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GEOGRAPHIC INTELLIGENCE REVIEW
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<sup>\*</sup>The individual classification of each article in this issue is given at the end of the article.

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#### CHANGING PATTERN OF OIL EXPLORATION IN FRANCE

#### Introduction

The discovery of the Parentis oilfield in 1954 has unleashed a flood of activity in the oil industry of France. The Parentis field has been brought into active production; prospecting activities have been extended and intensified; outmoded legislation concerning mineral rights is being overhauled; relations between the French Government and foreign investors have been improved; and a greatly increased percentage of the French crude-oil consumption will be provided by domestic sources. On the basis of 1954 testing and production at Parentis, it is anticipated that as much as 20 percent of the French requirements will come from local sources within the next 2 or 3 years as compared with only 3 percent in 1953, when

Strategically the Parentis oilfield is well situated. It is located in the Landes of southwestern France, a sparsely populated area of pine woods and sand dunes. The field is only 10 miles from the Atlantic coast and 80 miles from the Spanish border. Heretofore almost 95 percent of the oil requirements of France have come from the Middle East via the Mediterranean. Should the shipping lanes of the Mediterranean become blocked, this new and valuable source of crude oil would still be available to France and other parts of Western Europe. Furthermore the new oilfield is also close to the

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coastal refineries at the mouth of the Gironde and not far from the refineries at Donges at the mouth of the Loire.

The NATO 12" military fuel pipeline to Metz (now about two-thirds completed and scheduled for service by June 1956) begins at Donges, near St. Nazaire (see map CIA 12616).\* This pipeline will be connected with others planned by NATO. One of these will be a 10" pipeline running from Le Havre eastward to some point near Metz. Another will begin at Marseille and continue northward through the Rhône Valley to join the other two lines some place north of Dijon. The fact that the seaports of these three pipelines are widely separated is of strategic importance to Western Europe, and the high potential productive capacity of the new oilfield is of significance to military planners as well as oil company officials.

#### Sequence of Events in the Esso Standard Concession

Esso Standard, S.A.F., a French-American company largely controlled by Standard Oil of New Jersey,\*\* first struck oil near Parentis-en-Born on 22 March 1954, on its 4,300,000-acre concession

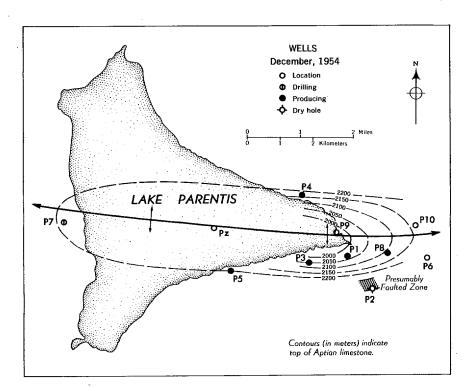
<sup>\*</sup>Published in Map Intelligence Review No. 36S-6, June 1953.

<sup>\*\*</sup>Esso Standard was formerly Standard Française des Pétroles. Standard Oil of New Jersey owns 63.2 percent of the stock; Gulf Oil 18.349 percent; and French investors 18.451 percent. The original company included the Atlantic Petroleum Company which later sold its holdings to Standard Oil of New Jersey. Throughout this report the company is referred to by its present name regardless of the date of information. A new company to be known as Société Esso de Recherches et d'Exploitation Petrolières (ESSO REP), in which Esso will control 89 percent of the stock, will probably be organized in May 1955. ESSO REP will exploit the oil found by Esso Standard.

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covering much of the Gironde Basin. A 5-year concession had been granted to Esso Standard by the French Government on 17 February 1951, culminating many years of preliminary reconnaissance, which was interrupted in 1939 by World War II. The 1951 concession was the first ever granted to a foreign enterprise but included only the right to explore, not to exploit any possible discovery of oil. This posed many legal questions, and special legislation had to be enacted to allow Esso Standard to start commercial production in October 1954.

The Parentis field is in the southwestern corner of the concession. (See map below.) Estimates of the size of the potentially



Note: The latest information from the field indicates that 15 wells have been located, 7 of which were producing in March 1955.

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productive area vary from a conservative figure of approximately 15 square miles to an optimistic estimate of 40 or more square miles. By the end of 1954, ten wells had been located around the edges of Lake Parentis (Étang de Biscarosse et de Parentis), and another was tentatively located near the middle of the lake.

Of these new wells, No. 9 showed promise of becoming an even more spectacular producer than No. 1.

Esso Standard has been extremely reticent and conservative in reporting production estimates to the press. In Government and industrial circles, however, enthusiasm has run high ever since official tests at Parentis No. 1 on 25 March and 5 April 1954 showed an unexpectedly large flow of 1,100 barrels per day of sulphurfree crude oil with a specific gravity of 34 A.P.I. Other unofficial tests, made by Esso Standard shortly after the well was discovered, revealed a production rate of approximately 3,000 barrels per day. This, in turn, was surpassed when the well came into actual production several months later. Speculative comparisons were made between the Parentis oilfield and highly productive fields of North America and the Near East, and by the end of the year many oil companies both in France and in the United States had become interested in possible participation in the Landes development or in prospecting for oil in other parts of France having similar geologic formations.

By December 1954, Esso Standard had five wells in production and six drilling rigs in operation. Four more drilling rigs were

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expected in the area within a few months. A total of 1,000,000 barrels of crude oil were shipped to the refinery during 1954. By mid-April 1955, six wells were in steady operation and produced a total of 10,400 barrels per day. Almost double that production is anticipated by the end of 1955. The chief problems facing the company have been the inadequacy of storage space and transportation facilities.

In early summer 1954, the company built three new storage tanks and four new loading platforms at Parentis-en-Born. It is estimated that a total of seven storage tanks will be needed to satisfy foreseeable requirements. During the summer and fall, crude oil was shipped by complete trains of tank cars all the way from Parentis-en-Born to Le Havre and thence by pipeline to the Esso Standard refinery at Port Jerome in the lower Seine complex near Le Havre. Because of heavy oil shipments, much of the railroad roadbed had to be reconstructed to carry an axle-load of 24 instead of 15 tons. Recently, a coastal terminal was completed near Bordeaux and oil is being shipped to Port Jerome by tanker. Some consideration has been given to shipping it to the nearby Shell and Caltex refineries at Pauillac and Ambès, respectively. Other possibilities include the building of a new Esso Standard refinery in the Bordeaux area or the buying of the war-damaged Shell refinery at Pauillac, which is now only partially reconstructed (see Map 12616).

