

MANAGERIAL CONCERNS FOR EXITING THE ECONOMIC CRISIS OF 1929-1933 IN JIU VALLEY COAL MINING

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ABSTRACT: *We are attempting in this study to present a part of existing preoccupations in the Jiu Valley so that present coal mining can efficiently respond to the economic crisis of 1929-1933.*

We are observing, from a management point of view, the application of the principles of "rationalization", many of the taken measures being dictated by the more or less subjective capacity of Romanian society to absorb the basic production of mines, coal and the necessity of dealing with the income-expenditure ratio, without which the largest part of production capabilities could not maintain its activity.

"Rationalization" has entailed an intellectual and material effort and has consequently created a modern technical basis and, implicitly, the continuation of mining activity in this region and the establishment of the Jiu Valley as the most important carbon basin of Romania until the 1990s.

KEY WORDS: *Jiu Valley, coal mining, mining companies, economic crisis, rationalization.*

JEL CLASSIFICATIONS: *N54; L72.*

During 1929-1933 the global economy would be traversed by an economic crisis of overproduction which would also manifest in the Romanian economy. Mining in general, with the significant exception of gold and silver mining, would enter a crisis, the mining industry and, implicitly, Jiu Valley mining supporting the consequences of imbalances produced in the Romanian economy.

The crisis in the mining industry begins as early as 1927, in the following conditions: the Romanian economy, being in a recession, was incapable of absorbing the entirety of coal production, and the main consumer, C.F.R., would reduce its

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demand for coal and, at the same time, acquire increasingly large quantities of lignite and brown coal, to the detriment of Jiu Valley superior coal; competition with other energy sources manifests itself: petrol (heavy fuel oil (HFO)), natural gases, wood and hydro power, being either less polluting or cheaper, or easier to use; the carbon industry is incapable of finding, with notable exceptions, far larger domains which utilize its product and the need to develop technologies which increase burning efficiency etc.¹

Table 1. C.F.R. fuel consumption during 1926-1934²

Year	Energy source						
	Coal					HFO	Wood
	Jiu Valley	Pit coal	Lignite and brown coal	Total	% Jiu Valley coal from total		
	t					t	m ³
1926	1.292.385	10.060	775.072	2.077.517	62,21	295.804	387.446
1927	1.400.625	1.968	835.552	2.238.145	62,58	263.615	185.998
1928	1.350.610	4.411	781.383	2.136.404	63,22	286.203	176.570
1929	1.332.368	574	770.071	2.103.013	63,35	287.476	152.261
1930	1.046.573	-	546.025	1.592.598	65,71	299.997	98.613
1931	952.974	37.252	451.595	1.441.821	66,09	295.556	60.695
1932	822.201	36.388	293.531	1.152.120	71,36	325.498	32.003
1933	780.897	23.782	326.166	1.130.845	69,05	295.997	21.800
1934	777.953	36.383	505.881	1.320.217	58,93	239.170	19.584

Industrial carbon mining in the Jiu Valley, which has its beginnings in the end of the 1860s, the first known production, of 853 t, being obtained in 1868, 150 years ago, would reach maturity in the interwar period.

In the first interwar years, together with the achievement of the Great Union of 1918 and the incorporation of Transylvania in Romania, with geostrategic and legislative changes of 1923-1924, a process of “nationalization” of foreign capital is created in Jiu Valley mining, which determines the creation of new mining companies, in which Romanian capital comprises a majority: the “Petroșani” Company, in operation from the 1st of January 1921, having a social capital of 100 million lei, rising in succession up to 820 million lei in 1927, through the reevaluation of capital, and which overtakes the Jiu Valley actives of the “Salgótarján” Company; the “Lupeni” Company, which started operating on the 1st of January 1925, with a 400 million lei capital, which rose in 1927 to 590 million lei, formed mainly from Jiu Valley actives of the “Uricani-Valea Jiului” Company; the “Valea Jiului de Sus” Company, property, in equal proportion, of, from now, the “Petroșani” and “Lupeni” Companies. At the same time, through the application of the provisions of the Law regarding commercialization and control of State enterprises of the 7th of June 1924, Lonea State Mines are commercialized and, from the 1st of January 1926, the “Lonea” Company would be created, with a 180 million lei capital, of which 150 million lei are State shares, and 30

¹ Analele Minelor din România (A.M.R.), XII, 1929, nr. 5, p. 224-225.

