

2017–2018 Minerals Yearbook

CENTRAL AMERICA

THE MINERAL INDUSTRIES OF CENTRAL AMERICA

Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama

By Jesse J. Inestroza

BELIZE

In 2017 and 2018, the production of mineral commodities—notably crude petroleum—represented only a minor part of the economy of Belize (Central Bank of Belize, 2019, p. 27–28). The legislative framework for the hydrocarbon sector in Belize is provided by the Petroleum Act (revised 2003) and Petroleum Regulations, statutory instrument No. 112 of 1992. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Belize can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Central Bank of Belize, 2019, 2018 annual report & statement of accounts: Belize City, Belize, Central Bank of Belize, 135 p. (Accessed December 12, 2019, at https://www.centralbank.org.bz/docs/default-source/4.2.4-annual-reports/annual-report-2018.pdf?sfvrsn=2/.)

COSTA RICA

In 2017 and 2018, the production of mineral commodities—notably cement, crushed stone, diatomite, gold, petroleum refinery products, and sand and gravel—represented only a minor part of the economy of Costa Rica (Central Bank of Costa Rica, 2019, p. 124). The legislative framework for the mineral sector in Costa Rica is provided by the Mining Code Law No. 6797 of 1982. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Costa Rica can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Central Bank of Costa Rica, 2019, Memoria anual 2018 [Annual report 2018]: San Jose, Costa Rica, Central Bank of Costa Rica, 130 p. (Accessed December 20, 2019, at https://activos.bccr.fi.cr/sitios/bccr/publicaciones/DocMemoriaAnual/Memoria_Anual_2018.pdf.)

EL SALVADOR

In 2017 and 2018, the production of mineral commodities—notably cement and raw steel—represented only a minor part of the economy of El Salvador (Banco Central de Reserva de El Salvador, 2019). The legislative framework for the mineral sector in El Salvador is provided by law No. 544/1995. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of El Salvador can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Banco Central de Reserva de El Salvador, 2019, Gross domestic product— Production, expenditure and income. At current prices: San Salvador, El Salvador, Banco Central de Reserva de El Salvador. (Accessed October 18, 2019, via https://www.bcr.gob.sv/bcrsite/?cdr=160&lang=en.)

GUATEMALA

In 2017 and 2018, the production of mineral commodities—notably antimony, gemstones, gold, gypsum, lead, limestone, nickel, raw steel, silver, and zinc—represented only a minor part of the economy of Guatemala (Ministerio de Energia y Minas, 2019, p. 11–13, 16). The legislative framework for the mineral sector in Guatemala is provided by Decree No. 48/1997. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Guatemala can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Ministerio de Energía y Minas, 2019, Anuario estadístico minero 2018 [Annual mining statistics 2018]: Guatemala City, Guatemala, Ministerio de Energía y Minas, 27 p. (Accessed December 21, 2019, via http://www.mem.gob.gt/mineria/estadisticas-mineras/anuario-estadistico-minero/.)

HONDURAS

In 2017 and 2018, the production of mineral commodities—notably antimony, cement, gold, lead, silver, and zinc—represented only a minor part of the economy of Honduras (Banco Central de

Honduras, 2019, p. 45–46). The legislative framework for the mineral sector in Honduras is provided by Decree No. 32/2013. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Honduras can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Banco Central de Honduras, 2019, Memoria 2018 [2018 report]: Tegucigalpa, Honduras, Banco Central de Honduras, 65 p. (Accessed October 18, 2019, at https://www.bch.hn/download/memoria/memoria anual 2018.pdf.)

NICARAGUA

In 2017 and 2018, the production of mineral commodities—notably cement, gold, gypsum, lime, petroleum refinery products, and silver—represented only a minor part of the economy of Nicaragua (Banco Central de Nicaragua, 2019, p. 143). The legislative framework for the mineral sector in Nicaragua is provided by law No. 525/2001. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Nicaragua can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Banco Central de Nicaragua, 2019, Informe anual 2018 [Annual report 2018]:Managua, Nicaragua, Banco Central de Nicaragua, 166 p. (Accessed December 18, 2019, at https://www.bcn.gob.ni/publicaciones/periodicidad/anual/informe anual/2018/Informe%20Anual%202018.pdf.)