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During July a trace was surveyed for a proposed 10"-12" crudeoil pipeline from Parentis-en-Born to Ambès at the head of the Gironde
Estuary, a distance of approximately 100 miles. From here the oil
could be shipped by tanker to the Port Jerome refinery. A pipeline
from Parentis-en-Born to Le Havre has also been considered. Probably
neither pipeline will be constructed until actual production justifies
the cost of construction and until many legal questions have been
resolved.

A number of exploratory wells have been located in various parts of the Esso Standard concession outside the Parentis area. Two are at Carcans, about 30 miles northwest of Bordeaux, near what is thought to be the northern limit of the oil-bearing formations. Although the company is not overly optimistic about the possibilities of the Carcans area, it plans to continue work there because what oil has been found is more suitable for lubricants than the Parentis oil. Other wells are located at Pontenx-les-Forges, 5 miles south, and Mothes, approximately 10 miles east of the Parentis field, and at Bouglon, in the southeastern corner of the concession, almost due east from Parentis. Special geophysical studies are underway in the vicinity of Sanguinet, directly north of Parentis. It is anticipated that exploration and eventually drilling may extend to offshore beds under the Atlantic Ocean.

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# Influence of the Parentis Discovery Upon Other Exploration in France

All mineral resources in France, including petroleum, are the property of the State, and their exploitation has been governed by the Napoleonic Mining Code of 1810 and the relatively few basic mining laws passed since that date. The discovery of oil by a foreign-controlled company brought into sharp focus the inadequacy of this legislation. An official committee was therefore set up to suggest revision of the basic mining laws.

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the proposed changes,

which concern the size of concessions both on land and on the continental shelf, the time limit on exploration and exploitation rights, the specific responsibilities of the companies, and the authority of the French Government, are generally favorable to the oil industry.

The discovery of oil in quantity combined with the possibility of less cumbersome legal restrictions initiated a period of unprecedented activity in French oil circles. Although French oil firms had prospected in all parts of France and French geologists were aware of recent advances in geophysics, their explorations advanced at a lethargic pace -- chiefly because they had little money and investors were apathetic.

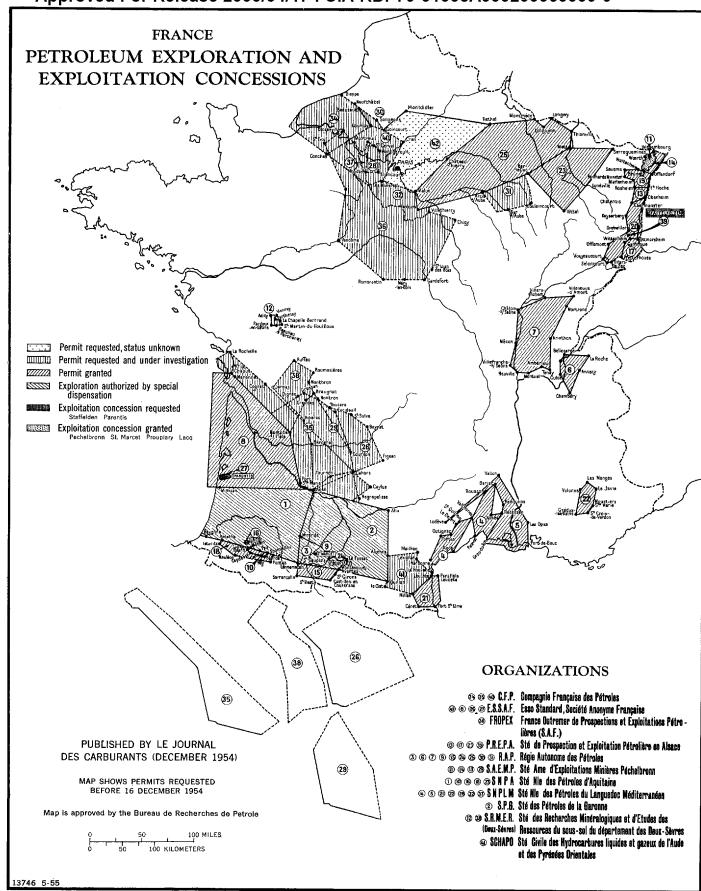
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A comparison of Map 12616, published in mid-1953, and Map 13746 shows the radical changes that occurred by the end of 1954. By the end of 1954, Esso Standard had applied for an additional 4,000,000-acre exploration concession in the Périgord district adjacent to its Bordeaux concession, and three other companies -- Pechelbronn (SAEMP), Deux-Sèvres (SRMER), and the Compagnie Française des Pétroles (CFP)\* -- had applied for concessions in the same general area. The four requests overlap at a central point near Bergerac. It seems unlikely that Esso Standard will be granted the full 4,000,000 acres requested, even though it was the first of the companies to apply for a concession in this area.

The successful operations of Esso Standard at Parentis also precipitated a scramble for oil concessions in other parts of France. The Paris Basin became the center of a second tangle of requests for concessions. Following the July 1954 discovery of oil at Hannaches, about 50 miles northwest of Paris, prospecting activity was intensified throughout north-central France. In an area extending from the mouth of the Seine to the Massif Central, the CPF, the Société Nationale des Pétroles du Languedoc Mediterranéen (SNPLM), the Régie Autonome des Pétroles (RAP), and the newly formed Société Outremer France de Recherches et Explorations Petrolières (FROPEX)

<sup>\*</sup>The Compagnie Française des Pétroles has extensive oil interests in North Africa and owns 23.75 percent interest in the Iraq Petroleum Company as well as stock in other French companies. This is the first time CFP has applied for exploration rights within France.

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have applied for concessions, several of which overlap near Paris. Although the technical problems of oil production in the north are more difficult and tests so far show the oil to be inferior to that of the Parentis field, Esso Standard applied for a concession of 2,600,000 acres in the Paris Basin adjoining the overlapping requests of RAP, SNPIM, and CFP.

