



The pulsed electromagnetic sounding method (PEMS)

Searches of deposits of minerals and water

Problem

- Their reliability does not exceed 48%, those, more than half of the wells drilled are “empty”
- In hard-to-reach places (mountains, swamps, shallow water, etc.), only aeromethods are available
- The cost of the boring drilling of one mining hole on a depth 5 kilometres makes the approximately 7 million dollars of the USA

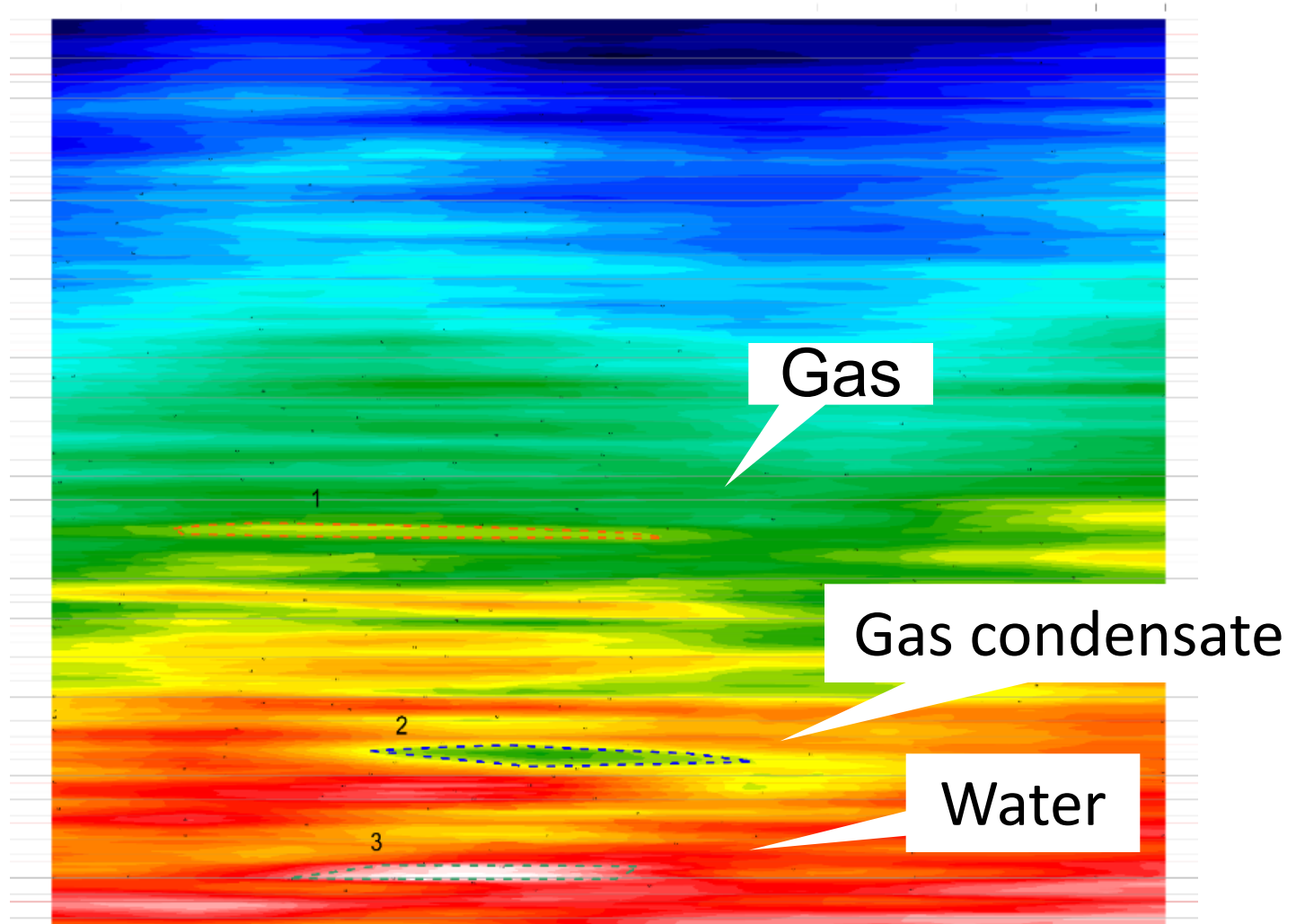
Solution

- A method of the pulsating electromagnetic sounding (PEMS) is a modern exact instrument of search of deposits of oil and gas
- Simplicity of the use and application does technology of PEMS an effective instrument for rapid and exact decisions
- Basic principle of work is a receipt of the high quality field information and subsequent deep semantic interpretation

