



2009 Minerals Yearbook

PARAGUAY AND URUGUAY

THE MINERAL INDUSTRIES OF PARAGUAY AND URUGUAY

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PARAGUAY

In 2009, Paraguay's gross domestic product (GDP) based on purchasing power parity decreased to \$28.5 billion from \$29.5 billion in 2008, or by 3.4%. Paraguay's mineral industries included cement, iron and steel, and petroleum derivatives. Paraguay has considerable industrial mineral resources, such as clays, dolomite, gypsum, kaolin, limestone, magnesium, and semiprecious stones; in addition, Paraguay has geology that is favorable for natural gas and petroleum discoveries. The country's Parana River is an immense source of hydroelectric power. The Itaipu Dam is the world's second ranked hydroelectric power generator. The dam was built and operated jointly with Brazil. Other dams include the Central Acaray, which was managed by the Government-owned Administración Nacional de Electricidad, and the Yacyreta, which was a joint venture with Argentina. Currently, to meet its crude oil and petroleum derivatives demand, Paraguay relied on imports of approximately 28,000 barrels per day (bbl/d) of crude oil based on May 15, 2009, estimates (International Monetary Fund, 2010; U.S. Department of State, 2010; U.S. Energy Information Administration, 2010; World Bank, The, 2010).

Paraguay welcomes foreign investment and its laws treat national and foreign investors on equal terms. The economy is dependent on exports of agricultural goods and electricity generation. Paraguay works closely with its Southern Cone Common Market (MERCOSUR) partners (Argentina, Brazil, and Uruguay) on many economic, political, and social issues. In 2009, the country's exports amounted to \$3.2 billion and included such products as cement, clays, cotton, electricity, leather, meat, soybeans, and wood. Paraguay's leading export partners were Brazil (21%), Uruguay (17%), Chile (12%), Argentina (11%), and the United States (2%). Paraguay's imports amounted to \$6.5 billion worth of consumer goods, electrical machinery and equipment, manufactured goods, and mineral fuels and lubricants. Paraguay's leading suppliers were China (30%), Brazil (23%), Argentina (16%), Japan (5%), and the United States (4%). In 2009, the sectors that contributed to Paraguay's GDP were services (59.6%), agriculture (22.3%), and industry (18.1%). A combination of economic growth in Argentina and Brazil, which led to increased demand for Paraguayan exports, and high world prices for Paraguay's agricultural exports helped improve Paraguay's economy. Paraguay also depended on trade with its partners in MERCOSUR, which, in terms of trade value, was the second ranked trade association in the Americas and the eighth ranked trade association worldwide (Banco Central del Paraguay, 2010, p. 9; U.S. Central Intelligence Agency, 2010; U.S. Department of State, 2010; World Bank, The, 2010).

Production

In 2009, Paraguay produced mostly cement, clays, petroleum derivatives, pig iron, and steel. Paraguay's mineral reserves and resources were unknown. Data on mineral production are in table 1.

Structure of the Mineral Industry

The cement and petroleum industries of Paraguay continued to be owned by the Government (table 2). Since 2007, however, the structure of much of the country's mineral industry had changed to a privately owned and Government-regulated regime, such as the steel industry. The new regime is managed by the Dirección de Recursos Minerales (DRM), which is under the Paraguayan Ministerio de Obras Públicas y Comunicaciones (MOPC), Viceministerio de Minas y Energía (VMME). The DRM facilitates the process of obtaining the necessary approvals of permits and concessions for foreign private companies to conduct hydrocarbon and mining prospecting, exploration, and operation activities in the country (Ministerio de Industria y Comercio, 2010a, p. 1-3).

Paraguay's foreign direct investment (FDI) inflows increased to \$184.2 million in 2009 from a revised \$109.1 million in 2008, or by 68.8%. Paraguay was the only country in the entire Latin American and Caribbean region that showed such a large increase in its FDI with respect to 2008. This flow, mostly from the United States, went mainly to the industry sector (37%), petroleum processing (32%), financial sector (23%), and transportation (17%) (Economic Commission for Latin America and the Caribbean, 2010, p. 30).

