



# 2014 Minerals Yearbook

---

## ALGERIA

---

# THE MINERAL INDUSTRY OF ALGERIA

By Mowafa Taib

Algeria was an important supplier of crude oil, helium, natural gas, and pumice (pozzolanic materials) to the world in 2014. The country was the world's fourth-ranked producer of helium after the United States, Canada, and Qatar and held 8.2 billion cubic meters of helium resources, including 1.8 billion cubic meters of proven reserves (Hamak, 2016). Algeria was the world's ninth-ranked producer, and Africa's leading producer, of natural gas and accounted for 2.4% of the world's output. The country was also the third-ranked crude oil producer in Africa after Angola and Nigeria and accounted for 1.6% of the world's crude oil and condensate production; it held 4.5 trillion cubic meters of proven natural gas reserves, which was 2.4% of the world's total proven reserves, and 12.2 billion barrels (Gbbbl) of proven crude oil reserves, which was 0.7% of the world's total reserves. Algeria held the world's third largest resources of shale gas (estimated by the U.S. Energy Information Administration to be 20 trillion cubic meters) and 5.7 Gbbbl of shale oil (U.S. Energy Information Administration, 2014; BP p.l.c., 2015, p. 6, 8, 20, 22; Organization of the Petroleum Exporting Countries, 2015, p. 100).

Nonfuel mineral production in Algeria included iron and steel; small quantities of gold and silver; and secondary aluminum, copper, lead, and zinc. The country produced a wide variety of such industrial mineral commodities as barite, bentonite, cement, common clay, crushed stone, diatomite, dolomite, feldspar, fertilizer, gypsum, kaolin, lime, limestone, marble, nitrogen, perlite, phosphate rock, pozzolan, rhyolite, salt, sand and gravel, sulfur, and tuff. Algeria was responsible for 0.7% of the world's phosphate rock output, 1.9% of the world's pumice (pozzolan) output, and 0.9% of the world's gypsum output in 2014 (table 1; Crangle, 2016a, b; Jasinski, 2016).

## Minerals in the National Economy

Algeria's gross domestic product (GDP) increased in real terms by 3.8% in 2014 compared with an increase of 2.8% (revised) in 2013. The value of hydrocarbon sector activity, which accounted for 27.1% of the GDP in 2014 compared with 29.8% in 2013, decreased in real terms by 0.6% compared with a decrease of 5.5% in 2013 and 4.0% in 2012. The decrease in value was the result of decreased volumes of crude oil, condensate, and natural gas output and exports and a slightly lower crude oil price, which, for Algeria's Saharan Blend, was \$99.68 per barrel in 2014 compared with \$109.38 per barrel in 2013 (Banque d'Algérie, 2015, p. 150; International Monetary Fund, 2015, p. 173; Organization of the Petroleum Exporting Countries, 2015, p. 82).

Employment in the state-owned mining companies increased, by 2.8% to 30,255 people in 2014 from 29,424 people in 2011. The number of employees in private mining companies increased slightly to 20,427 from 20,406 in 2013. State-owned oil company Sonatrach employed 60,921 people in 2014 compared with 50,160 in 2013 (Bouarroudj, M.T., Acting

General Director of Mines, Ministry of Industry and Mines, written commun., August 2, 2015; Sonatrach, 2015a).

## Government Policies and Programs

In February, the Government issued a new mining law, law No. 14 of February 24, 2014, which replaces ordinance No. 07–02 of March 1, 2007, which had amended and supplemented the old law. The Mining Law guarantees parity for all investors, allows separate surface and underground mine tenure; ensures that disputes can be appealed to international arbitrators, gives incentives for importing equipment for mining operations, and provides custom-tariff exemptions and rebates on mineral extraction royalties. The new law, however, does not give priority to state-owned companies over private companies in issuing mining permits as was the case with the old law. The Government continued its golden share policy, which was initiated in 2010, concerning foreign investment in the country, but it was expected that this provision would be removed in the near future. The policy gives the Government majority ownership (that is, at least a 51% share) in the local operations of new companies operating in Algeria as well as a seat on the company's board of directors but not voting rights (EY, 2015, p. 11).