The success of Esso Standard in the discovery of oil seems to be breaking down official hostility to foreign enterprise in France, even near the nation's capital. On 19 June 1954, a joint American-French company was chartered for the exploration of 5,300,000 acres in the Paris Basin. This new company, the Société de Recherches et Exploration Petrolière (FROPEX), was formed through an agreement between the American Overseas Petroleum Company (AMOPET), a subsidiary of CALTEX, and the French Government-controlled SNPIM. Only a year before, CALTEX in conjunction with Conorado Petroleum Company had been refused a permit to prospect for oil in the same area. Nevertheless it is apparent that from now on no American company is likely to receive terms as favorable as those granted Esso Standard in 1951. Whereas Esso Standard operates on a 90-percent Esso and a 10-percent Bureau de Recherches Pétrole (French Government) basis, the interest in FROPEX is allotted 45 percent to AMOPET and 55 percent to the French Government-controlled SNPLM.

In September 1954, a group of French banks arranged with the American-owned Société d'Études Petrolières to match American capital

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investment up to 35 percent in any joint operating company formed under French law. Several American oil companies, including Socony Vacuum, are reported to be interested in obtaining exploration rights in France. The British Anglo-Iranian Oil Company is also anxious to explore for oil in the vicinity of its refineries at Dunkirk in the north and Lavera on the Mediterranean.

Two petroleum research groups were organized during 1954. In May the Société Financière des Pétroles (FINAREP), which had been in the process of formation since 1950, was finally set up. Its membership includes four of the largest French and American companies operating in France and two companies currently working in North Africa. A similar group, the Compagnie Financière de Recherches Petrolières, is subscribed to by eighteen oil firms and banking institutions.

Although many questions are still to be answered and many estimates yet to be proven, the discovery of oil at Parentis has initiated a new era of increased activity among both French and foreign investors. Within a very few years, France can be reasonably sure of a substantial increase in crude oil for domestic use, accompanied by reduced dependence on Middle East sources. (CONFIDENTIAL)

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#### EVALUATION OF RECENT SOVIET ATLAS AND MAP ACCESSIONS

Detailed reference atlases or maps on the Soviet Union have not been freely available to the western world since the publication in 1939 of Volume II of the Bol'shoy Sovetskiy Atlas Mira (Great Soviet Atlas of the World). Although a new edition of the 32-sheet Karta SSSR (Map of the USSR) at 1:2,500,000 did appear in 1946 and both the Atlas SSSR (Atlas of the USSR) and the Atlas Ofitsera (Officer's Atlas) were published about 1947, their distribution has been extremely limited. Each year a large edition of the Geograficheskiy Atlas SSSR has been issued for students of intermediate schools, but this highly generalized, very small-scale atlas is completely inadequate for any detailed study on the USSR. Apparently the scarcity of reference materials has been a serious problem to the organs of the Soviet Government as well as to foreign intelligence analysts, since three new atlases -- the Geograficheskiy Atlas, Atlas SSSR, and Atlas Mira (Atlas of the World) -- with a combined issuance of 150,000 copies, were published in 1954.

The <u>Geograficheskiy Atlas</u>, designed for teachers in the intermediate schools, is a good general work. Two-fifths of the atlas is devoted exclusively to the USSR. The first plates in the USSR section show at very small scales (1:20,000,000 to 1:50,000,000) the overall pattern of political-administrative units, population density, nationalities, and physical geographic features such as relief,

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climate, soils, geology, and vegetation. Next is a series of maps giving the distribution of various types of industry and agricultural crops throughout the Soviet Union. Twenty-three pages of general geographic maps at somewhat larger scales -- one map each at 1:1,500,000 and 1:2,500,000 and the rest ranging from 1:3,000,000 to 1:10,000,000 -- are devoted to the individual regions of the Soviet Union. Coverage of the USSR is completed by small-scale economic maps for each of the Union Republics. The remainder of the atlas deals with the rest of the world through a series of general maps for each continent, with supplementary maps showing the geographic features and major economic activities of the various larger countries or groups of countries.

Although more compact than the <u>Geograficheskiy Atlas</u>, the <u>Atlas</u> <u>SSSR</u> (approximately 7-1/2 by 10-1/2 inches) is generally more useful for the analyst interested in specific areas within the Soviet Union. Except for a map of the world included for orientation purposes, all 76 map pages deal with the Soviet Union. A series of introductory maps shows the political-administrative breakdown for the various Union Republics, but the heart of the atlas consists of the 58 pages of general geographic maps for the individual regions of the USSR. With 11 of the maps at 1:1,500,000 or 1:2,500,000, this section is more comprehensive and gives more place names than the corresponding plates of the <u>Geograficheskiy</u> Atlas.

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The most important of the three atlases is the Atlas Mira. Prominent Soviet topographers, engineers, and geographers served on the editorial board for this atlas, and representatives of leading scientific institutes such as the State Oceanographic Institute participated in the map compilation. As the title indicates, this massive work of 283 plates, with a format reminiscent of the Bol'shoy Sovetskiy Atlas Mira, covers the entire world. Atlas Mira measures about 13 by 20 inches and is almost 2 inches thick. There are a total of 76 general geographic and political-administrative plates on the USSR. Thirty-four maps at scales ranging from 1:1,500,000 to 1:2,500,000 cover most of the Soviet Union, and maps at scales no smaller than 1:5,000,000 are provided for the remaining, less densely settled areas. Although the plan of the atlas obviously called for a 1:250,000 map of each of the important cities of the world, such maps for Soviet and Satellite cities were omitted, probably for security reasons.

All three atlases were published by the Glavnoye Upravleniye Geodezii i Kartografii (GUGK). The task of preparing the plates, however, was of such magnitude that it required not only the facilities in Moscow but also those of the four GUGK cartographic plants in Riga, Minsk, Sverdlovsk, and Omsk. The printing of the plates for the Atlas SSSR began as early as 1953, and some of those in the Atlas Mira date back to June 1952. In spite of last-minute efforts to correct the internal administrative boundaries of the USSR,

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the series of territorial-administrative changes that occurred in December 1953 and early 1954\* made the revised boundaries obsolete even before the first copies of the atlases were sold.

Although all the atlases indicate attempts to bring the major Soviet transportation facilities up to date, the Atlas Mira appears to be most complete in this respect. For example, it is the only one of the three to show the rail lines between Izvestkovyy and Sredniy Urgal in Khabarovskiy Kray, and between Irkutsk and Slyudyanka at the southwestern tip of Lake Baykal.

