SOCIALIST REPUBLIC OF
ROMANIA

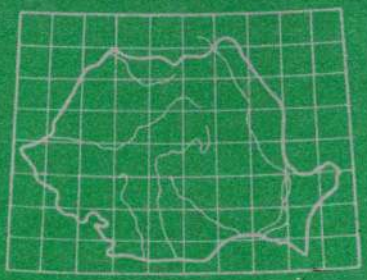
8

GEOLOGICAL ATLAS 1:1 000 000

MAP OF THE MINERAL RESOURCES

2nd edition

EXPLANATORY NOTE



MINISTRY OF GEOLOGY
INSTITUTE OF GEOLOGY AND GEOPHYSICS
Institutul Geologic al României
BUCHAREST 1984

PUBLISHED AND PRINTED BY THE INSTITUTE OF GEOLOGY AND GEOPHYSICS

Editors of the Map:

M. BORCOŞ

H.G. KRAUTNER

G. UDUBAŞA

M. SĂNDULESCU

Ş. NĂSTĂSEANU

C. BIŢOIANU

SOCIALIST REPUBLIC OF

ROMANIA

GEOLOGICAL ATLAS 1:1 000 000

MAP OF THE MINERAL RESOURCES

2nd edition

EXPLANATORY NOTE

MINISTRY OF GEOLOGY

INSTITUTE OF GEOLOGY AND GEOPHYSICS

Institutul Geologic al României

BUCHAREST

PART ONE

GENERAL

by

M. Borcoş, G. Udubaşa, M. Săndulescu, H. Kräutner
S. Năstăseanu, C. Biţoianu, S. Rădan

I. INTRODUCTION

The Map of the Mineral Resources - scale 1:1 000 000,2nd edition - represents a new stage in the knowledge of the distribution of metalliferous and nonmetalliferous mineral resources as well as of caustobioliths in the territory of Romania. The progress achieved is pointed out by both the increased number of mineral deposits represented - 932 (including the deposits omitted) as against 443 in the 1st edition (1969) - and the thorough geological characterization of each deposit or occurrence in the explanatory text of the map.

The geological units related to the most significant zones with mineral resources - some of them considered as classical - are represented on more detailed regional maps. These 33 representative areas with mineral resources complete the map contents and point out the significant relationships between the geotectonic , structural, lithological elements, the evolution of the metamorphic and magmatic processes and the favourable conditions of formation and location of the mineral resources; at the same time they indicate some qualitative prognostic aspects which complete the regional data of the map.

As its main aim is the genetic systematization and spatial distribution of the deposits, on the map scale 1:1 000 000 as well as on the detail maps with the representative areas, the occurrences of different types of mineral resources are plotted, without references to their size, stage of knowledge or their degree of assessment. Besides mining or mineable deposits, exploited or abandoned deposits, also prospecting targets and small occurrences of special scientific interest have been included. Therefore all significant occurrences can be found on the map. Terms as deposit,

occurrence have only a geological meaning, irrespective of whether they are economically important or not.

The 932 localities represented on the map are given in the increasing order of their numbers. The detail maps increase to 1084 the total number of the plotted occurrences.

The mineral resources have been represented on a simplified tectonic background adopted according to the Tectonic and Geological Maps of Romania, scale 1:1 000 000. For the most important zones with mineral resources the detail maps give supplementary information on the geological setting and the host rocks. In order to facilitate rapid information on the main geological and economic elements three lists are given in the explanatory text; they contain supplementary descriptive data as well as classification regarding genetic and compositional types.

The density, variety and systematization of the data supplied by the Map of Mineral Resources scale 1:1 000 000, the detail sketches with the representative areas , as well as the explanatory text, give the possibility of choosing specific data for the reorganization of the whole material according to other criteria which should lead either to a thorough study of particular aspects or to metallogenetic and prognostic considerations. Thus, the map with its explanatory text could be useful to a large number of specialists . The great complexity of the geological evolution in Romania gave rise to some very well-known and classical ore deposits (Săcărîmb, Roşia Montană, Musariu, Baia Sprie, Moldova Nouă, Ocna de Fier, Bălan, Teliuc-Ghelar, Iacobeni, etc.), coal deposits (Petroşani, Anina, Motru, etc.), salt deposits (Tîrgu Ocna, Slănic Prahova, Ocna Mureş, Ocna Dej, etc.), oil and gas fields (Moreni, Moineşti, Sărata Monteoru, Transylvanian gas fields, etc).

For the elaboration of the map and explanatory text both published materials and data from the archieves of the institutes and enterprises of the Ministry of Geology, Ministry of Petroleum and Ministry of Mines were used. Turning to account most of the present sources of data, the 2nd edition of the Map of the Mineral Resources scale 1:1 000 000 reflects the actual stage of knowledge and may be useful for further development of the main research directions in this domain.

II. MAIN STRUCTURAL UNITS OF THE ROMANIAN TERRITORY

Generally, the main geotectonic domains of the Romanian territory are represented by the Alpine orogens and their contemporary platforms. The former comprise the pericratonic Carpathian Orogen and the intracratonic North-Dobrogean Orogen, and the latter include the Moldavian, Scythian and Moesian platforms. The basement of the platforms is of different ages; among them only that of Assyntic age crops out.

A. The Platforms

The oldest platform of the Carpathian Foreland is the Moldavian Platform, which represents a sector of the south-western part of the East European Platform. The platform basement, cata-mesozonal, with granitic intrusions, was consolidated during the Svecofeno-Karelian cycle and in places regenerated during the Gothian cycle. The platform cover starts with Vendian sedimentary formations, followed by several Paleozoic (Cambrian, Ordovician ?- Silurian), Mesozoic (Upper Jurassic-Eocretaceous, Upper Cretaceous) and Tertiary (Neogene, beginning with the Badenian) sedimentary sequences. The Vendian and Paleozoic deposits are mostly argillo-siltic or sandy-quartzitic, with calcareous episodes, and the Neocretaceous ones are calcareous-detrital. The Neogene - sandy-quartzitic, anhydritic in the base (Badenian) - is generally of molasse-type in the Sarmatian-Pliocene time-span.

The boundary of the Moldavian Platform is marked by important transcrustal tectonic accidents extending also outside the Romanian territory both northwards and eastwards. The basement and cover of the platform are fractured by faults striking approximately N-S, along which the platform plunges gradually under the outermost nappes of the Carpathian Orogen; several major fractures, with an E-W striking, cut up the southern part of the platform.

At the exterior of the Moldavian Platform, west and south of it, is developed the Scythian Platform; its basement is less known in the Romanian territory and is presumed to be consolidated especially during the Caledonian orogenesis and partly regenerated during the Hercynian one. The platform cover starts with Middle Devonian sedimentary formations or Permian molasse deposits. The Mesozoic formations are represented in the platform cover by sequences assigned to the Triassic, Middle and Upper Jurassic (mostly argillaceous) and Lower Cretaceous (marly-calcareous). The Neogene is common to the Scythian and Moldavian platforms. In the Romanian ter-

ritory the Scythian Platform corresponds to the Pre-Dobrogean Depression, which constitutes an element of its cover.

Between the continental shelf of the Black Sea and the Siret River, the Scythian Platform is overthrust by the North-Dobrogean Orogen; westwards, under the Carpathian Nappes, it comes into contact with the Moesian Platform along the Trotuş Fault.

South of the Scythian Platform or south of the North-Dobrogean Orogen the Moesian Platform is developed. The basement of the Moesian Platform crops out in Central Dobrogea, where it comprises the formations of the Assyntic (Cadomian) orogenesis, represented by the greenschists series (anchimetamorphic flysch-type deposits). The basement of the greenschists in Central Dobrogea, or of their equivalents in South Dobrogea, consists of mesometamorphic formations resulting from one or several pre-Cadomian orogeneses. In the central and western part of the Moesian Platform, west of the Intra-Moesian Fault, the basement is less known, being built up of metamorphic formations, probably of pre-Assyntic age.

The cover of the Moesian Platform is represented by Paleozoic and Tertiary deposits which, in many sectors, exceed several thousands metres in thickness. It begins with Ordovician (or Cambro-Ordovician) sandy-quartzitic formations, overlain by Silurian(silto-argillaceous), Devonian (carbonatic and evaporitic) and Carboniferous (calcareous and detrital) deposits. The next sedimentary cycle starts with Permo-Triassic detrital formations, followed by carbonatic (Mid-Triassic) and detrital (Neotriassic) formations with evaporites; acid and basic effusive rocks are associated to this cycle. The detrital Middle Jurassic is overlain by Neojurassic and Eocretaceous (predominantly calcareous), Upper Cretaceous (carbonatic detrital), Eocene (calcareous), and Neogene (mostly molassic) deposits. The last ones, like all the Neogene deposits of the platforms, are common with those of the Carpathian Foredeep but of different thicknesses.

The ruptural tectonics, which affects the Moesian Platform,is dominated by two fracture systems. North-east of the Intra-Moesian Fault the principal fractures strike NE-SW, and west of this fault they trend especially E-W. Second-order faults intersect more or less orthogonally the two above-mentioned systems.

The mineral resources are especially related to the platform-cover (hydrocarbons, coals, nonmetalliferous substances). In the metamorphic basement of the platforms only iron and base metal ores are known in Central and South Dobrogea.

B. The North-Dobrogean Orogen

Situated in the Carpathian Foreland, the North-Dobrogean Orogen has an intracratonic position, lying between the Scythian Platform, in the north, and the Moesian Platform, in the south. The pre-Alpine formations were deformed during several orogenic cycles - pre-Assyntic, Assyntic (Cadomian), Caledonian, and Hercynian - accompanied by mesozonal (the first two) and epizonal (the third) metamorphic processes, or by anchimetamorphism (the last). Several generations of pre- and post-Carboniferous granites were intruded, followed by Permian acid effusions. The pre-Alpine magmatic rocks mainly crop out in the innermost unit of the North-Dobrogean Orogen - the Măcin Nappe.

Mesozoic deposits are apt to be found in all the three Alpine tectonic units of North Dobrogea: the Măcin, Niculiţel and Tulcea nappes. In the Măcin Nappe, the Triassic and Jurassic formations appear in places. In the Niculiţel Nappe the Triassic formations develop predominantly in calcareous facies and end with Norian flysch deposits; Triassic (Middle and Upper) basic and/or acid rocks are frequently found in this unit. In the Tulcea Nappe the Triassic formations are calcareous; they are overlain by a Lower Jurassic flysch and Middle Jurassic argillo-siltic deposits or Upper Jurassic calcareous ones. Veins of basic and acid eruptive rocks occur within restricted areas.

The three above-mentioned Alpine units were successively overthrust from the inside outwards, as early as the Lower Jurassic (Old Kimmerian tectogenesis) and resumed in the Neocomian (Late Kimmerian tectogenesis) or Barremian-Aptian.

The Upper Cretaceous deposits of the Babadag Synclinorium (sandy-calcareous) unconformably overlain the Alpine structural elements of North Dobrogea, constituting their posttectogenetic cover.

The North-Dobrogean Orogen extends north-west of the Danube in the North-Dobrogean Promontory, overlain by Neogene deposits. In this sector only the Măcin Nappe is represented.

The existing mineral resources (barytine, iron and base metal sulphides) known up-to-now within the North-Dobrogean Orogen are related to the Mesozoic magmatic activity.

C. The Carpathian Orogen

Most of the Romanian territory corresponds to the Carpathian units and the associated depressions. Taking into account some

specific characteristics, the Carpathian Orogen can be divided into internal zones (Dacides), external zones (Moldavides), post-tectogenetic molasse depressions and the Foredeep. The subsequent Neocretaceous-Paleogene and Neogene magmatites intrude or overlie the internal zones.

The pre-Alpine formations constitute most of the tectonic units of the internal zones (Dacides). They are the result of successive cycles of Upper Precambrian and Paleozoic (Lower and Middle) tectogenesis and metamorphism. The Precambrian cycles include mostly medium grade metamorphic rocks frequently overprinted by younger events whereas the Paleozoic metamorphic rocks are generally low grade . Sometimes the metamorphic rocks are penetrated by Precambrian and/or Paleozoic granitoids, some synkinematic, others (most of them) tardikinematic or postkinematic. Basic and ultrabasic igneous bodies appear in the South Carpathians.

With few exceptions (Silurian, Devonian and Lower Carboniferous formations of the Danubian Domain), the oldest sedimentary formations of the Carpathians belong to the Upper Carboniferous and Permian. They are represented by Hercynian molasses in places associated with acid and basic effusive rocks (Apuseni Mountains , South Carpathians).

The Mesozoic formations of the internal folded zones are mainly represented by sedimentary rocks. The detrital rocks are widespread in the Lower Triassic, Lower and Middle Jurassic and Upper Cretaceous. The carbonatic formations are found especially in the Middle and Upper Triassic, Upper Jurassic and Lower Cretaceous. Flysch-type deposits occur in the internal Carpathians in the Tithonian-Lower Cretaceous time-span and partly in the Upper Cretaceous. In the external Carpathians the flysch-type deposits prevail almost in all tectonic units, in the Lower Cretaceous-Lower Miocene (inclusive) stratigraphic interval.

In some units of the internal Carpathians, grouped into two tectonic sutures, Mesozoic basic, in places ultrabasic magmatic rocks are developed. Most of them are of Jurassic age, others are of Middle and Upper Triassic age. Other types of Mesozoic magmatic rocks are the alkali rocks occurring in the East and South Carpathians.

The tectonic units of the internal Carpathian zones are overlain by posttectogenetic (postnappe) covers, consisting of sedimentary rocks, mostly detrital and more seldom calcareous.

The Alpine tectogenesis developed in the Carpathian area

during two different periods. The first period includes the Cretaceous tectogeneses (Mesocretaceous, pre-Gosau, Laramian) and represents the Dacidic period. The second one, Moldavidic, consists of Miocene tectogeneses (Old Styrian, Late Styrian, Moldavian).The Alpine deformations led, both in the internal and in the external Carpathians, to the formation of nappes of different types and of high and very high amplitude. In the internal Carpathian zones, the nappes are of several types: basement nappes, obduction nappes and cover nappes. In the external Carpathian zones only cover nappes are found.

Two major Neogene molasse depressions are superposed over the internal Carpathian zones: the Transylvanian Depression and the Pannonian Depression (its eastern margin in the Romanian territory). Intermontane, also Neogene, depressions are developed either isolated or associated with the margins of the above-mentioned major molasse depressions.

The Carpathian subsequent subduction magmatism (calc-alkali) contains Neocretaceous and Paleogene products, encompassed in the western part of the South Carpathians and in the Apuseni Mountains, as well as Neogene products, which form two volcanic arcs: an external arc inside the East Carpathians, and an internal one in the Apuseni Mountains. The latter contains magmatic products which can establish a link between the first and second period of the subsequent magmatism.

The Carpathian Foredeep consists of two zones : a folded internal zone (superposed on the outermost Moldavidic nappes) and a nonfolded external one (superposed on the Foreland). The foredeep is built up of molasse deposits of Middle Sarmatian-Pleistocene age; they are subsequent to the most recent thrust processes (Intra-Sarmatian), which deformed the external Carpathian zones.

Within the Carpathian Orogen the existing mineral resources are to be found in all its major units and almost at all stratigraphic levels. The pre-Alpine metamorphic and magmatic formations, as well as the Alpine magmatic formations comprise ferrous, base metal and nonmetalliferous ore deposits. The Upper Paleozoic, Mesozoic and Tertiary sedimentary formations are linked with accumulations of hydrocarbons, coals, nonmetalliferous substances and, more rarely, ferrous and base metal ones. The large genetic, morphologic and structural variety of the mineral resources in the Carpathians give a first-order theoretical and practical significance to this orogen.

REFERENCES

Bleahu M., Lupu M., Patrulius D., Bordea S., Stefan A., Panin S. (1981) The Structure of the Apuseni Mountains. Guide to Excursion B3.C.-B.G.A., 12th Congr., Publ.Inst.Geol.Geophys., Bucureşti.

Borcoş M., Peltz S., Stan N., Berbeleac I. (1980) Neogene and Permian Volcanism in the Apuseni Mountains and the East Carpathians. Guidebook for the Field Works of the Group 3.4. Romania, 1980. Com. on the Probl.IX. Magmatism and Metallogenesis Associated to the Epochs of Molasse Formation. Publ. Inst.Geol.Geophys., Bucureşti.

Ciupagea D., Paucă M., Ichim Tr. (1970) Geologia depresiunii Transilvaniei. Edit.Acad.RSR, Bucureşti.

Kräutner H., Năstăseanu S., Berza T., Stănoiu I., Iancu V. (1981) Metamorphosed Paleozoic in the South Carpathians and Its Relations with the Pre-Paleozoic Basement. Guide to Excursion A1. C.-B.G.A. 12th Congr., Publ.Inst.Geol.Geophys. Bucureşti.

Năstăseanu S., Bercia I., Iancu V., Vlad S., Hîrtopanu I. (1981) The Structure of the South Carpathians (Mehedinţi - Banat Area). Guide to Excursion B2. C.-B.G.A., 12th Congr.,Publ. Inst. Geol.Geophys., Bucureşti.

Patrulius D. (1974) Sinteza geologică a Dobrogei de nord. Arh.IGG, Bucureşti.

Rădulescu D., Borcoş M., Peltz S., Istrate G. (1981) Subduction Magmatism in Romanian Carpathians. Guide to Excursion A2, C.-B.G.A., 12th Congr., Publ. Inst.Geol.Geophys., Bucureşti.

Săndulescu M. (1975) Essai de synthèse structurale des Carpathes. B.S.G.F.(7), XVII, 3, Paris.

Săndulescu M., Kräutner H.G., Balintoni I., Russo-Săndulescu D., Micu M. (1981) The Structure of the East Carpathians. Guide to Excursion B1. C.-B.G.A., 12th Congr.,Publ. Inst. Geol.Geophys., Bucureşti.

III. DISTRIBUTION OF MINERAL RESOURCES

A. Metalliferous and Nonmetalliferous Mineral Resources

The complex geological structure of the Romanian territory represents a first basis for the diversification of the mineral resources, some of them (gold, salt, iron, etc.) being known and mined for two thousand years. The list of the mineral resources comprises a large number of genetic types, formed during a long geological evolution as a result of processes generating magmatic, sedimentary and metamorphic mineral deposits. The variety of genetic and compositional types is thus due to both the different ages - involving the special significance and sometimes the specialization of the metallogenic epochs or provinces - and the partial superposition of their development areas. Although it is difficult to specify their extent, the remobilization processes could have played an important part in the chemical and mineralogical diversification of ores, at least in some zones such as: the Rodna, Bihor, Metaliferi, and Leaota Mountains.

The most important ore types were formed during the Karelian cycle (1), by Middle Proterozoic sedimentary-magmatic processes(2) due to the Middle Proterozoic metamorphism (3) related to the Upper Proterozoic-Cambrian sedimentary-magmatic events, and under various geological conditions specific to the Variscan cycle (5); the Alpine cycle includes almost all types of mineral resources, being the most important metallogenetic cycle (6).

1. In the Karelian structures in the basement of the Moesian Platform metamorphosed stratiform iron ores of Krivoi Rog type are preserved in South Dobrogea (918, Palazu Mare).

2. The metallogenesis of the sedimentary-magmatic cycle assigned to the Middle Paleozoic is characterized especially by Pb-Zn ore deposits hosted by carbonate formation in the upper part of the Carpian sequence, both in the Rodna Mts (50, 56, 57, Fig.3) and in the Făgăraş Mts (148). In the median part of the mentioned sequence stratiform manganese ores, of a lesser importance, occur in the Semenic (228), Sebeş (165) and Lăpuş (41) Mountains. In the lower part of the same pile small lenses of oxidic iron ore are associated with amphibolites as for example in the Poiana Ruscă Mts (201,220, Fig.3). Syngenetic concentrations of sulphides, magnetite and baryte were reported only from Central Dobrogea (910). Metaultrabasites with nickel minerals appear in the Surianu (166), Căpăţînei (160) and East Făgăraş (139) Mountains (Fig.7). All these syngenetic strati-

form and magmatic ores were regionally metamorphosed in the almandine amphibolite facies, during a tectogenesis assigned to the Greenvillian-Dalslandian event. Later on, they have been affected by the metamorphism and tectogenesis of younger cycles (Early Caledonian, Variscan, Alpine). Therefore they display a polymetamorphic character.

3. The metamorphism of the sequence assigned to the Middle Proterozoic generated in the Carpian crystalline series graphite concentrations within the Danubian of the Paring Mts (161-164), muscovite- and feldspar-bearing pegmatites within the Getic Nappe in the Banat (219, 222, 223, 234, 238, 258, Fig.10), Lotru Mts(153-158) and Cindrel Mts (157), within the Rodna Nappe in the Rodna Mts (58, Fig.3), in the Preluca Massif (39, 40),and within the Bihor Autochthon crystalline formations of the Gilău Mts (375,376). The Cindrel Mts pegmatites are also significant for spodumen (157) or beryl (158). Some of the pegmatitic dykes in the Preluca Mts and particularly their peripheral plagioplitic zones were later hydrothermally argillized and graded into bentonite (42).

Metamorphic quartz dykes (225, 226, 229) occur in the Banat and kyanite concentrations are known in the Cindrel (156,159) and Făgăraș (149) Mts.During younger overprints retrogressive phenomena had some metallogenetic significance by gold concentration in metamorphic quartz veins (152) and by the talcitization of dolomitic (90, 96) or basic and ultrabasic (221, 237) rocks.

4. The metallogenesis of the Upper Proterozoic-Cambrian sedimentary-magmatic cycle is characterized especially by the provinces of syngenetic pyrite and base metal sulphide ores of Kuroko type s.l. (43, 45-48, Fig.2;76, 71, 73, 74, 77, Fig.4; 103-105, Fig.5) associated with the Cambrian rhyolitic volcanism of the Tulgheș Group in the East Carpathians. Due to intensive mining four main types of sulphide deposits were recognized relying on the ore deposition process. In the same Cambrian sequence (Tulgheș Group) of the East Carpathians, a wide zone with syngenetic manganese ore deposits (Iacobeni type)(63, 66-69, 81, 82-84, Fig.4; 91) occur in association with a formation of graphitous quartzites (metalydites). At the same lithostratigraphic level there appear also stratiform baryte ores, in places associated with pyrite and sphalerite concentrations (80, Fig.4). Some stratiform pyrite, pyrrhotine and sphalerite (200) ore deposits in the Poiana Ruscă Mts (Fig.9) are related to the initial basic volcanism. All the mentioned syngenetic ores underwent an Early Caledonian regional metamorphism in the

greenschists facies and were locally affected by the Variscan metamorphism and the Alpine tectogenesis.

5. The Variscan cycle is characterized by a metallogenesis more diversified as regards both the types of ore deposits and the genetic affiliation. The most important are the sideritic ores of Teliuc-Ghelar type in the Poiana Ruscă Mts (194-196, 202, 208, Fig. 9), defined as a carbonate equivalent of the oxidic Lahn-Dill type ores. Small-sized hematitic and magnetitic concentrations of Lahn-Dill type are genetically affiliated to the same Devonian basic volcanism of the Poiana Ruscă Mts (203, 204, 206, Fig.9). Similar ores, but in a geologically different environment, appear at Rusaia, in the Bistriţa Mts (61). Syngenetic stratiform pyrite and sulphide ores, of a minor interest, occur only in the Rodna Mts (91, Fig.3). A particularity of the ores related to the Paleozoic metamorphites consists in the hydrothermal ore deposits related to the Lower Carboniferous metarhyolites of the Northern Poiana Ruscă Mts. Typical representatives are the Muncelu Mic lead-zinc ore deposits (192) and the Veţel base metal sulphide ores (191, Fig.9). The above-mentioned syn- and epigenetic ores underwent a regional metamorphism in the greenschist facies during the Sudete phase. In this process the unconformable Pb and Zn ores at Muncelu Mic were mostly mobilized on the metamorphic schistosity. Talc concentrations were generated by the Variscan metamorphism in the Upper Carboniferous dolomites of the Poiana Ruscă Mts (197-199, 207) and in the metaultrabasites (211, Fig.9). The Variscan cycle also includes some vein mineralizations with iron carbonates and base metal sulphides, boudined and deformed, which crop out in the northern part of the East Carpathians (49, 62). Hydrothermal copper mineralizations, of a lesser importance, appear in the Highiş Mts connected with the Hercynian granitoids (360). The Paleozoic ultrabasites of the South Banat contain some small chromite deposits (265, 266, 268, Fig.12) and in places asbestos concentrations (244, 267).

6. The Alpine orogenesis gave rise to important structural complications, generating endogene and exogene conditions favourable for the accumulation of metalliferous and nonmetalliferous mineral resources.

The Triassic acid magmatites of North Dobrogea are accompanied by baryte and base metal sulphide ore deposits (906-908, Fig.20). Predominantly hematitic iron ores are found at Iulia (909, Fig.20), but their genesis is still under discussion.

In North Dobrogea kaolin accumulations (904) occur as a

result of hydrothermal and/or supergene alteration of quartz porphyry veins.

In the ophiolitic rocks of the Metaliferi Mountains there are local Fe-Ti-V liquid-magmatic concentrations (229, 303, Fig.13) and occurrences of Ni mineralizations of the same origin (305 M.) associated with gabbroic bodies of the first tholeiitic evolution phase of the ophiolitic magmatism. Cyprus-type volcanic concentrations (291, 292, 294) - some of them partly regenerated magmatically(300) - or hydrothermal mineralizations predominantly veins(301, 302 M, Fig. 13) were formed in connection with the basaltic volcanics of the same phase. Ore deposits assimilated to the Kuroko genetic type are known at Vorţa (308), genetically associated with the island-arc calc-alkali volcanism of the last evolution phase; the Valea Lungă high-temperature copper mineralizations (309) are probably of the same genetic affiliation. The vein concentrations of quartz-molybdenite, pyrite±Cu,Pb,Zn of Săvîrşin and Cerbia (293, 297) are located in granitoids whose K/Ar ages indicate time-spans corresponding to the Lower Cretaceous, thus being older than the Banatites.

The metallogenesis of the Ditrău alkaline massif is very complex; there exist mineralizations of molybdenum (99), of molybdenum and rare earth ores associated with titanium oxides, sulphides, sulphosalts, etc.(98).

The postmagmatic activity linked with banatites and Neogene volcanics is highly significant from the viewpoint of both the formation of ore deposits and the diversification of the compositional types or ores. It is worth mentioning that from such ore deposits - pyrometasomatic and especially hydrothermal - about 20 minerals (e.g. nagyagite, sylvanite, tellurium - as metal and ore -, krennerite, andorite, semseyite, fizelyite, felsöbanyite, rezbanyite, szmikite, cronstedtite, monsmedite, krautite) have been described for the first time.

The banatitic metallogenesis is generally characterized by pyrometasomatic iron ore deposits (273, 371, 372, Figs.11,17), first defined as such by Cotta (1864) at Ocna de Fier, base metal hydrothermal-metasomatic (274,373), metasomatic copper±Mo (285-290 Fig.11), lead-zinc±Au,Ag(209,Fig.9) or Bi-Mo-W-Cu±B,Au,Ag complex ore deposits (394), as well as by other vein mineralizations with a complex composition - Cu,Pb,Zn;Au,Ag±Mo,Fe-, such as those in the South Bihor Mts (384-391, Fig.18), or with a predominant copper character in the North Bihor Mts (396). Porphyry copper structures

(Cu±Mo,Pb,Zn) are known only in the Banat (241, 247, 289,Fig.11). Among the nonmetalliferous mineral resources related to the banatitic magmatism it is worth mentioning the brucite (398) and wollastonite (394) concentrations of Bihor or the calcite concentrations of the Metaliferi Mts (304,Fig.13), generated by the contact metasomatosis of some carbonate rocks, the hydrothermal zeolites of Bihor (395,Fig.18), as well as the Valea Chioarului bentonite deposits (380) formed by the hydrothermal alteration of a rhyodacitic dyke.

The ore deposits related to the Neogene magmatites are mainly hydrothermal, most of them occurring as veins; as stockworks (18, 30, 314, 315, etc.) or metasomatic bodies within metamorphic limestones or pelitic formations (53, 54, 55, 342, 365); all of them display a predominant polymetallic character (Pb-Zn-Cu-Au-Ag±Te,W, Mo). The ore deposits are very diversified, occurring as gold deposits (5, 17, 19, 92, 329, 330, 335, 341, 358, 361, etc.) and as gold telluride deposits - specific to the Metaliferi Mts (313,343a, 343, 365, 355 M); very often the mineralizations exhibit a gold-polymetallic character (Au,Ag±Pb,Zn,Cu) either due to the composition of the ore (11, 12, 365, 365 a, etc.) or as result of the zonal development of the mineralizations (20, 22, 24, 323, 342,347). The ore deposits with a predominant polymetallic character are numerous : most of those found in the Baia Mare zone (Fig.1); they occur frequently in the Metaliferi Mts, too(Figs. 14, 15, 16).Mercury mineralizations, of a minor interest, appear in all the three Neogene volcanic zones (4, 118, 353, 354,Figs. 6,15).

The nonmetalliferous mineral resources related to the Neogene volcanics are relatively frequently found in the East Carpathians. They are represented by kaolin in the Oaş-Gutii Mts (23,29,Fig.1), south-western part of the Rodna Mts (59,60) and the Harghita Mts (110, 113, 119), bentonite in the Oaş-Gutii Mts (7), feldspar in the Metaliferi Mts (302,Fig.16) and aragonite in the western part of the Gurghiu Mts (117). They occurred as a result of the hydrothermal, possibly deuteric (?) alteration of some rhyolitic (59, 302), perlitic (?), dacitic (60), and andesitic (23, 29, 110, 113, 119) rocks or of the precipitation from low-temperature hydrothermal solutions (117). In the Calimani Mts sulphur (89) and sulphur + limonite (88) concentrations occur in andesitic pyroclastics. Also related to the Neogene volcanic activity are the bentonite deposits in the Mureş Zone (310, 311), encompassed in the complex of andesitic pyroclastics, bentonites (170, 260, 820, 822-825) and zeolites (26, 802) formed at the expense of the tuff beds, generally acid

(dacitic) intercalated in the Miocene sedimentary sequences of the Transylvanian (820, 822-825), Haţeg (170), Ogradena-Bahna (260), Sylvania (802) basins or the Transcarpathian Depression (26). The grading of the initial cineritic material into bentonitic and/or zeolitic rocks is controlled by exogene processes (halmyrolisis ± weathering).

Mineral resources associated with the Alpine sedimentary cycle are found both in the orogenic belts and in the platform covers. Most of them are represented by nonmetalliferous minerals.

In the Neocomian, in the continental realm, **allochthonous bauxite deposits** appear in the Pădurea Craiului Mts (405-411, Fig.19) and in the Bihor Mts (399-401).

Ferrolitic intercalations and lenses (sphenosiderites and pelosiderites), encompassed in the lower subformation of the black shales formation (427, 492), are known in the Lower Hauterivian-Barremian flysch deposits of the East Carpathians (Audia Unit).

A new continental episode, associated with the bauxite accumulations of the South Carpathians (171), is very significant at the Upper Aptian level.

In the Albian, interesting concentrations of glauconite are found in South Dobrogea (921) in the epicontinental deposits of the Moesian Platform cover. In the same area, psephitic rocks with phosphatic concretions (922) appear in the Cenomanian, and calcareous organogene deposits, chalk (919, 920), in the Campanian-Maastrichtian).

Allochthonous bauxite accumulations (363) were formed on the Precambrian crystalline limestones of the Baia de Arieş Unit (Apuseni Mountains) during an ante-Upper Santonian epoch. Also in the continental realm, kaolinitic weathering crusts were formed in the Ticău Mts (37) during an ante-Paleogene period with a lateritic climate (possibly the same period which generated the pre-Santonian bauxites).

During the Eocene, glauconitic deposits (374) associated with concentrations of iron-rich oölites (374, 377) were formed on the north-western border of the Transylvanian Basin under epicontinental marine conditions; gypsum rocks (804, 813) precipitated in the lagoonal domain.

The Oligocene is interesting in the external flysch zone of the East Carpathians where diatomitic organogene beds (503) appear in association with menilitic rocks.

The Miocene molasse comprises several lagoonal episodes, which

have generated significant deposits of gypsum, halite and deliquescent salts. The basal part of the Lower Miocene is represented in the East Carpathians by concentrations of gypsum (514, 515), salt (421, 425, 428, 431, 449, 450, 473, 475, 489, 494, 502) and potassium and magnesian salts (425, 428, 431, 432, 476) and in the folded limb of the Dacic Basin by gypsum (661) and salt deposits (668). Gypsum beds are also to be found in the upper part of the Lower Miocene of the East Carpathians (429, 474, 477, 575, 576). The second major evaporitic episode appeared mainly during the Middle Miocene; it is represented by important gypsum (524) and salt deposits (523) in the East Carpathians , salt in the Dacic Basin (691), gypsum (169, 816, 818), in places with lenses and nests of alabaster (819) on the north-western and south-western borders of the Transylvanian Basin, salt in the whole Transylvanian Basin(814, 815 , 821, 845, 864, 850, 897) and the Maramureş Depression (25).

The Upper Miocene is characterized by the predominance of the brackish-water, siliceous organogene deposits (diatomites). They are encountered in South Dobrogea (923, 924, 926), in the sedimentary cover of the Moesian Platform, and in some intermontane basins of the Apuseni Mountains (21). Fresh-water diatomites occur in the Upper Pliocene of some intermontane basins in the East Carpathians (121).

During the Pliocene and Quaternary, as well as during the recent sedimentary processes, concentrations of heavy minerals (Ti, Zr, Fe, Au) were formed in the sandy deposits of the inner limb of the Carpathian Foredeep, the Transylvanian and Pannonian basins, along some river courses in the Apuseni Mts, Banat, Poiana Ruscă, as well as in the deltaic and littoral zone of the Black Sea.

Among the nonmetalliferous mineral resources there are several mineral deposits formed as a result of the postdepositional alterations of different origins. Thus, the accumulations of pyrophilitic schists in the Danubian Autochthon (188) were formed by the weak metamorphic or anchimetamorphic transformation. In the west of the Transylvanian Basin celestine comes from the diagenetic alteration of the Middle Miocene gypsum deposits. All the sedimentary sulphur accumulations of the East European Platform cover (414), the East Carpathians (525, 577) or the Getic Depression (692, 693) are the result of the bacterian biochemical precipitation and diagenetic recrystallization, the initial rock being usually sulphatic (gypsum).The supergene alteration could also generate magnesite

accumulations, of a minor or major interest, at the expense of ultrabasic rocks in the Almaj Mts (269), aragonite accumulations on metamorphosed dolomites in the Poiana Ruscă Mts (207 a), etc.

x

x x

During the evolution in time of the processes of the mineral resources accumulations in Romania, generally with a well documented genetic appurtenance, there are cases when the connection between mineralizations and their sources has been destroyed. The genesis of the copper (366) and (367) ferriferous mineralizations in the southern part of the Muntele Mare is still uncertain. The epigenetic character of some Alpine iron (65) or base metal and baryte (72, 75, 76,Fig.4) concentrations in the northern part of the East Carpathians is relatively clear but the magmatic affiliation is still an unsolved problem. The mineralizations in the eastern part of the Făgăraş Mts (137-140 , Fig.7), predominantly polymetallic, and those in the Leaota Mts (142,143,Fig.8), with a complex character - Co-Cu-Pb-Zn-Au - are highly tectonized; their age and genetic connection with pre-Alpine magmatites, occurring in both zones, are still under discussion.The lead-zinc mineralizations of Jitia (500) exhibit a solitary position; they are probably of diagenetic origin, formed under conditions specific to a Sabkha process. The Sarmatian bentonites of Dobrogea (925, 927) have also an uncertain genesis because of the lacking of any volcanic activity at this level in the area.

B. Hydrocarbon Accumulations

The areal distribution of the hydrocarbon deposits, regarded in connection with the great structural units, can be divided into several groups, as follows: accumulations related to the Carpathian Foreland (1); accumulations related to the foredeep s.str. (2); accumulations related to the Moldavidian Nappes (3); accumulations related to the Transylvanian Depression (4); accumulations related to the Pannonian Depression (its basement inclusive) (5); accumulations related to the Transcarpathian Flysch (extremely restricted) (6).

In some cases, accumulations belonging to two of the above-mentioned groups, can be vertically superposed (flysch nappes thrust over the foreland, foredeep superposed on the Subcarpathian Nappe or Foreland). In such situation (not too frequent), the separation is difficult.

1. The accumulations related to the Carpathian Foreland (Fig. 31) represent about 40% of the accumulations known in the Romanian territory. In several cases (507, 509, 512, 513, 542, 543, etc.) they are common to the Carpathian Foredeep s.str. The Moesian Platform hosts the overwhelming majority of the hydrocarbon accumulations of the Foreland. The host structures of the accumulations are moderately up to strongly fractured, tabular or slightly undulated, some of them controlled by sedimentogene factors(unconformities, facial variations, lithostratigraphic pinching out). The hydrocarbon accumulations are encompassed in the Moesian Platform at different stratigraphic levels, from the Paleozoic deposits to the Neogene ones. In the Paleozoic deposits accumulations are found in the Devonian/Eocarboniferous limestones and the Carboniferous arenites. Some accumulations are hosted by the Permian-Triassic detrital series and the Middle Triassic calcareous deposits.A complex rich in accumulations is represented by the Middle Jurassic calcareous-detrital formations. The Malm-Eocretaceous series, predominantly calcareous, and the Senonian formations also comprise hydrothermal accumulations. The most recent deposits including accumulations are the Neogene ones - especially Sarmatian - and are common with the Foredeep.

Outside the Moesian Platform, hydrocarbon accumulations occur in the cover of the North-Dobrogean Promontory (469-499), the Bîrlad Depression overlapping the Scythian Platform (479, 480, 495) or the cover of the Moldavian Platform (419, 423, 426, 430). Within the promontory cover, accumulations are encompassed in Neogene formations,in the Jurassic and Neogene deposits of the Bîrlad Depression and in the Neogene deposits of the Moldavian Platform.

The origin of the hydrocarbons accumulated in the Carpathian Foreland is hardly established. It is not certain if the hydrocarbons of these accumulations are of the same age (or close ages) or of different ages. The existence of important gaps within the platform covers, accompanied by periods of erosion might constitute an argument in favour of the first assumption. The location of accumulations at different levels, as regards both the stratigraphic age and the depth, might be an argument in favour of the second one. The conspicuous difference between the frequency, complexity and richness of the hydrocarbon accumulations of the Moesian Platform as against those of the Foreland, determined by the different features of the cover of the former, must also be emphasized.

2. The accumulations related to the Carpathian Foredeep

(s.str.) are encompassed in the Sarmatian-Pliocene formations both in its external zone, nondeformed, and in the internal zone, deformed.

In the external zone of the foredeep, accumulations (Fig.30) are grouped in the median and western part of the bend zone, or its two asymmetrical flanks. The structural forms hosting accumulations are represented by brachifolds, monoclines or homoclines, more or less faulted. The stratigraphic and/or lithologic traps play an important part here, as well.

In the internal zone of the foredeep (Fig.29) also occur the oldest hydrocarbon fields in Romania and, among them, the greatest ore deposit known in the Romanian territory. The most varied structures with hydrocarbon accumulations of this structural units are to be found in the so-called Diapir Folds, lying between the Buzău and Dîmboviţa valleys. An important part in the distribution of the hydrocarbon accumulations is played, in this segment, by the diapir character of the salt. They are associated with all types of diapir anticlines, from the exaggerated ones up to the cryptodiapir folds, through the overflown and outcropped ones. Some accumulations are divided into stages and are common to the Subcarpathian Nappe and the folded deposits of the Internal Foredeep, overlapping the former (e.g. 527, 584, 656, 670), where there also occur accumulations exclusively in the molasse deposits of the Foredeep.

The origin of the hydrocarbon accumulations situated in the Carpathian Foredeep seems to be obviously connected with the Oligocene-Lower Miocene bituminous formations which enter into the constitution of some of the Moldavidic Nappes as well as the Subcarpathian, Marginal Folds and Tarcău nappes.

3. The accumulations related to the Moldavidic Nappes (Fig. 29) are encompassed in the Oligocene and Lower Miocene formations of the Marginal Folds Nappe (External Unit) , within which sandy sequences (Kliwa Sandstone), with high porosity and permeability, are developed.

Accumulations are very frequently found in the segment which extends from the Bistriţa Half-window, in the north, and the Oituz Half-window, in the south. In this area the marginal folds are overlain by the Tarcău Nappe and the lambeaux de rabotage situated in front of it.

The accumulations are hosted by faulted anticlinal or fault-folds (scales) and in places occur at different levels. The origin of the hydrocarbons from the accumulations related to the Moldavid-

ic Nappes is obviously connected with the Oligocene-Lower Miocene bituminous facies, the dysodile schists, for a long time considered as the main hydrocarbon source in the flysch zone and the Subcarpathians.

4. The accumulations related to the Transylvanian Depression (Fig.33) consist exclusively of gaseous hydrocarbons. They are encompassed in the molasse formations of the Sarmatian and/or Pannonian depressions. In the Transylvanian Depression the gas domes are mostly connected with cryptodiapir structures of the Badenian salts. The anticlines with diapir stocks seated on the margin of the depression exhibit only very rarely hydrocarbon accumulations.

5. The accumulations related to the Pannonian Depression (Fig. 32), its basement inclusive, are discontinuously spread and are encompassed in sedimentary formations of fairly varied ages and constitutions, including the fissured metamorphic formations of the basement. The accumulations are especially controlled lithologically and/or stratigraphically and then tectonically, the host structures being more or less fractured.

6. The accumulations related to the Transcarpathian Flysch Zone (413) are encompassed in the Oligocene-Lower Miocene deposits, with the Borsa Sandstone, of the posttectogenetic cover of the Crystalline-Mesozoic Zone.

C. Solid Combustibles

Within the Hercynian and Alpine structural setting of Romania were formed numerous accumulations of coals and combustible schists, whose distribution and energetic qualities differ from one zone or unit to another. The list of these accumulations was made up on the basis of the petrographic types: peat(1), lignite(2), brown coal (3), bituminous coal(4), anthracite(5), carbonaceous shales(6),and oil shales(7).

1. Peat, a product of the actual sedimentation, occurs sporadically in the South Carpathians (903) and the Apuseni Mountains (812). It exhibits accumulations of interest only in the East Carpathians (84, 86, 100, 111, etc.).

2. Lignite is widespread in the Romanian territory, locally constituting coal deposits of interest. The Dacic Basin, situated in both the Carpathian Foredeep (Wallachian and Getic zones) and the Moesian Platform (North-Danubian sector), represents one of the main coal sources of Neogene age. In the Wallachian zone(the sector between the Trotuş and Argeşel valleys, Fig.28), lignite accumulations occur in: Meotian - as beds of subordinate sizes;

Pontian(657) - 1-3 beds of 0.80-2.0 m thick; Dacian (540) - 2-3 beds of 0.50-6.0 m thick; Romanian (578) - 1-2 beds of 0.10-1.40 m thick. The structure of these accumulations is generally very complicated due to the salt diapirism. In the Getic zone (Fig.32), west of the Olt Valley, the greatest lignite deposits, mined both in quarries and underground, are to be found in the Upper Dacian and Lower Romanian (733-761). The number and thickness of the coal beds decrease gradually from the foredeep towards the platform.The structure of these deposits is characterized by folds striking W-E, affected by numerous faults, in the foredeep sector, and by smaller or larger basins connected with the vertical movements of the blocks in the platform area.

The Moldavian Basin, situated in the northern extension of the Dacic Basin, overlying the Precarpathian Depression and the internal part of the East-European Platform, contains Sarmatian lignite formations at Fălticeni-Boroaia (424), where 1-8 lenticular beds, of 0.20-1.0 m thick are to be found.

The Pannonian Basin (Fig.33)extends in the western part of the Apuseni Mountains and South Carpathians. The coal-bearing formations are of different ages : Badenian, at Caransebeş (227)where there occur 1-5 beds of 0.5-4.0 m thick; Sarmatian, at Borod (787) - 1-2 lenticular bodies of 1-5 m thick; Pontian, in the Simleul Silvaniei Basin (779-789) - 19-27 lignite beds, over 0.50 m thick, and at Lugoj (762) where this formation contains 3-10 beds of 0.50-3.60 m thick. The structure of the coal fields is represented here by folds with gentle-dipping limbs but affected by a conspicuous ruptural tectonics.

Besides the mentioned accumulations, lignite also appears in the Tara Bîrsei basins, at Căpeni-Baraolt (Fig.27), where the productive formation is of Middle Pliocene age and comprises 6-8 beds, of 1-29 m thick, and in the Bilbor and Borsec basins, where it is of Pliocene-Pleistocene age (93-97) and consists of 1-6 beds.

3. The brown coal is found in rather restricted areas as compared with lignite. It forms accumulations of interest only in the Comăneşti Basin, where the coal-bearing formation is of Sarmatian age and consists of 3-11 beds with thicknesses of 0.30-1.75 m. The tectonics of this basin is represented by several asymmetrical folds, affected by N-S strike faults, which divide the basin into several fields.

The Pannonian Basin comprises, besides the mentioned lignite fields, brown coal in the Brad-Săcărîmb and Mehadia-Bozovici gulfs.

The Tebea-Brad brown coal accumulations (336) belong to the Badenian, within which three beds of 0.20-3.60 m thick occur, as well as to the Sarmatian which displays nine intercalations among which only two with thicknesses exceeding 0.20-0.95 m.

The Mehadia (239) and Bozovici (242) coal deposits, situated in the passage between the Pannonian and Dacic basins, of Badenian age, are built up of lenticular beds of different thicknesses(0.20 -13 m).

The Almaş-Agrij Basin consists of Upper Oligocene-Aquitanian accumulations (805-811). 13 coal beds with thicknesses of 0.30-0.90 m occur here.The coal fields are confined to the homoclinal regime of the Paleogene and Miocene deposits with a slight eastward dipping (6-12°).

The Tara Bîrsei Basin contains also brown coal accumulations in Lower Jurassic formations at Codlea-Vulcan and Cristian, where four coal beds of 0.30-7 m thick are to be found. These coal deposits exhibit a complicated tectonics due to a system of Alpine nappes which affect the whole region of the Carpathian bend zone.

4. Bituminous coal was accumulated in different tectonic units of the South Carpathians.

The Petroşani Basin (Fig.29) comprises the most important accumulations of Oligocene-Lower bituminous coal, partly coking, and are represented by 18-21 beds of 0.50-30 m thick.

In the Reşiţa Basin (Fig.31), coal accumulations appear in Upper Carboniferous and Lower Jurassic formations. The Upper Carboniferous consists of two coal-bearing complexes including 5-7 beds with thicknesses up to 3 m, well individualized in the northwestern part of the basin, at Lupac (276). The Lower Jurassic is represented by a carbonaceous horizon in the base and a horizon with oil shales at the upper part.In the carbonaceous horizon, eight coal beds of 0.30-3 m thick (281,282) occur at Anina, and two coal beds of 0.80-2.30 m thick (279) at Doman. The structure of the coal fields in this basin is extremely complicated,especially at Lupac, where the Hercynian tectonic elements are superposed by the Alpine ones, which generated overthrustings with an amplitude similar to the nappes or reversed faults, with a N-S strike and eastern vergence.

The Sirinia Basin (Fig.30) contains bituminous coal accumulations in geological formations similar to those in the Reşiţa Basin. The Upper Carboniferous is represented by deposits with continuous development, which limits the coal distribution. The Baia Nouă

coal deposit (255) is constituted of two lenticular beds, already mined. In the Dragosela Valley basin there is only one bed (0.30-1 m thick), situated at the terminal part of the Upper Cretaceous deposits. The Lower Jurassic consists of a coal-bearing basal horizon and an upper siltic horizon. Bituminous accumulations of interest are found at Cozla (253), where there are three beds of coking bituminous coal (0.3-5.0 m thick), Bigăr (254), Pregheda (250), Chiacovăţ (251), Crivi Rudăria (249), and Sopot (248), the last ones made up of 3-5 beds of energetic bituminous coal (0.30-2 m thick). The structure of these deposits is complicated especially due to the reversed faults with a N-S striking and E vergence, as well as to the numerous post-Laramian vertical and subvertical faults.

5. Anthracite occurs only in the Mehedinţi Basin, at Schela (189), where the productive formation is of Lower Jurassic age (Schela Formation) and contains anthracite lenses separated by beds of pyrophyllite-bearing refractory clays. The structure of this deposit is complicated by the Susiţa Granite Nappe which partly overlie the coal-bearing formation.

6. The carbonaceous shales were accumulated under genetic conditions similar to the coals, being usually situated in their footwall and hanging wall.

In the Reşiţa Basin, the carbonaceous shales constitute a well-outlined deposit at Ranchina (277). The Lower Jurassic is the host formation. In its upper part the sequence contains a level of carbonaceous clays with numerous lenses of bituminous coal. In the Transylvanian Basin there is also a small deposit of carbonaceous shales, at Coaş (801), in the Curtuiuş Beds of Upper Oligocene age.

7. The oil shales, unlike the carbonaceous ones, exhibit a sapropelic origin, being the result of the accumulation of organic matter in the large areas of marine sedimentation.

In the Romanian territory oil shales of Oligocene-Lower Miocene age appear in the East Carpathians (417, 418, 472, 504), Transylvanian Basin (803) and of Lower Jurassic age in the South Carpathians (280, 283).

In the Reşiţa Basin, at Anina and Doman, the upper horizon of Lower Jurassic consists almost exclusively of mineable bituminous clays. In structural respect, the oil shales of the Reşiţa Basin form the limbs of the Anina-Doman Anticline, conformably overlying the lower (carbonaceous) horizon of the Lower Jurassic. The general structure of the entire basin is complicated by numerous reversed faults with eastern vergences.

REFERENCES

Almăşan B.(1982) Exploatarea şi valorificarea zăcămintelor de substanţe minerale utile solide. Edit.didactică şi pedagogică.

Bombiţă Gh.,Drăgănescu A.,Micu M.,Popescu Gh.(1983) Prognoza pentru gipsuri. Arch. IGG, Bucureşti.

Borcoş M.,Andăr P.,Dimitriu Al.,Gheorghiţă J.,Lang B.,Marinescu Fl.,Mîndroiu V.,Peltz S.,Stan N.,Stanciu C.,Udrescu C., Vasiliu C.,Volanschi E.(1975) Sinteză geologică asupra masivelor vulcanice Oaş-Gutîi.Arch.IGG,Bucureşti.

Borcoş M.(1976) Geological and Metallogenetic Elements of the Evolution of the Neogene Volcanism(Apuseni Mountains). Rev.roum.géol.,géophys.,géogr.,Géol.,20,1,85-101.

Borcoş M.,Kräutner H.,Ardelean P.(1984) Studii complexe în vederea îmbunătăţirii fundamentării prognozei geologice pentru principalele substanţe minerale utile solide. Minereuri neferoase. Arch. IGG,Bucureşti.

Bordea S.,Bordea J.,Mantea Gh.,Pop Gr.,Popescu I.(1983) Studii complexe în vederea îmbunătăţirii fundamentării prognozei geologice pentru principalele substanţe minerale utile.Minereuri de aluminiu.Arch.IGG, Bucureşti.

Boştinescu S.,Vlad C.,Serbănescu A.,Tiepac I.(1981) Sinteza datelor referitoare la mineralizaţiile cuprifere disperse din Munţii Metaliferi,inclusiv reevaluarea prognozei. Arch. IGG, Bucureşti.

Brana V.(1958) Zăcăminte metalifere ale subsolului romanesc.Edit. ştiinţifică,Bucureşti.

Brana V.(1968) Zăcămintele de substanţe utile nemetalifere. Edit. tehnică, Bucureşti.

Cheşu M.(1983) Elemente minore în minereuri neferoase din România. Editura tehnică, Bucureşti.

Cioflică Gr.,Savu H.,Borcoş M.,Ştefan A.,Istrate G.(1973) Alpine Volcanism and Metallogenesis in the Apuseni Mountains. Guidebook 13, Symp.Volcanology and Metallogenesis, Inst. geol.,Bucureşti.

Codarcea Al. (1931) Studiu geologic şi petrografic al regiunii Ocna de Fier-Bocşa Montană(jud.Caraş-Banat).An.Inst. Geol.Rom.,XV, Bucureşti.

Cosma R.(1982) Caracteristici calitative, zone de perspectivă şi posibilităţi de valorificare ale tufurilor vulcanice din România. Mine,petrol şi gaze, 33, 1, Bucureşti.

Folea I.(1980) Orientarea cercetărilor geologice şi tehnologice pentru valorificarea raţională a potenţialului de minereuri neferoase din R.S.România. St.tehn.econ., A/14,

Bucureşti.

Gavăţ I. (1963) Geologia petrolului şi a gazelor naturale. Edit. didactică şi pedagogică, Bucureşti.

Gherasie I. et al. (1976) Sinteza geologică privind situaţia actuală a acumulărilor de sare gemă din R.S.România. Arch. IPGG, Bucureşti.

Gherasie I. (1977) Sinteza lucrărilor geologice privind acumulările de săruri de potasiu din R.S.Romania. Arch. IPGG, Bucureşti.

Ghiţulescu T.P., Streckeisen A. (1929) Les ressources d'or de Roumanie. In: The Gold Resources of the World, 15th Intern. Congr.,South Africa, 1929 (Pretoria), 295-303.

Ghiţulescu T.P. (1934) Distribution de la minéralisation dans les gisments d'âge tertiaire de Transylvanie. Bul. Soc. rom. geol., 2, 56-97, Bucureşti.

Ghiţulescu T.P.,Socolescu M., Giuşcă D. (1938) Études géologiques et minières dans le quadrilatère aurifère (Monts Métallifères). C.R.Inst. Géol., XXII, 74-92, Bucureşti.

Ghiţulescu T.P., Socolescu M.(1941) Étude géologique et minière des Monts Métallifères. An.Inst.Geol.Rom., 21, 181-464, Bucureşti.

Giuşcă D., Bleahu M., Borcoş M., Dimitrescu R., Kräutner H., Savu H. (1968) Neogene Volcanism and Ore Deposits in the Apuseni Mountains. 23rd Intern. Geol. Congr.,Czechoslovakia, 1968, Guide to Excursion 48 AC,Romania, Publ. Geol. Inst., 1967, Bucureşti.

Grigoraş N. (1961) Geologia zăcămintelor de petrol şi gaze din RPR, Edit. tehnică, Bucureşti.

Grigorescu C., Butucescu D. (1971) Diatomite şi bentonite.Zăcăminte din ţară şi străinătate şi tehnologii de valorificare. IMPG, ODPT, Bucureşti.

Helke A. (1934) Zăcămintele de minereu aurifer din România. Minerva, IX.

Hîrtopanu I., Roşu E., Stanciu C., Szakacs A., Apostoliu A.,Arion M., Diaconu Fl., Popa M., Barnar Z. (1983) Prognoza pentru roci cu feldspar potasic. Arch. IGG, Bucureşti.

Hîrtopanu I., Diaconu Fl. (1983) Prognoza pentru disten. Arch.IGG, Bucureşti.

Hurezeanu E., Soare C. (1980) Sinteza lucrărilor geologice efectuate pentru minerale grele în depozitele aluvionare din Delta Dunării pe grindurile Letea,Caraorman, Nufă-

ru, Perişor şi Buhaz, jud. Tulcea. Arch.IPGG, Bucureşti.

Ianovici V. (1949) Surse de azbest exploatabile în R.P.Română. Natura , 1.

Ianovici V. (1956) Informations générales sur lès gisements de minerai de manganèse de la Roumanie. Symp. sobre yacimientos de manganeso : 20th Intern. Geol. Congr.Mexico, 1956, 5, Europe, 349-373.

Ianovici V., Dimitriu Al. (1968) Parametrii geochimici ai minereurilor din Romania. I. Distribuţia elementelor chimice principale în minereurile de mangan. Studii cerc. geol., geofiz., geogr., Geol., 13, 3-15, Bucureşti.

Ianovici V., Constantinof D., Drăghici C., Ionescu C., Dimitriu Al. (1968) Geology of Manganese Deposits in Romania. Rep. 23rd Intern. Geol. Congr.,Czechoslovakia, 1968, 13, 269-279,. Prague.

Ianovici V., Giuşcă D., Ghiţulescu T.P., Borcoş M., Bleahu M., Savu H. (1969) Evoluţia geologică a Munţilor Metaliferi. Edit. Acad. RSR, Bucureşti.

Ianovici V., Borcoş M., Patrulius D., Bleahu M., Lupu M., Dimitrescu R., Savu H. (1976) Geologia Munţilor Apuseni . Edit. Acad. RSR, Bucureşti.

Ianovici V., Stiopol V., Constantinescu E.(1979) Mineralogie. Edit. didactică şi pedagogică.

Ianovici V., Borcoş M. (1983) Mineral Deposits of Europe.2:Southeast Europe (Romania). Publ. Mineralogical Soc., 41 Queens Gate, London SV 75 HR and the Inst. Mining and Metallurgy 44 Portland Place, London.

Kräutner H. (1966) Die Genesis der Sulfidlagerstätten aus den kristalinen Schiefern der Ostkarpaten. Rev. roum.géol., géophys., géogr. Géol., 10, Bucureşti.

Kräutner H. (1970) Die hercynische Geosynklinalerzbieldung in den rumänischen Karpaten und ihre Beziehungen zu der hercynischen Metallogenese Mitteleuropas. Mineral. Deposita, 5, 223-344.

Kräutner H., Kräutner Fl. (1972) Studiul metalogenetic complex al eruptivului banatitic şi al mineralizaţiilor asociate din masivul Poiana Ruscă. Arch. IGG, Bucureşti.

Kräutner H. (1977) Hydrothermal-sedimentary Iron Ores Related to Submarine Volcanic Rises : the Teliuc-Ghelar Type as a Carbonatic Equivalent of the Lahn-Dill Type. In:Time and Strata-bound Ore Deposits, p.233-235, Springer-Verlag,

Berlin, Heidelberg, New York.

Lazăr C., Berbeleac I., Volanschi E. (1982) Caracterele geochimice ale piritelor şi zonalitatea mineralizaţiilor asociate magmatismului laramic din partea central-sudică a Munţilor Bihor. D.S. Inst.geol.geofiz., LXVII/1, Bucureşti.

Lupei N., Brana V. (1971) Zestrea minerală a lumii. Edit.ştiinţifică, Bucureşti.

Mateescu I. (1962) Geologia zăcămintelor de cărbuni. Edit. didactică şi pedagogică, Bucureşti.

Mîrza I. (1982) Geneza zăcămintelor de origine magmatică. Edit. Dacia, Cluj-Napoca.

Mrazec L., Teisseyre W. (1902) Privire geologică asupra formaţiunilor salifere şi zăcămintelor de sare din România. Mon. Int. Petr. Rom., Bucureşti.

Mureşan M., Poşca V., Vlad S., Seghedi A., Miraută E., Savu H., Szasz L., Beguţiu G., Codarcea V.(1983) Corelarea regională a datelor geologice şi geofizice în vederea reevaluării prognozei geologice în Dobrogea centrală şi de nord.Arch. IGG, Bucureşti.

Năstăseanu S. et al. (1982) Studiul de reevaluare a prognozei pentru cărbuni şi şisturi combustibile pe teritoriul României. Arh. IGG, Bucureşti.

Nedelcu L., Peltz S., Ardelean P. (1984) Studii complexe în vederea îmbunătăţirii fundamentării prognozei geologice pentru principalele substanţe minerale utile solide. Minereuri de fier.Arch. IGG, Bucureşti.

Nedelcu L., Balaban A., Stelea I., Stelea G., Udubaşa G., Pomîrleanu V., Anghel S., Lupulescu A., Zămîrcă A., Gaftoi F., Bratosin I., Anastase S., Serbănescu A., Popescu Fl. (1984) Litostratigrafia, structura şi metalogeneza Munţilor Făgăraş de est.Arch. IGG. Bucureşti.

Panin N., Panin S. (1969) Sur la genèse des accumulations des minéraux lourds dans le delta du Danube. Rev. géogr.phys. géol. dyn., 2-3, XI, 5, Bucureşti.

Panin N. et al. (1980) Cercetarea complexă, geologică-geofizică,a platformei continentale a Mării Negre pentru aprecierea potenţialului economic al acesteia. Sectorul Sulina-Sf. Gheorghe.Arch. IGG, Bucureşti.

Panin N. et al. (1983) Cercetarea complexă, geologică-geofizică, a platoului continental al Mării Negre pentru aprecierea potenţialului economic al acesteia. Sectorul Constanţa-

Cap Tuzla.Arch. IGG, Bucureşti.

Papiu C.V., Mînzatu S., Iosof V. (1970) Genetische Typen der Karstbauxiten in den rumänischen Kreideformationen. An.Inst. Geol. Publ. Hung., 54, 403, 241-264, Budapest.

Papiu C.V., Udrescu C. (1973) Éléments nincurs des bauxites de Roumanie. Traveaux du Comité International pour l'étude des bauxites, des oxydes et des hydroxydes d'aluminium. Acad. Ing.Sci.Arts, Zagreb.

Papiu C.V., Alexandrescu Gr., Iosof V., Popescu Fl., Bratosin I., Neacşu V.(1977) Mineralogical-chemical Study of the Black Shales and Associated Ferrolites from the East Carpathians Flysch. D.S. Inst. geol. geofiz., LXIII/1, Bucureşti.

Paraschiv D. (1975) Geologia zăcămintelor de hidrocarburi din România. St. tehn. econ., A/10, Bucureşti.

Paraschiv D. (1979) Romanian Oil and Gas Fields. St. tehn. econ., A/12, Bucureşti.

Petrulian N., Buzilă I., Steclaci L. (1954) Contribuţii la studiul serpentinitelor nichelifere din RPR. Serpenţinitele din Banat. Bul. şt. Acad. RPR, 3, Bucureşti.

Petrulian N. (1973) Zăcăminte de substanţe minerale utile. Edit. tehnică, Bucureşti.

Pop E. (1960) Mlaştinile de turbă din RPR. Edit. Acad. RPR, Bucureşti.

Popescu Gh. (1981) Metalogenie aplicată şi prognoza geologică. Univ. Bucureşti.

Popescu-Voiteşti I. (1922) Considérations sur la géologie du sel massifs de régions Carpathique roumaine. C.R. Congr. Intern. Géol., XIIIème sess., Bruxelles.

Rădan S., Vanghelie I. (1979) Cercetări pentru identificarea unor acumulări de roci bentonitice magneziene (cu sepiolit şi attapulgit), utilizabile la prepararea fluidelor de foraj pentru sondele de mare adîncime.Arch.IGG, Bucureşti.

Rădan S., Zberea A., Nicolici Al., Bernes Z., Popa M.A. (1982) Prognoza pentru bentonite.Arch. IGG, Bucureşti.

Rădulescu D.P., Borcoş M., Krăutner H. (1969) Progrese recente în cercetarea zăcămintelor şi contribuţia lor la conturarea concepţiilor actuale asupra metalogenezei pe teritoriul României. An. Com. Geol., XXXVI, 181-199, Bucureşti.

Rădulescu D.P., Borcoş M., Krăutner H., Savu H., Vasilescu ...(1976) Notă explicativă la Harta metalogenetică a României,

scara 1:1000000. Inst. Geol., Bucureşti.

Rădulescu D.P.,Dimitrescu R.(1960) Mineralogia topografică a României. Edit. Acad. RPR, Bucureşti.

Rădulescu S. et al. (1970) Raport geologic de sinteză Baia Mare, prospecţiuni în perioada 1959-1969.Arch. IPGG,Bucureşti.

Răileanu Gr., Grigoraş N., Oncescu N., Plisca T. (1963) Geologia zăcămintelor de cărbuni. Edit. tehnică, Bucureşti.

Savu H. (1972) Metalogeneza asociată magmatismului ofiolitic din Munţii Drocea. D.S. Inst. geol., LXIII/2, 93-119, Bucureşti.

Socolescu M.(1944) Les affleurements de minerais de la région Vaţa-Soimuş-Buceava-Săvîrşin-Zam. C.R. Inst.Géol.,XXVIII, 93-125, Bucureşti.

Socolescu M. (1972) Phénomènes métallogéniques dans la provence de Baia Mare. 2nd Intern. Symp. on the Mineral Deposits of the Alps. Liublyana.

Stoica C., Gherasie I. (1981) Sarea şi sărurile de potasiu şi magneziu din România. Edit. tehnică, 248, Bucureşti.

Stanciu C., Szakacs A., Berbeleac I. (1983) Prognoza pentru roci caolinizate.Arch. IGG, Bucureşti.

Udubaşa G., Borcoş M. (in press) Metalogeneza neogenă din România: etape de cunoaştere şi perspective privind lărgirea bazei de materii prime minerale. D.S. Inst. geol.geofiz., Bucureşti.

Udubaşa G., Medeşan A., Zămîrcă A. (1975) Studiul de sinteză asupra mineralizaţiilor metalifere din partea de sud a masivului Rodnei.Arch. IGG, Bucureşti.

Udubaşa G., Nicolae I., Stefan A., Pop Gr., Bălan M. (1981) Modelarea geochimică a mineralizaţiilor din ofiolitele din partea sudică a Munţilor Metaliferi, Arh. IGG,Bucureşti.

Udubaşa G., Răduţ M., Edelstein O., Pop N.; Istvan D., Pop V., Stan D., Kovacs M., Roman L., Bernad A. (in press) Metalogeneza complexului eruptiv Tibleş, Carpaţii Orientali. D.S. Inst. geol. geofiz., LXIX, Bucureşti.

Udubaşa G., Dinică I., Gheuca I., Robu N., Robu L., Gheuca D., Gaftoi F., Serbănescu A., Zămîrcă A., Anastase S.,Popescu Fl. (1984) Litostratigrafia, structura şi metalogeneza masivului Leaota.Arch. IGG, Bucureşti.

Ungureanu B. et al. (1972) Sinteza geologică a zonei Brad-Săcărîmb. Arch.IPGG, Bucureşti.

Vlad N.S. (1983) Geologia zăcămintelor de porphyry copper. Edit. Acad. RSR, Bucureşti.

PART TWO

MINERAL RESOURCES

by

V. Arsenescu, C. Bițoianu, I. Berbeleac, T. Berza, M. Borcoș,
S. Bordea, S.G. Boștinescu, I. Dinică, H. Hann, P. Hârtopanu,
I. Hârtopanu, I. Întorsureanu, H. Kräutner, D. Jipa, C. Lazăr,
M.C. Micu, M. Mureșan, L. Nedelcu, S. Peltz, S. Rădan,
D. Russo - Săndulescu, M. Săndulescu, G. Ududbașa

All the mineral resources represented on the map scale 1:1 000 000 and on the 33 detail sketches are grouped in three lists including many supplementary information.

When inconsistencies are observed between the graphic representation of the ore deposits and their presentation in chapters I, II and III, the latter should be taken into account.

I. MAIN FEATURES OF THE MINERAL RESOURCES

Each ore deposit or occurrence is described following a unique pattern, i.e.(1)number on the map and/or figures,denomination, main constituents±secondary constituents,genetic type, age; (2) geographic location; (3) geological setting, main tectonic or petrogenetic units; (4) genetically linked formation (for syngenetic mineralizations) or the group(s) of magmatic, metamorphic sedimentary formations hosting the mineral deposits(for epigenetic mineralizations).In addition, if necessary, lithostratigraphic units,paleontological and radiometric data are also given. (5) host rocks and additional data on the main hydrothermal alteration types, etc.; (6) orebody morphology; (7) chemical composition ; main elements, secondary elements, trace elements. In case of coals the following data are also mentioned : U_h=specific humidity; U_t= total humidity; A^i= ash initial sample; A_{anh} = anhydrous ash; V^i=volatiles of initial sample; V^{mc}= volatiles of the combustible mass; C^{mc}= carbon of the combustible mass; S_c^i= combustible sulphur of the initial sample; S_t^i= total sulphur of the initial sample; S_t^{mc}= total sulphur of the combustible mass; Q_i^i = thermal power of the initial sample; Q_i^{mc}=lower thermal power of the combustible mass; (8)mineralogical composition,mineral parageneses (mineralization phases),zonal character;minerals first discovered in Romania are underlined with a continuous line and rare minerals - with a dashed line; in case of coals petrographic composition is mentioned; (9)selective references including only the main bibliographic sources, reviews indicated in Chapter III

have been used (only name of the first author and the year of publication) when no other information was available; unpublished papers have also been quoted.

For nonmetalliferous mineral resources as well as for oil, gas and coals, the significance of the mentioned points may differ more or less from that for ore deposits: e.g. in some cases the mineral resource may substitute completely the source rock or the host rock itself. Likewise, some data concerning age, chemical and/or mineralogical composition cannot be specified for the oil and gas deposits.

For similarly featured occurrences only point 1 of the pattern is mentioned and references to a representative deposit.

The data included in the following list were collected and summarized by a number of authors, whose initials are given at the end of each description.

1. (1) GHEZURI (Pb,Zn±Au,Ag; hydrothermal; Miocene).(2) East Carpathians; Oaş Mts. (3) Oaş Neogene volcanic zone. (4) Andesitic structures and Miocene molasse. (5) Pontian amphibole pyroxene andesites, propylitized, chloritized, adularized, sericitized, argillized, silicified, pyritized; hydrothermalized Pannonian-Pontian sandstones, marls, clays. (6) Veins and impregnations. (7) Pb,Zn± Cu,Au,Ag;Cd,As,Sb,V,Ti,Mn,Ga. (8) Pyrite, sphalerite, wurtzite, galena (+pyrrhotine, mispickel, chalcopyrite, tetrahedrite, marcasite, cinnabar), quartz,adularia,calcite, rhodochrosite, clay minerals. (9) Manilici et al.(1970) St.tehn.econ., A/8. (M.B.)

2. (1) SOCEA-BATARCI (Pb,Zn±Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Oaş Mts. (3) Oaş volcanic zone. (4) Neogene andesitic extrusive products. (5) Pontian andesites, hyaloandesites, dacites-hyalodacites, propylitized, chloritized, adularized, sericitized, argillized,silicified, pyritized. (6) Veins and impregnations. (7) Pb,Zn±Cu,Au,Ag; As,Cd,Sb,Ga,V. (8) Pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, marcasite, quartz, calcite, clay minerals. (9) See no 1 . (M.B.)

3. (1) PENIGHER (Pb,Zn±Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Oaş Mts. (3) Oaş volcanic zone. (4)Subvolcanic eruptive bodies, lavas, pyroclastics, andesitic apophyses and Miocene molasse. (5) Pontian pyroxene andesites propylitized, chloritized, adularized, sericitized, argillized, silicified, pyritized; hydrothermalized Pannonian-Pontian sandstones, marls, clays.

(6) Veins. (7) Pb,Zn±Cu,Au,Ag; As,Sb,Co,Ni,Mn,Te,Ga,Tl. (8)Pyrite, sphalerite, chalcopyrite, galena, tetrahedrite, stibnite, marcasite, quartz,adularia,calcite, clay minerals, locally with metahaloysite preferential concentration. (9)See no. 1. (M.B.)

4.(1)CĂMÎRZANA(Au,Ag,Hg; hydrothermal; Miocene). (2) East Carpathians; Oaş Mts. (3) Oaş Neogene volcanic zone; (4) Dacitic body and Miocene molasse. (5) Pontian dacites, marly-argillaceous complex with intercalations of calcareous sandstones, Sarmatian tuffs and tuffites, sandstones, marls, Pannonian clays sericitized, carbonated, argillized, silicified. (6) Veins and impregnations. (7) Au,Ag,Hg; Pb,Zn,Cu,Mo,As,Sn. (8) Three sequences are distinguished within the mineralogenetic succession : pyrite, marcasite (a), sphalerite±galena, chalcopyrite (b), marcasite II, cinnabar (c); marcasite and cinnabar are accompanied by quartz-crystobalite-opal,kaolinite, montmorillonite, nontronite, limonite, and zeolites. (9) Istvan D. et al.(1982)D.S.Inst.geol.geofiz.,LXVII/2. (M.B.)

5. (1) BIXAD (Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Oaş Mts. (3) Oaş Neogene volcanic zone. (4) Post-Pontian andesitic products. (5) Quartz andesites propylitized, adularized, argillized, silicified. (6) Veins. (7) Au,Ag±Pb,Zn; As,Sb,Bi,Cd, Hg. (8) Pyrite, mispickel±native gold, sphalerite, galena, common sulphosalts, marcasite, cinnabar, quartz, calcite±clay minerals. (9) Borcoş et al.(1975), Arch. IGG. (M.B.)

6. (1) TIRSOLT (lignite; sedimentary; Pliocene). (2) East Carpathians; Oaş Basin. (3) Pannonian Depression. (4) Pontian marly-sandy series. (5) Alternations of polygenous conglomerates, gravels, sands, sandy marls, and clays. (6) Lens-like beds. (7) A^i(18%), V^i(29.6%), S^i_t(31%), Q^i_i(3408 k.cal/kg). (8) dull coal; textinite 15%, ulminite 50%,liptodetrinite 6%, densinite 20%, clay 7%. (9) Nicorici M. et al.(1982)Arch. IPEG "Maramureş". (C.B.)

7. (1) ORAŞUL NOU (bentonite; hydrothermal or deuteric; Miocene). (2) East Carpathians; Oaş Mts. (3) Oaş Neogene volcanic zone. (4) 1st eruption phase volcanics (Badenian). (5) Argillized perlites. (6) Lenses and lens-bed. (7) SiO_2 (70.10%), Al_2O_3 (12.54%) Fe_2O_3 (80%), FeO (0.25%), MgO (1.50 %), CaO (54%), Na_2O (1.07%), K_2O (0.14%), TiO_2(0.20%), P_2O_5(0.08%), CO_2 (0.71%), H_2O^+(7.04%), H_2O^-(3.89%). (8) Ca-montmorillonite (over 70%) in association with illite, kaolinite, halloysite, chlorite, cristobalite. (9) Giuşcă et al. (1973) Guide to Excurs. 1 AB, Symp.Volc.Metallogen.;Rădan S. et al. (1982) Arch.IGG; Rădan S. et al. (1983) Arch. IGG. (M.B., S.R.)

8. (1) RACSA (gold pyrite; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (4) Sarmatian andesitic products. (5) Adularized breccia body. (6) Stock. (7) Au,Ag; Pb,Zn. (8) Pyrite, sphalerite, galena + gold, native silver, quartz and calcite. (9) Borcoş M. et al. (1974) Rev.roum.géol.,géophys.,géogr., Géol., 18, p.37. (M.B.).

9. (1) VALEA BĂII NORTH(Pb,Zn±Au; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Andesitic products and Miocene volcano-sedimentary formation. (5)Sarmatian pyroxene andesites; rhyodacites (pyroclastics,subordinate lavas) with intercalations of Badenian sedimentary deposits chloritized, adularized, argillized, sericitized, intensely silicified, pyritized. (6) Impregnations, veinlets, nests. (7) Zn,Pb± Cu,Au,Ag; As,Cd,Mn,Co. (8) Pyrite variably associated with sphalerite, galena, chalcopyrite, mispickel, marcasite, covellite, calcocite , bornite, melnicovite, and limonite; quartz, calcite, siderite, sericite, chlorite, and adularia (9) Borcoş M. et al.(1975) Arch.IGG. (M.B.)

10. (1) VALEA COLBULUI (Pb,Zn,Cu±Au,Ag ; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi volcanic zone. (4) Andesitic products and Miocene acid volcano-sedimentary formation. (5) Sarmatian pyroxene andesites; rhyodacite alternations with Badenian sedimentary deposits propylitized, chloritized, adularized, sericitized, carbonated, argillized, silicified, pyritized. (6) Veins and impregnations. (7) Pb,Zn,Cu±Au,Ag; As,Cd,Bi,Co, Mn,Sb,Ga ± Se,Te,Tl,V,Ti,Sn,In. (8) Hematite, pyrrhotite, pyrite, chalcopyrite, chlorite, quartz, sericite (a);locally there follows a cupper sequence : pyrite, chalcopyrite (b); finally a lead-zinc sequence is prevailing : mispickel, sphalerite, galena, chalcopyrite, pyrite, quartz (c). (9) See no. 8. (M.B.)

11. (1) ILBA HANDAL (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Andesitic products and Miocene acid volcano-sedimentary formation. (5) Sarmatian pyroxene andesites, rhyodacites with intercalations of Badenian sedimentary deposits propylitized, chloritized, adularized, sericitized, argillized, silicified, pyritized. (6) Veins and impregnations. (7) Pb,Zn,Cu±Au,Ag; As,Cd,Mn,Co,Bi,Sb,Ga± Te,Se,Tl,In,Ni. (8) Succession begins with : hematite, pyrite, pyrrhotine,±sphalerite, chalcopyrite, galena, chlorite, quartz (a) and ends with a mostly polymetallic sequence : sphalerite, wurtzite, chalcopyrite, tetrahedrite, galena, pyrite,bournonite,chlorite,

quartz, adularia, sericite (b). See no.8. (M.B.)

12. (M)(1) CICÎRLĂU (Pb,Zn±Au,Ag; hydrothermal; Miocene); Fig.1. Similar to ore deposit no.11 Ilba Handal.

13. (1) NISTRU (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi volcanic zone. (4) Piatra Handal Neogene volcanic edifice and Miocene acid volcano-sedimentary formation. (5) Sarmatian pyroxene andesites propylitized, chloritized, adularized, silicified, sericitized; alternations of rhyodacites (pyroclastics, subordinate lavas) with hydrothermalized Badenian sedimentary deposits. (6) Vein groups striking NE and EW and impregnations. (7) Pb,Zn,Cu±Au,Ag; As,Cd,Mn,Sb,Bi,Ga, Ti,Co±Se,Tl,Te,Sn,In,Ge. (8) Lead-zinc mineralization: hematite, magnetite, pyrite, mispickel, chalcopyrite, sphalerite, wurtzite, galena, tetrahedrite, pyrargyrite, marcasite,adularia,sericite, chlorite, quartz, kaolin ,baryte , calcite (a); copper mineralization with local development in certain veins: pyrite, chalcopyrite ±sphalerite, galena in association with quartz, chlorite±adularia (b); the gold polymetallic mineralization contains amounts of sulphosalts±tellurium and vivianite (c);towards the end of the succession amounts of calcite±quartz (d) and subordinate common sulphides are deposited; representative are the stalactitic and stalagmitic columnar marcasites as well as the pipe-like bent ones. See no. 8. (M.B.)

13 a.(M) (1) LIMPEDEA (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene);Fig.1. Similar to the gold polymetallic mineralizations of the ore deposit no.13 Nistru.

14. (M) (1) TYUZOSA (Pb,Zn,Cu±Ag; hydrothermal; Miocene); Fig.1. (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Quartz andesites and Miocene acid volcano-sedimentary formation. (5) Pannonian quartz andesites; rhyodacites(pyroclastics, subordinate lavas) with intercalations of Badenian sedimentary rocks adularized, sericitized, argillized, silicified, pyritized. (6) Lens-like veins, impregnations. (7) Pb,Zn,Cu±Au,Ag; Cd, As,Sb,Ti,V,Ni,Co. (8) Pyrite, chalcopyrite,sphalerite, galena± sulphosalts, quartz, calcite, clay minerals. (9) Borcoş M. et al. (1974). Rev.roum.géol.,géophys.géogr.,Géol.,18, (M.B.)

15. (M) (1) BĂIŢA (Pb,Zn,Au,Ag; hydrothermal; Miocene); Fig.1. Similar to the gold polymetallic mineralizations of the ore deposit no.13 Nistru.

