



2016 Minerals Yearbook

CENTRAL AMERICA [ADVANCE RELEASE]

THE MINERAL INDUSTRIES OF CENTRAL AMERICA

BELIZE, COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA, AND PANAMA

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BELIZE

In 2016, the production of mineral commodities—notably crude petroleum—represented only a minor part of the economy of Belize (Ministry of Economic Development and Petroleum, 2017). 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

Ministry of Economic Development and Petroleum, 2017, Production—Crude oil production: Belize City, Belize, Ministry of Economic Development and Petroleum. (Accessed December 28, 2017, at <http://med.ict.gov.bz/production/>.)

COSTA RICA

In 2016, the production of mineral commodities—notably cement, crushed stone, petroleum refinery products, and sand and gravel—represented only a minor part of the economy of Costa Rica (Dirección de Geología y Minas, 2017). 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

Dirección de Geología y Minas, 2017, Minería de Costa Rica en datos [Costa Rica mining in data] 2017: San Jose, Costa Rica, Dirección de Geología y Minas. (Accessed December 28, 2017, at http://www.geologia.go.cr/mineria/mineria_de_costa_rica_en_datos.html.)

EL SALVADOR

In 2016, the production of mineral commodities—notably cement and crude (raw) steel—represented only a minor part of

the economy of El Salvador (Banco Central de Reserva de El Salvador, 2017, p. 17, 22–23). 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, 2017, Informe económico anual [Annual economic report] 2016: San Salvador, El Salvador, Banco Central de Reserva de El Salvador, 40 p. (Accessed May 30, 2018, at <http://www.bcr.gov.sv/bcrsite/uploaded/content/category/1013579804.pdf>.)

GUATEMALA

In 2016, the production of mineral commodities—notably antimony, gold, lead, limestone, nickel, silver, and zinc—represented only a minor part of the economy of Guatemala (Ministerio de Energía y Minas, 2017, p. 30–32). 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, 2017, Anuario estadístico minero [Annual mining statistics] 2016: Guatemala City, Guatemala, Ministerio de Energía y Minas, 61 p. (Accessed December 29, 2017, at <http://www.mem.gob.gt/wp-content/uploads/2017/11/ANUARIO-ESTADISTICO-2016-ULTIMA-VERSION-OCTUBRE.pdf>.)

HONDURAS

In 2016, the production of mineral commodities—notably gold, lead, silver, and zinc—represented only a minor part of the economy of Honduras (Banco Central de Honduras, 2017, p. 51). 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, 2017, Memoria 2016 [Memory 2016]: Tegucigalpa, Honduras, Banco Central de Honduras, 70 p. (Accessed December 29, 2017, via <http://www.inhgeomn.gob.hn/>.)

NICARAGUA

In 2016, the production of mineral commodities—notably gold, gypsum, lime, petroleum refinery products, and silver—represented only a minor part of the economy of Nicaragua (Ministerio de Energía y Minas, 2017). 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

Ministerio de Energía y Minas, 2017, Minas—Series históricas [Mining—Historical series]: Managua, Nicaragua, Ministerio de Energía y Minas. (Accessed December 30, 2017, via http://www.mem.gob.ni/?page_id=290.)

PANAMA

In 2016, the production of mineral commodities—notably gold, lime, and salt—represented only a minor part of the economy of Panama (Instituto Nacional de Estadística y Censo, 2017). 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, 2017, Cuentas nacionales [National accounts]: Panama City, Panama, Instituto Nacional de Estadística y Censo, 14 p. (Accessed May 31, 2018, at <https://www.contraloria.gob.pa/INEC/archivos/P85513%20-%20Cuentas%20nacionales%2011.pdf>.)