Commodity Review

Metals

Iron and Steel.—In 2009, Paraguay produced 130,000 metric tons (t) of crude steel compared with 129,600 t in 2008. The production of pig iron totaled 145,500 t in 2009 compared with 145,420 t in 2008 (table 1; World Steel Association, 2010).

Industrial Minerals

Cement.—The Industria Nacional del Cemento (INC), which was a Paraguayan state-owned company, was the only cement producer in Paraguay. INC produced about the same amount of cement as in 2008. The Villeta cement plant was expected to be able to meet about 20% of the future (2010-14) demand for cement in Paraguay. In 2009, the National Customs Department reported almost 150,000 t of imported cement. Nearly 80% of Paraguay's consumption (750,000 t) was satisfied by domestic

production (600,000 t); the remaining 20% was met by imports (Ministerio de Industria y Comercio, 2010a, p. 60).

Mineral Fuels and Related Materials

Natural Gas.—Paraguay had the potential to produce natural gas; however, the country did not consume natural gas because of the lack of domestic production capacity and the absence of import pipelines. The Ministry of Industry and Commerce (MIC) planned to install a biogas plant between Concepcion and San Pedro that uses banana, mango, and pineapple residues as feedstock. According to the MIC, those interested in the investment were German companies that wanted to produce environmentally friendly gas and create jobs in the country (Ministerio de Industria y Comercio, 2010b).

Petroleum.—State-owned Petróleos Paraguayos (Petropar) had a monopoly on all crude oil and petroleum product sales and imports in Paraguay. Petropar operated the country's sole refinery, the 7,500-bbl/d Villa Elisa unit. Paraguay consumed 28,000 bbl/d in 2009. Energy cooperation between Paraguay and Venezuela could be possible by the latter building an oil refinery in Paraguay that could process its heavy crude oil. This effort could help satisfy Paraguay's crude oil demand, and Venezuela's supply to Paraguay could reach 15,000 bbl/d in the form of gasoil. The Paraguayan Government announced that crude oil had been discovered in the western Chaco region and that exploration for crude oil in the Emilia prospect, which is located within the Boqueron field, would continue. In 2009, however, no hydrocarbon reserves had been proven at the Emilia prospect, which was considered the country's most potentially productive unit. The recoverable resource at the Emilia prospect was estimated to be 40 million barrels of oil (Ministerio de Industria y Comercio, 2010a, b; U.S. Energy Information Administration, 2010).

Uranium.—The Government announced the possibility of building a nuclear-powered electricity-generating plant that would use uranium to be produced eventually from deposits located in the zone of Yuty (Caazapa, San Antonio), southeast of Asuncion. Paraguay was considering requesting France's assistance to develop a nuclear power program (Mercosur Noticias, 2009).

Outlook

Paraguay's economy is expected to return to growth by 2010 in spite of the decrease of its GDP to -3.4% in 2009 from 5.8% in 2008; the projected growth of its economy will be highly dependent on MERCOSUR's economic stability, however. The cement industry's production was expected to increase and to be able to meet about 50% of Paraguay's future (2010-14) cement demand; the remaining demand would be covered by imports. The Paraguayan mineral fuels industry is set to continue its exploration activities by 2012 and beyond because of the positive exploration results in the Chaco region (Banco Central del Paraguay, 2010).

References Cited

Banco Central del Paraguay, 2010, Informe económico Diciembre 2009: Banco Central del Paraguay. (Accessed July 13, 2010, at http://www.bcp.gov.py/index.php?option=com_content&task=view&id=149&Itemid=369.)

Economic Commission for Latin America and the Caribbean, 2010, Foreign investment in Latin America and the Caribbean 2009 report: Economic Commission for Latin America and the Caribbean, April 28, 76 p. (Accessed July 9, 2010, at <http://www.eclac.cl/publicaciones/xml/2/39422/inversion2009i.pdf>.)