In 2014, the administration of the Algerian mining sector was transferred to the Ministry of Industry from the Ministry of Energy. Thus, the names of the two ministries were changed to the Ministry of Energy and the Ministry of Industry and Mining (MIM). Subsequently, the MIM became responsible for regulating geologic and mining activities through its respective agencies.

The law No. 14 of February 24 assigned the Agence du Service Géologique de l'Algérie [Geological Survey Agency of Algeria (ASGA)], which had been the Office National de la Recherche Géologique et Minière [National Office of Geologic and Mining Research (ORGM)], to be in charge of the country's geologic activities and research. Agence Nationale des Activités Minières [National Agency for Mining Activity (ANAM)] was charged with issuing mining and quarrying permits and promoting investment opportunities in the mining sector. According to the Directorate General of Mines of the Ministry of Industry and Mines, Algeria had 1,900 valid mining permits and 1,370 mining operations that produced 30 mineral commodities in 2014. Eighty percent of the mining operations were private and 20% were either state-owned or partnerships between the state and private companies (Agence Nationale des Activités Minières, 2015; National Agency of Investment Development, 2015, p. 15).

The hydrocarbon sector is regulated by ordinance No. 06–10 of July 29, 2006, which is a supplement to law No. 05–07 of April 28, 2005. The ordinance grants Sonatrach 51% ownership of all hydrocarbon projects in the country. Environmental laws applicable to the mineral industry include

law No. 03–10 of July 19, 2003, and associated decrees and law No. 05–12 of September 4, 2005.

To increase hydrocarbon production, which had been declining since 2005, the Government attempted to attract participation of international oil companies by introducing amendments to the hydrocarbon law. Under the revised law (law No. 13-01 of February 20, 2013, which amended Hydrocarbon Law No. 05-07 of April 28, 2005), taxes are assessed on profits rather than on revenue; this change is intended to make exploration of smaller fields more viable. The Government had been promoting economic diversity by planning major mineral industry projects, such as aluminum and steel mills and ammonia and other fertilizer plants. An important challenge for the Government was to be able to produce sufficient quantities of natural gas for such projects while maintaining current levels of natural gas exports and meeting the increased domestic demand for natural gas for electric power generation and other types of consumption. The Government planned to meet 20% of Europe's natural gas demand (Nield, 2014; EY, 2015, p. 20, 22).

The Government amendments to the hydrocarbon law are also intended to give international oil companies the incentive to develop the country's vast nonconventional gas resources, such as shale gas reserves, which were estimated by the Government to be 27 trillion cubic meters, which is six times greater than the country's conventional gas reserves of 4.5 trillion cubic meters (Baxter, 2014).

## Production

Notable increases in Algeria's mineral commodity production in 2014 compared with that of 2013 included the increase in kaolin production, by 326%; ammonia and urea, by 95% each; barite, by 88%; marble blocks, by 78%; calcite, by 25%; phosphate rock, by 23%; bentonite, cement, and construction sand, by 14% each; limestone, by 13%; and zinc metal, by 10%. Notable decreases in mineral commodity production in 2014 compared with that of 2013 included the decrease in gold output, by 39%; silver, by 41%; pozzolan, by 19%; crushed marble, iron ore and methanol, by 15% each; feldspar, by 11%; and dry natural gas, by 4% (table 1).

## Structure of the Mineral Industry

Algeria's hydrocarbon sector operations were conducted by Sonatrach S.p.A. and several international oil companies, which were working in Algeria under production-sharing agreements with Sonatrach. In 2014, Sonatrach was responsible for 84%, 77%, and 51% of natural gas, condensate, and crude oil production, respectively, and the remainder was produced by international oil companies, including Anadarko Petroleum Corp. of the United States; BP Algeria, which was a subsidiary of BP p.l.c. of the United Kingdom; Compañía Española de Petróleos, S.A.U. (CEPSA) of Spain; Eni Algeria Production BV of Italy; Repsol YPF S.A. of Spain; Maersk Olie og Gas AS of Denmark; Statoil ASA of Norway; Talisman Energy Inc. of Canada; and Total Algeria S.p.A. of France (Sonatrach S.p.A., 2015a; U.S. Energy Information Administration, 2014).