PANAMA

In 2017 and 2018, the production of mineral commodities—notably cement, gold, lime, and salt—represented only a minor part of the economy of Panama (Instituto Nacional de Estadística y Censo, 2019). The legislative framework for the mineral sector in Panama is provided by law No. 23/1963. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Panama can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Latin America and Canada, which are available at https://www.usgs.gov/centers/nmic/latin-america-and-canada-north-america-central-america-and-caribbean.

Reference Cited

Instituto Nacional de Estadística y Censo, 2019, Cuentas nacionales [National accounts]: Panama City, Panama, Instituto Nacional de Estadística y Censo. (Accessed December 21, 2019, via http://www.inec.gob.pa/archivos/P9231Avance%20Anual%20y%20Trimestral-2018.xlsx.)

$\label{eq:table1} \textbf{TABLE 1}$ CENTRAL AMERICA: PRODUCTION OF MINERAL COMMODITIES 1

(Metric tons, gross weight, unless otherwise specified)

Country and commodity ²		2014	2015	2016	2017	2018
BELIZ	E					
Petroleum, crude	thousand 42-gallon barrels	642	528	449 ^r	860	801
COSTA R	thousand metric tons	1,500	1,600	1,600	1,800	1,900
Diatomite Diatomite	do.	18 °	20 e	20 e	7	7
	kilograms	100 e	100 e	100 e	4,255	3,699
Gold, mine, Au content						
Petroleum, refinery ^e	thousand 42-gallon barrels	20,000	20,000	20,000	20,000	20,000
Stone, sand, and gravel:						
Sand and gravel, construction	thousand metric tons	7,724	7,700 °	7,700 °	7,700 °	6,000 e
Stone, crushed:						
Limestone, including calcareous	materials do.	1,944	1,950 °	1,950 °	1,950 e	1,900 °
Sandstone	do.	145	150 ^e	150 ^e	150 °	150 e
Unspecified, rock and rough stor		12,020	12,000 e	12,000 e	12,000 e	10,000 e
EL SALVA	ADOR					
Cement, hydraulic ^e	thousand metric tons	1,000	1,000	1,000	1,000	1,000
Iron and steel:						
Raw steel		121,000	124,000	100,000	96,000	99,000
Products, semimanufactured ^e		110,000	111,000	95,000	95,000	95,000
GUATEM	ΔΙΔ	110,000	111,000	75,000	72,000	72,000
Antimony, mine, concentrate, Sb con-		159	r	25	25 e	25 e
	tent	43	544	500		40 e
Barite					43	
Cement, hydraulic ^e	thousand metric tons	3,500	3,500 ^r	3,600	3,700	3,800
Clays:						
Bentonite		38,368	718 ^e	18,081	20,542	20,000 e
Kaolin		1,285	1,101	793	657	700 ^e
Feldspar, mine		10,410	10,340	30,428	29,145	30,000 °
Gemstones, jadeite		521	589	216	1,891	1,611
Gold, mine, Au content	kilograms	5,928	5,641	3,826	1,646	200 e
Gypsum, mine	thousand metric tons	82	111	131	135	133
Iron and steel, raw steel	do.	395	403	314	294	300
Lead, mine, concentrate, Pb content		10,359 ^r	10,193 ^r	4,181 ^r	13,803	264
Lime hydrated ^e	thousand metric tons	r	r	170	170	170
Magnesite		24,268	20,000	23,954	16,298	20,000 e
Nickel, ferronickel, Ni content		5,040 ^r	10,826	8,688	12.416	14,688
Petroleum:		3,040	10,820	0,000	12,410	14,000
	41	2.660	2.664 f	2 205 [2.510	2 262
Crude	thousand 42-gallon barrels	3,669	3,664 ^r	3,285 ^r	3,519	3,363
Refinery:	42 11 1	227 700	162 671	02.020	270 514	500 550
Asphalt	42-gallon barrels	237,700	163,671	82,939	278,514	589,552
Diesel	do.	280,240	268,699	291,943	240,250	338,591
Kerosene	do.	3,520	3,000 e	3,000 e		521
Refinery fuel	do.	20,000 ^e	19,000 r, e	16,521	17,000 ^e	21,613
Pumice and related materials, pumice	, sand	192,725	387,976	569,476	570,000 °	570,000 °
Silver, mine, Ag content	kilograms	631,382	862,197	793,083	336,943	
Stone, sand, and gravel:						
Sand and gravel, construction:						
River sand	thousand metric tons	314	181	99	100 e	100 e
Silica sand		53,200 ^r	324,658	515,921	69,021	69,000 e
Unspecified, common	thousand metric tons	235	622	281	591	728
Stone, crushed:						· · · · · · · · · · · · · · · · · · ·
Basalt		22,874 ^r	12,816 ^r	50,032	60,000 e	60,000 e
Basaltic andesite		2,324,208 ^r	2,574,334	2,789,343	3,030,955	5,503,883
Dolomite		10,305	33,837	16,583	20,000 °	14,994
Limestone, crude		2,823,106	5,036,552	2,050,691	5,583,172	2,072,312
·						
Marble		75,716	168,331	76,152	26,254	63,207