² Ioan M. Lăzărescu, *Întrebuințarea cărbunilor la C.F.R.*, Miniera, XVIII, 1943, nr. 3, p. 80.

million lei are private capital, mainly the one involved in the creation of the “Petroșani” and “Lupeni” Companies. Furthermore, on the 1st of July 1926 a small mining company would be created, the “Sălătruc” Company.

As was previously said, the economic crisis, with all of its consequences, would affect coal mining in the Jiu Valley, but what must be emphasized is the fact that, beyond problems of a social nature, which have created a major discomfort to an important part of the workforce, we are currently observing the most important transformations of an organizational, and especially technical and technological nature. These transformations, some which started before the economic crisis, and others which were continued after 1933-1934, and which were thought out and realized by management which has proven itself knowledgeable and performing, would define coal mining in the region for a long period of time, and are contained in what in the era was called *rationalization*. Rationalization mainly sought to lower material costs through better organising of work and through renewal of fixed capital on the basis of new techniques which allowed a rise in work productivity, and the mining companies of the Jiu Valley would be capable of conducting a policy of major investments.

Eng. Ioan M. Lăzărescu, talking in 1941 about *Coal in the Romanian economy*, arrives at the conclusion that, “the problem of rational use of coal in Romania has been brought up since 1926, meaning in a period in which almost all coal producing nations in Europe went through an acute crisis. The Romanian coal industry, in particular, has been, over the past 15 years, in a unique situation, for it was competing with other fuels which were fairly widespread in the country: HFO, natural gases and wood. It had to make a large effort to sustain itself and to resort to a series of measures meant to ensure a return close to that of the other fuels: 1. Reducing cost price to a minimum, in order to ensure that diffusion is as high as possible in relation to HFO and natural gases in the industry and to wood in household consumption. In order to achieve this goal intensification of the mechanization of extraction, rationalization of exploitation and its concentration were resorted to; 2. Improving the quality of coal meant for consumption, improvements realized through plants for prepaning, sieving and washing, through modern agglomeration and briquetting plants; 3. Improving coal usage conditions at C.F.R. – the main client of the coal mining industry – in industry and in household consumption”³.

Here we could add the steps relating to the concentration of capital, being created economic entities with a financial, material and human force capable of dealing with market competition and, why not, for cancelling competition which could become a disruptive factor, and not a stimulating one.

Even though we are talking about several mining companies in the Jiu Valley, the fact that they conducted the same type of activity, with the same finality, that they had similar internal organizational structures, that there were close relations between the companies through the origin of invested capital, through the presence of the same people in the leadership of the companies, and, last but not least, the need to efficiently respond to stimuli, especially random external and internal factors, would gradually

³ Miniera, XVI, 1941, unique number, p. 15-18.

determine a process of concentration in the entire basin which could ensure a larger return of capital and also an optimization of productive activity.

The artisan of this process would be Eng. Ion E. Bujoiu, CEO of the “Lupeni” Company from the 1st of January 1925 and of the “Petroșani” Company from the 15th of November 1927, his proposals regarding the fusion of the two companies being discussed inside the talks carried between the Romanian Group of shareholders, represented by the Romanian Bank, and the hungarian “Salgo-Commerce” Groups and “Urikány-Budapest” of the shareholders. The talks would end favorably⁴, permitting the closing at the end of 1930 of a principle accord regarding the fusion of the “Petroșani” and “Lupeni” Companies. As such, the idea that the fusion brought not only important savings in the total costs generated by the enterprises, through the removal of the different administrations, but also a reduction in return costs through the possibilities of a large merged enterprise to conduct studies and make improvements in the organization of extraction, was accepted.