Place-name indexes are integral parts of the two smaller atlases; the Atlas Mira does not include an index but is accompanied by a coupon that entitles the buyer to a copy of an index to be published later.

A detailed comparison of the plates of the Atlas Mira with the corresponding sheets of the 1946 Soviet map series at 1:2,500,000, the <u>Karta SSSR</u>,\*\* leads to the following conclusions concerning their relative values for intelligence purposes.

The atlas plates are generally superior to the map sheets in their presentation of natural features such as terrain and

<sup>\*</sup>Details of these changes may be found in the article "Recent Territorial-Administrative Changes in the USSR," Geographic Intelligence Review No. 42, August 1954, pp. 15-20.

<sup>\*\*</sup>An original set of this series has recently been obtained and is now held by CIA. A colored reproduction is being produced in a limited edition for reference purposes.

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atlas plates. The series shows a considerably more complete network of secondary roads. Unlike the atlas, it differentiates between broad- and narrow-gauge railroads and uses special symbols to indicate riverports and the heads of navigation on major rivers.

Whereas the map series in general gives a greater number of place names, the atlas plates that are at the scale of 1:1,500,000 are better in this respect -- for example, the plates covering the Moscow Region and the Central Urals. For all features that have changed greatly since 1944 (the date of compilation), the map series is out of date. For areas such as the Kuriles, Southern Sakhalin, and Kaliningrad Oblast, where a large number of place names have been changed, the atlas provides many of the currently used Russian names. Some of the newer Soviet settlements, such as Takhia-Tash in the Uzbek SSR, also are located on the atlas plates. The fact that the political-administrative boundaries on the map series are obsolete is relatively unimportant. Even the atlas, although published late in 1954, is already somewhat out of date. The administrative units are shown as of 15 June 1953, whereas the latest series of changes, which altered internal boundaries in European USSR and in Khabarovskiy Kray, occurred in late 1953 and early 1954.

The atlas shows stretches of railroad and road constructed during the postwar period, such as the rail line between Vinnitsa and Gaysin in the Ukrainian SSR, but it omits other stretches of lines whose existence has been fairly well confirmed, such as a stretch of railroad

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hydrography. In the atlas, relief is shown by a combination of contours and layer tinting that is more effective than the relief shading used on the map series, which is overgeneralized. In the atlas the stream pattern appears to be more nearly complete and more accurately drawn, and swampy areas are more precisely delimited than on the map series. Results of recent surveys in the Soviet Far East and Arctic appear to have been incorporated into the atlas in the form of corrections in spot heights and sea depths. In Arctic areas, the "approximate shoreline" symbol has been replaced in many places by a more definitive line. The northeastern shoreline of the Caspian Sea has also been revised slightly.

Although the atlas is generally better for showing natural features, the map sheets have the advantage of delimiting forest and tundra areas. For the desert regions of Soviet Central Asia, the sheets also indicate wells and sand-dune areas and differentiate more clearly between salt lakes and fresh-water lakes.

The map series, although somewhat more difficult to read (and consequently difficult to reproduce), is superior to the atlas for any detailed study of cultural features. The number of settlements identified on individual sheets is usually considerably greater than on the corresponding atlas plates, in some cases twice as many. Furthermore, the 1:2,500,000 series is the only map series of any date that locates every rayon center in the USSR. Transportation facilities are also better represented on the map sheets than on the

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running from Zolotonosha (directly north of Cherkassy) westward via Kanev to Mironovka. This line apparently was destroyed during World War II and, since the 1950 Soviet timetable fails to list it, was probably not reconstructed immediately. Later Soviet sources, however, show the stretch between Zolotonosha and Kanev as in operation, and a Ukrainian economic geography text published in 1952 shows the entire line. Among other unexplained atlas omissions are (1) the short branch line from Nizhniy Tagil westward to Visimo-Utkinsk in the Urals, and (2) the line that branches westward from the Petrozavodsk-Murmansk line to Rugozero (Karelo-Finnish SSR), both of which are indicated on the 1:2,500,000 series.

The combination of the new atlases and the colored reproductions of the 1:2,500,000 maps should materially ease the map reference problems of intelligence analysts working on the Soviet Union.

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#### PROJECTED RAILROAD CONSTRUCTION IN TROPICAL AFRICA

Practically all the countries of Africa south of the Sahara are at present striving to improve their economic status, and expansion of railroad facilities is an important factor in their plans. Railroad construction currently in progress in tropical Africa has been discussed in the Geographic Intelligence Review No. 43, September 1954. The present article reports on railroads that are projected but not yet under construction (see the accompanying map, No. 13659). The lines selected for discussion are those that have figured most prominently in recent reports and dispatches.

#### The Sinoia-Kafue Cutoff, Northern and Southern Rhodesia

The projected 250-mile Sinoia-Kafue cutoff through Northern and Southern Rhodesia would shorten by 500 miles the haul from the Northern Rhodesian Copper Belt to Beira, which now passes through Livingstone, Bulawayo, and Salisbury. The building of this link is scheduled to begin as soon as the southeast (Pafuri) line from Bannockburn in Southern Rhodesia to Guija, Mozambique, is completed. It is possible, however, that the completion of the latter line may lessen the need for the Sinoia-Kafue link by giving the Rhodesias access to another Mozambique port, Lourenço, Marques, to which copper exports could be diverted. The traffic would still go through Livingstone and Bulawayo but would turn off at Somabula, where the Shabani branch joins the Pafuri line. Though surveys

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were made for the Sinoia-Kafue cutoff in 1916, 1932, and 1952, the final alignment has not yet been selected.

### North-South Railroad, Northern Rhodesia and Tanganyika

A north-south railroad to connect the East African and Central African systems has been under consideration for some time. Little progress has been made, however, partly because of the large scale and consequent high cost of the operation and partly because the economic value of the line is not assured.

According to the most recent survey the north-south line would be approximately 1,200 miles long, extending from Kapiri Mposhi, Northern Rhodesia, through Mbeya, Makumbako, and the Kilombero Valley (all in Tanganyika) to Morogoro on the Tanganyika Central Line, with a possible branch southeastward through Njombe and Songea to the Southern Province Railway of Tanganyika. Another link of about 160 miles, for which an engineering survey is being made, would connect the Central and Tanga lines between Morogoro and Korogwe, Tanganyika.