See footnotes at end of table.

$\label{total} \mbox{TABLE 1---Continued} \\ \mbox{CENTRAL AMERICA: PRODUCTION OF MINERAL COMMODITIES}^1$

(Metric tons, gross weight, unless otherwise specified)

Country and commodity ²		2014	2015	2016	2017	2018
GUATEMALA—	Continued					
Stone, sand, and gravel:—Continued						
Stone, crushed:—Continued						
Marl		65,898	60,957	60,000 ^e	60,000 e	60,000 e
Schist		310,091	358,382	556,723	394,315	390,000
Talc and related materials, talc		7,250	3,779	2,733	1,981	2,000 e
Zinc, mine, concentrate, Zn content		13,394	14,810 ^r	5,564 ^r	6,100	
HONDUR	AS					
Antimony, mine, concentrate, Sb conte	ent ^e	94	21	3	3	12
Cement, hydraulic ^e	thousand metric tons	1,700	1,700	1,700	1,700	1,800
Gold, mine, Au content	kilograms	2,762 ^r	2,598 ^r	2,607	2,657	2,064
Lead, mine, concentrate, Pb content		15,509	9,844	4,400 ^r	6,760	9,893
Silver, mine, Ag content	kilograms	56,827	34,369	19,275 ^r	21,785	31,182
Zinc, mine, concentrate, Zn content		29,509	22,992	14,579	20,436	28,421
NICARAG	UA					
Cement, hydraulic ^e	thousand metric tons	700	700	700 ^r	900	910
Gold, mine, Au content	kilograms	8,648 ^r	6,814 ^r	8,391	7,377	7,703
Gypsum, including anhydrite, mine		57,390	50,370	41,750	66,740	70,341
Lime		4,679	4,104	5,000 e	5,200 °	5,000 °
Petroleum, refinery:						
Asphalt	thousand 42-gallon barrels	105,900	132,200	113,700	101,510	128,071
Diesel	do.	1,591,000	1,421,700	993,400	1,221,340	1,520,128
Fuel oil	do.	1,942,700	2,236,700	2,200,900	2,118,070	1,776,491
Gasoline	do.	815,500 ^r	839,800 ^r	776,800	854,620	819,070
Kerosene, turbo fuel	do.	216,700	256,200	271,800	287,310	200,028
Liquefied petroleum gas	do.	116,600	155,300	213,600	231,260	202,284
Silver, mine, Ag content	kilograms	13,889	18,577	21,382	15,149	11,263
Stone, sand and gravel:						
Sand and gravel, construction	thousand metric tons	453	357	286	296	218
Stone, crushed:						
Quarried unspecified	do.	9,857	10,237	8,880	9,419	5,828
Tuff, volcanic	do.	160 ^r	171 ^r	181	222	199
Unspecified	do.	2,175	1,954	2,251	1,232	1,415
PANAMA	A					
Cement, hydraulic ^e	thousand metric tons	2,190	2,200 ^r	2,200 ^r	1,900	2,000
Gold, mine, Au content	kilograms	2,954	2,000 e	400 e	400 e	400 e
Lime ^e		3,500 ^r	3,500 ^r	4,000	4,200 e	4,400 e
Salt		56,500	60,000 e	60,000 e	41,094	38,107

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through October 17, 2019. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²Additional commodities may have been produced, but available information was inadequate to make reliable estimates of output.