TABLE 1
CENTRAL AMERICA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2012	2013	2014	2015	2016	
BELIZE						
Petroleum, crude	thousand 42-gallon barrels	1,030	792	642	528	475
COSTA RICA						
Cement, hydraulic ^c	thousand metric tons	1,400	1,460	1,500	1,600 ^r	1,600
Gold, mine production, Au content ^c	kilograms	400	100 ^r	100 ^r	100 ^r	100
Petroleum, refinery production	thousand 42-gallon barrels	18,249	19,016 ^r	20,000 ^e	20,000 ^e	20,000 ^e
Stone, sand, and gravel: ³						
Limestone, including calcareous materials	thousand metric tons	3,380	1,484	1,944	1,950 ^e	1,950 ^e
Sand and gravel, construction, unspecified	do.	4,800	7,558	7,724	7,700 ^e	7,700 ^e
Sandstone	do.	193	160	145	150 ^e	150 ^e
Unspecified, rock and rough stone	do.	8,300	11,763	12,020	12,000 ^e	12,000 ^e
EL SALVADOR						
Cement, hydraulic ^c	thousand metric tons	1,380	1,200	1,000	1,000	1,000
Iron and steel:						
Raw steel		72,000 ^r	118,000 ^r	121,000	124,000	100,000
Products, semimanufactured ^c		70,000 ^r	105,000	110,000	111,000	95,000
GUATEMALA						
Antimony, mine production, Sb content		62	67	159	50 ^{e,r}	25
Barite		91	343	43	544	500
Cement, hydraulic	thousand metric tons	2,880	2,970	3,500 ^e	3,700 ^e	3,600 ^e
Clay and shale:						
Bentonite		16,183	18,377	38,368	718	18,081
Kaolin		1,866	2,953	1,285	1,101	793
Feldspar, mine production		19,356	19,611	10,410	10,340	30,428
Gemstones, jadeite		33	89	521	589	216
Gold, mine production, Au content	kilograms	6,473	6,384	5,928	5,641	3,826
Gypsum, crude	thousand metric tons	100	118	82	111	131
Iron and steel, raw steel	do.	334	385	395	403	314
Lead, mine production, Pb content		2,300	2,100 ^e	6,266	10,153 ^r	9,969
Lime, hydrated ^c	thousand metric tons	150	150	150	215	170
Magnesite		27,132	17,200	24,268	20,000 ^e	23,954
Nickel, ferronickel, Ni content		--	--	5,000	10,826	8,688
Petroleum:						
Crude	thousand 42-gallon barrels	3,876	3,645	3,669	3,650	3,017
Refinery production:						
Asphalt	42-gallon barrels	275,000	193,740	237,700	163,671	82,939
Diesel	do.	227,790	201,700	280,240	268,699	291,943
Kerosene	do.	2,880	2,910	3,520	3,000 ^{e,r}	3,000 ^e
Refinery fuel	do.	32,670	18,180	20,000 ^e	15,850 ^r	16,521
Pumice and related materials, pumice, sand ³		1,110,569	218,589	192,725	387,976	569,476
Silver, mine production, Ag content	kilograms	204,555	283,204	631,382	862,197	793,083
Stone, sand, and gravel:						
Sand and gravel, construction:						
River sand	thousand metric tons	418	80	314	181	99
Silica sand		48,664	53,242	50,000	324,658	515,921
Unspecified, common	thousand metric tons	800	533	235	622	281
Stone, crushed:						
Basalt ³		59,692	87,575	23,731	14,334	50,032
Basaltic andesite ³		1,611,944	1,996,731	1,600,000	2,574,334	2,789,343
Dolomite ³		2,883	18,638	10,305	33,837	16,583
Limestone, crude		2,794,623	2,643,779	2,823,106	5,036,552	2,050,691
Marble		130,240	149,571	75,716	168,331	76,152
Marl		22,200	22,200	65,898	60,957	60,000 ^e
Schist		308,242	303,202	310,091	358,382	556,723
Talc and related materials		2,311	7,084	7,250	3,779 ^r	2,733
Zinc, mine production, Zn content		--	1,221	13,394	14,615	14,975

See footnotes at end of table.

TABLE 1—Continued
CENTRAL AMERICA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2012	2013	2014	2015	2016	
HONDURAS						
Cement, hydraulic	thousand metric tons	1,730	1,700 ^e	1,700 ^e	1,700 ^e	1,700 ^e
Gold, mine production, Au content	kilograms	1,858	1,985	2,839 ^r	2,736 ^r	2,607
Lead, mine production, Pb content		12,400	11,600	15,509 ^r	9,844	4,000
Silver, mine production, Ag content	kilograms	50,605	50,917 ^r	56,827 ^r	34,369 ^r	17,634
Zinc, mine production, Zn content		25,603	25,223	29,509	22,992	14,579
NICARAGUA						
Cement, hydraulic ^e	thousand metric tons	620	650	700	700	800
Gold, mine production, Au content	kilograms	6,981	8,612	8,160 ^r	7,612 ^r	8,391
Gypsum, including anhydrite, crude		34,890	36,500	57,390 ^r	50,370 ^r	41,750
Lime		5,575	6,832	4,679	4,104	5,000 ^e
Petroleum, refinery production:						
Asphalt	thousand 42-gallon barrels	34,900	51,600	105,900	132,200	113,700
Diesel	do.	1,138,800	1,555,700	1,591,000	1,421,700	993,400
Fuel oil	do.	1,558,200	2,003,600	1,942,700	2,236,700	2,200,900
Gasoline	do.	584,200	830,100	813,900 ^r	846,700 ^r	776,800
Kerosene, turbo fuel	do.	200,200	225,400	216,700 ^r	256,200	271,800
Liquefied petroleum gas	do.	100,400	127,100	116,600	155,300	213,600
Pumice and related materials, stone ³		169	24	--	--	--
Silver, mine production, Ag content	kilograms	9,927 ^r	13,743	13,889 ^r	18,577 ^r	21,382
Stone, sand, and gravel:						
Sand and gravel, construction	thousand metric tons	403	463	453	357	286
Stone, crushed:						
Quarried, unspecified	do.	9,216	9,344	9,857 ^r	10,237 ^r	8,880
Tuff, volcanic	do.	142	186	151 ^r	168 ^r	181
Unspecified	do.	1,799	1,841	2,175	1,954	2,251
PANAMA						
Cement, hydraulic	thousand metric tons	2,310	2,370 ^{e,r}	2,190 ^{e,r}	2,000 ^{e,r}	1,900 ^e
Gold, mine production, Au content	kilograms	2,115	2,141	2,954	2,000 ^e	400 ^e
Lime ^e		4,000	4,000	4,000	4,000	4,000
Salt		36,600	60,600	56,500	60,000 ^e	60,000 ^e