16. (M)(1) WILHELM (Pb,Zn,Au,Ag; hydrothermal, Miocene); Fig.1. (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic

zone. (4) Dacitic structures, Miocene molasse, Paleogene flysch. (5) Pannonian dacites propylitized, chloritized, sericitized, adularized; Badenian rhyodacitic volcano-sedimentary formation, sandstones, Paleogene marls argillized and silicified. (6) Veins, subordinate impregnations. (7) Pb,Zn,Au,Ag; Mn,Sb,As,V,Ti. (8) Pyrite, pyrrhotine, mispickel, sphalerite, chalcopyrite, tetrahedrite, galena, cuartz,adularia,calcite, rhodochrosite, sulphosalts,stibnite,gold and native silver, marcasite. (9) See no.14. (M.B.)

17. (1) SĂSAR (Au,Ag+Pb,Zn; hydrothermal; Miocene). (2)East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Polygenous andesitic structures and Miocene molasse. (5) Pannonian quartz andesites, subordinate Sarmatian pyroxene andesites propylitized, chloritized, carbonated, sericitized, argillized, and adularized; Badenian rhyodacitic volcano-sedimentary formation, hydrothermalized Pannonian marls and sandstones. (6) Vein groups striking NE displaying a ramification tendency at the upper part and anastomosis tendency in a diffusively pyritized brecciation zone. (7) Au,Ag±Pb,Zn; Cu,As,Sb,Ni,V,Ti±Se,Te,Tl. (8)The mineralogenetic succession begins with a poorly metallized sequence:grey, milky white quartz,adular,±pyrite,sphalerite,chalcopyrite,galena, gold (a); there follows grey, milky quartz,adularia,rhodochrosite, ±pyrite (± rutile inclusions), sphalerite, chalcopyrite, galena (b); the succession ends with: violaceous quartz ±adularia,rhodochrosite,siderite, calcite, clay minerals, proustite, pyrargyrite, tetrahedrite, jamesonite, argentite, gold and native silver,stibnite + pyrite, marcasite(c); this ore deposit supplies beautiful samples with black, grey, pink calcite, marcasite and of lamellar semseyite deposited on calcite;among the supergene minerals there predominate the Cu,Fe,Mn,Tl,K sulphates and hydroxides, locally with monsmedite ($Tl_2O_3K_2O.8SO_3.15H_2O$). (9) See no. 14;Udubaşa G. in : Amstutz et al.(ed.)(1982) Ore Genesis - the State of the Art. Springer-Verlag, Berlin. (M.B.,G.U.)

18. (M) (1) BORZAS (gold pyrite; hydrothermal; Miocene); Fig.1. (2) East Carpathians; Gutîi Mts. (3) Gutîi volcanic zone. (4) Pannonian andesitic structure. (5) Breccia body formed of quartz andesites adularized, silicified and pyritized. (6) Stock, subordinate veins. (7) Au,Ag;Zn,Cu,Pb. (8) Pyrite, gold,sphalerite, chalcopyrite, galena, mispickel, marcasite, melnicovite, quartz,adularia and subordinate carbonates. (9) See no. 14.

19. (M) (1) VALEA ROŞIE (Au,Ag±Pb,Zn,Cu; hydrothermal;

Miocene);Fig.1. Similar to ore deposit no.17 Săsar, with the difference that sulphides are better represented estecially at the lower part of the ore deposit.

20. (1) DEALUL CRUCII(Au,Ag,Pb,Zn;hydrothermal;Miocene).(2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone.(4) Neogene polygenous andesitic structure. (5) Pontian and Sarmatian pyroxene andesites, Pannonian quartz andesites propylitized,chloritized,adularized,sericitized,argillized. (6) Main vein with ramifications. (7)Au,Ag,Pb,Zn±Cu.(8) Pyrite,pyrrhotine,chalcopyrite, sphalerite, mispickel, galena, tetrahedrite, jamesonite, bournonite, stephanite, plumosite, pyrargyrite, füllopite ($Pb_3Sb_8S_{15}$), argentite, stibnite, marcasite, gold, silver, quartz, calcite,clay minerals. (9) Rădulescu S. et al.(1969) Arch. IPEG. (M.B.)

21. (1) HERJA (Pb,Zn,Au,Ag;hydrothermal;Miocene).(2)East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4)Paleogene sedimentary formations, Miocene molasse, Neogene subvolcanic structure. (5) alternation of marls, clays, hornfelsic Paleogene sandstones, with banded structure, hydrothermalized; Pannonian marls, sands, clays, hydrothermalized, Pontian pyroxene andesites, propylitized, chloritized, sericitized, argillized and subordinate adularized. (6) Veins. (7) Pb,Zn±Cu,Au,Ag;Cd,As,Sb,Bi,Ga,In, W,Tl,Sn,+Se,Te,Co,Ni. (8) Sphalerite, pyrite,pyrrhotine,mispickel (a);sphalerite, chalcopyrite,galena,stibnite, common sulphosalts, berthierite, semseyite, fyzelyite$(Pb,Ag)_8Sb_{11}S_{24}$, cronstedtite $Fe^{2+}_4\ Fe^{3+}_2(OH)_8Fe^{3+}Si_2O_{10}$. The ore deposit constituted a rich source of mineral samples : spectacular samples with stibnite, pyrrhotine-sphalerite,pyrrhotine-siderite, pyrrhotine-silver galena; spheres of white or black calcite or combined (1/2 white and 1/2 black);pseudomorphoses of marcasite after pyrrhotine;samples with crystals of quartz and sphalerite, amethyst with pyrite and molybdenite, bicoloured (white and black) gypsum,semseyite rosettes. (9) Borcoș M. et al. (1975) Rev.roum.géol.géophys.géogr., Géol., 19. (M.B.)

22. (1) BAIA SPRIE (Pb,Zn,Cu,Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Miocene molasse;andesitic dyke with eastern axial sinking. (5) Pontian pyroxene andesites propylitized, chloritized, adularized, sericitized, carbonated, argillized, silicified; Pannonian-Pontian sandstones, marls, clays, hydrothermalized. (6) Sulphide veins at the contact of the EW striking andesitic body; pyrite and copper impregnations within the selvage of vein fractures,

frequently found in the lower part of the ore deposit. (7) Pb,Zn, Cu,Au,Ag; As,Cd,Sb,Bi,Ga,Tl,Mn,Ti,Cr,Co,Ni,W,V ± Se,Te. (8) The associations :pyrite-chalcopyrite-chlorite-wolframite-scheelite(a); pyrite-chalcopyrite-quartz-dolomite; pyrite-sphalerite-galena-quartz(b); pyrite-chalcopyrite-sphalerite-galena-quartz,diaphorite (c) point out a vertical primary variation of the mineralization with a predominant copper character at depth and with a polymetallic-gold character in the median and upper part of the ore deposit. Hematite,magnetite,pyrrhotine, tetrahedrite,stibnite and freislebenite occur in variable amounts. The main vein - the most important concentration contains more than 70 minerals (sulphides, native elements - S,As,Au,Ag - sulphosalts,sulphates, arsenates, antimonates, oxides, carbonates, tungstates, phosphates, and silicates); six minerals have been determined here for the first time:andorite ($PbAgSb_3S_6$), semseyite ($9PbS.4Sb_2S_3$), felsöbanyite ($Al_4(OH)_{10}SO_4.5H_2O$), monsmedite ($Tl_2O_3K_2O.8SO_3.15H_2O$), klebersbergite($Sb_4O_4(OH)_2SO_4$), szmikite ($MnSO_4.H_2O$). There are also numerous interesting and spectacular samples with stibnite,stibnite associated with baryte , wolframite, chalcopyrite intergrowths - calcite, quartz, transparent quartz crystals - jaspers, gypsum, coloured varieties of baryte (white,blue,green,red), bournonite, etc.(9) Manilici et al. (1965) Mem.Com.Stat.Geol., VII; references indicated at point no.21. (M.B.).

22 a. (M) (1) BAIA SPRIE EAST (Pb,Zn,Cu ±Au,Ag; hydrothermal; Miocene); Fig.1. Similar to gold polymetallic mineralization of ore deposit no. 22 Baia Sprie.

23. (M) (1) LEPTEŞ (kaolin clay; hydrothermal; Miocene); Fig.1. (2)East Carpathians. (3) Gutîi Neogene volcanic zone. (4) Andesitic products. (5) Jereapăn Pontian pyroxene andesites, argillized. (6) Irregular accumulations , lens-bed. (7) SiO_2(59%); Al_2O_3 (24%); Fe_2O_3 (3.5%); TiO_2 (1%); CaO (0.5%); MgO (0.5%); Na_2O (1%); K_2O (4.5%); H_2O (2.5%); PC (5.5%). (8) Kaolinite-bearing minerals over 15%. (9) Brana V. (1967); Bologa V. (1971)Arch. IPEG "Maramureş".(S.R.)

24. (1) SUIOR (Au,Ag,Pb,Zn; hydrothermal; Miocene). (2)East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Explosion column . (5) Polygenous breccia body formed of pyroxene andesites and Pannonian sedimentary rocks, adularized, silicified and argillized. (6) Impregnations which, at depth, pass to vein bodies. (7) Au,Ag,Pb,Zn ± Cu; As,Sb,Cd,Ga. (8) Pyrite, wurtzite, sphalerite, mispickel, chalcopyrite, tetrahedrite, galena, boulan-

gerite, marcasite, gold, silver, quartz, calcite, rhodochrosite. (9) Măldărescu I. (1970) Thesis of doctor's degree, University of Bucharest; references indicated at point no. 21. (M.B.)

25. (1) OCNA ŞUGATAG (halite; lagoonal; Badenian). (2)East Carpathians; Maramureş Depression. (3) Idem. (4) Middle Miocene salt formation. (5) Badenian saliferous clays. (6) Diapir. (7) NaCl (95-99%). (8) Halite. (9) Gherasie I. et al.(1976); Stoica C., Gherasie I. (1981). (M.C.M.)

26. (1) BÎRSANA (zeolites; sedimentary - subaquatic alteration (halmyrolysis) of the cineritic material; Badenian).(2)East Carpathians, Maramureş Depression, Valea Izei. (3) Transcarpathian Depression. (4) Globigerina tuff horizon (Badenian). (5)Dacitic tuffs, zeolitized, associated with tuffaceous marls, marls and intercalations of sandstones and gritty-limestones (Badenian). (6) Beds. (7) SiO_2 (66.82%), Al_2O_3 (12.35 %), Fe_2O_3 (0.78%),MgO (1.12%), CaO (2.11%), Na_2O (2.06%), K_2O (2.24%). (8) Vitroclasts+ groundmass (90%), devitrified, zeolitized (clinoptilolite - 68-89%, heulandite, mordenite, ± montmorillonite, hydromica and seladonite); crystalloclasts (10%): plagioclase, sanidine, quartz, biotite, muscovite ± leucoxene, garnets, rutile, apatite, zircon; lithoclasts (sporadically, fragments of quartzites and andesites). (9) Popescu F.,Asvadurov H.(1978) St.tehn.econ.,I/14; Cosma R. (1982) Mine,petrol şi gaze, 33, 1; Pop N. et al.(1982) Mine, petrol şi gaze, 33, 4. (S.R.)

27. (1) CAVNIC-BOLDUŢ (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Andesitic structures and Miocene molasse. (5) Pontian pyroxene andesites, propylitized, chloritized, adularized, sericitized, carbonated, argillized; Pannonian-Pontian marls, sandstones, sands, clays, hornfelsed, with banded structure. (6)Veins; locally impregnations. (7) Pb,Zn,Cu±Au,Ag; Cd,As,Sb,Bi,In,Ti,Mn, Ga,Tl,Sn±Ge,Se,Te. (8) The products formed during three successive mineralization stages: hematite, goethite, magnetite, pyrite, chalcopyrite, quartz,collomorphous varieties of silica and chlorite (a); pyrite,galena,sphalerite,chalcopyrite,tetrahedrite, sulphosalts, quartz and clay minerals (b); rhodochrosite predominate; it is associated with common sulphides + quartz, calcite, gypsum (c).Native gold accumulations occur locally at the upper part of the ore deposit.Exceptional samples: decimetric gypsum crystals, milky quartz crystals,rhodochrosite crystals, tetrahedrite-calcite-quartz intergrowths, transparent sphalerite,

bournonite. (9) Borcoş M. et al(1976) Rev.roum.géol.géogr.,Géol., 20, 2. (M.B.)

28. (1) CAVNIC-ROATA (Pb,Zn±Cu,Au,Ag; hydrothermal;Miocene). (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Andesitic subvolcanic body and Miocene molasse. (5) Pontian-pyroxene andesites, propylitized, chloritized, adularized, sericitized, argillized, and silicified; Pontian andesitic volcano-sedimentary formation, mostly argillized. (6) Veins and impregnations. (7) Pb,Zn,Cu,Au,Ag; Cd,As,Sb,Mn,Ga,In,Sn±Se,Te. (8)Pyrite, galena, sphalerite,chalcopyrite,±stibnite,calcite,realgar, tetrahedrite, orpiment or cinnabar. (9) See no. 27. (M.B.)

29. (M) (1) NETEDA (kaolin; hydrothermal; Miocene);Fig.1. (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Neogene andesitic products. (5) Pontian pyroxene andesites (tuffs, lavas,agglomerates), propylitized and argillized. (6) Irregular body. (7) Al_2O_3 (22-24%), Fe_2O_3 (2-4%). (8)Kaolinite predominates; it is associated with dickite, halloysite, illite, montmorillonite, quartz, limonite. (9) Brana V.(1967);Anton O. (1971) Thesis of doctor's degree,University of Bucharest. (S.R.)

30. (M)(1) STRÎMBU-BĂIUT (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene). Fig.1(2) East Carpathians; Gutîi Mts.(3) Oaş-Gutîi Neogene volcanic zone. (4) Miocene molasse, andesites, Neogene dioriites, Paleogene sedimentary formations. (5) Alternations of Pannonian-Pontian marls, sandstones, clays, sands, Eocene flysch, andesites-quartz andesites-Pontian diorites, sericitized, argillized, silicified. (6) Impregnations and veins. (7) Pb,Zn,Cu±Au, Ag. (8) Pyrite±pyrrhotine, sphalerite, chalcopyrite, galena ± tetrahedrite, quartz, calcite, clay minerals. (9) Borcoş M. et al. (1975) Arch.IGG. (M.B.)

31. (M) (1) JEREAPĂN (Au,Ag±Pb,Zn; hydrothermal; Miocene); Fig.1. (2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Andesites and Miocene molasse. (5) Pontian pyroxene andesites, propylitized, chloritized, adularized, sericitized, argillized; Pannonian-Pontian sandstones, marls, clays, sands. (6) Veins and impregnations. (7) Au,Ag±Pb,Zn,Cu; As,Cd,Mn. (8) Pyrite, chalcopyrite, sphalerite, galena, gold, silver, quartz, calcite, gypsum. (9) Borcoş M.et al(1975) Arch. IGG. (M.B.)

32. (M) (1) BĂIUT (Pb,Zn,Cu ±Au,Ag; hydrothermal; Miocene); Fig.1.(2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Paleogene sedimentary formations; Miocene molasse. (5) Eocene flysch covered by Badenian, Sarmatian, and Pannonian sedi-

ments, intruded by metallogene Pontian diorites, generating hornfelses with muscovite, biotite, actinolite, chlorite, epidote, and quartz, as well as mostly potash hydrometasomatic products. (6) Veins. (7) Pb,Zn,Cu±Au,Ag; As,Cd,Ga,Tl±Se,Ge,Te,Co,Ni,Cr,Ti. (8) Three distinct parageneses are distinguished: hematite,goethite, pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, quartz, calcite, kaolinite (a); stibnite,marcasite (b); realgar, quartz, baryte - the last ones mark the end of the mineralization succession - (c). The Băiuţ stibnite is characterized by long and thick crystals, frequently associated with marcasite deposited at the end of the stibnite needles.(9) Borcoş M., Gheorghiţă I. (1976) Rev, roum.géol.,géophys.géogr.,Géol., 20, 2. (M.B.)

33. (1)VĂRATEC (Pb,Zn,Cu±Au,Ag; hydrothermal; Miocene).(2) East Carpathians; Gutîi Mts. (3) Gutîi Neogene volcanic zone. (4) Paleogene sedimentary formations, Miocene molasse, andesites. (5) Eocene flysch, Badenian,Sarmatian sediments, Pontian andesitic volcano-sedimentary formation, Pontian pyroxene andesites, hornfelsized nearby the andesitic and hydrothermalized intrusions, similar to the Băiuţ ore deposit. (6) ENE and NE striking veins. (7) Pb,Zn,Cu±Au,Ag; As,Cd,Bi,Te,Co,Ni,V,Ti,W. (8) The beginning of the succession is characterized by parageneses richer in iron oxides (hematite, goethite, magnetite), associated with quartz, chlorite + garnets, tourmaline, siderite, pyrite and chalcopyrite (a); there follows a sequence rich in sulphides: iron oxides, pyrite, chalcopyrite, mispickel, sphalerite, galena, tetrahedrite, marcasite ± quartz,adularia,siderite, kaolinite (b); the end of the sequence is marked by calcite, siderite, quartz ± baryte, marcasite association (c). (9) See no. 32. (M.B.)

34. (1) CISMA (Pb,Zn,Cu; hydrothermal; Miocene). (2) East Carpathians. (3) Poiana Botizei-Tibleş subvolcanic zone. (4) Paleogene sedimentary formations. (5) Eocene flysch penetrated by Pontian dioritic intrusions with hornblende, pyroxene ± biotite,hornfelsized and hydrothermalized, in the vicinity of eruptive bodies and of fracture systems. (6) Veins and impregnations. (7) Pb,Zn,Cu+Au,Ag; As,Sb,Bi,W,Co,Ni±Ge. (8) Quartz, hematite, goethite, pyrite, sphalerite, chalcopyrite, tetrahedrite,galena, marcasite, chlorite,adularia,siderite. (9) Borcoş M. et al.(1975) Arch. IGG. (M.B.)

35. (1) COASTA URSULUI (Pb,Zn,Cu; hydrothermal; Miocene). Similar to ore deposit no.34 Cisma.

36. (1) TIBLES (Cu,Pb,Zn ±Au,Ag (Sb); hydrothermal;Miocene).

(2) East Carpathians; Tibleş Mts. (3) East Carpathian Neogene subvolcanic zone. (4) Neogene subvolcanic rocks with intermediary chemism and Paleogene sedimentary deposits, generally metamorphosed at the contact. (5) Quartz monzodiorites, microgranodiorites, granodiorites, andesites argillized, silicified, adularized. (6) Veins and impregnations. (7) Pb,Zn,Cu,Mo,Au,Ag,Sb,As and Hg; Cd, Mn,Ti,F,Te. (8) Molybdenite, rutile, sphalerite (a); chalcopyrite, pyrite, magnetite (b); pyrite, pyrrhotine, arsenopyrite , iron-rich sphalerite, galena, cubanite, mackinawite, bournonite, tetrahedrite (c); stibnite, berthierite, kermesite, iron-poor sphalerite, galena, miargyrite, freislebenite, owyheite, jamesonite, cinnabar (d); quartz, calcite; magmatic magnesian skarns (forsterite, spinel, phlogopite, etc.) with magnetite, pyrrhotine, etc. Special samples of pyrite (cube 10x10 cm) come from veins from the southern part of the massif.(9) Udubaşa G. et al.(1984) An.Inst.geol. geofiz., LXI; Pop et al. D.S. Inst.geol.geofiz., LXIX/2(in press). (G.U.)

37. (1) ŞTEJERA (kaolin;residual-supergene alteration of metamorphic rocks; pre-Paleogene). (2) East Tarcău Mts. (3) Ticău massif crystalline island. (4) Someş Series(Precambrian). (5) Supergene kaolinized feldspathic gneisses (alteration crust) previous to the Paleogene transgression. (6) Irregular bed. (7) SiO_2 (71.76%), Al_2O_3 (12-15%), Fe_2O_3 (1.3-2%), Na_2O+K_2O (2.5-6.5%). (8) Kaolinite (57-80%), illite (5-20%), halloysite (1-3%),nontronite and Na-montmorillonite±chlorite (pennine),quartz,feldspar, goethite,hydrogoethite,dolomite,calcite,etc. (9) Kalmar I.(1968) St.cerc.geol., 11, 2; Kalmar I. et al.(1976) Paper presented at the 3rd National Meeting on Clays. (S.R.)

38. (1) VALEA CHIOARULUI (bentonite; hydrothermal alteration; Lower Eocene). (2) North-west of the Transylvanian Depression, between the Ticău and Preluca massifs. (3) Banatites intruded into Senonian and Lower Paleogene deposits. (4) Banatites (Lower Eocene). (5) Hydrothermally altered rhyodacite affecting deposits of the Jibou Beds variegated horizon (Ypresian-Lutetian). (6) Dyke, striking NNE-SSW and dipping WSW. (7) Mean (n = 9): SiO_2(68.83%), Al_2O_3 (14.41%), Fe_2O_3 (1.28%), MgO (2.04%), CaO (0.88%), K_2O (0.93%), Na_2O (2.70%). (8) Na-montmorillonite (50-70%) ± kaolinite ± illite, volcanic glass, quartz, cristobalite, feldspars, biotite, zeolites. (9) See no.7. (S.R.)

39. (1) COPALNIC MĂNĂŞTUR (muscovite, feldspar; metamorphic pegmatite; Middle Proterozoic). (2) Preluca Mts. (3) Preluca Crys-

talline. (4) Preluca Formation (equivalent of the Ineu Formation, Rebra Group). (5) Mica schists,gneisses.(6) Veins,lenses. (7) -. (8) Quartz,microcline ± orthose, albite-oligoclase, muscovite, biotite, tourmaline, almandine, apatite. (9) Kalmar I. (1973) D.S. Inst.geol., LIX/1, 231-249. (H.K.)

40. (1) RÎPA LUI FILIP (feldspar). Similar to accumulation no. 39 Copalnic Mănăștur.

41. (1) MAȘCA RĂZOARE (Mn,Fe; hydrothermal-sedimentary,metamorphosed; Middle Proterozoic).(2) Preluca Mts. (3) Preluca Crystalline. (4) Răzoare Formation.(5) Graphite quartzites, mica schists,gneisses. (6)Concordant lenses. (7) Mn,Fe,Si±Ca,Mg,Al,P. (8)Rhodochrosite,Mn-ferrodolomite,pyroxmangite,knebelite,bustamite, Mn-hisingerite,jakobsite, braunite, psilomelane,pyrolusite, quartz, apatite. (9) Gherasi N.,Sandu R.D.(1957) Arch.Univ.Buc.; Savul M. et al.(1958) St.cerc.geol.,III/1-2,7-59;Bălan M.(1976) Mineralogia zăcămintelor manganifere de la Iacobeni,Edit.Acad. RSR; Pop N. (1978) Arch. IPEG "Maramureș". (H.K.)

42. (1) RĂZOARE (bentonite; hydrothermal alteration). (2) Preluca Mts (south-east). (3) Preluca Crystalline. (4)Carbonatic formation (equivalent of the Voșlăbeni Formation) of the Rebra Group; Middle Proterozoic. (5) Plagiaplites and pegmatites encompassed in the Rebra Group (Precambrian), hydrothermally altered. (6) Veins, lenses.(7) Mean for the deposit : SiO_2(49.54%),Al_2O_3 (22.82%),CaO + MgO (10.12%), Na_2O+K_2O (4.71%), Fe_2O_3(1.20%). (8) Ca-montmorillonite (predominant) ± illite,kaolinite, chlorite (pennine), sepiolite, plagioclases, quartz, muscovite, tourmaline, apatite, biotite (a);chlorite, actinote, tremolite, diopside, vermiculite (reaction rim) (b).(9)Mîrza I. et al.(1966)Bull.Serv. Carte géol.Als.Lorr.,19,3-4, 213-220,Strasbourg. See no.7.(S.R.)

41. (1) NOVĂȚ-NOVICIOR (see 43 a Novicior and 43 b Novăț).

43 a.(M)(1) NOVICIOR (pyrite,Cu,Pb,Zn;hydrothermal-sedimentary of Kuroko type s.l.,metamorphosed;Cambrian);Fig.2.(2)Maramureș Mts. (3) Bucovinian Nappe; Putna Unit. (4) Tulgheș Group, Cambrian; rhyolitic volcano-sedimentary formation (Tg_3). (5) Chlorite-sericite schists, sericite schists. (6) Stratiform disseminated ore, lens-like compact ore. (7) S,Fe,Cu,Zn,Pb,Si;Au,Ag, Sn,In,Ge,Sc,Sb,As.(8)Pyrite, chalcopyrite, sphalerite, galena ± tetrahedrite, mispickel, magnetite; quartz, chlorite, sericite, albite. (9) Manilici V. et al. (1965) Carp.-Balk.Geol.Assoc. 7th Congr. Sofia III, 105-111. (H.K.)

43 b. (M)(1) NOVĂȚ (pyrite, Cu,Pb,Zn; hydrothermal-sedimen-

tary of Kuroko-type s.l.,metamorphosed; Cambrian); Fig.2. Similar to no. 43a Novicior.

44. (1) TOROIAGA (Cu,Pb,Zn ± Au,Ag; hydrothermal; Miocene). (2) East Carpathians; Maramureş Mts. (3) Toroiaga-Tibleş-Bîrgău subvolcanic zone. (4) Neogene subvolcanic body, pre-Hercynian crystalline formations (Tulgheş Group). (5) Pontian andesites, quartz andesites, quartz diorites, propylitized, epidotized, silicified and kaolinited in places, tourmalinized and biotitized.In the lower parts of the ore deposit hydrothermalism was preceded by hornfelsitization. (6) Vein system striking NE; subordinate impregnations. (7) Cu,Pb,Zn ± Au,Ag; As,Sb,Bi,Cd,Mn,In,Te,Se,Ga,Ge, Ni,Co ± Mo,Te,Sc,Tl,Sn,V. (8).The mineralogenetic succession is marked by pyrite, pyrrhotine, mispickel, sulphosalts, chalcopyrite, sphalerite, galena, gold being identified since the occurrence of the first metallic minerals; gangue is mostly quartzous and carbonatic towards the end of the succession. Caterina Vein displays an obvious zonality with lead-zinc-gold mineralizations, rich in sulphosalts (bournonite, semseyite, jamesonite, plumosite, tetrahedrite, freibergite, boulangerite, geocronite, matildite) in association with germanite,at the upper part, which makes the transition, at depth, to copper-gold mineralizations. (9) Steclaci L. (1962)Studiul mineralogic and geochimic al regiunii Toroiaga-Baia Borşa. Edit.Acad. RSR ; Borcoş M.(1982) D.S.Inst.geol.geofiz., LX VII/2 (1979-1980). (M.B.,G.U.)

45. (1) BAIA BORŞA-GURA BĂII (pyrite; Zn,Pb,Cu;hydrothermal-sedimentary of Kuroko-type s.l.,metamorphosed; Cambrian); Fig.2. Similar to accumulation no.46 Baia Borşa-Burloaia. (H.K.)

46. (1) BAIA BORŞA-BURLOAIA (pyrite, Zn,Pb,Cu; hydrothermal-sedimentary of Kuroko-type s.l.,metamorphosed; Cambrian); Fig.2. (2) Maramureş Mts. (3) Bucovinian Nappe, Putna Unit. 4. Tulgheş Group; Cambrian; rhyolitic volcano-sedimentary formation (Tg_3), Burloaia Horizon. (5) Quartz chlorite schists, chlorite-sericite schists, sericite±quartz schists. (6) Bed lens. (7) S,Fe,Pb,Zn, Cu,Si; Sn,Bi,Co,Ni,As,Au,Ag. (8) Pyrite, chalcopyrite, sphalerite, galena ± pyrrhotine, mispickel, tetrahedrite, bournonite, cassiterite, stannite, jamesonite; quartz, chlorite,sericite, feldspar, carbonates. (9) Zincenco D.(1973)St.cerc.geol.geofiz.geogr.,Geol. 18/1, 41-45. (H.K.)

47. (1) BAIA BORŞA-DEALU BUCĂTII (pyrite, Pb,Zn,Cu; hydrothermal-sedimentary of Kuroko-type s.l.,metamorphosed; Cambrian); Fig.2. (2) Maramureş Mts. (3) Bucovinian Nappe, Putna Unit.(4)

Tulgheş Group (Cambrian); rhyolitic volcano-sedimentary formation (Tg_3)(Dealul Bucăţii Horizon). (5) Quartz sericite schists, sericite-chlorite schists. (6) Stratiform, disseminated ore. (7) S,Fe, Zn,Pb,Cu,Si; Sn,Cd,Co,Ni,Au,Ag. (8) Pyrite, chalcopyrite, sphalerite, galena. (9) Zincenco D.et al.(1981) D.S. Inst.geol.geofiz., LXV/2, p.131-210. (H.K.)

48. (1) IZVORUL URSULUI (Cu,Zn,Pb, pyrite; hydrothermal-sedimentary of Kuroko-type s.l.,metamorphosed; Cambrian); Fig.4. Similar to accumulation no. 70 Fundu-Moldovei.

49. (1) CANAL TIBĂU (Zn,Pb,Fe; hydrothermal,metamorphosed; Paleozoic). (2) Rodna Mts. (3) Subbucovinian Nappe. (4) Tulgheş Group; Cambrian. (5) Sericite-chlorite-quartz schists. (6) Irregular body, lenses, boudines. (7) Zn,Pb±Cu,Si,Ca,Fe,S; Mn,Ag,Bi, Sb,As,Cd,Ti,Sn,Ni,Co. (8) Siderite, sphalerite, galena, pyrite, chalcopyrite, mispickel, tetrahedrite, bournonite. (9) Nedelcu L. (1978) Arch. IGG. (H.K.)

50. (1) GUSET (Pb,Zn; syngenetic-stratiform of Mississippi Valley type,metamorphosed; Upper Proterozoic). Similar to ore deposit no.57 Valea Blaznei.

51. (1) IZVORUL CEPII (pyrite, Cu±Pb,Zn; hydrothermal-sedimentary, metamorphosed; Paleozoic). (2) Rodna Mts. (3) Metamorphic formations of the Infrabucovinian Nappe. (4) Repedea Series metamorphites (Ordovician-Silurian). (5) Sericite-chlorite schists. (6) Concordant beds and lenses. (7) Cu; Fe,Pb,Zn; Ag,As. (8)Pyrite, sphalerite, galena, calcite, quartz, chlorite. (9) Rădulescu I.et al. (1963). Arch. IGG. (H.K.)

52. (1) CORONCHIS-SACII (Pb,Zn; syngenetic-stratiform of Mississippi Valley type s.l.,metamorphosed; Upper Proterozoic). Similar to ore deposit no.57 Valea Blaznei.

53. (1) IZVORUL ROSU (Pb,Zn; hydrothermal; Miocene).Similar to ore deposit no.54 Valea Vinului, the only difference being the host rocks - epimetamorphic crystalline limestones. (G.U.)

54. (1) VALEA VINULUI (Pb,Zn±Au,Ag; hydrothermal-metasomatic, Miocene). (2) East Carpathians, Rodna Mts. (3) East Carpathian Neogene subvolcanic zone. (4) Rebra Group carbonate formation (Upper Proterozoic) intruded by Neogene andesitic bodies associated with explosion breccias. (5) Crystalline limestones, argillized andesitic breccias, more rarely calcic skarns with garnets, pyroxenes and wollastonite. (6) Metasomatic bodies in limestones, impregnations and nests in breccias; the hydrometasomatic orebodies locally overlap stratiform syngenetic concentrations of Blazna-

Guşeţ type (type no.57). (7) Pb,Zn, ±Au,Ag; In,Bi,Cd,Mn,Sb. (8) Pyrite, pyrrhotine, mispickel, iron-rich sphalerite, galena; magnetite, chalcopyrite, bournonite, semseyite, mackinawite, chalcopyrrhotine;a compact cerusite body existed at the upper part of the mineralized structure; hetaerolite;calcite, quartz, kaolinite, lizardite. (9) Ghiţulescu T.P. (1931) D.S.Inst.Geol.Rom.,XVIII, 39-54; Socolescu M.et al(1958) Rev.min., 12, 542-548; Udubaşa G. (1970) Rev.roum.géol.,géophys.géogr.,Géol.,14, p.13-24; Udubaşa G. et al.(1984) D.S.Inst.geol.geofiz., LXVIII/2. (G.U.)

55. (M)(1) COBÂŞEL (Pb,Zn±Au,Ag; hydrothermal-metasomatic; Miocene); Fig.3. Similar to ore deposit no.54 Valea Vinului, from which it differs by the wider development of calcic skarns with magnetite concentrations. (G.U.)

56. (M)(1) CURĂTEL (Pb,Zn; **syngenetic-stratiform** of Mississippi Valley type,metamorphosed; Upper Proterozoic); Fig.1. Similar to ore deposit no.57 Valea Blaznei.

57. VALEA BLAZNEI (Pb,Zn; **syngenetic-stratiform** of Mississippi Valley type, metamorphosed; Upper Proterozoic). (2)East Carpathians, Rodna Mts. (3) Crystalline-Mesozoic Zone, Rodna Nappe. (4) Rebra Group carbonate formation, Upper Precambrian. (5) Limestones and dolomites, quartz schists, mica schists and amphibolites. (6) Concordant lenses and beds with variable thicknesses. (7) Pb,Zn,Ag; Cd,Ba,Ti. (8) Pyrite, iron-poor sphalerite, galena, chalcopyrite, magnetite, rutile, bournonite,proustite-pyrargyrite; baryte , quartz; first cymrite ($BaAl_2Si_2O_8.OH$) occurrence in Romania. (9) Socolescu M.et al. (1961) Rev.min., XII,6; Udubaşa G. et al. (1981) D.S.Inst.geol.geofiz.,LXV/2, 113-120; Udubaşa G. et al.(1983) Mineral Deposits, 18, 519-528,Berlin.(G.U.)

58. (1) REBRA SCĂRICELE (muscovite;metamorphic pegmatite; Middle Proterozoic); Fig.3. (2) Rodna Mts. (3) Subbucovinian Nappe, Rodna Unit. (4) Rebra Group, Ineu Formation (Rb_3). (5) Mica schists, paragneisses. (6) Lenses. (7) -. (8)Quartz, microcline, albite-oligoclase, muscovite, biotite, tourmaline, garnet, apatite. (9) Murariu T. (1979) St.tehn.econ.,I/15. (H.K.)

59. (1) PARVA (kaolin; hydrothermal alteration; Neogene). (2) Rodna Mts. (3) North-eastern border of the Transylvanian Basin. (4) Neogene volcanics intruded in the Rebra Series and the Eocene and Oligocene deposits of the Transylvanian Basin. (5) Rhyolitic dykes. (6) Veins, lenses. (7) SiO_2 (71.79%), Al_2O_3(15.05%),Fe_2O_3 (1.17%), CaO (1.53%), MgO (0.43%), K_2O (3.70%), Na_2O (1.21%). (8) Kaolinite + dickite (55-75%), illite (5-15%), montmorillonite (5-

15%), quartz (5-10%), feldspars (0-5%), cristobalite, calcite. (9) Ianovici V., Neacşu G.(1970) St.cerc.geol.,geofiz.,geogr., Geol. 15,2 . (S.R.)

60. (1) CORMĂIŢA (kaolin; hydrothermal alteration; Neogene). (2)-(4) Similar to accumulation no.59 Parva. (5) Biotite dacite subvolcanic body. (6) Irregular body. (7) SiO_2 (73.09%), Al_2O_3 (16.55%), Fe_2O_3 (1.35%). (8) Kaolinite (35-50%), illite (10-25%), montmorillonite (10-25%), chlorite (0-10%), feldspars (5-10%), cristobalite (2-7%), quartz (<1%). (9) See no.59 Parva. (S.R.)

61. (1) RUSAIA (Fe; hydrothermal-sedimentary, metamorphoşed; Middle Proterozoic). (2) Bistriţa Mts. (3) Rusaia Infrabucovinian Unit. (4) Rusaia Series (Silurian), basal horizon:Bretila Group (Middle Proterozoic). (5) Metaconglomerates with carbonatic cement, sericite-chlorite quartz schists, retromorphous gneisses. (6) Lenses, disseminations. (7) Fe,Si±Ca. (8) Hematite, magnetite, quartz, siderite ankerite, chlorite±albite,muscovite,apatite, chalcopyrite. (9) Kräutner H. (1967) D.S.Com.Geol.,LII/2, 5-29. (H.K.)

62. (1) FLUTURICA CÎRLIBABA (Pb,Zn,Cu,Fe; hydrothermal, metamorphosed; Paleozoic).(2) Bistriţa Mts. (3) Subbucovinian Nappe. (4) Tulgheş Group (Cambrian). (5) Sericite-chlorite schists, sericite-graphite schists. (6) Lenses, boudines,disseminations. (7) Fe,Pb,Zn,Cu,S,Si; Ca,Mn,Mg,Al,Cd,Ag,Bi,As,Sb,Ni,Co. (8) Galena, pyrite, sphalerite, tetrahedrite, chalcopyrite, siderite (oxidation zones: cerussite, anglesite, greenockite, proustite). (9) Walter B.(1978) Jahrb.d.h.k.geol.,R.A.,XXVI/4, 343-426;Nedelcu L.(1977) Arch.IGG. (H.K.)

63.(1) DADU CÎRLIBABA (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian). Similar to accumulation no.68 Iacobeni.

64. (1) ARŞITA BOTOŞEL (Pb,Zn,Cu, pyrite; hydrothermal-sedimentary of Kuroko type s.l.,metamorphosed; Cambrian); Fig.4. (2) Bistriţa Mts; Subbucovinian Nappe. (4) Tulgheş Group (Cambrian). (5) Sericite-chlorite schists, rhyolitic metatuffs. (6) Massive and disseminated ore lens. (7) Pb,Zn,Cu,Fe,S,Si,Au,Ag. (8)Galena, sphalerite, pyrite, quartz, siderite, sericite. (9) Arch. IPEG "Suceava". (H.K.)

65. (1) DELNIŢA (Fe; hydrothermal metasomatic; Mesozoic?); Fig.4. (2) Bistriţa Mts. (3) Subbucovinian Nappe. (4) Subbucovinian sedimentary series.(5) Triassic dolomites. (6) Lenses, irregular bodies. (7) Fe,Ca,Mg, ± S,Ba. (8) Siderite, hematite, limonite,

pyrite, baryte, quartz, dolomite, chlorite. (9) Căruntu C. (1972) Arch. IGG. (H.K.)

66. (1) OIŢA (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian); Fig.4. Similar to accumulation no.68 Iacobeni.

67. (1) TOLOVANU (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian;);Fig.4: Similar to accumulation no. 68 Iacobeni.

68. (1) IACOBENI (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian); Fig.4. (2) Bistriţa Mts. (3) Subbucovinian Nappe. (4) Tulgheş Group (Cambrian), metalydite graphite formation (Tg_2). (5) Black quartzites. (6) Lenses. (7) Mn,Fe,Si+P,S. (8) Rhodochrosite, ponite , Mg-rhodochrosite, Ca-rhodochrosite, oligonite, kutnahorite, Mn-calcite, tephroite, spessartine, rhodonite, pyroxmangite, manganiferous egyrine, egyrine, manganiferous augite, dannemorite, sonolite, alleghanite, triclinic FeMn antophyllite, manganiferous magnezioriebeckite, manganiferous stilpnomelane, ferrostilpnomelane, biotite, manganophyllite, muscovite (sericite), ripidolite, manganiferous chlorite, hematite, neotokite, talc, albite, microcline, hyalophane, celsian, paracelsian, bementite, magnetite, jakobsite, pyrophanite, quartz, graphite, pyrite, alabandine, chalcopyrite, apatite, baryte, högbomite , hübnerite (oxidation zone: hematite, halloysite, brostenite, manganite, nsutite, cryptomelane, pyrolusite, birnessite, wad, goethite, lepidomelane, malachite, evansite, variscite, brushite, rosenite, szomolnokite, opal, calcedony).(9) Bălan M. (1976) Mineralogia zăcămintelor manganifere de la Iacobeni. Edit. Acad. RSR; Savul M., Ianovici V.(1957) Bul.st.Acad. RPR,Geol. geogr., II/1, 119. (H.K.)

69. (1) COŞNA (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian); Fig.4. Similar to accumulation no.68 Iacobeni.

70. (1) FUNDU-MOLDOVEI (Cu,Zn,Pb, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. (2) Bistriţa Mts. (3) Bucovinian Nappe, Putna Unit. (4) Tulgheş Group (Cambrian); rhyolitic volcano-sedimentary formation (Tg_3); Fundu-Moldovei Horizon. (5) Chlorite-sericite schists, sericite-quartz schists, sericite-chlorite-quartz schists. (6) Massive ore lenses, stratiform disseminations. (7) Cu,Zn,Pb,S,Fe; Si; Mn,Ti, Co,Ni,Sn,Bi,As,Ag,In,Ga. (8) Pyrite, chalcopyrite, sphalerite, galena, pyrrhotine, mispickel, tetrahedrite, bournonite, bismuth-

ine, galenobismuthine, bornite, smaltine, gold, native bismuth, magnetite, siderite, ankerite, cassiterite, albite, rutile, sphene, stilpnomelane, talc, chlorite, muscovite (sericite), albite, quartz. (9). Krätuner H. et al.(1974) Arch. IGG; Kräutner H. et al. (1970) D.S.Inst.geol., LVI/2, 49-60. (H.K.)

71. VALEA PUTNEI-PRAŞCA (see 71a Prasca and 71b Valea Putnei).

71 a. PRASCA (Cu,Zn,Pb, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. Similar to accumulation no.70 Fundu-Moldovei.

71 b. (M)(1) VALEA PUTNEI (Cu,Zn,Pb, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. Similar to accumulation no.70 Fundu-Moldovei.

72. (1) MESTECĂNIS (Zn,Pb,Cu,pyrite; hydrothermal;Mesozoic?); Fig.4. (2) Bistriţa Mts. (3) Subbucovinian Nappe . (4) Tulgheş Group (Cambrian). (5) Quartz sericite-chlorite schists, crystalline schists tectonically brecciated. (6) Vein, disseminations. (7) Zn,Pb,Cu,Fe,S,Bi. (8) Sphalerite, galena, chalcopyrite,pyrite, quartz, sericite. (9) Muşat A. (1963-1970). Arch. IPEG "Suceava" (H.K.)

73. PÎRÎUL COLBU-GIUMALĂU (see 73a Giumalău and 73b Colbu).

73 a. GIUMALĂU (pyrite, Cu; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. (2) Bistriţa Mts. (3) Bucovinian Nappe, Putna Unit. (4) Tulgheş Group(Cambrian), rhyolitic volcano-sedimentary formation(Tg_3). (5) Quartz±sericite chlorite schists, sericite quartz schists. (6) Stratiform disseminations. (7) Cu,S,Fe,Si ± Pb,Zn. (8) Pyrite, chalcopyrite,sphalerite, galena, sericite, chlorite, albite. (9) Ivăşcanu Al. et al. (1967) Arch. IPLGS. (H.K.)

73 b.(M)(1) COLBU (pyrite, Cu;hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. Similar to accumulation no. 73a Giumalău.

74. (M)(1) BASCA-IZVORUL GIUMALĂU (Zn,Pb,Cu,pyrite;hydrothermal-sedimentary of Kuroko type s.l.,metamorphosed;Cambrian); Fig.4. (2) Bistriţa Mts. (3) Subbucovinian Nappe, Putna Unit.(4) Tulgheş Group (Cambrian). (5) Sericite-chlorite schists,chlorite-sericite schists, sericite-graphite schists. (6) Massive and disseminated ore boudines, in a tectonized zone. (7) Zn,Pb,Cu,Fe,S, Si. (8) Pyrite, pyrrhotine, sphalerite, galena, chalcopyrite,mispickel, galenobismuthine, molybdenite, quartz, albite, calcite, sericite. (9) Kräutner H. (1964)Arch. IGG. (H.K.).

75. (1) GEMENEA-SLĂTIOARA (Cu,Pb,Zn,Fe,baryte; hydrothermal; Mesozoic ?); Fig.4. (2) Bistriţa Mts. (3) Bucovinian Nappe. (4) Tulgheş Group (Cambrian).(5) Tectonized sericite-chlorite schists. (6) Vein. (7) Cu,Zn,Pb,Fe,S,Ba. (8) Chalcopyrite, pyrite, sphalerite, galena, siderite, baryte, quartz, calcite. (9) Ianovici V. et al.(1957) Anal. Univ."C.I.Parhon", Geol.geogr.,16,150-170.(H.K.)

76. (1) OSTRA (baryte, witherite; hydrothermal metasomatic; Mesozoic ?); Fig.4.(2) Bistriţa Mts. (3) Bucovinian Nappe. (4) Sedimentary cover of the Bucovinian Nappe and Bretila Group of the Rarău Unit. (5) Triassic dolomites, Rarău Gneisses tectonized. (6) Irregular body. (7) Ba±Si,Fe,S,Cu,Pb,Zn; Ag,Au,U,Th,Ra. (8) Baryte, witherite, pyrite, marcasite, sphalerite, galena, chalcopyrite, tetrahedrite, radiobaryte, quartz, dolomite, calcite, siderite, muscovite, albite, microcline, chlorite. (9) Ianovici V. et al. (1966) St.cerc.geol.,geofiz.,geogr.,Geol.,11/2, 331-340; Pitulea G. et al.(1963) Rev.geol.geogr., VII/2, 271-280. (H.K.)

77. (1) FAGU (Cu, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. Similar to accumulation no. 79b Leşu Ursului.

78. (1) CRUCEA (Cu, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian). Similar to accumulation no. 79c Leşu Ursului-Isipoaia.

79. LEŞU URSULUI (see 79a Valea Leşului, 79b Valea Ursului and 79c Isipoaia).

79 a.(M)(1) LEŞU URSULUI-VALEA LEŞULUI (Cu, Zn,Pb, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed;Cambrian); Fig.4. Similar to accumulation no. 79b Valea Ursului.

79b . (1) LEŞU URSULUI-VALEA URSULUI (Cu,Zn,Pb,pyrite;hydrothermal-sedimentary of Kuroko type s.l., metamorphosed;Cambrian); Fig.4. (2) Bistriţa Mts. (3) Bucovinian Nappe, Putna Unit.(4) Tulgheş Group (Cambrian),rhyolitic volcano-sedimentary formation (Tg_3), Leşu Ursului Horizon (zone I and II). (5) Quartz sericite-chlorite schists, quartz chlorite schists, quartz sericite schists. (6) Massive ore lenses, stratiform disseminations. (7) Cu,Zn,Pb, Fe,As,Mn,Ti,Bi,Sn,Sb,Cd,Ag,Ga,V,Co,Ni,In,Cr,Ba. (8) Pyrite,chalcopyrite,sphalerite, galena, mispickel, pyrrhotine, tetrahedrite, bournonite, galenobismuthine, smaltine, molybdenite, rosasite, semseyite, jamesonite, gold, rutile, ilmenite, magnetite, cassiterite, calcite, siderite, quartz, chlorite, muscovite,(sericite), stilpnomelane, albite, sphene, baryte. (9) Samoilă I. et al.(1958), Rev.Minelor, 12; Samoilă I. et al.(1959), Rev.Minelor,1; Petrulian

N. et al.(1966), St.cerc.geol.,geofiz.,geogr.,Geol.,II/1,91-104; Balintoni I. et al.(1978) D.S. IGG, LXII/2, 3-28; Kräutner H. et al. (1978) Arch. IGG. (H.K.)

79 c.(M)(1) LEŞU URSULUI-ISIPOAIA (Cu,Zn,Pb,pyrite;hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.4. (2) Bistriţa Mts. (3) Bucovinian Nappe, Putna Unit. (4) Tulgheş Group (Cambrian), rhyolitic volcano-sedimentary formation, Isipoaia Horizon (zone III). (5)Chlorite schists, chlorite-quartz schists, chlorite-sericite schists. (6) Massive ore lenses, stratiform disseminations. (7) Cu,Zn,Pb,Fe,S,As,Mn,Ti,Sn,Cd,Bi,Sb,Ag, Co,Ni,Mo,In,Ga,Tl,Cr,Ba,Sr. (8) Pyrite, chalcopyrite, sphalerite, galena, mispickel, pyrrhotine, tetrahedrite, bournonite, galenobismuthine, bismuthine, semseyite,jamesonite, molybdenite, gold, rutile, ilmenite, magnetite, cassiterite, baryte, quartz, albite, chlorite, muscovite (sericite), calcite, ankerite, sphene. (9) Petrulian N. et al. (1966) St.cerc.geol.,geofiz.,geogr.,Geol.11/1, 91-104; Balintoni I. et al.(1973) D.S.Inst.geol.geofiz.,LXII/2, 3-28; Kräutner H. et al.(1976) Arch.IGG. (H.K.)

80. (M)(1) HOLDIŢA-BROŞTENI (baryte, Zn, pyrite; hydrothermal-sedimentary,metamorphosed; Cambrian);Fig.4. (2) Bistriţa Mts. (3) Subbucovinian Nappe. (4) Tulgheş Group (Cambrian), metalydite graphite formation (Tg_2). (5) Black quartzites . (6) Lenses. (7) Ba,S±Fe,Zn,Pb; Mn,Sr,Ti,V,Ni,Co. (8) Baryte, quartz,calcite,rhodochrosite, siderite, pyrite, sphalerite, albite, muscovite (sericite); secondary: witherite. (9) Vodă A. et al. (1982) D.S.Inst. geol.geofiz., LXVII/2,233-246. (H.K.)

81. (1) BROŞTENI (Mn,Fe;hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian);Fig.4. Similar to accumulation no. 68 Iacobeni.

82. (1)ŞARUL DORNEI (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian);Fig.4. Similar to accumulation no. 68 Iacobeni.

83. (1) DEALUL RUSULUI (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian); Fig.4. Similar to accumulation no.68 Iacobeni.

84. (1) DEALU BOAMBEI (Mn,Fe; hydrothermal-sedimentary of Iacobeni type, metamorphosed; Cambrian);Fig.4. Similar to accumulation no. 68 Iacobeni.

85. (1) NEAGRA ŞARULUI (oligotrophic peat; Quaternary).(2) Bistriţa Mts, Neagra Sarului Basin. (3) Neogene eruptive zone and Crystalline-Mesozoic Zone . (4) Peat Horizon; Upper Quaternary.

(5) Sandy clays, muds, Upper Holocene. (6) Beds. (7)-.(8)Dark brown peat. (8) Pop E.(1966) (C.B.)

86. (1) PILUGANI-POIANA STAMPEI (oligotrophic peat;Quaternary). (2) Bistriţa Mts, Dornelor Basin. (3) Crystalline-Mesozoic Zone and Neogene eruptive zone. (4) Peat horizon; **Upper Quaternary.** (5) Sandy clays, muds; Upper Holocene. (6) Beds. (7) U_h(10-12%), V^i(54-62%), Q_i^i(4105-4450 kcal/kg); humic acides(10-47%), fulvic acids(3-10%). (8) Brown-yellowish peat with Sphagnum at the upper part, brown-light brown peat at the median part, of sub-Atlantic age; brown-blackish peat at the lower part, of Boreal age. (9) Codarcea Fl. (1977) St.tehn.econ.,A/12; Semaka A.(1957) D.S.Inst. geol., XIV.(C.B.)

87. (1) COLIBIŢA (Pb,Zn±Au,Ag ; hydrothermal; Pontian). (2) Călimani Mts. (3) Călimani-Harghita volcanic zone. (4) Andesite-diorite volcanic formation of the lower structural compartment, Pannonian, and Transcarpathian flysch formation, Paleogene. (5) Hornblende ± quartz pyroxene diorites and hornblende±pyroxene andesites, propylitized, argillized, silicified. (6) Veins. (7) Zn,Pb,Au,Ag.(8) Pyrite,sphalerite,galena, mispickel, marcasite, semseyite, chalcopyrite, jamesonite, stibine; calcite, quartz. (9) Mureşan G.,Peltz. (1969) Arch. IGG; Seghedi I., in Stoica et al.(1981), Arch.IGG.(S.P.)

88. (1) NEGOIUL ROMÂNESC (S,Fe; solphatarian; Pliocene). (2) Călimani Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic stratovolcanic formation of the upper structural compartment, Pliocene.(5) Pyroxene andesites and their pyroclastics, biotite-hornblende-quartz andesites, argillized,silicified,Pliocene. (6) Irregular,compact body.(7) S,Fe. (8) Impregnation sulphur, sublimation sulphur; limonite, goethite, hydrogoethite. (9) Mureşan G., Peltz S.(1969) Arch.IGG. (S.P.)

89. (1) IEZERUL MIC (S; solphatarian; Pliocene). Similar to ore deposit no.88 Negoiul Românesc.

90. (1) DRĂGOIASA (talc; metamorphic; Proterozoic-Paleozoic?); Fig.4. (2) Bistriţa Mts.(3) Subbucovinian Nappe, Rodna Unit. (4) Rebra Group (Middle Proterozoic), Voşlăbeni Formation, carbonatic. (5) Dolomites, tremolite dolomites. (6) Lenses, nests. (7) -. (8) Talc, pyrophyllite, dolomite,calcite, quartz, tremolite, muscovite, albite, pyrite, scapolite. (9) Frîncu-Avramescu D.(1982) D.S.Inst.geol.geofiz.,LXVII/2, 5-27. (H.K.)

91. (1) BORCA (Mn; hydrothermal-sedimentary, regionally metamorphosed; Cambrian). (2) East Carpathians, Bistriţa Mts. (3)

Putna Unit of the Subbucovinian Nappe.(4) Metalydite graphite formation (Tg_2) of the Tulgheş Group,Cambrian. (5) Graphite black quartzites, Cambrian. (6) Beds, stratiform lenses.(7) Mn,Fe; (8) Rhodonite,rhodochrosite,calcite,quartz±pyrite,apatite,manganiferous olivine, pyroxmangite, dannemòrite,manganiferous garnet,chlorite. (9) Zlatarova L.,Mureşan M.(1970) D.S.Inst.geol.,LVI,2.(M.M.)

92. (1) STÎNCENI (Au+Ag; hydrothermal;Pontian). (2) Călimani Mts. (3) Călimani-Harghita volcanic zone. (4) Andesite-diorite complex structure, Pannonian, and sedimentary deposits,Oligocene+Lower Miocene. (5) Hornblende andesites, hornblende+pyroxene andesites,porphyry microdiorites, quartz andesites and endogene breccias, propylitized, argillized, sericitized, carbonated, silicified, Pannonian. (6) Veins, impregnations. (7) Zn,Au,Ag,Pb,Cu,Sb± Te; Bi,Cd; gold mispickel, marcasite, pyrite, quartz; pyrite,sphalerite,galena,tetrahedrite, bournonite, jamesonite,calcite,quartz; sphalerite±pyrrhotine±chalcopyrite+pyrite, calcite; pyrite±pyrrhotine,+ gold mispickel, gold and silver tellurides; stibnite+calcite; sphalerite,pyrite,calcite,quartz. (9) Peltz S.(1969) St.tehn. econ., I/4;Peltz S. et al.(1981) D.S.Inst.geol.geofiz.,LXVI/5; Peltz S. et al.(1981) D.S.Inst.geol.geofiz.,LXVI/2. (S.P.)

93. (1) BILBOR-PÎRÎUL SECU (lignite; limnic; Pliocene). Similar to accumulation no.97 Borsec.

94. (1) HÂRLĂGIA (pyrite, Zn,Pb±Cu; hydrothermal-sedimentary of Kuroko type s.l., regionally metamorphosed; Cambrian). (2) East Carpathians, Bistriţa Mts. (3) Putna Unit of the Bucovinian Nappe. (4) Rhyolite volcano-sedimentary formation(Tg_3)of the Tulgheş Group, Cambrian. (5) Sericite-chlorite schists±calcite± quartz. (6) Stratiform lenses. (7) Zn,Pb,±Cu; As,Sb,Ag. (8) Quartz, sphalerite, galena±chalcopyrite, chlorite,pyrrhotine, tetrahedrite, proustite (?). (9) Mureşan M.,Mureşan G.(1977) St.tehn.econ., A/12. (M.M.)

95. (1) PALTIN (Zn,Pb, pyrite; hydrothermal, regionally metamorphosed; Cambrian). (2) East Carpathians, Giurgeu Mts. (3) Putna Unit of the Bucovinian Nappe. (4) Tulgheş Group, Cambrian. (5)Metarhyolites (porphyry) and sericite chlorite schists,Cambrian. (6) Veins, lenses, nests, disseminations. (7) Zn,Pb; Ag,As. (9) Galena±tetrahedrite, proustite, sphalerite, chalcopyrite, pyrite, quartz, calcite, dolomite (a); sphalerite±galena, pyrite, calcite, dolomite, quartz (b); pyrite, quartz±sphalerite, galena, chalcopyrite. (9) Mureşan M.,Mureşan G.(1977) St.tehn.econ.,A/12. (M.M.)

96. (1) BORSEC (talc; metamorphic-retromorphism; Paleozoic); Fig. 3. Similar to ore deposit no.90 Drăgoiasa. (9) Popa Gh., Stabliovschi V. (1980) Arch. IGG; Vîlceanu P., Vîlceanu E. (1975) Arch. IPEG.

97. (1) BORSEC (lignite; limnic; Pliocene). (2) East Carpathians, Bistriţa Mts. (3) Crystalline-Mesozoic Zone. (4) Greybluish grey clay marls horizon, Dacian. (5) Alternation of marls, sandy marls, clays, sandy clays, sands, gravel , conglomerates.(6) Beds, lenses. (7) U_h (4-10%), V^i(19-28%), A_{anh} (34-59%), Q_i^i (2200-3023 kcal/kg). (8) Soft dull coal, rich in inertinite. (9) Atanasiu J. (1924) St. tehn. econ., III/3 ; Georgescu D. et al.(1959) Arch. IPGG; Mateescu I. (1964) St.tehn.econ., A/6. (C.B.)

98. (1) JOLOTCA-DITRĂU (Mo; Pb,Zn±Au,Ag; pyrite; pneumatolitic-hydrothermal; Jurassic ?). (2) Giurgeu Mts. (3) Alkaline Ditrău Massif. (4) Diorite-hornblendite rock complex. (5) Diorites, hornblendites, syenites, lamprophyres, crystalline schists. (6) Veins, subordinate impregnations. (7) Mo,Pb,Zn±Au,Ag,Cu; Bi,Te,Ti,Ce,La, Th,Y,Nb,P. (8) Pyrite, sphalerite, galena, chalcopyrite, pyrrhotine, molybdenite, xenotime, parisite, bastnäsite; calcite, dolomite, ankerite, quartz, epidote, apatite, orthite. (9) Garbaşevski N. (1977)D.S.Inst.geol.geofiz.,LXIII,13-25; Constantinescu E. et al. (1984) An.Inst.geol.geofiz.,LXII. (G.U.)

99. (1) AURORA-DITRĂU(Mo;hydrothermal;Jurassic?).(2)Giurgeu Mts. (3)Alkaline Ditrău Massif.(4)Syenitic alkaline rocks.(5)Kataclased syenites.(6)Veins.(7) Mo,F,TR,Zn,Pb.(8)Molybdenite,fluorine, pyrite,sphalerite,galena,alkali feldspar,parisite,bastnäsite;monazite,orthite. (9) Jakab G. (1983) Arch.IGG. (G.U.)

100. (1) REMETEA (peat; eutrophic; Quaternary), (2) Gurghiu Mts and Ditrău Massif, Gheorghieni Basin. (3) Neogene eruptive zone of the Crystalline-Mesozoic Zone. (4) Peat horizon, Upper Quaternary. (5) Sandy clays, muds; Upper Holocene. (6) Beds. (7) -. (8) Brown-blackish peat including : Betula humilis, Betula warnstorffi, etc. (9) Pop E. (1960), Mlaşt.turb. RPR, Edit.Acad.;Bandrabur T. et al. (1969), INQUA Congr. VIII, Paris. (C.B.)

101. (1) DITRĂU (Ti,Zr; alluvial ; Quaternary).(2) Giurgeu Mts. (3) Crystalline-Mesozoic Zone. (4) Alluvia (V.Ditrăului-P.Alb). (5) Nonconsolidated alluvial deposits. (6) Irregular distribution in alluvia. (7) Ti,Zr. (8) Zircon, ilmenite, sphene, magnetite, monazite, etc. (9) Brana V.(1967). (G.U.)

102. (1) BICAZU ARDELEAN (Pb,Zn,Cu,pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian).(2) East Car-

pathians, Hăşmaşu Mare Mts. (3) Crystalline-Mesozoic Zone; Bucovinian Nappe. (4) Rhyolitic volcano-sedimentary formation (Tg_3) of the Tulgheş Group; Cambrian. (6) Stratiform lens. (7) Pb,Zn,Cu,Fe, S±Au,Ag. (8) Galena, sphalerite, chalcopyrite, covellite, bornite, pyrite, pyrrhotine, tetrahedrite, mispickel, tennantite, quartz, carbonates. (9) Vodă. Al.(1976,1977) Arch. IPEG. (M.M.)

103. (1) MEDIAŞ (Cu,Zn,Pb,pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.5. (2) Giurgeu Mts. (3) Bucovinian Nappe. (4) Tulgheş Group (Cambrian), Bălan Horizon. (5) Chlorite schists, chlorite-quartz schists, chlorite quartzites, sericite-chlorite schists. (6) Massive ore lenses, stratiform disseminations. (7) Cu,Zn,Pb,Fe,S. (8)Pyrite, chalcopyrite, sphalerite, galena, pyrrhotine, quartz, chlorite, sericite, albite, calcite. (9) Popa Gh. (1980-1983) Arch. IGG. (H.K.)

104. (1) BĂLAN (Cu, pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.5. (2) Giurgeu Mts.(3) Bucovinian Nappe. (4) Tulgheş Group (Cambrian), Bălan Horizon. (5) Chlorite schists, chlorite quartz schists, chlorite quartzites, chlorite-sericite schists. (6) Stratiform and lenticular disseminations. (7) Cu,Fe,S±Zn,Pb; Mn,Ti,Bi,Co,Ni,V,Cr,As,Ga,Ag. (8) Pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, bournonite, mispickel, galenobismuthine, jamesonite, teallite, cubanite, native bismuth, gold, silver, magnetite, hematite, ilmenite, cassiterite, rutile, quartz, chlorite, sericite, siderite, ankerite, albite, stilpnomelane, apatite, baryte, tourmaline, (9) Kräutner H. et al.(1970, 1972) Arch. IGG; Petrulian N. et al. (1971). (H.K.)

105. (1) FAGUL CETĂŢII (Cu,pyrite; hydrothermal-sedimentary of Kuroko type s.l., metamorphosed; Cambrian); Fig.5. Similar to accumulation no.104 Bălan.

105 a.(M)(1) BĂLAN SOUTH(Cu,pyrite; hydrothermal-sedimentary of Kuroko type s.l.,metamorphosed; Cambrian);Fig.5. Similar to accumulation no.104 Bălan.

106. (1) ŞUMULEU-GURGHIU (Cu±Mo,Au; porphyry copper; Pliocene). (2) Gurghiu Mts. (3) Călimani-Harghita volcanic zone. (4) Craterial andesitic stratovolcanic formation of the upper structural compartment, Pliocene. (5) Hornblende+pyroxene andesites propylitized, chloritized, biotitized, argillized. (6) Impregnations. (7) Cu±Mo, Pb,Zn,Au. (8) Chalcopyrite, molybdenite, magnetite; sphalerite, galena. (9) Peltz S. et al. (1975-1976) Arch. IGG; Stanciu C.(1977) Arch. IGG. (S.P.)

107. (1) OSTOROS (Cu±Mo,Au; porphyry copper; Pliocene). (2)

Harghita Mts, (3) Călimani-Harghita volcanic zone. (4) Craterial andesitic stratovolcanic formation of the upper structural compartment. (5) Hornblende andesites and hornblende+pyroxene andesites, propylitized, chloritized, biotitized, argillized, tourmalinized. (6) Impregnations. (7) Zn,Pb,Cu; B,Mo,Au.(8) Chalcopyrite, sphalerite, galena, molybdenite. (9) Peltz S. et al.(1975-1976) Arch.IGG; Stanciu C. (1977) Arch.IGG; Stanciu C. (1976) D.S.Inst.geol.geofiz., LXII/1. (S.P.)

108. (1) MĂDĂRAS-HARGHITA (Cu±Mo,Au; porphyry copper; Pliocene). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Craterial andesitic stratovolcanic formation of the upper structural compartment. (5) Pyroxene hornblende andesites, pyroxene microdiorites,hornblende microdiorites, Pliocene, propylitized,biotitized, chloritized, sericitized, carbonated, argillized, tourmalinized, silicified. (6) Impregnations. (7) Cu,Mo. (8) Magnetite, pyrrhotine, chalcopyrite (a); magnetite, pyrrhotine, pyrite, molybaenite, sphalerite (b). (9) Stanciu C. et al. (1977-1981) Arch. IGG; Stanciu C. et al., (in press) D.S.Inst.geol.geofiz.,LXVIII/1.(S.P.)

109 (1) COCOIZAŞ (Hg; hydrothermal; Pliocene). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4)Andesitic stratovolcanic formation of the upper structural compartment; Pliocene. (5) Pyroxene hornblende andesites, argillized; Pliocene. (6) Impregnations. (7) Hg ± Sb. (8) Cinnabar ± stibnite. (9) Stanciu C. et al. (1981) Arch. IGG. (S.P.)

110. (1) IVO (kaolin, hydrothermal alteration; Pliocene). Similar to accumulation no.113 Harghita Băi.

111. (M)(1) MĂDĂRAS-CIUC (Fe, hydrothermal-metasomatic; Pannonian).(2) Upper Ciuc Depression. (3) Călimani-Harghita volcanic zone. (4) Andesitic volcano-sedimentary formation of the lower compartment; Pannonian; Miocene-Pannonian sedimentary deposits; metamorphic rocks of the Crystalline-Mesozoic Zone. (5)Andesitic volcanoclasts, Pannonian; marls, sandy clays, Miocene?-Pannonian. (6) Lenses, concretions. (7) Fe. (8) Siderite, limonite, limestones and dolomites, Precambrian. (9) Tănăsescu L.(1967) St.tehn.econ., A/7; Setel M. et al. (1973) Arch. IGG; Mureşan M.,Tănăsescu L. (1981) D.S.Inst.geol.geofiz., LXVI/5. (S.P.)

112. (1) MIERCUREA CIUC (peat; eutrophic; Quaternary). (2) Between Harghita Mts and Ciuc Mts, Ciuc Basin. (3) Neogene eruptive zone and Cretaceous flysch zone. (4)Peat horizon; Upper Quaternary. (5) Sandy clays, muds; Upper Holocene. (6) Bed. (7) Organic matter 66-89% ; A = 10-36%; Q= 2060-4020 kcal/kg). (8) Brown-blackish peat

including : Betula humilis, Angelica palustris, Ribes rubrum, Salix pentrandra, etc. (9) Pop E. (1960) Ed. Acad. (C.B.)

113. (1) HARGHITA BĂI (kaolin, hydrothermal alteration; Pliocene).(2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic stratovolcanic formation of the upper compartment; Pliocene. (5) Pyroxene andesites,hornblende pyroxene andesites + pyroclastics, argillized. (6) Irregular,compact body. (7) Trace elements , Cu,Mo,Pb,Zn.(8) Montmorillonite-illite(a); illite-kaolinite (b). (8) Peltz S. et al. (1974) Arch. IGG; Stanciu C., in Rădulescu D.et al. (1983) Arch. IGG. (S.P.)

114. (1) VLĂHIȚA (Fe; hydrothermal-metasomatic; Pannonian). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic volcano-sedimentary formation of the lower compartment;Pannonian. (5) Andesitic volcanoclasts; Pannonian. (6) Concretions; (7) Fe. (8) Siderite. (9) Peltz S. et al. (1981) Arch IGG; Peltz S. et al., D.S.Inst.geol.geofiz., LXVI/2 (1982). (S.P.)

114 a. (M)(1) TIMBUC (Fe, volcano-sedimentary + hydrothermal-metasomatic; Pannonian). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic volcano-sedimentary formation of the lower compartment; Pannonian. (5) Andesitic volcanoclasts, Pannonian; clay marls, sandy sandstones , Volhynian-Bessarabian. (6) Concretions. (7) Fe. (8) Siderite. (9) Peltz S. et al.(1981) Arch IGG. (S.P.)

114 b. (M)(1) LAZU VÎRGHIS (Fe, volcano-sedimentary + hydrothermal-metasomatic; Pannonian). Similar to accumulation no.114 a Tîmbuc.

115. (1) LUETA (Fe, volcano-sedimentary; Pannonian).(2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4)Miocene sedimentary formations of the Transylvanian Depression; andesitic volcano-sedimentary formation of the lower compartment; Pannonian. (5) Conglomerates and gravel; Upper Malvensian; andesitic volcanoclasts; Pannonian. (6) Lenses, concretions. (7) Fe. (8) Siderite+ limonite. (9) Peltz S. et al. (1976-1981) Arch. IGG; Peltz S. et al. (1982) D.S. Inst.geol.geofiz., LXVI/2. (S.P.)

116. CHIRUI (Fe; volcano-sedimentary; Pannonian). Similar to accumulation no.115 Lueta.

116 a. (M)(1) PÎRÎUL LINII (Fe; geyserian; Pannonian). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic volcano-sedimentary formation of the lower compartment; Pannonian. (5) Andesitic pyroclastics; Pannonian.(6) Lenses, concretions. (7) Fe. (8) Limonite, limonitic opal. (9) Peltz S. et al.(1978-1981)

Arch. IGG; Peltz S. et al.(1982) D.S.Inst.geol.geofiz.,LXVI/2.(S.P.)

117. (1) CORUND (aragonite; hydrothermal; Pliocene).(2) Gurghiu Mts. (3) Călimani-Harghita volcanic zone. (4) Miocene-Pannonian sedimentary formation of the Transylvanian Depression and the volcano-sedimentary formation of the lower compartment; Pannonian. (5) Andesitic pyroclastics, Pannonian; saliferous clays, sandy sandstones, Miocene. (6) Veins. (7) CaO, trace elements Ba,Sr,Cr, V,Bi,Cu. (8) Aragonite, calcite. (9) Gheorghiu C. et al.(1965) Bul. Soc.şt.nat.,Geol.,3 . (S.P.)

118. (1) SÎNTIMBRU (Hg; hydrothermal; Pliocene).(2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic stratovolcanic formation of the upper compartment; Pliocene. (5) Biotite quartz andesite and its pyroclastics, argillized, silicified; Pliocene. (6) Irregular body, impregnations. (7) Hg; B, Au. (8) Cinnabar, metacinnabarite (sporadic), pyrite, limonite, marcasite, melnicovite, quartz, calcite, baryte, fluorine. (9) Vasilescu A. (1964) D.S.Inst.geol.,L/2; Dinu V. et al.(1974) Arch IPEG "Harghita"; Peltz S. et al. (1974) Arch. IGG; Tănăsescu L. (1976) Arch. IPGG. (S.P.)

118 a. (M)(1) SÎNTIMBRU (kaolin; hydrothermal alteration; Pliocene). (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic stratovolcanic formation of the upper compartment; Pliocene. (5)Biotite quartz andesites, argillized, Pliocene. (6) Irregular body. (7) -. (8) Illite-montmorillonite. (9) Dinu V. et al. (1975) Arch. IPEG "Suceava" . (S.P.)

119. (1) SÎNSIMION (kaolin; hydrothermal alteration; Pliocene. (2) Harghita Mts. (3) Călimani-Harghita volcanic zone. (4) Andesitic stratovolcanic formation of the upper compartment; Pliocene. (5) Hornblende+pyroxene+biotite andesites, argillized. (6) Irregular, compact body. (7) Trace elements ; Cu, Mo,Pb,Zn. (8) Illite, kaolinite, montmorillonite. (9) Moţoi G.et al.(1975) Arch. IGG. (S.P.)

120 (1) TUŞNAD SAT (peat;eutrophic; Quaternary). Similar to accumulation no.112 Miercurea Ciuc.

121. (1) FILIA (diatomite; sedimentary-organogene;depositions in lacustrine environment; Upper Pliocene).(2) East Carpathians; Ciuc Depression, (3) Ormeniş Basin.(4) Sandy horizon with intercalations of gravel and microconglomerates; Upper Pliocene. (5) Psamito-pelitic deposits with intercalations (1-11) of diatomites; Upper Pliocene. (6) Beds. (7) SiO_2 (85-86%); Fe_2O_3 (2-3%); Al_2O_3 (3.0-3.5%); CaO (0.4-1.5%); MgO (0.2%); TiO_2 (0.1%); P.C. (6-8%).

(8) Diatoms (80-85%), quartz (5-10%), calcite (1-3%), clay minerals (2-3%), feldspars (2-4%), limonite (2-3%), carbonaceous matter(less than 1%)(9) Brana V. (1967); Grigorescu C., Butucescu D. (1971) MMPG-ODPT. (S.R.)

122. (1) FILIA (Fe; volcano-sedimentary; Pliocene). (2) Baraolt Basin. (3) Călimani-Harghita volcanic zone. (4) Cormaş volcano-sedimentary formation; Pliocene. (5) Andesitic volcanoclasts, marls, sandy marls; Pliocene. (6) Lenses, concretions.(7) Fe. (8) Siderite, limonite. (9) Kosareva et al.(1975); Seghedi I., în Peltz et al. (1983) Arch. IGG. (S.P.)

123. (1) HERCULIAN (Fe; volcano-sedimentary; Pliocene). (2) Baraolt Basin. (3) Călimani-Harghita volcanic zone. (4)Cormaş volcano-sedimentary formation; Pliocene. (5) Diatomites; Pliocene. (6) Lenses, concretions. (7) Fe. (8) Limonite ± siderite. (9) Kosareva et al. (1975); Seghedi I., in Peltz S.et al. (1983) Arch. IGG. (S.P.)

124. (1) VÎRGHIŞ EAST(lignite; limnic; Pliocene). Similar to the deposit no. 127 Baraolt.

125. (1) BODOŞ (lignite; limnic; Pliocene). Similar to the deposit no.127 Baraolt.

126. (1) AITA SEACA (lignite; limnic; Pliocene). Similar to the deposit no. 127 Baraolt.

127. (1) BARAOLT (lignite; limnic; Pliocene). (2) Baraolt and Perşani Mts. (3) Posttectonic cover, Bîrsei Depression. (4) Marly-sandy horizon; Pliocene. (5) Alternation of marls,tuffaceous marls, sands. (6) Beds. (7) U_t (59%); A^i(10%); S^i_t (2%); Q^i_i (1800 kcal/kg). (8) Soft dull coal;humodetrinite (30-50%). (9) Popovici V. (1959) St.tehn.econ., A/5; Liteanu E. et al.(1962) St.cerc. Acad. RPR, VII, 3,4. (C.B.)

128. (1) ARCUŞ-VALEA CRIŞULUI (lignite; limnic; Pliocene). (2) Baraolt and Bodoc Mts. (3) Posttectonic cover, Bîrsei Depression. (4) Carbonaceous complex; Middle Pliocene. (5) Alternation of marls, clays, sands. (6) Beds. (7) U_h (19%); V^{mc}(47%); Q^i_i. (2000 kcal/kg). (8) Soft dull coal, slightly earthy. (9) Constantin D. (1981) Arch. ISPIF; Kusko M. (1978-1983) Arch. IPGG ;Popovici V. (1959) St.tehn.econ., A/5. (C.B.)

129. (1) IARAŞ-HĂGIG (lignite; limnic; Pliocene). Similar to the deposit no.128 Arcuş-Valea Crişului.

130. (1) CRISBAV (lignite; limnic; Pliocene). Similar to the deposit no. 128 Arcuş-Valea Crişulului.

131. (1) DUMBRĂVIŢA (peat; eutrophic; Quaternary). (2)Baraolt

Mts. (3) Posttectonic cover, Bîrsei Depression. (4) Peat horizon; Upper Quaternary. (5) Sandy clays, muds; Upper Holocene. (6) Bed. (7) pH - 6.2-7. (8) Brown-blackish peat with Primula jarinosa , Carex davalliana, Drosera anglica. (9) Pop E. (1960). (C.B.)

132. (1) ILIENI (lignite; limnic; Pliocene). Similar to the deposit no. 128 Arcuş-Valea Crişului.

133. (1) VLĂDENI (lignite; limnic; Pliocene). Similar to the deposit no. 128 Arcuş-Valea Crişului.

134. (1) CODLEA-VULCAN (Brown coal; paralic; Lower Jurassic). (2) South Carpathians . (3) Infrabucovinian Nappes, Holbav Unit. (4) Upper and lower productive horizon; Liassic. (5) Conglomerates, sandstones, clays, refractory clays, tuffites; Hettangian-Sinemurian. (6) Lenticular beds. (7) V^{i}(24-27%); S^{i}_{t}(1.4-1.7%); Q^{i}_{i} (3212-4082 kcal/kg). (8) Bright, brown coal; vitrinite (66%), exinite (23%), inertite (4%), mineral resources (7%). (9) Năstăseanu S. et al. (1970) St.tehn.econ., A/8; Năstăseanu S. et al.(1982); Săndulescu M.(1972) D.S.Inst.geol.,LIX/5.(C.B.)

135. (1) CRISTIAN (Brown coal; paralic; Lower Jurassic). Similar to the deposit no. 134 Codlea-Vulcan.

136. (1) RUDA-MESTEACĂN (Pb,Zn,Cu±Au,Ag; hydrothermal; Mesozoic). (2) South Carpathians; East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Micaschists, paragneisses, white gneisses, crystalline limestones, silicified, argillized, carbonated, chloritized. (6) Veins. (7) Pb,Zn,Cu±Au,Ag. (8) Pyrite, sphalerite, pyrrhotine (a);sphalerite, chalcopyrite, pink carbonates (b); sphalerite, silver galena, black chlorite, carbonates, baryte, quartz, pyrite (c). (9) Giuşcă D.(1942) Arch. IGG; Manilici V.(1956) An.Com.Geol.,XXIX; Micu C. (1970) Arch. IPGG; Nedelcu L., Anton L.(1984) D.S. Inst.geol., LXVIII/5; Vlad S., in Savu H. et al. (1981) Arch. IGG; Nedelcu L., Lupulescu A. (1983) Arch. IGG. (L.N.)

136 a. (M)(1) RUDA MICĂ (Pb,Zn,±Au,Ag; hydrothermal;Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Mica schists silicified, sericitized, carbonated. (6) Veins. (7) Pb,Zn, ±Au,Ag,Cu. (8) Sericite, pyrite (a); sphalerite, galena, chalcopyrite, quartz (b); baryte, carbonates (c). (9) See no.136. (L.N.)

136 b.(M)(1) MESTEACĂN (Pb,Zn,Cu±Au,Ag; hydrothermal;Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Mica schists, white gneisses, crystalline limestones, silicified, argil-

lized, carbonated, chloritized. (6) Veins. (7) Pb,Zn,Cu±Au,Ag. (8) Pyrite, sphalerite, pyrrhotine (a); sphalerite, chalcopyrite, pink carbonates (b); sphalerite, silver galena, black chlorite, carbonates, baryte, quartz, pyrite (c). (9) See no. 136. (L.N.)