From a technical point of view, the fusion presented the advantage of the adoption by all of the mining sites of principles proven to work in certain places, of standardization of working methods, of mutual help and of the organization of all principal and secondary mining sites; the mining sites could be reunited – closing some mines if need be – in a few mining groups, each group, built on geographical, geological and technical criteria, being considered a technical unit equipped with all necessary accessories for meeting production goals in good condition; supersized power plants of the two Companies would be tied together, one of them being closed; an immediate concentration of far too large central workshops of the different groups, a unit named Petroșani Central Workshops being created, which should be able to produce mining machinery and tools; the electromechanical service and the construction service would be concentrated and the colonies maintained⁵.

In order to make the accord operational, an extraordinary general assembly of the two mining companies was held on the 29th of May 1931, in which it was decided that the “Lupeni” Company would be dissolved and fused⁶.

The extraordinary general assembly of the “Lupeni” Company shareholders held on the 29th of May 1931, would unanimously approve: the fusion of the “Lupeni” Company with the “Petroșani” Company; the assets and liability of the “Lupeni” Company would be transferred through the effect of the fusion to the “Petroșani” Company, and personnel of the “Lupeni” Company would be transferred to the employment of the “Petroșani” Company, in the same conditions in which it is situated in the “Lupeni” Company; through the effect of the fusion with the “Petroșani” Company, the “Lupeni” Company would cease its existence from this moment⁷.

The extraordinary general assembly of the “Petroșani” Company shareholders held on the 29th of May 1931, would decide the fusion of the “Petroșani” Company with the “Lupeni” Company through the incorporation of the entirety of assets and liability of the “Lupeni” Company to the “Petroșani” Company, based on the balance

⁴ Serviciul județean Hunedoara al Arhivelor Naționale (hereafter referred to as, SJANHD), *Fond Societatea „Petroșani”*. *Direcțiunea Generală (D.G.)*. *Consiliul de Administrație*, dos. 2/1930, f. 23-24.

⁵ SJANHD, *Fond Societatea „Lupeni”*. *Direcțiunea Minelor*, dos. 166/1930, f. 1-5.

⁶ Monitorul Oficial, II, nr. 133/12 June 1931, p. 7481-7485.

⁷ SJANHD, *Fond Societatea „Lupeni”*. *Direcțiunea Minelor*, dos. 169/1931, f. 1-2.

sheets of the two societies at the 31st of December 1930; the growth of social capital of the “Petroșani” Society, from 820 million lei to 1.410.000.000 lei, meaning with 590 million lei, a sum which represented the “Lupeni” Company capital; the modification of articles 5, 6, 8, 9, 11, 13, 15, 25, 29 from the Statutes of the “Petroșani” Company⁸, and the modification of the statutes of the company’s Pension House⁹.

The newly formed “Petroșani” Company, having its social centre in Bucharest, would be the largest producer of coal of the country and, at the same time, the third largest industrial corporation by capital, initially having the following organizational structure: the General Direction, situated in Bucharest, led by the general director; Mining Groups: Petroșani, Vulcan, Lupeni; the Central Administrative Division of the Jiu Valley/The Petroșani Mining Direction; the Lapoș Mining Exploitation; the Sebeș Forest Exploitation; the General Services Direction¹⁰.

Following the process of capital concentration, the “Petroșani” Company would purchase in 1933 the 10.000 shares of the “Sălătruc” Company, taking over its patrimony and transferring its social centre to Bucharest¹¹. This way, the “Sălătruc” Company is incorporated technically, organizationally and socially in the “Petroșani” Company and would continue with its support to carry on its extractive operation until January 1941 when an approval by the Ministry of National Economy to suspend mining operations is obtained¹².