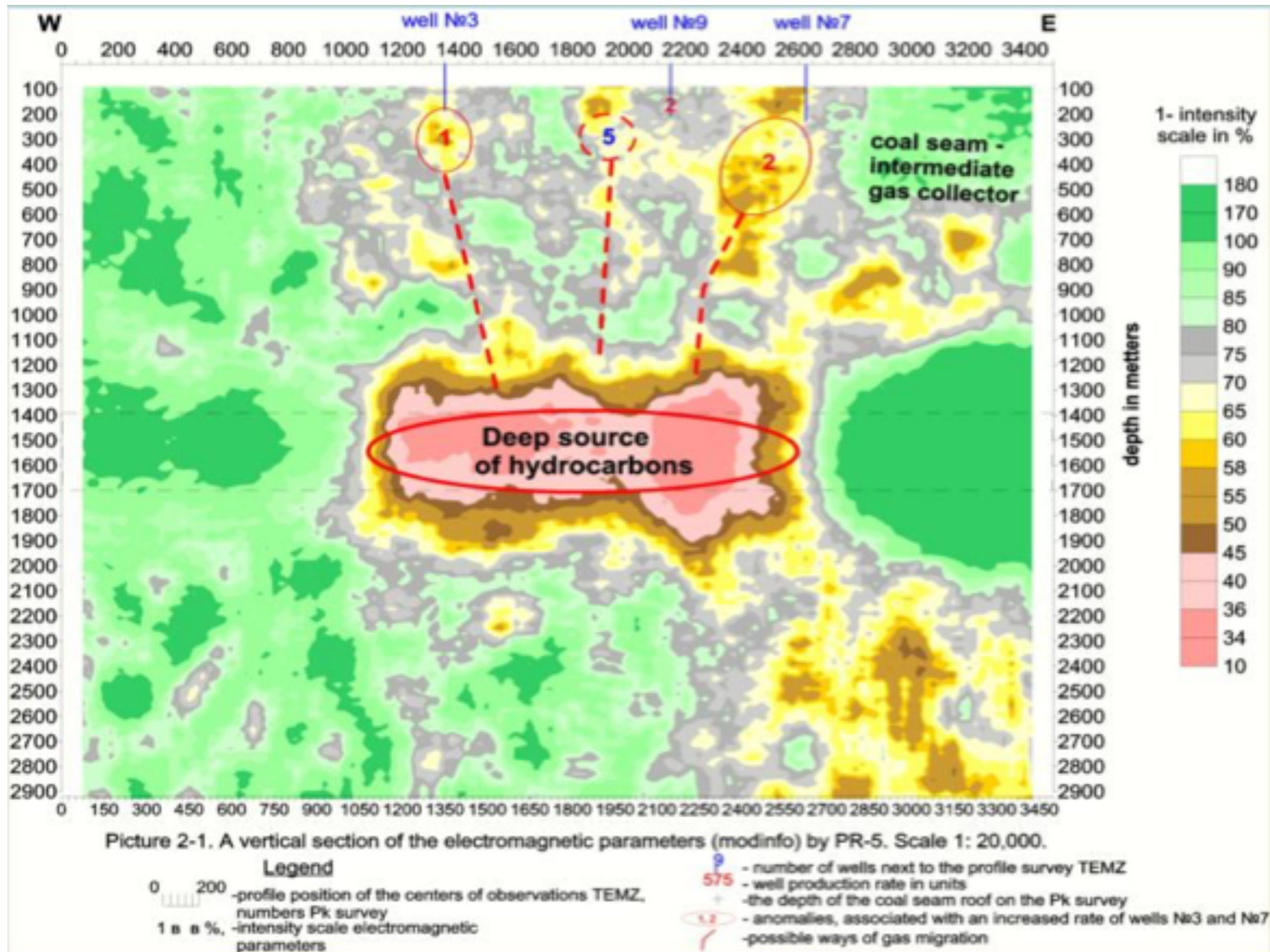
Advantages

- Research on PEMS technologies does not require the use of bulky vehicles, large vessels and significant human resources
- It takes three times less time than with seismic studies on a similar area
- The ability to conduct research in hard-to-reach areas
- The method of PEMS can determine a form, volume, coordinates of object and what is execute a structure (oil, gas or water)
- A method of PEMS is absolutely ecologically safe

**Section along the profile
at one of the hydrocarbon deposits in Ukraine.
Depth of research - 7300 meters**



PEMS PROFILE RESULTS



Our equipment



We work from the ship (even a small boat), plane, helicopter, car or on foot



Marine acquisition of PEMS data



Advantages of PEMS

№	INDICATOR	PEMS	Seismic exploration
1	Reliability	83-99%	30-43%
2	Depth accuracy (over 5 000 m)	0.5 m	25-60 m
3	Cost	low	high
4	Determination of oil and gas in non-structural, including tectonic traps	+	-
5	The ability to conduct research in hard-to-reach areas (aerial survey)	+	-
6	Environmental friendliness	+	-
7	Result	Oil/gas/water field	only structure

MARKET

- Our clients are mining, coal and oil and gas companies
- Government Resource Management Structures

Current status of the project

- The methodology for using PEMS has been developed
- Designed and tested equipment
- The first commercial studies using the PEMS method were performed

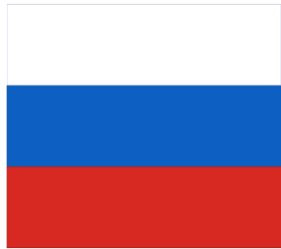
Geography



Ukraine



Mexico



Russia



Nigeria



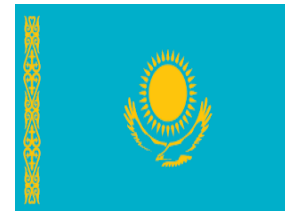
India



Liberia



USA



Kazakhstan

Intellectual property

- Technology and Intellectual property rights are protected by a patent and our Now-How