136 c. (M)(1)P.RĂCHITII(pyrite, Cu; hydrothermal; Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Mica schists, paragneisses, white gneisses, silicified, argillized, carbonated, chloritized. (6) Veins. (7) S,Cu±Zn,Pb. (8) Pyrite,sphalerite, chalcopyrite, pink carbonates (a); sphalerite, galena (b); black chlorite, carbonates, baryte, quartz, pyrite (c). (9) See no. 136. (L.N.)

137. (1) VULCĂNIŢA-GHERDANA (Pb,Zn±Au,Ag; hydrothermal; Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Micaschists, paragneisses, white gnsieses, silicified, carbonated, chloritized. (6) Veins. (7) Pb,Zn, Ag±Au. (8) Pyrite,sphalerite, silver galena, quartz, carbonates, anglesite, cerussite. (9) See point 136. (L.N.)

138. (1) BÎRSA FIERULUI (Pb,Zn ±Au,Ag, pyrite;hydrothermal; Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui Bucur Nappe). (4) Făgăraş Group (Middle Proterozoic). (5) Micaschists, paragneisses, white gneisses, argillized, silicified, carbonated. (6) Veins. (7) Pb,Zn±Au,Ag,S,Ni,Co. (8) Pyrite, nickeline, skutterudite, native silver, rammelsbergite, sphalerite, galena, proustite, chalcopyrite, tetrahedrite, quartz, carbonates (a); pyrite, carbonates, baryte (b). (9) Giuşcă D. (1942) Arch.IGG; Manilici V.(1956) An.Com.Geol.,XXIX; Micu C. (1970)Arch. IPGG; Pop A. et al. (1977) Arch.IPGG; Nedelcu L.,Anton L.(1984) D.S.Inst. geol.geofiz.,LXVIII/5; Lupulescu M.(1982) Anal.Univ.Bucureşti,XXXI; Vlad S., in Savu H. et al.(1981) Arch. IGG. (L.N.)

139. POIANA MĂRULUI (Ni; liquid-magmatic, metamorphosed; Middle Proterozoic).(2) South Carpathians, East Făgăraş Mts. (3) Supragetic. (4) Cumpăna Group; Middle Proterozoic. (5) Middle Proterozoic peridotites, serpentinized.(6) Irregular, compact bodies, impregnations. (7) Ni,Fe,Cu,Cr. (8) Magnetite, pyrrhotine, pentlandite, chalcopyrite, sperrylite, bravoite, pyrite, marcasite. (9) Codarcea Al. et al. (1952) Bul.St.Acad. RPR, IV,2; Micu C. (1970) Arch. IPGG; Petrulian N. (1973). (L.N.)

140. NIMAIA (Pb,Zn±Au,Ag; hydrothermal; Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic (Bîrsa lui

Bucur Mappe). (4) Făgăraş Group; Middle Proterozoic. (5) Mica schists, paragneisses, argillized, chloritized, silicified. (6) Veins. (7) Pb,Zn±Au,Ag,Cu,Co;Ge. (8) Pyrite, skutterudite, sphalerite,galena, proustite, chalcopyrite, tetrahedrite, quartz, carbonates(a); pyrite, carbonates (b). (9) See no. 138. (L.N.)

141. (M)(1) PÎRÎUL MĂNĂSTIRII (Cu; hydrothermal; Mesozoic). (2) South Carpathians, East Făgăraş Mts. (3) Supragetic. (4) Cumpăna Group; Middle Proterozoic. (5) Micaschists, augen gneisses silicified, epidotized, chloritized. (6) Veins. (7) Cu±Au,Pb,Zn. (8) Pyrite, sphalerite, chalcopyrite, galena, quartz, chlorite. (9) Popovici I. et al. (1977) Arch. IPGG; Chiricâ V. et al.(1978) Arch. IPGG. (L.N.)

142. (1) BĂDEANCA-DĂNIŞ (Co,Ni,Cu; hydrothermal; Upper Paleozoic?-Mesozoic). (2) Leaota Mts. (3) Leaota Crystalline. (4) Căluşu Formation (Upper Proterozoic ?- Lower Paleozoic). (5) Quartz-sericite-chlorite-albite schists, chlorite-albite schists, argillized, sericitized, carbonated, silicified. (6) Veins, nests, impregnations. (7) Co,Ni,Cu±Pb,Zn,Ag,Bi,Sb,As,Mo. (8) Ankerite (siderite), pyrite (a); maucherite, nickeline, smaltine, safflorite (b); quartz, sphalerite,chalcopyrite, galena, calcite; native bismuth, wittichenite; tetrahedrite, chalcopyrite + bornite, chalcocite (c); safflorite (d); other minerals : rammelsbergite, millerite,chloantite, skutterudite, linneite, polydymite, vaesite, emplectite, tetradymite, tellurobismuthite, mispickel, löllingite, marcasite, stibnite, proustite, chalcosine, eritrine, annabergite, marcasite. (9) Poni P.(1884) An.Bir.Geol.,21; Petrulian M.(1934) An.Inst.Geol., XVII; Popescu Gh.(1968) St.cerc.geol.,geofiz.,13/2, 430; Golovei A. (1969-1973) Arch. ILR; Hădăreanu R. et al.(1977-1983) Arch. ILR; Chiricâ V. et al.(1982) Arch. IPGG; Popovici I. et al.(1981) Arch. IPLGS; Vlad S., Dinică I. (in press) St.cerc.Acad. RSR. (I.D.)

143. (1) TÎNCAVA-PĂIŞ (Pb,Zn,Cu,Co,Ni; hydrothermal;Upper Paleozoic?-Mesozoic); Fig.8. (2) Leaota Mts. (3) Leaota Crystalline. (4) Voineşti and Lereşti formations;Upper Proterozoic. (5) Muscovite±biotite quartz paragneisses, micaschists, chlorite-muscovite schists with albite porphyroblasts, quartz-sericite-chlorite schists, albite schists, graphite schists, argillized, silicified, sericitized, chloritized, albitized. (6) Veins, impregnations, lenses. (7) Pb,Zn,Cu,Co,Ni±Au,Ag,Bi±As,Sb. (8) Quartz,pyrite,galena, sphalerite, chalcopyrite; covelline, cerussite; quartz, pyrite, galena; quartz, sphalerite, chalcopyrite, calcite, malachite, azurite; pyrite , chalcopyrite, galena, sphalerite. (9) Gherasi N.

(1952) Arch.IPGG; Constantinescu P. (1980) Arch. IMR; Hădăreanu R. et al. (1980) Arch. IMR; Chiricâ V. et al.(1983) Arch. IPGG; Vlad S.,Dinică I.(in press) St.cerc.geol. geofiz.geogr.; Pop Gh. et al. (1983) Elemente rare şi radioactive.II, OIDIM. (I.D.)

144. (M)(1) PÎRIUL LUI BRUSTURE (Cu; hydrothermal; Upper Paleozoic ?-Mesozoic); Fig.8. (2) Leaota Mts. (3)Leaota Crystalline. (4) Voineşti Formation - Bughea amphibolites horizon; Upper Proterozoic. (5)Amphibolite schists,mica schists, paragneisses, carbonated, silicified. (6) Veins, impregnations. (7) Cu±Pb,Zn,Ag, Co,Ni,Au,As,Bi,Ab. (8) Quartz, pyrite, gold(a); ankerite, chalcopyrite+bornite, covelline, chalcosine, tetrahedrite, pyrite, galena, sphalerite, calcite (b). (9) Hădăreanu R. et al. (1980) Arch. IMR; Constantinescu P.(1980) Arch. IMR; Chiricâ V. et al. (1982-1983) Arch. IPGG; Dinică I. et al.(1983) Arch. IGG. (I.D.)

145. (M)(1) VALEA CASELOR (Cu; uncertain genesis; Upper Proterozoic or Upper Paleozoic ?-Mesozoic); Fig.8. (2) Leaota Mts. (3) Leaota Crystalline. (4) Lereşti Formation; Upper Proterozoic. (5) Quartz-muscovite-chlorite schists with albite porphyroblasts, albite chlorite-amphibolite schists, sericitized, argillized, silicified. (6) Impregnations, schlieren, mass. (7) Cu±Pb,Mo. (8) Pyrite, chalcopyrite, bornite, tetrahedrite, molybdenite, chalcosine, covelline. (9) Gurău A. (1981-1982) Arch. IPGG; Gurău A.(in press) St.cerc.geol.geofiz.,geogr.; Dinică I. et al. (1983) Arch. IGG. (I.D.)

146. (1) V.GHIMBAV (Au; uncertain genesis; Upper Proterozoic). (2) Leaota Mts. (3) Leaota Crystalline. (4) Voineşti Formation (Upper Proterozoic). (5) Quartzitic gneisses with muscovite and retromorphous biotite, muscovite-chlorite schists with albite porphyroblasts. (6) Quartz veins and lenses, generally discordant seldom concordant with impregnations and nests of galena,pyrite, gold. (7)Au±Ag, Pb,Cu,Zn,As,Bi,Ni,Mo. (8) Quartz, gold, pyrite, marcasite, galena, mispickel±sphalerite, chalcopyrite, native bismuth. (9) Popovici I. et al. (1977) Arch. IPGG; Chiricâ V. et al. (1978-1979) Arch. IPGG; Dinică I. et al. (1983) Arch. IGG. (I.D.)

147. (1) ARPAŞ (Pb,Zn,Cu; hydrothermal-sedimentary,metamorphosed; Middle Proterozoic).(2) Făgăraş Mts. (3) Supragetic. (4) Făgăraş Group. (5) Crystalline limestones, amphibolites, mica schists. (6) Bands, beds. (7) Pb,Zn,Cu; Ni,Co,V,Mn,Ti.(8) Sphalerite, galena, pyrite, chalcopyrite, pyrrhotine, magnetite. (9) Cantuniari St. (1926) D.S.Inst.geol.,IX ; Schuster A.C., Hîrtopanu I. (1973) Arch. IGG. (L.N.)

148. (1) PORUMBACU (Pb,Zn; syngenetic - stratiform of Mississippi Valley type, metamorphosed; Middle Proterozoic. (2) Făgăraş Mts. (3) Supragetic. (4) Făgăraş Group. (5) Crystalline limestones. (6) Bands, beds. (7) Pb,Zn,Cd; Ti,Mn. (8) Sphalerite, galena, pyrite. (9) Cantuniari St. (1926) D.S.Inst.Geol., IX; Dimitrescu R.(1967) D.S.Inst.geol.,LIII/2, 241-245; Schuster A.C., Hîrtopanu I. (1973) Arch. IGG. (G.U.)

149. (1) COCORÎCIU-MOAŞA (kyanite; metamorphic, pegmatoid type; Middle Proterozoic). (2) Făgăraş Mts, V.Oltului Basin. (3) Supragetic. (4) Făgăraş Group. (5) Garnet+staurolite mica schists. (6) Lenses. (7) Al_2SiO_5. (8) Kyanite, staurolite, almandine, mica. (9) Arion M. et al.(1967) Arch. IPGG. (I.H.)

150. (1) CIBIN OLT (Ti,Zr±Au; alluvial; Quaternary). (2) South Carpathians. (3) Recent deposits overlapping areas of the Transylvanian Basin and Făgăraş Mts Crystalline. (4) Recent alluvia. (5) Nonhomogeneous deposits of sands, gravel and clay lenses. (6) Stratiform and lenticular bodies. (7) Ti,Zr±Au. (8) Ilmenite, magnetite, garnet. (9) Rădulescu I. et al. (1983) Arch. IGG.(D.J.)

151. (1) PERIŞANI (Au;metamorphic, metamorphosed; Proterozoic). Similar to ore deposit no.152 Valea lui Stan, but with a simple chemical composition (only native gold).

152. (1) VALEA LUI STAN (Au; metamorphic,metamorphosed,tectogene; Proterozoic).(2) South Carpathians, Căpăţîna Mts. (3)Getic Nappe. (4) Sebeş-Lotru Group, Middle Proterozoic. (5) Retromorphous mica schists and amphibolites with quartz lenticular separations, concordant or discordant. (6) Ore deposit is hosted by quartz bodies of variable sizes, within which it forms irregular nests. (7) Au,Ag;As,Ti,Pb,Zn,Cu,Bi. (8) Pyrite, chalcopyrite, arsenopyrite, sphalerite, galena, magnetite, native gold. (9) Petrulian N. (1936) An.Inst.Geol.Rom., XVIII, 309-318; Udubaşa G. et al. (1976) Arch. IGG. (G.U.)

153. (1) VASILATU-BREZOI (feldspar; metamorphic pegmatite; Middle Proterozoic). (2) Lotru Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Plagiogneisses, mica schists. (6) Concordant veins. (7) $Na_2O + K_2O$ (on an average 7-11%). (8) Microcline, quartz, plagioclase, muscovite. (9) Savu H. et al. (1977) Mălaia Sheet, scale 1:50 000; David M.(1978) Arch. IM Rm.Vîlcea. (I.H.)

154. (1) MĂNĂILEASA (muscovite, feldspar; metamorphic pegmatite; Middle Proterozoic). (2) Lotru Mts. (northern side of the Mănăileasa Peak).(3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Garnet paragneisses and mica schists. (6) Concordant lenticular bodies.

(7) -. (8) Microcline, oligoclase, quartz, muscovite, biotite, tourmaline, garnet, apatite ± beryl. (9) See no.158 Pietrele Albe. (I.H.)

155. (1) VOINEASA-CATARACTE (muscovite, feldspar; metamorphic pegmatite; Middle Proterozoic). (2) Lotru Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Paragneisses. (6) Irregular body. (7) Concentrate : SiO_2 (71.62%); Al_2O_3 (16.68%); Fe_2O_3 (under 0.10%); CaO (1.27%); MgO (0.22%); K_2O (7.3%); Na_2O (3%). (8) Oligoclase, microcline, quartz, mica±tourmaline, garnet , apatite, beryl ; sporadically pyrite, chalcopyrite, iron oxides. (9) See no. 158 Pietrele Albe. (I.H.)

156. (1) NEGOVANU (kyanite; metamorphic; Upper Proterozoic). (2) Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Paragneisses and micaschists ± garnet, staurolite. (6)Interstratified tabular lenses and bodies. (7) Al_2O_3 (59%); SiO_2(35%); Fe_2O_3 (3.23%); MgO (1.40%); K_2O (0.60%); CaO (1.40%); TiO_2 (1.13%); Cr, Ti,Mn,Fe,Ga,In,Tl,Na,Zr,K,Ag. (8) Feldspars, quartz, garnet, staurolite, kyanite, mica . (9) See no.158 Pietrele Albe. (I.H.)

157. (1) CONŢU SUPERIOR-ORATA (Li; metamorphic pegmatite; Middle Proterozoic). (2) Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Paragneisses + biotite, kyanite, gneisses and amphibolic schists. (6) Spodumen pegmatite veins. (7) Li_2O(0.84%); K_2O (2.02%); Na_2O (4.17%). (8) Oligoclase, microcline, perthite, albite, spodumen, quartz, muscovite, biotite, apatite, garnet , epidote, zeolite . (9) See no.158 Pietrele Albe. (I.H.)

158. (1) PIETRELE ALBE (Be; metamorphic pegmatite; Middle Proterozoic). (2) Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5)Mica or quartz paragneisses, amphibolic gneisses,quartzites. (6) Veins of variable sizes, concordant or discordant. (7) K_2O (5.11-6.33%); Na_2O (4.56-5.67%); BeO (0.008-0.07%).(8) Microcline, albite, quartz, muscovite, tourmaline, beryl, garnet. (9) Apostoliu A. et al. (1978-1981) Arch. IPGG. (I.H.)

159. STRÎMBA MARE-CINDREL (kyanite; metamorphic; Middle Proterozoic). (2) Cindrel Massif. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Paragneisses and mica schists ± garnets, staurolite. (6)Interstratified tabular lenses and bodies. (7) Al_2SiO_5. (8) Kyanite, mica , staurolite, almandine, quartz. (9) Micu C. (1964) Arch. IGG. (I.H.)

160. (1) URDELE (Ni; liquid-magmatic, metamorphosed); (2) South Carpathians, Parîng Mts. (3) Danubian. (4) Tulişa Group. (5) Ultrabasic rocks, serpentinized. (6) Impregnations. (7) Pt,Pd,

Ni,Co,Cr. (8) Pentlandite, pyrrhotine, magnetite, chromite. (9) Arsenescu V. et al. (1972) Arch. IGG. (P.H.)

161. NEGOVANU-OLTEŢ (graphite; metamorphic; Proterozoic). Similar to accumulation no. 163 Ribari Olteţ.

162. (1) UNGURELAŞ (graphite; metamorphic; Proterozoic). (2) South Carpathians, Parîng Mts, right side of Olteţ. (3) Lower Danubian.(4) Lainici-Păiuş Group, carbonate-graphite formation ;Proterozoic. (5) Mica gneisses. (6)Lenticular beds. (7) Graphite (10-40 %)(96-98% graphitic acid); S (0.08-0.10%); V (10000-80000 ppm); Ge (110-400 ppm). (8) Macrocrystalline graphite, biotite, muscovite, quartz, andesine, andalusite, sillimanite (a); microcrystalline graphite, sericite, chlorite, albite, epidote (b). (9) Damaschian Gh. (1942) Bul.Inst.Rom. de Energie, 243; Trifulescu M. et al. (1967) D.S.Inst.geol.,LII/3,162-187. (T.B.)

163. (1)RÎBARI OLTEŢ (graphite; metamorphic; Proterozoic). (2) South Carpathians. (3)Lower Danubian. (4) Lainici-Păiuş Group. (5) Paragneisses and quartzites + biotite. (6) Tabular bodies. (7) Carbon. (8) Graphite in association with mica , quartz, sillimanite ± cordierite, garnet . (9) Trifulescu M. (1982) Thesis of doctor's degree, University of Bucharest. (T.B.)

164. (1) CĂTĂLINU-GALBENU (graphite; metamorphic; Proterozoic). (2) South Carpathians, Parîng Mts. (3) Lower Danubian. (4) Lainici-Păiuş Group, carbonate-graphite formation; Upper Precambrian. (5) Mica gneisses. (6) Lenticular beds. (7) Graphite (10-40%)(96-98% graphitic acid); S (0.08-0.10%); V (10000-80000 ppm); Ge (110-400 ppm). (8) Macrocrystalline graphite, biotite, muscovite, quartz, andesine, andalusite, sillimanite (a); microcrystalline graphite, sericite, chlorite, albite, epidote. (9) Damaschian Gh.(1942) Bul. Inst. Rom. de Energie, 243; Trifulescu M. et al. (1967) D.S.Inst. geol., LII/3, 167-187. (T.B.)

165. (1) PRAVĂŢ BĂTRÎNA (Mn; sedimentary, metamorphosed; Middle Proterozoic). (2) South Carpathians, Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Mica schists, paragneisses, amphibolites, gneisses. (6) Lens-bed. (7) Mn,Fe. (8) Tephroite, pyroxmangite, rhodonite, dannemorite, jakobsite, braunite, rhodochrosite. (9) Hîrtopanu P. et al. (1981) St.cerc.geol.geofiz.,geogr.,Geol., 26,1, 35-44. (P.H.)

166. (1) TITIANU-DL. NEGRU (Ni; liquid magmatic; Middle Proterozoic). (2) South Carpathians, Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Olivine peridotites. (6) Impregnations.(7) Fe,Ni,Co,Cr. (8) Pentlandite, chromite, magnetite. (9) Hîrtopanu I.

et al. (1983) Arch. IGG. (P.H.)

167. (1) RĂSCOALA (Mn; sedimentary,metamorphosed; Middle Proterozoic). (2) South Carpathians, Sebeş Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Micaschists. (6) Lenses. (7) Mn,Fe.(8) Tephroite, pyroxmangite, rhodonite, spessartine. (9) Savu H.,Micu C. (1964) Arch. IGG; Hîrtopanu P.(1981) St.cerc.geol.geofiz., geogr.,Geol.,26/1. (P.H.)

168. (1) PIANU (Ti,Zr,Au; alluvial; Quaternary). Similar to accumulation no. 150 Cibin Olt.

169. (1) CĂLAN (gypsum; lagoonal-evaporitic; Badenian). (2) South Carpathians. (3) Streiului Basin, Sîncraiului Basin. (4) Evaporitic horizon (Badenian). (5) Gypsum with fossiliferous clay intercalations,lying between tuffs and globigerina marls and radiolaria shales. (6) Beds. (7) -. (8) Gypsum, quartz, clay minerals. (9) Bombiţă Gh. et al. (1983). Arch. IGG. (S.R.).

170. (1) SÎNTAMARIA DE PIATRĂ (bentonite; sedimentary-subaquatic alteration (halmyrolysis,aquatolysis) of the cineritic material; Sarmatian). (2) South Carpathians - Orăştie Passage.(3) Haţeg Basin. (4) Sandy marls and sands complex (Sarmatian). (5) Bentonitized tuffs intercalated in pelito-psamitic deposits (Sarmatian). (6) Beds. (7) SiO_2 (51.94%); Al_2O_3 (28.94%); CaO (4.84%); MgO + K_2O + Na_2O (2.81%); Fe_2O_3 (11.84%). (8) Ca-montmorillonite. (9) Rădan S. et al. (1983) Arch. IGG. (S.R.)

171. (1) OHABA PONOR (bauxite; residual-allochthonous; Albian). (2) South Carpathians, Haţeg. (3) Getic Domain. (4) Cretaceous sedimentary formations. (5)Allochthonous residual rocks, deposited in the paleokarst formed on Urgonian limestones. (6) Irregular, compact body, often lenticular. (7) Alumina (less than 50%) iron oxides and hydroxides (25-35%), silica (cca 11%), anatase. (8) Bauxite. (9) Stilla Al. (1978) D.S.Inst.geol.geofiz.,LXIV/2 (S.B.)

172. (M)(1) RĂSCOALA (bituminous coal; paralic; Oligocene); Fig.29.Similar to accumulation no.182 Lupeni.

173. (1) LONEA (bituminous coal; paralic;Oligocene).Similar to accumulation no.182 Lupeni.

174. (1) PETRILA (bituminous coal; paralic; Oligocene). Similar to accumulation no.182 Lupeni.

175.(M)(1) LIVEZENI (bituminous coal; paralic; Oligocene); Fig.29. Similar to accumulation no.182 Lupeni.

176. (M)(1) SĂLĂTRUC (bituminous coal; paralic; Oligocene); Fig.29. Similar to accumulation no.182 Lupeni.

177. (M)(1) ISCRONI (bituminous coal; paralic; Oligocene); Fig.29. Similar to accumulation no.182 Lupeni.

178. (M)(1) DÎLJA bituminous coal; paralic; Oligocene);Fig. 29. Similar to accumulation no.182 Lupeni.

179. (M)(1) ANINOASA (bituminous coal; paralic; Oligocene); Fig. 29. Similar to accumulation no.182 Lupeni.

180. (1) VULCAN (bituminous coal; paralic; Oligocene). Similar to accumulation no.182 Lupeni.

181. (1) PAROŞENI (bituminous coal; paralic; Oligocene). Similar to accumulation no. 182 Lupeni.

182. (1) LUPENI (bituminous coal; paralic; Oligocene).(2) South Carpathians; Parîng, Retezat and Vîlcan Mts, Valea Jiului Basin. (3) Posttectonic cover-Petroşani Depression. (4) Middle horizon; Upper Oligocene. (5) Continental-lacustrine-deltaic molasse deposits; alternation of clays, sandy marls, marls, bituminous marls, clay shales, carbonaceous shales, Chattian. (6) Beds (thicknesses up to 30 m). (7) U_t (1-8%); A^i(17-36%); V^i(27-34%); q_i^i(4400-6400 kcal/kg). (8) Coking, fat bituminous coal; vitrite (50-90%); clarit (5-45%); inertite (1-9%); mineral components (5-8%). (9) Drăghindă I. (1960-1968) Arch. IPGG; Moisescu V.(1972-1983) Arch. IGG; Rusu T. et al. (1960-1983) Arch.IPGG. (C.B.)

183. (M)(1) URICANI (bituminous coal; paralic; Oligocene). Similar to accumulation no.182 Lupeni.

184. (M)(1) BÂRBĂTENI (bituminous coal; paralic; Oligocene); Fig.29. Similar to accumulation no.182 Lupeni.

185. (M)(1) HOBICENI (bituminous coal; paralic; Oligocene); Fig.29. Similar to accumulation no.182 Lupeni.

186. (1) CÎMPUL LUI NEAG (bituminous coal; paralic; Oligocene). Similar to accumulation no.182 Lupeni.

187. (1) URICANI (quartz; metamorphic; pre-Alpine ?). (2) Vîlcan Mts. (3) Danubian. (4) Drăgşani Group. (5)Amphibolites and amphibole gneisses. (6) Veins. (7) SiO_2. (8) Quartz. (9) Popescu A. (1957) Arch. CSG; Tudoran I., Sculi D. (1964) Arch. CSG; Stan N. et al. (1978) Cîmpul lui Neag Sheet, scale 1:50 000. Arch. IGG.(H.K.)

188. (1) VIEZUROIU (pyrophyllite; anchimetamorphic; Lower Liassic). (2) Vîlcan Mts. (3) Lower Danubian. (4) Schela Formation. (5) Pyrophyllitic schists alternating with quartz sandstones and microconglomerates. (6) Beds. (7)-. (8) Pyrophyllite (80-90%); chloritoid (1-19%); sericite (1-10%); kaolinite (1-7%); quartz (1-4%); graphite (1-4%); iron oxides and hydroxides, sporadically diaspore, chlorite, carbonates, rutile. (9) Neacşu G., Neacşu V.

(1980) Acta Mineralogica, Petrographica, XXIV (Supplementum), Budapest. (H.H.)

189. (1) SCHELA-VIEZUROIU (anthracite; paralic; Lower Jurassic).(2) South Carpathians, Mehedinţi Plateau. (3) Danubian Domain-Mehedinţi-Retezat Unit. (4) Schela Formation; Lower Liassic. (5) Metasandstones, argillites, graphite schists + chloritoid, pyrophyllitic schists. (6) Lenticular beds (with thicknesses up to 25 m). (7) V^{mc} (2-4%); C^{mc}(95-96%); Q_i^{mc}(7700-8300 kcal/kg). (8) Anthracite: vitrite (75-92%); fusite (7-25%).(9) Boiciuc M.(1966, 1967,1972,1980) Arch IFLGS; Drăghici C. et al. (1969) St.cerc.geol. geofiz. geogr.,Geol.14, 2, 423; Năstăseanu S. et al. (1970) St. tehn.econ., A/8; Stănoiu I. (1973) D.S.Inst. geol.,LIX/5;Stănoiu I.(1980) D.S.Inst.geol.geofiz.,LXVII/3; Stănoiu I. et al.(1982) Arch. IGG. (C.B.)

190. (1) BAIA DE ARAMĂ (Cu, pyrite; volcanogene of Cyprus type; Jurassic). (2) Mehedinţi Plateau. (3) Severin Nappe. (4) Jurassic ophiolitic rocks of the Jurassic-Neocomian olistostrome. (5) Basalts, tuffaceous rocks, (6) Bed -lenses, impregnations and veins. (7) Cu,Pb,Zn,Co,Ni. (8) Pyrite, chalcopyrite, pyrrhotine, sphalerite, galena, quartz, calcite, epidote. (9) Savu H. et al. (in press) D.S.Inst.geol.geofiz. (G.U.)

191. (1) VETEL (Cu,Zn,Pb; hydrothermal-sedimentary, metamorphosed and hydrothermal metamorphosed; Lower Carboniferous); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Padeş Series, Leşnic Formation, metarhyolites; Lower Carboniferous. (5) Sericite schists, sericite quartzites, sericite-chlorite schists, metarhyolites. (6) Stratiform disseminations and veins. (7) Cu,Zn,Pb,Fe,S. (8) Pyrite, chalcopyrite, sphalerite, galena, mispickel, tetrahedrite, quartz, sericite, chlorite, calcite, rutile, albite. (9) Gurău A. (1980) D.S.Inst.geol.geofiz., LXIV/2, 91-117. (H.K.)

192. (1) MUNCELU MIC (see 192 a Copileţ, 192 b Muncelu Mic central, 192 c Berceanu, 192 d Săliste).

192 a.(1) MUNCELU MIC-COPILEŢ (Pb,Zn; hydrothermal,metamorphosed; Lower Carboniferous); Fig.9. Similar to accumulation no. 192 b Muncelu Mic central.

192 b. (1) MUNCELU MIC CENTRAL (Pb,Zn; hydrothermal, metamorphosed; Lower Carboniferous); Fig.9.(2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Padeş Series, metarhyolites; Lower Carboniferous. (5)Metarhyolites, sericite-chlorite schists; sericite schists. (6) Disseminated ore involved on the

metamorphic schistosity, lenses and nests of massive ore. (7) Pb, Zn,S ± Cu; Cd,Ag,As,Mn,Mg,Ga,Sb,Ni,Ge,In,Mo,Sn,Au. (8) Sphalerite, galena, pyrite, chalcopyrite, mispickel, tetrahedrite, gold, quartz, ankerite, calcite, albite, orthose, sericite, zeolites. (9) Kräutner H. (1963) Asoc.Geol.Carp.-Balc., Congr.V, 97-114. (H.K.)

192 c.(M)(1) MUNCELU MIC-BERCEANU (Pb,Zn; hydrothermal, metamorphosed; Lower Carboniferous); Fig.9. Similar to accumulation no.192 b Muncelul Mic central.

192 d. (M)(1) MUNCELU MIC-SĂLIŞTE (Pb,Zn; hydrothermal,metamorphosed; Lower Carboniferous); Fig.9. Similar to accumulation no. 192 b Muncelul Mic central.

193 a.(M)(1) CERBĂL (Fe; hydrothermal-sedimentary,Lahn-Dill type, metamorphosed; Devonian); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series (Devonian); Iazuri greenschists formation. (5) Calcite chlorite-albite schists. (6) Stratiform lenses. (7) Fe±Mn,Ca,Mg,Na,Al,P. (8) Magnetite, hematite, spessartine, chlorite, sericite, quartz, albite, calcite, apatite, stilpnomelane, iron biotite. (9) Kräutner H. (1969) Thesis of doctor's degree, University of Bucharest; Kräutner H. (1961) Arch. IGG. (H.K.)

193 b. (M)(1) ARANIEŞ (Fe,Mn; volcano-sedimentary, metamorphosed; Devonian);Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series; Devonian; Iazuri greenschists formation. (5) Calcite chlorite-albite schists, sericite-chlorite schists, dolomites. (6) Lenses. (7)Fe,Mn+S. (8) Spessartine, magnetite, quartz, chlorite. (9) Kräutner H. (1961) Arch. IGG;Kräutner H. (1969)Thesis of doctor's degree, University of Bucharest. (H.K.)

194 a. (M)(1) NADEJDIE (Fe; hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian); Fig.9. Similar to accumulation no.195 Teliuc.

194 b.(M)(1) TELIUC EAST(Fe; hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian); Fig.9. Similar to accumulation no.195 Teliuc.

195. (M)(1) TELIUC (Fe; hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian);Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series; Devonian; Ruşchiţa-Alun greenschists formation. (5) Calcareous chlorite-albite schists, sericite-chlorite schists. (6) Lenses.(7) Fe± S,Ba,Sr,Ti,V,Cu,Zn,Pb,Bi,Ag. (8) Siderite,manganosiderite,sideroplesite, ankerite, ferroankerite, dolomite, calcite, magnetite,

hematite, pyrite, quartz, iron chlorite (thuringite), ferrostilpnomelane, baryte, celsian, apatite, amosite, actinote, iron biotite, phlogopite, pyrrhotine, mispickel, galena, sphalerite, albite, graphite. (9) Ianovici et al. (1978) Iron Ore Deposits of Europe, 147-152, Hannover; Kräutner H.(1964) D.S.Com.Geol., XLIX/1, 345-360; Kräutner H. et al.(1964) Rev.roum.géol.géogr., Géol., 7/1, 121-146; Kräutner H. (1969) Thesis of doctor's degree, University of Bucharest; Kräutner H. (1972) In Time and Strata-bound Ore Deposits, 232-253, Springer-Verlag; Kräutner H. (1970) Mineral.Deposita, 5/4, 123-344. (H.K.)

196. GHELAR (see 196 a Ghelar East,196 b Ghelar central).

196 a. (M)(1) GHELAR EAST(Fe,hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian);Fig.9. Similar to accumulation no.195 Teliuc.

196 b. (M)(1) GHELAR CENTRAL (Fe, hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian);Fig.9. Similar to accumulation no.195 Teliuc.

197. (1) GOVĂJDIA (talc; metamorphic; Lower Carboniferous); Fig.9. Similar to accumulation no.198 Cerişor.

198.(M)(1)CERIŞOR (talc; metamorphic; Lower Carboniferous); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Padeş Series (Lower Carboniferous); Hunedoara-Luncani dolomite formation. (5) Dolomites. (6) Lenses. (7) -. (8) Talc, dolomite, quartz ± calcite, sericite, galena. (9)Bercheş St.(1983) Thesis of doctor's degree, Univ. "Al.I.Cuza" Iaşi. (H.K.)

199. (1) LELESE (talc; metamorphic; Lower Carboniferous); Fig.9. Similar to accumulation no.198 Cerişor.

200. (M)(1) BOIŢA HAŢEG (pyrite, Zn; hydrothermal-sedimentary, metamorphosed; Upper Proterozoic); Fig.9. (2) Poiana Ruscă Mts. (3) Getic Nappe. (4) Cibin Group; Upper Proterozoic; basic volcano-sedimentary formation. (5) Dolomites, amphibolic schists, garnet muscovite-biotite schists. (6) Stratiform. (7) Fe,S,Zn±Cu, Pb. (8) Pyrite, pyrrhotine, sphalerite, galena, chalcopyrite, quartz, parankerite, ankerite, siderite, apatite, muscovite. (9) Kräutner H. (1965) Stud.cerc.geol.geofiz.geogr., Geol. 10/2, 367-388; Macaleţ V. (1984) D.S.Inst.geol.geofiz. (H.K.)

200 a. (1) SILVAŞ (pyrite, Zn; hydrothermal-sedimentary, metamorphosed; Upper Proterozoic); Fig.9. Similar to accumulation no.200 Boiţa Haţeg.

201. (M)(1) VALEA FIERULUI (Fe, volcano-sedimentary, metamorphosed; Middle Proterozoic); Fig.9. (2) Poiana Ruscă Mts. (3)

Getic Nappe. (4) Sebeş-Lotru Group; Middle Proterozoic; gneiss-amphibolic formation (Cp_1). (5) Amphibolites, silica limestones, dolomite, gneisses. (6) Lens-bed. (7) Fe± S. (8) Magnetite, pyrrhotine, hornblende, calcite, diopside, garnet, epidote, plagioclase, pyrite, chalcopyrite. (9) Ghika-Budeşti (1944) Arch. IGG. (H.K.)

202. (M)(1) VADU DOBREI (Fe, hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series; Devonian; Ruşchiţa-Alun greenschists formation; upper iron horizon. (5) Biotite sericite-chlorite schists, biotite albite chlorite-calcareous schists, sericite-graphite schists, sericite quartz-feldspar schists. (6) Lens-bed. (7) Fe±Mn,S. (8) Manganosiderite, siderite, ankerite, parankerite, magnetite, pyrite, chalcopyrite, cummingtonite,garnet, iron biotite (lepidomelane),quartz. (9) Krätuner H. (1964) D.S.Com.Geol.,XLIX/1, 345-360; Kräutner H. et al.(1964) Rev.roum.géol.géoph.géogr.,Géol.,7/1, 121-146; Kräutner H. (1969) Thesis of doctor's degree, University of Bucharest. (H.K.)

203. (M)(1) IAZURI (Fe; hydrothermal-sedimentary of Lahn-Dill type, metamorphosed; Devonian); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series; Devonian; Iazuri greenschists formation. (5) Epidote calcite chlorite-albite schists. (6) Lenses, stratiform disseminations. (7) Fe±P; Ti,Cr,Ni, Co,V,Cu,Pn,Zn,Ag,As,Sn,Ge,Ga. (8) Magnetite, hematite,quartz, chlorite, spessartine, epidote, orthite, sphene, calcite, sericite, albite, (9) Kosareva T. et al.(1962) Rev.mineler, XIII/9, 421-426; Krätuner H.(1969) Thesis of doctor's degree, University of Bucharest; Mureşan M.(1973) An.Inst.geol.,XLII, 7-337. (H.K.)

204 a. (M)(1) DÎMBUL PASCULUI (Fe; hydrothermal-sedimentary of Lahn-Dill type, metamorphosed; Devonian); Fig.9. Similar to accumulation no.203 Iazuri.

204 b. (M)(1) BĂTRÎNA (Fe; hydrothermal-sedimentary of Lahn-Dill type, metamorphosed; Devonian); Fig.9. Similar to accumulation no.203 Iazuri.

205. (1) POIENI (Fe; Mn; residual; Albian?). (2) South Carpathians, Poiana Ruscă Mts. (3)Border of the Pannonian Basin. (4) Poieni Formation; Albian?; continental accumulations of reddish clays ± Bohnerz and carbonate ± quartz ± iron ± manganese blocks. (5) Red clays. (6) Lenticular and irregular accumulations of iron ± manganese blocks and concretions. (7) Fe,Mn. (8) Goethite,hydrogoethite, manganese oxides, quartz ± hydrargillite, boehmite, diaspore, halloysite. (9) Mureşan M.(1973) An.Inst.Geol., XLII, 7-337.

(H.K.)

206. (M)(1) TOMEŞTI (Fe, hydrothermal-sedimentary of Lahn-Dill type, metamorphosed; Devonian); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series (Devonian), Bega sericite-chlorite schists formation with intercalations of carbonate rocks and basic metatuffs, Tomeşti Horizon. (5) Calcite chlorite-albite schists, chlorite-sericite schists. (6) Lens-bed. (7) Fe. (8) Hematite, magnetite, quartz. (9) Kräutner H. (1969) Thesis of doctor's degree, University of Bucharest; Mureşan M. (1973) An. Inst.geol., XLII, 7-337. (H.K.)

207.(M)(1) LUNCANI (talc; metamorphic; Lower Carboniferous); Fig.9. (2) South Carpathians, Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Hunedoara-Luncani dolomite formation (Pd_1) of the Padeş Series (Pd); Lower Carboniferous. (5)Poorly calcareous dolomites and limestones; Lower Carboniferous. (6) Stratiform lenses, lenses, nests. (7) -. (8) Talc, calcite,quartz ±chlorite. (9) Mureşan M. (1973) An.Inst.geol. XLII,7-337;Berghes St. (1983) Thesis of doctor's degree, "Al.I.Cuza"University,Iaşi. (H.K.)

208. (M)(1) PÎRÎUL CU RACI (RUŞCHIŢA) (Fe; hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian);Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series (Devonian), Ruşchiţa-Alun greenschists formation. (5) Calcite chlorite-albite schists, biotite calcite chlorite-albite schists, chlorite-sericite schists, feldspar quartzites. (6) Lenses. (7) Fe±Mn, S, P. (8) Siderite, sideroplesite, paraankerite, magnetite, hematite, quartz, pyrite, pyrrhotine, chalcopyrite, iron biotite (lepidomelane), iron chlorite(thüringite), cummingtonite, apatite, albite. (9) Kräutner H. (1969) Thesis of doctor's degree, University of Bucharest; Krätuner H. (1970) Mineral. Deposita, 5/4, 323-344; Kräutner H. (1977) In:Time and Strata-bound Ore Deposits, 232-253, Springer-Verlag. (H.K.)

209. (M)(1) RUŞCHIŢA (Pb,Zn; hydrothermal metasomatic; Paleocene);Fig.9.(2) Poiana Ruscă Mts. (3) Supragetic Unit,Banatitic province. (4) Poiana Ruscă Crystalline, Ghelar Series; Devonian; Ruşchiţa-Alun greenschists formation. (5) Crystalline limestones, chlorite-sericite schists, skarnized chlorite-calcareous shales. (6) Irregular body, stockwork. (7) Pb,Zn±Cu; Ag,Cd,Bi,Sb. (8) Pyrometasomatic : magnetite,hematite, diopside - sallite, garnet, tremolite, wollastonite, brucite, vesuvianite, scapolite. Hydrothermal: galena, sphalerite, chalcopyrite, pyrite, bornite, tetrahedrite, hematite, quartz, calcite, dolomite, chlorite,

actinote, epidote, grossularite, brannerite. Oxidation zone: allophane, azurite, malachite, cerussite, limonite, melanterite, pyromorphite, wulfenite. (9) Giuşcă D. et al.(1968); Udubaşa G. (1970) Arch. IGG ; Kräutner H. et al.(1973) Arch. IGG. (H.K.)

210. (M)(1) DEALU BOUL (Fe; polymetamorphosed: hydrothermal-sedimentary of Teliuc-Ghelar type; regionally metamorphosed; Devonian, subsequently thermally and hydrothermally metamorphosed; Paleocene); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline, (4) Ghelar Series; Devonian; Ruschiţa-Alun greenschists formation. (5) Epidote biotite chlorite-albite schists, biotite sericite schists, partly hydrothermally altered. (6) Lenses. (7) Fe±Mn,P,S;Ba,Nb,Th,Pb,Zn,Cu. (8) Regional metamorphism: ankerite, siderite, parankerite, quartz, iron biotite,pyrochlore.Thermic contact : magnetite, calcite, fayalite, iron gehlenite; pyrometasomatic: magnetite, hematite, calcite, andradite-grossular , hedenbergite, ilvaite, diopside, tremolite; hydrothermal: epidote, orthite, actinote, chlorite, calcite, quartz, pyrite, chalcopyrite, sphalerite, galena, pyrrhotine. (9) Kräutner H. et al.(1969) Tsch.Min.Petr.Mitt.,13,157-164; Kräutner H. (169) Thesis of doctor's degree, University of Bucharest. (H.K.)

211. (M)(1) VALEA LUPULUI (talc; metamorphic; Lower Carboniferous); Fig.9. (2) Poiana Ruscă Mts. (3) Supragetic, Poiana Ruscă Crystalline. (4) Ghelar Series; Devonian. (5) Metabasites and metaultrabasites. (6) Irregular body.(7) -. (8) Talc, chlorite (clinochlore), magnetite, tremolite + quartz, calcite, sphene, epidote. (9) Kräutner H. (1960) Arch. IGG. (H.K.)

212. (M)(1) AFINARI-DEALU NEGRII (Fe; hydrothermal-sedimentary of Teliuc-Ghelar type, metamorphosed; Devonian);Fig.9.Similar to accumulation no. 202 Vadu Dobrii.

213. (1) VARNIŢA (Pb,Zn,Cu; hydrothermal metasomatic;Paleocene). (2) Poiana Ruscă Mts. (3) Rusca Montană sedimentary basin. (4) Turonian-Maastrichtian marly formation and the breccia conglomerate basal horizon of the Upper Maastrichtian-Danian volcano-sedimentary formation. (5) Skarns in Turonian-Middle Maastrichtian marly-limestones and in limestone blocks of the Upper Maastrichtian-Danian megabreccia. (6) Irregular body, impregnations. (7) Pb, Zn,Cu. (8) Diopside-sallite, garnet(a); grossular, epidote, tremolite, magnetite, hematite (b); sphalerite, galena, pyrite, chalcopyrite, tetrahedrite, chlorite, calcite (c). (9) Kräutner H., Kräutner Fl. (1973) Arch. IGG. (H.K.)

214. (1) RUSCA MONTANĂ (bituminous coal; lacustrine; Upper

Cretaceous).(2) South Carpathians, Poiana Ruscă Massif. (3) Getic Domain, Rusca Montană Depression. (4) Lower and upper productive horizon; Senonian. (5)Microconglomerates, sandstones, pyroclastics, carbonaceous shales; Maastrichtian. (6) Lenses. (7) V^i(39-44%); A^i(9-11%); Q_i^{mc} (7800-8100 kcal/kg). (8) Flame energetic bituminous coal: vitrite (45%), clarit (15%),fusite (7%), mineral substances (33%). (9) Dincă A. et al.(1963) Arch. IPGG; Biţoianu C. (1970) St.tehn.econ., A/8; Rusu T. et al. (1976) Arch. IPGG.(C.B.)

215. (1) ASCUŢITA (Cu,Pb,Zn; hydrothermal metasomatic ; Paleocene). (2) Poiana Ruscă Mts. (3) Rusca Montană sedimentary basin. (4) Turonian-Lower Maastrichtian marly-calcareous formation at the contact with the Ruşchiţa-Glimboca granodioritic pluton. (5) Skarns and marly-limestones affected by hydrothermal metamorphism. (6) Impregnations, irregular body. (7) Cu,Pb,Zn. (8) Diopside, garnet,vesuvianite,wollastonite (a); grossular, andradite, epidote, tremolite, hematite, magnetite (b); chalcopyrite, sphalerite, galena, pyrite, bornite, quartz, actinote, chlorite, calcite (c). (9) Kräutner H.,Kräutner Fl. (1973) Arch. IGG.(H.K.)

216. (1) TINCOVA (Fe; pyrometasomatic; Paleocene). (2) Poiana Ruscă Mts. (3) Poiana Ruscă Crystalline, Paleozoic. (4) Ghelar Series at the contact with the Tincova-Nădrag granodioritic pluton. (5) Skarns and hornfelses on amphibolic rocks. (6) Irregular body. (7) Fe; Mn±Cu. (8) Diopside, sallite-hedenbergite, garnet (a); magnetite, hematite, ilmenite, titanite, grossular-andradite, epidote, quartz (b); quartz,chalcopyrite, chlorite, actinote, calcite, siderite (c). (9) Kräutner H.,Kräutner Fl.(1973) Arch. IGG. (H.K.)

217. (1) TINCOVA (Cu; Pb,Zn; Mo; hydrothermal; Paleocene). (2) Poiana Ruscă Mts. (3) Poiana Ruscă Crystalline, Paleozoic, and Tincova Crystalline, Precambrian. (4) Ghelar and Tincova series in the magmatic metamorphic aureole of the Tincova-Nădrag granodioritic pluton. (5) Skarns on calcareous amphibolic rocks, schists and breccias, hydrothermally altered. (6) Irregular body, impregnations, veins. (7) Cu; Pb, Zn; Mo. (8) Diopside, hedenbergite-sallite, garnet (a); epidote, quartz, gedrite, tremolite-actinote, hematite (b); molybdenite, chalcopyrite, pyrite,sphalerite, galena, quartz, chlorite, calcite, siderite(c). (9) Kräutner H., Kräutner Fl.(1973) Arch. IGG. (H.K.)

218. (1) HOBIŢA (quartz; metamorphic; pre-Alpine?).(2) North Retezat Mts. (3) Danubian. (4) Zeicani Group. (5) Micaceous gneisses and plagiogneisses. (6) Lenses and veins. (7) SiO_2. (8) -.

(9) Boştinescu S. (1963) Arch. IGG.(H.H.)

219. (1) BUCOVA (muscovite; metamorphic pegmatite; Middle Proterozoic. (2) South of the Poiana Ruscă Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Plagiogneisses and mica schists ± migmatized. (6) Lenses, concordant veins, rare discordant bodies. (7) -. (8) Muscovite, quartz, microcline, plagioclase. (9) Deaş et al. (1968) Arch. IPGG; Marinescu E. et al. (1973) Arch. IPGG; Maier O. et al. (1975) An.Inst.geol.,XLIII.(H.H.)

220. (1) BOUŢARI (Fe; volcano-sedimentary, metamorphosed; Middle Proterozoic). (2) Poiana Ruscă Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group; Middle Proterozoic; gneiss-amphibolic formation (Cp_1). (5) Amphibolites. (6) Lens-bed. (7) Fe; S. (8) Magnetite, pyrrhotine, hornblende, plagioclase ± chalcopyrite. (9) Ghika-Budeşti(1944) Arch. IGG. (H.K.)

221. (1) MARGA (talc; metamorphic; Alpine ?). (2) Ţarcu Mts. (3) Upper Danubian. (4) Zeicani Group (Măru Series). (5) Metaserpentinites. (6) Irregular bodies. (7) -. (8) Talc,chlorite, quartz. (9) Gherasi N. et al. (1974) Arch. IPGG. (H.H.)

222. (1) TÎLVA (muscovite; metamorphic pegmatite; Middle Proterozoic). (2) North of the Ţarcu Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Plagiogneisses and micaschists + migmatized. (6) Lenses, concordant veins, rare discordant bodies. (7)-. (8) Muscovite, quartz, microcline, plagioclase. (9) Gherasi N. (1952)Arch. IPGG; Deaş et al. (1968) Arch. IPGG; Marinescu E. et al. (1973) Arch IPGG; Hann H. (1983) Thesis of doctor's degree University of Bucharest. (H.H.)

223. (1) MĂRU (muscovite; metamorphic pegmatite; Middle Proterozoic).(2) North of the Ţarcu Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Plagiogneisses and micaschists, migmatized. (6) Lenses, concordant veins, rare discordant bodies. (7)-. (8) Muscovite, quartz, microcline, plagioclase. (9) Mînzatu S., Mînzatu E. (1957) Arch. IGG; Deaş et al. (1973) Arch. IPGG; Hann H. (1983) Thesis of doctor's degree University of Bucharest. (H.H.)

224. (1) TURNU RUENI (Cu,Pb,Zn,Mo; pyrite; hydrothermal; Upper Cretaceous-Paleogene).(2) South Carpathians; Tarcu-Muntele Mic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Mylonitized paragneisses. (6) Impregnations and veins. (7) Fe,Cu,Mo,Ni; Ag. (8) Pyrite, pyrrhotine, chalcopyrite; molybdenite, covellite; limonite, malachite. (9) Rădulescu I., Rădulescu L. (1958) Arch. IPGG; Popescu A.,Stefan R. (1964) Arc IGG.; Savu H.,

Hann H. (1982) D.S. Inst.geol.geofiz., LXVI, 127-138. (H.H.)

225. (1) VÎRCIOROVA (Quartz; metamorphic; Proterozoic?). (2) East Banat, Tarcu Mts. (3) Upper Danubian. (4) Zeicani Group; amphibolic formation of the Măru Series. (5) Amphibolites, amphibole gneisses. (6) Veins. (7) SiO_2. (8) -. (9) Gherasi N.et al. (1970) Arch. IPGG; Savu H.,Hann H.(1981) Geological map, scale 1:50 000, Muntele Mic Sheet, Arch. IGG. (H.H.)

226. (1) ILOVA (quartz; metamorphic; Proterozoic ?). (2) East Banat. (3) Upper Danubian. (4) Muntele Mic Granitoid. (5) Granitoids and granites. (6) Veins. (7) SiO_2. (8) -. (9) Gherasi N. et al. (1970) Arch. IPGG. (H.H.)

227. (1) BALTA SĂRATĂ (lignite; limnic; Miocene). (2) South Carpathians. (3) Pannonian Depression, Caransebeş-Mehadia Passage. (4) Carbonaceous complex, Lower Badenian. (5) Alternation of marls, clays, sands, limestones, tuffites; Langhian. (6) Beds. (7) V^i (18-28%); A^i (19-34%); Q_i^i (1600-2880 kcal/kg). (8) Soft brown coal; ulminite (10-20%); gelinite (3-10%); densinite (30-50%); mineral substances(20-30%). (9) Munteanu A.(1980)Arch. IPEG "Banat"; Rarinca E. et al.(1959) St.tehn.econ.,A/5. (H.H.)

228. (1) DELINEŞTI (Mn; sedimentary, metamorphosed; Middle Proterozoic). (2) South Carpathians, Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Micaschists, paragneisses, gneisses, quartzites, amphibolites. (6) Lens-bed. (7) Mn,Fe+Ti, Sr,Ba,Cu. (8) Tephroite, k ebellite, pyroxmangite, rhodonite, dannemorite, piedmontite, rhodochrosite, siderite, jacobsite, magmetite, quartz, ferrimuscovite, plagioclase, apatite, biotite; schefferite, pistacite, orthite; pyrite, chalcopyrite. (9) Savu H. (1962) D.S.Com.Geol., XLVI. (P.H.)

229. (1) BUCHIN-NEMANU (quartz; metamorphic; Proterozoic?). (2) Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group, Middle Proterozoic. (5) Plagiogneisses and micaschists. (6) Veins and lenses. (7) SiO_2. (8) Quartz. (9) Brana V., Gridan T. (1969)Arch. IPGG; Gridan T. (1981) Edit.Acad. (H.H.)

230. (1) POIANA GURBĂNEASA (quartz; metamorphic; pre-Alpine). Similar to accumulation no.229 Buchin-Nemanu. (H.H.)

231. (1) VĂLIUG (Au±Ag; magmatic remobilization; Proterozoic-Paleocene). (2) Semenic Mts.(3) Getic Nappe. (4) Sebeş-Lotru Group; Middle Proterozoic. (5) Mica schists, paragneisses, amphibolites. (6) Impregnations and veins. (7) Au,Ag; As,Cu,Pb, Zn; Sb,Bi,Cd,Mn,Ti,Sn. (8) Pyrite, mispickel, galena, sphalerite, chalcopyrite, tetrahedrite, gold; stibnite; quartz, siderite,

ankerite;gold ore deposit of Valea lui Stan type (no.152) of Proterozoic ? age, reworked by Laramian magmatites. (9) Savu H. et al. (1979) D.S.Inst.geol.geofiz., LXIII/2, 71-104; Vlad. S. (1979) Rév. roum.géol.,géophys.géogr.,Géol., 23, 39-44. (G.U.)

232. (1) ARMENIS (lignite; limnic; Miocene). Similar to accumulation no. 227 Balta Sărată.

233. (1) ARMENIS (Fe; hydrothermal-sedimentary,metamorphosed; Middle Proterozoic). (2) Banat, Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group; Middle Proterozoic;gneiss-amphibolitic formation (Cp_1). (5) Crystalline limestones and dolomites, amphibolites, gneisses. (6) Lenses and bands. (7) Fe. (8) Magnetite, hematite, quartz, calcite. (9) Hurduzeu C. (1970) D.S. Inst.geol.,LV/2; Savu H. (1970) An.Inst.geol.,XXXVIII. (H.H.)

234. (1) TEREGOVA (feldspar; metamorphic pegmatite; Upper Proterozoic). (2) Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Plagiogneisses ± migmatized. (6) Discordant veins.(7) K_2O + Na_2O (7-12% on an average). (8) Microcline, quartz, plagioclase, muscovite, beryl, columbite. (9) Marinescu E. et al. (1973) Arch. IPGG; Savu H. (1977) D.S.Inst.geol.geofiz.,LXIII; Diaconu Fl. (1979) Arch. IGG; Hann H. (1983) Thesis of doctor's degree, University of Bucharest. (H.H.)

235. (1) GLOBU RĂU (Mn ± Fe; sedimentary,metamorphosed; Middle Proterozoic). (2) South Carpathians, Cerna Mts. (3) Danubian. (4) Neamţu Series. (5) Gneisses, quartzites,chlorite-sericite schists. (6) Lens-bed . (7) Fe,Mn. (8) Pyroxmangite, rhodonite, dannemorite, spessartine, rhodochrosite, siderite. (9) Petrulian N. (1973). (P.H.)

236. (1) VERENDIN (brown coal; limnic; Miocene). Similar to accumulation no. 239 Mehadia.

237. (1) PÎRVOVA (talc; metamorphic; Proterozoic). (2) Banat, eastern part of the Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group. (5) Serpentinites. (6) Lenticular bodies. (7) -. (8) Talc. chlorite, quartz. (9) Savu H. (1970) An.Inst. geol., XXXVIII; Savu H. (1974) Geological map, scale 1:50 000, Pîrvova Sheet, Arch. IGG. (H.H.)

238. (1) GLOBUL CRAIOVEI (feldspar; metamorphic pegmatite; Middle Proterozoic).(2) Semenic Mountains. (3) Getic Nappe. (4) Sebeş Lotru Group. (5) Plagiogneisses ± migmatized. (6) Concordant lenses and veins. (7) K_2O + Na_2O (7-12 % on an average). (8) Microcline, quartz, plagioclase, muscovite. (9) Marinescu E. et al. (1973) Arch. IPGG; Diaconu Fl. (1979) Arch.IGG. (H.H.)

239. (1) LEHADIA (brown coal; limnic; Miocene).(2) Almaj and Cerna Mts. (3) Pannonian Depression, Caransebeş-Mehadia Passage. (4) Marly-clay-carbonaceous horizon; Badenian. (5) Alternation of grey tuffaceous clays, dacitic tuffs, marls and sands; Langhian. (6) Beds. (7) A^i(10-48%); Q_i^i (2060-4377 kcal/kg).(8) Dull brown coal; ulminite (10-20 %); cutinite (3-7%); fusinite (5-10%). (9) Pop E. (1956) An.Com.Geol., XXX; Rarinca E. (1959) St.tehn. econ., A/5; Iliescu O. et al. (1960,1971) Arch. IPGG. (C.B.)

240. (1) BOZOVICI (Au; metamorphic; Proterozoic). (2)South-eastern border of the Semenic Mts. (3) Getic Nappe. (4) Sebeş-Lotru Group; Middle Proterozoic; Bozovici leptino-amphibolitic formation. (5) Gneisses, amphibolites. (6) Quartz veins, with lenticular aspect. (7) Au ± Ag; Pb,Cu,Ni,Zr,Ba,Sr. (8) Native gold, pyrite, quartz, pennine, epidote, carbonates. (9) Lucca V. (1949) Arch. IM Barza,Brad; Petrulian N. (1973); Intorsureanu I. et al. (1983) Arch. IGG. (I.I.,G.U.)

241. (1) LAPUŞNICUL MARE (Cu; porphyry copper; Paleocene). (2) South-eastern border of the Semenic Mts. (3) Getic Nappe. (4) Porphyric banatitic bodies . (5) Quartz monzodiorite porphyries. (6) Stockwork. (7) Cu±Mo; Pb,Au,Ag,Co,Ni,Ti, (8) Chalcopyrite, pyrite, pyrrhotine, molybdenite, hematite, magnetite, maghemite, sphalerite, quartz, orthose, biotite, sericite,chlorite, montmorillonite, kaolinite, carbonates, laumontite,stilbite. (9) Ianovici V. et al. (1977) Mineral.Deposita,12, 307-317, Berlin; Intorsureanu I. et al. (in press). D.S. Inst.geol.geofiz. LXVIII/2. (I.I.)

242. (1) BOZOVICI (brown coal; limnic; Miocene). (2) South Carpathians, Almaj Mts. (3) Pannonian Depression, Bozovici Basin. (4) Productive marly-gritty horizon; Badenian. (5) Alternation oi sandstones, marls, sands, clay shales, carbonaceous shales - Kossovian. (6) Beds. (7) V^{mc} (44-48%); S_c(5-9%); Q_i^{mc}(5700-6300 kcal/kg). (8) Dull brown coal,textinite (0.3-4%), ulminite (9-40%), cutinite (2-9%), mineral substances(20-40%). (9)Dumitrache O. (1975,1976)Arch. IFLGS ;Iliescu O. et al. (1960,1971) Arch. IPGG. (C.B.)

243. (1) BOZOVICI (Au; alluvial; Badenian-Quaternary).(2) Banat, Bozovici Depression. (3) Bozovici Basin, Tertiary sedimentary formations. (4) Sands, gravel, sandy sandstones. (5) Recent alluvia and Badenian basal horizon. (6) Detrital concentrations as nests, lenses, beds. (7) Au ± Fe,Ti,Zr. (8) Detrital gold, magnetite, hematite, rutile, ilmenite, zircon, pyrite, garnet,

hornblende, tourmaline, staurolite, kyanite, epidote. (9) Griselini F.(1780) Istoria Banatului timişan. Translation 1926; Brana V., Fărcăşanu R. (1982) Arch. IFLGS; Intorsureanu I. et al. (1983) Arch. IGG. (I.I.)

244. (1) RUDĂRIA (chrysotile asbestos; differentiation of the serpentinization process; Precambrian). (2) Almaj Mts. (3) Danubian. (4) Ielova Crystalline (Precambrian). (5) Serpentinites. (6) Vein networks. (7) -. (8) Chrysotile. (9) Trifulescu M., Mureşan M. (1962) D.S. Com.Geol., XLVII.(H.H.)

245. (1) BĂNIA VÎRŞEŢ (Fe; pyrite, baryte; metamorphic; Middle Proterozoic). (2) Almaj Mts, Rudăria Valley. (3) Danubian. (4) Ielova Series. (5) Crystalline limestones. (6) Lenses. (7) Fe,;Mn; Ba. (8) Manganosiderite, pyrite, baryte, quartz.(9) Matsch E. (1970) Arch. IPGG. (H.H.)

246. (1) CIOACA BRAZILOR (Ba, pyrite + thallium; hydrothermal; Upper Cretaceous-Paleogene). (2) South Carpathians;Almaj Mts. (3) Danubian Crystalline and cover deposits. (4) Ielova Series (amphibolites, gneisses, migmatites; Middle Proterozoic); Jurassic limestones, Laramian rhyolites. (5) Amphibolites and gneisses chloritized, epidotized (± feldspathized), argillized, barytized, barytized and silicified limestones, rhyolites propylitized, silicified, weakly barytized. (6) Hydrometasomatic bodies and veins. (7) Ba,Fe; As,Sb,Tl. (8) Diopside, epidote, chlorite, carbonates ± quartz (a); baryte, anhydrite, quartz, hematite, pyrite, marcasite, melnicovite, baryte, quartz, carbonates (b). (9) Berbeleac I. et al. (1981) Arch. IGG; Berbeleac I. et al. (in press) D.S. Inst.geol.geofiz. (I.B.)

247. (1) VALEA NASOVĂŢ-LILIECI (Cu; porphyry copper; contact metasomatic and hydrothermal; Paleocene). (2) Almaj Mts, western part. (3) Central alignment of banatitic eruptive rocks. (4) Senonian deposits in the Sopot Zone. (5) Garnet±epidote±amphibole skarns. (6) Metasomatic bodies, nests, impregnations. (7) Cu ± Fe; Pb,Sn,Ga,Ni,Zr. (8) Garnet (grossular-andradite), tremolite,antophyllite-gedrite, hematite (specularite),magnetite, (muschetovite); epidote, chlorite,pyrite, chalcopyrite, quartz, carbonates, zeolites; azurite, malachite, limonite. (9) Hanomolo I. et al. (1961) Arch. IGG;Intorsureanu I. et al. (1982) Arch. IGG. (I.I.)

248. (1) SOPOT (Cu; contact metasomatic; Paleocene).(2-3) Similar to accumulation no.247. (4) Precambrian crystalline formations, Senonian sedimentary deposits of the Sopot Zone and

Laramian eruptive rocks. (5-9) Similar to accumulation no. 247. (I.B.)

249. (1) CRIVI RUDĂRIA (bituminous coal; paralic; Lower Jurassic). (2) South Carpathians, Almaj Mts, Banat. (3) Danubian Domain, Sirinia Zone. (4) Upper carbonaceous complex - Lower Liassic. (5) Alternation of quartz microconglomerate sandstones with schist sandstones, clays, clay shales, carbonaceous shales: Hettangian-Sinemurian. (6) Beds. (7) V^i (1-5%); S_t^i (0.4-3.6%); Q_i^i (5300-7600 kcal/kg). (8) Poor anthracitic bituminous coal: collinite (60%), inertite (37%), mineral substances (3%). (9) Năstăseanu S. et al. (1983) Arch. IGG; Răileanu Gr. (1960) An. Com.Geol., XXVI-XXVIII; Pitulea Gh. et al. (1970-1980) Arch. IFLGS. (C.B.)

250. (1) PREGHEDA (bituminous coal; paralic; Lower Jurassic). Similar to accumulation no. 249 Crivi Rudăria.

251. (1) CHIACOVĂŢ (bituminous coal; paralic; Lower Jurassic). Similar to accumulation no. 249 Crivi Rudăria.

252. (1) CAMENIŢA (bituminous coal; paralic; Lower Jurassic). Similar to accumulation no. 253 Cozla.

253. (1) COZLA (bituminous coal; paralic; Lower Jurassic). (2) South Carpathians, Almaj Mts, Banat. (3) Danubian Domain, Sirinia Zone, Cozla-Cameniţa Syncline. (4) Upper carbonaceous complex; Lower Liassic. (5) Alternation of schist sandstones, marly clays, clay shales, carbonaceous shales; Hettangian-Sinemurian. (6) Lenticular beds (thickenings up to 12 m).(7) A^i (35%); V^i(22%); Q_i^i (5300 kcal/kg). (8) Coke bituminous coal ; vitrite (50-90%); fusite (5-25%). (9) Năstăseanu S. et al.(1982) Arch. IGG; Pitulea G. (1965-1975) Arch.IFLGS ; Răileanu Gr.(1960) An. Com.Geol.,XXVI-XXVIII; Stilla Al. et al. (1971-1972) Arch. IPGG. (C.B.)

254. (1) BIGĂR (bituminous coal; paralic; Lower Jurassic). Similar to accumulation no. 249 Crivi Rudăria.

255. (1) BAIA NOUĂ (bituminous coal; limnic; Carboniferous). (2) South Carpathians, Banat. (3) Danubian Domain, Sirinia Zone. (4) Carbonaceous complex III(lower);Upper Carboniferous. (5)Alternation of quartz-feldspar sandstones; Westphalian-Stephanian. (6) Lenticular beds (thickenings up to 26 m), metamorphosed.(7) A^i(30%); V^i (9%); Q_i^i (5850 kcal/kg). (8) Bright coal, highly brittle; vitrite (5-40%); fusite (30-50%); anthracitic bituminous coal.(9) Năstăseanu S. (1979) Rev.roum.géol.géophys.géogr.,Géol. 23, 2; Răileanu Gr. (1960) An.Com.Geol., XXVI-XXVIII;Stănoiu I.

(1982) Arch. IGG. (C.B.)

256. (M)(1) DRAGOSELA (bituminous coal; limnic; Carboniferous); Fig.30. Similar to accumulation no.255 Baia Nouă.

257. (1) TOPLET (Fe; hydrothermal-sedimentary, metamorphosed; Middle Proterozoic). (2) Banat, Iardaşiţa Valley basin. (3)Danubian.(4) Neamţu Series. (5) Amphibolites and amphibolic schists (6) Lenses, impregnations. (7) Fe,Mn,P. (8) Magnetite, quartz, apatite. (9) Brana V.(1958); Codarcea Al.,Pavelescu L. (1964) Bul.IPGG, VIII. (P.H.)

258. (1) TREI CUCUIE (feldspar; metamorphic pegmatite; Middle Proterozoic). (2) South of the Mehedinţi Basin, Racoväţ Valley basin. (3) Getic Nappe in the Bahna Outlier. (4) Sebeş-Lotru Group. (5) Paragneisses and quartz-feldspar rocks. (6) Veins, lenses. (7)-. (8) Feldspars, quartz, micas, garnet, cordierite. (9) Andrei A. et al. (1971) Arch. IGG. (I.H.)

259. (1) VALEA CERNEI-TOPLET (Ba; Pb,Zn,Cu±Au,Ag; hydrothermal; Paleocene ?). (2) Almaj Mts. (3) Danubian. (4) Corbu and Neamţu Series, Ogradena Granitoids, aplites, pegmatites, quartz porphyries, porphyrites, lamprophyres. (5) Sericite-chlorite quartz schists, porphyroids, quartzites; Precambrian-Cambrian. (6) Veins and nests, rare stockworks. (7) Ba; Sr,Pb,Zn, Cu±Au,Ag; Mn,Cd,Ni,Co,V,Tl. (8) Baryte±galena, sphalerite, pyrite, marcasite; succession: $quartz_1$, pyrite, sphalerite, galena, baryte, $quartz_2$. (9) Bercia I. et al. (1972) Arch. IPGG. (I.B.)

260. (1) TUFARI (bentonite; subaquatic alteration(halmyrolysis-aquatolysis) of the cineritic material; Badenian). (2) South Carpathians, Ogradena-Bahna Depression. (3) Ogradena-Bahna Basin. (4) Clay-sandy complex with gravel and conglomerate intercalations, Badenian. (5) Bentonitized tuffs intercalated in pelito-psamitic deposits; Badenian. (6) Beds. (7) SiO_2 (46.17%); Al_2O_3 (15.45%); Fe_2O_3 (2.42%); FeO (1.53%); MgO (3.12%); CaO (1.98%); K_2O (0.64%); Na_2O (0.60%). (8) Ca-montmorillonite (predominant) ± illite, volcanic glass, quartz. (9) Rădan S., Vanghelie I. (1979) Arch. IGG; Rădan S. et al. (1983) Arch.IGG. (S.R.)

261. (1) JIDOVIŢA(Au,Ag; metamorphic metamorphosed; Proterozoic). (2) Mehedinţi Plateau. (3) Getic Nappe, Porţile de Fier Outlier. (4) Sebeş-Lotru Group; Middle Proterozoic. (5) Micaschists, plagiogneisses. (6) quartz(lenticular bodies)with disseminated mineralization or as bands.(7) Au,Ag;As,Cu,Pb,Zn; Ti,Gr,Cd,Sb,Mn,Mo. (8) Mispickel, pyrite, chalcopyrite, sphaleri-

te, pyrrhotite, galena, quartz; skorodite. (9) Iancu V. et al. (1980) Arch. IGG. (G.U.)

262. (1) OGRADENA (quartz; metamorphic; Proterozoic). (2) Almaj Mts, South Banat. (3) Danubian. (4) Ogradena Granite.(5) Granites. (6) Veins. (7) SiO_2. (8) Quartz. (9) Arch. M.G. (H.H.)

263. (1) MRACONIA (Mo; porphyry copper; Paleozoic?). (2) South Carpathians, Almaj Mts. (3) Danubian. (4) Neamţu Series (Middle Proterozoic) intruded by Paleozoic granitic bodies. (5) Granites altered in potash, phyllic and argillic facies. (6) Stockworks and impregnations. (7) Mo, W, Cu. (8) Molybdenite, scheelite, chalcopyrite. (9) Gunnesch K. et al. (1978) St. cerc. geol.,geofiz.geogr., Geol., 23/2; Vlad S. et al. (1976) Arch.IGG. (G.U.)

264. (M)(1) PÎRÎUL NEAMŢULUI (quartz; metamorphic; Proterozoic); Fig.12. (2) Almaj Mts, South Banat. (3) Danubian. (4) Neamţu Series. (5) Quartz-feldspathic and micaceous rocks, amphibolites. (6) Veins. (7) SiO_2. (8) Quartz. (9) Hîrlea N. (1975) Arch. IPGG. (H.H.)

265. (1) GOLEŢU MARE (Cr;liquid magmatic; Paleozoic). (2) Almaj Mts. (3) Danubian. (4) Paleozoic ? serpentinized ultrabasites. (5) Serpentinites. (6) Lenses, nests, schlieren. (7) Cr;Ni. (8) Chrome spinels, generally zoned; the grain nucleus is formed of chromospinel and aluminium chromopicotite, evoluted through magnesioferrite to magnetite; pentlandite, bravoite. (9) Codarcea Al., Kräutner Th. (1935) C.R. Inst.Géol. Roum., XX, 31-38; Petrulian N. (1935) Bul. Soc.Rom.Geol., II, 146-162;Stoicovici E., Motiu A. (1960) Studia Univ. "Babeş-Bolyai", II/1, 63-72,Cluj; Kräutner H. (1962) St.cerc.geol., VII/3-4, 633-645; Bercia I., Bercia E. (1962) An.Com.Geol., XXXII, 425-480 ; Herzberg A.(1979) Fortsch. Miner., 57/1, 38-40, Stuttgart; Udubaşa G. et al. (1984) Arch. IGG. (G.U.)

266. (M)(1) PLAVIŞEVIŢA (Cr; liquid magmatic; Paleozoic); Fig. 12. Similar to accumulation no. 265 Goleţu Mare.

267. (1) EIBENTHAL (chrysotile asbestos; differentiation of the serpentinization process; Paleozoic). (2) Almaj Mts. (3) Danubian. (4) Paleozoic serpentinized ultrabasites. (5) Antigoritic serpentinites. (6) Veinlets of variable thicknesses. (7) - . (8) Chrysotilic asbestos. (9) Gheorghiu C. (1954) Arch. IGG; Trifulescu M., Mureşan M. (1962) D.S.Com.Geol.,XLVII,45-61; Kräutner H. (1962) St.cerc.geol., VII/3-4, 609-632; Bercia I., Bercia E. (1962) An.Com.Geol., XXXII, 425-480. (G.U.)

268. (1) PUSKARSCHI (Cr;liquid magmatic; Paleozoic). Similar to accumulation no. 265 Goleţu Mare.

268 a. (M)(1) DÎLMA (Cr;liquid magmatic ; Paleozoic); Fig. 12. Similar to accumulation no. 268 Puşkarschi.

269. (1) TIŞOVIŢA (magnesite; supergene alteration;Paleozoic ?). (2) Almaj Mts. (3) Danubian. (4) Paleozoic serpentinized ultrabasites. (5) Dunites, partly serpentinized, which underwent supergene alteration. (6) Irregular accumulations, nests, veinlets etc. (7) -. (8) Magnesite. (9) Bercia I.,Bercia E. (1962) An.Com. Geol., XXXII, 425-480; Scarlat L. et al.(1973) Arch. IGG. (G.U.)

270. (M)(1) TIŞOVIŢA (Ni; magmatic remobilization ?; Paleozoic); Fig. 12. (2) Almaj Mts. (3) Danubian. (4) Paleozoic serpentinized ultrabasites. (5) Chrysotile serpentinites, pyroxenites. (6) Millimetric nests in a serpentinite band, at the contact with the Iuţi gabbros. (7) Ni, Pt ?. (8) Pentlandite, pyrrhotine, violarite. (9) Bercia I. et al. (1973) Arch. IGG; Udubaşa G. et al. (1984) Arch. IGG. (G.U.)

270 a. (M)(1) VALEA TIŞOVIŢA (Ni;magmatic remobilization ?; Paleozoic); Fig.12. Similar to accumulation no. 268 Tişoviţa.

271. (1) BOCŞA (baryte; Pb,Zn±Au,Ag; hydrothermal; Paleocene). (2) South Carpathians, Banat, Areniş Mt. (Bocşa). (3) Plutonic zone (western) of the banatites,Bocşa composite massif. (4) Bocşa 2 Unit and partly Bocşa 1 Unit. (5) Granitoids of Bocşa 2 type (with hornblende, including also clinopyroxene + biotite nuclei)and more rarely quartz monzonites and hornblende monzogranites, clino- and orthopyroxene + biotite; large zones with hydrothermal alterations : propylitization, argillization (kaolinite ± illite ± dickite), carbonation (ankerite, siderite, calcite). (6) a) Baryte occurs as stockwork and impregnations in brecciated or slightly fissured zones; b)sulphides appear as thin veinlets, discontinuous on direction. (7) Ba,Pb,Zn ± Au,Ag. (8) a) Metalliferous minerals in baryte zones: pyrite, sphalerite, chalcopyrite, chalcopyrrhotite, marcasite, covelline, goethite ; b) in sulphide veinlets : pyrite, pyrrhotine, sphalerite, molybdenite, chalcopyrite, tetrahedrite, native Au. (9) Russo-Sändulescu D. et al. (1978) Arch. IGG. (D.R.S.)

272. (1) AMELIA-DEALUL STROSULUI (Fe; prolluvial; Pliocene). (2) Banat Mts (Ocna de Fier). (3) Border of the Pannonian Basin. (4) Prolluvial deposits. (5)Iron ore rolled blocks of Ocna de Fier type (see no. 273). (6) Irregular accumulations. (7) Fe.(8) Magnetite, hematite. (9) Codarcea Al. (1932) An.Inst.Geol.Rom.,

XV, 261-435. (G.U.)

273. (1) OCNA DE FIER (Fe; Pb,Zn,Cu; B; contact metasomatic; Paleocene). (2) Banat Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Tithonian-Neocomian carbonate rocks at the contact with Laramian magmatites (granodiorites). (5) Skarns, recrystallized limestones. (6) Irregular bodies, nests, bands, impregnations. (7) Fe,Cu,Pb, Zn; B; Bi,Ag,Cd. (8) Garnets, pyroxenes (diopside), phlogopite, tremolite, paligorskite, ludwigite, wolframite; magnetite,hematite; sphalerite,galena, pyrite, chalcopyrite, bismuthine, cosalite, pyrrhotine, tetradymite, tetrahedrite, warthaite, veszelyite, etc. (9) Codarcea Al. (1931) An.Inst.Geol.Rom., XV; Kissling Al.(1967) Studii mineralogice şi petrografice în zona de exoskarn de la Ocna de Fier (Banat). Edit.Acad.RSR. (G.U.)

274. (1) DOGNECEA (Pb,Zn,Cu; Fe; contact metasomatic and hydrothermal;Paleocene).(2) Banat Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Urgonian (Barremian-Aptian) carbonate rocks, more rarely metamorphic rocks, at the contact with Laramian magmatites (granodiorites).(5) Skarns, recrystallized limestones, epidotites. (6) Irregular bodies, nests, bands, impregnations. (7) Cu,Pb,Zn,Au,Ag, Fe;As,Bi,Sb,Mn. (8) Garnets, pyroxenes (Mn-salite, Mn-ferrosalite, Mn-hedenbergite, Mn-ilvaite), wollastonite (a); epidote, hematite, magnetite, pyrrhotine, chalcopyrite, pyrite, sphalerite, galena, mispickel, bismuthine, cosalite, dognacskaite, tetradymite, tetrahedrite (b); dolomite, ankerite, calcite (c). (9) Codarcea Al. (1931) An.Inst.Geol.Rom.,XV; Vlad S.(1974) Mineralogeneza skarnelor de la Dognecea. Edit. Acad. RSR. (G.U.)

275. (1) SURDUC (Fe-Ti-V; liquid-magmatic ; Neocretaceous) . (2) South Carpathians, Banat. (3) Plutonic (western) zone of banatites, Bocşa composite massif. (4) Surduc 1 Unit with differentiates in schlieren. (5) Quartz monzodiorites, gabbros (rare pneumatolitic autometamorphism). (6) Early precipitate in normal plutonic rock. (7) Fe,Ti,V. (8) Magnetite with ilmenite exsolutions, bornite with chalcopyrite exsolutions, chalcopyrite ± pyrrhotine, pyrite, chalcopyrite. (9) Russo-Săndulescu D. et al. (1979,1980) Arch. IGG. (D.R.S.)

276. (1) LUPAC (bituminous coal; limnic; Carboniferous).(2) South Carpathians, Banat. (3) Getic Domain, Reşiţa Zone. (4) Lupacu Bătrîn Beds, carbonaceous complex II (middle) and Lupac Beds, carbonaceous complex I (upper); Upper Carboniferous. (5) Alternation of conglomerates, sandstones,ferruginous spherolite clays, clay shales and carbonaceous shales; Stephanian. (6) Beds and

lenses. (7) V^i (2.80-6.30%); C^{mc} (75-85%); Q_i^i (5300-7200 kcal/kg) (8) Anthracite bituminous coal; collite (40-50%); fusinite (30-40%); mineral substances (10-20%) (9) Năstăseanu S. et al. (1973) An. Inst. geol.,XL; Năstăseanu S. (1979) Rev.roum. géol.,géophys. géogr.,Géol.,23, 2; Pitulea Gh. et al.(1981) Arch. IFLGS; Răileanu Gr. et al. (1958) An.Univ."C.I.Parhon", St.nat., 18. (C.B.)

