GEOELEC
Geothermal data Ukraine

Based on literature and public documents

Regional Workshop
Baltic States and Finland

Burkhard SANNER

European Geothermal Energy Council

Vilnius, 22/03/2012

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Information and literature used:

Stoyanov, B. & Taylor, A. (1996): Geothermal Resources in Russia & Ukraine. – 44 p., Bob Lawrence & Associates, Inc., Alexandria VA

Barylo, A. (2000): Assessment of the energy potential of the energy potential of the Beregovsky geothermal system, Ukraine. – UNU-GTP Report 2000/03, Reykjavik

Khvorov, M., Shurchkov, A. & Zabarny, G. (2005): Geothermal Resources of Ukraine. - Proc. WGC 2005, paper 0169, Antalya

Gordienko, I., Gordienko, V. & Zavgorodnyaya O. (2005): Geothermal Resources of Ukraine. – Proc. WGC 2005, paper 2619, Antalya

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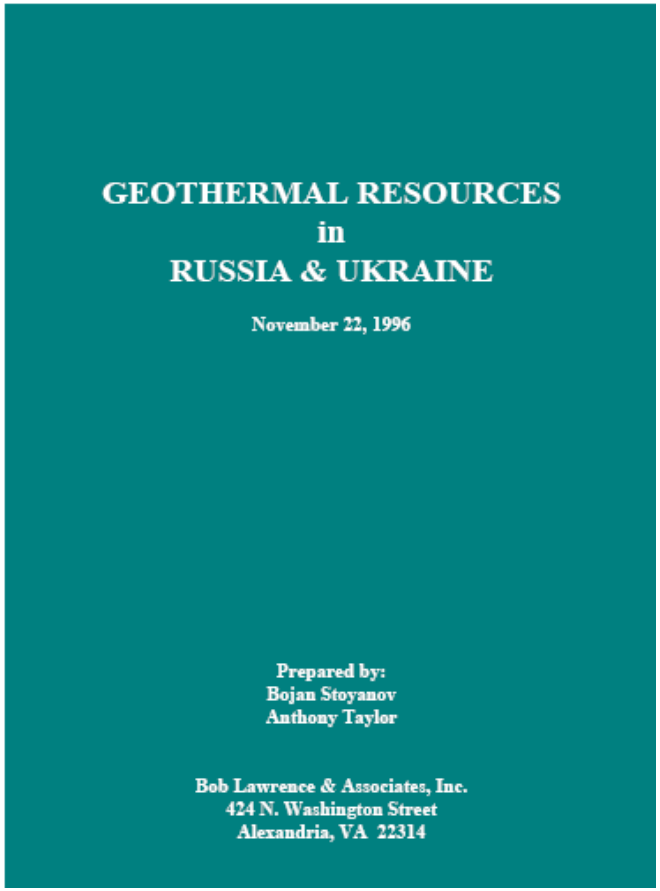
Geothermal data