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

¹Table includes data available through March 3, 2018. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, additional cement, clay, construction materials, diatomite, dolomite, gold, gravel, limestone, marl, refinery products, sand, and semimanufactures may have been produced in some other countries in Central America, but available information was inadequate to make reliable estimates of output.

³In 2016, the units of measurement were changed to metric tons from cubic meters for all years shown.

TABLE 2
CENTRAL AMERICA: STRUCTURE OF THE MINERAL INDUSTRIES IN 2016

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

Country and commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c	
BELIZE				
Petroleum, crude thousand 42-gallon barrels	Belize Natural Energy Ltd., 100%	Spanish Lookout oilfields, Cayo District	475	
COSTA RICA				
Cement, limestone, including marl	LaFarge Holcim Costa Rica S.A. (Holcim 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, Guanacaste Province, and Guatuso de Patarra cement grinding and bagging plant, San Jose	900	
Clay	do.	Tajo Finca clay quarry, near city of Platanar	100	
Limestone	do.	Cerro Pena Blanca limestone quarry, Guanacaste Province	300	
Do.	LaFarge Holcim Costa Rica S.A. (Holcim Ltd., 59.8%, and other private, 40.2%)	La Chilena and three other quarries near Cartago cement plant, Cartago Province	650	
Steel, semimanufactures	Laminadora Costarricense S.A. (Mittal Steel Company N.V., 50%, and Grupo Pujol-Marti, 50%)	Rolling mill, steel manufacturing complex, Guapiles, Jimenez de Pococi, Alajuela, y Tibas	450	
EL SALVADOR				
Cement	Cemento de El Salvador S.A. de C.V. (LaFarge Holcim Ltd., 64.25%, and other private, 35.75%)	El Ronco and Maya plants, near Metapan, Santa Ana Department	1,900	
Limestone	do.	Quarries near Aldea El Zapote and Santa Ana, Santa Ana Department	440	
Steel:				
Raw	Corporación Industrial Centroamericana S.A. de C.V. (private, 100%)	Electric arc furnace, Quetzaltepeque, La Libertad Department	125	
Semimanufactures	do.	Billet casting machine and rolling mill, Quetzaltepeque, La Libertad Department	110	
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	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, Sacatepequez 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	6,500
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.

TABLE 2—Continued
CENTRAL AMERICA: STRUCTURE OF THE MINERAL INDUSTRIES IN 2016

(Thousand metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity ^e
GUATEMALA—Continued				
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	10
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%; Government of Guatemala, 1.8%)	Sechol Mine, Senahu and Panzos municipalities, Alta Verapaz, Department	NA
Petroleum, crude	thousand 42-gallon barrels	Perenco plc, 100%	Rubelsanto and West Chinaja fields, Alta Verapaz Department, and Caribe, Tierra Blanca, and Xan fields, Peten Department	4,500
Silver		Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	6,200
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		Tahoe Resources Inc., 100%	Escobal Mine, Laguna de Ayarza, Santa Rosa Department	15
HONDURAS				
Cement		Cementos del Norte S.A. de C.V. (LaFarge Holcim 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 SA de CV, 53.3%, and other private, 46.7%	Piedras Azules plant, municipality of Comayagua, Comayagua Department	1,300
Gold		Aura Minerals Inc., 100%	San Andres Mine, municipality of La Union, Copan Department	3,300
Lead		Nyrstar NV, 100%	El Mochito Mine, Santa Barbara Department, 90 kilometers south of San Pedro Sula	15
Silver		do.	do.	60,000
Zinc		do.	do.	40
NICARAGUA				
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		LaFarge Holcim de Nicaragua S.A. (LaFarge Holcim Ltd., 70%, and other private, 30%)	Nagarote grinding plant, San Rafael del Sur	350
Gold		B2 Gold Corp., 95%	Limon Mine, Talavera deposit, 160 kilometers north of Managua	1,200
Do.		B2 Gold Corp., 100%	La Libertad, 110 kilometers east of Managua	4,500
Do.		Mineros S.A., 89.99%	Rio Bambana, Atlántico Norte	2,000
Do.		do.	Bonanza, North Caribbean Coast Autonomous Region	1,150
PANAMA				
Gold		Petaquilla Minerals Ltd., 100%	Molejon Mine, Panama Province	2,800

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