The north-south railroad would contribute toward completion of the rail net in East and Central Africa, open up new territory for development, and furnish the Rhodesias with an all-British route to a British colonial seaport. Much of the line, however, would pass through difficult country, necessitating a large amount of costly grading and bridge work. Moreover, the systems cannot be integrated

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until the gauge of the East African Railroad is converted from 1 meter to 1.067 meters (3 feet 6 inches), that of the Central African Railroads.

### The Port Francqui-Léopoldville Railroad, Belgian Congo

The projected Port Francqui-Léopoldville railroad, which would connect the Bas Congo-Katanga line of the Compagnie du Chemin de Fer du Bas-Congo au Katanga (BCK) and the Matadi-Léopoldville line of the Office d'Exploitation des Transports Coloniaux (Otraco) in the Belgian Congo, has had a varied history. The construction of this rail link would provide a completely Belgian-controlled all-rail connection between a deep-water port, Matadi, and the important mineral-producing Katanga Province. With the completion of the Kamina-Kabalo rail line (see Geographic Intelligence Review No. 43), the BCK and CFL (Compagnie des Chemins de Fer du Congo Supérieur aux Grands Lacs Africains) systems will be connected, and the Port Francqui-Léopoldville link, when completed, would tie together three of the four principal rail systems of the Belgian Congo.

The construction of a railroad between Port Francqui and Léopoldville has been under consideration for nearly 50 years. Surveys for the best possible route were carried on over a period of 15 years (1907-22) by the BCK, which was projecting a rail route from Bukama to connect with the Matadi-Léopoldville railroad of the Lower Congo. These surveys failed to locate a satisfactory route

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between Port Francqui and Léopoldville, and construction on this section was deferred in favor of the Port Francqui-Bukama railroad, which was begun in 1923 and completed in 1928.

The project was temporarily revived in 1930-33, when the BCK tried to interest the Ministry of Colonies in plans for the completion of the Lower Congo-Katanga rail system as a public works project suitable to a period of depression. In the Belgian Government's Ten-Year Development Plan, consideration was again given to the construction of this rail link, but it was rejected as probably not economically feasible until after the conclusion of the Ten-Year Plan. During the transportation crisis in 1951, the congestion of freight in the Léopoldville-Matadi area again focused attention on the problem of transport in the Belgian Congo. The Minister of Colonies restated the transportation policy of the Belgian Congo in terms of the colony as a whole, citing the need of connecting existing railroad lines through the construction of the Kamina-Kabalo line (now underway), the line from Port Francqui to Léopoldville, and another from Kindu to Ponthierville, connecting two sections of the CFL system.

Two tentative routes have been suggested for the Port Francqui-Léopoldville line. The "direct" route would bypass Léopoldville, going in a relatively straight line from Port Francqui to the Matadi-Léopoldville line near Moerbeke, approximately 190 kilometers (about 120 miles) south of Léopoldville. The second, or northern, route would follow more closely the Kasaï River to Léopoldville. The latter

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route, which is favored by the BCK, would be easier, since most of its course would cross a relatively level plateau with fewer rivers. As yet, no definite decision has been made, but the northern route seems to be preferred. No date for the beginning of construction has been set, though the general opinion seems to be that work will not begin for 4 or 5 years, or at least until the Kamina-Kabalo line has been completed.

The value of the Port Francqui-Léopoldville link lies in the shortening of travel time between Elisabethville and Matadi, reduction in cost by eliminating two transshipments, and avoidance of the inconveniences and delays caused periodically by low water in the Kasaï River.

#### The Kindu-Ponthierville Link, Belgian Congo

The Minister of Colonies suggested in 1952 that transportation in the Belgian Congo would be improved by the construction of a rail-road from Kindu to Ponthierville connecting two sections of the CFL system. No statement has been made regarding the probable date of construction. The line would speed traffic by eliminating transshipments on the Congo River and on railroads in the eastern part of the Belgian Congo.

# The Vila Luiza-Magude Railroad and Other Railroad Projects in Mozambique

Construction of the Vila Luiza-Magude railroad via Manhiça is tentatively planned to begin upon completion of the Limpopo railroad

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(see <u>Geographic Intelligence Review</u> No. 43). Such a line would contribute to the successful operation of the Limpopo railroad by enabling traffic from the Rhodesias to enter Lourenço Marques by a less congested route than the main line from Moamba, which is on the direct route to the South African Railroads.

A line from Lourenço Marques to Vila Luiza already exists, but the rails are light and considerable work would have to be done to enable it to handle the heavier traffic, consisting largely of minerals, from the Rhodesias. The section from Vila Luiza to Manhiça has been surveyed and the extension of the railroad from Vila Luiza is in progress. The extension of this line would also be valuable to Manhiça, which is the center of an important agricultural area.

The Mozambique Railroad runs inland from the port of Nacala to Cuamba, a distance of approximately 335 miles. Several routes for an extension have been suggested, but no final decision has been made. One suggested route would go northwest to Catur and eventually to Lake Nyasa; another calls for the terminal to be located at Vila Cabral, near the Maniamba coalfields; and a third would run toward the Nyasaland border. One section of the line has been surveyed, but construction will probably not begin until the Limpopo line (and possibly also the Vila Luiza-Magude link) has been completed.

In keeping with the desire to further develop the territory, a number of other railroad projects have been proposed for Mozambique. They include: (1) an extension from Tete to Furancungo; (2) a

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Pafúri-Tete line; (3) an Alto Ligonha spur; (4) a Montepuez spur; and (5) a link to connect the railroads in the Vila de João Belo-Inhambane Region. None of these is likely to be built for some time. The Luanda Railroad, Angola

Two improvements are projected for Angola. The Luanda Railroad is to be extended eastward from Malange through Lui and Camaxilo to Luchico near the Belgian Congo frontier. A second line is to run from Luanda north to Caxito, then east by way of either the Ucua or the Dande Valley, eventually connecting with the Matadi-Léopoldville Railroad near Matadi. Both would permit development of agricultural and mineral areas north and east of Luanda.