The “Valea Jiului de Sus” Company would be absorbed by the “Petroșani” Company as well. Because after July 1931 the productive activity in the mining field of the “Valea Jiului de Sus” Company from Vulcan would cease, in November 1942 the General Assembly of the Company would decide the fusion of the “Valea Jiului de Sus” Company with the “Petroșani” Company, through the concession of capital and patrimony¹³.

In 1929, as a result of the teachings acquired during a study trip in the Ruhr mining region in Germany, Eng. August Buttu from the “Petroșani” Company elaborates a study named *Rationalization in coal mines, with a few observations about the opportunity of mechanisation and frontal stopes*¹⁴, in which he proposes, among others, quitting coal layers and unprofitable mines and the methodical concentration of operations, possible, however, only after new stoping methods will be adopted.

By this logic, the “Petroșani” Company would proceed to close the following mines: West Petroșani (30th of October 1928)¹⁵; Dâlja/Petroșani (march 1931)¹⁶; West Vulcan, East Vulcan, Dr. Chorin¹⁷ and “Valea Jiului de Sus” from Vulcan¹⁸ after July

⁸ Societatea „Petroșani”, *Statute. Modificate în Adunarea Generală Extraordinară din 29 mai 1931*, Tiparul Românesc, București, 1931; Monitorul Oficial, II, nr. 133/12 June 1931, p. 7483-7484.

⁹ SJANHD, *Fond Societatea „Petroșani”. D.G. Consiliul de Administrație*, dos. 1/1930, f. 5-6.

¹⁰ SJANHD, *Fond Societatea „Petroșani”. Direcțiunea Minelor (D.M.). Serviciul Muncă și Salarii*, dos. 9/1932, f. 1-10.

¹¹ SJANHD, *Fond Societatea „Sălătruc”*, dos. 35/1940, f. 556.

¹² *Ibidem*, dos. 28/1938-1942, f. 7-8.

¹³ A.M.R., XXV, 1942, nr. 12, p. 256.

¹⁴ The study will be published later in, A.M.R., XXIV, 1941, nr. 2, p. 27-35; nr. 3, p. 53-62.

¹⁵ SJANHD, *Fond Inspectoratul Minier Petroșani*, dos. 68 c/1931, f. 10-18.

¹⁶ *Ibidem*, f. 5.

¹⁷ *Ibidem*, dos. 99/1931, f. 13-24.

¹⁸ *Ibidem*, f. 30.

1931 and temporarily suspend the activities of the East Petroșani Mine at the 29th of June 1937¹⁹, which would then become a sector of the Petrila Mine.

In Lupeni, the program was based on intensifying the production of the Ștefan and Ileana Mines in the 3, 5, 8, 9 layers, after the depletion of higher layers of the Ileana Mine, the closing down of the Carolina and Victoria Mines during a 2-5 year term, meaning after the complete depletion of higher coal layers²⁰. Such a process would also occur at the “Lonea” Company. It was thought that the most logical solution regarding concentration would be at Mine III “Jieț” - Mine I Cimpa and II Lonea would be closed down from 1930 – because it presented the largest advantage that the majority of organizational operations were already under way, the coal layers permitting the application of modern extraction methods, and the coarse coal was in a smaller percentage than in the other two mines²¹.

Therefore, a process of reorganizing mainly surface activities is taking place, at the same time as the lowering of production capabilities, which has not, however, affected the possibility of satisfying the necessary amount of coal demanded on the market. Inside the “Petroșani” Company, the Petrila, East Petroșani, Aninoasa, and the Lupeni Group mines would remain functional after May 1931, with the present mines, at the “Lonea” Company, Mine III “Jieț”, and there was also the small enterprise of the “Sălătruc” Company from Livezeni, so that, by the end of the interwar period, five mines would operate: Petrila, Aninoasa, Lupeni, Lonea and Sălătruc, the latter being closed down in January 1941.