International Monetary Fund, 2010, World economic outlook: International Monetary Fund, April, 216 p. (Accessed June 8, 2010, at <http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/text.pdf>.)

Mercosur Noticias, 2009, Paraguay—En un poco más de un año se comenzará con la producción de uranio: Mercosur Noticias, February 8. (Accessed July 14, 2009, at http://www.mercosurnoticias.com/index.php?option=com_content&task=view&id=5509&Itemid=254.)

Ministerio de Industria y Comercio, 2010a, Negocios en el Paraguay—Elementos del Costo País: Ministerio de Industria y Comercio, 100 p. (Accessed July 13, 2010, at http://www.mic.gov.py/images/costo_pais_paraguay.pdf.)

Ministerio de Industria y Comercio, 2010b, Paraguay—MIC plans to install a biogás plant in the country: Ministerio de Industria y Comercio. (Accessed July 13, 2010, at http://www.mic.gov.py/index.php?option=com_content&task=view&id=737&Itemid=853.)

U.S. Central Intelligence Agency, 2010, Paraguay, in *The world factbook*: U.S. Central Intelligence Agency, May 27. (Accessed June 16, 2010, at <https://www.cia.gov/library/publications/the-world-factbook/geos/pa.html>.)

U.S. Department of State, 2010, Paraguay: U.S. Department of State background note, March 26. (Accessed June 16, 2010, at <http://www.state.gov/r/pa/ei/bgn/1841.htm>.)

U.S. Energy Information Administration, 2010, Paraguay energy profile: U.S. Energy Information Administration, May 18. (Accessed June 16, 2010, at http://www.eia.doe.gov/country/country_energy_data.cfm?fips=PA.)

World Bank, The, 2010, Paraguay country brief: The World Bank. (Accessed June 16, 2010, at http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/PARAGUAYEXTN/0,,contentMDK:20198432~pagePK:141137~piPK:141127~theSitePK:342833,00.html#Retos_20.)

World Steel Association, 2010, World steel in figures 2009: World Steel Association, 3 p. (Accessed July 9, 2010, at http://www.worldsteel.org/pdf_stats.php?type=steel&monthsBack=12&year=2009&month=13&period=latest.)

URUGUAY

Uruguay's gross domestic product (GDP) based on purchasing power parity amounted to \$44 billion in 2009 compared with \$42.3 billion in 2008. This represented a growth of 4%. Uruguay's strong GDP growth of 8.9% in 2008 decreased to 1.7% in 2009 owing to the 2008-09 global economic crisis. The sectors that contributed to the country's GDP were services (68%), industry (22.5%), and agriculture (9.5%). The mining sector accounted for less than 1% of the GDP. Unemployment increased to 7.9% in 2009 from 7.6% in 2008. Uruguay's economy was characterized by an export-oriented agricultural sector. Uruguay's FDI inflows decreased to \$1.14 billion in 2009 from \$1.84 billion in 2008 (Banco Central del Uruguay, 2010; Economic Commission for Latin America and the Caribbean, 2010; International Monetary Fund, 2010; U.S. Central Intelligence Agency, 2010; World Bank, The, 2010).

Uruguay continued to produce significant quantities of clays, gold, gypsum, iron ore, sand and gravel, semiprecious gemstones, steel, and stone. In 2009, exports were valued at \$6.3 billion and included such commodities as dairy products, dolomite, fish, gold, leather, meat, rice, and wool. Export partners included Brazil (18.7%), the United States (9.4%), China (8.5%), Argentina (7.3%), Germany (6.5%), Mexico (4.9%), and others (44.7%). Imports of such goods as chemicals, machinery, petroleum and derivatives, and vehicles were valued at \$6.6 billion in 2009. Import partners included Argentina (19.6%), Brazil (17.9%), China (11%), the United States (9.7%), Paraguay (6.5%), Nigeria (4.5%), and others (30.8%). Uruguay

had no proven crude oil or natural gas reserves but it does have substantial hydroelectric capacity (Banco Central del Uruguay, 2010; U.S. Central Intelligence Agency, 2010; U.S. Department of State, 2010).