277. (1) RANCHINA (carbonaceous shales; paralic; Lower Jurassic). (2) South Carpathians, Semenic Mts, Banat. (3) Getic Domain, Reşiţa Zone. (4) Carbonaceous-schist complex; Lower Liassic. (5) Alternation of sandstones, clays, clay shales, carbonaceous shales, coals; Hettangian-Sinemurian. (6) Coal and carbonaceous shale beds. (7) A^i (60-75%) ; Q_i^i (680-1750 kcal/kg). (8) Energetic, lean bituminous coal and carbonaceous shales; telinite+collinite (30-40%); fusinite (10%); mineral substances (40-60%). (9) Pitulea Gh. et al. (1980) Arch. IFLGS; Stilla A. et al. (1972) Arch. IPGG. (C.B.)

278. (1) SECU (bituminous coal; limnic; Carboniferous). (2) South Carpathians, Semenic Mts, Banat. (3) Getic Domain, Reşiţa Zone. (4) Carbonaceous complex II (median); Upper Carboniferous. (5) Alternation of microconglomerates, sandstones, clays, carbonaceous shales; Staphanian. (6) Beds and lenses. (7) V^i (18%) ; Q_i^i (4890 kcal/kg). (8) Fat and lean bituminous coal; telinite + collinite (50-60%); cutinite (3-10%); fusinite (15-20%). (9) Boldur C. et al. (1955) Arch. IPGG; Mateescu I. (1957) An.Com.Geol.,XXX; Năstăseanu S. (1979) Rev.roum.géol.,géophys.géogr.,Géol., 23,2; Răileanu Gr. (1960) An.Com.Geol., XXVI-XXVIII. (C.B.)

279. (1) DOMAN (bituminous coal; limnic; Carboniferous). Similar to accumulation no. 278 Secu.

280. (M)(1) DOMAN (bituminous shale; paralic; Lower Jurassic); Fig.31. (2) South Carpathians, Banat. (3) Getic Domain, Reşiţa Zone. (4) Bituminous shale horizon; Middle Liassic. (5) Black shales + spherosiderites; Pliensbachian-Toarcian. (6) Beds (thicknesses up to 30 m). (7) Volumetric weight (2.35 t/m^3) ; Q_i^i (1050-1200 kcal/kg). (8) Inorganic mass (78-80%); organic mass (20-22%); coal 6-10%); bitumen (10-15%). (9) Boldur C. et al. (1955) Arch. IPGG; Răileanu Gr. et al. (1957) Bul.şt.Acad. RPR., 3,2; Suru I. et al. (1980) Arch. IPEG "Banat", Caransebeş. (C.B.)

281. (1) ANINA-BRĂDET (bituminous coal; paralic; Lower Jurassic). Similar to accumulation no. 282 Anina.

282. (1) ANINA (bituminous coal; paralic; Lower Jurassic). (2) South Carpathians, Banat. (3) Getic Domain, Reşiţa Zone. (4) Carbonaceous horizon; Lower Liassic. (5) Alternation of microcon-

glomerates, siliceous sandstones, argillaceous sandstones, clay shales, carbonaceous shales, refractory clays; Hettangian-Sinemurian. (6) Beds. (7) V^{mc} (28-36%); C^{mc}(81-86%); Q_i^{mc} (7700-8200 kcal/kg). (8) Coking, fat bituminous coal; telinite + collinite (10-60%); fusinite (20-30%); cutinite (10%). (9) Năstăseanu S. (1964) An.Inst.geol.geofiz.,XXXIII; Răileanu Gr. et al. (1957) Bul. st.Acad. RPR, 3,2; Stilla A. et al. (1972) Arch. IPGG. (C.B.)

283. (1) ANINA-WESTERN LIMB (bituminous shale; paralic; Lower Jurassic). (2) South Carpathians, Banat. (3) Getic Domain, Reşiţa Zone. (4) Bituminous shale horizon; Middle Liassic. (5) Clays, black argillaceous siltites with thin levels of sphenosiderites; Pliensbachian-Toarcian. (6) Beds (thicknesses up to 90 m). (7) Mineral oils (3.9.-4.3%); Q_i^i (1055-1200 kcal/kg). (8) Inorganic mass (80-82%); organic mass (18-20 %); coal (2-3%); bitumen (16-18%). (9) Niţulescu I. (1977) D.S.Inst.geol.geofiz., LXIII, 2, 35-70; Răileanu Gr. et al.(1957) Bul.st.Acad. RPR, 3, 2; Todros C. et al. (1975) Arch. IPEG "Banat, Caransebeş. (C.B.)

284. (1) AGADICI (tremolitic asbestos; metamorphic; Paleozoic). (2) South Carpathians, West Banat. (3) Bocşa Nappe. (4) Basic magmatogene tuffaceous shale complex of the Valea Caraşului Series, Lower Paleozoic. (5) Lower Paleozoic werhlitic serpentinites, regionally metamorphosed. (7) Asbestos. (8) Tremolite ± calcit, talc, titanite, magnetite. (9) Zlatarova L. et al. (1968) D.S.Inst.geol.,LIV, 2. (M.M.)

285. (1) ORAVIŢA (Cu,Mo ; contact metasomatic and hydrothermal; Paleocene). (2) Locva Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Jurassic carbonate rocks at the contact with Upper Cretaceous-Paleogene magmatites. (5) Garnet-pyroxene skarns, tectonic breccia, limestones, silicified quartz diorite rocks. (6) Nests, bands, impregnations. (7) Cu,Mo,Zn,Sb,Au,Co,W,As,Bi, (8) Sericite,quartz, chalcopyrite, magnetite, pyrite, bornite, molybdenite (a);diopside, garnet , amphibole ,anthophyllite, tremolite, pyrite, magnetite (b); pyrrhotine, chalcopyrite, pyrite, sphalerite, hematite, tetrahedrite (c). (9) Gheorghiţescu D. (1975) D.S.Inst.geol.geofiz., LXI/1, 59-103. (G.U.)

286. (1) CICLOVA (Cu,Mo,W ; contact metasomatic and hydrothermal; Upper Cretaceous-Paleogene). (2) Locva Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Jurassic carbonate rocks at the contact with Upper Cretaceous-Paleogene magmatites. (5) Garnet-pyroxene skarns, recrystallized limestones, granodiorites. (6) Irregular bodies. (7) Cu,Mo,Bi,Pb,Zn,W,Au,Ag,Te,Se. (8) Garnet , pyroxene ,

vesuvianite, pyrite, chalcopyrite, sphalerite, galena, bismuthine, molybdenite, magnetite. (9) Gheorghiţescu D. (1975) Rev.roum.géol., géophys.géogr., Géol.,19, 47-61. (G.U.)

286 a. (M)(1) CICLOVA (Cu; porphyry copper; Paleocene).(2) Locva Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Banatitic magmatites. (5) Quartz monzodiorites and quartz diorites. (6) Disseminations. (7) Cu ± W,Mo,Co,Au. (8) Orthose and biotite (a), quartz-sericite± chlorite, pyrite, chalcopyrite, molybdenite, scheelite. (9) Vlad S. (1983). (G.U.)

287. (1) SASCA MONTANĂ (Cu; Pb,Zn ± Au,Ag; contact metasomatic and hydrothermal ; Paleocene). (2) Almaj Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Jurassic-Neocomian carbonate rocks at the contact with Upper Cretaceous-Paleogene magmatites. (5) Skarns, recrystallized limestones, quartz-diorites and quartz-monzodiorites. (6)Tabular, lenticular ore bodies; columns, irregular bodies, breccias, impregnations in eruptive rocks. (7) Cu,Pb,Zn,Au,Ag;As,Mo, Co,Ni,Sb. (8) Chalcopyrite, magnetite, pyrite, bornite, molybdenite,digenite, vesuvianite, wollastonite, pyroxenes, scapolite, mispickel, tetrahedrite, jamesonite, idaite, siegenite, native copper, etc. (9) Constantinescu E. (1980) Mineralogeneza skarnelor de la Sasca Montană. Edit.Acad. RSR; Constantinescu E.,Udubaşa G. in G.C.Amstutz et al. (ed) (1982) Ore Genesis - the State of the Art. Springer-Verlag, Berlin, 434-441. (G.U.)

288.(1) MOLDOVA NOUĂ-SUVOROV (Cu; Pb,Zn ± Au,Ag; contact metasomatic and hydrothermal; Paleocene). (2) South Carpathians, Banat Mts. (3) Reşiţa-Moldova Nouă Zone.(4) Jurassic carbonate rocks at the contact with Laramian magmatites (granodiorites).(5) Skarns, Jurassic limestones, granodiorites, skarnified. (6) Irregular bodies, impregnations, deposition on fissures. (7) Cu,Pb,Zn,Au, Ag; Bi,Mo,Sb,As,Co,Ni,In,Ga,Cd. (8) Garnet , pyroxene, vesuvianite, magnetite, hematite (a); pyrite, pyrrhotine, sphalerite, chalcopyrite, bornite, tetrahedrite, galena, realgar (b); epidote,chlorite, adularia, quartz, calcite, siderite, dolomite, baryte, anhydrite, gypsum (c). (9) Gheorghiţă I. (1975) St.tehn.econ.,I/11, 1-188. (G.U.)

289. (1) MOLDOVA NOUĂ (Cu-Mo; porphyry copper; Paleocene). (2) South Carpathians, Banat Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Laramian magmatites. (5) Granodiorites. (6) Disseminations in granodiorites with concentrical alterations and in adjacent skarns. (7) Cu,Mo; Zn,Sb,As. (8) Central potash alteration in granodiorites + magnetite, chalcopyrite, pyrite;phyllic [illegible]ation + pyrite,

chalcopyrite, sphalerite, molybdenite, tetrahedrite, anhydrite; propylitic alteration + magnetite, pyrite, chalcopyrite. (9) Gheorghiţă I. (1975) St.tehn.econ., I/11, 1-188; Vlad S. (1983). (G.U.)

290. (1) VĂRAD (Cu; Pb,Zn ± Au,Ag ; contact metasomatic and hydrothermal ; Paleocene). (2) South Carpathians, Banat Mts. (3) Reşiţa-Moldova Nouă Zone. (4) Jurassic carbonate rocks at the contact with Laramian magmatites (granodiorites). (5) Apogranodioritic and apogranocarbonatic skarns, recrystallized limestones. (6) Lenticular and irregular bodies, impregnations. (7) Cu, Pb, Zn, Au, Ag; Mo, Sb. (8) Andradite, diopside, vesuvianite, pargasite, epidote, hematite, magnetite, chalcopyrite, bornite, pyrite, molybdenite (a); sericite, quartz, pyrite, chalcopyrite, bornite, molybdenite, calcite (b); pyrite, sphalerite, chalcopyrite, chalcocite, bornite, calcite.(c). (9) Gheroghiţescu D. (1972) St.cerc.geol., geofiz.geogr.,Geol., 17, (1), 49-66. (G.U.)

291. (1) PĂTÎRŞ (Cu ; pyrite; volcano-sedimentary of Cyprus type; Jurassic). (2) Zarand Mts. (3) Căpîlnaş-Techereu Unit. (4) Jurassic basaltic rocks (ophiolites). (5) Chloritized and albitized basalts. (6) Impregnations and massive irregular bodies. (7) Cu; Fe; Zn,Co,Ni,Mo,V,Ti,Mn,Sb,As,Bi. (8) Pyrite, chalcopyrite, hematite, pyrrhotine, magnetite, rutile. (9) Savu H. et al. (1980) Arch. IGG. (G.U.)

292. (M)(1) CORBEŞTI (pyrite; volcano-sedimentary; Jurassic); Fig.13. (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Jurassic basaltic rocks (ophiolites). (5) Weakly silicified basalts and anamesites. (6) Impregnations and veins. (7) Pyrite, Cu; Ti,Mn.(8) Pyrite, chalcopyrite, pyrrhotine; quartz, goethite. (9) Socolescu M. (1944) C.R. Inst.Géol.Roum., XXVIII, 1-33; Savu H. (1972) D.S. Inst.geol.,LVIII/2, 93-119; Udubaşa G. et al. (1982) Arch. IGG. (G.U.)

293. (1) SĂVÎRŞIN (Mo; Cu; pyrite; hydrothermal; Lower Cretaceous). (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4)Acid banatitic rocks. (5) Granodiorites , argillized and partly silicified. (6) Veins. (7) Mo; Cu,Pb,Zn; Co,Bi. (8)Pyrite, molybdenite, chalcopyrite; sphalerite, galena; quartz; laumontite, heulandite, calcite. (9) Giuşcă D. (1959) Rev.géol.géogr., III, 201-207;Savu H., Mîndroiu V. (1980) D.S.Inst.geol.geofiz., LXIV/2, 133-151. (G.U.)

293 a. (M)(1) SAVÎRŞIN-P.CALULUI (Mo; hydrothermal; Upper Cretaceous); Fig.13. Similar to accumulation no.293 Săvîrşin.

294. (1) ROŞIA NOUĂ (HANULEAŞA)(pyrite; volcano-sedimentary;

Jurasšic). (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Jurassic basaltic rocks (ophiolites). (5) Basalts brecciated, epidotized, albitized, chloritized, calcitized. (6) Stockworks. (7) Pyrite, Cu,Zn; Co,Ni,V,Cr,Ti,Mo. (8) Pyrite, chalcopyrite, quartz, calcite, zeolites. (9) Papiu C.V. (1956) Erupţii vulcanice submarine. Edit.ştiinţifică, Bucureşti; Savu H.(1972) D.S.Inst. geol.,LVIII/2, 93-119; Udubaşa G. et al.(1981) Arch.IGG. (G.U.)

294 a. (M)(1) ROŞIA NOUA-P.TEMEŞOAIA (pyrite; volcano-sedimentary; Jurassic); Fig.13. Similar to accumulation no.294 Roşia Nouă.

294 b. (M)(1) ROŞIA NOUĂ-P.LUPOAIA (pyrite; volcano-sedimentary; Jurassic); Fig.13. Similar to accumulation no.294 Roşia Nouă.

295. (1) PÎRNEŞTI (Mn; volcano-sedimentary; Lower Cretaceous). (2) Metaliferi Mts. (3) Criş Unit. (4) Volcano-sedimentary formation; Jurassic-Lower Cretaceous. (5) Basaltic rocks and marls, silicified. (6) Lenses, bands. (7) Mn,Fe. (8) Mn oxides and hydroxides, hematite, quartz. (9) Socolescu M. (1944) C.R. Inst.Géol. Roum., XXVIII, 1-33; Savu H. (1972) D.S. Inst.geol.,LVIII, 93-119. (G.U.)

296. (1) BULZA (Pb,Zn ± Au,Ag; Sb; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Tisa-Fintoag-Bulza volcanic zone. (4) Andesitic volcano-sedimentary formation. (5) Sarmatian biotite hornblende andesite, propylitized, argillized, sericitized, carbonated, silicified. (6) Veins. (7) Zn, Pb ± Cu; Au,Bi,Ge; Sb,Ag+ Hg. (8) Pyrite, sphalerite, chalcopyrite, galena (a); galena, sphalerite, pyrite, calcite, quartz (b). (9) Peltz S. et al. (1972) D.S. Inst. geol., LVIII/2. (S.P.)

297. (1) CERBIA (Mo; pyrite; hydrothermal; Lower Cretaceous). (2) Apuseni Mts, Drocea Mts. (3) Căpîlnaş-Techereu Unit. (4) Eocretaceous granitoids. (5) Argillized and silicified granites.(6) Veins, rare impregnations. (7) Mo;Cu,Pb,Zn,Sb;Co,Bi,Sn. (8)Quartz, molybdenite, pyrite, sphalerite, galena, rutile, chalcopyrite, tetrahedrite. (9) Cioflica G. (1964) Anal.Univ. Bucureşti, St.nat. geol.geogr., XIII/1, 61-72; Socolescu M. (1944) C.R.Inst.Géol. Roum., XXVIII, 1-33; Udubaşa G. et al. (1981) Arch. IGG. (G.U.)

298. (1) TĂMĂŞEŞTI (Mn;volcano-sedimentary;Lower Cretaceous). Similar to accumulation no. 295 Pîrneşti.

299. (1) ALMAŞ-SĂLIŞTE (Fe,Ti,V; liquid-magmatic;Jurassic). Similar to accumulation no. 303 Căzăneşti-Ciungani. (9) Cioflica G.,Savu H. (1963) Rev.géol.géogr., VII/1, 71-83.

300. (1) ALMAŞEL (Cu; volcano-sedimentary of Cyprus type,

magmatically regenerated; Jurassic).(2) Metaliferi Mts. (3)Căpîlnaş-Techereu Unit. (4) Jurassic basaltic rocks and gabbros (ophiolites). (5) Basalts, dolerites, microgabbros. (6) Veins, impregnations, bands. (7) Cu,S,Zn,Co,V,Ti, (8) Pyrite and chalcopyrite (in basaltic rocks); magnetite, hematite, chalcopyrite, pyrite,sphalerite, galena, tetrahedrite, bornite, chalcosine, quartz, siderite (microgabbro veins). (9) Socolescu M. (1944)C.R. Inst.Géol.Roum., XXIII, 93-125; Gheorghiţescu D. (1970) St.cerc.geol.,geofiz.geogr., Geol., 15/1, 85-93; Savu H. (1972) D.S.Inst. geol., LVIII/2, 93-119; Udubaşa G. et al. (1981) Arch.IGG. (G.U.)

301.(1) CĂZĂNEŞTI-VALEA CAPREI (Cu; pyrite; hydrothermal, magmatic regeneration possible in the Lower Cretaceous). (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Upper Jurassic ophiolitic rocks, intruded by Lower Cretaceous magmatites. (5) Jurassic basalts and Upper Cretaceous amphibole+biotite andesites, chloritized, argillized, partly silicified. (6) Bands, veins, nests. (7) Cu,Pb,Zn,Ag; As,Mo,Co,Cr,Ti,Mn. (8) Pyrite, chalcopyrite (a); chalcopyrite, hematite, magnetite (b); pyrrhotine, sphalerite, galena, tetrahedrite-tennantite (c); calcite, quartz, clay minerals. (9) Socolescu M. (1944) C.R.Inst.Géol.Roum., XXVIII, 1-33; Udubaşa G. et al. (1981) Arch. IGG.(G.U.)

302. (M)(1) CĂZĂNEŞTI-VALEA SASULUI (Pb,Zn ± Au,Ag; hydrothermal; Upper Cretaceous); Fig.13. (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Upper Jurassic ophiolitic rocks. (5) Jurassic basalts argillized. (6) Veins. (7) Pb,Zn ± Au,Ag; Cd,As,Ag,Mo, Mn.(8) Sphalerite, galena, chalcopyrite, tetrahedrite, calcite, quartz. (9) Udubaşa G. et al. (1981) Arch. IGG. (G.U.)

303. (1) CĂZĂNEŞTI-CIUNGANI (Fe-Ti-V; liquid-magmatic; Upper Jurassic). (2) Metaliferi Mts. (3) Căpîlnaş Techereu Unit. (4) Căzăneşti-Ciungani pseudostratified intrusive nappe. (5) Gabbros. (6) Bands, schlieren, disseminations. (7) Fe,Ti, V.(8) Magnetite, ilmenite, hematite, rutile, sphene. (9) Giuşcă D., Cioflica Gr. (1956) Anal.Univ. "C.I.Parhon", St.nat., 12, 175-180; Cioflica Gr., Savu H. (1960) St.cerc.geol., V/4, 693-709. (G.U.)

304. (M)(1) CĂZĂNEŞTI (calcite; contact metasomatic; Upper Cretaceous); Fig.13. (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Jurassic carbonate formation. (5) Jurassic limestones; Malm. (6) Tabular body. (7) $CaCO_3$ (92-99%). (8) Calcite. (9) Brana V. (1967). (G.U.)

305.(M)(1) CIUNGANI (Ni; liquid-magmatic; Upper Jurassic) ; Fig.13. (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4)Upper

Jurassic ophiolites. (5) Peridotites and gabbros. (6) Nests, disseminations, lenses. (7) Ni,Cu. (8) Pyrrhotine, pentlandite, magnetite, chalcopirite, violarite, pyrite, chlorite. (9) Petrulian N. (1943) Bull.Acad.Roum., 25; Socolescu M. (1944) C.R.Inst.Géol. Roum., XXVIII, 1-33. (G.U.)

306. (1) ŞOIMUŞ-BUCEAVA (Mn; volcano-sedimentary; Lower Cretaceous). Similar to accumulation no. 295 Pîrneşti.

307.(M)(1) MĂGUREAUA VAŢEI (Fe; contact metasomatic;Upper Cretaceous); Fig.13. (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Apocarbonatic skarns. (5) Jurassic limestones at the contact with granodiorites (banatites). (6) Irregular bodies. (7) Fe. (8) Wollastonite, diopside, grossular, andradite, vesuvianite, scapolite, magnetite, hematite; epidote, calcite, chlorite; there are also barren skarn zones, interesting due to the presence of gehlenite in association with wollastonite, melanite, vesuvianite (Ştefan A. et al.(1978) Rev.roum.géol.,géophys.géogr.,Géol.,22, 155-160) or with spurrite and tilleyite + spinel, wollastonite, garnet, vesuvianite (Istrate G. et al. (1978) Rev.roum.géol.,géophys.géogr.,Géol., 22, 143-153). (9) Cioflica Gr. (1960) St.cerc. geol., V/3, 509-518. (G.U.)

308. (1) VORŢA-P.BĂII (Pb,Zn ± Au,Ag; volcano-sedimentary of Kuroko type ; Jurassic).(2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Jurassic acid and intermediary volcanics. (5) Andesites, basalts, rhyodacites, argillized, silicified, zeolitized. (6) Tabular bodies and impregnations. (7) Pb,Zn,Au,Ag;Cu,Sb,As,Cd,Ti, Mn,Ga,Bi. (8) Massive ore: sphalerite, galena, chalcopyrite,pyrite, tetrahedrite, bornite; carbonate, baryte, clay minerals, zeolites; impregnations: cleiophane sphalerite, pyrite, chalcopyrite,bornite, tetrahedrite, galena, quartz; secondary minerals: chalcosine, covelline, digenite, marcasite. (9) Udubaşa G. et al.(1978) Arch.IGG (affiliation to the Kuroko type); Savu H.,Nicolae I. (1975) D.S. Inst.geol.geofiz., LXI/2, 72-80, and Cioflica Gr. et al.(1981) Arch. Univ. Bucureşti (affiliation to the hydrothermal type).(G.U.)

308 a. (M)(1) VORŢA-P.HEIUŞULUI (Pb,Zn±Au,Ag; Kuroko type; Jurassic); Fig.13. Similar to accumulation no.308 Vorţa-P.Băii.

308 b. (M)(1) VALEA HOMORODULUI (Pb,Zn ± Au,Ag; Kuroko type; Jurassic); Fig.13. Similar to accumulation no. 308 Vorţa-P.Băii.

308 c. (M)(1) CĂRMĂZINEŞTI (Pb,Zn ± Au,Ag; Kuroko type ; Jurassic) ; Fig. 13. Similar to accumulation no.308 Vorţa-P.Băii.

309. (M)(1) VALEA LUNGĂ (Cu±Zn,Pb; hydrothermal; Miocene?). (2) Metaliferi Mts. (3) Căpîlnaş-Techereu Unit. (4) Barremian

sedimentary deposits (Căbeşti Beds). (5)Blackish sandstones and siltites, weakly silicified and argillized. (6) Nests, impregnations, veinlets. (7) Cu,Pb,Zn;Ag,Bi,Co,Sb,V,Ni. (8) Chalcopyrite, sphalerite; galena, pyrrhotine, mispickel, marcasite; quartz,calcite, dolomite; goethite, malachite. (9) Udubaşa G. et al. (1978) Arch. IGG. (G.U.)

310. (1) GURASADA (bentonite; subaquatic alteration - halmyrolysis, aquatolysis - of the cineritic material; Badenian-Sarmatian). (2) Apuseni Mts, Mureş Passage (north of Mureş). (3) Neogene eruptive of the Metaliferi Mts.(4) Eruptive complex of the andesitic products; Badenian-Sarmatian. (5) Fine tuffs and pyroclastics, bentonitized, associated with andesitic breccias and agglomerates; andesitic bodies and lava flows, sometimes with a basaltic aspect. (6) Lens-bed. (7) Mean (n=3) : SiO_2 (65.93%); Al_2O_3 (14.10%); Fe_2O_3 (1.65%); FeO (0.27%); MgO (3.53%); CaO(1.38%); K_2O (0.89%); Na_2O (0.96%). (8) Ca(±Na)-montmorillonite (55-70%) ; cristobalite (10-25%); feldspars (5-10%); quartz (0-15%); illite + micas (5-10%); chlorite (0.5%) ± kaolinite. (9) See no. 260.(S.R.)

311. (1) MIHĂILEŞTI-DOBRA (bentonite; subaquatic alteration-halmyrolysis,aquatolysis - of the cineritic material; Badenian-Sarmatian).(2) Apuseni Mts, Mureş Passage (south of Mureş). (3) Neogene eruptive of the Metaliferi Mts. (4) Eruptive complex of the Gurasada-type pyroclastics; Badenian-Sarmatian. (5) Fine tuffs and pyroclastics, bentonitized, associated with andesitic breccias and agglomerates, andesitic bodies and lava flows, sometimes with basaltic aspect. (7) Mean (n=2): SiO_2 (65.90%); Al_2O_3 (14.05%) ; Fe_2O_3 (1.30%); MgO (3.59%); CaO (1.63%); K_2O (1.60%); Na_2O(0.53%). (8) Ca-montmorillonite (37-58%); illite (6-10%); kaolinite (6-8%); cristobalite (16-20%); feldspars (14-18%); quartz (2-5%); calcite (1-3%) ± sepiolite ± zeolites .(9) See no. 260. (S.R.)

312. (1) DEVA (Cu; porphyry copper; Miocene). (2) South Carpathians; Poiana Ruscă Mts. (3) V.Mureşului Neogene volcanic zone. (4) Padeş Series; chlorite-sericite, graphite schists and phyllites, rhyolitic metatuffs; Lower Carboniferous; sandstones, microconglomeratic sandstones, marls, radiolarites; Turonian-Senonian; sands, gravel, clays, marls with lenses of gypsum and tuffs; Miocene; amphibole andesites and Sarmatian biotite amphibole andesites. (5) Biotite amphibole andesites in subvolcanic facies, feldspathized, biotitized, argillized. (6) Impregnations, stockwork. (7)Cu,Fe±Au,Se;Mo;Ag,Co,Ni,V,Ba,Sr. (8) Internal zone: alkali feldspar, biotite, bornite, chalcopyrite, magnetite (at depth :

pyrite, anhydrite; very rare clausthalite ?); external zone: clay minerals, quartz, locally pyrite. (9) Ianovici V. et al. (1976); Ianovici V. et al. (1977) Mineral.Deposita, Berlin; Vlad S.(1983). (S.B.)

313. (1) SĂCĂRÎMB (Au,Ag,Te;Pb,Zn; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Volcanics of the Barza-Săcărîmb Series; Sarmatian. (5) Hornblende biotite quartz andesites, propylitized, adularized, argillized. (6) Veins striking NE and NW, forming a network in the median zone of the central volcanic apparatus.(7) Au,Ag,Te±Pb,Zn,Cu; Cd, Ga,In,As,Sb,Bi,Se,Sn,Co,Ni. (8) Pyrite, mispickel, sphalerite, galena, chalcopyrite, alabandine (a); pyrite, mispickel, sphalerite, galena, chalcopyrite + nagyagite ($Pb_5Au(Te,Sb)_4S_{5-8}$), krennerite ($(Au,Ag)Te_2$), sylvanite ($(Au,Ag)Te_4$), altaite, frohbergite($FeTe_2$), hessite, petzite, tellurium,tetrahedrite, boulangerite,jamesonite, stibnite, native arsenic (b); pyrite, mispickel, sphalerite, galena, chalcopyrite, krennerite, sylvanite, altaite, tetrahedrite, boulangerite, bournonite (c); pyrite, mispickel, sphalerite, galena, chalcopyrite, tellurides (without nagyagite), quartz, calcite, rhodochrosite, kutnahorite, krautite ($MnHAsO_4.H_2O$), rhodonite, baryte, siderite, arsenolite,smithsonite, stibiconite, valentinite, etc. (d); the above-mentioned associations are distributed differentiately on vein groups; association (a) becomes dominant in the lower parts of the veins. (9) Giuşcă D. (1936) C.R.Acad. Sci.Roum. I, 243-246; Helke A.(1934) N.Jb.Min.Geol.Pal.Abb.67/Bl, 19-85 ; Ghiţulescu T.P., Socolescu M.(1941) An.Inst.Geol.Rom., XXI, 181-464; Ianovici V. et al. (1969); Udubaşa G. et al.(1981-1983) Arch. IGG. (G.U.)

314. (M)(1) BOCŞA-SĂCĂRÎMB (Pb,Zn ± Au,Ag; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series, Sarmatian, and detrital rocks, Burdigalian. (5) Hornblende biotite quartz andesites, brecciated, argillized (illite 2 M_1) and silicified; conglomerates and sandstones, silicified. (6) Stockwork, nests and veins. (7) Pb,Zn ± Au;Cu,Ag,Sb,Cd,As. (8) Pyrite,iron-rich sphalerite, galena, chalcopyrite, mispickel, pyrrhotine , chalcopyrrhotite, tetrahedrite, bournonite; quartz, calcite, baryte. (9) Udubaşa G. et al. (1976) D.S.Inst.geol.geofiz. LXII/2, 97-124 . (G.U.).

315.CORANDA-HONDOL (Pb,Zn±Au,Ag; hydrothermal; Miocene) . (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4)

Cretaceous sedimentary deposits intruded by a Neogene subvolcanic body; Sarmatian?. (5) Cretaceous sandstones and siltites (silicified, partly argillized and adularized),Burdigalian sandstones and conglomerates and hornblende andesites, adularized and argillized. (6) Impregnations in sedimentary deposits, partly brecciated, veins in the andesitic body. (7) Pb,Zn ± Au;Ag,Cd,Sb,As,Ti, Mn,Ga. (8) Pyrite, sphalerite (poor in iron), galena, chalcopyrite, tetrahedrite, bournonite, meneghinite, mispickel, boulangerite, pyrrhotine, mackinawite, native gold; stibnite; quartz, calcite, baryte. (9) Udubaşa G. et al. (1982) D.S.Inst.geol.geofiz., LXVII/2, 197-232. (G.U.)

316. (M)(1) HONDOL (Au,Ag; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series; Sarmatian. (5) Hornblende andesites, argillized and adularized. (6) Veins with different striking. (7) Au,Ag ± As; Pb,Zn,Cu,Sb,As. (8) Pyrite, sphalerite, galena, tetrahedrite, chalcopyrite, stibnite, realgar (a); native gold, native arsenic , pyrite, rutile, quartz (b).(9) Ghiţulescu T.P., Socolescu M. (1941) An. Inst.Geol.Rom.,XXI,181-464; Udubaşa G. et al.(1981-1982) Arch. IGG. (G.U.)

317. (M)(1) PÎRÎUL LUI AVRAM (Cu,As; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Cetraş Series; Sarmatian-Pannonian. (5) Biotite hornblende quartz andesites, silicified and argillized. (6) Veins and impregnations. (7) Cu,As; Pb,Zn,Bi,Cu, Sb,Ge. (7) Pyrite, pyrrhotine (a); luzonite, famatinite, enargite, galenobismuthine, sphalerite, galena, tennantite, chalcopyrite, etc. (b); quartz, baryte. (9) Socolescu M. et al. (1963) Rev.minelor, XIV, 9. (G.U.)

318. (M)(1) VOIA (Cu; porphyry copper; Miocene); Fig.14.(2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Neogene subvolcanic structure; Miocene molasse. (5) Andesites, quartz andesites, amphibolic micridiorites ± biotite, Sarmatian-Pannonian, feldspathized, biotitized, propylitized, argillized; alterations of Badenian-Sarmatian sandstones, conglomerates, clays ± marls, hornfelsized, argillized. (6) Stock, subordinate veins. (7) Cu ± Au,Fe; Pb,Zn,Ag,Mo,Co,Ni ± As, Ga. (8) Internal zone: chalcopyrite, pyrite, magnetite, feldspar, biotite, quartz, anhydrite (gypsum); median zone: pyrite, magnetite, chalcopyrite, hematite, quartz,anhydrite (gypsum) , chlorite; external zone: pyrite, marcasite ± galena, sphalerite, gold, clay minerals, gypsum,

quartz;during the same metallogenetic activity, in the same structure there are accumulated vein gold polymetallic ore deposits: sphalerite, galena, tetrahedrite, pyrite, proustite, pyrargyrite ± gold, anhydrite (gypsum), clay minerals (a); pyrite, sphalerite, galena, chalcopyrite, native gold, quartz, carbonates, anhydrite (b). (9) Berbeleac I. et al. (1980); Berbeleac I. et al.(in press) D.S.Inst.geol.geofiz. (I.B.)

319. (M)(1) MĂGURA (Au,Ag;Pb,Zn; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series. (5) Hornblende andesites, argillized ± adularized. (6) Veins predominantly striking NS. (7) Pb,Zn,Au,Ag; Cu,Sb,Cd,Mn,Ga. (8) Pyrite, mispickel, sphalerite, chalcopyrite, galena, gold (a); pyrite, sphalerite, chalcopyrite, tennantite (b); pyrite, marcasite, "plumosite", quartz, calcite, baryte (c). Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol.Rom.,XXI, 181-464; Cioflica Gr. et al. (1966) St.cerc.geol.,geofiz.geogr.,Geol.,11, 389-401.(G.U.)

320. (1) BOLCANA-TROIŢA (Cu; porphyry copper; Miocene).(2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Cretaceous basaltic and andesitic rocks, gravel, sandstones and marls , Middle Miocene, and andesites, Sarmatian. (5)Sarmatian amphibolic andesites in subvolcanic facies, propylitized, feldspathized, biotitized, sericitized, argillized, silicified. (6) Stockworks and impregnations; veins. (7) Cu,Fe,Au±Pb,Zn,Cu; Mo, Ag,Co,Ni,V,Ti,Cd,Sb. (8) Internal zone: alkali feldspar, biotite, pyrite, chalcopyrite, bornite, magnetite, rutile, molybdenite ± chlorite (at depth : anhydrite, gypsum); external zone: clay minerals, sericite, quartz, pyrite ± chlorite (a). Vein : pyrite, sphalerite, galena, chalcopyrite, sporadic tetrahedrite, bournonite, quartz. (9) Andrei J. et al.(1974) Arch. IGG; Ianovici V. et al.(1977) Mineral.Deposita , 12, 307-317, Berlin; Boştinescu S. et al. (1980,1983) Arch. IGG.; Udubaşa G. et al. (1981) Arch. IGG; Borcoş M. et al. (1983) Arch. IGG; Velciov, Veress (1977-1983) Arch. IPEG Hunedoara.(S.B.,G.U.)

321. (M)(1) TROIŢA (Pb,Zn,Au,Ag; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series. (5) Hornblende andesites, silicified, argillized ± adularized. (6) Veins mostly striking NS. (7) Pb,Zn ± Au,Ag; Cu,Sb,Cd,Mn,Ga. (8) Sphalerite, chalcopyrite, galena, mispickel (a); pyrite, sphalerite, galena, chalcopyrite, tennantite, bornite, chalcosine(b) ;

pyrite, marcasite, stibnite, "plumosite", quartz, baryte, calcite, gypsum (c). (9) See no. 319. (G.U.)

321. (M)(1) TROIŢA-TEASCU (Pb,Zn ± Au,Ag; hydrothermal; Miocene); Fig.14. Similar to ore deposit no.319 Măgura.

322. (M)(1) TRESTIA (Au,Ag; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Sarmatian hornblende andesites, silicified and argillized; Mesozoic basaltic rocks, argillized. (6) Veins striking EW. (7) Pb,Zn, Au,Ag;Cu,Sb,Cd. (8) Pyrite, chalcopyrite, sphalerite, galena, tetrahedrite; quartz, calcite, kaolinite. (9) Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol.Rom., XXI, 181-464. (G.U.)

323. (1) BĂIŢA CRĂCIUNEŞTI (Au,Ag; Pb,Zn + Au,Ag; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Rhyolitic volcanics of cycle I (pre-Badenian?). (5) Rhyolites, argillized, adularized and argillized, Mesozoic basaltic rocks, argillized. (6) Veins (in rhyolites and basalts) convergent towards a central stock; rare impregnations in Mesozoic limestones, partly silicified. (7) Au,Ag,Pb,Zn;Cu,Sb,As,Mn, Ga. (8) Sphalerite, galena, pyrite, chalcopyrite, marcasite,tetrahedrite, stephanite, native gold, argentite, orpiment, mispickel, quartz, calcite, gypsum. (9) See no. 316. (G.U.)

324. (M)(1) DRAICA (Au,Ag; hydrothermal;Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone.(4) Neogene andesitic volcanic structure; Miocene molasse; Mesozoic basic complex. (5) Badenian quartz andesites + hornblende+biotite, propylitized, argillized, silicified; Badenian-Sarmatian andesitic volcano-sedimentary formation, with Badenian conglomerates and sandstones in the base; basaltic pyroclastics and lavas, gabbros, Upper Jurassic-Lower Cretaceous, propylitized, argillized. (6) Simple and branching veins. (7)Au,Ag ± Pb,Zn,Cu; As,Cd,Mn,Sb. (8) Pyrrhotine, pyrite, sphalerite, chalcopyrite, argentite, galena, cleiophane, gold, marcasite, quartz, carbonates, baryte, clay minerals. Characteristic associations : sphalerite-galena-gold; quartz-gold (electrum); galena-argentite; sphalerite-galena-manganocalcite. (9) Ianovici V. et al. (1969); Berbeleac I. (1975) An.Inst.geol.geofiz.,XLVI,5-189. (I.B.)

325. (1)VĂLIŞOARA (Au;Ag; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Complex Neogene andesitic volcanic structure with circular and semicircular dykes; complex of Mesozoic basic rocks. (5) Sarmatian-Pannonian hornblende ± biotite quartz andesites, propylitized, car-

bonated, weakly silicified; pyroclastics-basaltic lavas,microdiorites partly altered pyrometasomatically (garnet-epidote-actinolite) and hydrothermally (chlorite-carbonates-quartz-clay minerals-zeolites). (6) Stocks in explosion breccia bodies, veins. (7) Au,Ag±Pb,Zn,Cu; In ± Cd,Mn,Ti,As,Co,Ni. (8) Pyrrhotine, pyrite,hematite , sphalerite, chalcopyrite, cleiophane, galena, gold, marcasite; carbonates, quartz ± amethyst.Typical associations in stocks: pyrite-gold±sphalerite,galena; in veins: sphalerite-galena-chalcopyrite-gold-quartz-amethyst;quartz-gold. (9) See no.324. (I.B.)

326. (M)(1) VĂLIŞOARA-WEST (Au,Ag,Pb,Zn,Cu;hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Complex Neogene andesitic volcanic structure; Miocene molasse; complex of Mesozoic basic rocks. (5)Sarmatian-Pannonian hornblende±biotite quartz andesites, propylitized, feldspathized, argillized, silicified; Badenian conglomerates and clays; Upper Jurassic-Lower Cretaceous pyroclastics and basaltic lavas. (6) Stock and veins. (7) Au,Ag,Pb,Zn,Cu; Cd,Mn,Ti, As. (8) Pyrrhotine, pyrite,hematite,chalcopyrite, sphalerite, hessite, galena, gold, marcasite; quartz, carbonates,manganocalcite; typical associations : sphalerite-galena-gold; quartz-gold. (9) See no. 47 and 324. (I.B.)

327. (M)(1) CORDUREA (Au,Ag,Te; hydrothermal; Miocene); Fig. 14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Complex Neogene andesitic volcanic structure; Cretaceous sedimentary formations; Mesozoic basic rocks complex. (5) Sarmatian-Pannonian hornblende±biotite quartz andesites, propylitized, argillized, sericitized, adularized, silicified; Valanginian-Hauterivian sandstones and conglomerates, silicified, argillized; Upper Jurassic-Lower Cretaceous pyroclastics and basalts, chloritized, argillized. (6) Veins. (7) Au,Ag±Pb,Zn,Cu, Te;Cd,Sb,Hg,Ti,Mn,As. (8) Pyrite, tetrahedrite, bornite,bournonite, chalcopyrite, galena, nagyagite, hessite, gold, marcasite, realgar, cinnabar. (9) See no. 324. (I.B.)

328. (M)(1) HĂRŢĂGANI (Pb,Zn±Au,Ag; hydrothermal;Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series.(5) Sarmatian hornblende quartz andesites, argillized; Mesozoic basaltc, argillized, polymictic breccias. (6) Veins and impregnations in breccias. (7) Pb,Zn,Au,Ag; Cu,Cd,Mn,Sb,As,In. (8) a: pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, mispickel,

pyrrhotine, rutile, jamesonite, marcasite (in veins); b: pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, bornite; quartz, calcite (in breccias). (9) Udubaşa G. et al.(1983) Arch. IGG; see also no. 324. (G.U,)

328 a. (M)(1) MĂGURA BĂII (Au,Ag±Pb,Zn; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series. (5) Sarmatian hornblende andesites, argillized. (6) Veins. (7) Au,Ag,Pb,Zn,Sb,As,Cd. (8) Pyrite, sphalerite, galena, tetrahedrite, mispickel, bournonite, gold. (9) Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol.Roum.,XXI,181-464; Mureşan M., Mureşan G. (1963) Soc.şt.nat.,geol.,Com.Geol.,II, 31-46.(G.U.)

329. (M)(1) CÎINEL (Au,Ag; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone.(4) Andesitic volcanic structure and Miocene molasse. (5) Badenian andesites, quartz andesites, propylitized, sericitized, adularized,argillized; alternations of gravel, clays, sands. (6) Veins with ramifications, subordinate impregnations. (7) Au,Ag,subordinately accompanied by Pb,Zn,Cu,As,Co,Ni,Ga ± Se,Te,Mn,Sn.(8) Quartz impregnated with common sulphides, pyrite (± mispickel), sphalerite, galena, chalcopyrite, tetrahedrite, pyrargyrite and other nondetermined sulphosalts, native gold, clay minerals ± calcite, baryte. (9) See no. 47, 316, 324. (M.B.)

330. (1) MUSARIU (Au,Ag; hydrothermal; Miocene).(2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4)Neogene andesitic structure; complex of Mesozoic basic rocks. (5)Badenian-Sarmatian andesites-quartz andesites, propylitized, chloritized, adularized, sericitized, argillized; alternations of pyroclastic products and andesitic and basaltic lavas, hydrothermalized. (6) Veins. (7) Au,Ag ± Pb,Zn,Cu; As,Cd,Mn,Se,Te,Ti,Co,Ni, V,Ga,Sn ± Bi,Sb,Cr. (8) Pyrite (± rutile inclusions), galena, sphalerite, chalcopyrite, tetrahedrite, gold, quartz, calcite, baryte, gypsum; typical associations: gold-sulphides, gold-quartz, gold-clay minerals; gold-baryte-gold-gypsum. (9) See no.316, 324; Udubaşa G.(1978) D.S.Inst.geol.geofiz.,LXIV (1976-1977). (M.B.)

331. (M)(1) MUSARIU NOU (Au,Ag; hydrothermal; Miocene); Fig.14.(2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Neogene andesitic subvolcanic body; Neogene molasse; Mesozoic basic rocks complex. (5) Badenian-Sarmatian andesites-quartz andesites, propylitized, chloritized;adularized,serici-

tized, argillized, silicified; sandstones, marls with intercalations of clays and sands, Badenian; andesites-basalts, Lower Cretaceous, hydrothermalized. (6) Veins, impregnations. (7) Au, Ag ± Pb,Zn,Cu; As,Cd,Mn,Ti,Se,Te,Tl,Sn,Ga,Co,Ni,V ± Bi,Sb,Mo, Cr,B. (8) Pyrite (± rutile inclusions), Lispickel, chalcopyrite, sphalerite, tetrahedrite, galena, frohbergite, weissite,sylvanite, nagyagite, krennerite, calaverite, montbrayite, tellurium, petzite, hessite, empressite, altaite,realgar, arsenic, gold; gangue minerals: quartz, clay minerals ± zeolites ± magnesiolaumontite,carbonates;typical associations : gold-marcasite; gold-native arsenic-realgar; gold-gypsum; gold-baryte; gold-clay minerals; gold-tellurides; gold-gypsum. (9) Borcoș M.(1960) St.cerc.geol., V,4; Berbeleac I.(1980) An.Inst.geol.,LVI: references indicated at no.316. (M.B.)

332. (1) BRĂDIȘOR (Au,Ag ± Pb,Zn ; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Neogene polygenous volcanic andesitic structure;Miocene molasse; Mesozoic basic rocks complex. (5)Andesites-quartz andesites, propylitized, sericitized, adularized,argillized,silicified; sandstones, marls, sands, clays, Badenian; alternations of pyroclastics and andesitic-basaltic lavas, Lower Cretaceous, hydrothermalized. (6) Veins, impregnations. (7) Au,Ag ± Pb,Zn,Cu; As,Cd,Mn,Ti,Bi,Te,Se,Sb,Tl,Ga,Co,Ni,V ± Cr,Sn. (8) Quartz, pyrite (± rutile inclusions), galena, sphalerite,chalcopyrite, tetrahedrite, altaite, sylvanite, hessite, petzite, jamesonite, tellurium,gold. (9) See no. 331. (M.B.)

333. (1) VALEA MORII (Cu; porphyry copper; Miocene).(2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Neogene andesitic subvolcanic body. (5) Andesites-quartz andesites-microdiorites + amphiboles + pyroxenes, Badenian-Sarmatian, hydrothermalized. (6) Stockworks and impregnations; veins. (7) Cu ± Fe,Zn,Pb,Au,Ag ± As,Ga,Sn,Ge,Mo,Mn,Ni,Co,Cr,V,Zr,Se, Ba,Sr. (8) Internal zone: orthoclase, microperthite, biotite, chalcopyrite ± adularia, albite, white and violaceous quartz, actinolite, chlorite, epidote, carbonates, clay minerals; median zone with associations of: chlorite, calcite ± talc, montmorillonite, kaolinite; chlorite, epidote, calcite; epidote,chlorite ± calcite ± albite in association with quartz, chalcopyrite, magnetite, pyrite; external zone and/or in the vicinity of vein fractures : hydromica, kaolinite, montmorillonite ± illite in association with gold pyrite (± rutile inclusions), sphaleri-

te; within the same metallogenetic activity there is the gold-silver and/or gold polymetallic hydrothermal stage, described at the ore deposit 333 a Cireşata. (9) Borcoş M. et al.(1980) D.S.Inst.geol.geofiz., LXIV/2 (1976-1977). (M.B.)

333 a. (M)(1) CIREŞATA (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene); Fig.14. (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Polygenous Neogene volcanic structure and Miocene molasse. (5)Andesites-amphibolic quartz andesites, Badenian-Sarmatian, propylitized, sericitized, adularized,argillized, silicified. (6) Veins, subordinate impregnations. (7) Au, Ag ± Pb,Zn,Cu; As,Cd,Mn,Sn,Ti,Te,Se,Co,Ni,V. (8) Quartz,calcite, rhodochrosite (± calcite), pyrite (± rutile inclusions), marcasite, sphalerite, galena, bournonite, chalcopyrite, cleiophane, tetrahedrite, emplectite, sylvanite, gold. Characteristic is the violaceous quartz gangue in association with sulphides, rhodochrosite and native gold. The gold vein ore deposits,partly with a polymetallic character, ends, within the same metallogenetic activity, the previous stage with copper impregnation mineralization located within the same andesitic eruptive body, described for ore deposit no. 333 Valea Morii. (9) See no. 331, 333. (M.B.)

334. (M)(1) VALEA MORII VECHE (Au,Ag±Pb,Zn,Cu; hydrothermal; Miocene); Fig.14. Similar to ore deposit no. 333 Valea Morii, with the difference that sphalerite, galena and chalcopyrite are better represented quantitatively. (M.B.)

335. (1) CARACI-MĂGURA ŢEBEI (Au,Ag;Pb,Zn; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series, Sarmatian. (5) Quartz andesites, argillized, adularized; Mesozoic basalts, argillized; andesitic breccias, argillized. (6) Veins (mostly auriferous) and impregnations in breccias (predominantly lead-zinc). (7) Pb,Zn,Au,Ag; Cd,Sb,Mn,Ga. (8) Pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, gold, carbonates (in andesitic breccias) (a); pyrite, marcasite, quartz; sphalerite, galena, chalcopyrite, tetrahedrite, gold, alabandine. (9) Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol., XXI,181-464; Jude R. et al.(1973) An.Inst.geol.,XL,8-69; Jude L.,Jude R. (1979) Arch.Univ.Bucureşti; Udubaşa G. et al. (1983) Arch. IGG. (G.U.)

335 a. (M)(1) MĂGURA ŢEBEI (Pb,Zn ± Au,Ag; hydrothermal;

Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Andesitic volcanics of the Barza-Săcărîmb Series, Sarmatian. (5) Quartz andesites, brecciated, argillized and adularized. (6) Impregnations in breccias. (7) Pb,Zn,Au,Ag; Cu, Cd,Ti,Mn.(8) Pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, gold, carbonates, quartz, zeolites. (9) See no. 335. (G.U.)

336. (1) TEBEA-BAIA DE CRIŞ (brown coal; paralic-intramontane type; Miocene); (2) Apuseni Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4) Middle Miocene marly-clay horizon. (5) Alternations of marls, clays, gravel, limestones and tuffites, Langhian-Sarmatian. (6) Beds. (7) V^i (27%); A^i (14%); Q_i^i (3888 kcal/kg). (8) Dull brown coal, slightly carbonated, with clay nests slightly pyritized; ulminite (20%); atrinite (41%); cutinite (5%); fuzinite (10%). (9)Popescu C. (1963) Arch. IFLGS. (C.B.)

337. (1) BIRTIN (Pb,Zn ± Au,Ag; hydrothermal; Paleocene). (2) Metaliferi Mts. (3) Cerbia-Măgureaua Vaţei banatite alignment. (4) Mesozoic ophiolitic rocks (basalts) and banatites.(5) Upper Jurassic basalts and Upper Cretaceous granodiorites, silicified and argillized. (6) Veins striking NW-SE and impregnations. (7) Pb,Zn,Au,Ag;Ni,Mn,Cr,Ga,As,Bi,Cd. (8) Pyrite, galena, sphalerite, chalcopyrite , tetrahedrite; quartz, calcite, cerussite . (9) Ghiţulescu T.P., Socolescu M.(1941) An.Inst.Geol. Rom.,XXI, 181-464; Jude R. et al. (1973) An.Inst.Geol.,XL,8-69. (G.U.)

338. (1) REMETEA (Cu; porphyry copper; Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone. (4)Albian sandy and clay-marly flysch, Sarmatian amphibolic andesite products. (5) Amphibolic andesites in subvolcanic facies (Sarmatian) propylitized, feldspathized, chloritized, biotitized, actinolitized, epidotized, argillized, (6) Stockwork, impregnations. (7) Cu,Fe;Au,Ag,Mo,Zn,Ti,Sn. (8) Internal zone: alkali feldspar, chlorite, biotite, actinote, epidote, pyrite, chalcopyrite, magnetite, sporadic molybdenite; external zone: clay minerals (chlorite inclusive), quartz, pyrite. (9) Ianovici V. et al. (1977) Mineral. Deposita, 12, 307-317; Boştinescu S. et al. (1983) Arch. IGG; Ionescu F. (1980) Arch. IPEG Hunedoara, Deva; Borcoş M. et al. (1982) Arch. IGG. (S.G.B.)

339. (M)(1) BUCURESCI-ROVINA (Au,Ag; hydrothermal;Miocene). (2) Metaliferi Mts. (3) Brad-Săcărîmb Neogene volcanic zone.

(4)Albian flysch formations (mostly sandy) and Miocene amphibolic andesites. (5) Amphibolic quartz andesites and sandstones, sericitized, argillized, silicified, pyritized. (6) Veins, impregnations, mineralized breccias in association with a porphyry copper with a very low content. (7) Au,Ag ± Pb,Zn,Cu;Mn,Ti,B,Sn,Co.(8) Pyrite, chalcopyrite, galena, sphalerite, gold, quartz, calcite (in mineralized breccias, locally, garnets); in subvolcanic body: alkali feldspar, biotite, magnetite, chalcopyrite, locally tourmaline. (9) Boştinescu S., Mătieş P. (1966) Arch.IPGG; Andrei J.,Nedelcu C.(1973) Arch. IGG; Boştinescu S. et al.(1983) Arch. IGG; Borcoş M. et al. (1981) Arch. IGG. (S.B.)

340. (1) ALMAŞU MIC (Pb,Zn,Cu; hydrothermal; Miocene);Fig. errata. (2) Metaliferi Mts. (3) Techereu ophiolitic massif. (4) Banatites; complex of Mesozoic basic rocks. (5) Hornblende diorites, Paleogene, propylitized, sericitized, argillized; Upper Jurassic-Lower Cretaceous basalts, argillized. (6) Lenticular, discontinuous veins; nests. (7) Pb,Zn,Cu. (8) Calcite, quartz, sphalerite, galena, pyrite + chalcopyrite. (9) Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol., XXI. (M.B.)

341. (1) BREAZA (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4)Neogene andesitic structure. (5) Andesites-amphibolic quartz andesites, Upper Badenian-Sarmatian, propylitized, chloritized, adularized, sericitized, argillized, silicified;subordinately andesitic-volcano sedimentary formation, Badenian, argillized. (6) Veins, local impregnations. (7) Au,Ag ± Pb,Zn,Cu;As,Cd,Mn,Ga,Co,V,Ti ± Ni,Cr, Sn,Sb. (8) Gangue minerals predominate: calcite, quartz, rhodochrosite, clay minerals ± baryte in association with pyrite, sphalerite, galena, chalcopyrite ± mispickel, tetrahedrite, with occurrences of native gold at the upper part of the ore deposit (gold-quartz; gold-calcite; gold-rhodochrosite). (9) Ghiţulescu T.P., Socolescu M. (1941) An.Inst.Geol.,XXI; Ianovici V. et al. (1969; 1976). (M.B.)

341 a.(M)(1) BREAZA NORTH-EAST (Au,Ag ±Pb,Zn,Cu; hydrothermal; Miocene); Fig.15. Similar to ore deposit no. 341 Breaza.

342. (M)(1) LARGA (gold pyrite, Pb,Zn ±Au,Ag,Cu; hydrothermal-hydrometasomatic; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Miocene (Oligocene ?) molasse. (5) Conglomerates, gravel (Lower Miocene-Oligocene ?), alternations of marls, sandstones, clays, Badenian,andesitic volcano-sedimentary formation,Badenian, locally intruded by ande-

sitic apophyses, sericitized, argillized, silicified, pyritized. (6) Lens-like compact bodies, subordinate veins striking ESE. (7) Au,Pb,Zn ± Cu,Ag,Cd,Bi,Sb,Mn,Ni,Co,V,Ti,Sn ± Ga,Cr,In. (8) Pyrite ± mispickel, sphalerite, galena, chalcopyrite, tetrahedrite, quartz, calcite ± clay minerals. (9) See no. 316. Borcoş M. et al. (1979-1981) Arch. IGG. (M.B.)

342 a. (M)(1) LARGA 37 (Pb,Zn ± Au,Ag,Cu; hydrothermal; Miocene); Fig.15. Similar to the gold lead-zinc mineralization of the ore deposit no. 343 Haneş.

342 b. (M)(1) PREPESTENIA (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Andesitic breccia body. (5) Andesites-quartz andesites, Badenian, adularized, sericitized, argillized, pyritized; Miocene molasse, Oligocene ? sedimentary deposits, argillized. (6) Stock within which veins are distinguished. (7) Au,Ag ± Pb,Zn,Cu. (8) Pyrite, mispickel, sphalerite, chalcopyrite, galena, tetrahedrite, sulphosalts(undetermined), gold, quartz, calcite, clay minerals. (9) Borcoş M. et al. (1961,1965) Arch. IGG. (M.B.)

343. (1) HANEŞ (Au,Ag±Pb,Zn,Cu; gold pyrite; hydrothermal-hydrometasomatic; Miocene).(2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Neogene andesitic structure; Miocene(Oligocene ?) molasse. (5) Andesites- amphibolic quartz andesites (Upper Badenian), propylitized, chloritized, sericitized, adularized, argillized and silicified; polygenous conglomerates, gravel (Lower Miocene-Oligocene ?); marls and sandstones, Badenian, hydrothermalized. (6) Veins and impregnations in intervein brecciated zones at the upper part of the ore deposit; irregular, compact, hydrometasomatic pyrite accumulations. (7) Au,Ag ± Pb, Zn,Cu; As,Cd,In,Sb, Bi,Ga,Tl,Sn,Ti,Mn,Ni,Co ± Mo,Cr,V. (8) Pyrite, pyrrhotine, marcasite, mispickel, galena, sphalerite, chalcopyrite, tetrahedrite, melnicovite, native gold intergrown with quartz, calcite ± rhodochrosite, baryte. The hydrometasomatic pyrite bodies are similar to those of the ore deposit no. 342 Larga. (9) See no. 341.(M.B.)

343 a. (M)(1) FAŢA BĂII (Au,Ag,Te ± Pb,Zn,Cu; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Lower Miocene (?) sedimentary deposits; Miocene molasse, (5) Polygenous conglomerates, Oligocene (?) gravel, Badenian-Sarmatian sandstones, marls, clays. (6) Veins. (7) Au,Ag,Te ± Pb,Zn, Cu. (8) Quartz, calcite, clay minerals, pyrite, marcasite, galena, sphalerite, chalcopyrite, bornite, krennerite, nagyagite, tetradymite, tellurium, tetrahedrite, jamesonite, gold, realgar; free

gold occurs frequently in association with tellurides or gangue minerals. (9) See no. 341. (M.B.)

344. (M)(1) METEŞAN (Pb,Zn ± Au,Ag; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Miocene (Oligocene?) molasse, Neogene andesites. (5) Polygenous conglomerates, gravel (Lower Miocene-Oligocene ?); andesites-amphibolic quartz andesites, Badenian, adularized, sericitized, argillized, silicified, pyritized. (6) Andesitic breccia body, impregnated, whithin which lead-zinc compact lens-like accumulations develop. (7) Pb,Zn ± Cu,Au,Ag;As,Cd,Sb,Bi,Sn,Ti,Mn,Ni,V ± Ga,Co,Cr. (8) Pyrite, sphalerite, galena ± mispickel, chalcopyrite, tetrahedrite, quartz, calcite, clay minerals. (9) See no. 341. (M.B.)

345. (M)(1) BABA (Pb,Zn ± Au,Ag; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Andesites and Miocene (Oligocene ?) molasse. (5) Andesites-quartz andesites, Badenian, propylitized, chloritized, sericitized ±adularia, argillized, silicified; polygenous conglomerates, pebbles, Oligocene (?); alternations of marls, sandstones, sands, Badenian-Sarmatian. (6) Pyrite impregnations, lead-zinc, compact vein accumulations. (7) Pb,Zn,Cu ± Au,Ag;As,Cd,Sb,Mo,Ti,Mn,Ni,V ± Ga,Sn,Ge, Co,Cr. (8) Pyrite, galena, chalcopyrite, sphalerite, tetrahedrite, marcasite or clay minerals, calcite ± the same common sulphides and native gold. (9) See no. 341. (M.B.)

345 a. (M)(1) BABUŢA-CONCORDIA (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene); Fig.15. Similar to the gold mineralization of the ore deposit no. 345 Baba.

346. (M)(1) ALMAŞ (Au,Ag ± Pb,Zn ; hydrothermal-hydrometasomatic; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Neogene andesitic structure; Cretaceous sedimentary formations. (5) Andesites-amphibolic quartz andesites, Badenian, hydrothermalized; marly-clay-sandy and sandy-calcareous complex, Barremian-Aptian. (6) Veins, impregnations, locally hydrometasomatic accumulations in calcareous limestones. (7) Au,Ag ± Pb,Zn,Cu. (8) Quartz, calcite, pyrite, mispickel, sphalerite, chalcopyrite, galena, tetrahedrite, jamesonite, gold. Characteristic is the gold-sphalerite-galena-chalcopyrite association with occurrence of gold-galena graphic structures. (9) See no. 341. (M.B.)

347. (1) MUNCĂCEASCA-STĂNIJA (Au,Ag ± Pb,Zn; gold pyrite; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Zlatna-Stănija Neogene volcanic zone. (4) Neogene complex volcanic structure ;

Cretaceous sedimentary formations and basalts. (5)Andesites-amphibolic quartz andesites, Badenian, propylitized, chloritized, adularized, sericitized, argillized, silicified; Barremian-Aptian marls, sandstones, clays, Cenomanian conglomerates, Lower Cretaceous basalts, hydrothermalized. (6) Veins, impregnations, local irregular compact hydrometasomatic accumulations or pyrite stockworks. (7) Au,Ag,Pb,Zn ± Cu,Te; As,Cd,Bi,Sb,Ga,Sn,Ti,Mn,Ni,V±Cr,Co. (8) Quartz, carbonates, pyrite, mispickel, marcasite, galena,sphalerite, chalcopyrite, tetrahedrite, tetradymite, krennerite, petzite, tellurium, gold, plumosite; characteristic are associations : gold-sphalerite-chalcopyrite-galena; tellurides-sulphosalts;gold-tellurides; gold-carbonates; gold-clay minerals. (9) See no. 341. (M.B.)

347 a. (M)(1) MUNCĂCEASCA WEST-PODUL IONULUI (Cu±Au,Ag,Pb,Zn; porphyry copper; Miocene); Fig.15. Similar to ore deposit no. 333 Valea Morii. Borcoş M. et al.(1978-1981) Arch. IGG.

348. (M)(1) MUNCĂCEASCA EAST (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija Neogene volcanic zone. (4) Neogene complex structure, Cretaceous sedimentary formations and basalts. (5)Andesites-amphibolic quartz andesites, propylitized, chloritized, adularized, sericitized, argillized, silicified;sandstones, marls with clay intercalations, Barremian-Aptian, Lower Cretaceous basalts, hydrothermalized. (6) Veins, impregnations, local stockworks with gold pyrite. (7) Au,Ag ± Pb,Zn,Cu; As,Cd,Bi,Mn,Sn,Ti,Ni,V ± Te,Ga,In,Ge,Cr,Co. (8)Pyrite, mispickel, sphalerite, galena, chalcopyrite, tetrahedrite, marcasite, native gold preferentially associated with calcite, quartz, clay minerals. (9) See no. 341. (M.B.)

349. (M)(1) STĂNIJA-POPA (Au,Ag,Te ± Pb,Zn,Cu; gold pyrite; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Polygenous Neogene volcanic structure; Cretaceous sedimentary formations and basalts. (5) Andesites-quartz andesites, Badenian, propylitized, chloritized, adularized, sericitized, argillized, silicified, pyritized; Albian-Aptian marly-sandy complex, Cenomanian conglomerates and Lower Cretaceous andesites-basalts, hydrothermalized. (6) Veins striking N-S and impregnations in intervein brecciated zones. (7) Au,Ag ±Pb,Zn,Cu; As,Cd,Bi,Sb,Ga,Te,Ti,Mn,Ni, V ± In,Ge. (8) Quartz, nacrite, fluorine, calcite, pyrite, sphalerite, chalcopyrite, galena, altaite, tetradymite, petzite, tetrahedrite, bournonite, gold, stibnite; characteristic are associations : native gold-clay minerals;native

gold-tellurides ± sphalerite, galena. (9) See no. 341. (M.B.)

349 a. (M)(1) BRĂDIŞOR (gold pyrite; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone.(4) Andesitic breccia body. (5)Andesites-amphibolic quartz andesites, adularia sericitized, argillized, silicified, pyritized. (6) Impregnation, subordinate veins. (7) Au,Ag ± Pb,Zn. (8) Pyrite ± nickel, sphalerite, galena, chalcopyrite, marcasite, calcite, quartz, clay minerals. (9) Borcoş M. et al. (1961-1962) Arch.IGG. (M.B.)

350. (M)(1) LORMÎNTUL (BORZEŞTI) (Au,Ag ± Pb,Zn ; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone.(4) Miocene andesites; Cretaceous sedimentary formations. (5)Basaltic pyroclastics and Albian sandy flysch deposits, Badenian marly microconglomeratic-sandy deposits; andesites-amphibolic quartz andesites, propylitized, sericitized, argillized,silicified, carbonated. (6) Veins and impregnations. (7) Au,Ag±Pb,Zn. (8) Quartz, calcite, pyrite (± galena, sphalerite), gold. (9) See no. 341. (M.B.)

351. (M)(1) VALEA TISEI (Au,Ag ± Pb,Zn ; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Miocene andesites; Cretaceous sedimentary formations. (5) Albian flysch deposits, mostly sandy, Sarmatian andesites-amphibolic quartz andesites, sericitized, argillized, silicified. (6) Veins and impregnations. (7) Au,Ag ± Pb,Zn, Cu; Cd,In ± Se,Co, Ni,Ga. (8) Quartz, carbonates, pyrite, pyrrhotine, sphalerite, galena, chalcopyrite, gold (a) and quartz, pyrite, gold (b). (9) See no. 341. (M.B.)

352. (M)(1) RUNCULEŢE (gold pyrite; Au,Ag ± Pb,Zn; hydrothermal; Miocene); Fig.15. (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Andesites-amphibolic quartz andesites, Sarmatian. (5) Albian sandy flysch, sometimes marly-argillaceous deposits, andesites-amphibolic quartz andesites, Sarmatian, propylitized, sericitized, argillized, silicified. (6) Veins. (7) Au,Ag ± Pb,Zn,Cu. (8) Quartz, pyrite, pyrrhotine, sphalerite, galena, gold. (9) See no.341. (M.B.)

353. (1) IZVORUL AMPOIULUI (Hg; hydrothermal-metasomatic; Miocene). (2) Metaliferi Mts. (3) Zlatna-Stănija volcanic zone. (4) Anticlinal structure with Mesozoic sedimentary deposits. (5) Marly-sandy schists, marly-limestones, Aptian. (6) Impregnations and irregular compact accumulations. (7) Hg accompanied by minor elements : Pb,Zn,Cu,Ag,Sn,Ge,Ga,Sb,As,Ti,Mn,Cr,Ni,V,Be,B.

(8) Cinnabar, pyrite, marcasite, goethite, lepidocrocite, quartz, chalcedony, calcite, gypsum ± native mercury. (9) Manilici V. et al. (1975) D.S. Inst.geol.geofiz., LXI/2. (M.B.)

353 a. (M)(1) V.VÎLTORI (Hg; hydrothermal; Miocene); Fig.15. Similar to ore deposit no. 353 Izvorul Ampoiului.

354. (M)(1) BABUIA (Hg; hydrothermal; Miocene) ; Fig.15. Similar to ore deposit no. 353 Izvorul Ampoiului.

355. (M)(1) VÎLCOI (Au,Ag; hydrothermal; Miocene); Fig.16. (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş volcanic zone. (4) Cretaceous sedimentary formations. (5)Marls, sandstones, Aptian, Albian, Maastrichtian. (6) Veins. (7) Au,Ag ±Te, Pb,Zn,Cu. (8) Quartz, calcite ± baryte, pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, hessite, native gold. (9) See no. 341. (M.B.)

356. (1) BUCIUM TARNIŢA (Cu,Au,Fe; porphyry copper; Miocene). (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş volcanic zone. (4) Sandstones with marl and clay intercalations belonging to the Albian flysch; Neogene volcanics. (5) Amphibolic andesites in subvolcanic facies, Sarmatian; Albian sandstones and marls, feldspathized, chloritized, biotitized, actinolitized, epidotized, argillized. (6) Impregnations and depositions on microfissures; veins. (7) Cu,Au,Fe ± Mo; Ni,V,Sc,Cr. (8) Internal zone : alkali feldspar, chlorite, actinolite, chalcopyrite, pyrite, magnetite; alkali feldspar, chlorite, biotite, pyrite, chalcopyrite, magnetite; alkali feldspar, chlorite, epidote, pyrite, magnetite; external zone: quartz, clay minerals, pyrite(a), pyrite, sphalerite, galena, chalcopyrite (± marcasite, tetrahedrite), calcite (b). (9) Ianovici V. et al. (1972); Ianovici V. et al. (1976) Edit. Acad.; Ianovici V. et al. (1977) Mineral. Deposita, Berlic. (S.G.B.)

357. (M)(1) BUCIUM ARAMA (Cu,Au,Ag,Pb,Zn; hydrothermal; Miocene); Fig.16. (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Neogene complex andesitic structure; Cretaceous sedimentary formations. (5) Andesites - amphibolic quartz andesites ± pyroxenes, quartz, biotite, propylitized; chloritized, sericitized, adularized, argillized, silicified; sandstones, marls with intercalations of microconglomerates, Aptian-Albian. (6) Veins, impregnations. (7) Cu,Au,Ag,Pb,Zn; Ge,Se,Te,Mn,Ti,Sn,Ni,Co ± Cd,Ga,Sb,Bi,As,In. (8) Quartz, baryte, carbonates, pyrite, sphalerite, tellurides, galena, bornite, chalcopyrite, chalcocite, covellite, enargite, luzonite, germani-

te, tetrahedrite, marcasite, gold; typical ore associations : germanite-sulphosalts-chalcopyrite-chalcocite; tellurides-common sulphides; tellurides-gold. (9) See no. 341. (M.B.)

358. (1) CORABIA (Au,Ag; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş volcanic zone. (4) Neogene andesitic volcanic structure; Cretaceous sedimentary formation. (5) Andesites-amphibolic quartz andesites ± quartz, pyroxene, sporadic biotite, propylitized, chloritized, sericitized, adularized, argillized; alternations of sandstones, marls, Aptian-Albian. (6) Veins, subordinate impregnations. (7) Au,Ag, sporadically in association with Pb,Zn,Cu. (8) Gangue minerals predominate : quartz, calcite, clay minerals in association with native gold, pyrite; sphalerite, galena, chalcopyrite occur subordinately especially in the selvage of the veins. (9) See no. 341. (M.B.)

359. (M)(1) CONTU (Au,Ag ± Pb,Zn,Cu; hydrothermal;Miocene); Fig.16. (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Neogene dacitic volcanic structure; Cretaceous sedimentary formations. (5) Pannonian dacites propylitized, chloritized ± adularia, sericitized, argillized; Aptian sandstones, marls, microgonglomerates predominate. (6) Veins, impregnations. (7) Au,Ag ± Pb,Zn,Cu. (8) Common sulphides, sporadically native gold, quartz, calcite, clay minerals. (9) See no. 341. (M.B.)

360. (M)(1) FRASIN (Au,Ag ± Pb,Zn; hydrothermal;Miocene); (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Sandstones with Albian clay-marly intercalations, Badenian acid volcano-sedimentary formation. (5) Sarmatian dacites and Badenian volcano-sedimentary formation, sericitized, argillized, silicified. (6) Veins and stockworks. (7) Au,Ag ± Pb,Zn,Cu. (8) Calcite, rhodochrosite, quartz (±chalcopyrite), galena, sphalerite, pyrite (sometimes as impregnations), gold. (9) See no. 341. (M.B.)

361. (1) ROŞIA MONTANĂ (Au,Ag; hydrothermal; Miocene).(2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Neogene polygenous dacitic volcanic structure; acid volcano-sedimentary formation; Cretaceous sedimentary formations. (5) Badenian dacites intensely adularized, sericitized, argilliżed, silicified, pyritized; alternations of marls, sandstones, pyroclastics, rhyodacites, Badenian, and marls, sands, Sarmatian, mostly argillized. (6) Veins, stockworks, impregna-

tions. (7) Au,Ag ± Pb,Zn,Cu, potash feldspar; As,Ti,Mn,Cd,Te,Ga, Tl,V,Ni,Co ± Sb,Bi,Mo,Sn,Zr. (8) Pyrite (± rutile inclusions), mispickel, sphalerite, chalcopyrite, galena, alabandine, tetrahedrite, proustite, pearceite, polybasite, argentite, gold, marcasite; typical are associatinns : marcasite-mispickel; gold-marcasite; gold-common sulphides; gold-gold sulphosalts ± argentite; gold-calcite-rhodochrosite-quartz; gold-calcite; gold-quartz-marcasite. (9) Petrulian N. (1935) An.Inst.Géol.Roum.,XVI; references indicated at no. 341. (M.B.)

361.a. (M)(1) ROŞIA MONTANĂ-CÎRNIC (Au,Ag; hydrothermal; Miocene); Fig.16. Similar to ore deposit no. 361 Roşia Montană.

361 b. (M)(1) ROŞIA MONTANĂ-ŢARINA (Au,Ag; hydrothermal; Miocene); Fig.16. Similar to ore deposit no. 361 Roşia Montană, with the difference that the mineralization occurring as veins and impregnations is located in Miocene and Cretaceous sedimentary formations, hydrothermalized. (M.B.)

362. (M)(1) ROŞIA MONTANĂ-Dl.CETATE (potash feldspar; hydrothermal; Miocene); Fig.16. Similar to ore deposit no. 361 Roşia Montană; in Dealul Cetate adularia and primary potash feldspar vary between 7-12 %; potash feldspar concentrate contains: 12.7% K_2O; 0.20 % Na_2O; 0.23% Fe_2O_3; 65.86% SiO_2; 18.8% Al_2O_3; 0.35 % CaO; 15% MgO; 0.05 % TiO_2; 0.03 % MnO; 1.5 % P C; 0.9% H_2O. Borcoş M. et al. (1983;1984) Arch. IGG. (M.B.)

363. (M)(1) CÎMPENI-SOHODOL (Al; residual; Senonian); Fig. errata. (2) Metaliferi Mts. (3) Baia de Arieş Unit. (4) Marble Series; Middle Paleozoic. (5) Bauxite deposited on the paleokarst formed on crystalline limestones of the Baia de Arieş Series. (6) Irregular, compact body, often lens-like, with stratiform tendencies. (7) Alumina (33-57 %); iron oxides and hydroxides (11-26%); silicas (2.50-12.0%); TiO_2 (1.80-2.80 %); CaO (0.45-2.80%); MgO (0.15-1.40%); Na, K, Mn, P,S,C. (8) Bohemite , diaspore, kaolinite, septochlorite, hematite, goethite, siderite, pyrite, anatase, calcite, muscovite, quartz. (9) Bordea S., Constantinescu R. (1970) Arch. IGG; Papiu C.V. (1975). (S.B.)

364. (1) ROŞIA POIENI (Cu; porphyry copper; Miocene). (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Wildflysch type formations,mostly clay-sandy, Campanian; Neogene andesitic subvolcanic body. (5) Amphibolic andesites in subvolcanic facies, Sarmatian, feldspathized, biotitized, argillized, propylitized. (6) Stockwork, impregnations. (7) Cu,Fe ± Au,Mo,Co,Pb,Ga,Sn. (8) Internal zone : alkali feldspar,

biotite (at depth : ± anhydrite, zeolites) pyrite, chalcopyrite ± bornite; external zone : sericite, clay minerals, chlorite. (9) Ionescu O. (1974) St.cerc.geol.,geogr.,geofiz., Geol.,19; Ianovici V. et al. (1976); Ianovici V. et al. (1977); Vlad S.(1983). (S.B.)

365. (1) BAIA DE ARIEŞ-AFINIŞ (Au,Ag ± Pb,Zn,Cu; hydrothermal; Miocene). (2) Metaliferi Mts. (3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Neogene andesitic subvolcanic structures; subordinate pre-Alpine crystalline formations. (5) Andesites-amphibolic quartz andesites (Badenian-Sarmatian ?), propylitized, chloritized, adularized, sericitized, argillized ± garnet and wollastonite; mesometamorphic schists. (6)Stockworks, veins, impregnations. (7) Au,Ag ± Pb,Zn,Cu; As,Tl, Ga,Ge,Te,Cd,Mn,Ti,V,Co,Ni,Sn,W ± Mo,Bi,Sb,Ge. (8) Pyrite, mispickel, marcasite, hematite, sphalerite, galena, alabandine,chalcopyrite, cleiophane, tetrahedrite, bournonite, stibnite, sulphosalts, tellurides, gold, quartz, rhodochrosite, calcite, clay minerals. Typical are associations: marcasite-mispickel (in feathered structures); gold-pyrargyrite-stephanite-argentite; gold-clay minerals. (9) Lazăr C. (1966) St. cerc.geol., 11,2; references indicated at no. 341. (C.L.)

365 a. (M)(1) BAIA DE ARIEŞ-AMBRU (Pb,Zn ± Cu ± Au,Ag; hydrothermal-metasomatic hydrometasomatic; Miocene); Fig.16. (2) Metaliferi Mts.(3) Roşia Montană-Bucium-Baia de Arieş Neogene volcanic zone. (4) Neogene andesitic subvolcanic structures; pre-Alpine crystalline formations. (5) Andesites, quartz andesites (Badenian-Sarmatian) hydrothermalized, similar to those of the ore deposit no. 365 Baia de Arieş-Afiniş; calcareous series, weakly metamorphosed. (6) Irregular, compact hydrometasomatic bodies, subordinate veins, impregnations. (7) Pb,Zn,Cu ± Au,Ag; Cd,Mn,Ti,As,Sb,Bi,V,Co,Ni,Sn,W ± Ga,Tl,Se,Te,Mo,Ge,Cr. (8)Quartz, rhodochrosite, calcite, pyrite, mispickel, marcasite, hematite, sphalerite, galena, alabandine, chalcopyrite, tetrahedrite, bournonite, stibnite. (9) See no. 365. (C.L.)

366. (1) LUPŞA (Cu; volcano-sedimentary, metamorphosed, partly regenerated posttectonically ?; pre-Permian + Paleogene ?). (2) Apuseni Mts, southern side of the Gilău-Muntele Mare Massif. (3) Zone within which the metamorphic formations of the Bihor-Gilău Autochthon is overlain by those of the Codru and Muncel-Lupşa nappes, being covered, in their turn, by Senonian and Paleogene deposits of the Cîmpeni-Lupşa Basin. (4) Biharia and

Muncel formations. (5) Chlorite schists and crystalline limestones of the Biharia Formation; sericite-quartz schists, graphite phyllites, metaconglomerates of the Muncel Formation. (6) Stockworks, impregnations, lens-like bodies. (7) Cu ± Fe, S, Zn,Cu. (8) There are three associations: chalcocite, bornite, chalcopyrite, malachite, azurite; pyrite, chalcopyrite, sphalerite, galena, tetrahedrite (?); magnetite, hematite, chalcopyrite. (9) Dimitrescu R. (1958) An. Com.Geol., XXXI, 51-149; Borcoş M. et al. (1974) Arch. IGG; Dimitrescu R. et al. (1974) Geological map of RSR, scale 1:50 000, Cîmpeni Sheet. Arch. IGG. (C.L.)

367. (1) SĂLCIUA RUNC (Fe; uncertain genesis; volcano-sedimentary, metamorphosed or hydrothermal-metasomatic and supergene alteration; Proterozoic or Paleozoic and Quaternary). (2) Apuseni Mts, south-east of Muntele Mare. (3) Crystalline formations on the south-eastern border of the Gilău Massif. (4) Detrital formation of the Baia de Arieş Group; carbonatic formation of the Baia de Arieş Group (Vulturese-Belicara); Biharia volcano-sedimentary formation. (5) Garnet mica schists, sericite-chlorite schists and phyllites, quartzites, carbonate rocks (crystalline limestones and dolomites). (6) Lenses partly concordant with the surrounding metamorphites; bags. (7) Fe ± Mn; Ba,Sr,Ti,Pb. (8) Siderite, ankerite, parankerite, dolomite, calcite, hematite, magnetite, pyrolusite, quartz, limonite, psilomelane, pyrite. (9) Socolescu M. (1941) C.R.Inst.Géol.,XXVI (1937-1938), 105-114; Gheruci O., Popa Gh. (1961) Arch. IGG; Rădulescu D., Dimitrescu R. (1966); Mîrza I. (1969) Evoluţia unităţilor cristaline din sud-estul Muntelui Mare, Edit. Acad. RSR; Ianovici V. et al. (1976); Lazăr C. et al. (1984) Arch. IGG. (C.L.)