It was thought that closing down these productive units would not affect the capacity of the Jiu Valley to provide the necessary amount of coal demanded on the market: Mine III Lonea could provide, work being done in two shifts, 500 t coal/day, so a 55% increase relative to May 1931, and the “Petroșani” Company could provide, through the Lupeni and Petroșani mining groups, 5.200 t coal/day, work being done in two shifts, so a 75% increase relative to May 1931. Furthermore, it was determined that, should the expansion of production be necessary, the following mines could be reopened: II Lonea; West Petroșani and Dâlja/Petroșani; East Vulcan; Victoria/Lupeni. It was determined that the existing features allowed the expansion of production capabilities of the Jiu Valley mines with 1.700 t coal/day as soon as necessity would demand it, keeping the advantages of surface concentration²².

Concentration would make the “Petroșani” Company, which had in its activity, before this process, 15 mines and 32 pits, in 1943 to only have three mines in exploitation, where 14 pits were functioning, among which only four were extraction pits. The effects of concentration can be observed in the quantity of extracted coal/metre of tunnel: in 1928 there were 203,8 km of tunnels at annual production of about 132.355 t of coal, and in 1941, 101,7 km to 186.000 t, so 0,65t/m in 1928 and 1,82 t/m in 1941²³.

¹⁹ *Ibidem*, dos. 106/1937-1938, f.f.

²⁰ SJANHD, *Fond Societatea „Lupeni”*. *Direcțiunea Minelor*, dos. 101/1928, f. 47-48; dos. 68e/1931, f. 13-14; dos. 9/1932, f.f.

²¹ SJANHD, *Fond Inspectoratul Minier Petroșani*, dos. 111/1931, f. 1-5.

²² SJANHD, *Fond Societatea „Petroșani”*. *D.M. Serviciul Tehnic*, dos. 1/1931, f. 1-3.

²³ August Buttu, *Vues retrospectives sur l'industrie extractive de charbon en Roumanie au cours des dernières 25 années*, A.M.R., XXVI, 1943, nr. 4, p. 65.

Eng. August Buttu, in the cited study, has also regarded that, in order to optimise activities long-term solutions were necessary, which consisted of, among others: reestablishing discipline and order; lengthening effective work time; rational use of those who did not produce, elimination of those who were useless, unwanted, inadequate; increase and picking of good supervising and control personnel, for the workers as well as for the material and equipment; rising the value of workers through schools; protection of personnel through safety measures, medical service and welfare; equitable wages and bonuses; perfecting mechanical equipment, introduction and use of machinery in mines, applying the principle of: *don't let a man do what a machine can*; methods of general organizing and of exploitation with the application of a large-scale concentration policy, through the introduction of stopes with long fronts, large units of production.

Eng. Ion E. Bujoiu would understand that these measures had to be taken, especially in the increasingly harsh conditions which affected the mining companies in 1929, due to the tripling of mining tax, the lowering quantity of taken coal and the lowering of prices by 8% of supplies to C.F.R., the competition of other energy sources, and higher wages. At the made proposals, Eng. Ion E. Bujoiu added the obligation to obtain the amelioration of the amount of coal extracted through the removal of as much sterile as possible and reduction of the percentage of dust, in order to deal with consumer requirements.

From the amount of issues, we will choose just two plans of action: *a.* the introduction of new exploitation methods, based on augmenting mechanization; *b.* sustained preoccupation with ameliorating the quantity of extracted coal.

The modernization of exploitation methods, like of the entire productive process of Jiu Valley mining, would obviously entail the development of mechanization, tools and machines being built which would operate underground using electricity and compressed air, being, at the same time, safe for the vicious medium, especially the one with methane, in which they operated.