Production

Data on mineral production are in table 1.

Structure of the Mineral Industry

The mineral industry of Uruguay was mostly owned by Uruguayan state-owned firms and privately owned companies (table 2).

Commodity Review

Metals

Gold.—Uruguay Mineral Exploration Inc. (UME) of Canada was the only gold producer in Uruguay. UME's San Gregorio gold mine produced 1,690 kilograms (kg) (54,320 troy ounces) in 2009 compared with 2,182 kg (90,668 troy ounces) in 2008; the decrease was owing to heavy rainfall and lower gold grades at San Gregorio's east-side mine. UME continued with its exploration program at the Arenal Deeps gold deposit, which was discovered in 2003, and expected to complete an additional 15,000 meters of drilling in early 2010. UME planned to change its name to Orosur Mining Inc., effective January 11, 2010 (table 1; Mbendi Information Services (Pty) Ltd., 2010; Uruguay Mineral Exploration Inc., 2010a, b).

Industrial Minerals

Cement.—Cementos Artigas S.A. (CASA) was owned by Cia. Uruguaya de Cemento Portland S.A. (Cemolins International SL of Spain, 50%, and Uniland International B.V. of the Netherlands, 50%). CASA was the only cement producer in Uruguay; it had a production capacity of 620,000 metric tons per year. The cement industry continued to be an important employer because of the ongoing construction in Uruguay's coastal cities. In 2009, CASA produced about the same amount of cement as in 2008 (table 1; Cementos Artigas S.A., 2010a, b).

Mineral Fuels

Natural Gas.—Two pipelines supplied Uruguay with natural gas from Argentina. The CR. Federico Slinger or Gasoducto del Litoral runs 20 kilometers (km) from Colon, Argentina, to Paysandu, Uruguay. The pipeline was constructed and operated by the Administración Nacional de Combustibles, Alcohol y Portland (ANCAP), which had an operating capacity of 138,800 cubic meters per day (4.9 million cubic feet per day). The Gasoducto Cruz del Sur (GCDS), which was operated by a consortium led by British Gas plc., extends 210 km from Argentina's natural gas grid to Montevideo and had an operating capacity of 5.1 million cubic meters per day (180 million cubic feet per day). The GCDS project also held a

concession for a possible pipeline extension of 870-km to Porto Alegre, Brazil. Argentina, however, had begun to decrease its natural gas exports to Chile and Uruguay because of natural gas output shortages. On the energy front, Argentina agreed to consider a plan that calls for the construction in Uruguay of a degasification plant to supply both countries with natural gas (Cortes, 2010; U.S. Energy Information Administration, 2010).

Petroleum.—The state-owned oil company ANCAP operated Uruguay's single oil refinery, La Teja, which had a production capacity of 50,000 bbl/d. To meet its oil consumption, Uruguay relied completely on imports, mostly from Venezuela, of about 49,000 bbl/d based on 2008 estimates. In 2009, ANCAP and its Venezuelan counterpart, *Petróleos de Venezuela S.A.*, signed a joint-venture agreement to explore for and produce heavy oil from Ayacucho Block 6, which is located in Venezuela's Orinoco heavy oil belt (*Petróleos de Venezuela S.A.*, 2010; U.S. Energy Information Administration, 2010).

YPF S.A. (a subsidiary of the Spanish oil firm Repsol YPF S.A.) won a bid to explore for oil along the coast of Punta del Este. Exploration in that project was to take place in the first quarter of 2010. YPF would have a 40% stake in the exploration project; the other partners were Petrobrás Uruguay (40%), which was a subsidiary of *Petróleo Brasileiro S.A.*, and Portugal's GALP Energia, SGPS, S.A. (20%). YPF would operate the deepwater exploratory Block 3 and Petrobrás would operate the shallow water exploratory Block 4, both of which are located along the coast of Punta del Este. YPF did not say how much money the company planned to invest in the project. BP p.l.c. and Petrobrás-controlled Pan American Energy were also part of the consortium (40%), and they were planning to invest \$98 million in the project by 2010 (Turner, 2010).