${\it TABLE~2}$ CENTRAL AMERICA: STRUCTURE OF THE MINERAL INDUSTRIES IN 2018

(Thousand metric tons, gross weight, unless otherwise specified)

	Major operating companies		Annual	
Country and commodity	and major equity owners	Location of main facilities	capacitye	
Petroleum, crude thousand 42-gallon barrels	Belize Natural Energy Ltd., 100%	Never Delay and Spanish Lookout oilfields, Cayo District	475	
COSTA RICA				
Cement, limestone, including marl	LafargeHolcim Costa Rica S.A. (LafargeHolcim Ltd., 59.8%, and other private, 40.2%)	Cartago cement plant, Aguas Calientes	1,200	
Do.	CEMEX Costa Rica S.A. (CEMEX S.A.B de C.V., 98.7%, and other private, 1.3%)	Colorado de Abangares cement plant, Guancaste Province, and Guatuso de Patarra cement grinding and bagging plant, San Jose	1,100	
Clay	do.	Tajo Finca clay quarry, near city of Platanar	100	
Steel, semimanufactures	Laminadora Costarricense S.A. (Mittal Steel Company N.V., 50%, and Grupo Pujol-Martí, 50%)	Rolling mill, steel manufacturing complex, Guapiles, Jimenez de Pococi, Alajuela, y Tibas	450	
Stone, limestone	CEMEX Costa Rica S.A. (CEMEX S.A.B de C.V., 98.7%, and other private, 1.3%)	Cerro Pena Blanca limestone quarry, Guancaste Province	300	
Do.	LafargeHolcim Costa Rica S.A. (LafargeHolcim Ltd., 59.8%, and other private, 40.2%)	La Chilena and three other quarries near Cartago cement plant, Cartago Province	650	
EL SALVADOR	, , ,	C 1 / C		
Cement	Cemento de El Salvador S.A. de C.V. (LafargeHolcim Ltd., 64.25%, and other private, 35.75%)	El Ronco and Maya plants, near Metapan, Santa Ana Department	1,900	
Steel:				
Raw	Corporación Industrial Centroamericana S.A. de Electric arc furnace, Quetzaltepeque, C.V. (private, 100%) La Libertad Department		125	
Semimanufactures	do.	Billet casting machine and rolling mill, Quetzaltepeque, La Libertad Department	110	
Stone, limestone	Cemento de El Salvador S.A. de C.V. (LafargeHolcim Ltd., 64.25%, and other private, 35.75%)	Quarries near Aldea El Zapote and Santa Ana, Santa Ana Department	440	
GUATEMALA				
Antimony	Minas de Guatemala S.A. (private, 100%)	Clavito, La Florida, Los Lirios, and Torlon Mines, Ixtahuacan, Huehuetenango Department	NA	
Do.	do.	Los Angeles Mine, Guatemala Department	NA	
Do. metric tons	do.	Cantera Los Manantiales Mine, Chiquimula Department	160	
Do.	do.	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	NA	
Cement	Cementos Progreso S.A., 100%	San Gabriel plant, San Juan, Sacatepéquez Department, San Miguel plant, Sanarate, El Progreso Department, and La Pedrera plant, Guatemala City	6,000	
Copper	Minera Quetzal, S.A.	Cubulco municipality, Baja Verapaz Department	NA	
Do.	Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	NA	
Gold kilograms	Goldcorp Inc., 100%	Marlin Mine, near municipalities of San Miguel Ixtahuacan and Sipakapa, San Marcos Department		
Do.	Exploraciones Mineras de Guatemala, S.A.	Progreso VII Derivada, San Jose del Golfo and San Pedro Ayampuc Municipalities, Guatemala Department	NA	
Do.	Ricas ek Tanbirm S.A.	San Antonio La Paz, El Progreso Department	NA	
Do.	Entre Mares de Guatemala, S.A.	Asuncion Mita, Jutiapa Department	NA	

See footnotes at end of table.