#### Proposed Lines for French West Africa and French Equatorial Africa

Discovery of copper near Akjoujt and of iron near Fort Gouraud has touched off surveys for routes aimed specifically at facilitating the exploitation of these minerals. Akjoujt is only 125 air-miles from the sea and may possibly be tapped by road rather than by rail, but three rail routes from Fort Gouraud are being considered. These are: (1) directly across the Spanish Sahara to Villa Cisneros, a distance of approximately 235 miles; (2) across 80 miles of the Spanish Sahara to Port-Étienne, some 340 miles; and (3) to Port-Étienne by an all-Mauretanian route, about 450 miles. Although the last is the longest and the most costly route, it has the advantage, to the French, of lying entirely within their own territory.

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A situation similar to that in French West Africa has arisen through the discovery of manganese deposits in Gabon. The manganese is located in a hilly tropical forest 28 air-miles northwest of Franceville and 250 miles from the coast. Construction of a railroad is considered to be cheaper than improvement of the poor roads now serving the area, and one of the following rail routes will probably be selected: (1) northwest to Ovendo on the coast, 320 miles; (2) southwest to Mayoumba, also on the coast, 260 miles; (3) south to Loudima on the Congo-Ocean Railroad, 162 miles (from Loudima to the coast at Pointe Noire is 135 miles).

In addition to the railroad projected for the development of the manganese deposits in Gabon, an extension of the central line (Douala-Yaoundé) toward Ubangi-Shari and Chad has been proposed. This extension would open up territories rich in cattle, cotton, mineral resources, and, in certain localities, manpower. The route was surveyed and studied in 1931-32, but there have been no further developments.

# Rail Connection Between Southern Rhodesia and Walvis Bay, South-West Africa

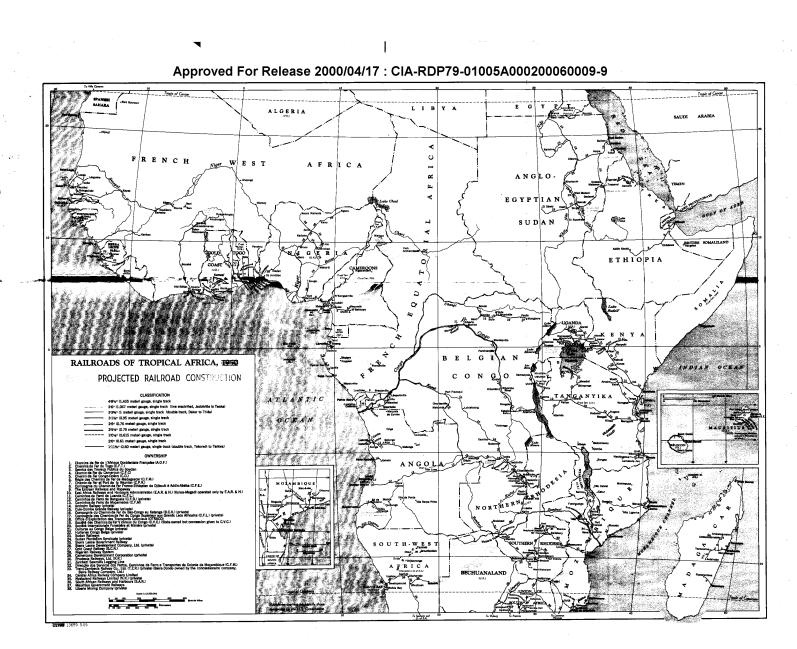
Construction of a railroad to connect Southern Rhodesia with Walvis Bay, South-West Africa, has been proposed. This line, approximately 550 miles long and with a 3-foot 6-inch gauge, would extend from Matetsi on the Rhodesia Railways to one of three points in South-West Africa -- Tsumeb, Grootfontein, or Gobabis, all on the

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South African Railways system, which would provide connections with Walvis Bay. An initial survey was made along the Tsumeb-Grootfontein-Matetsi route in the early 1930's, but for some reason the project was dropped. It has been revived by a syndicate interested in linking the Rhodesias to the west coast of Africa through Commonwealth territory. An aerial-photographic survey of the area has been made.

The purposes of the proposed railroad are (1) to provide a means by which Rhodesian coal and mining concentrates could be shipped directly to the Atlantic Ocean, (2) to eliminate the shipment through non-British territory of valuable materials such as chrome and copper, and (3) to open up the agricultural possibilities of the area through which it would pass.

Some of the lines discussed above may never get beyond the planning stage; the three that seem most likely to go into construction in the near future are the Sinoia-Kafue cutoff, the Vila Luiza-Magude railroad in Mozambique, and the Port Francqui-Léopoldville line in the Belgian Congo. No doubt other railroads to connect or extend existing lines or to provide rail transportation for undeveloped areas have been or will be proposed in connection with the economic programs of the tropical African countries. (CONFIDENTIAL)



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#### ALBANIAN ADMINISTRATIVE DIVISIONS

The administrative divisions of Albania were reorganized by a decree issued by the People's Assembly on 20 August 1953. This was the third such measure taken by the Communist regime since the end of World War II, the first two occurring in 1947 and 1949. The aim of the third reorganization, although officially stated to be decentralization, in reality appears to have been more effective control of local government from the capital at Tiranë. This was indicated by the reduction in both the number of first-order administrative divisions and the total number of local units responsible to them.

The system provides for four orders of administrative divisions, with certain cities (qytete) having a rank equal to that of any one of the three lower divisions. In order of rank the administrative divisions are regions (qarke), districts (rrethe), localities (lokalitete), and villages (fshatra). Albania now has 10 regions, the region having replaced the district as the first-order division. Subordinate to the region are 49 districts, not including four cities -- Dürres, Korçe, Shkodër, and Tiranë -- which have the same status. Two types of administrative units may be directly subordinate to the district -- the third-order locality or the fourth-order village. The locality was designed primarily to facilitate administration in remote areas and generally consists of a group of villages, each of which is responsible to the locality. In more accessible areas