Outlook

Uruguay's economy is expected to continue to grow during 2010-12. This growth, however, is quite dependent on higher prices for its exports, stronger currency, lower international interest rates, economic stability within the MERCOSUR, and reliable supplies of imported natural gas and petroleum.

References Cited

- Banco Central del Uruguay, 2010, Reporte de estabilidad financiera 2009: Banco Central del Uruguay, April, 112 p. (Accessed July 19, 2010, at http://www.bcu.gub.uy/autoriza/sieras/ref_iv-09.pdf.)
- Cementos Artigas S.A., 2010a, Fabricación y comercialización de cementos: Cementos Artigas S.A. (Accessed July 19, 2010, at <http://www.cemartigas.com.uy/>.)
- Cementos Artigas S.A., 2010b, Manual de calidad: Cementos Artigas S.A., 80 p. (Accessed July 19, 2010, at [http://www.cemartigas.com.uy/Manual de Calidad.pdf](http://www.cemartigas.com.uy/Manual%20de%20Calidad.pdf).)
- Cortes, Raul, 2010, Uruguay, Argentina to cooperate on energy, environment: *LatinPetroleum Magazine*, June 3. (Accessed July 20, 2010, at <http://www.latinpetroleum.com/new/printarticle.php?aid=8309>.)
- Economic Commission for Latin America and the Caribbean, 2010, Foreign direct investment in Latin America and the Caribbean 2009 report: Economic Commission for Latin America and the Caribbean, May, 76 p. (Accessed July 9, 2010, at <http://www.eclac.cl/publicaciones/xml/2/39422/inversion2009i.pdf>.)
- International Monetary Fund, 2010, World economic outlook: International Monetary Fund, April, 216 p. (Accessed June 8, 2010, at <http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/text.pdf>.)

MBendi Information Services (Pty) Ltd., 2010, Gold mining in Uruguay—Overview: MBendi Information Services (Pty) Ltd. (Accessed July 19, 2010, at <http://www.mbendi.com/indy/ming/gold/sa/uy/p0005.htm#5>.)

Petróleos de Venezuela, S.A., 2010, PDVSA Petroamerica: Petróleos de Venezuela, S.A. (Accessed July 19, 2010, via <http://www.pdvs.com/>.)

Turner, Taos, 2010, South American oil majors team up to explore offshore Uruguay: Dow Jones Newswires, July 1. (Accessed July 20, 2010, at http://www.rigzone.com/news/article.asp?a_id=77850.)

Uruguay Mineral Exploration Inc., 2010a, Change of name from Uruguay Mineral Exploration Inc. to Orosur Mining Inc.: Uruguay Mineral Exploration Inc. (Accessed July 19, 2010, at http://phx.corporate-ir.net/phoenix.zhtml?c=144610&p=irol-news/Article_Print&ID=1372500&highlight=.)

Uruguay Mineral Exploration Inc., 2010b, San Gregorio gold mine: Uruguay Mineral Exploration Inc., February. (Accessed July 19, 2010, at http://www.uruguayminerals.com/operations/san_gregorio/overview/.)

U.S. Central Intelligence Agency, 2010, Uruguay, in *The world factbook*: U.S. Central Intelligence Agency, May 27. (Accessed July 16, 2010, at <https://www.cia.gov/library/publications/the-world-factbook/geos/uy.html>.)

U.S. Department of State, 2010, Uruguay: U.S. Department of State background note, April 8. (Accessed July 16, 2010, at <http://www.state.gov/p/wha/ci/uy/>.)

U.S. Energy Information Administration, 2010, Uruguay energy profile: U.S. Energy Information Administration, May 18. (Accessed July 16, 2010, at http://www.eia.doe.gov/country/country_energy_data.cfm?fips=UY.)