If at the surface the spread of electricity was universal, the triphased asynchronous motor being an indispensable auxiliary for any machine, steadily electricity has entered the underground: centrifugal pumps; ventilation fans; locomotives with trolleys or accumulators; trolleys for inclines, and in the coalface: oscillating troughs; transporters with rubber bands or scrapers. Even whough, in the coalface, pneumatic disclocation tools were prevalent – in 1925 624 pneumatic hole punchers, 38 stoping hammers, 19 hewing machines, 1509 m oscillating troughs²⁴ - electricity tends to be used through electrical lighting of the workplace, using fans for secondary ventilation, centrifugal pumps, electrical boring machines, hewing machines, using asynchronous motors etc., such that, in 1929 the “Petroșani” Company consumed 19,9 Kwh/t of extracted coal, the Lupeni Group, which was the most electrified, consuming 34,4 Kwh/t of extracted coal. Furthermore, in 1931, after the Petrila and Lupeni Preparation Stations started their operations, the specific energy consumption of the “Petroșani” Company would be 27,8 Kwh/t of extracted coal. Of course the focus on mechanization and, implicitly, on the introduction of electricity,

²⁴ SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Tehnic*, dos. 4/1925-1932, f. 1.

would favor an increase in the capacity of the Vulcani and Lupeni Power Plants the coal mines consuming a part of the production in order to create secondary energy with a large output²⁵.

The growth of mechanization would allow the introduction, beginning with 1927-1929 in Lupeni, along with the method of exploitation with stoping rooms, the method of exploitation with mechanized stopes with a long 80-120 m front in thin layers, method which would later be applied in the Petrila, East Petroșani Piscu/Aninoasa mines. The use in stopes with a long front from thin layers, of hewing machines, has determined a 50% growth in returns and a productivity of the hewing machine of 96 t/shift, with an 80 m long coal-face²⁶.

During 1932-1933 experimenting was done in Lupeni, being later applied at Aninoasa mine, with the following type of exploitation: directional frontal stopes, in layer 3, using a pneumatic embankment, the long front being introduced in the main layer as well²⁷. From 1933, again in Lupeni, in layer 3 the method with transverse front and pneumatic embankment was introduced, followed in 1934-1935 by the selection of coal in the coal-face²⁸.

In 1936 the first horizontal frontal stope started operating in layer 3 at the Lupeni mine, with metallic support under an artificial ceiling made out of planks, the method being extended in 1937 in Lupeni at layer 5, in frontal stopes on the layer's slope. This type of support, with 70 kg metallic pillars supplied by the "Schwarz" company, semirigid type, with planks, with a strength of 30 t/pillar²⁹, would be applied at layer 3 at Aninoasa mine in 1937 and at Petrila mine in 1938³⁰.

It is worth mentioning that augmenting mechanization and introducing new methods of exploitation, which are based on technological progress, would cause advancing speeds in stoping and a growth in productivity, as expected - in 1928 the "Petroșani" Company had 9.926 employees, of which 2.525 were miners, output in the coal-face being 2,226 t, and in 1934 there were 6.484 employees, out of which 1.635 were miners, output in the coal-face being 3,988 t - however, the growth is not spectacular, and after peaking in 1933-1934, output started to visibly decline, which shows us that mechanization helps the effort of the people, but in mining deposit conditions definitively influence the output of machines and of people³¹.

The second large direction which we were referring to would be represented by the sustained preoccupation for ameliorating the quality of extracted coal, through methods used in the mine: reduction of shooting, selection, manipulation, as well as especially its mechanical preparation. This direction would impose financial and technical actions to ensure a response to the "challenge" which coal buyers imposed

²⁵ Ștefan Georgescu-Gorjan, *Aplicațiile electricității în industria carboniferă*, Buletinul I.R.E., I, 1933, nr. 2, p. 229-268.

²⁶ Ion Marian, Nicolae Iliș, Gheorghe Giuclea, Constantin Teodorescu, *Probleme privind mecanizarea în abatajele din Valea Jiului*, in vol., xxx, „Dezvoltarea tehnicii miniere în bazinul carbonifer Valea Jiului”, edited by Ministerul Minelor, Oficiul de documentare și publicații tehnice, București, 1969, p. 60.