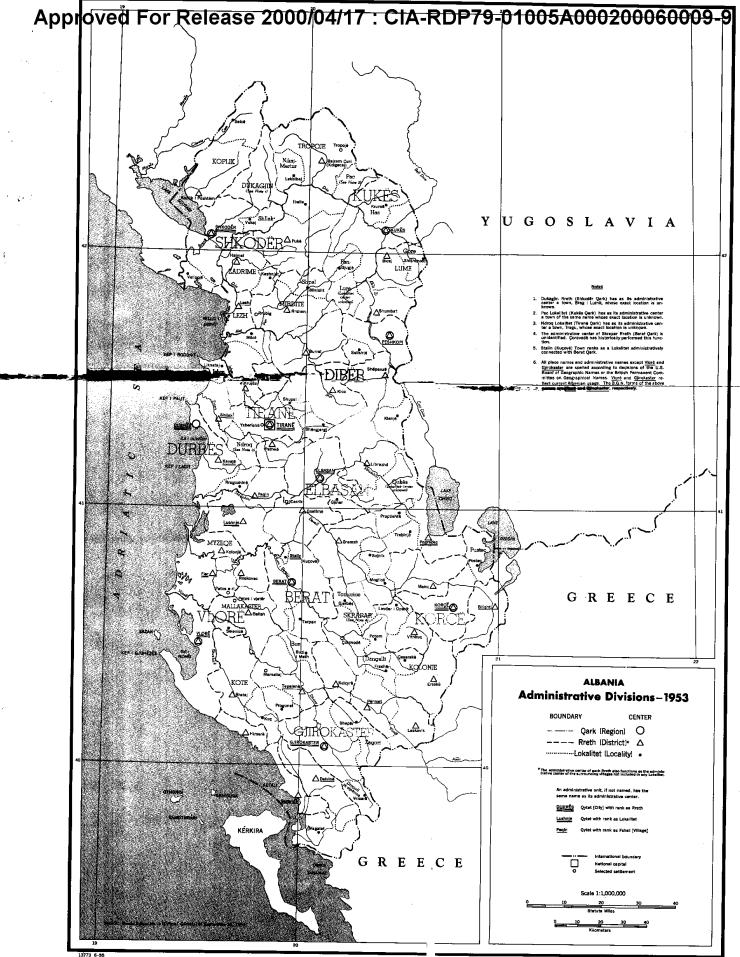
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the village is directly responsible to the district, with no intermediary third-order division. Within Albania, there are 40 localities, and an additional nine cities are at the same administrative level, among them the new oil city of Stalin (Kuçove). The country had a total of some 2,600 villages. Eleven cities and 55 wards within large cities also have the rank of villages.

The ten new regions do not represent a return to the prewar prefectural breakdown, although there are many similarities between the two systems. Several of the new districts also resemble those delimited in 1949, but they are no longer first-order divisions.

The accompanying administrative map of Albania (CIA 13773) is based on the list of divisions and component villages published in the <u>Gazeta Zyrtare</u> (Official Gazette), No. 14, 15 September 1953. The boundaries of the three highest orders were drawn by enclosing the villages listed for each division and interpolating on the basis of topography and drainage. Consequently, the boundaries may err in detail but the core area of each division is correct.

Owing to deficiencies in the principal source, a certain amount of rationalization was necessary in determining and locating administrative centers. Centers for regions and districts were not clearly indicated in the decree, and in compiling the map a few of the centers had to be selected on the basis of rank, population, and accessibility. No centers could be identified for the district of Skrapar and the localities of Lurë and Qukës. In addition, it was not possible to



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locate three known centers -- Pac, Breg i Lumit, and Tregu. The map represents the first attempt since the war to show all basic categories of the Albanian administrative system. (UNCIASSIFIED)

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#### A BRITISH SERIES OF WORLD MAPS ON INSECT PESTS

The British Commonwealth Institute of Entomology is publishing on a continuing basis a significant series of world maps titled Distribution of Insect Pests.\* Publication was started in 1951 and 48 maps, each dealing with a single type of insect, have been published. The latest addition to the series was a group of six maps issued in December 1954. As maps become available, they are distributed to subscribers for insertion in a special looseleaf portfolio that will eventually become, in effect, an atlas. The total number of maps to be published and the schedule of publication are not known, but the size of the portfolio suggests that the work done to date constitutes only a small part of what is planned.

The maps, all at scales of about 1:100,000,000, are monochrome and very simple in style and format. Areas where a particular pest is known to occur are circled with a heavy line; a dotted line is used where the limits are doubtful. A graticule and crudely portrayed hydrography are the only orientation aids. On the reverse side of each map, however, is a list of the countries that fall within infested areas. Pertinent entomological literature is cited after the name of each country. The insects covered by the maps published to date (e.g., boll weevil, gypsy moth, San Jose scale) are all of considerable economic importance as a threat to crops.

<sup>\*</sup>CIA Map Library Call No. aA000-1.C6.

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Although some problems involved in planning control of insect pests seem to be susceptible to analysis by graphic methods, comparatively few entomological maps have been prepared, and those that are available are often hidden in the back pages of obscure journals. It is believed, therefore, that this continuing series on insect pests will be an important addition to the research aids available in map form in the field of entomology. If the spectre of biological warfare figured in some indirect way in initiating work on the series, nothing appearing on the maps themselves suggests it. (UNCLASSIFIED)

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# NEW EDITION OF BARTHOLOMEW'S HANDY REFERENCE ATLAS

The need of the English-speaking world for a compact, legible world atlas with a fairly complete place-name index was attested yet again by the publication in 1954 of the 16th edition of <u>Bartholomew's</u> Handy Reference Atlas of the World.\* This atlas, first published in 1887, has been noteworthy over the years more for its uniformity from edition to edition than for its innovations. Place names, boundaries, city plans, and the portrayal of transportation are brought up to date from time to time, but changes come slowly, and the format and cartographic style continue to reflect the 19th century.

The atlas includes a selection of world maps at very small scales; a dozen hemisphere or continent maps; maps of such major regions as Scandinavia, the Balkans, and Southeast Asia; some 40 country maps; 50 to 60 maps of smaller regions; and plans of the principal cities of the world. No maps were found in the 1954 atlas that did not also appear in the 15th edition published in 1949. The only significant improvement in the 1954 edition appears to be in the place names; for example, several names have been added to the map of Korea, and Korean readings are given instead of the Japanese forms used in the 1949 volume.

Like its predecessors, the 1954 edition includes an excellent "General Index" in which virtually all place names appearing in the

<sup>\*</sup>CIA Map Library Call No. aA000.B36.1954.