Report Stoyanov & Taylor, 1996



GEOTHERMAL RESOURCES
in
RUSSIA & UKRAINE

November 22, 1996

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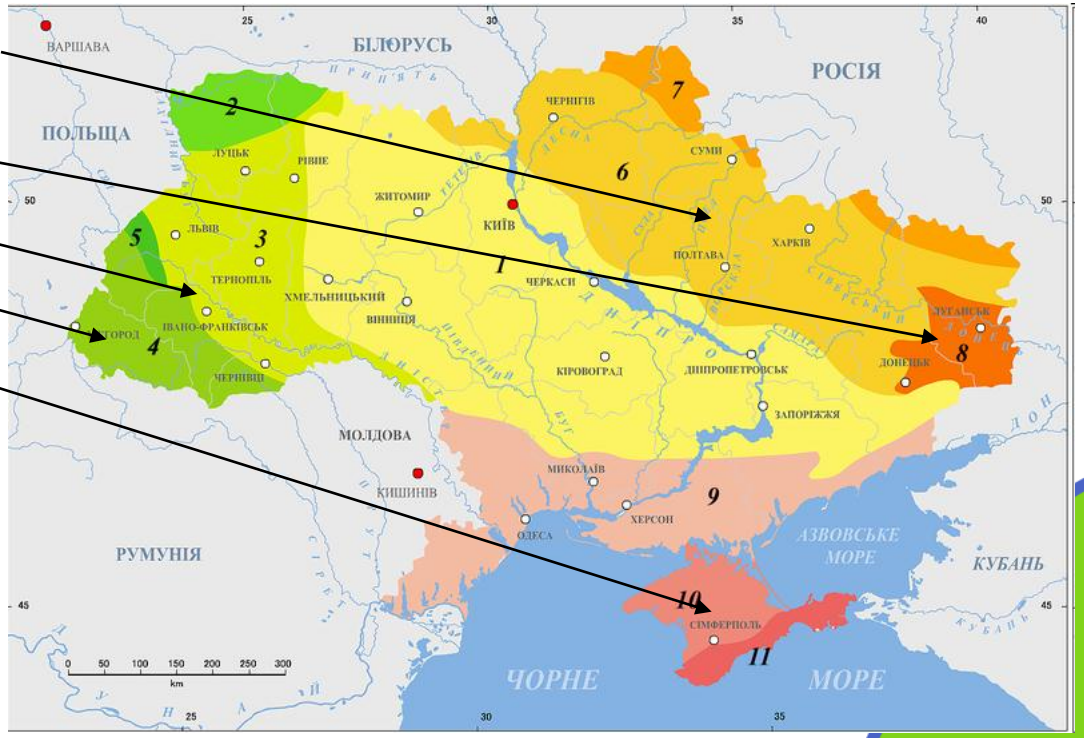
Report Stoyanov & Taylor, 1996

Prospective areas:

- Dneprovsko-Donetskaia trough
- Donetskoe folding system
- Ciscarpathian depressions
- Transcarpathian depressions
- Skifskaia (Scythian) platform

Conclusion based on study by geophysical methods

- geothermal heat flux
- Depth of the 150 °C isotherme



(Map Tora, 2009, Wikimedia Commons)

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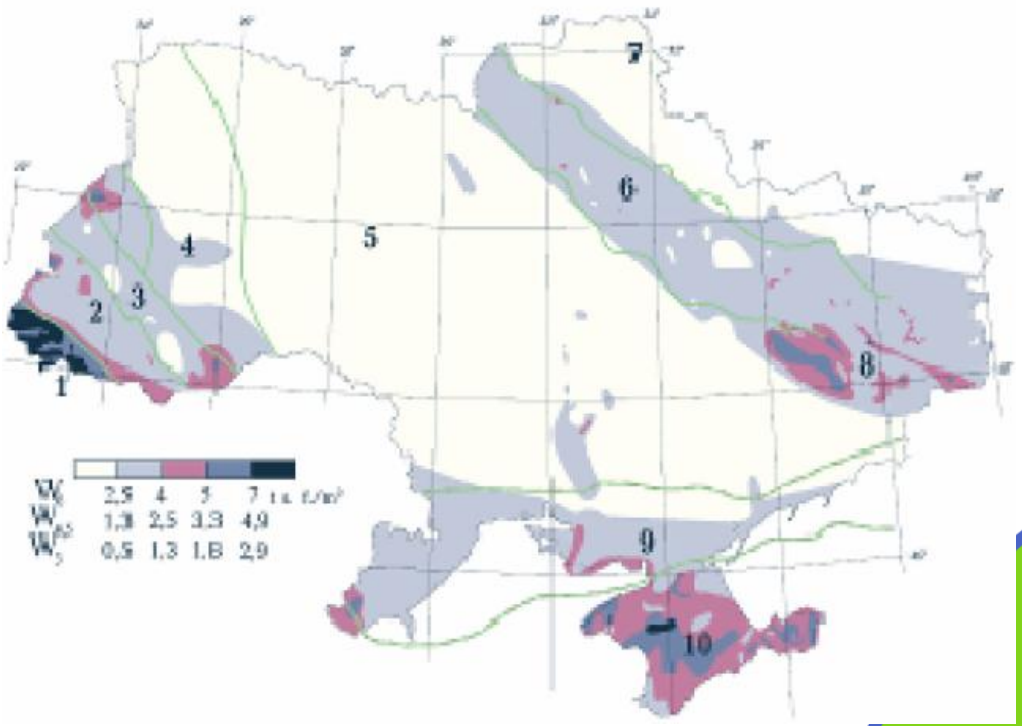
Geothermal resources (after Gordienko et al., 2005):

Values for 3, 4.5 and 6 km depth

Based on 12’000 boreholes!