368. (1) REMETEA (Fe; uncertain genesis; hydrothermal metasomatic or volcano-sedimentary metamorphosed and supergene alteration; Proterozoic or Paleozoic and Quaternary). (2) Trascău Mts. (3) North-easternmost part of the South Apuseni Mts. (4) Carbonatic formation of the Trascău Series. (5) Crystalline limestones or at their contact with crystalline schists (sericite-chlorite quartz schists, graphite schists, etc.). (6) Stratiform lenses generally concordant with limestones; irregular bodies, nests, veins.(7) Fe ± Mn; Cu,Pb,Zn. (8) Siderite, calcite, dolomite, magnetite, hematite, quartz, pyrite, chalcopyrite, galena, sphalerite, limonite, psilomelane, malachite. (9) Socolescu M. (1941) C.R.Inst.Geol.,XXVI, 105-114; Mîrza I. (1962) Studia Univ."Babeş Bolyai", Geol.-Geogr. VII, 2,7-20, Cluj; Moţoi Gr.,Moţoi A.(1969)

Arch. IGG; Ianovici V. et al.(1976). (C.L.)

369. (1) VALEA ARIEŞULUI (Au ± Ag ; alluvial; Quaternary). (2) Apuseni Mts. (3) Quaternary formations. (4) Alluvial fields (actual alluvia + terrace alluvia). (5)Nonconsolidated psephitic and psamitic rocks (boulders, pebbles, sands). (6) Patches. (7) Au;Fe,Ti,Zr,Ce,La,Th,Y,Sn. (8) In alluvia gold occurs in association with pyrite, ilmenite, garnets, zircon,amphiboles,pyroxenes, quartz, sphene, magnetite, epidote, zoisite, monazite, rutile, staurolite, apatite, tourmaline, kyanite, anatase, cassiterite, sphalerite, galena. (9) Cosma S. (1957) Arch. IGG; Rădulescu D., Dimitrescu R. (1960); Ianovici V. et al. (1976). (C.L.)

370. (1) BURU (Fe; volcano-sedimentary; Jurassic).(2) Trascău Mts. (3) North-easternmost part of the South Apuseni Mts.(4) Ophiolitic formation in the north-east of the Trascău Mts. (5) Carbonate rocks (detrital limestones) intercalated in pyroclastics at the upper part of the ophiolitic complex. (6) Stratiform lenses, subordinate nests and veins. (7) Fe + Mn. (8) Hematite, pyrolusite, calcite, limonite, psilomelane. (9) Moţoi Gr.,Moţoi A. (1964) Arch. IGG; Cioflica Gr. et al.(1980) An.Inst.geol.geofiz., LVI, 79-95. (C.L.)

371. (1) MAŞCA BĂIŞOARA (Fe; contact metasomatic; Paleocene). (2) Apuseni Mts, Gilău Massif. (3) Eastern border of the Gilău Massif. (4) Carbonate formation of the Baia de Arieş Group (?) in the thermal and metasomatic contact aureole of the banatitic bodies. (5) Calcic and magnesian skarns, especially apocarbonatic; subordinate recrystallized marbles and dolomites. (6) Metasomatic veins, nests and/or impregnations. (7) Fe ± S,B; Zn,Cu,Mo,Bi,Mn. (8) Ludwigite, magnetite, hematite, pyrrhotine, mispickel, molybdenite, pyrite, sphalerite, galena, chalcopyrite, marcasite; goethite, marcasite. (9) Lazăr C. et al. (1972) D.S. Inst.geol., LVIII (1970-1971), 1, 143-173; Tibad Cs., Burz V. (1976) Arch. IPEG "Cluj", Cluj-Napoca; Lazăr C. et al. (1980) Arch. IGG. (C.L.)

371 a. (1) MAŞCA (Fe; contact metasomatic; Paleocene); Fig. 17. (2) Apuseni Mts, Gilău Massif. (3) Eastern border of the Gilău Massif. (4) Carbonate formation of the Baia de Arieş Group (?) of the thermal and metasomatic contact aureole of the banatitic bodies. (5) Calcic and magnesian skarns, especially apocarbonatic; subordinately, iron mineralization are encompassed in marbles and dolomitic marbles. (6) Small-sized irregular compact bodies, subordinate nests and/or impregnations, rare metasomatic veins. (7) Fe ± S,B; Zn,Mn,Cu,Bi. (8) Ludwigite,

magnetite, maghemite, hematite, pyrrhotine, mispickel; pyrite, sphalerite, chalcopyrite, marcasite; goethite, hydrogoethite, bornite, covellite, marcasite. (9) Lazăr C. et al.(1972) D.S.Inst. geol., LVIII, 1, 143-173; Intorsureanu I., Popescu M.(1973) D.S. Inst.geol., LIX, 39-52; Intorsureanu I. (1976) D.S.Inst.geol. geofiz., LXII, 39-50; Lazăr C., Intorsureanu I. (1982) D.S.Inst. geol.geofiz. (C.L.)

372. (1) CACOVA BĂIŞOARA (Fe; contact metasomatic;Paleocene). (2) Apuseni Mts, Gilău Mts. (3) Eastern border of the Gilău crystalline massif. (4) Carbonate formation of the Baia de Arieş Group (Vulturese-Belioara) (?) of the thermal and metasomatic contact aureole on the southern margin of the Miei-Cacova granodioritic body. (5) Calcic and magnesian skarns, especially apocarbonatic, sometimes partly hydrothermally altered; rarely in recrystallized limestones and dolomites. (6) Irregular, compact bodies of variable sizes and complex shapes ;often they are generally lens-like; bands, nests, impregnations. (7) Fe ± S;Cu, Pb,Zn,Mn,B. (8) Ludwigite (?), magnetite, hematite,pyrrhotine, pyrite, sphalerite, chalcopyrite, galena, marcasite, goethite. (9) Tibad Cs. et al.(1977) Arch. IGG; Magyari Cs. et al.(1983) Arch. IPEG "Cluj", Cluj-Napoca; Lazăr C. et al.(1984) Arch. IGG. (C.L.)

373. (1) LITA BĂIŞOARA (Cu; contact metasomatic and hydrothermal; Paleocene).(2) Apuseni Mts, Gilău Massif. (3) Western border of the Transylvanian Basin. (4) Senonian formations changed into contact aureole of the banatitic bodies. (5) Mineralizations are located especially in epidotic pseudoskarns, formed at the expense of flysch-like sedimentary deposits and subordinately in skarns or dacite-granodioritic porphyries, hydrothermally altered. (6) Compact metasomatic bodies (lens-like, with irregular contour or elongated, nests and pockets), vein bodies, stockworks and impregnations. (7) Cu,Zn,Pb ± Ag; Mn,Cd,Bi,Ti. (8) Pyrite, sphalerite, pyrrhotine, chalcopyrite, cubanite, mackinawite, galena, tetrahedrite, boulangerite, marcasite; bornite, covellite, limonite, malachite, azurite. (9) Stoicovici E. et al. (1973) Studia Univ. "Babeş Bolyai", Geol.Mineral, 2, 3-12; Tibad Cs., Constantiniuc E. (1974) Arch. IPEG "Cluj", Cluj-Napoca; Intorsureanu I. Gheorghiţescu D. (1978) Arch. IGG; Gheorghiţescu D. et al. (1979) Rev.roum.géol.,géophys.géogr.,Géol., 23, 2, 167-181, (C.L.)

374. (1) SĂVĂDISLA (Fe; glauconite; sedimentary; Eocene-

Lutetian). (2) Transylvanian Basin. (3) North-west Transylvanian Depression. (4) Eocene lower marine series. (5) Marls. (6) Beds. (7) Fe. (8) Glauconite, limonite. (9) Niţă P.P.(1964) D.S.Com. Geol., II, XLIX, 193-201. (P.H.)

375. (1) VALEA IARA (feldspar; pegmatite metamorphic; Middle Proterozoic). Similar to ore deposit no. 376 Rişca-Muntele Rece.

376. (1) RIŞCA-MUNTELE RECE (feldspar; pegmatite metamorphic; Middle Proterozoic).(2) Gilău Mts,Valea Rîşca. (3) Gilău Crystalline. (4) Someş Group. (5) Quartz-feldspar gneisses and micaschists. (6) Bodies, veins, lenses(50-800 m long and 5-80 m thick). (7) -. (8) Feldspar, quartz + muscovite, garnets, tourmaline, apatite, kaolinite, sericite, epidote, carbonates, chlorite, iron oxides. (9) Brana V. (1967). (I.H.)

377. (1) CĂPUŞ (Fe; sedimentary; Eocene(Lutetian)). (2) Transylvanian Basin. (3) Transylvanian Depression. (4) Eocene lower marine series. (5) Marls, clays, limestones. (6) Beds. (7) Fe. (8) Goethite, hydrogoethite, glauconite. (9) Stoicovici E. et al. (1964) Studia Univ. "Babeş-Bolyai", Geol.-Geogr., 7-29, Cluj; Vinogradov C. et al. (1963) St.cerc.geol.,8,2, 235-251. (P.H.)

378. (1) DUMBRAVA (graphite; metamorphic; Cambrian). (2) Eastern zone of the Gilău Mts. (3) Gilău Crystalline. (4) Biharia Formation. (5) Carbonate-graphite schists. (6) Lenses (1-1.5 m thick and 60 m long). (7) Carbon (8-10%). (8) Graphite in association with pyrite (60%). (9) Brana V. (1967). (I.H.)

379. (1) MĂNĂSTIRENI (quartz; metamorphic; Proterozoic). (2) Apuseni Mts Gilău Mts. (3) Bihor Autochthon. (4) Someş Group. (5) Sericite-quartz schists. (6) Vein bed. (7) -. (8) Quartz, muscovite . (9) Brana V. (1967). (I.H.)

380. (1) ŞOIMUŞ (Cu; hydrothermal; Hercynian). (2)Apuseni Mts, Highiş Mts. (3) Highiş-Poiana Nappe. (4) Hercynian metatuffs and granites. (5) Argillized granites. (6) Veins and impregnations. (7) Cu,Co,Bi,Zn,As;Ni. (8) Chalcopyrite, glauconite, cobaltine, bismuth, sphalerite, cubanite, tennantite, apatite. (9) Giuşcă D. (1957) Anal.Univ.Bucureşti,St.nat., 16. (G.U.)

381. (1) MINIŞU DE SUS (diatomite; organogene deposited in brackish environment; Sarmatian). (2) Apuseni Mts; Zarand Depression. (3) Zarand Basin. (4) Sarmatian diatomitic cineritic complex. (5) Alternations of diatomites and dacitic tuffs and bentonitized andesites with intercalations of psephitic pyro-

clastics (Sarmatian). (6) Beds. (7) SiO_2(60-75%); Fe_2O_3 (3-7%); Al_2O_3 (7-15%); CaO (2-4%); MgO (0.9-1.6%); TiO_2 (0.3-0.6%); P C (8-9%). (8) Diatoms (50-60%); quartz (4-6%); calcite (1-3%);clay minerals (30-40%); feldspar (5-10%); limonite (1%); carbonaceous substances (less than 0.5%). (9) Brana V. (1967); Grigorescu C., Butucescu D. (1971) MMPG-ODPT. (S.R.)

382. (1) RĂNUŞA (Cu,Mo; magmatic remobilization;Permian-Paleocene ?). (2) Apuseni Mts, Moma Mts. (3) Codru Nappes zone. (4)Upper Carboniferous-Upper Triassic sedimentary formations and Permian pegmatites. (5) Rhyolites and clay shales, silicified. (6) Irregular veins, nests and impregnations. (7) Cu,Mo;Pb,Zn,Ga, Sn,Ni,Co,Cr,V,Sc,Y,La,Zr,Nb,Ba,Sr. (8) Chalcopyrite, pyrite, bornite, molybdenite, malachite, azurite, chalcocite, covelline, quartz, baryte. Associations: chalcopyrite ± bornite,quartz; chalcopyrite, pyrite, quartz, molybdenite. (9) Borcoş M. et al. (1974) Arch. IGG; Vlad S. (1980) Arch. IGG. (I.B.)

383. (1) ZIMBRU (Co,Mo; magmatic remobilization; Permian-Paleocene ?). (2) Apuseni Mts, Moma Mts. (3) Codru Nappes zone. (4)Upper Carboniferous-Upper Triassic sedimentary formations and Permian magmatites. (5) Conglomerates, sandstones and clays, Permian, silicified. (6) Beds, lenses, quartz veins. (7) Mo,Cu; Pb,Zn; Ga,Sn,Ni,Co,Cr,V,Sc,Y,Yb,La,Zr,Nb,Ba,Sr. (8) Chalcopyrite, bornite, arsenopyrite, tetrahedrite, chalcocite, molybdenite, sphalerite, galena, malachite, azurite, chrysocolla, native copper, tenorite, cuprite, quartz. Succession (unconformable ore deposits): molybdenite, pyrite, arsenopyrite-chalcopyrite,bornite, chalcocite-galena-covelline. (9) Sălăjan I.(1970) Thesis of doctor's degree, Univ."Babeş-Bolyai", Cluj-Napoca; Borcoş M. et al. (1974) Arch. IGG.; Vlad.S. (1980) Arch. IGG. (I.B.)

384. (1) BRUSTURI-LUNCUŞOARA (Cu,Pb,Zn; contact metasomatic and hydrothermal; Paleocene). (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana district. (4) Biharia Formation(chlorite schists + albite porphyroblasts, quartz-feldspar schists,quartz-carbonate schists, limestones, etc.),Upper Proterozoic, banatitic vein rocks (andesites, basalts and lamprophyres, Upper Cretaceous -Paleogene. (5) Biharia Formation schists (Upper Proterozoic) and Laramian vein rock suite, silicified, sericitized,chloritized, carbonated, feldspathized, affected pyrometasomatically, with formation of epidote skarns, garnets, wollastonite, tremolite, carbonates, oxides, sulphides. (6) Impregnation bodies, rare veins. (7) Pb,Zn,Cu; Cd,As,Bi,Te,Sb,Mo,Co,Ni. (8) Quartz, clay

minerals, pyrite, molybdenite, epidote, garnet, wollastonite, tremolite, chlorite, carbonates, Fe oxides ± chalcopyrite, sphalerite (a); quartz, clay minerals, pyrite ± sphalerite, chalcopyrite (b); chlorite, epidote, quartz, carbonates, pyrite, chalcopyrite, sphalerite, galena (c). (9) Giuşcă D. et al. (1974) St.cerc. geol.geofiz.,geogr.,Geol., 18, 1; Giuşcă D. et al.(1976) St.cerc. geol.,geofiz.geogr., Geol., 21,31-44; Lazăr C. et al. (1979) D.S. Inst.geol.geofiz., LXVI, 233-270. (I.B.)

385. (M)(1) RÎUL MIC (Pb,Zn,Cu±Au,Ag; hydrothermal; Paleocene ?). (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district. (4)Epimetamorphic crystalline schists, sedimentary rocks, Upper Cretaceous, and vein eruptive rocks, Laramian. (5) Schists of Biharia and Muncel formations, sandstones and clay shales, Coniacian-Santonian, andesites and lamprophyres + porphyry microdiorites, frequently silicified and argillized. (6) Veins and hydrometasomatic bodies. (7) Pb,Zn,Cu,Au,Ag;As,Sb ± Mo. (8) Mispickel, löllingite, pyrite, gold, quartz, clay minerals, sphalerite, chalcopyrite, galena. (9) Berbeleac I., Ionescu O. (1969) St.cerc.geol.,geofiz.geogr.,Geol.,14, 1, 97-106. (I.B.)

386. (1) ŞIPOT-DIBARŢI (Pb,Zn ± Au,Ag; hydrothermal;Paleocene). (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district. (4) Precambrian epimetamorphic crystalline schists and Laramian vein rocks. (5) Schists of Biharia Formation (chlorite + albite porphyroblasts, quartz-albite, limestones, etc.), andesites, granitic porphyries, porphyry diorites and lamprophyres, argillized, sericitized, silicified, chloritized. (6) Hydrometasomatic bodies, rare veins. (7) Pb, Zn,Cu± Au,Ag; Cd,Co, Ni,Bi,As. (8) Magnetite, hematite, pyrite, sphalerite, chalcopyrite 1, galena, chalcopyrite 2, pyrite 2 (± gold); epidote, chlorite, carbonates ± garnets, quartz, sericite, clay minerals, baryte. (9) Lazăr C. et al.(1980) St.cerc.geol.geofiz.,geogr., 25, 3-17; Lazăr C. et al. (1979) D.S. Inst.geol.geofiz.,LXVI(1979), 223-270. (I.B.)

387.(M)(1) ŞIPOT-DIBARŢI (Pb,Zn,Cu±Au,Ag; volcano-sedimentary metamorphosed;Proterozoic-Paleocene). (2-5) See no. 386. (6) Lenticular bodies and disseminations. (7) Pb,Zn,Cu;As,Bi,Cd. (8) Pyrite, sphalerite, galena, chalcopyrite. (9) See no. 386. (I.B.)

388. (1) GRUIUL DUMII (Pb,Zn,Cu; contact metasomatic and hydrothermal ; Upper Cretaceous-Paleocene). (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district.

(4) Precambrian and Paleozoic crystalline schists, Laramian vein eruptive rocks (banatitic).(5) Schists of Biharia Formation (chlorite schists + albite porphyroblasts, quartz-feldspar schists, dolomitic limestones and sericite-chlorite carbonate quartz schists; Upper Proterozoic)and of Păiuşeni Group (metaconglomerates, phyllites, etc.; Proterozoic), as well as vein sequences of Laramian rocks (lamprophyres, granitic porphyries, porphyric microdiorites, etc.), silicified, carbonated, argillized, pyrometasomatically affected, resulting skarns + garnets, wollastonite, tremolite, etc. (6) Hydrometasomatic bodies, more rare veins.(7) Pb,Zn,Cu;As,Bi,Co,Ni;Cd,Ag,Sb,Mo. (8) Pyrite, sphalerite,galena ± chalcopyrite, quartz; pyrite, mispickel, maucherite, nickeline, sphalerite, smaltine; quartz; pyrite, chalcopyrite, nickeline ± Co and Ni arsenides, Pb and Zn sulphides; pyrite, hematite,quartz ± Co,Ni arsenides. (9) Berbeleac I. (1967) Arch. IGG; Berbeleac I., Ionescu O. (1977) St.cerc.geol.geofiz.geogr.,Geol.,14, 1, 97-106. (I.B.)

389. (M)(1) GRUIUL DUMII (Cu, pyrite; volcano-sedimentary metamorphosed; Proterozoic). (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana district. (4) Crystalline schists, Proterozoic dolomitic limestones, banatitic vein rocks. (5) Dolomitic limestones and chlorite schists + albite porphyroblasts, weakly carbonated-chloritized. (6) Lenses and disseminations at the contact of limestones with schists of the base. (7) Fe;Cu;Zn,Pb, Au,Ag. (8) Magnetite, hematite, pyrite, chalcopyrite, garnet , wollastonite, vesuvianite, asbestos,carbonates ±quartz. (9) Berbeleac I. (1967) Arch.IPGG; Lazăr C. et al.(1979) Arch. IGG.(I.B.)

390. (1) IZVORUL BIHORULUI (Pb,Zn;±Cu; contact metasomatic and hydrothermal; Paleocene).(2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district. (4) Permian of the Arieşeni Unit. (5) Conglomerates, siltites, Permian, and vein rocks of porphyry microdiorites type, lamprophyres and andesites, Upper Cretaceous-Paleogene, silicified, epidotized, chloritized, argillized. (6) Impregnation,hydrometasomatic bodies, arranged in a line with fractures striking NW-SE and N-S, very rare veins.(7) Zn,Pb,Cu;Cd,Bi,As,Sb,Ti,Co,Ni,Sn,Mo. (8) Pyrite, chalcopyrite ± sphalerite, galena (in the southern part of the ore deposit), pyrite-sphalerite-galena, chalcopyrite ± bornite, hematite, magnetite (in the central part); at depth - associations of iron oxides, quartz,carbonates. (9) Lazăr C. et al. (1977) Arch. IGG. (I.B.).

391. (1) VALEA MARE (Pb,Zn; ± Cu; contact metasomatic and hydrothermal; Paleocene ?; partly sedimentary; Precambrian).(2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district. (4) Schists of Biharia Formation (Upper Proterozoic) subordinate Permian siltites. (5) Dolomitic limestones, limestones and chlorite schists + albite porphyroblasts, in places carbonatic, + chlorite, quartz and albite; veins of lamprophyres,basalts and andesites; chloritized, feldspathized, silicified, argillized. (6) Hydrometasomatic bodies, subordinate veins. (7) Pb,Zn,Cu;Cd, Bi,As,Sb,Ti,Co,Ni,Mo. (8) Pyrite, sphalerite, galena, chalcopyrite, chlorite, quartz, carbonates; pyrite, quartz,carbonates; pyrite, Pb,Zn,Cu sulphides, clay minerals. (9) Lazăr C. et al. (1977) Arch. IGG. (I.B.)

392. (1) VALEA TITIŞOR (Pb,Zn; ± Cu; contact metasomatic and hydrothermal; Cretaceous-Paleogene ?); Fig.18. (2) Apuseni Mts, Bihor Mts. (3) Brusturi-Hălmagiu-Poiana metallogenetic district. (4)Schists of the Păiuşeni Series (Paleozoic) and veins of basic rocks. (5) Lamprophyres and phyllite schists, sericitized, argillized, carbonated.(6) Hydrometasomatic body, subordinate veins. (7) Pb,Zn,Cu;Cd,Bi,Se,Co,Ni,Ti. (8) Pyrite,sphalerite, galena, quartz, carbonates, clay minerals; pyrite, sphalerite, chalcopyrite, chlorite ± clay minerals. (9) Berbeleac I., Lazăr C. (1976-1980) Arch. IGG. (I.B.)

393. (1) MONEASA-VAŞCĂU (Mn,Fe; re idual ± transport;Upper Jurassic). (2) Apuseni Mts, Codru Moma Mts. (3) Mesozoic deposits of the Codru Moma Mts. (4) Triassic limestones. (4) Triassic (Anisian) grey limestones, weakly stratified, with several joints. (6) Nests, pockets, rare lenses,formed in karstic paleorelief. (7) Mn,Fe. (8) Psilomelane, pyrolusite, waad, limonite (goethite, hydrogoethite, lepidocrocite) ± clay minerals, quartz, terra rossa, remains of rocks. (9) Petrulian N. (1973). (I.B.)

394. (1) BĂIŢA BIHOR (Pb,Zn,Cu; Mo±Bi,W;B; contact metasomatic and hydrothermal; Paleocene).(2) Apuseni Mts, Bihor Mts. (3) Arieşeni Unit, Băiţa Bihorului metallogenetic district. (4) Mesozoic sedimentary deposits and vein rocks (basalts,lamprophyres) Laramian. (5) Limestones, Triassic quartzites, Jurassic limestones and Laramian vein rocks, silicified, argillized, carbonated, pyrometasomatically altered with formation of calcic and magnesian skarns. (6) Substitution bodies, rare veins. (7) Pb,Zn,Cu; Mo,Bi,B,W ± Au,Ag;Cd,Mn,Ni,Co,Te. (8) a: Mo-Bi-W mineralizations: molybdenite, bismuthine, scheelite, Bi sulphosalts, Bi in skarns

with grossularite, wollastonite, vesuvianite and diopside; b: B mineralizations : ludwigite, szaibelyite, kotoite and fluoborite in magnesian skarns; c: Cu-Bi-W mineralizations: chalcopyrite, Bi sulphosalts (especially aikinite) , scheelite in magnesian skarns with diopside, chrondrodite, clinohumite, forsterite and phlogopite; d: Pb-Zn mineralizations: galena, sphalerite, chalcopyrite, scheelite, talc and serpentinic minerals. (9) Giuşcă D. (1941) Acad. Roum.Mem.Sci. (3), XVI/6, 681-693. (I.B.)

395. (M)(1) VALEA LEUCII (zeolites; hydrothermal; Paleocene); Fig.18. (2) Apuseni Mts, Bihor Mts. (3) Bihor Mts Crystalline, Brusturi-Hălamgiu-Poiana metallogenetic district. (4) Precambrian and Carboniferous crystalline schists, rhyodacite veins (banatites). (5) Sericite-quartz phyllite schists, amphibolites, etc. of the Biharia Formation (Biharia Nappe) (Upper Proterozoic) and phyllites, graphite-quartz schists, serniphites of the Păiuşeni Series (Paleozoic), intruded by rhyodacite concordant veins, chloritized, epidotized, and zeolites; zeolitizations include all rocks (eruptive and metamorphic) and are more obvious in the right side of the Leuca Valley, downstream Desiţului Valley. (6) Irregular bodies, rarely lenticular , resulting from zeolite depositions on fissuration and schistosity planes of the rocks. (7) Zeolites ± pyrite, iron oxides. (8) Phyllipsite, desmine. (9) Boştinescu S. (1963) Arch. IPGG. (I.B.)

396. (1) JULEŞTI-VALEA FAGULUI (Pb,Zn,Cu ± Au,Ag; hydrothermal; Paleocene). (2) Bihor Mts. (3) Convergence zones of three structural units: Bihor Autochthon, Ferice Unit and Arieşeni Unit. (4) Permian sedimentary deposits of the Arieşeni Unit and Triassic carbonate deposits of the Ferice Unit. (5) Permian sandstones and microconglomerates, Triassic limestones and dolomites, banatitic rhyodacites, breccias, epidotized, adularized, argillized. (6) Veins and impregnations. (7) Cu,Pb,Zn; Ag,Cd,Mo,Sn. (8) Sphalerite, galena, pyrite, chalcopyrite, bornite; tetrahedrite, boulangerite, proustite, chalcocite, hematite, marcasite; phlogopite, fluorine, calcite. (9) Udubaşa G. et al. (1980) D.S.Inst. geol. geophys., LXIV/2, 185-211. (G.U.)

397. (1) BUDUREASA (Pb,Zn,Cu,Au,Ag;Fe; contact metasomatic and hydrothermal; Paleocene). (2) Bihor Mts. (3) Arieşeni Nappe. (4) Triassic and Cretaceous carbonate and sandy rocks at the contact with Upper Cretaceous-Paleogene magmatites (banatites). (5) Triassic dolomitic limestones and siltites, Barremian-Aptian limestones, garnet-pyroxene skarns, hornfelses. (6) Irregular

bodies, impregnations. (7) Fe,Pb,Zn,Au,Ag,Bi,Sb,Mo,Cd,W. (8) Garnet, pyroxene, magnetite, chalcopyrite, pyrite (a); fosterite, spinel, ludwigite (b); ilvaite, pyrrhotine, magnetite (c);galena, sphalerite, chalcopyrite, pyrrhotine (d). (9) Istrate G.,Udubaşa G.(1981) D.S.Inst.geolgeofiz.,LXV/2, 5-19. (G.U.)

398. (1) BUDUREASA (brucite; contact metasomatic;Paleocene). (2) Bihor Mts. (3) Arieşeni Nappe. (4) Triassic carbonate rocks at the contact with Upper Cretaceous-Paleogene monzogranites.(5) Dolomitic limestones and dolomites, predazzites. (6) Irregular bodies and impregnations. (7) Mg. (8) Brucite. (9) Istrate G. (1978) An.Inst.geol.geofiz.,LIII,177-298; Istrate G.,Udubaşa G. (1981) D.S.Inst.geol.geofiz., LXV/2, 5-19. (G.U.)

399. (1) PIATRA GALBENII (GALBENA) (bauxite; residual;Neocomian). (2) Bihor Mts. (3) Bihor Autochthon. (4) Neojurassic carbonate formations. (5) Bauxite accumulated in depressions cut in the paleokarst formed in Neojurassic limestones of the Bihor Autochthon. (6) Compact,irregular body, frequently lens-like, cone-shaped (Aston type) or lobate (Caguanes type). (7) Al_2O_3 (45-69%); Fe_2O_3 (10-37%); SiO_2(2-15%); TiO_2(1.00-3.50%); Ca,Mg, Na,K,P,S. (8) Diaspore (49-80%); hematite (1.20-22.80%);goethite (2.00-6.50%); kaolinite (2.40-7.80%); anatase (2.60-4,00%); chlorite (1.30-20.00%). (9) Puricel R,Georgescu V.(1975) Arch. IPGG; Mantea Gh. et al. (1981) Arch. IGG. (S.B.)

400. (1) VALEA SEACĂ (Fe;Pb,Zn,Cu ± Au,Ag; contact metasomatic and hydrothermal; Paleocene). (2) Bihor Mts. (3) Bihor Autochthon. (4) Neojurassic carbonate formations. (5) Calcic skarns, recrystallized limestones at the contact with quartz monzodiorites and banatitic granodiorites. (6) Irregular bodies. (7) Fe,Cu,Pb,Zn ± Au,Ag; Sb,Bi,Ni,Co. (8) Garnets, pyroxenes, magnetite, chalcopyrite, pyrite, sphalerite, galena; epidote, calcite, quartz; malachite, goethite. (9) Istrate G. et al.(1973) Arch. IGG. (G.U.)

401. IZVORUL SOMEŞULUI CALD (bauxite; residual; Neocomian). (2) Bihor Mts. (3) Bihor Autochthon. (4) Neojurassic carbonate formations. (5) Bauxite accumulated in depressions cut in the paleokarst formed in Neojurassic limestones of the Bihor Autochthon. (6) Compact,irregular body, frequently lens-like, cone-shaped (Aston type)or lobate (Caguanes type). (7) Alumina (51-53%); iron oxides and hydroxides (23-26%); silica (3.70-8.00%); TiO_2 (2.5-2.6%); Ca,Mg,Na,K,Mn,P,S. (8) Diaspore (49-63%);hematite-goethite (14.5-27.5%); kaolinite (0.40-15.10%); anatase

(2.5-2.6%); chlorite (1.20-22.3%). (9) Papiu C. et al.(1981) D.S. Inst.geol.geofiz.,LXV; Mantea Gh.(in press) Thesis of doctor's degree, Univ."Al.Ioan Cuza", Iaşi. (S.B.)

402.(1) GINGINEASA (Pb,Zn,Cu ± Au,Ag);metamorphic-magmatic remobilization; Precambrian,Paleocene ?).(2) Apuseni Mts,Vlădeasa Mts. (3) Someş and Arada mesometamorphic series. (4)Metamorphic crystalline schists of the Someş Series, metarhyolites and rhyolites. (5) Quartz-mica schists, quartz-feldspathic schists, mica schists, sericite-quartz schists, metarhyolites, rhyolitic breccias. (6) Bands, lenses, veinlets, disseminations. (7) Pb,Zn, Cu; Au,Ag;Co,Ni,Ti,V,Ga,Cd.(8) Pyrite, pyrrhotine, marcasite, chalcopyrite, sphalerite, galena, magnetite, arsenopyrite, tetrahedrite, quartz, carbonates, chlorite; successions: magnetite, siderite (a);quartz 1, arsenopyrite 1, pyrite, marcasite (b); arsenopyrite 2, pyrrhotine 1, sphalerite, chalcopyrite, galena, tetrahedrite (c); quartz, calcite, pyrrhotine 2, marcasite 1, aragonite (d). (9) Bleahu M. et al. (1975) Arch. IGG; Panaite M. et al. (1973) D.S.Inst.geol.,LIX,53-62; Panaite M. et al. (1977) St.cerc.geol.,geofiz.,geogr.,Geol., 22, 75-86; Gheorghiţescu D. et al. (1980) D.S.Inst.geol.geofiz.,LXIV, 57-90. (I.B.)

403. (1) RĂCHITELE (Pb,Zn,Cu ± Au,Ag; hydrothermal;Paleocene).(2) Apuseni Mts, Vlădeasa Mts. (3) Someş and Arada mesometamorphic series. (4) Mesometamorphic crystalline schists of the Someş Series, metarhyolites and rhyolites. (5) Quartz-mica schists, quartz-feldspar schists, mica schists, sericite-quartz schists, metarhyolites, rhyolitic breccias. (6) Irregular or lenticular bodies, dissemination zones and veins. (7) Pb,Zn,Cu; Fe,As,Au,Ag;Cd,Ni,Co,V,Ti. (8) Magnetite, pyrite, pyrrhotine, arsenopyrite; pyrite, pyrrhotine; chalcopyrite, pyrrhotine,sphalerite; pyrite, chalcopyrite, magnetite; successions: magnetite, siderite, quartz, arsenopyrite 1, pyrite 1, marcasite 1, arsenopyrite 2, pyrrhotine 1, sphalerite, chalcopyrite, galena, tetrahedrite, quartz 2, calcite, pyrrhotine 2, pyrite, marcasite, aragonite. (9) See no. 402 Gingineasa. (I.B.)

404. (1) RĂCHITELE (Fe; hydrothermal-sedimentary,metamorphosed; Middle Proterozoic). (2) Apuseni Mts,Vlădeasa Mts. (2) Someş Group and Arada Formation. (4) Mesometamorphic crystalline schists of the Someş Group, metarhyolites and rhyolites. (5) Sericite-quartz schists, metarhyolites, rhyolitic breccias, mica schists, quartz-feldspar schists. (6) Lenticular bodies, dissemination zones, rare veinlets. (7) Fe; Pb,Zn,Cu,Ag,Au,As;Cd,

Ni,Co,V,Ti. (8-9) See no. 403 Răchiţele. (I.B.)

405. REMEŢI (bauxite; residual; Neocomian); Fig.19.(2) Pădurea Craiului Mts. (3) Bihor Autochthon. (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated in depressions of the paleokarst formed on the Bihor Autochthon limestones, partly altered at the contact with magmatic rocks (black bauxite). (6) Compact, irregular body, often lenticular. (7) Alumina (45.20-55.20%); iron oxides and hydroxides (20-23%); silica (1.15-7.0%); TiO_2 (2.70-3.0%); CaO (less than 1.10%); MgO (less than 0.15%); MnO(less than 0.32%); Na,K,P,S,C. (8) Diaspore(50-52%);hematite (14-36%); kaolinite (1.60-12%); magnetite (1-12%);leptochlorite (1.60-8.00%); anatase (2-3%); pyrite (less than 2.70%). (9)Papiu C.V. et al.(1970) An.Inst.geol.; Popa E.(1981) An.Inst.geol., LVII. (S.B.)

406. (1) MEZIAD (bauxite; residual;Neocomian); Fig.19.(2) Pădurea Craiului Mts. (3) Vălani Unit. (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated in depressions of the paleokarst, formed on the Vălani Unit limestones, weakly altered at the contact with magmatic rocks. (6) Irregular,compact body, often lentiliform. (7) Alumina (54-64%); iron oxides and hydroxides(15-23%); silica (3.60-9.20%); TiO_2 (3.30-2.20%); CaO(about 1%); MgO (about 1%); Mn,P,Na,S,C,K.(8) Diaspore + boehmite (59-71 %); kaolinite (less than 17%); goethite (less than 19%);leptochlorite (less than 19%). (9) Mantea Gh., in Patrulius D. et al. (1978) Arch. IGG; Papiu C.V. et al. (in press) D.S.Inst.geol. geofiz. (S.B.)

407. (1) LUNCA SPRIE (bauxite; residual; Neocomian); Fig.19. (2) Pădurea Craiului Mts. (3) Bihor Autochthon, (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated in depressions of the paleokarst formed on the Bihor Autochthon limestones. (6) Compact, irregular body, often lentiliform. (7) Alumina (59.50-60.0 %); iron oxides and hydroxides (21.50-22.0%); silica (2.60-3.20%); TiO_2 (2.50-3.10%); Ca,Mg,Na,K,Mn,P,S. (8) Diaspore (62-68%); boehmite (less than 5%); hematite (18-22%); kaolinite (5-7.5%); goethite (3-6.30%); magnetite (less than 1%); leptochlorite (about 1%); anatase (3.10-2.40%). (9) Patrulius D. et al.(1983) Arch. IGG; Papiu C.V. et al.(1970) An.Inst.geol., XXXVIII. (S.B.)

407 a. (1) VIDA (bauxite; residual; Neocomian); Fig.19.(2) Similar to the deposit 407 Lunca Sprie.

407 b. (1) DÎMBU LETII (bauxite; residual; Neocomian); Fig. 19. Similar to the deposit no. 407 Lunca Sprie.

407 c. (1) RACĂȘ SOUTH (bauxite; residual; Neocomian); Fig.19. Similar to the deposit no. 407 Lunca Sprie.

408. (1) ROȘIA-ALBIOARA (bauxite; residual; Neocomian); Fig.19. (2) Pădurea Craiului Mts. (3) Bihor Autochthon. (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated in depressions of the paleokarst formed on the Bihor Autochthon limestones. (6) Compact, irregular body, often lenticular. (7) Alumina (61.3-64.0%); iron oxides and hydroxides (about 11%); silica (6-7%); TiO_2 (about 3.5%); MgO (less than 1.90%); Na,K, Mn,P,S. (8) Boehmite (up to 65% or lacking); diaspore (up to 69% or lacking); kaolinite (10-13%); hematite (1.80-5.30%); goethite (less than 5%); leptochlorite (less than 8%); anatase (about 3.50%). (9) See no. 407. (S.B.)

408 a. (1) SCLAVUL PLEȘ (bauxite; residual; Neocomian); Fig. 19. Similar to the deposit no.408 Gugu.

408 b. (1) MĂGURA LAZURANILOR (bauxite; residual; Neocomian); Fig.19. Similar to the deposit no. 408 Gugu.

409. (1) GUGU-ZECE HOTARE (bauxite; residual; Neocomian). Fig.19. (2) Pădurea Craiului Mts. (3) Bihor Autochthon. (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated in depressions of the paleokarst formed on the Bihor Autochthon limestones. (6) Compact,irregular body, often lenticular. (7) Alumina (51.40-68.50%); iron oxides and hydroxides (7.70-30.80%); silica (2.0-8.75%); TiO_2(about 3%);CaO (less than 1%); MgO (less than 1.40%); Na_2O (less than 0.25%); K_2O (less than 0.25%); MnO (less than 0.25%); P S C.(8) Diaspore (up to 67% or lacking); boehmite (up to 76% or lacking); kaolinite (4-17%); hematite (1.50-29.50%); goethite (less than 8%); magnetite (less than 1%); leptochlorite (less than 17%); pyrite (less than 5%); anatase (about 3%).(9) Patrulius D.,Bordea S.(1982) Arch. IGG; Papiu C. V. et al. (1970) An.Inst.geol.,XXXVIII. (S.B.)

410. (1) BRATCA-SECĂTURA (bauxite; residual; Neocomian); Fig.19. (2) Pădurea Craiului Mts. (3) Bihor Autochthon. (4) Upper Jurassic calcareous formations. (5) Bauxite accumulated on the depressions of the paleokarst formed on the Bihor Autochthon limestones. (6) Compact, irregular body, often lenticular. (7) Alumina (50-61%); iron oxides and hydroxides (15-28%); silica (2.60-9.20%); TiO_2(2.30-3.50%); MnO (less than 1%); CaO (less than 0.30%); MgO (less than 1%).(8) Diaspore(52-73%);hematite (13-22%);goethite(less than 12.70%);chlorite(1-2.40%);kaolinite (7-18%);anatase (2.30-3.50%).(9)Bordea S.,Bordea J.(1983)Arch. IGG;Papiu C.V.et al.Arch. IGG.(S.B.)

411. (1) CORNET-VALEA POENI (bauxite; residual; Neocomian); Fig.19. (2) Pădurea Craiului Mts. (3) Bihor Autochthon. (4)Upper Jurassic calcareous formations. (5) Bauxite accumulated in the depressions of the paleokarst,formed on the Bihor Autochthon limestones. (6) Compact, irregular body, often lenticular. (7) Alumina (60-45%); iron oxides and hydroxides (7-36%); silica (3.0-6.5%); TiO_2(2.5%-3.0%); CaO (less than 1%). (8) Diaspore (53-79%); boehmite (8.5-9.0%); kaolinite (4-17%); hematite (6-30%); goethite (0.13%); magnetite (less than 1%); leptochlorite (0-3%); anatase (2.5-3.8%). (9) See no. 407 Lunca Sprie. (S.B.)

411 a. (1) CALATEA (bauxite; residual;Neocomian); Fig.19. Similar to the deposit no. 411 Cornet-Valea Poeni .

411 b. (1) PONIȚA (bauxite; residual;Neocomian); Fig.19. Similar to the deposit no. 411 Cornet-Valea Poeni .

411 c. (1) POENI (bauxite; residual; Neocomian); Fig.19. Similar to the deposit no. 411 Cornet-Valea Poeni.

412. (1) BOROD-CORNITEL (Pb,Zn,Cu ± Au,Ag; hydrothermal; Paleocene). (2) North Apuseni Mts, Plopiș Mts. (3) Plopiș Mts Crystalline and Borod-Vad Neogene basin. (4) Precambrian crystalline schists, Mesozoic limestones and sandstones,Neogene molasse sediments and Laramian eruptive rocks. (5) Gneisses, amphibolites and micaschists ,Precambrian , limestones, conglomerates and clays ,Lower Triassic(Anisian-Ladinian) , Laramian rhyolites, silicified, argillized, chloritized, carbonated, subordinately feldspathized. (6) Irregular breccia bodies, more rare veins.(7) Pb,Zn,Cu ±Au,Ag;Bi,Sb,Co,Ni,Sn. (8) Pyrite, quartz, clay minerals, sphalerite, galena, chalcopyrite, carbonates (a); sphalerite, galena, carbonates, pyrite, chalcopyrite, quartz, clay minerals (b); chalcopyrite, tetrahedrite, calcite, pyrite, sphalerite, galena, clay minerals; quartz (c). (9) Cîmpeanu St. (1971)Arch. IPGG; Cîmpeanu St. et al. (1968) D.S.Com.Geol.,LIII/3, 39-55; Cîmpeanu St. et al. (1974,1976) Arch. IPGG; Berbeleac I. et al. (1982)D.S.Inst.geol.geofiz., LXVII/2, 29-54. (I.B.)

413. (1) SĂCEL (oil) (2) East Carpathians, Maramureș. (3) Transcarpathian flysch zone. (4) Valea Caselor Formation. (5) Sandstones. (6) Faulted anticline. (9) Paraschiv D. (1979).(M.S.)

414. (1) DARABANI (sulphur; sedimentary, biochemical precipitation under the influence of sulphur-reducing bacteria; diagenetic recrystallization; Badenian). (2) Moldavian Plateau (North); Darabanilor Spur. (3) East-European Platform cover.(4) Horizon with evaporites, marly-limestones and sandstones;Badeni-

an.(5) Bituminous gypsums, limestones, marly-limestones,Badenian. (6) Impregnations and nests. (7) -. (8) Native sulphur, gypsum, clay minerals. (9) Brana V. (1967). (S.R.)

415. (1) DERSCA-LOZNA (peat; eutrophic; Quaternary).(2) Moldavian Plateau, Dorohoi Basin(V.Bahnei). (3) Moldavian Platform. (4) Peat horizon; Upper Quaternary. (5)Sandy clays, sands, muds ; Upper Holocene. (6) Bed. (7) Organic matter (10-84%); carbon (7-46%); pH(6.80-7.50) ; Q_i^i (3700-3900 kcal/kg). (8) Dark brown peat, formed of club rush, sedge, Dutch rush and reed. (9) Pop E. (1960) Mlaşt.turb.RPR,Edit.Acad.(C.B.)

416. (1) CUCORANI (peat; eutrophic; Quaternary).Similar to the deposit no. 415 Dersca Lozana.

417. (1) VALEA SUCEVEI-VALEA MOLDOVEI (oil shale;paralic; Oligocene-Lower Miocene). (2) Obcinele Bucovinei (Obcina Mare). (3) Tarcău Unit and Marginal Folds Unit. (4) Bituminous formation. (5) Alternation of bituminous clays, Kliwa-type arenites, bituminous marls and siliceous rocks (menilites); in places calcareous rocks (Jaslo Limestones),tuffs and bentonites. (6) Beds. (7) A^i (66-89%); Q_i^i (600-1000 kcal/kg). (8) Clay minerals, detrital minerals and chemical and biochemical precipitation minerals. (9) Papiu V.C. et al. (1978-1983) Arch. IGG. (C.B.)

418. (1) VALEA SUCEVEI-VALEA PUTNEI (oil shale; paralic; Oligocene-Lower Miocene). Similar to accumulation nr. 417 Valea Sucevei-Valea Moldovei.

419. (1) PĂLTINOASA (gases). Similar to the deposit no. 420 Gura Humorului-Frasin.

420. (1) GURA HUMORULUI-FRASIN (gases and condense). (2) East Subcarpathians. (3) Moldavian Platform. (4) Infraanhydritic formation, Badenian. (5) Sandstones and sands. (6) Faulted monocline. (9) Paraschiv D. (1979). (M.S.)

421. (1) CACICA(halite; lagoonal; Lower Miocene). (2) East Carpathians, Subcarpathian Zone. (3) Subcarpathian Nappe. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Diapir scale (7) Cl,Na. (8) Sodium chloride (84.7%). (9) Iorgulescu T. et al. (1961) Arch. IPGG; Brana V.(1967); Stoica C., Gherasie I. (1981); Gherasie I. et al.(1977) Arch. IPGG;Săndulescu M. et al. (1979) Arch. IGG. (M.C.M.)

422. (1) VALEA SEACĂ (gases). Similar to the deposit no. 420 Gura Humorului-Frasin.

423. (1) MĂLINI (gases). Similar to the deposit no. 420 Gura Humorului-Frasin.

424. (1) FĂLTICENI-BOROAIA (lignite; limnic; Miocene). (2) Moldavian Plateau. (3) Foredeep, external part. (4) Carbonaceous complex; Sarmatian. (5) Alternation of marls, clays, sandy clays, sands; Volhynian. (6) Lenticular beds. (7) Q_i^i (3500 kcal/kg).(8) Soft dull coal: textinite, attrinite, fuzinite and semifuzinite. (9) Polonic P., Polonic G. (1958) Arch. IGG; Săndulescu M. et al. (1980) Arch. IGG. (C.B.)

425. (1) BĂLTĂŢEŞTI (potash salts , halite; lagoonal;Lower Miocene). (2) East Carpathians, Moldavian Subcarpathians, Crăcăoani-Tg. Neamţ Depression. (3) Marginal Folds Nappe , Bistriţa Half-window, Almaşu-Bălţăteşti-Văratec false anticline. (4)Lower Miocene salt formation. (5) Saliferous clays. (6) Lenticular beds. (7) Na, K, Mg, Ca, Cl. (8) Halite, sylvite, kainite, polyhalite, langbeinite, leonite, anhydrite, clay insoluble substances. (9) Brana V. (1967); Stoica C., Gherasie I. (1981);Gherasie I. (1977) Arch. IPGG. (M.C.M.)

426. (1) CUEJDIU (oil and gases). Similar to the deposit no. 420 Gura Humorului-Frasin.

427. (1) CÎMPULUNG MOLDOVENESC-SADOVA (iron; chemical precipitation in marine environment; Lower Hauterivian-Barremian). (2) East Carpathians; Obcina Feredeului. (3) Audia Unit (Black Shales Unit). (4) Black Shales Formation (Audia Beds); lower subformation with sideritic rocks (Lower Hauterivian-Barremian). (5) Rhythmical alternations of black and grey,schistous pelitic rocks, arenites, marly limestones and pelosiderites (Lower Hauterivian-Barremian).(6) Beds and lenses. (7) Main elements (n=59): SiO_2 (20.44%); Al_2O_3 (4.81%); Fe_2O_3 (2.41%); FeO (20.08%);CaO (15%); MgO (5.02%); K_2O (0.86%); minor elements (n=32): Pb (10ppm); Cu(34 ppm);Ga(9 ppm); Sn (7.7 ppm); Ni (35 ppm); Co (4.3 ppm); Cr (42 ppm); V(80 ppm); Be (2.6 ppm); Sr(172 ppm); Ba (245 ppm); Li (31 ppm). (8) Siderite (10.9-84%); calcite (4.0-63%); dolomite (0.0-20.0%); feldspar (0.0-10%); quartz (0.0-34%); hydromica (0.0-30.0%); chlorite (0.0-16.8%); pyrite (0.0-1.9%); hematite (0.0-9.21 %). (9) Papiu C.V. et al. (1977) D.S. Inst.geol.geofiz. LXIII/1. (S.R.)

428. (1) GÎRCINA (potash salts , salt; lagoonal ; Lower Miocene). (2) East Carpathians, Moldavian Subcarpathians. (3) Marginal Folds Nappe , Bistriţa Half-window. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Lenticular beds . (7) Na,K,Mg,Ca,Cl. (8) Halite, sylvite,kainite, polyhalite, leonite, anhydrite, clay insoluble substances. (9) Brana V.(1967);Stoica

C., Gherasie I.(1981); Gherasie I. (1977) Arch.IPGG. (M.C.M.)

429. (1) CIRITEI (PIATRA NEAMŢ) (gypsum; lagoonal; Lower Miocene). (2) East Carpathians, Moldavian Subcarpathians .(3) Subcarpathian Nappe, Pietricica Digitation. (4) Grey formation. (5) Grey clays. (6) Lenticular beds. (7) $CaSO_4$. (8) Gypsum. (9) Săndulescu M. et al. (1976) Arch. IGG. (M.C.M.)

430. (1) ROMAN-SĂCUIENI (gases and condense). (2) Moldavian Plateau. (3) Moldavian Platform. (4) Sarmatian formations.(5) Sands. (6) Faulted monocline. (9) Paraschiv D. (1979). (M.S.)

431. (1) VORLEŞTI (MESTEACĂN) (potash salts, salt; lagoonal; Lower Miocene). (2) East Carpathians, Tazlău Subcarpathians. (3) Marginal Folds Nappe, Cut Digitation. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Lenticular beds. (7) K,Na, Mg,Ca,Cl. (8) Halite, sylvite, kieserite, polyhalite, langbeinite, leonite, anhydrite. (9) Gherasie I. (1977) Arch. IPGG; Rădan S., Drăgulescu A. (1982) Arch. IGG; Brana V. (1967); Stoica C.,Gherasie I. (1981) (M.C.M.)

432. (1) TAZLĂU (potash salts ; lagoonal; Lower Miocene). (2) East Carpathians, Tazlău Subcarpathians. (3) Marginal Folds Nappe, Cut Digitation, Bistriţa Half-window. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Lenticular beds. (7) K,Na,Mg,Ca,Cl. (8) Halite (20-40%); sylvite (1-4%); kieserite (5-25%); polyhalite (10-20%); langbeinite (10-25%); leonite (1-5%); anhydrite (1-10%). (9) Gherasie I. (1977) Arch IPGG; Rădan S., Drăgulescu A. (1982) Arch. IGG; Brana V. (1967); Stoica C., Gherasie I.(1981).(M.C.M.)

433. (1) TAZLĂUL MARE (gases and condense). Similar to the deposit no. 446 Moineşti-Foale.

434. (1) GEAMĂNA (oil). Similar to the deposit no. 446 Moineşti-Foale.

435. (1) FRUMOASA (oil). Similar to the deposit no. 446 Moineşti-Foale.

436. (1) MIHOC (oil and gases). Similar to the deposit no. 446 Moineşti-Foale.

437. (1) CÎMPENI (oil). (2) East Subcarpathians, Tazlău hydrographic basin. (3) Subcarpathian Nappe. (4) Lower Miocene molasse formations. (5) Sandstones and conglomerates. (6) Faulted anticline. (9) Paraschiv D. (1979). (M.S.)

438. (1) ARŞITA (oil). Similar to the deposit no. 446 Moineşti-Foale.

439. (1) GROPILE LUI ZAHARACHE (oil). Similar to the

deposit no. 446 Moineşti-Foale.

440. (1) CHILII WEST (oil). Similar to the deposit no. 446 Moineşti-Foale.

441. (1) CHILII (oil). Similar to the deposit no. 446 Moineşti-Foale.

442. (1) CUCUIEŢI (oil). Similar to the deposit no. 446 Moineşti-Foale.

443. (1) TAŞBUGA (oil). Similar to the deposit no. 446 Moineşti-Foale.

444. (1) ZEMES CHILIOAIA (oil). Similar to the deposit no. 446 Moineşti-Foale.

445. (1) ASĂU (oil). Similar to the deposit no. 446 Moineşti-Foale.

446. (1) MOINEŞTI-FOALE (oil). (2) East Carpathians;Tazlău-Trotuş hydrographic basin. (3) Marginal Folds Nappe zone. (4) Bituminous facies with Kliwa Sandstones ,Oligocene-Lower Miocene. (5) Kliwa Sandstones. (6) Folds-faults (scales) and faulted folds. (9) Paraschiv D. (1979). (M.S.)

447. (1) UTURE MOINEŞTI ORAŞ (oil). Similar to the deposit no. 446 Moineşti-Foale.

448. (1) TEŢCANI (oil and gases). (2) East Subcarpathians, Tazlău hydrographic basin. (3) Subcarpathian Nappe. (4) Lower Miocene molasse and bituminous facies with Kliwa Sandstones, Oligocene-Lower Miocene. (5) Sandstones and conglomerates, Kliwa Sandstones. (6) Faulted folds. (9) Paraschiv D. (1979). (M.S.)

449. (1) SOLONŢ (potash salts ; lagoonal; Lower Miocene). Similar to the deposit no. 432 Tazlău.

450. (1) MOINEŞTI (potash salts ; lagoonal; Lower Miocene). Similar to the deposit no. 432 Tazlău.

451. (1) BACĂU (gases). Similar to the deposit no. 430 Roman Săcuieni.

452. (1) SĂRATA BACĂU (salt; lagoonal; Lower Miocene). Similar to the deposit no. 432 Tazlău.

453. (1) VĂSIEŞTI (oil). (2) East Carpathians, Trotuş hydrographic basin. (3) Flysch zone of the Tarcău Nappe and Marginal Folds Nappe . (4) Eocene flysch and bituminous facies with Kliwa Sandstone, Oligocene-Lower Miocene. (5) Miocene sandstones and Kliwa Sandstone. (6) Faulted folds. (9) Paraschiv D. (1979).(M.S.)

454. (1) COMĂNEŞTI (oil). Similar to the deposit no. 453 Văsieşti.

455. (1) COMĂNEŞTI (brown coal; paralic; Miocene).(2) East

Carpathians. (3) Comăneşti posttectonic depression. (4) Supan Formation; Sarmatian. (5) Alternation of clays, siltic clays, silts, sandstones, sands, carbonaceous clays; Upper Bessarabian-Kersonian. (6) Beds. (7) A^i (11-28%); V^i (27-33%); S_t^i (1.3-3.2%); Q_i^i (3500-4400 kcal/kg). (8) Bright brown coal; telinite (1-5%); collinite (20-50%); cutinite (3-16%); fuzinite (1-8%); mineral substances (2-10%). (9) Micu M. et al. (1981) Arch.IGG; Nicolaescu V. et al.(1981) Arch. IPGG; Stroescu C. et al.(1979) Arch. IFLGS. (C.B.)

456. (1) LEORDA (brown coal; paralic; Miocene); Fig. 26. Similar to the deposit no.455 Comăneşti.

457. (1) LEORDA NORTH (brown coal; paralic; Miocene); Fig. 26. Similar to the deposit no.455 Comăneşti.

458. (1) VERMEŞTI (brown coal; paralic; Miocene); Fig.26. Similar to the deposit no. 455 Comăneşti.

459. (1) GALEON (brown coal; paralic; Miocene); Fig.26. Similar to the deposit no. 455 Comăneşti.

460. (1) SĂLĂTRUC (brown coal; paralic; Miocene); Fig.26. Similar to the deposit no. 455 Comăneşti.

461. (1) LAPOŞ (brown coal; paralic; Miocene); Fig.26. Similar to the deposit no. 455 Comăneşti.

462. (1) PODENI (brown coal; paralic; Miocene); Fig.26. Similar to the deposit no. 455. Comăneşti.

463. (1) PÎRÎUL NEGRU (brown coal; paralic; Miocene); Fig. 26. Similar to the deposit no. 455 Comăneşti.

464. (1) BRĂTULEŞTI-DOFTEANA (brown coal; paralic;Miocene); Fig.26. Similar to the deposit no. 455 Comăneşti.

465. (1)DĂRMĂNEŞTI (oil). Similar to the deposit no. 446 Moineşti-Foale.

466. (1) DOFTEANA BOGATA (oil). Similar to the deposit no. 446 Moineşti-Foale.

467. (1) DOFTĂNIŢA (oil). Similar to the deposit no. 446 Moineşti-Foale.

468. (1) SLĂNIC (oil). Similar to the deposit no. 446 Moineşti-Foale.

469. (1) PĂCURIŢA (oil). Similar to the deposit no. 453 Văsieşti.

470. (1) CERDAC (oil). (2) East Carpathians, Oituz Mts. Similar to the deposit no. 446 Moineşti-Foale.

471. (1) SLĂNIC FIERASTRĂU (oil). Similar to the deposit no. 446 Moineşti-Foale.

472. (1) VALEA TROTUŞULUI (oil shale; paralic; Oligocene-Lower Miocene). (2) Culmea Berzuntului Mts and Oituz Mts. (3) Tarcău Unit and Marginal Folds Unit. (4) Oligocene-Lower Miocene bituminous formation. (5) Alternation of bituminous clays, Kliwa-type arenites, bituminous marls and siliceous rocks (menilites); in places , calcareous rocks (Jaslo Limestones), tuffs and bentonites. (6) Beds. (7) A^i (66-89%); Q_i^i (600-1000 kcal/kg). (8) Clay minerals, detrital minerals and chemical and biochemical precipitation minerals. (9) Florea F. et al. (1980-1983) Arch. IPEG "Suceava"; Papiu C.V. et al. (1982) Arch. IGG. (C.B.)

473. (1) GURA SLĂNICULUI (salt; lagoonal; Lower Miocene). (2) East Carpathians, Trotuş Mts. (3) Marginal Folds Nappe, Oituz-Slănic Half-window. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite ± potash salts. (9) Gherasie I. et al. (1977) Arch. IPGG; Iorgulescu T. et al. (1961) Edit.Acad.RPR; Brana V. (1967) Edit.tehnică; Stoica C., Gherasie I. (1981) Edit.tehnică. (M.C.M.)

474. (1) PERCHIU (gypsum; lagoonal; Lower Miocene). (2) East Carpathians, Trotuş Subcarpathian zone. (3) Subcarpathian Nappe, Măgireşti-Perchiu Digitation. (4) Gypsum grey formation. (5) Grey clays. (6) Lenticular beds. (7) $CaSO_4$. (8) Gypsum.(9) Pîrvu G. (1964) Edit.tehnică; Săndulescu M. et al.(1975) Arch. IGG. (M.C.M.)

475. (1) TG.OCNA (salt; lagoonal; Lower Miocene). (2) East Carpathians, Trotuş Mts. (3) Marginal Folds Nappe , Oituz-Slănic Half-window. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Şee no. 473 Gura Slănicului. (M.C.M.)

476. (1) GĂLEANU (potash salts; lagoonal; Lower Miocene). (2) East Carpathians;Trotuş Mts. (3) Marginal Folds Nappe; Oituz Slănic Half-window. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,K,Mg,Ca. (8) Halite, polyhalite, sylvite , langbeinite, kainite, carnalite, anhydrite. (9) Rădulescu D. (1960); Iorgulescu T. et al. (1961); Brana V. (1967); Stoica C., Gherasie I.(1981); Gherasie I. (1977) Arch. IPGG. (M.C.M.)

477. (1) NISTOROAIA-TG.OCNA (gypsum; lagoonal; Lower Miocene). (2) East Carpathians, Trotuş Mts. (3) Subcarpathian Nappe, Măgireşti-Perchiu Digitation. (4) Gypsum grey formation. (5) Grey clays. (6) Lenticular bed. (7)-. (8) Gypsum. (9) Nedelcu L. et al. (1976) Arch. IGG; Săndulescu M. et al. (1977) Arch. IGG;

Micu M., in Lupu M. et al. (1983) Arch. IGG.(M.C.M.)

478. (1) TUTA-VARNIŢA (salt; lagoonal; Lower Miocene). (2) Moldavian Subcarpathians, Trotuş-Putna sector. (3) Subcarpathian Nappe, Măgireşti-Pechiu Digitation. (4) Salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Gherasie I. et al.(1977) Arch. IPGG; Stoica C.,Gherasie I. (1981).(M.C.M.)

479. (1) GĂICEANA (gases and condense). Similar to the deposit no. 480 Glăvăneşti.

480. (1) GLĂVĂNEŞTI (oil and gases). (2) Moldavian Plateau. (3) Foredeep (s.str.) (4) Sarmatian molasse formations. (5) Sandstones and sands. (6)Faulted dome. (9) Paraschiv D. (1979).(M.S.)

481. (1) HURUIEŞTI (oil and gases). Similar to the deposit no. 480 Glăvăneşti.

482. (1) CAŞIN (oil).(2) East Subcarpathians, Oituz Valley. (3) Subcarpathian Nappe, Pericarpathian Fault. (4) Badenian molasse formations. (5) Sandstones and sands. (6) Faulted anticline. (9) Paraschiv D. (1979). (M.S.)

483. (1) ADJUD (oil). Similar to the deposit no. 480 Glăvăneşti.

484. (1) HOMOCEA (oil and gases). Similar to the deposit no. 480 Glăvăneşti.

485. (1) IZVOARELE OITUZULUI (oil). (2) East Carpathians, Oituz Mts. Similar to the deposit no. 446 Moineşti-Foale.

486. (1) LEPŞA (oil and gases). (2) East Carpathians, Vrancea Mts. Similar to the deposit no. 446 Moineşti-Foale.

487. (1) PRALEA (lignite; limnic; Pliocene). (2) Moldavian Subcarpathians. (3) Pliocene zone. (4) Gravel complex; Pliocene. (5) Alternation of marly clays, sandy clays, sands, gravel. (6) Lenticular beds. (7)-.(8)-. (9) Motaş I. (1952) D.S.Com.Geol., XL; Macarovici N.(1952) Arch. IGG; Niţă P.(1952-1954) Arch. IPGG; Popovici V. (1953,1954). Arch. IFLGS. (C.B.)

488. (1) CÎMPURI VIZANTEA (oil). (2) East Subcarpathians, Suşiţa Valley. (3) Subcarpathian Nappe, Pericarpathian Fault.(4) Sarmatian molasse formations. (5) Sandstones and sands. (6)Faulted anticlines. (9) Paraschiv D. (1979). (M.S.)

489. (1) IZVOARELE PUTNEI (oil). (2) East Carpathians, Vrancea Mts. Similar to the deposit no. 446 Moineşti-Foale.

490. (1) GHELINŢA (OJDULA) (oil). (2) East Carpathians, Lăcăntului Mts. Similar to the deposit no. 446 Moineşti-Foale.

491. (1) LUNGA-OJDULA (peat; eutrophic; Quaternary). (2) Sf.Gheorghe Basin. (3) Audia Unit and Tarcău Unit. (4) Peat

horizon; Upper Quaternary. (5) Sandy clays, muds; Upper Holocene. (6) Bed. (7) -. (8) Light brown peat. (9) Pop E.(1960).(C.B.)

492. (1) COVASNA-ZAGON (iron; chemical precipitation in marine environment; Lower Hauterivian-Barremian). (2) East Carpathians; Buzău Mts. Similar to the deposit no. 427 Cîmpulung Moldovenesc-Sadova.

493. (1) COMANDĂU (peat; eutrophic; Quaternary). Similar to the deposit no. 491 Lunga-Ojdula.

494. (1) VALEA SĂRII (salt; lagoonal; Lower Miocene). (2) Moldavian Subcarpathians, Putna-Milcov sector. (3) Subcarpathian Nappe, Pietricica Digitation. (4) Lower Miocene salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Gherasie I. et al. (1977) Arch. IPGG; Stoica C.,Gherasie I. (1981). (M.C.M.)

495. (1) ŢEPU (oil and gases). (2) Moldavian Plateau. (3) Neogene cover of the North-Dobrogean Promontory. (4) Calcareous-sandy formations, Badenian, Sarmatian, Meotian. (5) Sandstones, sands, sandy limestones. (6) Faulted monocline. (9) Paraschiv D. (1979).(M.S.)

496. (1) MATCA (oil and gases). (2) Moldavian Plateau. (3) North-Dobrogean Promontory and its Neogene cover. (4) Carapelit Formation, Eocarboniferous, and calcareous-sandy formations, Badenian, Sarmatian, Meotian. (5) Sandstones, sands, limestones. (6) Fold-faults and faulted monocline. (9) Paraschiv D.(1979) .. (M.S.)

497. (1) CIUDALBI (gases). Similar to the deposit no. 495 Ţepu.

498. (1) INDEPENDENŢA (oil and gases). (2) Covurlului Hills. (3) Neogene cover of the North-Dobrogean Promontory. (4) Molasse-type formations, Sarmatian-Pliocene. (5) Sandstones and gravel. (6) Buried relief. (9) Paraschiv D. (1979). (M.S.)

499. (1) FRUMUŞIŢA (gases). Similar to the deposit no.498 Independenţa.

499. (1) FRUMUŞIŢA (Fe; hydrothermal; post-Lower Carboniferous ?). (2) Covurluiului Hills (north of Galaţi). (3)North-Dobrogean Promontory extension (Măcin Unit). (4) Boclugea Series (epimetamorphic); Lower Vendian (?)-Lower Cambrian. (5) Priopcea Quartzites; Vendian (?)-Lower Cambrian. (6) Stockwork and impregnation in tectonic breccia. (7) Fe; Cu,Pb. (8) Iron dolomite, hematite, magnetite ± pyrite, chalcopyrite, galena, quartz,chalcedony; goethite and hydrogoethite in the supergene zone. (9)

Crudu E. et al. (1972) Arch. IGG. (M.M.)

500. (1) JITIA (Pb,Zn; sedimentary of Sabkha type; Lower Miocene). (2) East Carpathians, Vrancea Mts, Rîmnicul Sărat spring area. (3) External flysch, Miocene zone. (4) Gypsiferous marly complex, Burdigalian. (5) Subfeldspathic sandstones + carbonate cement, subordinate quartz sandstones + clay cement, marls and clays. (6) Beds. (7) Pb,Zn; Tl,Mn,Ge,Co,Ni. (8) Pyrrhotine, pyrite, marcasite, sphalerite, galena, carbonates, gypsum, celestite. Succession : pyrrhotine, pyrite, marcasite, sphalerite, galena. (9) Biţă I. (1984) Arch. IPGG; Berbeleac I. (1984) Arch. IGG. (I.B.)

501. (1) BISOCA-SĂRILE (oil).(2) East Subcarpathians, Rîmnicu Sărat Valley. (3) Internal Foredeep. (4) Molasse formations, Sarmatian-Pliocene. (5) Sandstones and sands .(6) Diapir anticline. (9) Paraschiv D. (1979). (M.S.)

502. MÎNZĂLEŞTI-LOPĂTARI (halite; lagoonal; Lower Miocene). (2) Buzău Subcarpathians. (3) Subcarpathian Nappe, Măgireşti-Perchiu Digitation. (4) Lower Miocene salt formation. (5) Salifemous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Gherasie I. et al.(1977) Arch.IPGG; Săndulescu M. et al. (1978) Arch. IGG; Stoica C.,Gherasie I. (1981) Ed.tehnică. (M.C.M.)

503. (1) PĂTÎRLAGELE (diatomite; sedimentary - siliceous organogene rocks deposited in marine environment; Oligocene). (2) East Carpathians; Buzău Valley. (3) Flysch external zone; Tarcău Nappe - southern limb of the Văleni Spur. (4) Upper menilite horizon (Oligocene). (5) Menilitic schists (Oligocene).(6) Beds. (7) SiO_2 (78-85%); Fe_2O_3 (2-3%); Al_2O_3 (3-7%); CaO + MgO (less than 2%); P C (8-9%). (8) Diatoms (75-80%); quartz (5-10%); feldspar (3-5%); pyrite and coal (subordinate). (9) See no. 121 Filia.

504. VALEA BUZĂULUI-VALEA TELEAJEN (oil shale; paralic; Oligocene-Lower Miocene). (2) Buzău Mts. (3) Tarcău Unit. (4) Bituminous formation, Oligocene-Lower Miocene. (5) Alternation of clays, arenites, bituminous marls, menilites, tuffs and bentonites. (6) Beds. (7) A^i(60-80%); Q_i^i (600-900 kcal/kg). (8) Clay minerals, detrital minerals and chemical and biochemical precipitation minerals. (9) Alexandrescu Gr. (1956) Arch. IGG; Papiu V. et al. (1983) Arch. IGG. (C.B.)

505. (1) PLOPEASA (oil and gases). (2) East Subcarpathians, Buzău Valley hydrographic basin. (3) Internal Foredeep. (4) Pliocene molasse formations. (5) Sands and sandstones. (6)

Faulted monocline. (9) Paraschiv D. (1979). (M.S.)

506. (1) BERCA ARBĂNAŞI (oil and gases). (2) East Subcarpathians, Buzău Valley hydrographic basin. (3) Internal Foredeep. (4) Meotian molasse formations. (5) Sandstones and sands. (6) Faulted anticline. (9) Paraschiv D. (1979). (M.S.)

507. (1) BOLDU (gases). (2)North-east of the Romanian Plain. (3) External Foredeep. (4) Pliocene molasse formations. (5) Sands. (6) Flattened dome. (9) Paraschiv D. (1979). (M.S.)

508. (1) BOBOCU (gases). Similar to the deposit no. 507 Boldu.

509. (1) BALTA ALBĂ (gases). Similar to the deposit no. 507 Boldu.

510. (1) BĂRBUNCEŞTI (oil and gases). Similar to the deposit no. 506 Berca Arbănaşi.

511. (1) SĂRATA MONTEORU (oil and gases). (2) East Subcarpathians, Nişcov Valley. (3) Internal Foredeep. (4) Sarmatian and Meotian molasse formations. (5) Sands and sandstones. (6) Faulted anticline. (9) Paraschiv D. (1979). (M.S.)

512. (1) ROŞIORU (gases). Similar to the deposit no. 507 Boldu.

513. (1) GHERGHEASA (gases). Similar to the deposit no.507 Boldu.

514. (1) CERAŞU (gypsum; lagoonal; Lower Miocene). (2) Wallachian Subcarpathians. (3) Tarcău Nappe, Slănic Syncline. (4) Lower gypsum horizon. (5) Grey clays. (6) Beds. (7)-.(8) Gypsum (85-94%) ± anhydrite. (9) Pîrvu G.(1964) Edit.tehnică; Brana V., (1967) Edit.tehnică. (M.C.M.)

515. (1) MÎNECIU-UNGURENI (gypsum; lagoonal; Lower Miocene). Similar to the deposit no. 514 Ceraşu.

516. (1) DRAJNA (gypsum; lagoonal; Lower Miocene). (2) Wallachian Subcarpathians. (3) Tarcău Nappe, Drajna Syncline. (4-9) Similar to the deposit no. 514 Ceraşu.

517. (1) SURANI CĂRBUNEŞTI (oil and gases). (2) East Subcarpathians, Buzău Valley hydrographic basin. (3) Internal Foredeep(diapir folds zone). (4) Bituminous facies with Kliwa Sandstone, Oligocene-Lower Miocene, molasse formations,Miocene-Pliocene. (5) Kliwa Sandstones, sandstones and sands. (6) Faulted anticline with stratigraphic traps. (9) Paraschiv D. (1979).(M.S.)

518. (1) POSEŞTI (oil). Similar to the deposit no. 517 Surani Cărbuneşti.

519. (1) BISCENI (oil and gases). Similar to the deposit no.

517 Surani Cărbuneşti.

520. (1) APOSTOLACHE (oil). Similar to the deposit no. 521 Matiţa.

521. (1) MATIŢA (oil and gases). (2) East Subcarpathians, Cricov Valley. (3) Molasse formations, Meotian and Pontian. (5) Sandstones and sands. (6) Faulted synclinal limb. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

522. (1) PĂCUREŢI (oil and gases). (2) East Subcarpathians, Cricov Valley. (3) Internal Foredeep (diapir folds zone). (4) Molasse formations, Pliocene. (5) Sands and sandstones. (6)Faulted diapir anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

523. (1) SLĂNIC (halite;lagoonal; Middle Miocene). (2) Wallachian Subcarpathians. (3) Tarcău Nappe, Slănic Syncline.(4) Middle Miocene(Badenian) salt formation. (5) Saliferous clays.(6) Diapir. (7) Na,Cl. (8) Halite. (9) Iorgulescu T. et al. (1961)Edit. Acad.RPR; Brana V.(1967);Stoica C., Gherasie I. (1981) Edit. tehnică; Gherasie I. et al.(1977) Arch. IPGG. (M.C.M.)

524. (1) PIATRA VERDE (gypsum;lagoonal;Middle Miocene).(2) Wallachian Subcarpathians.(3)Tarcău Nappe,Slănic Syncline.(4)Evaporite level, Middle Miocene(Badenian).(5)Clays.(6)Lenticular beds. (7)-.(8) Gypsum. (9) Nedelcu I. et al. (1976) Arch.IPGG.(M.C.M.)

525. (1) VĂRBILĂU-PODUL URSULUI (sulphur; bacterian diagenetic, biochemical precipitation under the influence of sulphur-reducing bacterias; diagenetic recrystallization;Aquitanian). (2) Wallachian Subcarpathians, Vărbilău Valley. (3) East-Carpathian Flysch Nappes zone; northern limb of the Trestioara Basin. (4) Cornu Beds; lower gypsum horizon (Aquitanian). (5)Alterations of clays,marls,gypsiferous sandstones and marly limestones with sulphur nests (Aquitanian). (6) Nests.(7)-.(8) Native sulphur, gypsum, clay minerals. (9) Brana V.(1967). (S.R.)

526. (1) RUNCU BUŞTENARI (oil and gases). (2) East Subcarpathians, Teleajen Valley basin. (3) Contact of the Tarcău Nappe with the Internal Foredeep. (4) Bituminous facies with Kliwa Sandstone, Oligocene-Lower Miocene, molasse formations, Lower Miocene and Meotian. (5) Kliwa Sandstone (Buştenari), sandstones and sands. (6) Postnappe reversed fault. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

527. (1) CÎMPINA GURA DRĂGĂNESII (oil).(2) East Subcarpathians,Prahova Valley.Similar to the deposit no. 526 Runcu Buştenari.

528. (1) BĂICOI ŢINTEA (oil and gases). (2) East Subcarpathians,Prahova Valley hydrographic basin.(3) Internal Foredeep(diapir

folds zone). (4) Sarmatian-Pliocene molasse formations. (5) Sandstones and sands (Dräder in Dacian. (6) Open diapir anticline. (7) -. (8) -. (9) Paraschiv D. (1979). (M.S.)

529. SILIŞTEA MĂGURENI (oil). Similar to the deposit no. 528 Băicoi Ţintea.

530. FLOREŞTI (oil and gases). Similar to the deposit no. 528 Băicoi Ţintea.

531. BOLDEŞTI (oil and gases). (2) East Carpathians, Prahova Valley hydrographic basin. (3) Internal Foredeep (diapir folds zone). (4) Sarmatian-Pliocene molasse formations. (5) Sandstones and sands. (6)Closed diapir anticline. (7)-. (8) -. (9) Paraschiv D.(1979). (M.S.)

532. MĂLĂEŞTI (oil and gases). (2) East Subcarpathians, Teleajen Valley basin. (3) Internal Foredeep (diapir folds zone). (4) Pliocene molasse formations. (5) Sandstones and sands. (6) Fold-scale (exaggerated diapir). (7)-. (8)-. (9) Paraschiv D.(1979) (M.S.)

533. SCĂIOŞI (oil).(2) East Subcarpathians, Teleajen Valley basin. (3) Internal Foredeep (diapir folds zone). (4) Meotian molasse formations. (5) Sandstones and sands.(6) Faulted anticline. (7)-. (8)-. (9) Paraschiv D. (1979). (M.S.)

534. COPĂCENI-PRĂDĂL SĂRARI (oil and gases). Similar to the deposit no. 526 Buştenari-Runcu.

535. PODENII VECHI (oil and gases). Similar to the deposit no. 520 Apostolache.

536. TĂTARU (oil). Similar to the deposit no. 537 Ceptura-Urlaţi.

537. CEPTURA URLAŢI (oil and gases). (2) East Subcarpathians, Cricovul Sărat Valley. (3) Internal Foredeep (diapir folds zone). (4)Meotian molasse formations. (5) Sandstones and sands. (6) Closed diapir anticline. (7) -. (8) -. (9) Paraschiv D.(1979). (M.S.)

538. CHIŢORANI ORLEA (oil and gases). Similar to the deposit no. 537 Ceptura-Urlaţi.

539. BOŢEŞTI (oil). (2) East Subcarpathians, Dîmboviţa-Argeş Interfluve. (3) Internal Foredeep. (4) Pucioasa Facies, Pliocene molasse. (5) Micaceous sandstones (Oligocene), sandstones and sands (Meotian). (6) Fractured brachianticline. (7)-.(8)-. (9) Paraschiv D. (1979).(M.S.)

540. CEPTURA (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Wallachian Zone, Ceptura-Urlaţi Anticline.

Carbonaceous complex, Upper Pliocene. (5) Alternation of marls, sandy marls, sands, carbonaceous clays, Dacian-Romanian. (6)Beds. (7) U_t (22-28%); A_{anh}(22-41%); V^i(55-58%); Q_i^i (2100-3400 kcal/kg). (8) Soft dull coal; textinite (27%), ulminite (12%), attrinite (21%), fuzinite(7%), clay minerals (19%). (9) Motaş I. et al. (1977) ; Popovici V. (1958) Arch. IFLGS; Vîlceanu E. et al.(1963) Arch.Comb.Cărb.,Ploieşti. (C.B.)

541. (1) ROTARI (lignite; limnic; Pliocene). Similar to the deposit no. 540 Ceptura.

542. (1) SINAIA (gases). (2) Romanian Plain (north-eastern zone). (3) External Foredeep. (4) Pliocene(Meotian) molasse formations. (5) Sandstones and sands. (6) Faulted monocline. (7)-.(8)-(9) Paraschiv D.(1979). (M.S.)

543. (1) BĂRĂITARU (gases). (2) Romanian Plain (north-eastern zone). (3) External Foredeep. (4) Sarmatian-Pliocene molasse formation. (5) Sandstones and sands. (6) Faulted monocline. (7)-. (8)-. (9) Paraschiv D. (1979). (M.S.)

544. (1) PLOPU (oil). (2) Eastern Romanian Plain. (3) Moesian Platform, External Foredeep. (4) Meotian molasse formations. (5) Limestones, sandstones, sands. (6) Fractured monocline. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

545. (1) OPRIŞENEŞTI (oil and gases). (2) Eastern Romanian Plain. (3) Moesian Platform, External Foredeep. (4) Platform cover (Lower Cretaceous), Sarmatian-Pliocene formations. (5) Limestones, sandstones, sands. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

546. (1) BORDEI VERDE EAST (oil). (2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Sandstones and sands (Meotian). (6) Fractured hemianticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

547. (1) LIŞCOTEANCA (oil and gases). Similar to the deposit no. 546 Bordei Verde East.