²⁷ SJANHD, *Fond Inspectoratul Minier Petroșani*, dos. 62/1933, f. 1-3.

²⁸ SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Tehnic*, dos. 45/1932-37, f. 180-182.

²⁹ SJANHD, *Fond Mina Lupeni*, dos. 28-12/1937, f. 47.

³⁰ Gh. Giuclea, D. Opreș, *Susținerea abatajelor în minele din Valea Jiului*, in vol., „Conferința Națională de Tehnică Minieră”, București, 28-30 November 1968, p.77.

³¹ SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Muncă și Salarii*, dos. 2/1935, f. 16.

and, at the same time, ensure its integral capitalization at a price which should be as convenient as possible³².

C.F.R., which used coal for the production of vaporized water in the locomotive's focus, was the main buyer of coal extracted in Romania and would impose its own policy regarding quantity and quality of the purchased product. Otherwise, the evolution of Jiu Valley mining companies would be decisively influenced by the purchasing policy of C.F.R. and a part of the realized transformations, especially the qualitative ones, would owe to the requirements formulated and imposed by their most important client. The leaders of these mining societies understood that, in the conditions in which coal is not a renewable source, it is beneficiary that it be exploited rationally and, most importantly, be capitalized in a superior and profitable way.

1930 exploitation programs and the extraordinary operations program for 1930-1931 and 1932 of the "Petroșani" and "Lupeni" Companies provided the concentration of mechanical coal preparation activities in two modern and complex installations, using the "rheo-laveur" system, at Petrila and Lupeni, which would replace the old separations at East Petroșanit, West Petroșani, Vulcan, Lupeni: Victoria, and Ștefan³³. The Lupeni plant with a washing capacity of 140 t/h, would be functional from the 18th of February 1931³⁴, and the Petrila plant, with a washing capacity of 270 t/h, would be functional from the 12th of August 1931³⁵.

The beginning was continued and so, at the beginning of the 1940s, the "Petroșani" Company could boast about a complex of coal preparing equipment, unique in Romania, comprised of seven groups: washing plants; drying plants; flotations; water treatment; briquetting; low-temperature carbonization; autoagglomeration³⁶, and which allowed it to deliver a large assortment of coal to its clients³⁷.

Of course, all of these actions and achievements have not only had a financial and technical component, but also a social component, there being preoccupations for creating conditions which would allow the necessary reproduction of the workforce, as well as maintaining productive activity at an acceptable standard.

Through all that was achieved, the economic crisis was overcome and, especially, the maintenance of the Jiu Valley industrial complex and the underlining of qualitative competence, which allowed it to keep an economic, technical and social role in the Romanian economy. All of these would not have been possible without those who have been invested in leading the destiny of this industrial complex and who had the managing capacity of thinking about continuity through the imposition of transformations which overlooked all the components of this entity.

³² See also, Mircea Baron, Oana Dobre-Baron, *Evoluția prețului la cărbunele vândut Căilor Ferate Române în perioada interbelică*, Sargetia, XXXII, 2004, p. 609-622.

³³ SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Tehnic*, dos. 25/1932, f. 1-97.

³⁴ SJANHD, *Fond Inspectoratul Minier Petroșani*, dos. 84/1932, f. 1-7

³⁵ *Ibidem*, dos. 54/1931, f. 32.

³⁶ The description of the entire complex is made by eng. August Buttu in the study, *Cerințele consumatorilor de cărbuni din România și adaptarea instalațiilor de preparare la aceste cerințe*, presented at the Congress of Engineers and Technicians in the Mining Industry, București, May 1937 and found at SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Tehnic*, dos. 63/1937, f. 1-26.

³⁷ SJANHD, *Fond Societatea „Petroșani”*. D.M. *Serviciul Tehnic*, dos. 63/1937, f. 4.

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