Calculation of “W” after method by Dyad'kin et al., 1991



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Geothermal resources (after Gordienko et al., 2005):

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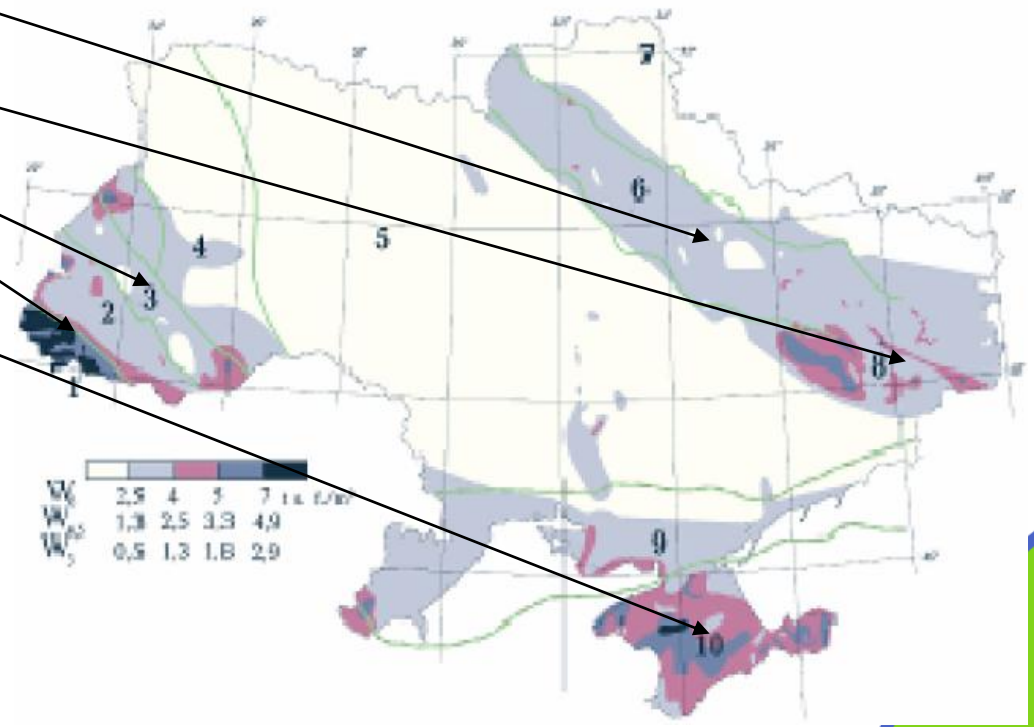

