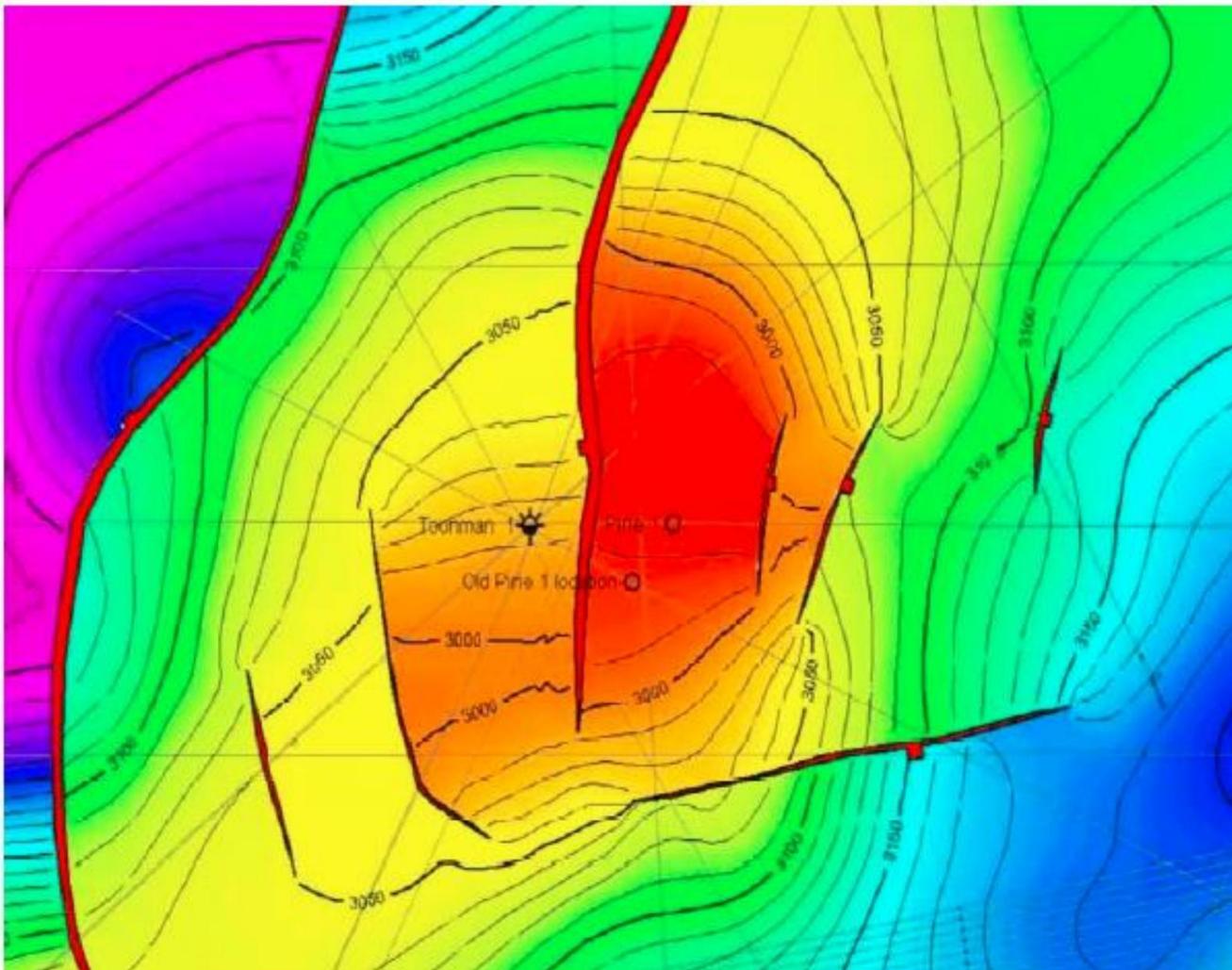
The oil accumulations and wells locations have proved the delineated anomalies. Recommendations were made to drill new wells at the identified anomalies to the north-east.

## Kes IV. AMERIKA SYARIKAT. Testimoni



# Kajian kes V. Australia.

# Medan pengeluaran minyak



## License block Pel-105 in Aus- tralia

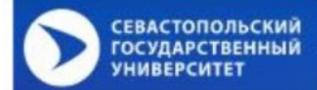
Well Pine-1 location was changed as suggested the identified anomaly. The well has been drilled and proved to be productive.



# RSS NMR

THE SIMPLE WAY OF EXPLORATION

G R O U P  
**POISK**



By Fands-LLC



FANDS-LLC  
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Economica  
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