World Bank, The, 2010, Uruguay country brief: The World Bank. (Accessed June 16, 2010, at <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/URUGUAYEXTN/0,,contentMDK:22256166~pagePK:1497618~piPK:217854~theSitePK:331609,00.html>.)

TABLE 1
PARAGUAY AND URUGUAY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity	2005	2006	2007	2008	2009 ^e
PARAGUAY²					
Cement, hydraulic ^e thousand metric tons	550	600	600	600	600
Clays: ^e					
Kaolin	66,000	66,000	66,000	66,000	66,000
Other, unspecified	230,000	230,000	230,000	230,000	230,000
Gypsum ^e	4,500	4,500	4,500	4,500	4,500
Iron and steel:					
Pig iron	124,000 ³	136,000	148,000	145,420	145,500 ⁴
Semimanufactures ^e	51,500	51,500	51,500	45,120 ⁴	45,200
Steel, crude	101,000 ³	118,000	132,000	129,600	130,000
Lime ^e	90,000	90,000	90,000	90,000	90,000
Petroleum, refinery products: ^e					
Distillate fuel oil thousand 42-gallon barrels	600	600	600	600	600
Gasoline do.	660	660	660	660	660
Jet fuel do.	20	20	20	20	20
Kerosene do.	250	250	250	250	250
Liquefied petroleum gas do.	630	630	630	630	630
Residual fuel oil do.	460	460	460	460	460
Unspecified do.	40	40	40	40	40
Total do.	2,660	2,660	2,660	2,660	2,660
Pigments, mineral, natural, ocher ^e	250	250	250	250	250
Sand, including glass sand ^e	25,500	25,500	25,500	25,500	25,500
Stone: ^e					
Dimension thousand metric tons	70	70	70	70	70
Crushed and broken:					
Limestone, for cement and lime	16,000	16,000	16,000	16,000	16,000
Marble	750	750	750	750	750
Other	2,000	2,000	2,000	2,000	2,000
Talc, soapstone, pyrophyllite ^e	200	200	200	200	200
URUGUAY					
Aluminum, secondary ^e	45	45	45	45	45
Barite ^e	15	15	15	15	15
Bentonite	195 ⁵	515	515	515	515
Cement, hydraulic thousand metric tons	620	620	620	620	620
Clays, unspecified	70,209 ⁵	82,162	82,200	82,200	82,200
Coke, gashouse ^e	5,000	5,000	5,000	5,000	5,000
Feldspar	2,150 ⁵	2,470	2,500	2,500	2,500
Gemstones, semiprecious:					
Agate	10,166 ⁵	18,369	18,400	18,400	18,400
Amethyst	433 ⁵	468	500	500	500
Gold ⁶ kilograms	3,151	3,000	2,820	2,182	1,690

See footnotes at end of table.