Sonatrach was the leading oil company in Africa and the 12th-ranked oil company in the world in terms of the volume

of its hydrocarbon production. The state-owned company carried out diverse operations in mining and the extraction of crude oil and natural gas; it was responsible for the exploration, production, pipeline transportation, and marketing of hydrocarbons and their byproducts. Sonatrach had 154 affiliates and subsidiaries, 105 of which were located in Algeria and 49 of which were located in such countries as Argentina, Mali, Niger, Peru, and Spain (table 2; Sonatrach S.p.A., 2015b).

The Government-owned *Entreprise Nationale de Fer et du Phosphate* (Ferphos Group S.p.A.) managed Algeria's production of iron ore, phosphate rock, pozzolan, and other building materials. Its subsidiaries included *Société des Mines de Phosphates S.p.A.* (SOMIPHOS), which was the state's phosphate rock mining company; *Société des Mines de Fer d'Algérie S.p.A.* (SOMIFER), which was the iron ore mining company; and *Société des Pouzzolanes et des Matériaux de Construction S.p.A.* (SPMC), which produced pozzolan and other building materials (*Agence Nationale du Patrimoine Minier*, 2013).

The state-owned industrial group Manal S.p.A. [also known as *Société de Manadjem El Djazair* (Algerian Mines Co.)] was created by Presidential Decree No. 11–85 of February 16, 2011. Manal replaced *Société de Gestion des Participations de Mines de l'Etat* (SOMINES), which had been in charge of the assets of five state-owned mining companies, including *Entreprise Nationale d'Exploitation des Carrières de Sels Industriels et Domestiques et Commercialisation des Sels S.p.A.* (ENASEL), *Entreprise Nationale du Marbre S.p.A.*, *Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles S.p.A.* (ENOF), and Ferphos. Manal assumed responsibility for the development, exploration, exploitation, distribution, and marketing of the country's nonfuel mineral resources. Manal also oversaw financial, industrial, and partnership aspects of mining operations in Algeria (Ministry of Energy, 2014).

## Mineral Trade

In 2014, Algeria's exports decreased in value by 7% to \$60.0 billion from \$64.7 billion (revised) in 2013. The value of hydrocarbon exports, which comprised 97% of the country's total exports, decreased to \$58.4 billion from \$63.3 billion in 2013, which included 184.5 million barrels (Mbbbl) of crude oil valued at \$18.3 billion; 132.0 Mbbbl of refinery products valued at \$13.2 billion; 78.6 Mbbbl of liquefied petroleum gas (LPG) valued at \$5.2 billion; 42.9 Mbbbl of condensate valued at \$3.9 billion; 28.5 million metric tons (Mt) of liquefied natural gas (LNG) valued at \$7.4 billion, and 27.4 billion cubic meters of natural gas valued at \$10.3 billion. Other nonfuel mineral exports included ammonia (valued at \$304 million), phosphate rock (\$97 million), helium and hydrogen (\$39 million each), and zinc (\$15 million). In 2014, crude oil exports accounted for 31.4% of Algeria's total exports; refined petroleum products, 22.6%; natural gas, 17.7%; LNG, 12.7%; LPG, 8.9%; and condensate, 6.7% (*Banque d'Algérie*, 2015, p. 166, 167).

Algeria's total imports increased in value to \$59.7 billion in 2014 from \$55.0 billion in 2013. The top import categories were motor vehicles and refined petroleum products, which were valued at about \$3.8 billion each. Imports of semifinished and finished steel products decreased in value to about \$1.9 billion

in 2014 from \$2.1 billion in 2013 but increased in volume to 6.0 Mt in 2014 from 5.1 Mt in 2013 and about 4.7 Mt in 2012. In 2014, Algeria was the world's seventh-ranked net importer of steel products. The country's cement imports were estimated to be 5 Mt (Banque d'Algérie, 2015, p. 166–167; World Steel Association, 2015a, p. 57, 2015b, p. 27).

