

SUMMARIES

Dubiel S., Jamrozik A., Matyasik A., Ziaja J.: **Problems related to oil and gas mining waste deposition in view of legal regulations** • AGH Drilling, Oil, Gas 2012 • Vol. 29 • No. 3

The legal regulations on mining waste have been reviewed in the paper. The most important problems related with exploitation waste management in oil and natural gas production have been analyzed. Industrial examples of waste neutralization have been presented.

Keywords: oil and gas mining, mining waste, law about mining waste, exploitation waste management, production, post-exploitation waste

Duse D.-M., Duse C.S.: **Influences of the organizational culture on management change and faculty development in natural gases engineering education** • AGH Drilling, Oil, Gas 2012 • Vol. 29 • No. 3

This paper sets out to present the defining elements of the cultural dimensions in a classical University in Romania ("Lucian Blaga" University in Sibiu) and their influence on change and development program of the university's management, especially on Natural Gases Engineering Education. Management change and development are considered under the umbrella of the new educational law (Law no. 1/2011) that came into force in Romania. Ideas that resulted by using the three-dimensional morphological matrix with the axes: organizational culture – organizational change – cultural intensity development are analysed and presented in five distinct hypostases of the five cultural dimensions promoted by the Dutch researcher Geert Hofstede. Expected results of the research are connected to discovering the activities that allow organizational, institutional and academic management change according to the cultural specifics and to the new national education law.

Keywords: academic management, change and faculty development, classical university, organizational culture, education law, natural gases engineering education

Lorenc M., Warowny W.: **Apparatus to study volumetric properties of the gas hydrates** • AGH Drilling, Oil, Gas 2012 • Vol. 29 • No. 3

A new pVT apparatus was built on Department of Drilling, Oil and Gas at AGH University of Science and Technology, which was sponsored by the Polish Oil and Gas Company. The apparatus was adjusted to measurement of the properties of the gas hydrates. On the schematic diagram of this apparatus, methodological solutions of the equipment were compared to different of this kind literature apparatuses. Among others innovatory elements of the present apparatus some of them should be counted: method of the changes of volume or automatic system (arrangement) to taking the sample with supported nafion drying. The first step of the experimental study is desulfurization of the natural, by using process of the hydrates formation in gas mixture.

Keywords: hydrate, hydration, methane, hydrogen sulfide, separation, desulfurization, natural gas, laboratory apparatus, nucleation, phase equilibrium, dissociation

Śliwa T., Szura M., Gonet A., Sapińska-Śliwa A.: **Hydraulic fracturing in systems of geothermal energy utilization (EGS, HDR)** • AGH Drilling, Oil, Gas 2012 • Vol. 29 • No. 3

This work reviews possibility of using the heat from impermeable hot dry rock formations. Significant development in hydraulic fracturing technique in a last few years have a result in making accessible sources of energy

from impermeable rocks, including hot dry rocks, which wasn't possible before. This paper presents the idea of utilization the EGS system which is based on forced and closed water circulation in a natural and permeable geological reservoir or in a reservoir, where the fractured zone was created artificially by for example hydraulic fracturing treatment. The article shows also an examples of recent EGS/HDR systems around the world.

Keywords: *geoenergetics, boreholes, hydraulic fracturing, HDR, EGS*