548. (1) BORDEI VERDE WEST (oil and gases). Similar to the deposit no. 546 Bordei Verde East.

549. (1) FILIU (oil). (2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Sandy limestones (Sarmatian).(6) Fractured hemianticline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

550. (1) STĂNCUŢA (oil). Similar to the deposit no. 546 Bordei Verde East.

551. (1) BERTEŞTI (oil and gases). Similar to the deposit no. 546 Bordei Verde East.

552. (1) VICTORIA (gases). Similar to the deposit no. 546 Bordei Verde East.

553. (1) JUGUREANU (oil and gases). (2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Glauconitic sandstones (Albian), limestones and limy sandstones (Senonian), limestones and sandstones (Sarmatian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

554. (1) ODÎLENI (gases). Similar to the deposit no. 553 Jugureanu.

555. (1) PADINA (oil and gases). (2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Glauconitic sandstones (Albian), limestones and calcareous sandstones (Senonian), limestones and sandstones (Sarmatian), sandstones (Meotian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

556. (1) NICULEŞTI (gases). (2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Moesian sandstones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

557. (1) CHIOCHINA AMARA (gases). Similar to the deposit no. 556 Niculeşti.

558. (1) COLELIA(oil and gases). Similar to the deposit no. 555 Padina.

559. (1) LIPĂNEŞTI (oil).(2) Eastern Romanian Plain. (3) Moesian Platform. (4) Platform cover. (5) Limestones(Lower Cretaceous).(6) Fractured monocline.(7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

560. (1) BRĂGĂREASA (oil and gases).(2) Eastern Romanian Plain. (3) Moesian Platform (External Foredeep).(4) Platform cover and molasse. (5) Limestones and calcarenites (Lower Cretaceous),chalky limestones and limy sandstones (Senonian), sandstones snd sands (Sarmatian and Meotian). (6) Buried relief and fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

561. (1) GÎRBOVI (gases). Similar to the deposit no. 567 Ileana.

562. (1) MALU (oil and gases). Similar to the deposit no. 567 Ileana.

563. (1) OREZU (gases). Similar to the deposit no. 567 Ileana.

564. (1) URZICENI (oil and gases). (2) Eastern Romanian Plain. (3) Moesian Platform (External Foredeep). (4) Platform cover and molasse. (5) Limestones and calcarenites (Lower Cretaceous), sandstones and sands (Sarmatian + Meotian).(6) Fractured

monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

565. (1) MĂNĂSIA (oil). Similar to the deposit no. 559 Lipăneşti.

566. (1) FIERBINŢI (gases). Similar to the deposit no. 567 Ileana.

567. (1) ILEANA (gases). (2) Eastern Romanian Plain. (3) Moesian Platform. (4)Platform cover. (5) Sandstones and sands (Sarmatian and Meotian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

568. (1) COLIBAŞI (DÎMBOVIŢA) (oil and gases). (2) East Subcarpathians, Cricov Valley. (3) Internal Foredeep (diapir folds zone). (4) Meotian molasse formations. (5) Sandstones and sands. (6) Fold-scale (overthrow diapir). (7)-.(8)-.(9)Paraschiv D. (1979). (M.S.)

569. (1) OCHIURI (oil and gases). Similar to the deposit no. 568 Colibaşi (Dîmboviţa).

570. (1) OCNIŢA (oil and gases). Similar to the deposit no. 568 Colibaşi (Dîmboviţa).

571. (1) FILIPEŞTII DE PĂDURE (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Vallachian zone,Siliştea Dealului Anticline. (4) Productive complex, Upper Pliocene. (5) Alternation of sandy marls, fine sands, sandy clays, carbonaceous clays, Dacian-Romanian. (6) Beds. (7) V^i(17%); S^i_c(0.8%); Q^i_i(1800-2500 kcal/kg). (8) Soft dull coal; textinite (3-7%), ulminite (7-20%), attrinite (10-30%), cutinite(1-16),mineral substances(8-14%). (9) Coica A. et al. (1968) Arch.Comb.Cărb.,Ploieşti;Motaş I. et al.(1977) Arch. IGG. (C.B.)

572. (1) LORENI (oil and gases). (2) East Subcarpathians, Cricov Valley. (3) External Foredeep (diapir folds zone). (4) Paleogene flysch formations and Miocene and Pliocene molasse. (5) Pucioasa Facies (Oligocene), sandstones (Lower Miocene), sandstones and sands (Meotian and Dacian-Drădeţ). (6) Diapir anticline (overthrow diapir). (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

573. (1) VALEA REŞCA (oil and gases). Similar to the deposit no. 568 Colibaşi.

574. (1) LĂCULEŢE-GLODENI (lignite; limnic; Pliocene). Similar to the deposit no. 578 Şotînga-Mărgineanca.

575. (1) PUCIOASA (gypsum; lagoonal; Lower Miocene). (2) East Subcarpathians; Ialomiţa Valley. (3) Tarcău Nappe. (4)Gypsum grey formation.(5) Grey clays. (6) Lenticular bed. (7)-.(8)Gypsum (79-83%). (9) Pîrvu C.(1964) Edit.tehnică; Nedelcu I. et al.(1976)

Arch. IPGG. (M.C.M.)

576. (1) LĂCULEȚE (gypsum; lagoonal; Lower Miocene). Similar to the deposit no. 575 Pucioasa. (M.C.M.)

577. (1) PUCIOASA (sulphur; bacterian-diagenetic; biochemical precipitation under the influence of sulphur-reducing bacteria; diagenetic recrystallization; Miocene). (2) East Subcarpathians; Pucioasa Depression. (3) East-Carpathian Flysch Nappes zone; Cîmpina-Valea Lungă-Brănești Syncline. (4) Bituminous complex (Miocene). (5) Crystal aggregates and sulphur nodules in blackish marls or marly-limestones (Miocene). (6) Irregular beds and lenses. (7) S (10-25%). (8) Native sulphur, gypsum (secondary), celestite, calcite, clay minerals, quartz . (9) Brana V.(1967) Edit.tehnică (S.R.)

578. (1) ȘOTÎNGA-MĂRGINEANCA (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Wallachian Zone, Doicești-Aninoasa Anticline. (4) Productive complex, Dacian-Romanian. (5) Alternation of marls, clays, sands. (6) Beds. (7) V^{i}(24%); q_{i}^{i}(2200 kcal/kg). (8) Soft dull coal; textinite (5%), ulminite (20%), attrinite(40%), mineral substances(20%)(9) Motaș I. (1952) D.S. Inst.Geol., XXXVI; Nicolaescu V. et al.(1975) Arch. IPGG. (C.B.)

579. (1) VULCANA PANDELE (lignite; limnic; Pliocene). Similar to the deposit no. 578 Șotînga-Mărgineanca.

580. (1) BRĂNEȘTI-IZVOARELE (lignite; limnic; Pliocene). Similar to the deposit no. 578 Șotînga-Mărgineanca.

581. (1) ȘOTÎNGA DOICEȘTI (oil and gases). (2) East Subcarpathians, Ialomița Valley. (3) Internal Foredeep (diapir folds zone). (4) Meotian molasse formations. (5) Sandstones and sands. (6) Fold-scale (overthrow diapir). (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

582. (1) ANINOASA (oil and gases). (2) East Subcarpathians, Ialomița Valley. (3) Internal Foredeep (diapir folds zone). (4) Meotian molasse formations. (5) Sandstones and sands. (6) Fractured syncline, stratigraphic unconformity. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

583. (1) RĂZVAD (oil). (2) East Subcarpathians, Ialomița Valley. (3) Internal Foredeep (diapir folds zone). (4) Lower Miocene and Pliocene (Meotian and Dacian) molasse formations. (5) Sandstones and sands. (6) Closed diapir anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

584. TEIȘ (oil and gases). (2) East Subcarpathians, Ialomița Valley. (3) Internal Foredeep (diapir folds zone). (4) Lower Mio-

cene and Pliocene (Meotian and Dacian) molasse formations. (6) Diapir anticline and stratigraphic unconformity (Pliocene/Lower Miocene). (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

585. (1) MĂRGINENI (oil and gases). (2) East Subcarpathians, Prahova Valley. (3) Internal Foredeep (diapir folds zone). (4) Sarmatian-Pliocene (Meotian and Dacian) molasse formations. (5) Sandstones and sands. (6) Cryptodiapir anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

586. (1) ARICEŞTI (oil and gases). Similar to the deposit no. 585 Mărgineni.

587. (1) MÎZGANA (Ti, Zr ± Au; alluvial; Pliocene-Quaternary). (2) Getic Piedmont. (3) Getic Depression. (4) Romanian formations, Cîndeşti Gravel, terraces, alluvia, and alluvial fans. (5) Sedimentary rocks, poorly consolidated, and sediments. (6) Disseminations and lenses. (7) Ti, Zr ± Au, Fe, V, Hg. (8) Titanomagnetite, ilmenite, rutile, martite, hematite, zircon, gold (free, pelicular, included). (9) Ungureanu B. et al. (1980-1982); Rădulescu I. et al. (1983) Arch. IGG. (V.A.)

588. (1) TINOSU-BRAZI (gases). (2) East Subcarpathians, Prahova Valley. (3) Internal Foredeep (diapir folds zone). (4) Meotian and Dacian molasse formations. (5) Sandstones and sands. (6) Brachianticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

589. (1) MĂNEŞTI VLĂDENI (gases). Similar to the deposit no. 588 Tinosu-Brazi.

590. (1) GHEBOAIA FINTA (gases). Similar to the deposit no. 588 Tinosu-Brazi.

591. (1) BUCŞANI (oil and gases). (2) East Subcarpathians, Ialomiţa Valley. (3-9) Similar to the deposit no. 585 Mărgineni.

592. (1) BRĂTEŞTI (gases). (2) East Subcarpathians, Dîmboviţa Valley. (3) Internal Foredeep (diapir folds zone). (4) Pliocene (Dacian) molasse formations. (5) Sandstones and sands. (6) Cryptodiapir dome. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

593. (1) GURA ŞUŢII (gases). (2) East Subcarpathians, Dîmboviţa Valley. (3-9) Similar to the deposit no. 588 Tinosu-Brazi.

594. (1) VIFORÎTA (oil and gases). Similar to the deposit no. 584 Teiş.

595. (1) ŞUŢA SEACĂ (oil and gases). (2) East Subcarpathians, Dîmboviţa Valley. (3) Internal Foredeep. (4) Lower Miocene, Meotian and Dacian molasse formations. (5) Sandstones, sands. (6) Fold-scales unconformably overlain by Pliocene molasse (brachianticline). (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

596. (1) DRAGOMIREŞTI (oil and gases). (2) East Subcarpathians, Dîmboviţa Valley. (3-9) Similar to the deposit no. 584 Teiş.

597. (1) LUDEŞTI (oil and gases). (2) East Subcarpathians, Dîmboviţa-Argeş Interfluve. (3) Internal Foredeep. (4) Meotian molasse. (5) Sandstones and sands. (6) Fractured anticline(pre-Pliocene unconformity). (7)-.(8)-.(9) Paraschiv D.(1979).(M.S.)

598. (1) BOGAŢI (oil). Similar to the deposit no. 597 Ludeşti.

599. (1) GLIMBOCEL (oil). (2) East Subcarpathians, Dîmboviţa-Argeş Interfluve. (3-9) Similar to the deposit no. 595 Şuţa Seacă.

600. (1) LEORDENI (oil). Similar to the deposit no. 595 Şuţa Seacă.

601. (1) BILCIUREŞTI (gases). (2) Northern Romanian Plain, Ialomiţa Valley. (3) External Foredeep. (4) Meotian molasse formations. (5) Sandstones and sands. (6) Sandy lens. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

602. (1) PERIŞ (oil and gases). (2) Northern Romanian Plain, Mostiştei Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover and molasse . (5) Limestones (Lower Cretaceous), sandstones and sands (Sarmatian and Meotian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979).(M.S.)

603. (1) MOARA VLĂSIEI (gases). (2) Northern Romanian Plain. (3) External Foredeep. (4) Meotian and Dacian molasse formations. (5) Sandstones and sands. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

604. (1) PASĂREA (gases). Similar to the deposit no. 603 Moara Vlăsiei.

605. (1) SERDARU (oil and gases). (2) Northern Romanian Plain, Dîmboviţa Valley. (3) Moesian Platform. (4) Platform cover. (5) Eocretaceous limestones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

606. (1) TITU (oil and gases). Similar to the deposit no. 605 Serdaru.

607.(1)BRÎNCOVEANU (oil and gases). (2) Northern Romanian Plain, Dîmboviţa Valley. (3) Moesian Platform. (4) Platform cover. (5) Albian sandstones, Eocretaceous limestones and calcarenites. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

608.(1) PETREŞTI-CORBII MARI-POIANA (oil and gases). (2) Northern Romanian Plain, Argeş Valley. (3) External Foredeep

(Moesian Platform). (4) Platform cover and molasse. (5)Pelagic and reefal limestones,Eocretaceous, sandstones and limestones, Sarmatian. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

609. (1) BROŞTENI (gases). (2) Northern Romanian Plain, Argeş Valley. (3) External Foredeep. (4) Sarmatian molasse formations. (5) Sandstones and sands. (6) Fractured monocline. (7)-. (8)-.(9) Paraschiv D.(1979). (M.S.)

610. (1) CROITORI (oil). (2) Northern Romanian Plain, Argeş Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover. (5) Albian sandstones. (6) Fractured monocline. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

611. (1) DRĂGHINEASA-VIŞINA (oil). (2) Northern Romanian Plain, Argeş Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover and molasse formations. (5) Limestones (Malm-Neocomian and Albian), sandstones (Sarmatian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

612. (1) VULTUREANCA (oil and gases). (2) Northern Romanian Plain, Argeş Valley. (3) External Foredeep(Moesian Platform).(4) Platform cover. (5) Limestones (Malm-Neocomian and Albian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

613. (1) GLIGANU (oil). (2)Northern Romanian Plain, Argeş Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover and molasse formations. (5) Limestones (Neocomian and Albian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv (1979). (M.S.)

614. (1) HUMELE (oil). (2) Northern Romanian Plain, Teleorman Valley. (3) Moesian Platform. (4) Platform cover. (5) Eocretaceous limestones. (6) Fractured monocline and lithostratigraphic variations. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

615. (1) RECEA (oil and gases). (2) Northern Romanian Plain, Teleorman Valley. (3) Moesian Platform. (4) Platform cover. (5) Albian limestones. (6) Fractured monocline and lithostratigraphic variations. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

616. (1) DUMBRAVA (oil). (2) Northern Romanian Plain,Teleorman Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover and molasse formations. (5) Limestones (Lower Cretaceous and Albian) , sandstones and sands (Sarmatian). (6) Fractured monocline and lithostratigraphic variations. (7).-.(8)-. (9) Paraschiv D. (1979). (M.S.)

617. (1) GLOGOVEANU (oil). Similar to the deposit no. 614

Humele.

618. (1) CORBII MARI SOUTH(gases). (2) Northern Romanian Plain, Neajlov Valley. (3) External Foredeep. (4) Molasse formations. (5) Sarmatian sandstones. (6) Buried relief. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

619. (1) STOENEŞTI-CĂSCIOARELE (oil). (2) Northern Romanian Plain, Argeş Valley. (3-9) Similar to the deposit no. 618 Corbii Mari South.

620. (1) BOLINTIN DEAL (oil). (2) Romanian Plain,Dîmboviţa Valley. (3-9) Similar to the deposit no. 618 Corbii Mari South.

621. (1) COZIENI (gases). (2) Romanian Plain, Colentina Valley. (3) Moesian Platform. (4) Platform cover. (5) Sarmatian and Meotian sandstones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

622. (1) POSTĂVARI (gases). (2) Romanian Plain,Colentina Valley. (3) Moesian Platform. (4) Platform cover. (5) Meotian sandstones. (6) Fractured monocline. (7)-.(8)-, (9) Paraschiv D. (1979). (M.S.)

623. (1) BĂLĂCEANCA (oil and gases). Similar to the deposit no. 621 Cozieni.

624. (1) CĂŢELU (oil). (2) Romanian Plain, Colentina Valley. (3) Moesian Platform. (4) Platform cover. (5) Sarmatian sandstones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

625. (1) BERCENI (oil and gases). (2) Romanian Plain,Dîmboviţa Valley. (3-9) Similar to the deposit no. 621 Cozieni.

626. (1) COPĂCENI (gases). (2) Romanian Plain, Argeş Valley. (3-9) Similar to the deposit no. 621 Cozieni.

627. (1) JILAVA (oil). (2) Romanian Plain, Argeş Valley. (3)Moesian Platform.(4) Platform cover. (5)Limy sandstones, Sarmatian. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979) (M.S.)

628. (1) POPEŞTI LEORDENI (oil and gases). (2) Romanian Plain, Dimboviţa Valley. (3) Moesian Platform. (4) Platform cover. (5) Meotian sandstones. (6) Fractured monocline. (7)-. (8)-.(9) Paraschiv D. (1979). (M.S.)

629. (1) DUMITRANA (oil). (2) Romanian Plain, Argeş Valley. (3) Moesian Platform(4)Platform cover. (5) Sarmatian sandstones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

630. (1) VALEA DÎMBOVIŢA-VALEA NEAJLOV (lignite; limnic; Pliocene).(2) Romanian Plain. (3) Dacic Basin, Moesian Platform. (4) Carbonaceous complex, Dacian. (5) Alternation of clays, sandy

clays and sands. (6) Beds. (7)-.(8)Impure, soft dull coal. (9) Bandrabur T. et al.(1982) Arch. IGG; Cojocaru L. et al.(1982); Ghica E.(1980) Arch. IFLGS. (C.B.)

631. (1) GRĂDINARI-DUMITREŞTI (oil). (2) Romanian Plain, Argeş Valley. (3) Moesian Platform. (4) Platform cover. (5) Sandstones and limestones, Sarmatian. (6) Fractured monocline. (7)-. (8)-. (9) Paraschiv D. (1979). (M.S.)

632. (1) BRAGADIRU (oil and gases).Similar to the deposit no. 631 Grădinari-Dumitreşti.

633. (1) BUTURUGENI (oil). (2-4)Similar to the deposit no. 631 Grădinari-Dumitreşti. (5) Meotian sands. (6-9) Similar to the deposit no.631 Grădinari-Dumitreşti.

634. (1) NOVACI (oil and gases). (2) Romanian Plain,Neajlov Valley. (3-9) Similar to the deposit no. 631 Grădinari-Dumitreşti.

635. (1) GORNENI (gases). (2) Romanian Plain, Neajlov Valley. (3-4) Similar to the deposit no. 631 Grădinari-Dumitreşti. (5) Meotian sands. (6-9) Similar to the deposit no. 631 Dumitreşti-Dumitrana.

636.(1) BĂLĂRIA (oil and gases). Similar to the deposit no. 637 Videle.

637. (1) VIDELE (oil and gases). (2) Romanian Plain, Glavacioc Valley. (3) Moesian Platform. (4) Platform cover. (5) Limestones (Lower Cretaceous),sands and sandstones (Sarmatian and Meotian). (6) Monocline and buried monocline, fractured. (7)-. (8)-.(9) Paraschiv D. (1979). (M.S.)

638. (1) MÎRŞA (gases). (2-4) Similar to the deposit no. 637 Videle. (5) Sands and sandstones, Sarmatian and Meotian. (6-9) Similar to the deposit no. 631 Grădinari-Dumitreşti.

639. (1) CARTOJANI (oil and gases). (2) Romanian Plain, Dîmbovnic Valley. (3) Moesian Platform. (4) Platform cover. (5) Sands and sandstones, Sarmatian and Meotian. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

640. (1) COŞOAIA (oil and gases). (2) Romanian Plain, Glavacioc Valley. (3-9) Similar to the deposit no. 631 Grădinari-Dumitreşti.

641. (1) VÎRTEJU (gases). (2) Romanian Plain, Teleorman-Glavacioc Interfluve. (3-4) Similar to the deposit no. 639 Cartojani. (5) Triassic sandstones. (6-9) Similar to the deposit no. 639 Cartojani.

642. (1) BLEJEŞTI (oil and gases). (2) Romanian Plain, Teleorman-Glavacioc Interfluve. (3-9) Similar to the deposit no.

637 Videle.

643. (1) TALPA (oil and gases). (2) Romanian Plain, Teleorman-Glavacioc Interfluve. (3-9) Similar to the deposit no. 637 Videle.

644. (1) PREAJBA (oil and gases). (2) Romanian Plain, Dîmbovnic Valley. (3) Moesian Platform. (4) Platform cover. (5) Sandstones, Albian, sands and sandstones, Sarmatian. (6) Fractured, buried relief. (7)-. (8)-. (9) Paraschiv D.(1979). (M.S.)

645. (1) GLAVACIOC (oil). (2) Romanian Plain, Glavacioc Valley. (3) Moesian Platform. (4) Platform cover. (5) Limestones, calcarenites, sandstones, Albian. (6) Faulted monocline. (7)-. (8)-.(9) Paraschiv D. (1979). (M.S.)

646. (1) ŞELARU (oil). Similar to the deposit no. 647 Stefan cel Mare.

647. (1) ŞTEFAN CEL MARE (oil). (2) Romanian Plain, Teleorman-Dîmbovnic Interfluve. (3) Moesian Platform. (4) Platform cover. (5) Limestones (Neocomian), sandstones, sandy limestones and sands (Albian), sandstones and sands (Sarmatian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

648. (1) IZVORU (oil). (2) Romanian Plain, Teleorman Valley. (3-9) Similar to the deposit no. 647 Ştefan cel Mare.

649. (1) STRÎMBENI-CĂLDĂRARU (oil and gases). (2) Romanian Plain, Teleorman Valley. (3) Moesian Platform. (4) Platform cover. (5) Limestones, sandy limestones, glauconitic sandstones(Albian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979).(M.S.)

650. (1) SILIŞTEA-RÎCA-GUMEŞTI (oil and gases). Similar to the deposit no. 649 Strîmbeni-Căldăraru.

651. (1) POPEŞTI-PALANGA-TĂTĂRĂŞTI (oil and gases). Similar to the deposit no. 649 Strîmbeni-Căldăraru.

652. (1) ONCEŞTI (Ti,Zr ± Au; alluvial; Pliocene-Quaternary). (2) Getic Piedmont. (3) Getic Depression. (4) Romanian formation, Cîndeşti Gravel, terrases, alluvia and alluvial fans. (5) Sedimentary rocks and sediments. (6) Disseminations, lenses. (7) Ti, Zr ± Au,Fe,V. (8) Titanomagnetite, ilmenite, martite, rutile, zircon, hematite, gold (free, pelicular, included). (9) Ungureanu B. et al. (1981-1982); Rădulescu I. et al.(1983) Arch. IGG.(V.A.)

653. (1) BACIU (oil and gases). (2) Romanian Plain, Teleorman-Dîmbovnic Interfluve. (3) Moesian Platform. (4) Platform cover. (5) Limestones (Lower Cretaceous), sandstones and sands (Sarmatian). (6) Fractured paleorelief. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

654. (1) HÎRLEŞTI (oil and gases). (2) Romanian Plain, Teleorman Valley. (3-9) Similar to the deposit no. 649 Strîmbeni-Căldăraru.

655. (1) BRĂTĂŞANI (oil and gases). (2) Romanian Plain, Vedea-Teleorman Interfluve. (3-9) Similar to the deposit no. 649 Strîmbeni-Căldăraru.

656. (1) TOPOLOVENI (oil and gases). Similar to the deposit no. 669. Călineşti-Oarja.

657. (1) SCHITU GOLEŞTI (lignite; limnic; Pliocene). (2) Zone of the Subcarpathian Hillocks. (3) Dacic Basin, Getic Zone. (4) Clay-marly-carbonaceous complex (Pontian) and sandy-clay complex (Dacian). (5) Alternation of marls, clays, sands, gravel. (6) Beds. (7) U_t (30%); V^i(56%); Q_i^i (2000-3000 kcal/kg). (8)Soft dull coal; textinite (5%), ulminite (20%), attrinite (25%). (9) Isac M. et al.(1976)Arch. IFLGS; Motaş I. et al.(1978) Arch.IGG; Protescu O.(1926)St.tehn.econ.,III; Rarinca El. (1959) St.tehn. econ.,A,5. (C.B.)

658. (1) CAPUL PISCULUI (lignite;limnic; Pliocene). Similar to the deposit no. 657 Schitu Goleşti.

659. (1) COTEŞTI ANINOASA (lignite; limnic; Pliocene). Similar to the deposit no. 657 Schitu Goleşti.

660. (1) RÎUL BRATIA-RÎUL DOAMNEI (lignite; limnic;Pliocene). Similar to the deposit no. 657 Schitu Goleşti.

661. (1) STĂNEŞTI CORBENI (gypsum, anhydrite; lagoonal; Lower Miocene). (2) Getic Piedmont. (3) Getic Depression. (4) Lower gypsum horizon. (5) Grey clays. (6) Beds. (7)-. (8) Gypsum, anhydrite (below 100 m deep). (9) Pîrvu G.(1964).Edit.tehnică; Brana V.(1967); Nedelcu I.(1976)Arch. IPGG. (M.C.M.)

662. (1) VALEA ARGEŞ-VALEA SLĂNIC (lignite; limnic; Pliocene). Similar to the deposit no. 657 Schitu Goleşti.

663. (1) GEMENEA (Ti,Zr ± Au; alluvial; Pliocene-Quaternary). Similar to the deposit no. 652 Onceşti.

664. (1) COLIBAŞI (ARGEŞ) (oil and gases). (2) South Subcarpathians, Argeş Valley. (3) Internal Foredeep. (4) Molasse formations. (5) Sandstones (Lower Miocene), sandstones and sands (Pontian). (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

665. (1) MERIŞANI-DRĂGANU (oil and gases). (2) South Subcarpathians, Argeş Valley. (3) Internal Foredeep. (4) Molasse formations. (5) Sandstones, Oligocene and Lower Miocene. (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv(1979). (M.S.)

666. (1) SĂPUNARI (oil and gases). (2) South Subcarpathians, Argeş-Topolog Interfluve. (3) Internal Foredeep(Subcarpathian Nappe). (4) Paleogene sandy-marly formations. (5) Sandstones (Eocene and Oligocene). (6) Fractured anticline. (7)-. (8)-. (9) Paraschiv D. (1979). (M.S.)

667. (1) MERIŞANI (Ti,Zr ± Au; alluvial; Pliocene-Quaternary). (2) Getic Piedmont. (3) Getic Depression. (4) Romanian formation, Cîndeşti Gravel, terraces, alluvia and alluvial fans. (5) Sedimentary rocks and sediments. (6) Disseminations. (7) Ti,Zr ± Au,Fe,V. (8) Titanomagnetite, ilmenite, martite, hematite, rutile, zircon ,gold(free, pelicular, included)(9) Ungureanu B. et al. (1981-1982) Arch. ILR (1983); Rădulescu I. et al.(1983) Arch.IGG. (V.A.)

668. (1) SLĂTIOARELE (halite; lagoonal; Lower Miocene). (2) Getic Piedmont. (3) Subcarpathian Nappe. (4) Lower Miocene salt formation. (5) Grey clays. (6) Diapir. (7) Na,Cl. (8) Halite.(9) Gherasie I. (1975) Arch. IPGG. (M.C.M.)

669. (1) CĂLINEŞTI-OARJA (oil and gases). (2) South Subcarpathians, Argeş-Vedea Interfluve. (3) Internal Foredeep. (4) Molasse formations. (5) Sandstones and sands (Meotian). (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

670. (1) SLĂTIOARELE (oil and gases). (2) Wallachian Subcarpathians. (3) Internal Foredeep (Subcarpathian Nappe). (4) Molasse formations. (5) Sandstones (Lower Miocene), sandstones and sands (Sarmatian, Meotian,Pontian). (6) Diapir anticline,faulted. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

671. (1) SILIŞTEA-CIREŞU (oil and gases). Similar to the deposit no. 669 Călineşti-Oarja .

672. (1) VAŢA (oil and gases) Similar to the deposit no. 669 Călineşti-Oarja.

673. (1) CIEŞTI (oil). (2) Northern Romanian Plain, Cotmeana Valley. (3) External Foredeep(Moesian Platform). (4) Platform cover. (5) Middle Triassic dolomites. (6) Fractured hemianticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

674. (1) BÎRLA (oil and gases). (2) Romanian Plain, Vedea-Teleorman Interfluve. (3) Moesian Platform.(4) Platform cover. (5) Sandstones and silts (Neotriassic), calcareous sandstones (Middle Triassic), limestones (Malm-Neocomian), sandstones and sands (Sarmatian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

675. (1) SURDULEŞTI (oil). Similar to the deposit 676

Ciureşti South.

676. (1) CIUREŞTI SOUTH (oil and gases). (2) Romanian Plain, Vedea Valley. (3) Moesian Platform. (4) Platform cover. (5) Sandstones (Neotriassic), calcareous sandstones (Middle Jurassic), limestones (Malm-Neocomian), sandstones (Meotian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

677. (1) CIUREŞTI NORTH (oil and gases). (2) Romanian Plain, Vedea Valley. (3-9) Similar to the deposit no. 674 Bîrla.

678. (1) BACEA (oil). (2) Romanian Plain, Vedea-Olt Interfluve. (3-9) Similar to the deposit no. 676 Ciureşti South.

679. (1) NEGRENI (oil). (2) Romanian Plain, Vedea Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover.(5) Calcarenites and sandstones (Albian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

680. (1) SPINENI (gases). (2) Romanian Plain, Vedea-Olt Interfluve. (3) Moesian Platform (underthrust). (4) Platform cover. (5)Sandstones (Middle Jurassic).(6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

681. (1) OTEŞTI (oil and gases). (2) Romanian Plain, Vedea-Olt Interfluve. (3) Internal Foredeep. (4) Molasse formations. (5) Meotian sandstones. (6) Dome brachianticline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

682. (1) OPORELU-CONSTANTINEŞTI (oil and gases). (2) Romanian Plain, Vedea-Olt Interfluve. (3) External Foredeep (Moesian Platform). (4) Platform cover. (5) Siliceous sandstones (Lower Triassic), dolomites (Middle Triassic), calcareous sandstones (Middle Jurassic). (6) Fractured dome. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

683. (1) DELENI (oil). (2-3) Similar to the deposit no. 682 Oporelu-Constantineşti. (3) Molasse formations. (5) Meotian sandstones. (6) Lithologic trap. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

684. (1) SLATINA (gases). (2) Romanian Plain, Olt Valley. (3) Moesian Platform. (4) Platform cover. (5) Meotian sandstones. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

685. (1) FĂUREŞTI (oil and gases). (2) Romanian Plain, Olt-Olteţ Interfluve. (3-4) Similar to the deposit no 682 Oporelu-Constantineşti.(5)Calcareous sandstones (Middle Jurassic). (6-9) Similar to the deposit no. 682 Oporelu-Constantineşti.

686. (1) TIGVENI (Ti,Zr; alluvial; Dacian-Pontian). (2) South Subcarpathians, Argeş Valley basin. (3) Neogene zone of

the Getic Depression. (4) Sands and marls. (5) Sand beds with high contents in heavy minerals, Pontian-Dacian. (6) Beds. (7) Ti, Zr. (8) Pyroxene , amphibole, garnet, magnetite, hematite, sphene, staurolite, apatite, kyanite, epidote, tourmaline, titanomagnetite, ilmenite, zircon, brookite, rutile, monazite, xenotime. (9) Arch. IMR; Rădulescu I. et al.(1983) Arch. IGG. (D.J.)

687. (1) RÎURENI (Au; alluvial; Quaternary). (2) Central South Carpathians. (3) Getic Depression. (4) Alluvial deposits of the Olt. (5) Alluvia, terraces and alluvial fans. (6) Disseminations . (7) Au,±Fe,Ti,Zr. (8) Free gold, magnetite, titanomagnetite, ilmenite, martite, hematite, rutile, zircon. (9) Rădulescu I. et al.(1983) Arch.IGG. (V.A.)

688. (1) GALICEA (gases). (2) South Subcarpathians, Olt Valley. (3) Internal Foredeep. (4) Molasse formations. (5) Lower Miocene sandstones. (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

689. (1) BĂBENI (oil and gases). (2-4) Similar to the deposit no. 688 Galicea. (5) Sandstones (Oligocene), sandstones and microconglomerates(Lower Miocene). (6-9) Similar to the deposit no. 688 Galicea.

690. (1) CREMENARI (Ti,Zr ± Au; alluvial; Pliocene-Quaternary).(2) Cotmeana Platform. (3) Getic Depression. (4) Cîndeşti Gravel, terraces, alluvia, alluvial fans. (5) Poorly cemented sedimentary rocks and sediments. (6) Disseminations, lenses. (7) Ti,Zr ± Au,Fe. (8) Titanomagnetite, ilmenite, rutile, zircon, hematite, gold (free, pelicular, included). (9) Ungureanu B. et al. (1981-1982); Rădulescu I. et al.(1983) Arch.IGG. (V.A.)

691. (1) OCNELE MARI (salt; lagoonal; Middle Miocene). (2) Oltenian Subcarpathians. (3) Getic Depression. (4) Middle Miocene salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl.(8) Halite. (9) See no. 473.

692. (1) GOVORA (sulphur; precipitation from sulphur springs; Recent). (2) Wallachian Subcarpathians; Rm.Vîlcea Basin. (3)Getic Depression. (4) Scree impregnated with hydrogen sulphide-rich water (Recent). (5) Scree with crusts deposited on rock fragments (Recent). (6) Crusts . (7)-.(8) Native sulphur. (9) Brana V.(1967) (S.R.)

693. (1) FOLEŞTI (sulphur; bacterian-diagenetic; diagenetic recrystallization; Badenian). (2) Wallachian Subcarpathians; Rm. Vîlcea Basin. (3) Getic Depression; Ocnele Mari-Govora-Foleşti Anticline. (4) Salt breccia horizon (Badenian). (5) Marls and

marly-limestones impregnated with sulphur (Badenian). (6) Lenses and nests. (7) S (11-19%). (8) Native sulphur, clay minerals, quartz, gypsum. (9) Brana V.(1967). (S.R.)

694. (1) FOLEŞTI (oil). (2) South Subcarpathians, Olt-Olteţ Interfluve. (3) Internal Foredeep. (4) Molasse formations. (5) Oligocene sandstones. (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

695. (1) CUCEŞTI (lignite; limnic; Pliocene). Similar to the deposit no. 697 Valea Tărîia-Valea Cernişoara.

696. (1) CERNIŞOARA (lignite; limnic; Pliocene). Similar to the deposit no. 697 Valea Tărîia-Valea Cernişoara.

697. (1) VALEA TARÎIA-VALEA CERNIŞOARA (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Getic Zone. (4) Clay-sandy complex, Dacian-Romanian. (5) Clays and sands.(6) Beds. (7) V^i (9-30%); q_i^i(1700-2500 kcal/kg). (8) Soft dull coal; textinite (4-10%), ulminite (15-20%), attrinite (20-40%), mineral substances (30-40%). (9) Cîrîc D.(1959) St.tehn.econ.,A,5;Motaş I. et al.(1979) Arch.IGG. (C.B.)

698. (1) VALEA AMARADIA-VALEA TĂRÎIA (lignite; limnic; Pliocene). Similar to the deposit no. 697 Valea Tărîia-Valea Cernişoara.

699. (1) PRIGORIE (gases). Similar to the the deposit no. 701 Alunu.

700. (1) BUCŞANA (gases). Similar to the deposit no. 701 Alunu.

701. (1) ALUNU (oil and gases). (2) South Subcarpathians, Olteţ-Jiu Interfluve. (3) Internal Foredeep. (4) Molasse formations. (5) Sandstones and microconglomerates(Lower Miocene),sandstones and sands (Meotian). (6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

702. (1) COLIBAŞI-NEGREŞTI (oil and gases). (2-4) Similar to the deposit no. 701 Alunu. (5) Sandstones and microconglomerates (Lower Miocene), sandstones and sands (Sarmatian and Meotian). (6-9) Similar to the deposit no. 701 Alunu.

703. (1) BUSTUCHINI (oil and gases). (2-4) Similar to the deposit no. 701 Alunu. (5) Sandstones and microconglomerates (Lower Miocene), sands (Sarmatian). (6-9) Similar to the deposit no. 701 Alunu.

704. (1) GRĂDIŞTEA (oil and gases). (2) South Subcarpathians, Olteţ Valley. (3-4) Similar to the deposit no. 701 Alunu. (5)

Sarmatian sands. (6) Fractured dome. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

705. (1) ROMÂNEŞTI (oil and gases). (2) South Subcarpathians, Olt-Olteţ Interfluve. (3-4) Similar to the deposit no. 701 Alunu. (5) Sandstones (Lower Miocene), sands (Sarmatian). (6) Faulted anticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

706. (1) ZĂTRENI (gases). (2) South Subcarpathians, Olteţ Valley. (3-4) Similar to the deposit no. 701 Alunu. (5) Sands (Sarmatian and Meotian). (6) Fractured brachianticline. (7)-. (8)-. (9) Paraschiv D. (1979). (M.S.)

707. (1) FĂUREŞTI (gases). (2-4) Similar to the deposit no. 708 Iancu Jianu. (5) Calcareous sandstones (Middle Jurassic).(6-9) Similar to the deposit no. 708 Iancu Jianu. (M.S.)

708. (1) IANCU JIANU (oil and gases). (2) Romanian Plain, Olteţ Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover, molasse formations. (5) Sandstones (Triassic), calcareous sandstones (Middle Jurassic), sandstones and sands (Sarmatian and Meotian). (6) Fractured dome. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

709. CARACAL (lignite; limnic; Pliocene). (2) Romanian Plain. (3) Dacic Basin, Moesian Platform. (4) Carbonaceous complex, Dacian-Romanian. (5) Alternation of sands, sandy clays, clays. (6) Beds. (7)-.(8) Soft, dull coal. (9) Ţicleanu N., Andreescu I., in Năstăseanu S. et al.(1982) Arch.IGG. (C.B.)

710. (1) MALU MARE (oil and gases). (2) Romanian Plain,Jiu Valley. (3) Moesian Platform. (4) Platform cover. (5) Calcareous sandstones (Middle Jurassic). (6) Fractured paleorelief. (7) -. (8)-. (9) Paraschiv D.(1979). (M.S.)

711. (1) GHERCEŞTI (oil and gases). Similar to the deposit no. 710 Malu Mare.

712. (1) CÎRCEA (oil and gases). Similar to the deposit no. 710 Malu Mare.

713. (1) MIHĂIŢA (lignite; limnic; Pliocene). (2) Romanian Plain. (3) Dacic Basin, Moesian Platform. (4) Carbonaceous complex, Dacian and Romanian. (5) Alternation of sands, clays, sandy clays. (6) Beds (thicknesses up to 7m). (7)-.(8) Soft dull coal; textinite (15%), ulminite (20%), attrinite (40%), mineral substances (25%). (9) Andreescu I.,Ticleanu N., in Năstăseanu S. et al.(1982) Arch. IGG. (C.B.)

714. (1) SÎMNICU (oil and gases). Similar to the deposit no. 710.

715. (1) IŞALNIŢA (oil). (2) Romanian Plain, Jiu Valley. (3) External Foredeep (Moesian Platform). (4-9) Similar to the deposit no. 710 Malu Mare.

716.(1) PITULAŢI(gases).(2-4) Similar to the deposit no.718 Brădeşti.(5) Sarmatian sands . (6-9) Similar to the deposit no. 718 Brădeşti.

717. (1) SFÎRCEA (gases). (2-4) Similar to the deposit no. 718 Brădeşti. (5) Sarmatian sands. (6-9) Similar to the deposit no. 718 Brădeşti.

718. (1) BRĂDEŞTI (oil and gases). (2) Romanian Plain, Jiu Valley. (3) External Foredeep (Moesian Platform). (4) Platform cover and molasse formations. (5) Sandstones and dolomites (Triassic), calcareous sandstones (Middle Jurassic), sandstones and sands (Sarmatian). (6) Fractured paleorelief and/or monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

719. (1) MELINEŞTI (oil). (2) Romanian Plain,Amaradici Valley. (3) External Foredeep (Moesian Platform); (4) Platform cover. (5) Middle Cretaceous dolomites. (6) Fractured dome. (7)-. (8)-.(9) Paraschiv D. (1979). (M.S.)

720. (1) VÎRTEJU (gases). Similar to the deposit no. 719 Melineşti.

721. (1) BIBEŞTI (oil and gases). (2) Romanian Plain, Amaradici Valley. (3) Moesian Platform (underthrust). (4) Platform cover. (5)Dolomites(Devonian), sandstones (Permian-Triassic), sandstones (Sarmatian). (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

722. (1) BULBUCENI-PISCUL STEJARULUI (gases). (2) South Subcarpathians, Gilort Valley. (3) Internal Foredeep. (4) Molasse formations. (5) Sandstones and sands (Sarmatian and Meotian).(6) Fractured anticline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

723. (1) HUREZANI (gases). (2) South Subcarpathians, Amaradia Valley. (3-9) Similar to the deposit no. 722 Bulbuceni-Piscul Stejarului.

724. (1) JUPÎNEŞTI (lignite; limnic; Pliocene). (2) Jiu Platform. (3) Dacic Basin, Getic Zone. (4) Carbonaceous complex, Dacian-Romanian. (5) Clays, siltic clays, sands and coal intercalations. (6) Beds. (7) V^i(25-30%); S^i_i (1.7-3.9%); U^i_t (27-34%); Q^i_i (2100-2900 kcal/kg); A_{anh}(38-42%). (8) Soft brown coal. (9) Ghica E.,Gologan O.(1982) Arch. IFLGS; Ticleanu N.(1983) Arch. IGG (C.B.)

725. (1) SOCU (gases). (2) South Subcarpathians, Gilort Valley. (3) Internal Foredeep. (4) Molasse formations. (5) Sand-

stones and sands, Meotian. (6) Fractured anticline. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

726. (1) TICLENI (oil and gases). (2) South Subcarpathians, Gilort-Jiu Interfluve. (3) Internal Foredeep(Subcarpathian Nappe). (4) Molasse formations. (5) Sandstones (Lower Miocene), sandstones and sands (Sarmatian and Meotian).(6) Fractured anticline. (7)-. (8)-.(9) Paraschiv D.(1979). (M.S.)

727. (1) ALBENI (lignite; limnic; Pliocene). Similar to the deposit no. 724 Jupînești.

728. (1) TÎRGU JIU (oil and gases). (2) South Subcarpathians, Jiu Valley. (3-4) Similar to the deposit no. 726 Ticleni. (5) Sandstones and conglomerates(Lower Miocene), sandstones and sands (Sarmatian). (6-9) Similar to the deposit no. 726 Ticleni.

729.(1) STRÎMBA-ROGOJELU(gases).(2) South Subcarpathians, Jiu Valley. (3-9) Similar to the deposit no. 725 Socu.

730.(1) BALA (gases). (2) South Subcarpathians, Tismana Valley. (3-9) Similar to the deposit no. 725 Socu.

731. (1) BÎLTENI (oil and gases). (2) South Subcarpathians, Jiu Valley. (3-9) Similar to the deposit no. 726 Ticleni.

732. (1) TÎLVA MĂCIEȘULUI (lignite; limnic; Pliocene). Similar to the deposit no. 733 Rovinari.

733. (1) ROVINARI (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Getic Zone. (4) Clay horizon, Dacian-Romanian. (5) Alternation of sands, sandy clays, clays, carbonaceous clays. (6) Beds.(IV-VI Dacian and VII-XVIII Romanian). (7) A^i(10-47%); Q_i^i (1900-2500 kcal/kg). (8) Soft dull coal; textinite (3-34%), ulminite (1-23%), cutinite (2%), attrinite (35-63%), densinite (6-22%), fuzinite (1-5%), mineral substances (5-30%). Soft brown coal. (9) Andreescu I. et al.(1982) Arch.IGG; Enache G.(1981) Mine,Petrol,Gaze, 32,4; Pană I. et al.(1981)Arch. ICITPML,Craiova; Popovici V.(1959) St.tehn.econ.,A,5; Papaianopol I. et al.(1981) Arch. IGG.(C.B.)

734. (1) MOI (lignite; limnic; Pliocene);Fig.32. Similar to the deposit no. 733 Rovinari.

735. (1) PEȘTEANA (lignite; limnic; Pliocene); Fig.32. Similar to the deposit no. 733 Rovinari.

736. (1) GÎRLA (lignite; limnic; Pliocene). Similar to the deposit no. 733 Rovinari.

737. (1) BETEREGA (lignite; limnic; Pliocene);Fig.32.Similar to the deposit no. 733 Rovinari.

738. (1) SOMANEȘTI (lignite; limnic; Pliocene);Fig.32.

Similar to the deposit no. 733 Rovinari.

739. (1) TISMANA (lignite; limnic; Pliocene); Fig.32. Similar to the deposit no. 733 Rovinari.

740. (1) PINOASA (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 733 Rovinari.

741. (1) ROGOJELU (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 733 Rovinari.

742. (1) FARCĂŞEŞTI (lignite; limnic; Pliocene) ; Fig.32. Similar to the deposit no. 733 Rovinari.

743. (1) NEGOMIR (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 733 Rovinari.

744. (1) COJMĂNEŞTI (lignite; limnic; Pliocene); Fig.32. Similar to the deposit no. 748 Jilţ South.

745. (1) URDARI (lignite; limnic; Pliocene); Fig.32. Similar to the deposit no. 733 Rovinari.

746. (1) MĂTĂSARI (lignite; limnic; Pliocene). Similar to the deposit no. 733 Rovinari.

747. (1) JILŢ NORTH (lignite; limnic; Pliocene). Similar to the deposit no. 748 Jilţ South.

748. (1) JILŢ SOUTH (lignite; limnic; Pliocene); Fig. 32. (2) Jiu Platform. (3) Dacic Basin, Getic Zone, Rovinari carboniferous basin. (4) Clay-sandy horizon, Dacian-Romanian. (5) Alternation of grey-yellowish clays, fine sands, gravel, with cross-stratification. (6) Beds (with thicknesses up to 10 m) situated over and under the hydrostatic level. (7) S_c^i (1-2%); Q_i^i(2186-2793 kcal/kg). (8) Soft dull coal; textinite (10-15%), ulminite (20%), attrinite (30%), cutinite (10%), mineral substances (25%). Soft brown coal. (9) Andreescu I. (1983) An.Inst.Geol.,LIX; Papaianopol I. et al.(1981) Arch. IGG. (C.B.)

749. (1) ROŞIUŢA (lignite; limnic; Pliocene); Fig.32 . Similar to the deposit no. 748 Jilţ South.

750. (1) PLOŞTINA (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 748 Jilţ South.

751. (1) LEURDA (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 748 Jilţ South.

752. (1) HORĂŞTI (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 748 Jilţ South.

753. (1) SAMARINEŞTI (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 748 Jilţ South.

754. (1) LUPOAIA (lignite; limnic; Pliocene); Fig. 32. Similar to the deposit no. 748 Jilţ South.

755. (1) ZEGUJANI EAST-MERIŞ (lignite; limnic; Pliocene). Similar to the deposit no. 756 Motru West.

756. (1) MOTRU WEST (lignite; limnic; Pliocene). (2) Subcarpathian Hills. (3) Dacic Basin, Getic Zone. (4)Carbonaceous complex, Getian and Romanian. (5) Alternation of grey-greenish clays, clay sands, carbonaceous clays. (6) Beds (with thicknesses up to 8 m) poorly carbonated. (7) V^i(21-27%); Q_i^i (1616-2423 kcal/kg). (8) Soft dull coal; xylite (10-15%).(9) Cîrîc D.(1959) St. tehn.econ., A,5; Papaianopol I. et al.(1981) Arch. IGG. (C.B.)

757. (1) HUSNICIOARA (lignite; limnic; Pliocene). Similar to the deposit no. 756 Motru West.

758. (1) BALOTA-GHELMEGIOAIA (lignite; limnic; Pliocene); Fig. errata. Similar to the deposit no. 756 Motru West.

759. (1) PRUNIŞOR-IZVORUL ANEŞTILOR (lignite; limnic; Pliocene); Fig. errata. Similar to the deposit no. 756 Motru West.

760. (1) LIVEZILE (lignite; limnic; Pliocene). Similar to the deposit no. 756 Motru West.

761. (1) BĂILEŞTI (lignite; limnic; Pliocene). (2) Romanian Plain. (3) Dacic Basin; Moesian Platform. (4) Carbonaceous complex, Dacian. (5) Alternation of clays, sandy clays, clay shales. (6) Beds. (7)-.(8) Soft dull coal; textinite (3-5%), ulminite (5-40%), attrinite + densinite (6-40%), fuzinite (3-6%), mineral substances (2-15%). (9) Marin G.(1982) Arch. IFLGS.(C.B.)

762. (1) SINERSIG-VIŞAG (lignite; limnic; Pliocene). (2) Banat, Timiş Basin. (3) Pannonian Depression. (4) Carbonaceous complex, Middle Pontian. (5) Alternation of conglomerates, gravel, sands, clays, Portaferrian. (6) Beds. (7) U_t (40%); S_c^i (0.9%); V^i (35%); Q_i^i (1800-2100 kcal/kg). (8) Soft dull coal; huminite (60-80%), liptinite (2-4%),inertinite(2-7%), mineral substances (20-25%). (9) Marinescu F et. al. (1981,1982) Arch. IGG; Munteanu A.(1980) Arch. IPEG Caransebeş. (C.B.)

763. (1) SÎNMARTIN (gases). (2) Banat. (3) Pannonian Depression. (4) Molasse formations. (5) Pannonian sandstones. (6) Fractured dome. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

764. (1) POIENI (oil and gases). Similar to the deposit no. 763 Sînmartin.

765. (1) CALACEA-SATCHINEZ-ŞANDRA (oil and gases). (2) Banat. (3) Pannonian Depression. (4) Molasse formations and basement. (5) Sandstones and sands (Miocene-Pannonian), fissured crystalline. (6) Fractured, buried relief. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

766. (1) VARIAŞ (oil and gases). Similar to the deposit no. 763 Sînmartin.

767. (1) TOMNATEC (gases). Similar to the deposit no. 765 Calacea-Satchinez-Sandra.

768. (1) TEREMIA (oil and gases). (2) Banat. (3) Pannonian Depression. (4) Molasse formations. (5) Pannonian sandstones. (6) Fractured dome covering buried relief. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

769. (1) CHERESTUR (oil and gases). (2) Banat; (3) Pannonian Depression. (4) Depression basement and molasse formations.(5) Fissured crystalline, Miocene conglomerates. (6) Buried relief. (7)-.(8)-.(9) Paraschiv D. (1979).

770. (1) CHERESTUR NORTH (oil and gases). Similar to the deposit no. 769 Cherestur.

771. (1) PORDEANU (oil and gases). Similar to the deposit no. 769 Cherestur.

772. (1) NADLAC (oil and gases). (2) Mureş Valley. (3-9) Similar to the deposit no. 769 Cherestur.

773. (1) TURNU (oil and gases). (2) Mureş-Crişul Alb Interfluve. (3-9) Similar to the deposit no. 769 Cherestur.

774. (1) BUZAD (Fe; sedimentary; Miocene). (2) Lipova Plateau. (3) Pannonian Depression. (4) Dacian sedimentary formations. (5) Sands. (6) Bands, beds. (7) Fe,Ti,V. (8) Magnetite. (9) Niţă P. (1967) Rev.Minelor, XVIII/3, 129-134; Georgescu B.,Năstase M. (1964) Arch. IGG. (G.U.)

775. (1) SÎNTANA (oil). (2) Mureş-Criş Interfluve. (3-9) Similar to the deposit no. 769 Cherestur.

776. (1)CIUMEGHIU (oil and gases). Similar to the deposit no. 777 Salonta.

777. (1) SALONTA (gases and condense). (2) Crişana. (3) Pannonian Depression. (4) Depression basement. (5) Altered crystalline. (6) Buried relief. (7)-.(8)-.(9) Paraschiv D. (1979).(M.S.)

778. (1) BORŞ (oil). (2) Crişana. (3) Pannonian Depression. (4) Molasse formations. (5) Badenian sandstones and microconglomerates. (6) Fractured monocline. (7)-.(8)-.(9) Paraschiv D.(1979). (M.S.)

779. (1) ROŞIORI-BIHARIA (lignite; limnic; Pliocene). (2) Western Plain. (3) Pannonian Depression. (4) Marly-sandy horizon, Pontian. (5) Alternation of marls, sands, clay shales. (6) Beds. (7)-.(8) Soft dull coal. (9) Paal H. (1981) Arch. IFLGS. (C.B.).

780. (1) TĂTĂRUŞ (lignite; limnic; Pliocene). Similar to

the deposit no. 782 Popeşti-Voivozi.

781. (1) DERNA BUDOI (lignite; limnic; Pliocene). Similar to the deposit no. 782 Popeşti-Voivozi.

782. (1) POPEŞTI-VOIVOZI(lignite; limnic; Pliocene). (2) Western Plain, Şimleul Silvaniei Basin. (3) Pannonian Depression. (4) Middle productive horizon, marly-clay subhorizon,Pontian.(5) Alternation of marls, clays with sand intercalations. (6) Beds. (7) V^{mc} (52-56%); S_t^{mc}(2-7%); Q_i^i (1700-2100 kcal/kg). (8) Soft dull coal; humotelinite (20-40%), humodetrinite (30-40%), fuzinite (5-10%), mineral substances (25-35%). (9) Maciu S.(1977).Arch. IPGG; Nicorici M. et al.(1981) Arch. IPEG Cluj-Napoca; Papaianopol I. et al. (1983) Arch. IGG. (C.B.)

783(1)SUPLACUL DE BARCĂU (lignite; limnic; Pliocene). Similar to the deposit no. 782 Popeşti-Voivozi.

784. (1) IP (lignite; limnic; Pliocene). Similar to the deposit no. 782 Popeşti-Voivozi.

785(1)SUPLACU DE BARCĂU (oil). (2) Crişana. (3) Pannonian Depression. (4) Molasse formations.(5) Sandstones and conglomerates. (6) Fractured monocline. (7)-.(8)-. (9) Paraschiv D. (1979). (M.S.)

786. (1) MARCA-COZNICIU (lignite; limnic; Pliocene).Similar to the ore deposit no. 782 Popeşti-Voivozi.

787. (1) BOROD-BOROZEL (lignite; limnic; Miocene). (2) Borod Basin (Crişul Repede Valley). (3) Pannonian Depression. (4) Productive complex, Sarmatian. (5) Alternations of blackish or yellowish marls, gravel, sands, marly sandstones, tuff, oil shales, Lower Sarmatian. (6) Beds with thicknesses up to 5 m. (7) U_t(25%); A_{anh}(49%); Q_i^i (2300 kcal/kg). (8) Soft dull coal; ulminite (20-35%);densinite (5-15%); cutinite (1-5%); fuzinite (1-5%); mineral substances (4-12%). (9) Constantiniuc E. et al. (1978) Arch.IPEG Cluj-Napoca; Marinescu F. et al. (1980) Arch. IGG; Nicorici M. et al.(1981) Arch. IPEG Cluj-Napoca; Radu A. et al.(1975,1976) Arch. IPGG. (C.B.)

788. (1) BEZNEA-VALEA NEAGRĂ-CORNIŢEL (lignite; limnic; Miocene). Similar to the deposit no. 787 Borod-Borozel.

789. (1) SĂRMAŞAG (lignite; limnic; Pliocene). (2) Şimleul Silvaniei Basin, Crasna River. (3) Pannonian Depression. (4) Productive horizon with three carbonaceous levels: lower, intermediary, upper; Pontian. (5) Alternation of marls, sands, clay. (6) Beds. (7) U_t (21-30%); A^i(11-20%); Q_i^i(2500-3100 kcal/kg). (8) Soft dull coal; textinite (8-15%); ulminite (15-20%); fuzinite

(2%); mineral substances (30-40%). (9) Mărcuţiu A.(1982) Arch. IPGG; Mateescu I.(1972) St.tehn.econ.,A,9. (C.B.)

790. (1) VIIŞOARA (oil). (2-3)Similar to the deposit no. 785 Suplacu de Barcău. (4) Molasse formations on the basement. (5) Sarmatian sandstones and fissured crystalline. (6) Fractured, buried relief.(7)-.(8)-.(9)Paraschiv D. (1979). (M.S.)

791. (1) ABRĂMUT (oil and gases). Similar to the deposit no. 778 Borş.

792. (1) SÎNIOB (oil). Similar to the deposit no. 778 Borş.

793. (1) MIHAI BRAVU (gases and condense). (2-4) Similar to the deposit no. 778 Borş. (5) Sandstones and microconglomerates, Sarmatian. (6-9) Similar to the deposit no. 778 Borş.

794. (1) CIOCAIA (gases and condensé). (2) Crişana. (3) Pannonian Depression. (4) Molasse formations and basement. (5) Sandstones and microconglomerates (Miocene and Pannonian), fissured crystalline. (6) Fractured, buried relief. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

795.(1) SĂCUIENI (gases). (2-4) Similar to the deposit no. 794 Ciocaia. (5) Pliocene sands. (6-9) Similar to the deposit no. 794 Ciocaia.

796. (1) CURTUIUŞENI (oil and gases). (2) Crişana. (3) Pannonian Depression. (4) Molasse formations.(5)Sandstones and conglomerates (Badenian and Sarmatian). (6) Fractured brachianticline. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

797. (1) PIŞCOLT (gases). (2-4) Similar to the deposit no. 796. (5) Sandstones and sands (Oligocene, Badenian,Sarmatian). (6-9) Similar to the deposit no. 796 Curtuiuşeni.

798. (1) CAPREI (oil and gases). (2-4) Similar to the deposit no. 796 Curtuiuşeni. (5)Pannonian sands. (6-9) Similar to the deposit no. 796 Curtuiuşeni.

799. (1) HOFTINU (gases). Similar to the deposit no. 796 Curtuiuşeni.

800. (1) MĂDĂRAŞ (oil and gases). Similar to the deposit no. 796 Curtuiuşeni.

801. (1) COAS (oil shales; Oligocene). (2) NW border of the Preluca Massif. (3) Transylvanian Depression. (4) Curtuiuş Beds, Upper Oligocene. (5) Alternation of marls, marly-limestones,clays, oil shales, coals,Rupelian. (6) Beds. (7)-.(8)-. (9) Kalmar I. et al. (1981) Arch. IPEG Maramureş. (C.B.)

802. (1) HIRŞID (zeolites; subaquatic alteration (halmyrolysis) of the cineritic material; Badenian). (2) Someş Platform;

northern end of the Mezeş Mts; Popeni Valley. (3) Sylvanian Depression (eastern border). (4) Psephito-psamitic complex with reefal limestones and tuffs (Badenian). (5) Zeolitized dacitic tuffs, associated with marly clays,fossiliferous limestones and sandstones (Badenian). (6) Beds. (7) SiO_2 (65.83%); Al_2O_3 (11.76%); Fe_2O_3 (1.10%); MgO (1.30%); CaO (2.94%); K_2O (3.11%); Na_2O (0.67%). (8) Vitroclasts + groundmass (95%) devitrified, zeolitized (clinoptilolite 10-70%, heulandite ± montmorillonite and seladonite) ; crystalloclasts (5%) (plagioclases,quartz, biotite, muscovite ± rutile, apatite, zircon). (9) See no. 26 Bîrsana. (S.R.)

803. (1) ILEANDA (oil shales; Oligocene). (2) Southern border of the Preluca Mts. (3) Transylvanian Depression. (4) Ileanda Beds , Upper Oligocene. (5) Bituminous desidous clays with sideritic and ankeritic concretions, Upper Rupelian. (6) Beds. (7) Schist oil (32-41 l/t); Q_i^i (800 kcal/kg). (8)-.(9) Rusu A. (1974)Thesis of doctor's degree; Zah E.(1973) Arch.IPGG. (C.B.)

804. (1) TREZNEA (gypsum; lagoonal; Eocene). (2) Mezeş Mts. (3) North-western border of the Transylvanian Basin. (4) Upper gypsum formation (Jebnai Gypsum),Eocene. (5) Massive gypsums with rare clay intercalations. (6) Beds. (7)-. (8) Gypsum, dolomite, calcite, clay minerals, quartz. (9) See no. 169 Călan. (S.R.)

805. (1) CRISTOLŢEL-TESTIOARA (brown coal; paralic; Oligocene-Lower Miocene).(2) NW of Transylvania, Almaş-Agriş Basin. (3) Transylvanian Depression. (4) Valea Almaşului Beds, Chattian-Aquitanian. (5) Alternation of sandstones, quartz sands, sandy clays, clays, carbonaceous shales, Egerian. (6) Beds. (7) A^i(18-22%); V^i(20-30%); Q_i^i(2800-3400 kcal/kg). (8) Bright brown coal; vitrinite (40-50%), exinite (10-20%),inertinite (12-17%), mineral substances (20-30%). (9) Niţă P. P. (1970) Arch. IPGG; Rusu A. (1977) An.Inst.Geol.Geofiz.,LI; Rusu A.(1961-1981) Arch.IGG;Rusu A.(1982) Arch. IGG.(C.B.)

806. (1) SURDUC (brown coal; paralic; Oligocene-Lower Miocene). Similar to the deposit no. 805 Cristolţel-Testioara .

807. (1) LUPOAIA (brown coal; paralic; Oligocene-Lower Miocene). Similar to the deposit no. 805 Cristolţel-Testioara.

808. (1) JAC (brown coal;paralic; Oligocene-Lower Miocene). Similar to the deposit no. 805 Cristolţel-Testioara.

809. (1) BRUSTURI (brown coal; paralic; Oligocene-Lower Miocene). Similar to the deposit no. 805 Cristolţel-Trestioara.

810. (1) HIDA-ZIMBOR (brown coal; paralic; Oligocene-Lower Miocene). Similar to the deposit no. 811 Ticu.

811. (1) TICU (brown coal; paralic; Oligocene-Lower Miocene). (2) Almaş-Agriş Basin. (3) Transylvanian Depression. (4)Dîncu Beds and Cetate Beds, Upper Oligocene. (5) Marls, clays, sands and sandstones, Upper Rupelian. (6) Beds. (7) V^i(27%); Q_i^i(3600 kcal/kg). (8) Bright brown coal; vitrinite (20-45%), exinite(15-20%), inertinite (10-18%), mineral substances (25-40%). (9) Mateescu I.(1970) St.tehn.econ., A,8; Moisescu V.(1975) An.Inst.geol.geofiz.,XLVII; Niţă P.P.(1970) Arch. IPGG; Rusu A.(1977) An.Inst.geol.geofiz.,LI; Rusu A. (1982) Arch.IGG. (C.B.)

812. (1) CĂLĂŢELE-HUEDIN (peat; eutrophic; Quaternary).(2) Apuseni Mts, Huedin Basin. (3) Transylvanian Basin. (4) Peat horizon, Upper Quaternary. (5) Sandy clays, muds, Upper Holocene. (6) Beds. (7) A^i(2-34%); V^i(37-63%); Q_i^i(2900-3970 kcal/kg). (8)-.(9) Pop E.(1960)Edit.Acad.RPR. (C.B.)

813. (1) AGHIRES (gypsum; lagoonal; Eocene). (2) Transylvanian Plateau;Cluj Hills. (3)Transylvanian Depression. (4) Upper gypsum formation. (5) Grey clays. (6) Beds. (7)-.(8) Gypsum, kaolin clays. (9) Pîrvu G.(1964) Edit.tehnică. (M.C.M.)

814. OCNA DEJULUI (halite; lagoonal; Middle Miocene). (2) Transylvanian Plateau. (3) Transylvanian Depression. (4) Middle Miocene salt formation. (5) Grey clays. (6) Diapir. (7) Na,Cl.(8) Halite. (9) Iorgulescu T. et al.(1961) Edit.Acad.; Brana V.(1967); Stoica C.,Gherasie I.(1981); Gherasie I. et al.(1977)Arch.IPGG. (M.C.M.)

815. (1) NIREŞ (halite; lagoonal; Middle Miocene). Similar to the deposit no. 814 Ocna Dejului.

816. (1) CHEIA (gypsum; lagoonal; Middle Miocene). Similar to the deposit no. 818 Cheia Turda.

817. (1) COPĂCENI (gypsum; celestite; lagoonal; Middle Miocene). (2) Transylvanian Plateau. (3) Transylvanian Depression.(4) Middle Miocene evaporitic formation. (5) Clays, bituminous limestones. (6) Lenticular beds. (7)-.(8).Gypsum, alabaster,celestite. (9) Brana V.(1967); Nedelcu I. et al.(1976) Arch. IPGG.(M.C.M.)

818. (1) CHEIA TURDA (gypsum; lagoonal; Middle Miocene).(2) Transylvanian Plateau. (3) Transylvanian Depression. (4) Middle Miocene evaporitic formation. (5) Clays, sandstones. (6) Lenticular beds. (7)-.(8) Gypsum, alabaster. (9) Pîrvu G.(1964) Edit.tehnică; Brana V.(1967); Nedelcu I. et al.(1976) Arch. IPGG.(M.C.M.)

819. (1) CHEIA TURDA (alabaster; lagoonal; Badenian). (2) West of the Transylvanian Plateau (Arieş Valley). (3) West of the Transylvanian Basin. (4) Evaporitic horizon (Badenian). (5) Gypsum

with alabaster concretions (Badenian). (6) Lenticular beds. (7)-. (8) Gypsum, anhydrite, clay minerals, quartz. (9) Brana V.(1967). (S.R.)

820. (1) HĂDĂRENI (bentonitic tuff; subaquatic alteration (halmyrolysis-aquatolysis) of the cineritic material; Badenian). (2) West of the Transylvanian Plateau (Arieş Valley). (3) West of the Transylvanian Basin.(4) Middle-Upper Miocene pelito-psamitic complex. (5) Hădăreni Tuff intercalated in mostly marly deposits (Badenian). (6) Beds. (7)-.(8) Montmorillonite, zeolites,volcanic glass, quartz, feldspar. (9) See no. 260 Tufări. (S.R.)

821. (1) OCNA MUREŞ (halite; lagoonal; Middle Miocene).(2) Transylvanian Plateau. (3) Transylvanian Depression, diapir folds zone. (4) Middle Miocene(Badenian) salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Brana V.(1967); Stoica C., Gherasie I.(1981); Gherasie I. et al. (1977) Arch.IPGG. (M.C.M.)

822. (1) OCNA MUREŞ (bentonite; subaquatic alteration(halmyrolysis-aquatolysis) of the cineritic material; Badenian). (2) West of the Transylvanian Plateau. (3) West of the Transylvanian Basin. (4) Middle-Upper Miocene pelito-psamitic complex. (5) Hădăreni Tuff, intercalated in mostly marly deposits (Badenian). (6) Beds. (7) Mean (n=2): SiO_2(58.04%); Al_2O_3(13.60%); Fe_2O_3(1.57%); FeO (1.28%); MgO (1.96%); CaO(2.77%); K_2O (1.48%); Na_2O (2.23%). (8) Ca,Na-montmorillonite (predominant) ± chlorite, vermiculite, illite, zeolites, feldspar, quartz, cristobalite, calcite..(9) See no. 260 Tufari. (S.R.)

823. (1) CIUGUD (bentonite; subaquatic alteration (halmyrolysis -aquatolysis) of the cineritic material; Lower Miocene).(2) West of the Tîrnave Plateau.Left bank of the Mureş River. (3) South-west border of the Transylvanian Basin. (4)Red complex (Lower Miocene). (5) Bentonitized tuffs intercalated in a red psamitaleuro-pelitic complex in lacustrine continental facies(Lower Miocene). (6) Lens-bed. (7) Mean : SiO_2(61.71%); Al_2O_3(13.96%); CaO + MgO (5.94%); Na_2O + K_2O (2.71%); Fe_2O_3 (2.78%).(8) Ca,Na-montmorillonite (50-80%), illite, chlorite (10-25%), feldspar(1-3%), quartz (2-22%), calcite (0.5-5%). (9) See no. 260 Tufari.(S.R.)

824. (1) OARDA (bentonite; subaquatic alteration (halmyrolysis, aquatolysis) of the cineritic material; Lower Miocene).Similar to the deposit no. 823 Ciugud.

825. (1) STRAJA (bentonite; aquatic alteration (halmyrolysis, aquatolysis) of the cineritic material; Lower Miocene). Similar

to the deposit no. 823 Ciugud.

826. (1) BEUDIU (gases). (2) Transylvanian Basin, Someş Basin. (3) Transylvanian Depression; (4) Molasse formations, sands, Badenian-Sarmatian. (6) Fractured dome. (7)-.(8)-.(9) Paraschiv D. (1979). (M.S.)

827. (1) ENCIU (gases). Similar to the deposit no. 826 Beudiu.

828. (1) STRUGURENI (gases). Similar to the deposit no. 826 Beudiu.

829. (1) PUINI (gases). Similar to the deposit no. 826 Beudiu.

830. (1) ŢAGA (gases). Similar to the deposit no. 826 Beudiu.

831. (1) BUZA (gases). Similar to the deposit no. 826 Beudiu.

832. (1) FÎNTÎNELE (gases). Similar to the deposit no. 826 Beudiu.

833. (1) SĂRMĂŞEL (gases). (2) Transylvania, Mureş Valley Basin. (3) Transylvanian Depression. (4) Molasse formations. (5) Sandstones and sands , Badenian-Sarmatian. (6) Fractured dome. (7) -.(8)-.(9) Paraschiv D.(1979). (M.S.)

834. (1) SILVAŞUL DE CÎMPIE (gases).Similar to the deposit no. 833 Sărmăşel.

835. (1) DELURENI(gases). Similar to the deposit no. 833 Sărmăşel.

836.(1) ULIEŞ (gases). Similar to the deposit no. 833 Sărmăşel.

837. (1) SÎNMARTIN (gases). Similar to the deposit no. 833 Sărmăşel.

838. (1) CRĂTEŞTI-ERCEA (gases). Similar to the deposit no. 833 Sărmăşel.

839. (1) ŞINCAI (gases).Similar to the deposit no. 833 Sărmăşel.

840. (1) ZAUL DE CÎMPIE (gases). Similar to the deposit no. 833 Sărmăşel.

841. (1) GREBENIŞ (gases). Similar to the deposit no. 833 Sărmăşel.

842. (1) LUNCA (gases). Similar to the deposit no. 833 Sărmăşel.

843. (1) BOZED (gases). Similar to the deposit no. 833 Sărmăşel.

844. (1) VOIVODENI (gases). Similar to the deposit no. 833 Sărmăşel.

845. (1) GURGHIU (halite; lagoonal; Middle Miocene). (2) Transylvanian Plateau. (3) Transylvanian Depression, diapir folds zone. (4) Middle Miocene (Badenian) salt formation. (5) Saliferous clays. (6) Diapir. (7) Na,Cl. (8) Halite. (9) Gherasie I. et al. (1977) Arch. IPGG; Stoica C.,Gherasie I.(1981). (M.C.M.)

846. (1) IBĂNEŞTI (gases). Similar to the deposit no. 833 Sărmăşel.

847. (1) SÎNGER (gases). Similar to the deposit no. 833 Sărmăşel.

848. (1) ICLĂNZEL (gases). Similar to the deposit no. 833 Sărmăşel.

849. (1) PĂINGENI (gases). Similar to the deposit no. 833 Sărmăşel.

850. (1) FELEAC (gases). Similar to the deposit no. 833 Sărmăşel.

851. (1) DĂMIENI (gases). Similar to the deposit no. 833 Sărmăşel.

852. (1)DUMBRĂVIOARA (gases). Similar to the deposit no. 833 Sărmăşel.

853. (1) TÎRGU MUREŞ (gases). Similar to the deposit no. 833 Sărmăşel.

854. (1) ERNEI (gases). Similar to the deposit no. 833 Sărmăşel.

855. (1) SĂUŞA (gases). Similar to the deposit no. 833 Sărmăşel.

856. (1) VAIDEI (gases). Similar to the deposit no. 833 Sărmăşel.

857. (1) LUDUŞ (gases). Similar to the deposit no. 833 Sărmăşel.

858. (1) BOGATA DE MUREŞ (gases). Similar to the deposit no. 833 Sărmăşel.

859. (1) LECHINŢA-IERNUT (gases). Similar to the deposit no. 833 Sărmăşel.

860. (1) ACĂŢARI (gases). Similar to the deposit no. 833 Sărmăşel.

861. (1) CORUNCA (gases). Similar to the deposit no. 833 Sărmăşel.

862. (1) MIERCUREA NIRAJULUI(gases). Similar to the deposit no. 833 Sărmăşel.

863. (1) MĂGHIERANI (gases). Similar to the deposit no. 833 Sărmăşel.

864. (1) PRAID (halite; lagoonal; Middle Miocene). (2) Transylvanian Plateau. (3) Transylvanian Depression, diapir folds zone. (4) Middle Miocene salt formation. (5) Saliferous clays.(6) Diapir. (7-9) Similar to the deposit no. 845 Gurghiu. (M.C.M.)

865. (1) CUŞMED (gases). Similar to the deposit no. 833 Sărmăşel.

866. (1) FIRTUŞU (gases). Similar to the deposit no. 833 Sărmăşel.

867. (1) BENŢID (gases). Similar to the deposit no. 833 Sărmăşel.

868. (1) TÂRCEŞTI (gases). Similar to the deposit no. 833 Sărmăşel.

869. (1) TREISATE-GHIREŞTI (gases). Similar to the deposit no. 833 Sărmăşel.

870. (1)SÎNGEORGIU DE PĂDURE (gases). Similar to the deposit no. 833 Sărmăşel.

871. (1) GÂLĂŢENI (gases). Similar to the deposit no. 833 Sărmăşel.

872. (1) SUVEICA (gases). Similar to the deposit no. 833 Sărmăşel.

873. (1) FILITELNIC (gases). Similar to the deposit no. 833 Sărmăşel.

874. (1) LASLĂU MARE (gases). Similar to the deposit no.833 Sărmăşel.

875. (1) CUCERDEA (gases). Similar to the deposit no. 833 Sărmăşel.

876. (1) TĂURENI (gases). Similar to the deposit no. 833 Sărmăşel.

877. (1) CETATEA DE BALTĂ (gases). Similar to the deposit no. 833 Sărmăşel.

878. (1) VELT (gases). Similar to the deposit no. 833 Sărmăşel.

879. (1) SAROS-DELENII (gases). Similar to the deposit no. 833 Sărmăşel.

880. (1) AXENTE SEVER (gases). Similar to the deposit no. 833 Sărmăşel.

881. (1) COPŞA MICA (gases). Similar to the deposit no.833 Sărmăşel.

882.(1) BAZNA (gases). Similar to the deposit no. 883 Sărmăşel.

883. (1) SELEUS (gases). Similar to the deposit no. 883

866.(1) FIRTUŞU (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

867.(1) BENŢID (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

868.(1) TĂRCEŞTI (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

869.(1) TREISATE-GHIREŞTI (Gaze). Similar cu acumularea nr.833 Sărmăşel.

870.(1) SÎNGEORGIU DE PĂDURE (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

871.(1) GĂLĂŢENI (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

872.(1) SUVEICA (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

873.(1) FILITELNIC (Gaze). Similar cu acumularea nr.833 Sărmăşel.

874.(1) LASLĂU MARE (Gaze). Similar cu acumularea nr.833 Sărmăşel.

875.(1) CUCERDEA (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

876.(1) TĂURENI (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

877.(1) CETATEA DE BALTĂ (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

878.(1) VELT (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

879.(1) SAROŞ-DELENII (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

880.(1) AXENTE SEVER (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

881.(1) COPŞA MICA (Gaze). Similar cu acumularea nr.833 Sărmăşel.

882.(1) BAZNA (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

883.(1) SELEUŞ (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

884.(1) NADEŞ (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

885.(1) ŞOIMUŞ (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

886.(1) CHEDIA (Gaze). Similar cu acumularea nr. 833 Sărmăşel.

Olt River. (3) Făgăraş Depression. (4) Peat horizon, Upper Holocene. (5)Sandy clays, muds. (6) Bed (the deposit consists of two peat bogs: Balta Sercăii and Crîngul Mîndrii,lying on a surface of 150 ha).(7) U_h(8-9-11%); V^i(30-49%); Q_i^i(2700-4300kcal/kg).(8) Peat is brown-yellowish-coloured, being constituted of reed and sedge. (9) Mihăilă N. (1973) St.teĥn.econ.,H,5; Pop E.(1960).(C.B.)

904. (1) MĂCIN (kaolin ; hydrothermal alteration or supergene alteration; uncertain age). (2) North Dobrogea, Măcin Mts, Cheia and Viţelaru Hills. (3) North Dobrogea, Măcin Unit. (4) Priopcea Quartzites (Paleozoic ?). (5) Veins of quartz porphyries, kaolinitized, encompassed in Priopcea Quartzites (Paleozoic or Proterozoic). (6) Veins, lenses. (7) SiO_2(68.69%); Al_2O_3 (21.92%); Fe_2O_3 (0.45%); FeO (0.18%); MgO (0.57%); CaO(0.35%); K_2O (1.55%). (8) Kaolinite (60-80%), montmorillonite (10-30%), illite (less than 10%), quartz, feldspar. (9) Brana V.(1967); Rădan S.,Bratosin I.(1977) Arch. IGG. (S.R.)

904 a.(1)VIŢELARU (kaolin; hydrothermal alteration or supergene alteration; uncertain age); Fig.20. Similar to the deposit no. 904 Măcin.

904 b.(1) EPAMINONDA (kaolin; hydrothermal alteration or supergene alteration; uncertain age); Fig.20. Similar to the deposit no. 904 Măcin.

905. (1)NICULIŢEL (quartz; hydrothermal; Triassic). (2) Dobrogea. (3) North Dobrogea, Niculiţel Unit. (4) Triassic ophiolitic complex. (5)Triassic dolerites. (6) Veins. (7) $SiO_2 \pm$ Fe,Ca. (8) Quartz $\pm$ epidote. (9) Savul M. (1931) D.S. Inst.Geol.Rom., XVIII; Borcoş M.,Hanomolo I. (1956) Arch. IGG; Savu H. et al.(1980) D.S.Inst.geol.geofiz.,LXV,1. (I.B.)

906. (1) SOMOVA (Ba;Pb,Zn $\pm$ Cu; hydrothermal-metasomatic; Triassic). (2)North Dobrogea. (3) Tulcea Unit. (4) Somova Beds and Triassic rhyolites. (5) Spathic limestones, turbiditic accumulations, Lower Triassic. (6) Peneconcordant compact bodies, veins, lenses and impregnation zones. (7) Ba,Pb,Zn $\pm$ Cu; Sr,Ag,As,Cd,In, Ga. (8) Pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, baryte, fluorine, carbonates, quartz. Vertical zoning (veins): baryte, fluorine (zone Ba+F); baryte, sphalerite, galena (zone Ba$\pm$Pb,Zn); galena,sphalerite. Succession: baryte, pyrite (syndiagenetic phase) (a); galena, sphalerite, quartz, calcite, dolomite, fluorine, baryte (b). (9) Ianovici V. et al.(1957) Anal.Univ.C.I. Parhon; Ianovici V. et al.(1977) Stud.cerc.geol.,geofiz.,Geol.,22, 11-17; Vlad S.(1978) Stud.cerc.geol.geogr.geofiz.,Geol.,23,2;

Baltreş A.(1982) Arch. IGG; Vîlceanu P. et al.(1979,1980).Arch. IPGG. (I.B.)