U.S. exports to Algeria increased in value by about 42% to \$2.62 billion in 2014 from about \$1.85 billion in 2013. The export categories included industrial engines (\$1 billion), generators (\$532 million), drilling and oilfield equipment (\$115 million), fuel oil (\$52 million), and other petroleum products (\$51 million). The value of U.S. imports from Algeria has been decreasing since 2008 when they peaked at about \$19.4 billion. In 2014, the value of U.S. imports from Algeria decreased by about 4% to \$4.6 billion in 2014 from \$4.8 billion in 2013. The value of U.S. crude oil imports from Algeria decreased to \$252 million in 2014 from \$4.2 billion in 2013 and a peak of \$11.5 billion in 2007; imports of LPG decreased to \$69 million from \$160 million in 2013 and a peak of \$4.7 billion in 2008; and imports of petroleum products decreased to about \$100 million from \$122 million in 2013. Fuel oil imports, however, increased to \$4.2 billion in 2014 from \$3.3 billion in 2013. The decrease in U.S. hydrocarbon imports from Algeria followed the general trend of decreased global petroleum exports to the United States as a result of an increase in U.S. domestic production (United Nations Statistics Division, 2015; U.S. Census Bureau, 2015a, b).

## Commodity Review

### Metals

**Gold.**—Entreprise d'Exploitation des Mines d'Or S.p.A. (ENOR) was the sole gold producer in the country, producing from the Amesmesa Mine in southwest of Tamanrasset Province in southern Algeria. Gold production from the mine has continued to decrease for the past 5 years. Gold output from the Amesmesa Mine decreased to 85 kilograms (kg) in 2014 from 140 kg in 2013 and the peak production of about 1,000 kg in 2009. The decrease was attributed to lower grades of ore. In 2014, ENOR called for interested companies to conduct an economic and technical feasibility study to develop gold deposits at the Amesmesa, the Tirek, and the ZITA (an intermediate zone) areas but no company was selected as of yearend 2014 (table 1; Entreprise d'Exploitation des Mines d'Or S.p.A., 2014).

Cancor Mines Inc. of Canada, which had four exploration permits in Algeria for copper, gold, and silver was located 2,000 kilometers (km) south of Algiers in the Hoggar region. No exploration activities took place since the company suspended operations in 2012 owing to political and military activity in neighboring Mali. In February, Cancor signed a binding merger agreement with Yorbeau Resources Inc. of Canada and became a wholly owned subsidiary of Yorbeau (Cancor Mines Inc., 2015).

**Iron Ore and Iron and Steel.**—Algeria's iron ore production decreased by 15% to about 911,000 metric tons (t) in 2014 from about 1.1 Mt in 2013. Crude steel production decreased slightly to 415,000 t in 2014 from 440,000 t in 2013. The decrease in iron ore and crude steel production in recent years was attributed

to disputes between the operating company, the Government, and worker's unions. Algeria was the eighth-ranked net importer of steel in the world in 2014; it imported about 6.0 Mt of steel products, including 4.5 Mt of long products, 956,000 t of flat products, and 323,000 t of tubular products to meet the increased demand for steel products in the domestic market. The country's apparent consumption of crude steel equivalent has been steadily increasing in the last decade; it was estimated to be 6.9 Mt in 2014 or 176 kg per capita compared with 6.3 Mt or 164 kg per capita in 2013 and 5.2 Mt or 138 kg per capita in 2012 (table 1; World Steel Association, 2015a, p. 2, 57, 67, 72, 77, 80, 83).

In 2014, ArcelorMittal Tebessa S.p.A continued to operate the Boukhadra and Ouenza iron ore mines in Tebessa Province, and ArcelorMittal Annaba S.p.A operated the El Hadjar steel plant in Annaba. In 2013, ArcelorMittal signed an agreement with Enterprise Nationale de Sidérurgie (Group Sider) to invest \$763 million for the development of the steel complex in Annaba and the iron ore mines in Boukhadra and Ouenza. Under the agreement, ArcelorMittal of Luxembourg reduced its stake in both ArcelorMittal Annaba S.p.A. and ArcelorMittal Tebessa S.p.A. to 49% from 70%. Ferphos purchased 21% of ArcelorMittal's share in ArcelorMittal Tebessa and Group Sider acquired 21% of ArcelorMittal's share in ArcelorMittal Annaba (table 2; ArcelorMittal, 2013).