TABLE 1—Continued
PARAGUAY AND URUGUAY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity	2005	2006	2007	2008	2009 ^e
URUGUAY—Continued					
Gypsum ^e thousand metric tons	1,130	1,150	1,150	1,150	1,150
Iron and steel:					
Iron ore	12,436 ⁵	15,525	15,525	15,525	15,525
Metal:					
Ferroalloys, electric-furnace ferrosilicon crust ^e	200	200	200	200	200
Semimanufactures ^e	32,000	32,000	32,000	28,000	28,000
Steel, crude	64,000 ³	57,000	71,000	69,700	70,000
Lime ^e	10,000	10,000	10,000	10,000	10,000
Petroleum, refinery products: ^e					
Distillate fuel oil thousand 42-gallon barrels	8,476 ^{4,7}	8,500	8,500	8,500	8,500
Gasoline do.	1,830 ^{4,7}	1,850	1,850	1,850	1,850
Kerosene do.	67 ^{4,7}	100	100	100	100
Liquefied petroleum gas do.	1,005 ^{4,7}	1,000	1,000	1,000	1,000
Residual fuel oil do.	3,650	3,650	3,650	3,650	3,650
Unspecified do.	201 ^{4,7}	200	200	200	200
Total do.	15,200	15,300	15,300	15,300	15,300
Sand and gravel:					
Sand, common thousand metric tons	1,666 ⁵	1,940	2,000	2,000	2,000
Gravel	71,711 ⁵	68,309	68,400	68,400	68,400
Stone:					
Flagstone	5,869 ⁵	5,900 ^e	6,000 ^e	6,000 ^e	6,000
Granite:					
Dimension	6,270 ⁵	7,643	7,650	7,650	7,650
Crushed and broken, alum schist thousand metric tons	699 ⁵	700 ^e	700 ^e	700 ^e	700
Other, rough stone ⁶	10,299	10,300 ^e	10,300 ^e	10,300 ^e	10,300
Diorite thousand metric tons	226 ⁵	169	170	170	170
Dolomite	11,159 ⁵	10,152	10,200	10,200	10,200
Limestone thousand metric tons	1,185	1,200 ^e	1,200 ^e	1,200 ^e	1,200
Marble, in blocks and broken: ^e					
Onyx	120	120	120	120	120
Other, unspecified	39 ^{4,5}	40	40	40	40
Marl	4,350 ⁵	6,320	6,400	6,400	6,400
Quartz	104 ⁵	150	150	150	150
Other, including ballast thousand metric tons	1,811 ⁵	1,800	2,000	2,000	2,000
Sulfur, elemental, byproduct ^e	3,000	3,000	3,000	3,000	3,000
Talc, soapstone, pryophyllite	1,131 ⁵	1,150	1,150	1,150	1,150
Tuff, tufa thousand metric tons	244 ⁵	250	250	250	250

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ¹Revised. do. Ditto. -- Zero.

¹Table includes data available through June 30, 2010.

²In addition to the commodities listed, construction materials (clays, miscellaneous rock, sand, and weathered tuffs) were presumably produced, but available information is inadequate to make reliable estimates of output.

³Source: International Iron and Steel Institute.

⁴Reported figure.

⁵Source: Dirección Nacional de Minería y Geología (Minerals Questionnaire 2008-09) and Cementos Artigas S.A., July 2010.

⁶Source: Uruguay Mineral Exploration Inc. Data are for fiscal year ending on March 31, 2010.

⁷Source: Administración Nacional de Combustible, Alcohol y Portland (ANCAP). Numbers were converted into 42-gallon barrels (bbl) from thousand cubic meters using the U.S. Energy Information Administration conversion factor of 1 cubic meter = 6.289812 bbl.

TABLE 2
PARAGUAY AND URUGUAY: STRUCTURE OF THE MINERAL INDUSTRIES IN 2009

Country and commodity		Major operating companies or deposits	Location or deposit name	Annual capacity
PARAGUAY				
Cement	thousand metric tons	Industria Nacional del Cemento (INC), 100%	Plantas Vallemi y Villeta	675
Petroleum, refinery products	thousand 42-gallon barrels	Petróleos Paraguayos (Petropar)	Villa Elisa refinery at Villa Elisa municipality	2,700
Steel	thousand metric tons	Consorcio Siderúrgico de Paraguay (Cerro Lorito, 67%, and Cooperativa de Trabajadores de ACEPAR, 33%)	ACEPAR steel mill at Villa Hayes	150
URUGUAY				
Cement	thousand metric tons	Cementos Artigas S.A. (Cia. Uruguaya de Cemento Portland S.A., 100%)	Mine and clinker plant in Lavalleja Department	620
Gold	kilograms	Uruguay Mineral Exploración Inc. (UME), 100%	Minas de Corrales Gold in Rivera Department	3,000
Iron and steel	thousand metric tons	Gerdau Laisa S.A.	Gerdau Laisa S.A.	70
Petroleum, refinery products	thousand 42-gallon barrels	Administración Nacional de Combustibles, Alcohol, y Portland (ANCAP)	La Teja oil refinery near Montevideo	18,000