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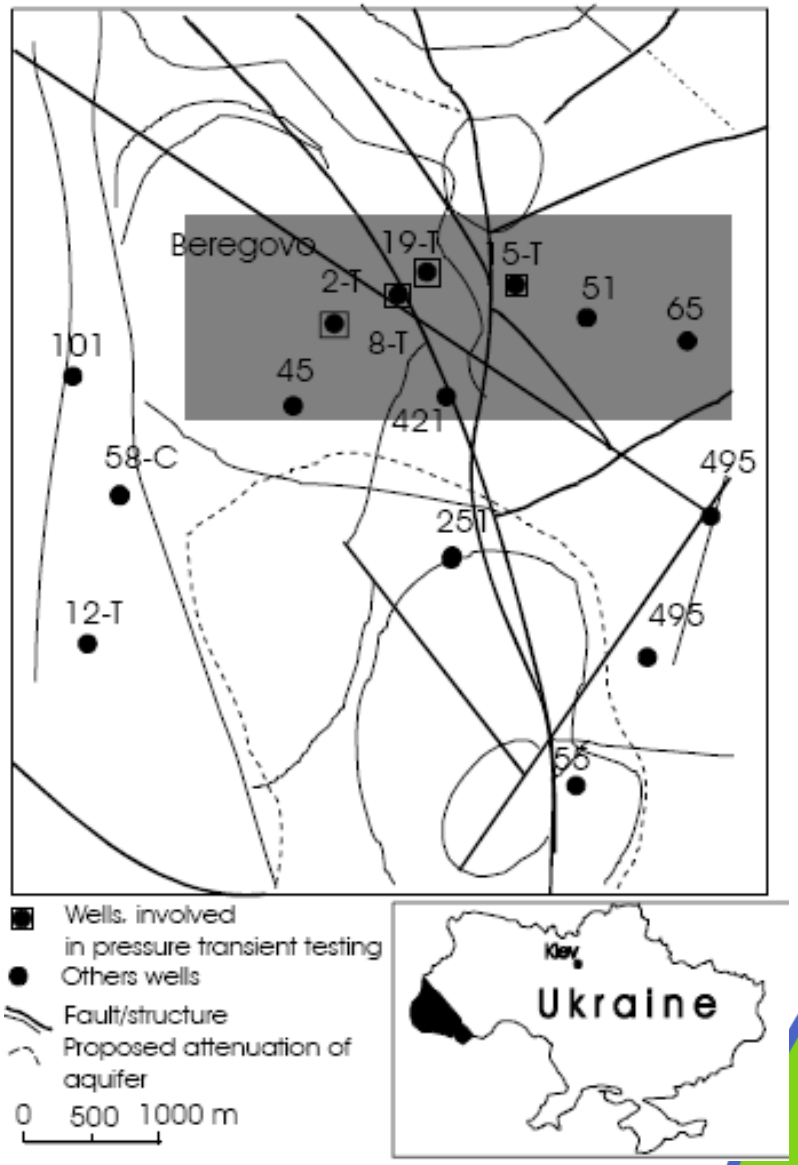
Study of the Beregovsky geothermal Area (Barylo, 2000)

map showing locations of wells and main geological structures

Part of the Ciscarpathian area:

- thermal water within the limits of 45-120°C
- depth of the productive aquifers from 1000 to 3000 m.



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Geothermal energy use

9 geothermal plants

(list from Khvorov et al., 2005)

6 in Scythian platform
of wich 5 on Crimea,
1 in Khersonskaya Oblast

3 in Ciscarpathia

in 2003:
10.9 MW heat installed
33 GWh heat production

Geothermal object	Year of introduction in operation	Thermal (electric) capacity (MWt)	Annual economy of fuel
1. System of the geothermal heat supply of the Beregovsky's sport center. Beregovskiy area, Zakarpatskaya region.	1978	2,1	1215
2. System of the geothermal heat supply of the sanatorium "Kosyno". Beregovskiy area, Zakarpatskaya region.	1998	1,2	860
3. System of the geothermal heat supply of the sanitary complex "Latorytza". Mukachevskiy area, Zakarpatskaya region.	1985	0,2	210
4. System of the geothermal heat supply of the settlement Yantarnoe. Krasnogvardeyskiy region, AR Crimea	1991	4,6	2700
5. System of geothermal power supply of the objects of budgetary sphere in the settlement Changar. Khersonskaya region	1998	1,0(0,1)	900
6. System of geothermal power supply of children's establishments and of the social cultural household spheres of settlement Medvedevka, Dzhankojsky area, AR Crimea	2002	0,8(0,06)	650
7. System of the geothermal heat supply of the objects in the settlement Zernovoe. Sakskiy area, AR Crimea	1997	0,4	355
8. System of the geothermal heat supply of the objects of municipal economy of settlement Piatykhatky. Krasnogvardeyskiy area, AR Crimea	1996	0.3	300
9. System of the geothermal heat supply of the objects in the settlement Nizinnoe. Sakskiy area, AR Crimea	1998	0,3	300
Total		10,9(0,17)	7470

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Thank You!

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