(Thousand metric tons unless otherwise specified)

		Major operating companies		Annual	
Country and commodity		and major equity owners	Location of main facilities	capacitye	
GUATEMALA—Co	ontinued	T. M.: C. C. 1000/	C : M: Al W D	NIA	
Lead		Tenango Mining Company S.A., 100%	Caquipec Mine, Alta Verapaz Department	NA	
Do.		Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	800	
Lime		HORCALSA S.A. (Cementos Progreso S.A., 100%)	San Miguel plant, Sanarate, El Progreso Department	180	
Nickel		Compañía Guatemalteca de Niquel, S.A. (Solway Investment Group, 98.2%, and	Fenix Project, El Estor municipality, Izabal, Department	20,000	
Petroleum, crude	thousand	Government of Guatemala, 1.8%) Perenco plc, 100%	Rubelsanto and West Chinaja fields, Alta	4,500	
*	on barrels	Telefico pie, 10070	Verapaz Department, and Caribe, Tierra Blanca, and Xan fields, Peten Department	4,300	
Silver 1	kilograms	Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	6,200	
Do.	do. Goldcorp Inc., 100% Marlin Mine, near municipalities of San Miguel Ixtahuacan and Sipakapa, San Marcos Department		2,000		
Steel:					
Raw		Siderúrgica de Guatemala S.A. (SIDEGUA) {Corporación Aceros de Guatemala S.A. [Corporación Centroamericana del Acero S.A. (Gerdau S.A., 30%, and other private, 70%), 100%], 100%}	Electric arc furnace, near city of Escuintla, Escuintla Department	800	
Semimanufactures		Indeta S.A. (INDETA) {Corporación Aceros de Guatemala S.A. [Corporación Centroamericana del Acero S.A. (Gerdau S.A., 30%, and other private, 70%), 100%], 100%}	Rolling mill at Colonia San Ignacio, Mixco, near Guatemala City	200	
Zinc 1	kilograms	Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	6,200	
HONDURAS	5				
Cement		Cementos del Norte S.A. de C.V. (LafargeHolcim Ltd., 24.2%, and Inversiones Continental S.A., 75.8%)	Rio Bijao plant, municipality of San Pedro Sula, Cortes Department	1,100	
Do.		Cementos Argos S.A. de C.V., 53.3%, and other private, 46.7%	Piedras Azules plant, municipality of Comayagua, Comayagua Department	1,300	
Gold 1	kilograms	Aura Minerals Inc., 100%	San Andres Mine, municipality of La Union, Copan Department	3,300	
Lead		Ascendant Resources Inc, 100%	El Mochito Mine, Santa Barbara Department, 90 kilometers south of San Pedro Sula	15	
Silver 1	kilograms	do.	do.	60,000	
Zinc		do.	do.	40	
NICARAGUA	A				
Cement		CEMEX Nicaragua S.A. (CEMEX S.A.B. de C.V., 100%, but on lease from Government)	San Rafael del Sur plant, 45 kilometers from Managua, and milling plant in Managua	600	
Cement, clinker		LafargeHolcim de Nicaragua S.A. (LafargeHolcim Ltd., 70%, and other private, 30%)	Nagarote grinding plant, San Rafael del Sur	350	
Gold 1	kilograms	B2 Gold Corp., 95%	Limon Mine, Talavera deposit, 160 kilometers north of Managua	1,200	
Do.	do.	B2 Gold Corp., 100%	La Libertad, 110 kilometers east of Managua	4,500	
Do.	do.	Mineros S.A., 89.99%	Rio Bambana, Atlántico Norte	2,000	
Do.	do.	do.	Bonanza, North Caribbean Coast	1,150	
	40.		Autonomous Region	1,130	

See footnotes at end of table.

(Thousand metric tons unless otherwise specified)

		Major operating companies		Annual
Country	and commodity	and major equity owners	Location of main facilities	capacitye
P	ANAMA			
Cement		CEMEX Panamá (Cemex Latam Holdings S.A., 100%)	Cemement plant, Panamá Province	2,100
Do.		Argos Panamá S.A. (Cemento del Grupo Argos, 100%)	Quebrada Ancha plant, municipality of	1,300
			Colon, Province of Colon	
Gold	kilograms	Artisanal miners	Various locations	1,600

^eEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.