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atlas are listed in a single alphabetical sequence; location is indicated by map page numbers and letter-number grid references. The index of the 1954 edition lists about 34,000 names, some 2,300 more than were given in the 1949 atlas. The compactness of the volume (it measures only 1-3/4" x 5-1/2" x 8") and the place-name index, which is remarkably complete for the size of the atlas, are undoubtedly the main reasons for the continued popularity and commercial success of this otherwise undistinguished work. (UNCLASSIFIED)

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#### MAP SERIES OF BELGIUM AT 1:50,000

To meet the demands of the public and the Army for an up-to-date map of Belgium, a 1:50,000 topographic map series\* of the country has recently been published by the Institut Géographique Militaire (IGM), the official Belgian mapping agency. This 74-sheet series has been issued in two forms -- a civilian edition with corner coordinates and marginal graticule ticks and a military edition with the Universal Transverse Mercator grid added. The series, which was completed in approximately 3 years, is designated Type Rapide and should not be confused with the basic 1:25,000 and 1:50,000 series, which are part of a long-range mapping program that will take about 10 years to complete.

The map was based on the IGM 1:40,000 series and was brought up to date from aerial photography and field checking. AMS Technical Manual No. 36 was followed in part in the preparation of the series. In order to produce the map in such a short time, some of the features found on regular IGM topographic maps had to be generalized and some of the details sacrificed. Nevertheless, the new map supplies a variety of good basic information.

Two other Type Rapide series are planned. A 1:100,000 series in 24 sheets based on the 1:50,000 series is to be completed by the end

<sup>\*</sup>Ia Nouvelle Carte de Belgique au 1/50,000e, Type Rapide; civilian edition, CIA Call No. 85582; military edition, AMS Call No. 13M, 3-30-41004-50/2.

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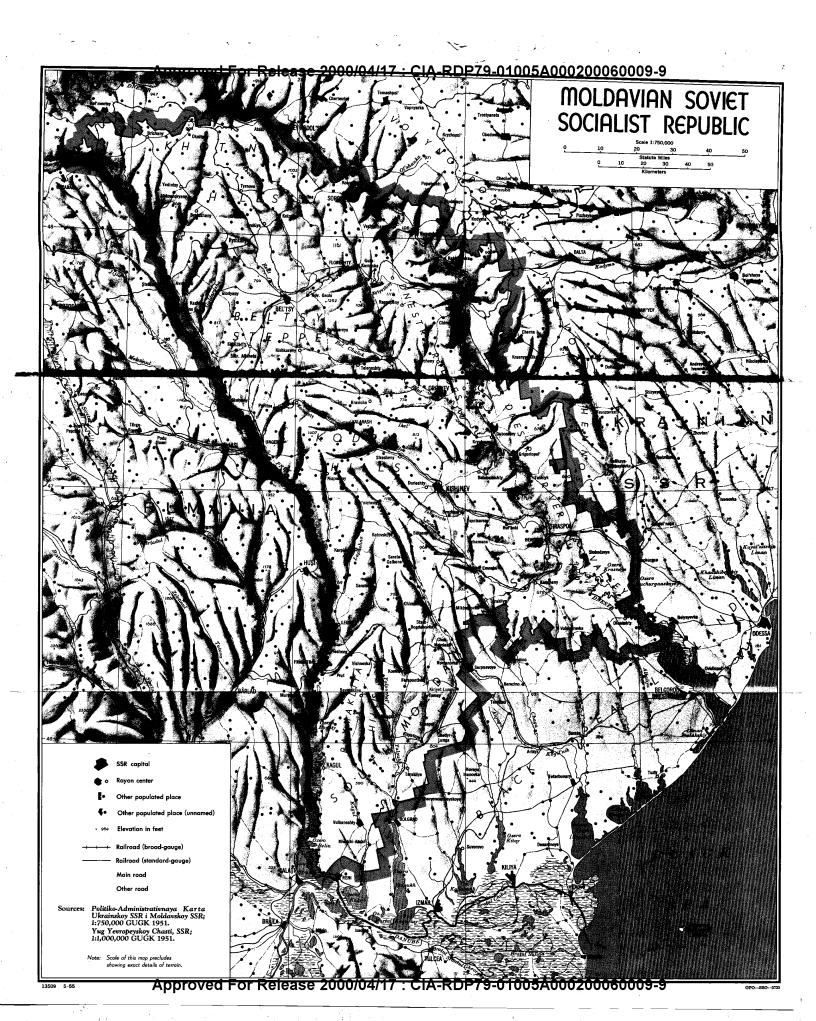
of 1956, and a 1:200,000 or 1:250,000 series based on the 1:100,000 is to be published some time in the future.

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#### NEW PHYSICAL AND CULTURAL MAP OF THE MOLDAVIAN SSR

The lack of a current physical and cultural map of the Moldavian SSR is one of the many deficiencies in available Soviet regional maps. The accompanying map, Moldavian Soviet Socialist Republic (No. 13509), has been produced to overcome this deficiency. The map is at 1:750,000, a scale large enough for locating and plotting general physical and cultural data.

The main physical regions of the Moldavian Republic as shown on the new map are taken from Moldavskaya SSR, a 1947 Soviet geographic study of the area published by the Geographic Institute and the Moldavian Institute of Scientific Research of the USSR Academy of Sciences. Hydrographic features, which include most of the lakes and rivers of Moldavia, are those generally shown on medium- and large-scale Soviet maps. The current road and railroad networks of Moldavia and the settlement pattern are based on Politiko-Administrativnaya Karta Ukrainskoy i Moldavskoy SSR (Political-Administrative Map of the Ukrainian and Moldavian SSR's), 1:750,000, GUGK, 1951. Administrative centers, selected road-junction settlements, and terminal points of a number of roads and railroads are named; other settlements, including an unusually large number of villages, are located by dots or areal symbols. The vertical shading on the new map is based largely on the contour data given on the Soviet map Yug Yevropeyskoy Chasti SSSR (South European Parts of the USSR),



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1:1,000,000, GUGK, 1951, supplemented by available vertical and oblique photography and textual sources. (UNCLASSIFIED)

NOTE on "Important Multipurpose River-Development Projects in the USSR," Geographic Intelligence Review No. 45, May 1955, pp. 12-20:

According to the most recent estimates the capacity of the Kama Project (p. 18) is 500,000 kw; the Ust'-Bukhtarma Project (p. 20), 420,000 kw; and the Mingechaur (p. 20), 372,000 kw.

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