906 a. (1) BECHIR-CISLA-DL.CARIEREI (Ba;Pb,Zn,±Cu; hydrothermal-metasomatic; Triassic).(2) North Dobrogea. (3) Tulcea Unit. (4)Somova Beds and Triassic rhyolites. (5) Spathic limestones, turbiditic accumulations, Lower Triassic. (6) Peneconcordant lenticular bodies, breccia bodies, nests with feathered and concretional depositions, veins. (7) Ba,Pb,Zn,Cu;Sr,Ag,As;Cd,In,Ga. (8) Baryte, sphalerite, galena, tetrahedrite, chalcopyrite, pyrite, quartz; baryte ± sulphides, sulphides ± baryte; zonation and succession similar to those described at no. 906 Somova. (9) See no.906 Somova; Vîlceanu P. et al.(1979) Arch. IPGG. (I.B.)

907. (1) MOVILA SĂPATĂ (Ba ± Pb,Zn; hydrothermal-metasomatic; Triassic). (2) North Dobrogea. (3) Tulcea Unit. (4) Somova Beds, Lower Triassic. (5) Spathic limestones, Lower Triassic. (6) Stockworks. (7) Ba,Pb,Zn ± Cu; Sr,Ag; Cd,Sb,As,Ga,Sn. (8) Pyrite, sphalerite, chalcopyrite, galena, baryte. Succession: pyrite, sphalerite 1, chalcopyrite 1, galena, chalcopyrite 2, sphalerite 2. (9) See no. 906 Somova. (I.B.)

908. (1)MALCOCI (Ba;Pb,Zn; hydrothermal-metasomatic; Triassic). (2) North Dobrogea. (3) Tulcea Unit. (4) Stratele de Somova, Lower Triassic. (5) Spathic limestones, Lower Triassic. (6) Irregular bodies, subordinate veins. (7) Ba ± Pb,Zn;Sr,Ag;Cd,Sb,As, Ga. (8) Pyrite, sphalerite, chalcopyrite, galena. (9) See no. 906 Somova. (I.B.)

908 a. (1) MARCA (Ba; Pb,Zn ± Cu; hydrothermal-metasomatic; Triassic). (2) North Dobrogea. (3)Tulcea Unit. (4) Somova Beds, Lower Triassic. (5) Spathic limestones, Lower Triassic. (6) Veins, irregular,hydrometasomatic bodies. (7) Ba;Pb,Zn,Cu;Sr,Ag,As,Cd,Ga, In. (8-9) Similar to the deposit no. 906 Somova.(I.B.)

908 b. (1) BORZA (Ba;Pb,Zn±Cu; hydrothermal-metasomatic ; Lower Triassic). (2) North Dobrogea. (3) Tulcea Unit. (4) Sedimentary deposits, Lower Triassic. (5) White, quartz sandstones, Werfenian. (6) Beds and agglomerations in nests. (7) Cu;Co,Ni,V,Pb,Zn. (8) Chalcocite, malachite, native Cu. (9) Murgoci (1915) An.Inst. Geol.Rom.,VI,2; Mirăuţă O.,Mirăuţă E.(1965)Carp.-Balk.Geol.Assoc. 7th Congr.,Sofia; Vlad S.(1978) St.cerc.geol.geogr.geofiz.,Geol, 23,2; Mureşan M. et al.(1983) Arch.IGG. (I.B.)

909. (1) IULIA (Fe; hydrothermal (?);Triassic). (2) North Dobrogea. (3) Consul Unit. (4) Consul Formation (Triassic-Spathian). (5) Reaction skarns (silicate limestones), limestones. (6)

Lenticular bodies. (7) Fe,Cu;Mn,Zn;Ta,Co,Ti,Pb. (8) Calcite,garnet, epidote, chlorite, quartz, vesuvianite; hematite, magnetite, pyrite, chalcopyrite; siderite , albite. (9) Vlad S.(1978) St.cerc.geol. geofiz.,geogr.,Geol.,23,2; Mîrza I. et al.(1981) St.cerc.geol. geofiz.,geogr.,Geol.,26,197-211; Baltreş A.,Codarcea V.,Boştinescu S.(1984) Arch. IGG. (G.U.)

909 a. (1) LOZOVA MALCIU (Fe; hydrothermal (?); Triassic). Similar to the deposit no. 909 Iulia.

909 b. (1) ESCHIBALIC (Fe; hydrothermal (?); Triassic). Similar to the deposit no. 909 Iulia.

910. (1) ALTÎN TEPE (Cu, pyrite; hydrothermal-sedimentary, metamorphosed, partly retromorphosed; Middle Proterozoic). (2) Dobrogea, Casimcea Plateau. (3) Northern part of Central Dobrogea. (4) Upper terrigene formation (At_4) of the Altîn Tepe Group,Middle Proterozoic. (5)Quartz chlorite-sericite schists, quartz chlorite schists ± pyrite, sericite quartz schists ± pyrite. (6) Strongly elongated, stratiform lenses of compact and disseminated ore. (7) Cu; Fe,Ba,Zn ±Pb; As,Sb,Au,Ag,Ge,Sn. (8) Primary compact ore, mostly pyritous: pyrite, quartz, baryte, chalcopyrite, sphalerite ± magnetite; hematite, chlorite,pyrrhotine, cassiterite, garnet, epidote,albite,apatite, zoisite, sphene, spathic iron,calcite (a); compact ore mostly magnetitic: magnetite, hematite,quartz, baryte ± pyrite, chalcopyrite, chlorite; disseminated ore:quartz, sericite, pyrite, chlorite, chalcopyrite ± baryte, albite,sphalerite, galena, pyrrhotite, cassiterite, epidote, apatite, zoisite, sphene, garnet; ore from the oxidation zone: limonite, malachite, azurite,cuprite, native copper, quartz (of the primary ore); ore from the cementation zone(in association with the ore from the oxidation zone and with the primary ore): covellite, chalcocite, calcanite, cuprite, bornite, melanterite, malachite, azurite, marcasite, limonite, gypsum. (9) Mureşan M.(1969) D.S.Inst.geol.geofiz.,LIV,2; Mureşan M.(1972) D.S.Inst.geol.geofiz., LVIII,2;Berbeleac I. et al.(1984) An.Inst.geol.geofiz.,LXIV(in press).(M.M.)

911. (1)CEAMURLIA (Cu; hydrothermal; uncertain age). (2) Dobrogea, Casimcea Plateau. (3) Northern part of Central Dobrogea. (4) Phillyte unit (intragraywacke) of the greenschists series, Upper Proterozoic. (5)Phyllites and metagraywacke. (7) Cu,S,Fe. (8) Quartz,chlorite, chalcopyrite, magnetite, pyrite. (9) Codarcea V.(1963,1964,1965) Arch. IGG; Constantinescu R. et al.(1978);Mirăuţă O.(1969) An.Inst.geol.,XXXVII.(M.M.)

912. (1) SFÎŞTOFCA-C.A.ROSETTI (Ti,Zr;alluvial; Holocene).

(2)North Dobrogea. (3) Danube Delta, Sulina and Chilia secondary deltas. (4) Erosive contact zone between Rosetti, Codru and Sfîştofca sets. (5) Sands, mostly quartzose, representing fossil littoral bars. (6) Multiple lenses. (7) Si,Al;Ti,Zr;Fe,Co;Mn,P, Cr. (8) Quartz, feldspar, glauconite, garnet, opaque minerals(ilmenite, hematite, magnetite), epidote, zoisite, rutile, zircon, staurolite, hornblende, kyanite, titanite, apatite, tourmaline, anatase, brookite. (9) Setel M. et al.(1977) Arch. IPGG. (D.J.)

913. (1) SULINA (Ti,Zr; alluvial; Quaternary). (2) North Dobrogea. (3) Danube Delta, frontal zone. (4) Sulina actual littoral belt. (5) Littoral sands, mostly quartzose. (6) Lenses. (7) Si,Al;Ti,Zr,Fe,Ca;Mn,P. (8)Quartz, feldspar, garnet, ilmenite, magnetite, zircon, rutile, staurolite, titanite, anatase, brookite, tourmaline. (9) Rădulescu I. et al.(1983) Arch.IGG. (D.J.)

914. (1) SFÎNTU GHEORGHE (Ti,Zr; alluvial;Holocene). (2) North Dobrogea. (3) Danube Delta, Sf.Gheorghe II deltaic phase. (4) Sărăturile accumulation formation. (5) Sands, mostly quartzose, representing fossil littoral bars. (6) Lenses. (7) Si,Al;Ti,Zr, Fe,Ca; Mn,P,Cr. (8) Quartz, feldspar,garnet, ilmenite, zircon,titanite, anatase, brookite, hematite, magnetite, epidote, rutile, staurolite, hornblende. (9) Rădulescu I. et al.(1983) Arch. IGG. (D.J.)

915.(1)PERIŞOR (Ti,Zr; alluvial; Holocene-Actual). (2) North Dobrogea. (3) Danube Delta, Sf.Gheorghe II deltaic phase. (4) Perişor I,II and III sets of Sf.Gheorghe II Delta. (5) Sands,mostly quartzose, representing fossil and actual littoral bars. (6) Elongated lenses. (7) Si,Al;Ti,Zr,Fe,Ca;Cr,P,Mn. (8) Quartz, feldspar, garnet, ilmenite, zircon, titanite, anatase, brookite, hematite, magnetite, epidote, zoisite, rutile, staurolite, hornblende, kyanite, tourmaline. (9) Rădulescu I. et al.(1983) Arch. IGG.(D.J.)

916. (1) CHITUC (Ti,Zr; alluvial; Holocene).(2) North Dobrogea. (3) Danube Delta, Sinoe-Coşna deltaic phase. (4) Chituc III and IV sets of the Sinoe-Coşna Delta. (5) Sands, mostly quartzose, representing fossil littoral bars. (6) Lenses. (7) Si,Al;Ti,Zr, Fe,Ca;Cr,P,Mn. (8) Quartz, feldspar, garnet, ilmenite, zircon, titanite, anatase, brookite, hematite, magnetite ,epidote, zoisite, rutile, staurolite, hornblende, kyanite, tourmaline. (9) Rădulescu I. et al. (1983) Arch. IGG. (D.J.)

918. (1) PALAZU MARE (Fe;Krivoi Rog type - regionally metamorphosed; Lower Proterozoic). (2) Dobrogea. (3) Northern part of South Dobrogea. (4) Lower formation of the quartz-amphibolic

schists + magnetite of the Palazu Mare Group, Lower Proterozoic. (5)Amphibolites, mica schists, quartzites, cummingtonitic rocks, quartz-amphibolic schists, limestones and dolomites + silicates; Middle Proterozoic. (6) Beds, lenticular beds, lenses. (7) Fe;Ti, Ba, P,Zr,Ni,Cu. (8) Quartz, hematite, magnetite, antophyllite, cummingtonite, hornblende, ferrosalite, almandine, grandite ,biotite, dolomite, ankerite, calcite. (9) Giuşcă D. et al.(1976) St. cerc.geol.,geofiz.,geogr.,Geol.,21; Maier O.,Mihu E.(1976) Arch. IGG; Visarion M.(1979) St.cerc,geol.,geofiz.,geogr.,Geol.,17,1. (M.M.)

919. (1) BASARABI (chalk; calcareous organogen deposited in marine environment; Campanian-Maastrichtian). (2) South Dobrogea. (3) Moesian Platform cover(South Dobrogea). (4) Carbonatic horizon (chalk), Campanian-Maastrichtian. (5) Chalk with siliceous accidents. (6) Beds. (7) $CaCO_3$ (92-96%); Al_2O_3 + Fe_2O_3 (1-1.2%); SiO_2(4-8%); MgO (0.88%). (8) Calcite, quartz, clay minerals. (9) See no. 414 Darabani. (S.R.)

920. (1) CAINAC (chalk; sedimentary-calcareous organogen rocks deposited in marine environment; Campanian-Maastrichtian). Similar to the deposit no. 919 Basarabi.

921. (1) REMUS OPREANU (glauconite; sedimentary-marine, by neoformation as a result of halmyrolysis processes; Albian). (2) South Dobrogea. (3) Moesian Platform cover (South Dobrogea). (4) Glauconitic gritty-sandy horizon (Albian). (5) Sandstones and sands (Albian). (6) Beds. (7) SiO_2 (61.2%); Al_2O_3(6.6%); Fe_2O_3 (13.7%); FeO (1.3%); MgO (4.2%); K_2O (5.4%). (8) Quartz (22-90%); glauconite (8-76%), feldspars, muscovite, chlorite, limonite, hematite, etc. (9) Similar to the deposit no. 414 Darabani.(S.R.)

922. (1) PEŞTERA (phosphatic rocks; marine by precipitation of phosphatic minerals on the continental platform from bottom, rising, cold currents waters; Cenomanian). (2) South Dobrogea.(3) Moesian Platform cover (South Dobrogea). (4) Conglomeratic horizon (Cenomanian). (5) Conglomerates and microconglomerates with phosphoritic concretions (Cenomanian). (6) Concretions. (7) P_2O_5 (3.87%); CaO (24.98%); MgO (traces), Fe_2O_3 (3.99%); Al_2O_3(2.58%); SiO_2(49.57%). (8) Colophanite, dahlite, francolite, glauconite. (9) See no. 414 Darabani. (S.R.)

923. (1) RASOVA-HAŢEG (diatomite;organogen ; sili - ceous rocks deposited in brackish environment; Sarmatian). (2) South-west of South Dobrogea. (3) Moesian Platform cover(South Dobrogea). (4) Diatomitic-bentonitic horizon (Bessarabian). (6)

Beds. (7) SiO_2 (72-77%); Fe_2O_3(2.5-6.0%); Al_2O_3(6-10%); CaO(1.4-4.0%);MgO (0.7-2.3%); TiO_2 (0.4-0.5%); P C(7-8%). (8) Diatoms (55-70%), quartz (3-5%), calcite (1-3%), clay minerals (30-40%), feldspar (2-3%), limonite (1-3%), carbonaceous substances (less than 0.5%). (9) Albu Z. et al.(1979) Arch. MG; see no. 121.(S.R.)

924. (1) ADÎNCATA (diatomite;sedimentary-organogen, siliceous rocks deposited in brackish environment; Sarmatian). Similar to the deposit no. 923 Rasova-Haţeg.

925. (1) ADÎNCATA (bentonitic clay; uncertain genesis; Sarmatian(Bessarabian)). (2) South-west of South Dobrogea. (3)Moesian platform cover (South Dobrogea). (4) Diatomitic-bentonitic horizon (Bessarabian). (5) Bentonitic clays situated in the footwall or hanging wall of diatomites lying between two calcareous horizons (Bessarabian). (6) Lenticular beds and lens-beds. (7) Mean : SiO_2(61.89%); Al_2O_3(13.71%); TiO_2 (0.50%); Fe_2O_3 (3.87%). (8) Beidellite (predominant), illite, quartz, cristobalite, plagioclase feldspars, opaque minerals, glauconite, diatom frustules. (9) Albu Z. et al.(1979) Arch. MG; see no. 260 Tufari (S.R.)

926. (1) ADAMCLISI (diatomite; sedimentary-organogen, siliceous rocks deposited in brackish environment; Sarmatian).Similar to the deposit no. 923 Rasova Haţeg.

927. (1) URLUIA (bentonitic clay; uncertain genesis; Sarmatian(Bessarabian)). Similar to the deposit no. 925 Adîncata.

928. (1) POGĂNEŞTI PRUT (Ti,Zr; alluvial; Actual). (2) Moldavian Plateau, east of Huşi. (3) Moldavian Platform. (4) Alluvial sands of the Prut. (5) Titano-zirconiferous alluvial sands. (6) Lenticular bodies. (7) Si,Fe,Ti,Zr. (8) Quartz, leucoxene, limonite, pyrite, amphiboles, garnet, epidote, titanite, rutile, kyanite, zircon, tourmaline, staurolite, apatite. (9) Huică I. et al. (1979) Arch. IPGG; Gaiţă C. et al.(1980-1981) Arch. IPGG. (D.J.)

929. (1) BOBOIEŞTI (Ti,Zr ±Au; alluvial; Pliocene). Similar to the deposit no. 930 Glogova.

930. (1) GLOGOVA (Ti,Zr ± Au; alluvial; Pliocene). (2) Oltenian Subcarpathians. (3) Getic Depression. (4) Sedimentary deposits, Pontian and Dacian. (5) Sands. (6) Bands, beds. (7) Ti, Zr,Fe±TR . (8) Ilmenite, rutile,magnetite, zircon ± monazite. (9) Arch. IMR (1983); Rădulescu I. et al.(1983) Arch. IGG.(V.A.)

931. (1) OHABA CĂINICENI (Ti,Zr ± Au; alluvial; Dacian). (2) Oltenian Subcarpathians. (3) Getic Depression. (4) Sedimentary formations, Dacian. (5) Sands. (6) Bands, beds. (7) Ti,Zr,Fe± Au,TR. (8) Ilmenite, rutile, magnetite, zircon,± monazite. (9)

IMR synthesis papers (1983); Rădulescu I. et al.(1983)Arch. IGG (V.A.)

932. (1) OHABA PESTENUTA (Ti,Zr ±Au; alluvial; Dacian). Similar to the deposit no. 931 Ohaba Căiniceni.

II.GENETIC TYPES OF MINERAL RESOURCES

For the genetic classification of mineral resources, only metalliferous and non-metalliferous deposits have been taken into account due to the fact that no significant genetic peculiarities may be recognized inside the groups of coal, oil and gas fields.

Generally, the genetic types mentioned on the legend of the map 1:1 000 000 were considered, but more details have been operated both in the classification of the main metallogenetic groups and in some of the fundamental genetic groups. Thus, magmatic, volcano-sedimentary and hydrothermal-sedimentary, sedimentary, metamorphosed and metamorphic ore deposits were separated as main groups. The differences between metamorphosed and metamorphic mineral resources is significant as the former represent various primary ore deposits overprinted by younger metamorphic events, while the latter were generated by metamorphism from rocks without economic importance.

Volcano-sedimentary and hydrothermal-sedimentary ore deposits were grouped together as in some cases no strict delimitation is possible. The separation of this group of accumulation as a genetic unit of first rank is due to their particular geological setting differentiating the above mentioned ore deposits both from magmatic and sedimentary ones.

The term hydrothermal-sedimentary is used for deposits supposed to result from submarine hydrothermal sources without implying their magmatic affiliation or the temperature domain. Therefore no significance is given to the controversed origin of these hydrotherms.

1) For magmatic ore deposits the legend of the map was followed with some more details concerning porphyry copper type deposits and hydrothermal deposits, according to their affiliation to different types of magmatic structures; at the same time, geyserian deposits were mentioned as a supplementary genetic type. Some concentrations due to metal mobilisation by magmatic processes were considered as well.

Alpine hydrothermal ore deposits are of highest frequence. Together with hydrothermal metasomatic and porphyry copper ores, they represent the most important sources for Cu, Pb, Zn, Au, Ag, Ba and kaolin of magmatic affiliation.

2) Volcano-sedimentary and hydrothermal-sedimentary ores are of high metallogenetic interest due to their large varieties in depositional types and different genetic affiliation, but they are not of first economic interest.

3) Sedimentary mineral resources were classified with more details in respect to the legend of the map. For example, details of the marine and lagoon environment have been taken into consideration, as well as differences between allochthonous and autochthonous residual accumulation. As a supplementary type, precipitation from sulphur bearing springs was considered. Lagoonal salt deposits and allochthonous residual bauxite accumulations are of special economic importance.

4) Metamorphosed ore deposits have been classified according to the primary (premetamorphic) genetic types, not specified in the legend of the map scale 1:1 000 000. More details were needed for the widespread syngenetic stratiform deposits considered as volcano-sedimentary or hydrothermal-sedimentary in origin. Due to the more or less pronounced alteration by metamorphism and polymetamorphism, it seemed reasonable to adopt a classification following the host rocks and the lithologic particularities of the hosting formations. Thus, the association with basic or acid volcano-sedimentary formations and with carbonatic graphitous or silty-sandy formations was underlined. According to this geological setting, the morphology and other characters, primary deposits of Kuroko, Lahn-Dill and Mississippi Valley type (sensu Mississippi Valley-Bleiberg-Silezia type of Amstutz) are suggested. For the Romanian territory, iron ores of Teliuc-Ghelar type and manganese ores of Iacobeni type are characteristic. Stratiform iron ores of the old shields were considered as a distinct genetic type. Of special economic importance are the Cambrian pyrite-basemetal deposits of Kuroko type, the Proterozoic Pb-Zn ores of Mississippi Valley type and the Cambrian manganese ores of Iacobeni type.

5) The metamorphic mineral resources were grouped according to processes of metamorphic differentiation (pegmatite, quartz veins) or metamorphic recrystallization under different thermodynamic conditions from different primary rocks, as for

example carbonaceous matter (graphite), pelitic rocks (kyanite, pyrophyllite), dolomite (talc), ultrabasic rocks (talc, amphibole-asbestos). Especially talc and graphite are of economic interest.

Many of the metamorphosed and metamorphic deposits display a polymetamorphic character. Of some metallogenetic interest were successive metamorphic events for gold concentrations in quartz veins and iron concentrations as magnetite in previously carbonatic rocks.

6) Mineral resources of unclarified genetic type have been listed separately.

In the list of genetic types, all mentioned mineral resources were registered with names and numbers used on the map and in figures; only the main useful elements are mentioned according to colours on the maps, but sometimes also supplementary data are inscribed in Chapter I, Part II.

1. MAGMATIC ACCUMULATIONS

1.1. MAGMATIC LIQUID

1. Goleţu Mare (265) Cr
2. Plavişeviţa (266) Cr
3. Ciucaru Mare (I-Fig.12) Cr
4. Rudina Înaltă (II-Fig.12) Cr
5. Curiştea (III-Fig.12) Cr
6. Tişoviţa (IV-fig.12) Cr
7. Lepopole (V-Fig.12) Cr
8. Puşcarschi (268) Cr
9. Dîlma (268 a-Fig.12) Cr
10. Ciungani-Căzăreşti (303; 305 M-Fig.13) Fe,Ti,V;Ni
11. Surduc (275) Fe,Ti,V
12. Almaş Sălişte (299) Fe,Ti,V
13. Dumbrăviţa (II-Fig.13) Fe, Ti,V
14. Juliţa (IV-Fig.13) Fe,Ti,V
15. Toc (VI-Fig.13) Fe,Ti,V

1.2. PORPHYRY MOLYBDENUM

16. Mraconia (263) Mo±Cu,W

1.3. PORPHYRY COPPER

1.3.1. Cu-Mo Type (Lowell-Guilbert)

17. Lăpuşnicul Mare (241) Cu,Mo
18. Teregova-Lăpuşnicel (I-Fig.11) Cu,Mo
19. Valea Nasovăţ-Lilieci (247) Cu,Mo
19a. Ciclova (286 a-Fig.11) Cu±Mo,W
20. Moldova Nouă (289) Cu,Mo;anhydrite

1.3.2. Cu,Au±Mo Type (Banza type)

21. Deva (312) Cu,Au±Mo;pyrite
22. Voia (318) Cu,Au;anhydrite
23. Bolcana-Troiţa (320) Cu,Au±Mo
24. Valea Morii (333) Cu,Au
25. Musariu Nou (II-Fig.14) Cu,Au
26. Colnic (IV-Fig.14) Cu,Au
27. Remetea (338) Cu,Au
28. Muncăceasca west-Podul Ionului (347 a-Fig.15) Cu,Au
29. Trîmpoiele (II-Fig.15) Cu,Au
30. Măgura Iepii (III-Fig.15) Cu,Au; pyrite
31. Bucium-Tarniţa (356) Cu,Au
32. Roşia Poieni (364) Cu,Au±Mo
33. Sumuleu-Gurghiu (106) Cu,Au±Mo
34. Ostoroş (107) Cu,Au±Mo

35.Mădăraș-Harghita(1o8)Cu,Au ±Mo
36.Găinească(I-Fig.6)Cu,Au±Mo
37.Fierăstraie(II-Fig.6)Cu, Au±Mo

1.4.CONTACT METASOMATIC

38.Tincova(216)Fe
39.Șopot(248 M-Fig.11)Fe
4o.Măgureaua Vaței(3o7)Fe
41.Maşca Băișoara(371)Fe
42.Maşca(371 a-Fig.17)Fe
43.Cacova Băișoara(372)Fe
44.Izvorul Arieșului(IV-Fig. 18)Fe
45.Ocna de Fier(273)Fe;Pb,Zn, Cu;B
45a.Pr.Drăcoița(I-Fig.18)Mo, pyrite
46.Budureasa(398)brucite
47.Căzănești(3o4 M-Fig.13) calcite
48.Băița Bihor(394)wollastonite

1.5.CONTACT AND HYDROTHERMAL METASOMATIC

49.Oravița(285)Cu,Mo
5o.Ciclova(286)Cu,Mo,W
51.Dognecea(274)Pb,Zn,Cu;Fe
52.Sasca Montană(287)Cu;Pb,Zn ±Au,Ag
53.Moldova Nouă-Suvorov(288)Cu; Pb,Zn±Au,Ag
54.Vărad(29o)Cu;Pb,Zn±Au,Ag
55.Lita-Băișoara(373)Cu±Pb,Zn
56.Brusturi-Luncșoara(384)Cu; Pb,Zn
57.Rîul Mic(385 M-Fig.18)Pb,Zn, Cu±Au,Ag
58.Șipot-Dibarți(386)Pb,Zn±Au,Ag
59.Gruiul Dumei(388)Pb,Zn±Cu
6o.Izvorul Bihorului(39o)Pb,Zn ±Cu
61.Valea Mare(391)Pb,Zn±Cu
62.Valea Titișor(392 M-Fig.18)Pb, Zn±Cu
63.Băița Bihor(394)Pb,Zn;Cu;Mo± Bi,W;B
64.Budureasa(397)Pb,Zn,Cu±Au,Ag; Fe
65.Pr.Drăcoița(I-Fig.18)pyrite,Cu
66.Valea Vacii(III-Fig.18)bari- tine
67.Valea Seacă(4oo)Cu,Pb,Zn±Au, Ag;Fe

1.6.HYDROTHERMAL

1.6.1.Associated with volcanic structures

1.6.1.1.Veins

67a.Corund(117)aragonite
68.Niculițel(9o5)quartz
69.Cocoizaș(1o9)Hg
7o.Bixad(5)Au,Ag
71.Stînceni(92)Au,Ag
72.Hondol(316 M-Fig.14)Au,Ag
73.Trestia(322 M-Fig.13)Au,Ag
74.Cîinel(329 M-Fig.14)Au,Ag
75.Musariu(33o)Au,Ag
76.Musariu Nou(331 M-Fig.14)Au,Ag
77.Barza(III-Fig.14)Au,Ag
78.Bucureșci-Rovina(339 M-Fig.14) Au,Ag
79.Vîlcoi(355)Au,Ag
8o.Corabia(358)Au,Ag
81.Roșia Montană-Cîrnic(361 a-Fig.16)Au,Ag
82.Runculețe(352 M-Fig.15)gold pyrite;Au,Ag
83.Săcărîmb(313)Au,Ag,Te;Pb,Zn
84.Cordurea(327 M-Fig.14)Au,Ag,Te
85.Fața Băii(343 a-Fig.15)Au,Ag, Te±Pb,Zn,Cu

86.Stănija-Popa(349 M-Fig.15) Au,Ag,Te±Pb,Zn,Cu

87.Săsar(17)Au,Ag±Pb,Zn

88.V.Roşie(19)Au,Ag±Pb,Zn

89.Dl.Crucii(2o)Au,Ag±Pb,Zn

9o.Jereapăn(31 M-Fig.1)Au,Ag± Pb,Zn

91.Măgura(319 M-Fig.14)Au,Ag; Pb,Zn

92.Băiţa Crăciuneşti(323)Au, Ag;Pb,Zn

93.Brădişor(332)Au,Ag;Pb,Zn

94.Cireşata(333 a-Fig.14)Au, Ag;Pb,Zn,Cu

95.V.Morii Veche(334)Au,Ag± Pb,Zn

96.Dl.Fetii-V.Talpelor(I-Fig. 14)Au,Ag±Pb,Zn

97.Breaza(341)Au,Ag±Pb,Zn,Cu

98.Breaza NE(341 a-Fig.15)Au, Ag±Pb,Zn,Cu

99.Haneş(343)Au,Ag;gold pyrite;Pb,Zn,Cu

1oo.Băbuţa-Concordia(345 a-Fig.15)Au,Ag±Pb,Zn,Cu

1o1.Almaş(346 M-Fig.15)Au,Ag ±Pb,Zn

1o2.Muncăceasca-Stănija(347) Au,Ag±Pb,Zn

1o3.Muncăceasca east(348 M-Fig.15)Au,Ag±Pb,Zn,Cu

1o4.Mormîntul(35o M-Fig.15)Au, Ag±Pb,Zn

1o5.V.Tisei(351 M-Fig.15)Au, Ag±Pb,Zn

1o6.Toţi Sfinţii(I-Fig.15)Au, Ag±Pb,Zn

1o7.Conţu(359 M-Fig.16)Au,Ag ±Pb,Zn,Cu

1o8.Frasin(36o M-Fig.16)Au,Ag ±Pb,Zn,Cu

1o9.Rodu(I-Fig.16)Au,Ag±Pb,Zn

11o.Ghezuri(1)Pb,Zn±Au,Ag

111.Socea-Batarci(2)Pb,Zn±Au,Ag

112.Penigher(3)Pb,Zn±Au,Ag

113.V.Colbului(1o)Pb,Zn±Au,Ag,Cu

114.Ilba-Handal(11)Pb,Zn±Au,Ag,Cu

115.Cicîrlău(12 M-Fig.1)Pb,Zn±Au,Ag

116.Nistru(13)Pb,Zn,Cu±Au,Ag

117.Nistru(13 a-Fig.1)Pb,Zn,Cu± Au,Ag

118.Tyuzoşa(14 M-Fig.1)Pb,Zn,Cu±Ag

119.Băiţa(15 M-Fig.1)Pb,Zn±Au,Ag

12o.Wilhelm(16 M-Fig.1)Pb,Zn±Au,Ag

121.Cavnic-Bolduţ(27)Pb,Zn,Cu±Au,Ag

121a.Cavnic-Roata(28)Pb,Zn±Au,Ag

122.Purcăreţ(I-Fig.1)Pb,Zn,Cu±Au, Ag

123.Bulza(296)Pb,Zn,Au,Ag;Sb

124.Troiţa(321 M-Fig.14)Pb,Zn,Au,Ag

125.Troiţa-Teascu(321 a-Fig.14)Pb, Zn±Au,Ag

126.Meteşan(344 M-Fig.15)Pb,Zn±Au, Ag

127.Baba(345 M-Fig.15)Pb,Zn±Au, Ag

128.P.lui Avram(317 M-Fig.14)Cu

129.Bucium-Armsma(357 M-Fig.16)Cu, Au,Ag,Pb,Zn

1.6.1.2.Stockwork (impregnations)

13o.Sîntimbru(118)Hg

131.Cămîrzana(4)Au,Ag;Hg

132.Caraci-Măgura Ţebei(335) Au,Ag

133.Racşa(8)gold pyrite

134.Borzaş(18 M-Fig.1)gold pyrite

135.V.Băii north(9 M-Fig.1)Pb,Zn± Au,Ag

1.6.2.Associated with subvolcanic

structures

1.6.2.1.Veins

136.Draica(324 M-Fig.14)Au,Ag

137.Vălişoara(325)Au,Ag

138.Şuior(24)Au,Ag,Pb,Zn

139.Aurum(II-Fig.1)Au,Ag,Pb, Zn±Cu

140.Vălişoara west(326 M-Fig. 14)Au,Ag,Pb,Zn,Cu;pyrite

141.Caraci-Măgura Ţebei(335)Au, Ag;Pb,Zn

142.Nyergheş(I-Fig.17)Au,Ag± Pb,Zn

143.Herja(21)Pb,Zn,Au,Ag

144.Baia Sprie(22)Pb,Zn,Cu; Au,Ag

145.Baia Sprie east(22 a-Fig. 1)Pb,Zn,Cu±Au,Ag

146.Băiuţ(32 M-Fig.1)Pb,Zn,Cu ±Au,Ag

147.Văratec(33)Pb,Zn,Cu±Au,Ag

148.Ţiganu(VI-Fig.2)Pb,Zn,Cu± Au,Ag

149.Colibiţa(87)Pb,Zn±Au,Ag

150.Căzăneşti-V.Sasului(302 M-Fig.13)Pb,Zn±Au,Ag

151.Bratosin(IX-Fig.13)Pb,Zn, Cu;gold pyrite

152.Hărţăgani(328 M-Fig.14)Pb, Zn±Au,Ag

153.Larga-vein 37(342 a-Fig. 15)Pb,Zn±Au,Ag,Cu

154.Borod-Corniţel(412)Pb,Zn, Cu±Au,Ag

155.Cisma(34)Pb,Zn,Cu

156.Coasta Ursului(35)Pb,Zn,Cu

157.Izv.Roşu(53)Pb,Zn

158.Juleşti-V.Fagului(396)Cu, Pb,Zn±Au,Ag

159.Tibleş(36)Cu,Pb,Zn±Au,Ag±Sb

160.Toroiaga(44)Cu,Pb,Zn±Au,Ag

1.6.2.2.Stockwork(impregnations)

161.Roşia Montană(361)Au,Ag

162.Vălişoara(325)Au,Ag

163.Şuior(24)Au,Ag;gold pyrite

164.V.Breze(II-Fig.16)Au,Ag;gold pyrite

165.Talagiu(VIII-Fig.13)Au;gold pyrite

166.Brădişor(349 a-Fig.15)Au;gold pyrite

167.Stănija-Popa(349 M-Fig.15)Au; gold pyrite

168.Prepestenia(342 b-Fig.15)Au, Ag±Pb,Zn,Cu

169.Baia de Arieş(365)Au,Ag±Pb, Zn,Cu

170.V.Cuţii(V-Fig.16)Au,Ag±Pb,Zn

170a.V.Socilor(IV-Fig.16)Pb,Zn± Au,Ag

171.Hărţăgani(328 M-Fig.14)Pb,Zn± Au,Ag

172.Birtin(337)Pb,Zn±Au,Ag

173.Almaşu Mic(340)Pb,Zn,Cu;pyrite

174.Meteşan(344 M-Fig.15)Pb,Zn± Au,Ag;gold pyrite

175.Muncăceasca east(348 M-Fig.15) Pb,Zn;gold pyrite

176.Răchiţele(403)Pb,Zn,Cu±Au,Ag

177.Galbena(III-Fig.1)Pb,Zn,Cu± Au,Ag

178.Strîmbu Băiuţ(30 M-Fig.1)Pb, Zn,Cu±Au,Ag

179.Bocşa-Săcărîmb(314 M-Fig.14) Pb,Zn±Au,Ag

180.Coranda-Hondol(315)Pb,Zn±Au,Ag

181.Măgura Ţebei(335 a-Fig.13)Pb, Zn±Au,Ag

182.V.Obîrşiei(VI-Fig.16)Pb,Zn± Au,Ag

183.Roşia Montană-Dl.Cetate (362 M-Fig.16)potash feldspar

1.6.3.Associated with plutonic structures

1.6.3.1.Hydrothermal

184.Bocşa(271)Pb,Zn±Au,Ag; baritine

185.Jolotca-Ditrău(98)Au,Ag

186.Aurora-Ditrău(99)Mo;Pb, Zn,pyrite

187.Săvîrşin(293)Mo;Cu;pyrite

188.Săvîrşin-Pr.Calului(293 a-Fig.13)Mo;pyrite

189.Cerbia(297)Mo;pyrite

19o.Şoimoş(38o)Cu

1.6.3.2.Stockwork (impregnations)

191.V.Leucii(395 M-Fig.18) zeolites

1.6.4.With uncertain magmatic affiliation

1.6.4.1.Veins

192.Pr.Mînăstirii(141 M-Fig. 7)Au

193.Păltineţ(XVII-Fig.8)Au

194.Mestecăniş(72)Zn,Pb,Cu; pyrite

195.Ruda-Mestecăn(136 M-Fig. 7)Pb,Zn,Cu±Au,Ag

196.Ruda Mică(136 a-Fig.7)Pb, Zn

197.Mesteacăn(136 b-Fig.7)Pb, Zn,Cu

198.Vulcăniţa-Gherdana(137) Pb,Zn±Au,Ag

198a.Bîrsa Fierului(138)Pb,Zn ±Au,Ag

199.Pr.Cărbunaru(I-Fig.7)Pb,Zn

2oo.V.Lupului(II-Fig.7)Pb,Zn

2o1.Valea de Mijloc(III-Fig.7)Pb, Zn

2o2.Nimaia(14o)Pb,Zn±Au,Ag

2o3.Tîncava-downstream(VI-Fig.8) Pb,Zn

2o4.Gemenea-Slătioara(75)Cu,Pb,Zn; Fe;baritine

2o5.Pr.lui Brusture(144 M-Fig.8)Cu

2o6.Tîncava-Ţîbra-Grui(V-Fig.8)Cu

2o7.Pr.lui Bucur(XIV-Fig.8)Cu,Pb, Zn

2o8.Valea Mare(XV-Fig.8)Cu

2o9.Valea lui Ecle(XVI-Fig.8)Cu,Au

21o.Valea Lungă(3o9)Cu,Pb,Zn

211.Pr.Răchitii(136 c-Fig.7)Cu, pyrite

212.Pietrele Măriei(I-Fig.2o)Fe

213.Valea lui Martin(II-Fig.2o)Fe

214.Amzalar(III-Fig.2o)Fe

215.Dl.Pîrlita(IV-Fig.2o)Fe

216.Dl.Boclugea(V-Fig.2o)Fe

217.Dl.Coşlugea(VI-Fig.2o)Fe

218.Dl.Islam-Geaferca(VII-Fig.2o)Fe

219.Dl.Boclugea(VIII-Fig.2o)Fe±Cu

22o.Bădeanca-Dăniş(142)Co,Ni,Cu

221.Tîncava-Păiş(143)Co,Ni;Cu,Pb, Zn

222.Lunca Gîrţii(I-Fig.8)Co,Ni

223.Valea lui Neguleţ(II-Fig.8)Co, Ni,Cu

224.Pr.Murgănii(III-Fig.8)Co,Ni,Cu

225.Grui(IV-Fig.8)Co,Ni,Cu

226.Tîncava-upstream(VII-Fig.8)Co, Ni,Cu

226a.Frumuşiţa(499)Fe

1.6.4.2.Stockwork(impregnations)

227.Turnu Rueni(224)Cu,Pb,Zn;Mo; pyrite

228.Ciotina(V-Fig.4)Cu;pyrite
229.Ceamurlia(911)Cu

23o.Iulia(9o9)Fe
231.Lozova-Malciu(9o9 a-Fig. 2o)Fe
232.Eschibalîc(9o9 b-Fig.2o) Fe

233.Pr.Sutila(VIII-Fig.8)Co, Ni,Cu

234.V.Cernei-Topleț(259)baritine;Pb,Zn,Cu±Au,Ag

1.7.METASOMATIC HYDROTHERMAL
1.7.1.Associated with volcanic structures

235.Izv.Ampoiului(353)Hg
236.V.Vîltori(353 a-Fig.15)Hg
237.Băbuia(354 M-Fig.15)Hg

1.7.2.Associated with sub-volcanic structures

238.Larga(342 M-Fig.15)gold pyrite;Pb,Zn±Au,Ag
239.Haneș(343)gold pyrite
24o.Muncăceasca-Stănija(347) gold pyrite±Pb,Zn

241.Baia de Arieș(365)Au,Ag ±Pb,Zn
242.V.Vinului(54)Pb,Zn±Au,Ag
243.Cobășel(55 M-Fig.3)Pb,Zn ±Au,Ag
244.Rușchița(2o9)Pb,Zn
245.Varnița(213)Pb,Zn
246.Baia de Arieș-Ambru(365 a-Fig.16)Pb,Zn±Au,Ag
247.Răchițele(4oȝ)Pb,Zn,Cu± Au,Ag

248.Ascuțita(215)Cu,Pb,Zn
249.Tîncova(217)Cu,Pb,Zn;Mo

25o.Cioaca Brazilor(246)baritine;Pb,Zn,Cu±Au,Ag

251.Mădăraș-Ciuc(111 M-Fig.6)Fe
252.Vlăhița(114)Fe

1.7.3.With uncertain magmatic affiliation

253.Delnița(65)Fe
254.Iulia(9o9)Fe
255.Lozova-Malciu(9o9 a-Fig.2o)Fe
256.Eschibalîc(9o9 b-Fig.2o)Fe

257.Ostra(76)baritine
258.Somova(9o6)baritine;Pb,Zn±Cu
259.Bechir-Cîșla-Dl.Carierei(9o6 a-Fig.2o)baritine;Pb,Zn±Cu
26o.Movila Săpată(9o7)baritine; Pb,Zn
261.Malcoci(9o8)baritine;Pb,Zn
262.Marca(9o8 a-Fig.2o)baritine; Pb,Zn±Cu
263.Dl.Bogza(9o8 b-Fig.2o)baritine; Pb,Zn±Cu

1.8.HYDROTHERMAL TRANSFORMATION

264.Orașu Nou(7)bentonite
265.V.Chioarului(38)bentonite
266.Răzoare(42)bentonite

267.Lepteș(23 M-Fig.1)kaolin clay
268.Neteda(29 M-Fig.1)kaolin
269.Parva(59)kaolin
27o.Cormășița(6o)kaolin
271.Ivo(11o)kaolin
272.Harghita Băi(113)kaolin
273.Sînsimion(119)kaolin
274.Sîntimbru(118 a-Fig.6)kaolin
275.Vîrghiș(III-Fig.6)kaolin
276.Tekero(IV-Fig.6)kaolin
277.Măcin(9o4)kaolin
278.Viteiaru(9o4 a-Fig.2o)kaolin
279.Epaminonda(9o4 b-Fig.2o)kaolin

1.9.FUMAROLIC-SOLFATARIC

28o.Negoiul Românesc(88)S,Fe

281.Iezerul Mic(89)S

1.1o.GEYSER TYPE

Chirui Type

282.Pîrîul Lînii(116 a-Fig.6)Fe

1.11.DIFFERENTIATION OF THE SEPENTINIZATION PROCESS

283.Rudăria(244)chrysotile asbestos

284.Eibenthal(267)chrysotile asbestos

1.12.MAGMATIC REMOBILIZATION

285.Văliug(231)Au

286.Almăşel(3oo)Cu;pyrite

287.Căzăneşti-V.Caprei(3o1)Cu; pyrite

287a.Rănuşa(382)Cu,Mo

288.Zimbru(383)Cu,Mo

289.Ginginsasa(4o2)Cu,Pb,Zn± Au,Ag

29o.Tişoviţa(27o M-Fig.12)Ni

291.V.Tişoviţa(27o a-Fig.12)Ni

2. VOLCANO-SEDIMENTARY AND HYDROTHERMAL-SEDIMENTARY ACCUMULATIONS

2.1.VOLCANO-SEDIMENTARY

2.1.1.Andesitic volcanism

Lueta Type

292.Tîmbuc(114 a-Fig.6)Fe

293.Lazu-Vîrghiş(114 b-Fig.6)Fe

294.Lueta(115)Fe

295.Chirui(116)Fe

Vlăhiţa Type

296.Filia(122)Fe

297.Herculian(123)Fe

2.1.2.Basic volcanism of oceanic floor

298.Pîrneşti(295)Mn

299.Tămăşeşti(298)Mn

3oo.Şoimuş-Bucesva(3o6)Mn

3ooa.Buru(37o)Fe

2.2.HYDROTHERMAL-SEDIMENTARY CYPRUS TYPE

3o1.Baia de Aramă(19o)Cu;pyrite

3o2.Pătîrş(291)Cu;pyrite

3o3.Corbeşti(292 M-Fig.13)pyrite

3o4.Roşia Nouă-Pr.Temeşoaia(294 a-Fig.13)pyrite

3o5.Roşia Nouă-Pr.Luposia(294 b-Fig.13)pyrite

3o6.Baia (I-Fig.13)pyrite

3o7.Bata(III-Fig.13)pyrite

3o8.Troaş(V-Fig.13)pyrite

3o9.Petriş(VII-Fig.13)pyrite

2.3.HYDROTHERMAL-SEDIMENTARY KUROKO TYPE

31o.Vorţa-Pr.Băii(3o8)Pb,Zn±Au,Ag

311.Vorţa-Pr.Heiuşului(3o8 a-Fig. 13)Pb,Zn±Au,Ag

312.V.Homorodului(3o8 b-Fig.13) Pb,Zn±Au,Ag

313.Cărmăzineşti(3o8 c-Fig.13)Pb, Zn±Au,Ag

3. SEDIMENTARY ACCUMULATIONS

3.1.MARINE

3.1.1.On continental shelves

314.D1.Pogor(IV-Fig.15)Fe,Ti

315.Almaş(V-Fig.15)Fe,Ti

316.D1.Cornilor(VI-Fig.15)Fe,Ti

317.Căpuş(377)Fe

318.Săvădisla(374)Fe;glauconite

319.Basarabi(919)chalk
320.Cainac(920)chalk
321.Peştera(922)phosphates
3.1.2.In trenches with flysch accumulations
322.Cîmpulung Moldovenesc-Sadova(427)Fe
323.Covasna-Zagon(492)Fe
3.2.LAGOON-EVAPORITIC TYPE
324.Tazlău(432)potash salts
325.Solonţ(449)potash salts
326.Moineşti(450)potash salts
327.Găleanu(476) potash salts
328.Bălţăteşti(425)potash salts;salt
329.Gîrcina(428)potash salts; salt
330.Borleşti(431)potash salts; salt
331.Slănic(523)salt
332.Ocna Şugatag(25)salt
333.Cacica(421)salt
334.Sărata-Bacău(452)salt
335.Gura Slănicului(473)salt
336.Tg.Ocna(475)salt
337.Tuta-Varniţa(478)salt
338.Mînzăleşti-Lopătari(502) salt
339.Slătioarele(668)salt
339a.Ocnele Mari(691)salt
340.Ocna Dejului(814)salt
341.Nireş(815)salt
342.Ocna Mureş(821)salt
343.Gurghiu(845)salt
344.Praid(864)salt
345.Merchişa(890)salt
346.Ocna Sibiului(897)salt
347.Valea Sării(494)salt; celestine
348.Călan(169)gypsum
349.Ciritei-Piatra Neamţ(429) gypsum
350.Perchiu(474)gypsum
351.Nistorosia-Tg.Ocna(477) gypsum
352.Mîneciu Ungureni(515)gypsum
353.Drajna(516)gypsum
354.Piatra Verde(524)gypsum
355.Pucioasa(575)gypsum
356.Lăculeţe(576)gypsum
357.Stăneşti-Corbeni(661)gypsum
358.Treznea(804)gypsum
359.Aghireş(813)gypsum
360.Cheia(816)gypsum
361.Cheia Turda(818)gypsum
362.Copăceni(817)gypsum;celestine
363.Ceraşu(514)gypsum;anhydrite
364.Cheia Turda(819)alabaster
3.3.SABKHA TYPE
365.Jitia(500)Pb,Zn
3.4.ALLUVIAL
3.4.1.Of Lane
3.4.1.1.Recent
366.Bozovici(243)Au
367.V.Arieşului(369)Au
368.Rîureni(687)Au
369.Cibin Olt(150)Ti,Zr±Au
370.Pianu(168)Ti,Zr±Au
371.Mîzgana(587)Ti,Zr±Au
372.Onceşti(652)Ti,Zr±Au
373.Gemenea(663)Ti,Zr±Au
374.Merişani(667)Ti,Zr±Au
375.Cremenari(690)Ti,Zr±Au
376.Ditrău(101)Ti,Zr
377.Tigveni(686)Ti,Zr
378.Pogăneşti-Prut(928-errata) Ti,Zr

3.4.1.2.Fossil

379.Vîrtop(III-Fig.16)Au,Ag

3.4.2.Deltaic and sea-shore

3.4.2.1.Recent

380.Sfiştofca-C.A.Rosetti(912) Ti,Zr

381.Sulina(913)Ti,Zr

382.Sfîntu Gheorghe(914)Ti,Zr

383.Perişor(915)Ti,Zr

384.Chituc(916)Ti,Zr

3.4.2.2.Fossil

385.Boboieşti(929-errata)Ti, Zr±Au

386.Glogova(930-errata)Ti,Zr ±Au

387.Ohaba-Căimăcani(931-errata) Ti,Zr±Au

388.Ohaba-Peştenuţa(932-errata) Ti,Zr±Au

389.Buzad(774)Fe

3.5.PROLUVIAL

390.Amelia-Dl.Strosului(272)Fe

3.6.ALLOCHTHONOUS RESIDUAL

391.Ohaba-Ponor(171)bauxite

392.Cîmpeni-Sohodol(363-errata) bauxite

393.Piatra Galbenii(399)bauxite

394.Izv.Someşului Cald(401) bauxite

395.Remeţi(405)bauxite

396.Meziad(406)bauxite

397.Lunca Sprie(407)bauxite

398.Vida(407 a-Fig.19)bauxite

399.Dîmbu Letii(407 b-Fig.19) bauxite

400.Racăş south(407 c-Fig.19) bauxite

401.Roşia-Albioara(408)bauxite

402.Sclavul Pleş(408 a-Fig.19) bauxite

403.Măgura Lazuranilor(408 b-Fig.19)bauxite

404.Gugu-Zece Hotare(409)bauxite

405.Bratca-Secătura(410)bauxite

406.Cornet-Valea Poenii(411) bauxite

407.Călăţea(411 a-Fig.19)bauxite

408.Poniţa(411 b-Fig.19)bauxite

409.Poeni(411 c-Fig.19)bauxite

410.Monease Vaşcău(393)Mn,Fe

3.7.AUTOCHTHONOUS RESIDUAL

411.Poieni(205)Fe,Mn

3.8.SUPERGENE ALTERATION

412.Stejera(37)kaolin

413.Măcin(904)kaolin

414.Luncani(I-Fig.9)aragonite

415.Tişoviţa(269)magnesite

3.9.SUBAQUATIC ALTERATION (HALMYROLYSIS, AQUATOLYSIS)

416.Sintamaria de Piatră(170) bentonite

417.Tufari(260)bentonite

418.Gurasada(310) bentonite

419.Mihăieşti -Dobra(311) bentonite

420.Hădăreni(820)bentonite

421.Ocna Mureş(822)bentonite

422.Ciugud(823)bentonite

423.Oarda(824)bentonite

424.Straja(825)bentonite

425.Bîrsana(26)zeolites

426.Mîrşid(802)zeolites

426a.Remus Opreanu(921)glauconite

3.10.ORGANOGENE

427.Filia(121)diatomite
428.Minişul de Sus(381)diatomite
429.Pătîrlagele(503)diatomite
430.Raşova-Haţeg(923)diatomite
431.Adîncata(924)diatomite
432.Adamclisi(926)diatomite

3.11.BACTERIAL-DIAGENETIC

4. METAMORPHOSED ACCUMULATIONS

4.1.METAMORPHOSED MAGMATIC LIQUID

438.Poiana Mărului(139)Ni
439.Holbav(IV-Fig.7)Ni
440.Urdele(160)Ni
441.Tiţianu-Dl.Negru(166)Ni

4.2.METAMORPHOSED HYDROTHERMAL

442.Veţel(191)Cu,Pb,Zn
443.Muncelu Mic(192)Pb,Zn
444.Muncelu Mic-Copileţ(192 a-Fig.9)Pb,Zn
445.Muncelu Mic-Central(192 b-Fig.9)Pb,Zn
446.Muncelu Mic-Berceanu(192 c-Fig.9)Pb,Zn
447.Muncelu Mic-Săliştе(192 d-Fig.9)Pb,Zn
448.Romăneşti(II-Fig.9)baritine;Pb,Zn
449.Canal-Ţibău(49)Zn,Pb;Fe
450.Fluturica-Cîrlibaba(62)Pb,Zn,Cu;Fe
451.Paltin(95)Zn,Pb;pyrite

4.3.METAMORPHOSED VOLCANO-SEDIMENTARY AND HYDROTHERMAL-SEDIMENTARY

4.3.1.Associated with ryolitic volcano-sedimentary formations Kuroko type s.l.)

433.Dărăbani(414)sulphur
434.Vărbilău-Podul Ursului(525)sulphur
435.Pucioasa(577)sulphur
436.Foleşti(693)sulphur

3.12.DEPOSITS FROM SULPHUR SPRINGS

437.Govora(692)sulphur

452.Novăţ-Novicior(43)pyrite;Cu,Pb,Zn
453.Novicior(43 a-Fig.2)pyrite;Cu,Pb,Zn
454.Novăţ(43 b-Fig.2)pyrite;Cu,Pb,Zn
455.Baia Borşa-Gura Băii(45)pyrite;Zn,Pb,Cu
456.Baia Borşa-Burloaia(46)pyrite;Zn,Pb,Cu
456a.Baia Borşa-Dl.Bucăţii(47)pyrite;Pb,Zn,Cu
457.Măcîrlău(I-Fig.2)pyrite;Cu±Pb,Zn
458.Ivăşcoaia(II-Fig.2)pyrite;Cu±Pb,Zn
459.Cataraama(III-Fig.2)pyrite;Cu±Pb,Zn
460.Măgura(IV-Fig.2)pyrite;Cu±Pb,Zn
461.Colbu-Secu(V-Fig.2)pyrite;Zn,Pb,Cu
462.Izv.Ursului(48)pyrite;Cu,Zn,Pb
463.Arşiţa-Botoşel(64)pyrite;Zn,Pb,Cu
464.Fundu Moldovei(70)pyrite;Cu,Zn,Pb
465.Leuştean(I-Fig.4)pyrite;Cu±Zn,Pb
466.V.Putnei-Praşca(71)pyrite;Cu,Zn,Pb
467.Praşca(71 a-Fig.4)pyrite;Cu,

Zn,Pb
468.V.Putnei(71 b-Fig.4)pyrite; Cu,Zn,Pb
469.Pr.Colbu-Giumalău(73)pyrite; Cu
47o.Giumalău(73 a-Fig.4)pyrite; Cu
471.Colbu(73 b-Fig.4)pyrite;Cu
472.Prașca-Izv.Giumalău(74)pyrite;Zn,Pb,Cu
473.Fagu(77)pyrite;Cu
474.Crucea(78)pyrite;Cu
475.Leșu Ursului(79)pyrite;Cu, Zn,Pb
476.Leșu Ursului-V.Leșului(79 a-Fig.4)pyrite;Cu,Zn,Pb
477.Leșu Ursului-V.Ursului(79 b-Fig.4)pyrite;Cu,Zn,Pb
478.Leșu Ursului-Isipoaia(79 c-Fig.4)pyrite;Cu,Zn,Pb
479.Puzdra(II-Fig.4)pyrite; Cu±Zn,Pb
48o.Hărlăgia(94)pyrite;Zn,Pb,Cu
481.Bicazu Ardelean(1o2)Pb,Zn, Cu;pyrite
482.Mediaș(1o3)Cu,Pb,Zn;pyrite
483.Bălan(1o4)Cu;pyrite
484.Fagul Cetății(1o5)Cu,Zn,Pb; pyrite
485.Bălan south(1o5 a-Fig.5)Cu; pyrite

4.3.2.Associated with basic volcano-sedimentary formations

4.3.2.1.In amphibolitic formations

486.Ciotina(V-Fig.4)Fe
487.V.Fierului(2o1)Fe
488.Bouțari(22o)Fe
489.Stîrminosul(IV-Fig.9)Fe; talc
49o.Armeniș(233)Fe
491.Topleț(257)Fe
492.Bănia-Vîrșet(245)Fe;pyrite; baritine
493.Bîzdîga(I-Fig.3)Cu;Fe
494.Altîn Tepe(91o)Cu;pyrite
495.Arpaș(147)Pb,Zn,Cu

4.3.2.2.In green schists formations

Lahn Dill Type

496.Cerbăl(193 a-Fig.9)Fe
497.Iazuri(2o3)Fe
498.Dîmbu Pascului(2o4 a-Fig.9)Fe
499.Bătrîna(2o4 b-Fig.9)Fe
5oo.Tomești(2o6)Fe
5o1.Arănieș(193 b-Fig.9)Fe,Mn

Teliuc-Ghelar Type

5o2.Nădăjdie(194 a-Fig.9)Fe
5o3.Teliuc east(194 b-Fig.9)Fe
5o4.Teliuc(195)Fe
5o5.Ghelar(196)Fe
5o6.Ghelar central(196 b-Fig.9)Fe
5o7.Dragoș-Mătrăguna(III-Fig.9)Fe
5o8.Vadul Dobrii(2o2)Fe
5o9.Pr.cu Raci(2o8)Fe
51o.Afinari-Dl.Negrii(212 M-Fig. 9)Fe

Scandinavian Type

511.Boița-Hațeg(2oo)pyrite;Zn
512.Silvaș(2oo a-Fig.9)pyrite;Zn

4.3.3.Association of graphitic quartzitic formations (metajaspolites,metalidites).

Iacobeni Type

513.Dadu-Cîrlibaba(63)Mn,Fe
514.Oița(66)Mn,Fe
515.Tolovanu(67)Mn,Fe
516.Iacobeni(68)Mn,Fe

517.Coşne(69)Mn,Fe
518.Puiu(III-Fig.4)Mn,Fe
519.Broşteni(81)Mn,Fe
52o.Şaru Dornei(82)Mn,Fe
521.Dl.Rusului(83)Mn,Fe
522.Dl.Boambei(84)Mn,Fe
523.Mestecăniş(IV-Fig.4)Mn,Fe
524.Borca(91)Mn

525.Holdiţa-Broşteni(8o)baritine;Zn;pyrite

4.3.4.Associated with carbonatic(limy-dolomitic) formations
Mississippi Valley Type

526.Guşeţ(5o)Zn,Pb
527.Coronghiş-Săcii(52)Zn,Pb
528.Curăţel(56 M-Fig.3)Zn,Pb
529.V.Blaznei(57)Zn,Pb
53o.Porumbacu(148)Pb,Zn

4.3.5.Associated with sandy-clay formations

5. M E T A M O R P H I C A C C U M U L A T I O N S

5.1.GENERATED BY METAMORPHIC DIFFERENTIATION

5.1.1.Pegmatites

542.Copalnic-Mînăştur(39) muscovite,feldspar
543.Rîpa lui Filip(4o)feldspar
544.Rebra-Scăricele(58)muscovite
545.Vasilatu-Brezoi(153)feldspar
546.Mănăileasa(154)muscovite, feldspar
547.Voineasa-Catarscte(155) muscovite,feldspar
548.Bucova(219)muscovite
549.Tîlva(222)muscovite
55o.Măru(223)muscovite
55oa.Poiana Gurbăneasa(23o)

In amphibolite facies with almandine

531.Prevăţ-Bătrîna(165)Mn
532.Răscoala(167)Mn
533.Delineşti(228)Mn
534.Globu Rău(235)Mn
535.Maşca-Răzoare(41)Mn,Fe

In green schists facies

536.Izv.Cepii(51)pyrite;Cu±Pb,Zn
537.Şipot-Diberţi(387 M-Fig.18) Pb,Zn,Cu±Au,Ag
538.Gruiul Dumii(389 M-Fig.18)Cu; pyrite

539.Rusaia(61)Fe
54o.Răchiţele(4o4)Fe

54oa.V.Vacii(III-Fig.18)baritine

4.4.STRATIFORM ORES FROM OLD SHIELDS (KRIVOI-ROG TYPE)

541.Palazu Mare(918)Fe

quartz

551.Teregova(234)feldspar
552.Globu Craiovei(238)feldspar
553.Trei Cucuie(258)feldspar
554.Ogaşul Cermez(I-Fig.1o)feldspar,muscovite
555.V.Scoarţa(II-Fig.1o)feldspar, muscovite
556.Var(III-Fig.1o)feldspar,muscovite
557.Dalci(IV-Fig.1o)feldspar,muscovite
558.Slatina Timiş(V-Fig.1o)feldspar
559.Satu Bătrîn(VI-Fig.1o)feldspar
56o.Armeniş(VII-Fig.1o)feldspar
561.V.Iara(375)feldspar
562.Rîşca-Muntele Rece(376)feldspar

563.Conţu superior-Orata (157)Li
564.Pietrele Albe(158)Be

5.1.2.Quartz veins

565.Uricani(187)quartz
566.Hobiţa(218)quartz
567.Vîrciorova(225)quartz
568.Ilova(226)quartz
569.Buchin-Nemanu(229)quartz
57o.Ogradena(262)quartz
571.Pr.Neamţului(264 M-Fig. 12)quartz
572.Mînăstireni(379)quartz

5.2.GENERATED BY METAMORPHIC RECRYSTALLIZATION

5.2.1.In amphibolite facies with almandine
5.2.1.1.On pelitic rocks

573.Cocoriciu-Moaşa(149) kyanite
574.Negovanu(156)kyanite
575.Strîmba Mare-Cindrel(159) kyanite

5.2.1.2.On rocks with organic matter

576.Negovanu-Olteţ(161)graphite
577.Ungurelaş(162)graphite
578.Rîbari-Olteţ(163)graphite
579.Cătălinu-Galbenu(164)graphite
58o.Dumbrava(378)graphite

5.2.2.In green schists facies
5.2.2.1.On dolomitic rocks

581.Drăgoiasa(9o)talc
582.Borsec(97)talc
583.Govăjdia(197)talc
584.Cerişor(198)talc
585.Lelese(199)talc
586.Luncani(2o7 M-Fig.9)talc

5.2.2.2.On ultrabasic rocks

587.V.Lupului(211 M-Fig.9)talc
588.Marga(221)talc
589.Pîrvova(237)talc
59o.Agadîci(284)tremolite asbestos

5.2.2.3.On clay rocks

591.Viezuroiu(188)pyrophyllite

5.3.POLYMETAMORPHIC ACCUMULATIONS
5.3.1.Metamorphosed metamorphic

592.Perişani(151)Au
593.V.lui Stan(152)Au
594.Bozovici(24o)Au
595.Jidoştiţa(261)Au

5.3.2.Regionally and thermically (contact)metamorphosed

596.Dealu Boul(21o)Fe

6. U N C E R T A I N G E N E S I S

597.V.Ghimbav(146)Au
597a.Pr.Alb(XI-Fig.8)pyrite, Au±Pb,Zn,Cu
598.V.Caselor(145 M-Fig.8)Cu
599.Lupşa(366)Cu
6oo.Sălciua-Runc(367)Fe
6o1.Remetea(368)Fe
6o2.Hîrnău(IX-Fig.8)pyrite; Au±Pb
6o3.Pr.Secările(X-Fig.8)pyrite; Au±Pb,Cu
6o4.Fierăria(XII-Fig.8)pyrite; Au±Pb,Zn,Cu
6o5.Pr.Curmătura(XIII-Fig.8) pyrite;Au±Pb
6o6.Adîncata(925)bentonitic clay

607.Adamcliei(927)bentonitic
clay

III. COMPOSITIONAL TYPES OF MINERAL RESOURCES

The following data underline the great variety of mineral resources which were formed under geological conditions specific al for the Romanian territory.

The mineral deposits and occurrences were grouped into four main categories: metalliferous and non-metalliferous resources, hydrocarbons, solid fuels; each category is characterized by its composition and economic features which generally define the main ore types and/or sorts.

Classification of mineral resources, sometimes supplied with some details as compared to the map legend, scale 1:1 000 000 underlines both specifical and peculiar cases. The economic mineral deposits are marked with an A, whereas the occurrences of limited importance are followed by an I. According to their complex composition, some ore deposits or occurrences may be found under two or more mineral types.

Among the 25 compositional types of ore-containing mineral resources, there are the lead-zinc and copper deposits which predominate. Also significant are the gold-silver and manganese ores as well as the alluvial Ti-Zr±Au concentrations and, to a lesser extent, the bauxite deposits. The most important ore deposits belong to the Alpine, early Caledonian and Precambrian metallogenetic cycles.

The group of non-metalliferous mineral resources consists of 29 types, among which the salt, gypsum, diatomite, kaolin, zeolite, sulphur and chalk deposits are to be emphasized. All of them were formed during the Alpine cycle.

Hydrocarbons are encompassed in traps which are mostly related to structural, stratigraphic, lithogenetic processes which took place during the Alpine cycle and to a lesser extent to processes belonging to the Hercynian cycle. Oil and gas deposits are representative outside the Carpathians, those of gas are largely developed inside them.

Among coal types, the Pliocene lignite of Oltenia is predominant; the Paleogene-Neogene bituminous coal from the Jiu valley and the Lias and Carboniferous bituminous coal of Banat are also important.

The presentation of resource types is made according to their order in the map legend. This classification can also be used to get other groupings such as those based on their areal distribution, evolution in time or genetic features.

1. METALLIFEROUS RESOURCES

1.1. IRON

1.Canal-Tibău(49)A
2.Bîzdîga(I-Fig.3)A
3.V.Vinului(54)A
4.Cobăşel(55 M-Fig.3)A
5.Rusaia(61)A
6.Fluturica-Cîrlibaba(62)A
7.Delniţa(65)A
8.Gemenea-Slătioara(75)A
9.Negoiul Românesc(88)A
1o.Mădăraş-Ciuc(111 M-Fig.6)A
11.Vlăhiţa(114)A
12.Tîmbuc(114 a-Fig.6)A
13.Lazu Vîrghiş(114 b-Fig.6)A
14.Lueta(115)A
15.Chirui(116)A
16.P.Lînii(116 a-Fig.6)I
17.Filia(122)A
18.Herculian(123)A
19.Răscoala(167)I
2o.Nădăjdie-Teliuc east(194)A
21.Teliuc east(194 b-Fig.9)A
22.Teliuc(195)A
23.Ghelar(196)A
24.Ghelar east(196 b-Fig.9)A
25.V.Fierului(2o1)A
26.Stîrminosu(IV-Fig.9)I
27.Vadu Dobrii(2o2)A
28.Dragoş-Mătrăguna(III-Fig.9)A
29.Iazuri(2o3)A
3o.Dîmbu Pascului-Bătrîna(2o4)A
31.Poieni(2o5)I
32.Tomeşti(2o6)I
33.P.cu Raci(Ruşchiţa)(2o8)A
34.Dl.Boul(21o)A
35.Afinari-Dl.Negrii(212 M-Fig. 9)A
36.Tincova(216)A
37.Bouţari(22o)I
38.Armeniş(233)A
39.Sopot(248 M-Fig.11)A
4o.Topleţ(257)A
41.Amelia-Dl.Strosului(272)A
42.Ocna de Fier(273)A
43.Dognecea(274)A
44.Măgureaua Vaţei(3o7 M-Fig.13)I
45.Remetea(368)I
46.Maşca-Băişoara(371)A
47.Maşca(371 a-Fig.17)A
48.Cacova-Băişoara(372)A
49.Săvădisla(374)A
5o.Căpuş(377)A
51.Budureasa(397)I
52.V.Seacă(4oo)I
53.Izv.Arieşului(IV-Fig.18)I
54.Răchiţele(4o3)I
55.Cîmpulung Moldovenesc-Sadova (427)I
56.Covasna-Zagon(492)I
57.Frumuşiţa(499)I
58.Buzad(774)A
59.Iulia(9o9)A
6o.Lozova-Malciu(9o9 a-Fig.2o)A
61.Eschibalîc(9o9 b-Fig.2o)I
61a.Pietrele Măriei(I-Fig.2o)I
61b.V.lui Martin(II-Fig.2o)I
61c.Amzalar(III-Fig.2o)I
61d.Dl.Boclugea(V,VIII-Fig.2o)I
61e.Dl.Coşlugea(VI-Fig.2o)I
62.Palazu Mare(918)A

1.2. IRON,TITANIUM,VANADIUM

63.Surduc(275)I
64.Almaş-Săliste(299)A
65.Căzăneşti-Ciungani(3o3)A
66.Dumbrăviţa(II-Fig.13)I
67.Juliţa(IV-Fig.13)I
68.Toc(VI-Fig.13)I
69.Dl.Pogor(IV-Fig.15)I
7o.Almaş(V-Fig.15)I
71.Dl.Cornilor(VI-Fig.15)I

1.3.IRON,MANGANESE

72.Maşca-Răzoare(41)A
73.Cerbăl-Arănieş(193)A
74.Arănieş(193 b-Fig.9)A
75.Delineşti(228)A
76.Globu Rău(235)A
77.Bănia-Vîrşeţ(245)A
78.Pîrneşti(295)I
79.Tămăşeşti(298)I
8o.Soimuş-Buceava(3o6)I
81.Sălciua-Runc(367)I
82.Buru(37o)I
83.Moneasa-Vaşcău(393)A

1.4.MANGANESE

84.Dadu-Cîrlibaba(63)A
85.Oiţa(66)A
86.Tolovanu(67)A
87.Puiu(III-Fig.4)A
88.Mestecăniş(IV-Fig.4)A
89.Iacobeni(68)A
9o.Coşna(69)A
91.Broşteni(81)A
92.Sarul Dornei(82)A
93.Dl.Rusului(83)A
94.Dl.Boambei(84)A
95.Borca(91)A
96.Pravăţ-Bătrîna(165)A

1.5.CHROMIUM

97.Goleţu Mare(265)I
98.Ciucaru Mare(I-Fig.12)I
99.Plavişeviţa(266 M-Fig.12)I
loo.Rudina Inaltă(II-Fig.12)I
lol.Curiştea(III-Fig.12)I
lo2.Puşcarschi(268)I
lo3.Dîlma(268 a-Fig.12)I
lo4.Tişoviţa(IV-Fig.12)I
lo5.Lepopole(V-Fig.12)I

1.6.TITANIUM, ZIRCONIUM±GOLD

lo6.Ditrău(lol)I
lo7.Cibin Olt(15o)A
lo8.Pisnu(168)A
lo9.Mîzgana(587)A
llo.Onceşti(652)A
lll.Gemenea(663)A
ll2.Merişani(667)A
ll3.Tigveni(686)A
ll4.Cremenari(69o)A
ll5.Chituc(916)A
ll6.Sulina(913)A
ll7.Sfîntu Gheorghe(914)A
ll8.Perişor(915)A
ll9.Sfiştofca-C.A.Rosetti(912)A
l2o.Pogăneşti-Prut(928-errata)I
l21.Boboeşti(929-errata)A
l22.Glogova(93o)A
l23.Ohaba-Căimăcani(931-errata)A
l24.Ohaba-Peştenuţa(932-errata)A

1.7.MERCURY

125.Cămîrzana(4)A
126.Cocoizaş(lo9 M-Fig.6)I
127.Sîntimbru(118)A
128.Izvorul Ampoiului(353)A
129.Băbuia(354 M-Fig.15)A

1.8.GOLD,SILVER±(Pb,Zn);±(Te)

13o.Bixad(5)A
131.Nistru(13)A
132.Nistru(13 a-Fig.1)A
133.Săsar(17)A
134.Aurum(II-Fig.1)A
135.Valea Roşie(19)A
136.Dl.Crucii(2o)A
137.Herja(21)A
138.Baia Sprie(22)A
139.Suior(24)A
14o.Stînceni(92)A
141.V.Ghimbav(146)I
142.Hîrnău(IX-Fig.8)I
143.P.Secările(X-Fig.8)I
144.P.Alb(XI-Fig.8)I

145.Fierărie(XII-Fig.8)I
146.P.Curmătura(XIII-Fig.8)I
147.V.lui Ecle(XVI-Fig.8)I
148.Păltineț(XVII-Fig.8)I
149.Perișani(151)I
15o.V.lui Stan(152)I
151.Văliug(231)A
152.Bozovici(24o)A
153.Jidoștița(261)I
154.Hondol(316 M-Fig.14)A
155.Măgura(319 M-Fig.14)A
156.Troița(321 M-Fig.14)A
157.Trestia(322 M-Fig.14)A
158.Băița-Crăciunești(323)A
159.Draica(324 M-Fig.14)A
16o.Vălișoara(325)A
161.Vălișoara west(326 M-Fig.14)A
162.Hărțăgani(328 M-Fig.14)A
162a.Măgura Băii(328 a-Fig.14)A
163.Cîinel(329 M-Fig.14)A
164.Musariu(33o)A
165.Dl.Fetii-V.Talpelor(I-Fig.14)A
166.Barza(III-Fig.14)A
167.Musariu Nou(331 M-Fig.14)A
168.Brădișor(332)A
169.Cireșata(333 a-Fig.14)A
17o.Valea Morii Veche(334 M-Fig.14)A
171.Caraci-Măgura Tebei(335)A
172.Talagiu(VIII-Fig.13)A
173.Bucureșci-Rovina(339 M-Fig.14)A
174.Breaza(341)A
175.Breaza NE(341 a-Fig.15)A
176.Prepestenia(342 b-Fig.15)A
177.Haneș(343)A
178.Baba(345 M-Fig.15)A
179.Băbuța-Concordia(345 a-Fig.15)A
18o.Almaș(346 M-Fig.15)A
181.Muncăceasca-Stănija(347)A
182.Muncăceasca east(348 M-Fig.15)A
183.Stănija-Popa(349 M-Fig.15)A
184.Mormîntul(35o M-Fig.15)A
185.V.Tisei(351 M-Fig.15)A
186.Vîlcoi(355 M-Fig.16)A
187.Corabia(358)A
188.Conțu(359 M-Fig.16)I
189.Frasin(36o M-Fig.16)A
19o.Rodu(I-Fig.16)A
191.V.Breze(II-Fig.16)A
192.Roșia Montană(361)A
193.Roșia Montană-Cîrnic(361 a-Fig.16)A
194.Roșia Montană-Țarina(361 b-Fig.16)A
195.Baia de Arieș(365)A
196.V.Cutii(V-Fig.16)I
197.V.Obîrșiei(VI-Fig.16)I
198.Nyergheș(I-Fig.17)I

1.9.TELLURIUM,GOLD±(Pb,Zn)

199.Săcărîmb(313)A
2oo.Cordurea(327 M-Fig.14)I
2o1.Musariu Nou(331 M-Fig.14)I
2o2.Fața Băii(343 a-Fig.15)A
2o3.Vîlcoi(355 M-Fig.16)I

1.1o.GOLD PYRITES±(Pb,Zn)

2o4.Cămîrzana(4)I
2o5.Racșa(8)A
2o6.Borzaș(18 M-Fig.1)A
2o7.Larga(342 M-Fig.15)A
2o8.Larga-vein 37(342 a-Fig.15)A
2o9.Haneș(343)A
21o.Muncăceasca-Stănija(347)A
211.Brădișor(349 a-Fig.15)A
212.Runculețe(352 M-Fig.15)I

1.11.ALLUVIAL GOLD±(Ti,Zr)

213.Bozovici(243)A
214.Valea Arieșului(369)A
215.Vîrtop(III-Fig.16)A
216.Hîureni(687)A

1.12.LEAD,ZINC±(Au,Ag);
±(Te) ± (Sb)

217.Ghezuri (1) A
218.Socea-Bătarci(2) A
219.Penigher (3) A
22o.Valea Băii north(9 M-Fig.1) A
221.Valea Colbului (1o) A
222.Ilba-Handal (11) A
223.Purcăreţ (I-Fig.1) A
224.Cicîrlău (12 M-Fig.1) A
225.Aurum (II-Fig.1) A
226.Băiţa (15 M-Fig.1) A
227.Wilhelm (16 M-Fig.1) A
228.Dl.Crucii (2o) A
229.Herja (21) A
23o.Baia Sprie (22) A
231. Şuior (24) A
232.Cavnic-Roata (28) A
233.Strîmbu-Băiuţ (3o M-Fig.1) I
234.Jereapăn (31 M-Fig.1) A
235.Ţibleş (36) A
236.Toroiaga (44) A
237.Măcîrlău (I-Fig.2) A
238.Ivăşcoaia (II-Fig.2) A
239.Catarama (III-Fig.2) A
24o.Guşet (5o) A
241.Coronghiş-Săcii (52) A
242.Izv.Roşu (53) A
243.V.Vinului (54) A
244.Cobăşel (55 M-Fig.3) A
245.Curăţel (56 M-Fig.3) A
246.V.Blaznei (57) A
247.Colibiţa (87) A
248.Jolotca-Ditrău (98) I
249.Ruda Mică (136 a-Fig.7)I
25o.P.Cărbunaru·(I-Fig.7) I
251.V.Lupului (II-Fig.7) I
252.V.de Mijloc (III-Fig.7)I
253.Vulcăniţa-Gherdana(137)I
254.Bîrsa Fierului (13[illegible]
255.Nimaia (14o) A
256. Tîncava-downstream (VI-Fig.8) I
257.Porumbacu (148) A
258.Muncelu Mic (192) A
259.Muncelu Mic central (192 b-Fig.9) A
26o.Muncelu Mic-Berceanu (192 c-Fig.9) A
261.Muncelu Mic-Sălişte (192 d-Fig.9) A
262.Romaneşti (II-Fig.9) A
263.Boiţa-Haţeg (2oo) A
264.Ruşchiţa (2o9) A
265.Bocşa (271) A
266.Sasca Montană (287) A
267.Moldova Nouă-Suvorov(288) A
268.Vărad (29o) A
269.Bulza (296)I
27o.Căzăneşti-V.Sasului(3o2 M-Fig.13)I
271.Vorţa (3o8)A
272.Vorţa-P.Heiuşului (3o8 a-Fig.13) A
273.V.Homorodului (3o8 b-Fig.13)A
274.Cărmăzineşti (3o8 c-Fig.13) A
275.Valea Lungă (3o9)I
276.Săcărîmb (313) A
277.Bocşa-Săcărîmb(314 M-Fig.14)A
278.Coranda Hondol (315) A
279.Măgura (319 M-Fig.14) A
28o.Troiţa (321 M-Fig.14) A
281.Troiţa-Teascu (321 a-Fig.14)A
282.Băiţa-Crăciuneşti (323) A
283.Brădişor (332) A
284.Cireşata (333 a-Fig.14) A
285.Valea Morii Veche (334 M-Fig.14) A
286.Caraci-Măgura Ţebei (335) A
287.Măgura Ţebei (335 a-Fig.13)A
288.Birtin (337) I
289.Breaza (341) A
29[illegible] A

291.Prepestenia (342 b-Fig. 15) A
292.Haneş (343) A
293.Meteşan (344 M-Fig.15)A
294.Baba (345 M-Fig.15) A
295.Muncăceasca-Stănija (347) A
296.Stănija-Popa (349 M-Fig. 15) A
297.Baia de Arieş-Ambru(365 a-Fig.16) A
298.V.Socilor (IV-Fig.16) I
299.Valea Cutii(V-Fig.16) I
3oo.V.Obîrşiei (VI-Fig.16)I
3ol.Nyergheş (I-Fig.17) I
3o2.Brusturi-Luncşoara(384)A
3o3.Şipot-Dibarţi (386) A
3o4.Şipot-Dibarţi (387 M-Fig. 18) A
3o5.Gruiul Dumii (388) A
3o6.Izv.Bihorului (39o) A
3o7.Valea Mare (391) A
3o8.Valea Titişor (392 M-Fig. 18) A
3o9.Jitia (5oo) I
31o.Somova (9o6) A
311.Bechir-Cîşla-Dl.Carierei (9o6 a-Fig.2o) A
312.Movila Săpată (9o7) A
313.Malcoci (9o8) A
314.Marca (9o8 a-Fig.2o) A
315.Dl.Bogza(9o8 b-Fig.2o) A

1.13.COPPER,LEAD,ZINC±(Au,Ag) ± (Mo,W)

316.Nistru (13) A
317.Nistru (13 a-Fig.1)A
318.Tyuzoşa (14 M-Fig.1) A
319.Baia Sprie east (22 a-Fig.1) A
32o.Cavnic-Bolduţ (27) A
321.Băiuţ (32 M-Fig.1) A
322.Văratec (33) A
323.Galbena (III-Fig.1)I
324.Cisma (34) A
325.Coasta Ursului (35) A
326.Novăţ-Novicior (43) A
327.Novicior (43 a-Fig.2) A
328.Novăţ (43 b-Fig.2) A
329.Toroiaga (44) A
33o.Ţiganul (VI-Fig.2) I
331.Baia Borşa-Gura Băii (45) A
332.Baia Borşa-Burloaia (46) A
333.Colbu-Secu (V-Fig.2) A
334.Baia Borşa-Dl.Bucăţii (47) A
335.Izv.Ursului (48) A
336.Canal-Ţibău (49) I
337.Fluturica-Cîrlibaba (62) I
338.Arşiţa-Botoşel (64) A
339.Fundu Moldovei (7o) A
34o.V.Putnei-Praşca (71) A
341.Praşca (71 a-Fig.4) A
342.V.Putnei (71 b-Fig.4) A
343.Leuştean (I-Fig.4) I
344.Mestecăniş (72) A
345.Praşca-Izv.Giumalău (74) A
346.Gemenea Slătioara (75) A
347.Ostra (76) I
348.Leşu Ursului (79) A
349.V.Ursului (79 b-Fig.4) A
35o.Isipoaia (79 c-Fig.4) A
351.Puzdra (II-Fig.4) A
352.Holdiţa-Broşteni (8o) A
353.Hărlăgia (94) A
354.Paltin (95) A
355.Bicazu Ardelean (1o2) I
356.Mediaş (1o3) A
357.Fagul Cetăţii (1o5) A
358.Bălan south (1o5 a-Fig.5) A
359.Ruda Mestecăn (136 M-Fig. 7) I
36o.Mesteacăn (136 b-Fig.7) I
361.Pîrîul lui Bucur (XIV-Fig.8) I
362.Arpaş (142) A

363.Veţel (191) A
364.Varniţa (213) A
365.Ascuţita (215) A
366.Tincova (217) A
367.Turnu-Rueni (224) I
368.V.Cernei-Topleţ (259) I
369.Ocna de Fier (273) A
37o.Dognecea (274) A
371.Vălişoara west (326 M-Fig.14) I
372.Hărţăgani (328 M-Fig.14)I
373.Bratosin (IX-Fig.13) I
374.Toţi Sfinţii (I-Fig.15)I
375.Bucium-Arame (357 M-Fig. 16) A
376.Baia de Arieş (365) A
377.Rîul Mic (385 M-Fig.18)A
378.V.Vacii (II-Fig.18) A
379.Băiţa Bihor (394) A
38o.Juleşti-V.Fagului(396) A
381.Budureasa (397) A
382.Valea Seacă (4oo) A
383.Gingineasa (4o2) I
384.Răchiţele (4o3) A
385.Borod-Corniţel (412) A
386.Ceamurlia (911) A

1.14.COPPER+(Mo,W)+(Au)

387.Valea Colbului (1o) A
388.Ilba-Handal (11) A
389.Baia Sprie (22) A
39o.Băiuţ (32 M-Fig.1) A
391.Văratec (33) A
392.Toroiaga (44) A
393.Măcîrlău (I-Fig.2) A
394.Ivăşcoaia (II-Fig.2) A
395.Catarama (III-Fig.2) A
396.Măgura (IV-Fig.2) A
397.Izv.Cepii (51) A
398.Bîzdîga (I-Fig.3) A
399.Pr.Colbu-Giumalău(73)A
4oo.Giumalău (73 a-Fig.4)A
4o1.Colbu (73 b-Fig.4) A
4o2.Fagu (77) A
4o3.Crucea (78) A
4o4.Leşu Ursului (79) A
4o5.Valea Ursului (79 b-Fig.4) A
4o6.Isipoaia (79 c-Fig.4) A
4o7.Bălan (1o4) A
4o8.Fagul Cetăţii (1o5) A
4o9.Bălan south (1o5 a-Fig.5) A
41o.Pr.Răchiţii (136 c-Fig.7) I
411.Pr.Mînăstirii (141 M-Fig. 7) I
412.Bădeanca-Dăniş (142) A
413.V.lui Neguleţ (II-Fig.8) I
414.P.Murgănii (III-Fig.8) I
415.Tîncava Păiş (143) A
416.V.Tîncava-Ţîbra-Grui (V-Fig.8) I
417.Tîncava-upstream(VII-Fig.8)I
418.Pr.Sutila (VIII-Fig.8) I
419.Pr.lui Brusture (144 M-Fig. 8) I
42o.Grui (IV-Fig.8) I
421.V.Caselor (145 M-Fig.8) I
422.V.Mare (XV-Fig.8) I
423.V.lui Ecle (XVI-Fig.8) I
424.Arpaş (147) A
425.Baia de Aramă (19o) A
426.Veţel (191) A
427.Muncelu Mic (192) A
428.Tincova (217) A
429.Ocna de Fier (273) A
43o.Dognecea (274) A
431.Oraviţa (285) A
432.Ciclova (286) A
433.Sasca Montană (287) A
434.Moldova Nouă-Suvorov (288) A
435.Vărad (29o) A
436.Săvîrşin (293) I
437.Cerbia (297) I
438.Almăşel (3oo) A
439.Căzăneşti-V.Caprei (3o1) A

44o.Valea Lungă (3o9) A
441.Deva (312) A
442.Pr.lui Avram (317 M-Fig. 14) I
443.Bucium-Arama (357 M-Fig. 16) A
444.Lupşa (366) A
445.Lita-Băişoara (373) A
446.Şoimoş (38o) A
447.Rănuşa (382) A
448.Zimbru (383) A
449.Brusturi-Luncşoara(384)A
45o.Şipot-Dibarţi (387 M-Fig. 18) A
451.Gruiul Dumii (389 M-Fig. 18) A
452.Băiţa Bihor (394) A

1.15.COPPER(POOR ORE)±(Au,Ag, Pb,Zn,Fe)± (Mo,Pb,Zn,Fe)

453.Şumuleu-Gurghiu (1o6) A
454.Găineasa (I-Fig.6) I
455.Fierăstraie (II-Fig.6) I
456.Ostoroş (1o7) A
457.Mădăraş-Harghita (1o8) A
458.Lăpuşnicu Mare (241) A
459.Teregova-Lăpuşnicel (I-Fig.11) I
46o.V.Nasovăţ-Lilieci (247)A
461.Ciclova (286 a-Fig.11)A
462.Moldova Nouă (289) A
463.Voia (318 M-Fig.14) A
464.Bolcana-Troiţa (32o) A
465.Valea Morii (333) A
466.Musariu Nou (II-Fig.14)A
467.Remetea (338) A
468.Colnic (IV-Fig.14) A
469.Muncăceasca west-Podul Ionului (347 a-Fig.15) I
47o.Trimpoele (II-Fig.15) I
471.Măgura Iepii(III-Fig.15)I
472.Bucium-Tarniţa (356) A
473.Roşia-Poieni (364) A

1.16.COPPER,PYRITE

474.Izv.Cepii (51) A
475.Cobăşel (55 M-Fig.3)A
476.Fagu (77) A
477.Leşu Ursului (79) A
478.Moldova Nouă (289) A
479.Pătîrş (291) A
48o.Răchiţele (4o3) A
481.Altîn Tepe (91o) A

1.17.MOLYBDENUM±(Cu);±(W,Bi)

482.Jolotca-Ditrău (98) A
483.Aurora-Ditrău (99) A
484.Turnu Rueni (224) I
485.Mraconia (263) A
486.Oraviţa (285) I
487.Ciclova (286 a-Fig.11)I
488.Moldova Nouă-Suvorov (288) A
489.Săvîrşin (293) A
49o.Săvîrşin-Pr.Calului (293 a-Fig.13) A
491.Cerbia (297) I
492.Deva (312) I
493.Rănuşa (382) A
494.Băiţa Bihor (394) A
495.Pr.Drăcoiţa (I-Fig.18) I

1.18.WOLFRAM ± (Mo,Cu)

496.Jolotca-Ditrău(98)I
497.Mraconia (263) A
498.Ciclova (286 a-Fig.11)I
499.Băiţa Bihor (394) A

1.19.NICKEL ± (Fe,Co,Cu)

5oo.Poiana Mărului (139) I
5o1.Holbav (IV-Fig.7) I
5o2.Bădeanca-Dăniş (142) I
5o3.Lunca Gîrţii (I-Fig.8) I
5o4.V.lui Neguleţ (II-Fig.8) I
5o5.Pr.Murgănii (III-Fig.8) I

506.Grui(IV-Fig.8)I
507.Tîncava-upstream(VII-Fig.8)I
508.Pr.Sutila(VIII-Fig.8)I
509.Urdele(160)I
510.Tiţianu-Dl.Negru(166)A
511.Tişoviţa(270 M-Fig.12)I
512.Tişoviţa(270 a-Fig.12)I
513.Ciungani(305 M-Fig.13)I

1.20.COBALT ± (Ni,Cu)

514.Bădeanca-Dăniş(142)I
515.Lunca Gîrţii(I-Fig.8)I
516.V.lui Neguleţ(II-Fig.8)I
517.Pr.Murgănii(III-Fig.8)I
518.Grui(IV-Fig.8)I
519.Tîncava-upstream(VII-Fig.8)I
520.Pr.Sutila(VIII-Fig.8)I
521.Tîncava-Păiş(143)I

1.21.BAUXITE

522.Ohaba-Ponor(171)A
523.Cîmpeni-Sohodol(363-errata)A
524.Piatra Galbenii(399)A
525.Izv.Someşului Cald(401)A
526.Remeţi(405)A
527.Meziad(406)A
528.Lunca Sprie(407)A
529.Vida(407 a-Fig.19)A
530.Dîmbul Letii(407 b-Fig. 19)A
531.Răcaş south(407 c-Fig. 19)A
532.Roşia-Albioara(408)A
533.Sclavul Pleş(408 a-Fig. 19)A
534.Măgura Lăzurenilor(408 b-Fig. 19)A
535.Gugu-Zece Hotare(409)A
536.Bratca-Secătura(410)A
537.Cornet-V.Poienii(411)A
538.Călăţea(411 a-Fig.19)A
539.Poniţa(411 b-Fig.19)A
540.Poeni(411 c-Fig.19)A

1.22.MAGNESITE

541.Tişoviţa(269)A

1.23.BORON

542.Ocna de Fier(273)I
543.Maşca Băişoara(371)I
544.Maşca(371 a-Fig.17)I
545.Băiţa Bihor(394)I

1.24.LITHIUM (Spodumen)

546.Conţu superior-Orata(157)I

1.25.BERYL

547.Pietrele Albe(158)I

2. N O N-M E T A L L I F E R O U S R E S O U R C E S

2.1.PYRITE

548.Novăţ-Novicior(43)A
549.Novicior(43 a-Fig.2)A
550.Novăţ(43 b-Fig.2)A
551.Toroiaga(44)A
552.Ţiganul(VI-Fig.2)A
553.Baia Borşa-Gura Băii(45)A
554.Baia Borşa-Burloaia(46)A
555.Măcîrlău(I-Fig.2)A
556.Ivăşcoaia(II-Fig.2)A
557.Catarama(III-Fig.2)A
558.Măgura(IV-Fig.2)A
559.Colbu-Secu(V-Fig.2)A
560.Baia Borşa-Dl.Bucăţii(47)A
561.Izv.Ursului(48)A
562.Arşiţa-Botoşel(64)A
562a.Ciotina(V-Fig.4)I
563.Fundu Moldovei(70)A

564.V.Putnei-Prașca(71)A
565.Prașca(71 a-Fig.4)A
566.Valea Putnei(71 b-Fig.4)A
567.Leuștean(I-Fig.4)I
568.Pr.Colbu-Giumalău(73)A
569.Giumalău(73 a-Fig.4)A
57o.Colbu(73 b-Fig.4)A
571.Prașca-Izv.Giumalău(74)A
572.Crucea(78)A
573.Isiposia(79 c-Fig.4)A
574.Puzdra(II-Fig.4)A
575.Hărlăgia(94)A
576.Paltin(95)A
577.Jolotca-Ditrău(98)A
578.Bicazu Ardelean(1o2)I
579.Mediaș(1o3)A
58o.Bălan(1o4)A
581.Fagul Cetății(1o5)A
582.Pr.Răchitii(136 c-Fig.7)I
583.Baia de Aramă(19o)A
584.Boița-Hațeg(2oo)A
584a.Silvaș(2oo a-Fig.9)I
585.Turnu Ruieni(224)A
586.Cioaca Brazilor(246)A
587.Pătârș(291)A
588.Corbești(292 M-Fig.13)I
589.Săvârșin(293)I
59o.Săvârșin-Pr.Calului(293 a-Fig.13)I
591.Roșia Nouă(294)A
592.Roșia Nouă-Pr.Temeșoaia (294 a-Fig.13)I
593.Roșia Nouă-Pr.Lupoaia (294 b-Fig.13)I
594.Baia(I-Fig.13)I
595.Bata(III-Fig.13)I
596.Troaș(V-Fig.13)I
597.Petriș(VII-Fig.13)I
598.Bratosin(IX-Fig.13)I
599.Almășel(3oo)A
6oo.Căzănești-V.Caprei(3o1)A
6o1.Deva(312)A
6o2.Almașu Mic(34o M)I
6o3.Gruiul Dumii(389 M-Fig.18)A
6o4.Pr.Drăcoița(I-Fig.18)A

2.2.SULPHUR

6o5.Negoiul Românesc(88)A
6o6.Iezerul Mic(89)A
6o7.Darabani(414)A
6o8.Vârbilău-Podul Ursului(525)A
6o9.Pucioasa(577)A
61o.Govora(692)I
611.Folești(693)A

2.3.KAOLIN

612.Lepteș(23 M-Fig.1)A
613.Neteda(29 M-Fig.1)A
614.Stejera (37)A
615.Parva(59)A
616.Cormăița(6o)A
617.Ivo(11o)A
618.Harghita Băi(113)A
619.Sîntimbru(118 a-Fig.6)A
62o.Vîrghiș(III-Fig.6)A
621.Tekero(IV-Fig.6)A
622.Sînsimion(119)A
623.Măcin(9o4)A
624.Vițelaru(9o4 a-Fig.2o)A
625.Epaminonda(9o4 b-Fig.2o)A

2.4.BARYTINE

626.Gemenea-Slătioara(75)A
627.Ostra(76)A
628.Holdița-Broșteni(8o)A
629.Romanești(II-Fig.9)A
63o.Bănia-Vîrșeț(245)I
631.Cioaca Brazilor(246)I
632.V.Cernei-Topleț(259)I
633.Bocșa(271)I
634.V.Vacii(III-Fig.18)I
635.Șipot-Dibarți(387 M-Fig.18)A
636.Somova(9o6)A

637.Bechir-Cîşla-Dl.Carierei (9o6 a-Fig.2o)A
638.Movila Săpată(9o7)A
639.Malcoci(9o8)A
64o.Marca(9o8 a-Fig.2o)A
641.Dl.Bogza(9o8 b-Fig.2o)A

2.5.WITHERITE

642.Ostra(76)A

2.6.CALCITE

643.Căzăneşti(3o4 M-Fig.13)A

2.7.ARAGONITE

644.Corund(117)A
645.Luncani(I-Fig.9)A

2.8.TALC

646.Drăgoiasa(9o)A
647.Borsec(96)I
648.Govăjdia(197)I
649.Cerişor(198)A
65o.Lelese(199)A
651.Luncani(2o7 M-Fig.9)I
652.V.Lupului(211 M-Fig.9)I
653.Marga(221)A
654.Pîrvova(237)A

2.9.ASBESTOS

655.Rudăria(244)A
656.Eibenthal(267)A
657.Agadici(284)A

2.lo.WOLLASTONITE

658.Băiţa-Bihor(394)A

2.11.BRUCITE

659.Budureasa(398)A

2.12.QUARTZ

66o.Uricani(187)A
661.Hobiţa(218)A
662.Vîrciorova(225)A
663.Ilova(226)A
664.Buchin-Nemanu(229)A
665.Poiana Gurbăneasa(23o M-Fig.lo)A
666.Ogradena(262)A
667.Pr.Neamţului(264 M-Fig.12)A
668.Mînăstireni(379)A
669.Niculiţel(9o5)A

2.13.FELDSPAR

67o.Copalnic-Mănăştur(39)A
671.Rîpa lui Filip(4o)A
672.Vasilatu-Brezoi(153)A
673.Mănăilessa(154)A
674.Conţu Superior-Orata(157)A
675.Tîlva(222)A
676.Măru(223)A
677.Ogaşul Cermez(I-Fig.lo)A
678.V.Scoarţa(II-Fig.lo)A
679.Var(III-Fig.lo)A
68o.Dalci(IV-Fig.lo)A
681.Armeniş(VII-Fig.lo)A
682.Teregova(234)A
683.Slatina Timiş(V-Fig.lo)A
684.Satul Bătrîn(VI-Fig.lo)A
685.Globul Craiovei(238)A
686.Trei Cucuie(258)A
687.Roşia Montană-Cetate(362 M-Fig.16)A
688.V.Iara(375)A
689.Rîşca-Muntele Rece(376)A

2.14.MUSCOVITE

69o.Copalnic-Mănăştur(39)A
691.Rebra-Scăricele(58)I
692.Mănăilessa(154)A
693.Voineasa-Cataracte(155)A
694.Bucova(219)A
695.Tîlva(222)A
696.Măru(223)A
697.Ogaşul Cermez(I-Fig. lo)I
698.V.Scoarţa(II-Fig. lo)I

699.Var (III-Fig.1o) I
7oo.Dalci (IV-Fig.1o) I

2.15.KYANITE

7o1.Cocoriciu-Moşa (149) A
7o2.Negovanu (156) A
7o3.Strîmba Mare-Cindrel (159) A

2.16.PYROPHYLLITE

7o4.Viezuroiu (188) A

2.17.GRAPHITE

7o5.Negovanu-Olteţ (161)A
7o6.Ungurelaş (162) A
7o7.Rîbari-Olteţ (163) A
7o8.Cătălinu-Galbenu(164)A
7o9.Dumbrava (378) A

2.18.SALT

71o.Ocna Şugatag (25) A
711.Cacica (421) A
712.Bălţăteşti (425) A
713.Gîrcina (428) A
714.Sărata-Bacău (452) A
715.Gura Slăniculuí(473)A
716.Tîrgu Ocna (475) A
717.Tuta-Varniţa (478) A
718.Valea Sării (494) A
719.Mînzăleşti-Lopătari (5o2) A
72o.Slănic (523) A
721.Slătioarele (668) A
722.Ocnele Mari (691) A
723.Ocna Dejului (814) A
724.Nireş (815) A
725.Ocna Mureş (821)A
726.Gurghiu (845) A
727.Praid (864) A
728.Merchiaşa (89o) A
729.Ocna Sibiului (897)A

2.19.POTASH SALTS

73o.Tazlău (432) A
731.Solonţ (449) A
732.Moineşti (45o) A
733.Găleanu (476) A
734.Bălţăteşti (425) A
735.Gîrcina (428) A
736.Berleşti (431)A

2.2o.GYPSUM

737.Călan (169) A
738.Ciritei-Piatra Neamţ(429)A
739.Perchiu (474) A
74o.Nistoroaia-Tîrgu Ocna(477)A
741.Ceraşu (514) A
742.Mîneciu Ungureni (515) A
743.Drajna (516) A
744.Piatra Verde (524) A
745.Pucioasa (575) A
746.Lăculeţe (576) A
747.Stăneşti-Corbeni (661) A
748.Treznea (8o4) A
749.Aghireş (813) A
75o.Cheia (816) A
751.Cheia-Turda (818) A

2.21.ALABASTER

752.Cheia-Turda (819) A

2.22.ANHYDRITE

753.Moldova Nouă (289) A
754.Voia (318) A
755.Ceraşu (514) A

2.23.CELESTITE

756.V.Sării (494) A
757.Copăceni (817) A

2.24.ZEOLITES

758.Bîrsana (26) A

759.V.Leucii(395 M-Fig.18)A
760.Mirşid(802)A

2.25.BENTHONITE

761.Oraşu Nou(7)A
762.V.Chioarului(38)A
763.Răzoare(42) A
764.Sîntamaria de Piatră (170)A
765.Tufări(260)A
766.Gurasada(310)A
767.Mihăieşti-Dobra(311)A
768.Hădăreni(820)A
769.Ocna Mureş(822)A
770.Ciugud(823)A
771.Carda(824)A
772.Straja(825)A
773.Adîncata(925)A
774.Adamclisi(927)A

2.26.DIATOMITE

775.Filia(121)A
776.Minişu de Sus(381)A
777.Pătîrlagele(503)A
778.Rasova-Haţeg(923)A
779.Adîncata(924)A
780.Adamclisi(926)A

2.27.CHALK

781.Basarabi(919)A
782.Căinac(920)A

2.28.GLAUCONITE

783.Săvădisla(374)A
784.Remus Opreanu(921)A

2.29.PHOSPHATIC ROCKS

785.Peştera(922)A

3. HYDROCARBONS

3.1.OIL

786.Săcel(413)A
787.Geamăna(434)A
788.Frumoasa(435)A
789.Cîmpeni(437)A
790.Arşiţa(438)A
791.Gropile lui Zaharache(439)A
792.Chilii west(440)A
793.Chilii(441)A
794.Cucuieţi(442)A
795.Taşbuga(443)A
796.Zemeş-Ciliosia(444)A
797.Asău (445)A
798.Moineşti-Fosle(446)A
799.Uture-Moineşti Oraş(447)A
800.Văsieşti(453)A
801.Comăneşti(454)A
802.Dărmăneşti(465)A
803.Dofteana-Bogata(466)A
804.Doftăniţa(467)A
805.Slănic(468)A
806.Păcuriţa(469)A
807.Cerdac(470)A
808.Slănic-Fierăstrău(471)A
809.Caşin(482)A
810.Adjud(483)A
811.Izv.Oituzului(485)A
812.Cîmpuri-Vizantea(488)A
813.Izv.Putnei(489)A
814.Ghelinţa(490)A
815.Bisoca Sările(501)A
816.Poseşti(518)A
817.Apostolache(520)A
818.Cîmpina-Gura Drăgănesei(527)A
819.Siliştea-Măgureni(529)A
820.Scăioşi(533)A
821.Tătaru(536)A
822.Boteşti(539)A
823.Plopu(544)A
824.Bordei Verde east(546)A
825.Filiu(549)A
826.Stăncuţa(550)A

827.Lipăneşti (559) A
828.Mănăsia (565) A
829.Răzvad (583) A
83o.Bogaţi (598) A
831.Glimbocel (599) A
832.Leordeni (6oo)A
833.Croitori (61o) A
834.Drăghineasa-Vişina(611)A
835.Gliganu (613) A
836.Humele (614)A
837.Dumbrava (616)A
838.Glogoveanu (617)A
839.Stoeneşti-Căscioarele (619) A
84o.Bolintin Deal (62o)A
841.Căţelu (624) A
842.Jilava (627) A
843.Dumitrana (629)A
844.Grădinari-Domneşti(631)A
845.Glavacioc (645)A
846.Şelaru (646) A
847.Ştefan cel Mare (647)A
848.Izvoru (648) A
849.Cieşti (673)A
85o.Surduleşti (675)A
851.Bacea (678)A
852.Negreni (679)A
853.Deleni (683) A
854.Foleşti (694)A
855.Işalniţa (715)A
856.Melineşti (719)A
857.Sîntana (775)A
858.Borş (778)A
859.Suplacu de Barcău (785)A
86o.Viişoara (79o)A
861.Siniob (792) A
862.Lebăda (917)A

3.2.GAS

863.Păltinoasa (419)A
864.Valea Seacă (422)A
865.Mălini (423) A
866.Bacău (451) A
867.Ciudalbi (497) A
868.Frumuşiţa (499) A
869.Boldu (5o7) A
87o.Bobocu (5o8) A
871.Balta Albă (5o9) A
872.Roşioru (512) A
873.Gherghiasa (513) A
874.Sinaia (542) A
875.Bărăitaru (543) A
876.Victoria (552) A
877.Odăieni (554) A
878.Nicoleşti (556) A
879.Ciochina Amara (557) A
88o.Gîrbovi (561) A
881.Orezu (563) A
882.Tinosu-Brazi (588) A
883.Măneşti-Vlădeni (589) A
884.Gheboaia Finta (59o) A
885.Gura Şuţii (593) A
886.Bilciureşti (6o1) A
887.Moara Vlăsiei (6o3) A
888.Pasărea (6o4) A
889.Broşteni (6o9) A
89o.Cornii Mari south (618) A
891.Cozieni (621) A
892.Păstrăvari (622) A
893.Berceni (625) A
894.Copăceni (626) A
895.Buturugeni (633) A
896.Gorneni (635) A
897.Mîrşa (638) A
898.Vîrteju (641) A
899.Spineni (68o) A
9oo.Slatina (684) A
9o1.Galicea (688) A
9o2.Prigorie (699) A
9o3.Bucşana (7oo) A
9o4.Zătreni (7o6) A
9o5.Făureşti (7o7) A

906.Pitulaţi (716) A
907.Sfîrcea (717) A
908.Bulbuceni-Piscul Stejarului (722) A
909.Hurezani (723)A
910.Socu (725) A
911.Strîmba-Rogojelu (729)A
912.Bala (730)A
913.Sînmartin (763)A
914.Tomnatec (767) A
915.Săcuieni (795) A
916.Piscolţ (797) A
917.Moftinu (799) A
918.Beudiu (826) A
919.Enciu (827) A
920.Strugureni (828) A
921.Puini (829) A
922.Ţaga (830)A
923.Buza (831) A
924.Fîntînele (832)A
925.Sărmăşel (833)A
926.Silvaşul de Cîmpie(834)A
927.Delureni (835)A
928.Ulieş (836)A
929.Sînmartin (837) A
930.Crăteşti-Ercea (838)A
931.Şincai (839)A
932.Zaul de Cîmpie (840)A
933.Grobeniş (841)A
934.Lunca (842)A
935.Bozed (843) A
936.Voivodeni (844)A
937.Ibăneşti (846) A
938.Sînger (847)A
939.Iclănzel (848)A
940.Păingeni (849)A
941.Feleac (850)A
942.Dămieni (851)A
943.Dumbrăvioara (852)A
944.Tîrgu Mureş (853)A
945.Ernei (854)A
946.Săuşa (855)A
947.Vaidei (856)A
948.Luduş (857) A
949.Bogata de Mureş (858)A
950.Lechinţa Iernut (859)A
951.Acăţari (860)A
952.Corunca (861)A
953.Miercurea Nirajului (862)A
954.Măghierani (863)A
955.Cuşmed (865)A
956.Firtuşu (866)A
957.Benţid (867)A
958.Tărceşti (868)A
959.Treisate-Ghireşti (869)A
960.Sîngeorgiu de Pădure (870)A
961.Gălăţeni (871)A
962.Suveica (872)A
963.Filitelnic (873)A
964.Laslău Mare (874)A
965.Cucerdea (875)A
966.Tăureni (876)A
967. Cetatea de Baltă (877)A
968.Velţ (878)A
969.Saroş Deleni (879)A
970.Axente Sever (880)A
971.Copşa Mică (881)A
972.Bazna (882)A
973.Seleuş (883)A
974.Nadeş (884)A
975.Şoimuş (885)A
976.Chedia (886)A
977.Cristuru (887)A
978.Beia (888)A
979.Eliseni (889)A
980.Buneşti-Criţ (891)A
981.Daia-Ţelina (892)A
982.Retiş (893)A
983.Netuş (894)A
984.Noul Săsesc (895)A
985.Alămor (896)A
986.Petiş (898)A

987.Ruşi (899) A
988.Bîrghiş (900) A
989.Ilimbav (901) A
990.Bărcuţ (902) A

3.3.OIL AND GAS

991.Cuejdiu (426)A
992.Mihoc (436)A
993.Teţcani (448) A
994.Glăvăneşti (480)A
995.Huruieşti (481) A
996.Lepşa (486)A
997.Ţepu (495) A
998.Independenţa (498) A
999.Plopeasa (505)A
1000.Berca-Arbănaşi (506)A
1001.Bărbuceşti (510)A
1002.Sărata-Monteoru (511)A
1003.Surani-Cărbuneşti (517)A
1004.Biscani (519)A
1005.Matiţa (521) A
1006.Păcureţi (522)A
1007.Buştenari-Runcu (526)A
1008.Băicoi-Tintea (528)A
1009.Floreşti (530)A
1010.Boldeşti (531)A
1011.Mălăeşti (532)A
1012.Copăceni Predeal-Sărari (534)A
1013.Podenii Vechi (535)A
1014.Ceptura-Urlaţi (537)A
1015.Chiţorani-Orlea (538)A
1016.Oprişeşti (545)A
1017.Lişcoteanca (547)A
1018.Bordei Verde west (548)A
1019.Berteşti (551)A
1020.Jugureanu (553) A
1021.Padina (555)A
1022.Colelia (558)A
1023.Brăgăreasa (560)A
1024.Malu (562)A
1025.Urziceni (564) A
1026.Fierbinţi (566) A
1027.Ileana (567) A
1028.Colibaşi-Dîmboviţa (568) A
1029.Ochiuri (569) A
1030.Ocniţa (570) A
1031.Moreni (572) A
1032.Valea Reşca (573) A
1033.Şotînga-Doiceşti (581) A
1034.Aninoasa (582) A
1035.Teiş (584) A
1036.Mărgineni (585) A
1037.Aricesti (586) A
1038.Bucşani (591) A
1039.Brăteşti (592) A
1040.Viforîta (594) A
1041.Suţa Seacă (595) A
1042.Dragomireşti (596)A
1043.Ludeşti (597) A
1044.Periş (602) A
1045.Serdaru (605) A
1046.Titu (606) A
1047.Brîncoveanu (607)A
1048.Petreşti-Corbii Mari-Poiana (608) A
1049.Vultureanca (612) A
1050.Recea (615) A
1051.Bălăceanca (623) A
1052.Popeşti Leordeni (628) A
1053.Bragadiru (632) A
1054.Novaci (634) A
1055.V.Plopilor-Bălăria (636) A
1056.Videle (637) A
1057.Cartojani (639) A
1058.Coşoaia (640) A
1059.Blejeşti (642) A
1060.Talpa (643) A
1061.Presjba (644) A
1062.Strîmbeni-Căldăraru (649) A
1063.Siliştea-Rica-Gumeşti (650) A
1064.Popeşti-Palanga-Tătărăşti (651)A

1065.Baciu(653)A
1066.Hîrlești(654)A
1067.Brătășani(655)A
1068.Topoloveni(656)A
1069.Colibași-Argeș(664)A
1070.Merișani-Drăganu(665)A
1071.Săpunari(666)A
1072.Călinești-Oarja(669)A
1073.Slătioarele(670)A
1074.Siliștea-Cireșu(671)A
1075.Vața(672)A
1076.Bîrla(674)A
1077.Ciurești south(676)A
1078.Ciurești north(677)A
1079.Otești(681)A
1080.Oporelu-Constantinești (682)A
1081.Făurești(685)A
1082.Băbeni(689)A
1083.Alunu(701)A
1084.Colibași-Negrești(702)A
1085.Bustuchini(703)A
1086.Grădiștea(704)A
1087.Românești(705)A
1088.Iancu Jianu(708)A
1089.Malu Mare(710)A
1090.Ghercești(711)A
1091.Cîrcea(712)A
1092.Sîmnicu(714)A
1093.Brădești(718)A
1094.Vîrteju(720)A
1095.Bibești(721)A
1096.Țicleni(726)A
1097.Tîrgu Jiu(728)A
1098.Bîlteni(731)A
1099.Foieni(764)A
1100.Calscea-Satchinez-Șandra (765)A
1101.Variaș(766)A
1102.Teremia(768)A
1103.Cherestur(769)A
1104.Cherestur north(770)A
1105.Pordeanu(771)A
1106.Nădlac(772)A
1107.Turnu(773)A
1108.Ciumeghiu(776)A
1109.Abrămuț(791)A
1110.Curtuiușeni(796)A
1111.Carei(798)A
1112.Mădăraș(800)A

3.4.GAS AND CONDENS

1113.Gura Humorului-Frasin(420)A
1114.Roman-Săcuieni(430)A
1115.Tazlăul Mare(433)A
1116.Găiceana(479)A
1117.Homocea(484)A
1118.Matca(496)A
1119.Salonta(777)A
1120.Mihai Bravu(793)A
1121.Ciocaia(794)A

4. SOLID FUELS

4.1.PEAT

1122.Neagra Șarului(85)A
1123.Pilugani-Poiana Stampei (86)A
1124.Remetea(100)I
1125.Miercurea Ciuc(112)I
1126.Tușnad Sat(120)I
1127.Dumbrăvița(131)I
1128.Dersca-Lozna(415)A
1129.Cucorani(416)A
1130.Lunga-Ojdula(491)I
1131.Comandău(493)A
1132.Călățele-Huedin(812)A
1133.Mîndra-Șercaia(903)A

4.2.BROWN COAL

1134.Codlea-Vulcan(134)A
1135.Cristian(135)A
1136.Verendin-Mehadica(236)I
1137.Mehadia(239)A

1138.Bozovici (242)A
1139.Ţebea-Baia de Criş(336)A
1140.Comăneşti- Asău (455)A
1141.Leorda (456 M-Fig.26)A
1142.Leorda north (457 M-Fig.26) A
1143.Vermeşti (458 M-Fig.26)A
1144.Galeon (459 M-Fig.26)A
1145.Sălătruc (460 M-Fig.26)A
1146.Lapoş (461 M-Fig.26)A
1147.Podeni (462 M-Fig.26)A
1148.Pr.Negru (463 M-Fig.26)A
1149.Brătuleşti-Dofteana (464 M-Fig.26)A
1150.Cristolţel-Testioara (805)A
1151.Surduc (806)A
1152.Lupoaia (807)A
1153.Jac (808)A
1154.Brusturi (809)A
1155.Hida-Zimbor (810)A
1156.Ticu (811)A

4.3.LIGNITE

1157.Tîrşolţ (6)A
1158.Bilbor-Pr.Secu (93)A
1159.Borsec (97)A
1160.Vîrghiş east (124)A
1161.Biborţeni (I-Fig.27)I
1162.Bodoş (125)I
1163.Aita Seacă (126)I
1164.Baraolt (127)A
1165.Măeruş (II-Fig.27)I
1166.Arcuş-V.Crişului (128)A
1167.Iaraş-Hăghig (129)A
1168.Crisbav (130)A
1169.Ilieni (132)A
1170.Vlădeni (133)A
1171.Balta Sărată (227)A
1172.Armeniş (232)A
1173.Fălticeni-Boroaia (424)A
1174.Pralea (487)A
1175.Ceptura (540)A
1176.Rotari (541)A
1177.Mîslea-Scorţeni (I-Fig.28)A
1178.Filipeştii de Pădure (571)A
1179.Lăculeţe-Glodeni (574)A
1180.Şotînga-Mărgineanca (578)A
1181.Vulcana-Pandele (579)A
1182.Brăneşti-Izvoarele (580)A
1183.V.Dîmboviţei-V.Neajlov (630)A
1184.Schitu Goleşti (657)A
1185.Capul Pisculuí (658)A
1186.Coteşti-Aninoasa (659)A
1187.Rîul Bratia-Rîul Doamnei (660)A
1188.V.Argeş-V.Slănic (662)
1189.Cucești (695)A
1190.Cernişoara (696)A
1191.V.Tărîia-V.Cernişoara (697)A
1192.V.Amaradia-V.Tărîia (698)A
1193.Caracal (709)A
1194.Mihăiţa (713)A
1195.Jupîneşti (724)A
1196.Albeni (727)A
1197.Tîlva Măcieşului (732 M-Fig.32)A
1198.Rovinari (733)A
1199.Moi (734 M-Fig.32)A
1200.Peşteana (735 M-Fig.32)A
1201.Gîrla (736)A
1202.Beterega (737 M-Fig.32)A
1203.Şomăneşti (738 M-Fig.32)A
1204.Tismana (739 M-Fig.32)A
1205.Pinoasa (740 M-Fig.32)A
1206.Rogojelu (741 M-Fig.32)A
1207.Fărcăşeşti (742 M-Fig.32)A
1208.Negomir (743 M-Fig.32)A
1209.Cojmăneşti (744 M-Fig.32)A
1210.Urdari (745 M-Fig.32)A
1211.Mătăsari (746)A
1212.Jilţ north (747)A

1213.Jilţ south(748 M-Fig.32)A
1214.Roşiuţa(749 M-Fig.32)A
1215.Ploştina(75o M-Fig.32)A
1216.Leurda(751 M-Fig.32)A
1217.Horăşti(752 M-Fig.32)A
1218.Samarineşti(753 M-Fig.32)A
1219.Lupoaia(754 M-Fig.32)A
122o.Zegujani east-Meriş(755 M-Fig.32)A
1221.Motru west(756)A
1222.Husnicioara(757)A
1223.Balota Ghelmegioaia(758 errata)A
1224.Prunişor-Izv.Aneştilor (759 errata)A
1225.Livezile(76o)A
1226.Băileşti(761)A
1227.Sinersig-Vişag(762)A
1228.Roşiori-Biharia(779)A
1229.Tătăruş(78o)A
123o.Derna-Budoi(781)A
1231.Popeşti-Voivozi(782)A
1232.Suplacu de Barcău(783)A
1233.Ip(784)A
1234.Marca-Cozniciu(786)A
1235.Borod-Borozel(787)A
1236.Beznea-V.Neagră-Corniţel (788)A
1237.Sărmăşag(789)A
1238.Voivozi north(I-Fig.33)A
1239.Marghita(II-Fig.33)A
124o.Zăuan(III-Fig.33)A
1241.Tileagd(IV-Fig.33)A
1242.Zalnoc(V-Fig.33)A
1243.Supuru(VI-Fig.33)A
1244.Stîna(VII-Fig.33)I
1245.Băiţa(VIII-Fig.33)I

4.4.COKING BITUMINOUS COAL

1246.Lupeni(182)A
1247.Uricani(183)A
1248.Bărbăteni(184 M-Fig.29)A
1249.Cameniţa(252)A
125o.Cozla(253)A
1251.Anina-Brădet(281)A
1252.Anina(282)A

4.5.ENERGETIC BITUMINOUS COAL

1253.Răscoala(172 M-Fig.29)A
1254.Lonea(173)A
1255.Petrila(174)A
1256.Livezeni(175 M-Fig.29)A
1257.Sălătruc(176 M-Fig.29)A
1258.Dîlja(178 M-Fig.29)A
1259.Iscroni(178 M-Fig.29)A
126o.Aninoasa(179 M-Fig.29)A
1261.Vulcan(18o)A
1262.Paroşeni(181)A
1262a.Dl.Babei(I-Fig.29)A
1263.Hobiceni(185 M-Fig.29)A
1264.Cîmpu lui Neag(186)A
1265.Rusca Montană(214)A
1266.Crivi-Rudăria(249)A
1267.Pregheda(25o)A
1268.Chiscovăţ(251)A
1269.Ostreş(I-Fig.3o)A
127o.Bigăr(254)A
1271.Dragoşela-Bigăr(II-Fig.3o)A
1272.Şopot(III-Fig.3o)A
1273.Baia Nouă(255)A
1274.Dragoşela(256 M-Fig.3o)A
1275.Lupac(276)A
1276.Secu(278)A
1277.Doman(279)A

4.6.ANTHRACITE

1278.Schela-Viezuroiu(189)A

4.7.CARBONACEOUS SHALES

1279.Ranchina(277)A
128o.Coaş(8o1)A

4.8.OIL SHALES

1281.Doman(28o M-Fig.31)A
1282.Anina western flank(283)A

1283.Anina-eastern flank(I-Fig.31)A
1284.Anina-northern flank (II-Fig.31)A
1285.V.Sucevei-V.Moldovei (417)I
1286.V.Sucevitei-V.Putnei (418)I
1287.V.Trotușului(472)I
1288.V.Buzăului-V.Teleajen (504)I
1289.Ileanda(803)I

A L P H A B E T I C I N D E X

All the deposits and occurrences mentioned on the graphic representations and in the text are listed alphabetically. The main types of substances are marked by different colours; red - metalliferous mineral resources; blue - non-metalliferous mineral resources; green - hydrocarbons; black - solid fuel. Following the denomination, the number noted in the first paranthesis stands for the occurrence plotted on the map and figures and described in part II, chapter I; the number inscribed in the second paranthesis makes easier (excepting the hydrocarbons and solid fuel) the finding of the genetic types mentioned in chapter II, part II; the third paranthesis is meant to point to the compositional types of mineral resources, noted in chapter III, part II.

ANINA, flanc nordic (II-fig.31); (-); (1284)
ANINOASA (582); (-); (1o34)
ANINOASA (179 M-fig.29); (-); (126o)
APOSTOLACHE (52o); (-); (817)
ARĂNIEŞ (193 b-fig.9); (5o1);(74)
ARCUŞ-VALEA CRIŞULUI (128); (-); (1166)
ARICEŞTI (586); (-); (1o37)
ARMENIŞ (232); (-); (1172)
ARMENIŞ (233); (49o); (38)
ARMENIŞ (VII-fig.1o); (56o); (681)
ARPAŞ (147); (495); (362;424)
ARŞIŢA (436); (-); (79o)
ARŞIŢA-BOTOŞEL (64); (463);(338; 562)
ASĂU (445); (-); (797)
ASCUŢITA (215); (248); (365)
AURORA-DITRĂU (99); (186); (483)
AURUM (II-fig.1); (239); (134;225)
AXENTE SEVER (86o); (-); (97o)

B

BABA (345 M-fig.15); (127); (178;294)
BACĂU (451); (-); (866)
BACEA (678); (-); (851)
BACIU (653); (-); (1o65)
BAIA (I-fig.13); (3o6); (594)
BAIA BORŞA-BURLOAIA (46); (456); (332;554)
BAIA BORŞA-DEALU BUCĂŢII (47); (456 a);(334;56o)
BAIA DE ARAMĂ (19o); (3o1); (425;583)
BAIA DE ARIEŞ (365); (169;241); (195;376)
BAIA DE ARIEŞ-ALBRU (365 a-fig.16); (246);(297)
BAIA BORŞA-GURA BĂII (45); (455); (331;553)
BAIA NOUĂ (255); (-); (1273)
BAIA SPRIE (22); (144); (138;27o;389)
BAIA SPRIE EST (22 a-fig.1); (145); (319)
BALA (73o); (-); (912)
BALOTA-GHELMEGIOAIA (758 M-erată); (-); (1223)
BALTA ALBĂ (5o9); (-); (87)
BALTA SĂRATĂ (227); (-); (1171)
BARAOLT (127); (-); (1164)
BARZA (III-fig.14); (77); (166)
BASARABI-ot (919); (319); (781)

BATA (III-fig.13); (3o7); (595)
BAZNA (882); (-); (927)
BĂBENI (689); (-); (1o82)
BABUIA (354 M-fig.15); (237); (129)
BĂBUȚA-CONCORDIA (345 a-fig.15); (1oo); (179)
BĂDEANCA-DĂNIȘ (142); (22o); (412;514;5o2)
BĂICOI-ȚINTEA (528); (-); (1oo8)
BĂILEȘTI (761); (-); (1226)
BĂIȚA (15 M-fig.1); (119); (226)
BĂIȚA (VIII-fig.33); (-); (1245)
BĂIȚA-BIHOR (394); (48;63); (379;499;494;452;545;658)
BĂIȚA-CRĂCIUNEȘTI (323); (92); (158; 282)
BĂIUȚ (32 M-fig.1); (146); (321;39o)
BĂLAN (1o4); (483); (4o7;58o)
BĂLAN SUD (1o5 a-fig.5); (485); (358;4o9)
BĂLĂCEANCA (623); (-); (1o51)
BĂLȚĂTEȘTI (425); (328); (712;734)
BĂNIA VÎRȘEȚ (245); (492); (77;63o)
BĂRĂITARU (543); (-); (875)
BĂRBĂTENI (184 M-fig.29); (-); (1248)
BĂRBUNCEȘTI (51o); (-); (1oo1)
BĂRCUȚ (9o2); (-); (99o)
BĂTRÎNA (2o4 b-fig.9); (499); (3o)
BECHIR-CÎȘLA-D.CARIEREI (9o6 a-fig.2o);(259);(311;637)
BEIA (888); (-); (978)
BENȚID (867); (-); (957)
BERCA-ARBĂNAȘI (5o6); (-); (1ooo)
BERCENI (625); (-); (893)
BERTEȘTI (551); (-); (1o19)
BETEREGA (737 M-fig.32); (-); (12o2)
BEUDIU (826); (-); (918)
BEZNEA-VALEA NEAGRĂ-CORNIȚEL (788); (-); (1236)
BIBEȘTI (721); (-); (1o95)
BIBORȚENI (I-fig.27); (-); (1161)
BICAZU ARDELEAN (1o2); (481); (353;578)
BIGĂR (254); (-); (127o)
BIGĂR-DRAGOSELA (II-fig.3o); (-); (1271)
BILBOR-PÎRÎUL SEC (93); (-); (1158)
BILCIUREȘTI (6o1); (-); (886)
BIRTIN (337); (172); (288)
BÎSCENI (519); (-); (1oo4)

BISOCA-SĂRILE (501); (-); (815)
BIXAD (5); (70); (130)
BILTENI (731); (-); (1098)
BÎRGHIȘ (900); (-); (988)
BÎRLA (674); (-); (1076)
BÎRSA FIERULUI (138); (198 a); (254)
BÎRSANA (26); (425); (758)
BÎZDÎGA (I-fig.3); (493); (2;398)
BLEJEȘTI (642); (-); (1059)
BOBOCU (508); (-);(870)
BOBOIEȘTI(929)-erată); (385); (121)
BOCȘA (271); (184); (265;633)
BOCȘA-SĂCĂRÎMB (314 M-fig.14); (179); (277)
BODOȘ (125); (-); (1162)
BOGAȚI (598); (-); (830)
BOGATA DE MUREȘ (858); (-); (949)
BOIȚA-HAȚEG (200); (511); (263;584)
BOLCANA-TROIȚA (320); (23);(464)
BOLDEȘTI (531); (-); (1010)
BOLDU (507); (-); (869)
BOLINTIN DEAL (620); (-); (840)
BORCA (91); (524); (95)
BORDEI VERDE EST (546); (-); (824)
BORDEI VERDE VEST (548); (-); (1018)
BORLEȘTI (431); (330); (736)
BOROD-BOROZEL (787); (-); (1235)
BOROD-CORNIȚEL (412); (154); (385)
BORSEC (97); (-); (647)
BORSEC (96); (582); (1159)
BORȘ (778); (-); (858)
BORZAȘ (18 M-fig.1); (134); (206)
BOTEȘTI (539); (-); (822)
BOUȚARI (220); (488); (37)
BOZED (843); (-); (935)
BOZOVICI (240); (594); (152)
BOZOVICI (242); (-); (1138)
BOZOVICI (243); (366); (213)
BRAGADIRU (632); (-); (1053)
BRATCA-SECĂTURA (410); (405); (536)
BRATOSIN (IX-fig.13); (151);(172;375;598)
BRĂDEȘTI (718); (-); (1093)

BRĂDIȘOR (332); (93); (168;283)
BRĂDIȘOR (349 a-fig.15); (166); (211)
BRĂGĂREASA (56o); (-); (1o23)
BRĂNEȘTI-IZVOARELE (58o); (-); (1182)
BRATAȘANI (655); (-); (1o67)
BRĂTEȘTI (592); (-); (1o39)
BRĂTULEȘTI-DOFTEANA (464 M-fig.26); (-); (1149)
BREAZA (341); (97); (174;289)
BREAZA NE (341 a-fig.15); (98); (175)
BRÎNCOVEANU (6o7); (-); (1o47)
BROȘTENI (81); (519); (91)
BROȘTENI (6o9); (-); (889)
BRUSTURI (8o9); (-); (1154)
BRUSTURI-LUNCȘOARA (384); (56); (3o2;449)
BUCHIN-NEMANU (229); (569); (664)
BUCIUM-ARAMA (357 M-fig.16); (129); (375;443)
BUCIUM-TARNIȚA (356); (31); (472)
BUCOVA (219); (584); (694)
BUCȘANA (7oo); (-); (9o3)
BUCȘANI (591); (-); (1o38)
BUCUREȘCI-ROVINA (339 M-fig.14); (78); (173)
BUDUREASA (397); (64); (51;381)
BUDUREASA-b (398); (46); (659)
BULBUCENI-PISCUL STEJARULUI (722); (-); (9o8)
BULZA (296); (123); (269)
BUNEȘTI-CRIȚ (891); (-); (98o)
BURU (37o);(3oo a); (82)
BUSTUCHINI (7o3); (-); (1o85)
BUȘTENARI-R.
BUTURUGENI (633); (-); (895)
BUZA (831); (-); (923)
BUZAD (774); (389); (58)

C

CACICA (421); (333); (711)
CACOVA-BĂIȘOARA (372); (43); (48)
CAINAC-ct (92o); (32o); (782)
CALACEA-SATCHINEZ-ȘANDRA (765); (-); (11oo)
CAMENIȚA (252); (-); (1249)
CANAL-ȚIBĂU (49); (449); (1;336)
CAPUL PISCULUI (658); (-); (1185)
CARACAL (7o9); (-); (1193)

CARACI-MĂGURA ȚEBEI (335); (132;141); (171;286)
CAREI (798); (-); (1111)
CARTOJANI (639); (-); (1057)
CAȘIN (482); (-) ;(809)
CATARAMA (III-fig.2); (459); (239; 395;557)
CAVNIC-BOLDUȚ (27); (121) ;(320)
CAVNIC_ROATA (28); (121 a); (332)
CĂLAN (169); (348); (737)
CĂLĂȚEA (411 a- fig.19); (407); (538)
CĂLĂȚELE-HUEDIN (812); (-); (1132)
CĂLINEȘTI-OARJA (669); (-); (1072)
CĂMÎRZANA (4); (131); (125;204)
CĂPUȘ (377); (317); (50)
CĂRMĂZINEȘTI (308 c-fig.13); (313); (274)
CĂTĂLINU-GALBENU (164); (579); (708)
CĂȚELU (624); (-) ; (841)
CĂZĂNEȘTI (304 M-fig.13); (47); (643)
CĂZĂNEȘTI-CIUNGANI (303); (10); (65)
CĂZĂNEȘTI-VALEA CAPREI (301); (287); (439;600)
CĂZĂNEȘTI-VALEA SASULUI (302 M-fig.13); (150); (270)
CEAMURLIA (911); (229); (386)
CEPTURA (540); (-); (1175)
CEPTURA-URLAȚI (537); (-); (1014)
CERAȘU (514); (363); (741;755)
CERBAL-ARENIEȘ (193); (496;501); (74)
CERBĂL (193 a-fig.9); (496); (73)
CERBIA (297); (189); (437;491)
CERDAC (470); (-); (807)
CERISOR (198); (584); (649)
CERNIȘOARA (696); (-); (1190)
CETATEA DE BALTĂ (877); (-); (967)
CHEDIA (886); (-); (976)
CHEIA (816); (360); (750)
CHEIA-TURDA (818); (361); (751)
CHEIA-TURDA-ab (819); (364);(752)
CHERESTUR (769); (-); (1103)
CHERESTUR NORD (770); (-); (1104)
CHIACOVĂȚ (251); (-); (1268)
CHILII (441); (-); (793)
CHILII VEST (440); (-); (792)

CHIRUI (116); (295); (15)
CHITUC (916); (384); (115)
CHIȚORANI-ORLEA (538); (-); (1o15)
CIBIN-OLT (15o); (369); (1o7)
CICÎRLĂU (12 M-fig.1); (115); (224)
CICLOVA (286); (5o); (432;461)
CICLOVA (286 a-fig.11); (19 a); (487;498)
CIEȘTI (673); (-); (849)
CIOACA BRAZILOR (246); (25o); (586;631)
CIOCAIA (794); (-); (1121)
CIOCHINA-AMARA (557); (-); (879)
CIOTINA (V-fig.4); (228;486); (562 a)
CIREȘATA (333 a-fig.14); (94); (169;284)
CIRITEI (PIATRA NEAMȚ) (429); (349); (738)
CISMA (34); (155); (324)
CIUCARU MARE (I-fig.12); (3); (98)
CIUDALBI (497); (-); (867)
CIUGUD (823); (422); (77o)
CIUMBGHIU (776); (-); (11o8)
CIUNGANI (3o5 M-fig.13); (1o); (513)
CIUREȘTI NORD (677); (-); (1o78)
CIUREȘTI SUD (676); (-); (1o77)
CÎINEL (329 M-fig.14); (74); (163)
CÎMPENI (437); (-); (789)
CÎMPENI-SOHODOL (363→erată); (392); (523)
CÎMPINA-GURA DRĂGĂNESEI (527); (-); (818)
CÎMPUL LUI NEAG (186); (-); (1264)
CÎMPULUNG MOLDOVENESC-SADOVA (427); (322); (55)
CÎMPURI-VIZANTEA (488); (-); (812)
CÎRCEA (712); (-); (1o91)
COASTA URSULUI (35); (156); (325)
COAȘ (8o1); (-); (128o)
COBĂȘEL (55 M-fig.3); (243); (4;244;475)
COCOIZAȘ (1o9 M-fig.6); (69); (126)
COCORICIU-MOAȘA (149); (573); (7o1)
CODLEA-VULCAN (134); (-); (1134)
COJMĂNEȘTI (744 M-fig.32); (-); (12o9)
COLBU (73 b-fig.4); (471); (4o1;57o)
COLBU-SECU (V-fig.2); (461); (333;559)
COLELIA (558); (-); (1o22)

COLIBAȘI (ARGEȘ) (664); (-); (1069)
COLIBAȘI-DÎMBOVIȚA (568); (-); (1028
COLIBAȘI-NEGREȘTI (702); (-); (1084)
COLIBIȚA (87); (149); (247)
COLNIC (IV-fig.14); (26); (468)
COMANDĂU (493); (-); (1131)
COMĂNEȘTI (454); (-); (801)
COMĂNEȘTI-ASĂU (455); (-); (1140)
CONȚU (359 M-fig.16); (107); (188)
CONȚU SUPERIOR-ORATA (157); (563); (546;674)
COPALNIC-MĂNĂȘTUR (39); (524); (690; 670)
COPĂCENI (626); (-); (894)
COPĂCENI-cs (817); (362); (757)
COPĂCENI-PREDEAL-SĂRARI (534);(-); (1012)
COPȘA MICĂ (881); (-); (971)
CORABIA (358); (80); (187)
CORANDA-HONDOL (315); (180); (278)
CORBEȘTI (292); (303); (588)
CORBII MARI SUD (618); (-); (890)
CORDUREA (327 M-fig.14); (84); (200)
CORMĂIȚA (60); (270); (616)
CORNET-VALEA POIENII (411); (406); (537)
CORONGHIȘ-SĂCII (52); (527); (241)
CORUNCA (861); (-); (952)
CORUND (117); (67 a); (644)
COȘNA (69); (517); (90)
COȘOAIA (640); (-); (1058)
COTEȘTI-ANINOASA (659); (-); (1186)
COVASNA-ZAGON (492); (323); (56)
COZIENI (621); (-); (891)
COZLA (253); (-); (1250)
CRĂTEȘTI-ERCEA (838); (-); (930)
CREMENARI (690); (375); (114)
CRISBAV (130); (-); (1168)
CRISTIAN (135); (-); (1135)
CRISTOLȚEL-TESTIOARA (805); (-); (1150)
CRISTURU (887); (-); (977)
CRIVI-RUDĂRIA (249); (-); (1266)
CROITORI (610); (-); (833)
CRUCEA (78); (474); (403; 572)

CUCERDEA (875); (-); (965)
CUCEŞTI (695); (-); (1189)
CUCORANI (417); (-); (1129)
CUCUTENI (442); (-); (794)
CUEJDIU (426); (-); (991)
CURĂŢEL (56 M-fig.3); (528); (245)
CURIŞTEA (III-fig.12); (5); (1o1)
CURTUIUŞENI (796); (-); (111o)
CUSMED (865); (-); (955)

D

DADU-CÎRLIBABA (63); (513); (84)
DAIA-ŢELINA (892); (-); (981)
DALCI (IV-fig.1o); (557); (68o;7oo)
DARABANI (414); (433); (6o7)
DĂMIENI (851); (-); (942)
DĂRMĂNEŞTI (465); (-); (8o2)
DEALU BABEI (I-fig.29); (-); (182 a)
DEALUL BOAMBEI (84); (522); (94)
DEALU BOCLUGEA (V-fig.2o); (216); (61 b)
DEALU BOCLUGEA (VIII-fig.2o); (219); (61 b)
DEALU BOGZA (9o8 b-fig.2o); (263); (315; 641)
DEALU BOUL (21o); (196); (34)
DEALU CORNILOR (VI-fig.15); (316); (71)
DEALU COSLUGEA (VI-fig.2o); (217); (61 e)
DEALU CRUCII (2o); (89); (136;228)
DEALU FETII-V.TALPELOR (I-fig.14); (96); (165)
DEALU ISLAM-GEAFERCA (VII-fig.2o); (-); (218)
DEALU PÎRLITA (IV-fig.2o); (-); (215)
DEALU POGOR (IV-fig.15); (314); (69)
DEALU RUSULUI (83); (521); (93)
DELENI (683); (-); (853)
DELINEŞTI (228); (533); (75)
DELNIŢA (65); (253); (7)
DELURENI (835); (-); (927)
DERNA-BUDOI (781); (-); (123o)
DERSCA-LOZNA (415); (-); (1128)
DEVA (312); (21); (441;492;6o1)
DITRĂU (1o1); (376); (1o6)
DÎLJA (177 M-fig.29); (-); (1258)
DÎLMA (268 a-fig.12); (9); (1o3)
DÎMBU LETII (4o7 b-fig.19); (399); (53o)
DÎMBU PASCULUI-BĂTRÎNA (2o4); (498;499); (3o)

FILITELNIC (873); (-); (963)
FILIU (549); (-); (963)
FIRTUȘU (866); (-); (956)
FÎNTÎNELE (832); (-); (924)
FLOREȘTI (53o); (-); (1oo9)
FLUTURICA-CÎRLIBABA (62); (45o); (6; 337)
FOIENI (764); (-); (1o99)
FOLEȘTI (693); (436); (611)
FOLEȘTI (694); (-); (854)
FRASIN (36o M-fig.16); (1o8); (189)
FRUMOASA (435); (-); (788)
FRUMUȘIȚA (499); (226 a); (57;868)
FUNDU MOLDOVEI (7o); (464); (336; 563)

G

GALBENA (III-fig.1); (177); (323)
GALEON (459 M-fig.26); (-); (1144)
GALICEA (688); (-); (9o1)
GĂICEANA (479); (-); (1116)
GĂINEASA (I-fig.6); (36); (454)
GĂLĂȚENI (871); (-); (961)
GĂLEANU (476); (328); (733)
GEAMĂNA (434); (-); (787)
GEMENEA (663); (373); (111)
GEMENEA SLĂTIOARA (75); (2o4); (8;346;626)
GHEBOAIA-FINTA (591); (-); (884)
GHELAR (196); (5o5); (23)
GHELAR EST (196 b-fig.9); (5o6); (24
GHELINȚA (49o); (-); (814)
GHERCEȘTI (711); (-); (1o9o)
GHERGHIASA (513); (-); (873)
GHEZURI (1); (11o); (217)
GINGINEASA (4o2); (289); (383)
GIUMALĂU (73 a-fig.4); (47o); (4oo; 569)
GÎRBOVI (561); (-); (88o)
GÎRCINA (428); (329); (713; 735)
GÎRLA (736); (-); (12o1)
GLAVACIOC (645); (-); (845)
GLĂVĂNEȘTI (48o); (-); (994)
GLIGANU (613); (-); (835)
GLIMBOCEL (599); (-); (831)
GLOBUL CRAIOVEI (238); (552); (685)
GLOBU RĂU (235); (534); (76)

GLOGOVA (93o-erată); (326); (122)
GLOGOVEANU (617); (-); (838)
GOLEŢU MARE (265); (1); (97)
GORNENI (635); (-); (896)
GOVĂJDIA (197); (583); (648)
GOVORA (692); (437); (61o)
GRĂDINARI-DOMNEŞTI (631); (-); (844)
GRĂDIŞTEA (7o4); (-); (1o86)
GREBENIŞ (841); (-); (933)
GROPILE LUI ZAHARACHE (439); (-); (791)
GRUI (IV-fig.8); (225); (42o;5o6); 518)
GRUIUL DUMII (388); (59); (3o5)
GRUIUL DUMII (389 M-fig.18); (538); (451;6o3)
GUGU-ZECE HOTARE (4o9); (4o4); (535)
GURA HUMORULUI-FRASIN (42o); (-); (1113)
GURA SLĂNICULUI (473); (335); (715)
GURASADA (31o); (418); (766)
GURA ŞUŢII (593); (-); (885)
GURGHIU (845); (343); (726)
GUŞET (5o); (526); (24o)

H

HANEŞ (343); (99;239); (177;2o9;292)
HARGHITA BĂI (113); (272); (618)
HĂDĂRENI (82o); (42o); (768)
HĂRLĂGIA (94); (48o); (353;575)
HĂRŢĂGANI (328 M-fig.14); (152;171); (162;372)
HERCULIAN (123); (297); (18)
HERJA (21); (143); (137;229)
HIDA-ZIMBOR (81o); (-); (1155)
HÎRLEŞTI (654); (-); (1o66)
HÎRNAU (IX-fig.8); (6o2); (142)
HOBICENI (185 M-fig.29); (-); (1263)
HOBIŢA (218); (566); (661)
HOLBAV (IV-fig.7); (439); (5o1)
HOLDIŢA-BROŞTENI (8o); (525); (352;628)
HOMOCEA (484); (-); (1117)
HONDOL (316 M-fig.14); (72); (154)
HORĂŞTI (752 M-fig.32); (-); (1217)
HUMELE (614); (-); (836)
HUREZANI (723); (-); (9o9)
HURUIEŞTI (481); (-); (995)

HUSNICIOARA (757); (-); (1222)

I

IACOBENI (68); (516); (89)
IANCU JIANU (708); (-); (1088)
IARAȘ-HĂGHIG (129); (-); (1167)
IAZURI (203); (497); (29)
IBĂNEȘTI (846); (-); (937)
ICLĂNZEL (848); (-); (939)
IEZERUL MIC (89); (281); (606)
ILBA-HANDAL (11); (114); (222;388)
ILEANA (567); (-); (1027)
ILEANDA (803); (-); (1289)
ILIENI (132); (-); (1169)
ILIMBAV (901); (-); (989)
ILOVA (226); (568); (663)
INDEPENDENȚA (498); (-); (998)
IP (784); (-); (1233)
ISCRONI (177 M-fig.29); (-); (259)
ISIPOAIA (790 -fig.4); (-); (350;406;573)
IȘALNIȚA (715); (-); (855)
IULIA (909); (230;254); (59)
IVĂȘCOAIA (II-fig.2); (458); (238;394;556)
IVO (110); (271); (617)
IZVOARELE OITUZULUI (485); (-); (811)
IZVOARELE PUTNEI (489); (-); (813)
IZVORU (648); (-); (848)
IZVORU ARIEȘULUI (IV-fig.18); (44); (53)
IZVORU CEPII (51); (536); (397;474)
IZVORUL AMPOIULUI (353); (235); (128)
IZVORUL BIHORULUI (390); (60); (306)
IZVORU ROȘU (53); (157); (242)
IZVORU SOMEȘULUI CALD (401); (394); (525)
IZVORU UPSULUI (48); (462); (335;561)

J

JAC (808); (-); (1153)
JEREAPĂN (31 M-fig.1); (90); (234)
JIDOȘTIȚA (261); (595); (153)
JILAVA (627); (-); (842)
JIUȚ NORD (747); (-); (1212)
JIUȚ SUD (748 M-fig.32); (-); (1213)

LUNCA (842); (-); (934)
LUNCA GÎRȚII (I-fig.8); (222); (503;515)
LUNCA SPRIE (407); (397); (528)
LUNCANI (207 M-fig.9); (586); (651)
LUNCANI (I-fig.9); (414); (645)
LUNGA-OJDULA (491); (-); (1130)
LUPAC (276); (-); (1275)
LUPENI (182); (-); (1246)
LUPOAIA (807); (-); (1152)
LUPOAIA (754 M-fig.32); (-); (1219)
LUPȘA (366); (599); (444)

M

MĂERUȘ (II-fig.27); (-); (1165)
MALCOCI (908); (261); (313;639)
MALU (562); (-); (1024)
MALU MARE (710); (-); (1089)
MARCA (908 a-fig.20); (262); (314;640)
MARCA-COZNICIU (786); (-); (1234)
MARGA (221); (588); (653)
MĂRGHITA (II-fig.33); (-); (1239)
MAȘCA (371 a-fig.17); (42); (47;544)
MAȘCA-BĂIȘOARA (371); (41); (46;543)
MAȘCA-RĂZOARE (41); (535); (72)
MATCA (496); (-); (1118)
MATIȚA (521); (-); (1005)
MĂCIN (904); (277;413); (623)
MĂCÎRLĂU (I-fig.2); (457); (237;393;555)
MĂDĂRAȘ (800); (-); (1112)
MĂDĂRAȘ-CIUC (111 M-fig.6); (251); (10)
MĂDĂRAȘ - HARGHITA (108); (35); (457)
MĂGHIERANI (863); (-); (954)
MĂGURA (319 M-fig.14); (91); (153;279)
MĂGURA (IV-fig.2); (460); (396; 558)
MĂGURA BĂII (328 a-fig.14);(171);(162 a)
MĂGURA IEPII (III-fig.15); (30); (471)
MĂGURA LĂZURANILOR (408 b-fig.19); (403); (534)
MĂGURA ȚEBEI (335 a-fig.13); (181); (287)
MĂGUREAUA VATEI (307 M-fig.13); (40); (44)
MĂLĂEȘTI (532); (-); 1011)
MĂLINI (423); (-); (865)

MĂNĂILEASA (154); (546); (673;692)
MĂNĂSIA (565); (-); (828)
MĂNEȘTI-VLĂDENI (589); (-); (883)
MĂRGINENI (585); (-); (1036)
MĂRU (223); (550); (676; 696)
MĂTĂSARI (746); (-); (1211)
MEDIAȘ (103); (482); (356;579)
MEHADIA (239); (-); (1137)
MELINEȘTI (719); (-); (856)
MERCHIAȘA (890); (345); (728)
MERIȘANI (667); (374); (112)
MERIȘANI-DRĂGANU (665); (-); (1070)
MESTEACĂN (136 b-fig.7); (197); (360)
MESTECĂNIȘ (72); (194); (344)
MESTECĂNIȘ (IV-fig.4); (523); (88)
METEȘAN (344 M- fig.15); (126;174); (293)
MEZIAD (406); (396); (527)
MIERCUREA CIUC (112); (-); (1125)
MIERCUREA NIRAJULUI (862); (-); (953)
MIHAI BRAVU (793); (-); (1120)
MIHĂILEȘTI-DOBRA (311); (419); (767)
MIHĂIȚA (713); (-); (1194)
MIHOC (436); (-); (992)
MINIȘU DE SUS (381); (428); (776)
MÎNĂSTIRENI (379); (572); (668)
MÎNDRA-ȘERCAIA (903); (-); (1135)
MÎNECIU-UNGURENI (515); (352); (742)
MÎNZĂLEȘTI-LOPĂTARI (502); (338); (719)
MÎRȘA (638); (-); (897)
MIRȘID (802); (426); (760)
MISLEA-SCORȚENI (1-fig.28); (-); (1177)
MÎZGANA (587); (371); (109)
MOARA VLĂSIEI (603); (-); (887)
MOFTINU (799); (-); (917)
MOI (734 M-fig.32); (-); (1199)
MOINEȘTI (450); (326); (732)
MOINEȘTI-FOALE (446); (-); (798)
MOLDOVA NOUA (269); (20); (478;462;753)
MOLDOVA NOUA-SUVOROV (288); (53); (267;434;488)
MONEASA-VAȘCĂU (393); (410); (83)
MORENI (572); (-); (1031)

O

OARDA (824); (423); (771)
OCHIURI (569); (-); (1029)
OCNA DE FIER (273); (45); (42;369;429;542)
OCNA DEJULUI (814); (340);(723)
OCNA MUREȘ (822); (342;421); (769)
OCNA MUREȘ (821); (-); (725)
OCNA SIBIULUI (897); (346); (729)
OCNA ȘUGATAG (25); (332); (710)
OCNELE MARI (691); (339 a) (722)
OCNIȚA (570); (-); (1030)
ODĂIENI (554); (-); (877)
OGAȘUL CERMEZ (I-fig.10); (554); (677;697)
OGRĂDENA (262); (570); (666)
OHABA CĂIMĂCANI (931-erată); (387); (123)
OHABA PEȘTENUȚA (932-erată); (388); (124)
OHABA PONOR (171); (391); (522)
OIȚA (66); (514); (65)
ONCEȘTI (652); (372); (110)
OPORELU-CONSTANTINEȘTI (682); (-); (1080)
OPRIȘESTI (545); (-); (1016)
ORAȘU NOU (7); (264); (761)
ORAVIȚA (285); (49); (431;486)
OREZU (563); (-); (881)
OSTOROȘ (107); (34); (456)
OSTRA (76); (257); (347; 642;627)
OSTREȘ (I-fig.30); (-); (1269)
OTEȘTI (681); (-); (1079)

P

PADINA (555); (-); (1021)
PALAZU MARE (918); (541); (62)
PALTIN (95); (451); (354;576)
PAROȘENI (181); (-); (1262)
PARVA (59); (269); (615)
PĂDĂREA (604); (-); (888)
PĂCUREȚI (522); (-); (1006)
PĂCURIȚA (469); (-); (806)
PĂINGENI (849); (-); (946)
PĂLTINEȚ (XVII-fig.8); (193); (148)
PĂLTINOASA (419); (-); (803)
PĂTÎRLAGELE (563); (429); (777)

SILIŞTEA-RICA-GUMEŞTI (650); (-); (1063)

SILVAŞ (200 a-fig.9); (512); (584 a)

SILVAŞUL DE CÎMPIE (834); (-); (926)

SÎNICU (714); (-); (1092)

SINAIA (542); (-); (874)

SINERSIG-VIŞAG (762); (-); (1227)

SÎNGEORGIU DE PĂDURE (870); (-); (960)

SÎNGER (847); (-); (930)

SÎNIOB (792); (-); (861)

SÎNMARTIN (837); (-); (929)

SÎNMARTIN (763); (-); (913)

SÎNSILVION (119); (273); (622)

SÎNTAMARIA DE PIATRĂ (170); (416); (764)

SÎNTANA (775); (-); (857)

SÎNTIMBRU (118 a-fig.6); (274); (619)

SÎNTIMBRU (118) ~~a-fig.6); (274); (619)~~ (130); (127)

SLATINA (684); (-); (900)

SLATINA TIMIŞ (V-fig.10); (558); (683)

SLĂNIC (468); (-)

SLĂNIC (523); (331); (720)

SLĂNIC-FIERĂSTRĂU ([illegible]); (-); (808)

SLATIOARELE (668); (339); (721)

SLĂTIOARELE (670); (-); (1073)

SOCEA-BATARCI (2); (121);(2)

SOCU (725); (-); (910)

SOLONŢ (449); (325); (731)

SOMOVA (906); (258); (310;636)

SPINENI (680); (-); (899)

STĂNCUŢA (550); (-); (826)

STĂNEŞTI-CORBŞORI (661); (357); (747)

STĂNIJA-POPA (349 M-fig.15); (86;167); (183;296)

STEJERA (37); (412); (614)

STÎNA (VII-fig.33); (-); (1244)

STÎNCENI (92); (71); (140)

STÎRCEA (717); (-); (907)

STÎRMINOSU (IV-fig.9); (489); (26)

STOENEŞTI -CASCIOARELE (619); (-); (839)

STRAJA (825); (424 ; (772)

STRÎMBA MARE-CINDREL (159); (575);(703)

STRÎMBA-ROGOJELU (729); (-); (911)

STRÎMBENI-CĂLDĂRARU (649); (-); (1062)

TEIȘ (584); (-); (1035)
TELIUC (195); (504); (22)
TELIUC EST (194 b-fig.9); (503); (21)
TEREGOVA (234); (551); (682)
TEREGOVA-LĂPUȘNICEL (I-fig.11); (18); (459)
TEREMIA (768); (-); (1102)
TEȚCANI (448); (-); (993)
TICU (811); (-); (1156)
TIGVENI (686); (377); (113)
TILEAGD (IV-fig.33); (-); (1241)
TÎLVA MĂCIEȘULUI (732 M-fig.32); (-); (1197)
TINCOVA (216); (38); (36)
TINCOVA (217); (249); (366;428)
TINOSU-BRAZI (588); (-); (882)
TISMANA (739 M-fig.32); (-); (1204)
TIȘOVIȚA (269); (415); (541)
TIȘOVIȚA (270 M- fig.12); (290); (511)
TIȘOVIȚA (IV-fig.12); (6); (104)
TITU (606); (-); (1046)
TITIANU-DEALU NEGRU (166); (441); (510)
TILVA (222) ; (549); (695; 675)
TÎMBUC (114 a-fig.6); (292); (12)
TÎNCAVA-AMONTE (VII-fig.8); (226); (417; 507; 519)
TÎNCAVA-AVAL (VI-fig.8); (203); (256)
TÎNCAVA-PĂIȘ (143); (221); (415;521)
TÎNCAVA-ȚIBRA-GRUI (V-fig.8); (206); (416)
TÎRGU JIU (728); (-); (1097)
TÎRGU MUREȘ (853); (-); (944)
TIRGU OCNA (475) (336); (716)
TÎRȘOLȚ (6); (-); (1157)
TOC (VI-fig.13); (15); (68)
TOLOVANU (67); (515); (86)
TOMESTI (206); (500); (32)
TOMNĂTEC (767); (-); (914)
TOPLEȚ (257); (491); (40)
TOPOLOVENI (656); (-); (1067)
TOROIAGA (44); (160); (236 ;329;392;551)
TOȚI SFINȚII (I-fig.15); (106); (374)
TREI CUCUIE (258); (553); (686)
TREISATE-GHIREȘTI (869); (-); (959)
TRESTIA (322 M-fig.14) ; (73); (157)

VALEA CUȚII (V-fig.16); (17o); (196; 299)
VALEA DE MIJLOC (III-fig.7); (2o1); (252)
VALEA DÎMBOVIȚA- VALEA NEAJLOV (63o); (-); (1183)
VALEA FIERULUI (2o1); (487); (25)
VALEA GHIMBAV (146); (597); (141)
VALEA HOMORODULUI (3o8 b-fig.13); (312); (275)
VALEA IARA (375); (561); (688)
VALEA LEUCII (395 M-fig.18); (191); (759)
VALEA LUI ECLE (XVI-fig.8); (2o9); (147; 423)
VALEA LUI MARTIN (II-fig.2o); (213); (61 b)
VALEA LUI NEGULEȚ (II-fig. 8);(223); (413; 5o4; 516)
VALEA LUI STAN (152); (593); (15o)
VALEA LUNGĂ (3o9); (21o); (275;44o)
VALEA LUPULUI (211 M-fig.9); (587); (652)
VALEA LUPULUI (II-fig.7); (2oo); (251)
VALEA MARE (391); (61); (3o7)
VALEA MARE (XV- fig.8); (2o8); (422)
VALEA MORII (333); (24); (465)
VALEA MORII VECHE (334 M-fig.14); (95); (17o;285)
VALEA NASOVĂȚ-LILIECI (247); (19); (46o)
VALEA OBÎRȘIEI (VI-fig.16); (182); (197; 3oo)
VALEA PLOPILOR-BĂLĂRIA (636); (-); (1o55)
VALEA PUTNEI (71 b-fig.4); (468); (342;566)
VALEA PUTNEI-PRAȘCA (71); (466); (34o;564)
VALEA REȘCA (573); (-); (1o32)
VALEA ROȘIE (19); (88); (135)
VALEA SĂRII (494); (347); (718; 756)
VALEA SCOARȚA (II-fig.1o); (555); (678; 698)
VALEA SEACĂ (422); (-); (464)
VALEA SEACĂ (4oo); (67); (52; 382)
VALEA SOCILOR (IV-fig.16); (171 a); (298)
VALEA SUCEVEI-VALEA MOLDOVEI (417); (-); (1285)
VALEA SUCEVIȚEI-VALEA PUTNEI (418); (-); (1286)
VALEA TĂRÎIA -VALEA CERNIȘOARA (697); (-); (1191)
VALEA TISEI (351 M-fig.15); (1o5); (185)
VALEA TIȘOVIȚA (27o a-fig.12); (291); (512)
VALEA TITIȘOR (392 M-fig.18); (62); (3o8)
VALEA TROTUȘULUI(472); (-); (128?)
VALEA VACII (II-fig.18); (66); (378)
VALEA VACII (III-fig.18) ; (54o a); (634)
VALEA VINULUI (54); (242); (3;243)

W

WILHELM (16 M-fig.1); (12o); (227)

Z

ZALNOC (V-fig.33); (-); (1242)
ZAUAN (III-fig.33); (-); (124o)
ZĂTRENI (7o6); (-); (9o4)
ZAUL DE CÎMPIE (84o); (-); (932)
ZEGUJANI EST-MERIŞ (755 M-fig.32); (-); (122o)
ZEMEŞ- CHILIOAIA (444); (-); (796)
ZIMBRU (383); (288); (448)

E R R A T A

PROPER DENOMINATION OF THE DEPOSITS

526.BUŞTENARI-RUNCU (p.134)
545.OPRIŞENEŞTI (p.136,226)
631.GRĂDINARI-DOMNEŞTI (p.144)
661.STĂNEŞTI-CORBŞORI (p.146,2oo)
926.ADAMCLİSI-URLUIA (p.171)
927.ADAMCLİSI-URLUIA (p.171)

English version: A NASTASE

GEOLOGICAL ATLAS OF THE S. R. ROMANIA
Scale 1 : 1 000 000

CONTAINS:

1. GEOLOGICAL MAP (1st edition 1966, 2nd edition 1978)
2. QUATERNARY MAP (1971)
3. GEOLOGICAL MAP OF THE PRE-TORTONIAN FORMATIONS (1969)
4. GEOLOGICAL MAP OF THE PRE-VRACONIAN FORMATIONS (1969)
5. GEOLOGICAL MAP OF THE PRE-WESTPHALIAN FORMATIONS (1969)
6. TECTONIC MAP (1970)
7. NEOTECTONIC MAP (1971)
8. MAP OF THE MINERAL RESOURCES (1st edition 1969; 2nd edition 1983)
9. METALLOGENETIC MAP (1969)
10. HYDROGEOLOGICAL MAP (1970)
11. SOIL MAP (1970)
12. MAP WITH THE SOIL GRANULOMETRIC COMPOSITION (1970)
13. GEOBOTANIC MAP (1973)
14. MAP OF THE MINERAL AND THERMAL WATERS (1981)

FOR INFORMATION ON THE OBTAINING OF THE MAPS PLEASE ADDRESS TO THE INSTITUTE OF GEOLOGY AND GEOPHYSICS, STR. CARANSEBES 1, 78.344 BUCHAREST, ROMANIA, TELEPHONE 65.75.30