Construction at the \$2 billion Algerian-Qatari joint-venture steel complex was expected to begin in 2015 and to be completed in 2017. The joint-venture partners Qatar International Co. of Qatar, Group Sider, and Fonds National de l'Investissement planned to build a 4-million-metric-ton-per-year (Mt/yr) steel complex in the Bellara Industrial Zone, which is located in Jijel Province about 360 km east of Algiers. Ownership in the new project would follow Algeria's new partnership rules, which give the Government a 51% share and Qatar International a 49% share. The Government's share would be divided equally between Group Sider and Fonds National de l'Investissement. The complex would be built in two stages, and a 2-Mt/yr-capacity direct-reduced-iron-based steelworks, including 600,000 metric tons per year (t/yr) of crude steel capacity, would be added at each stage (Med Africa Times, 2015).

Tosyali Industrie du Fer et de l'acier Algérie (Tosyali), which was owned by Tosyali Holding of Turkey, began production in 2013 at its new iron and steel plant in Oran. The \$750 million plant had the capacity to produce 1.6 Mt/yr of liquid steel, which used 1.4 Mt/yr of domestic and imported scrap iron and steel to produce steel billets and rebar. Tosyali signed a contract with Sinosteel Corp. of China to expand capacity at its steel plant in Algeria to 2.3 Mt/yr (Tosyali Holding, 2015).

In 2014, the Government created Société Nationale du Fer et de l'Acier [the National Iron and Steel Co. (Feraal)] to explore for and develop iron ore deposits at Gara Djebilet and Mecheri Abdelaziz, which are located in southwestern Algeria near the border with Mauritania and hold an estimated 2.5 billion metric tons (Gt) of iron ore. Feraal was owned by Sonatrach (55% interest), Manal (25% interest), and Sider (20% interest). The iron ore deposits at Gara Djebilet are located in the Reguibat Shield, which extends to Mauritania, and hosts an estimated 1.5 Gt of iron ore grading 56% iron.

The Mecheri Abdelaziz deposit is located east of Gara Djebilet and holds an estimated 700 Mt of iron ore grading 52% iron (African Manager, 2014; Algerian Press Service, 2015b).

**Lead and Zinc.**—Western Mediterranean Zinc S.p.A. (WMZ) was a joint venture of Terramin Australia Ltd. (65% interest), state-owned ENOF (32.5% interest), and ORGM (2.5% interest). The joint venture was formed to develop the Tala Hamza lead and zinc project on the 125-square-kilometer Oued Amizour exploration permit, which is located 15 km southwest of the Port of Bejaia in northeastern Algeria. In 2013, Terramin entered into a technical cooperation agreement with China Nonferrous Metal Mining Co. Ltd (CNMC) Foreign Engineering and Construction Co. Ltd. CNMC undertook a technical and financial assessment of mining methods for the Tala Hamza deposit and presented its findings to ENOF and the ORGM. The joint-venture parties planned to discuss the results of the revised definitive feasibility study, which was completed in 2014, to determine a preferred mining method that would be economically and technically viable, based on preliminary modeling (Terramin Australia Ltd., 2015).

As of yearend 2014, the total resource (measured, indicated, and inferred) at the Tala Hamza deposit was 68.6 Mt grading 1.2% lead and 4.6% zinc at a 2.5% zinc cutoff grade (Terramin Australia Ltd., 2014). The results of an earlier definitive feasibility study completed by Terramin in 2010 indicated that a project could be developed on the Tala Hamza deposit using block cave and conventional processing. The proposed project would have a production capacity of 2 Mt/yr of ore, which would be processed to produce 100,000 t/yr of zinc in concentrate and 25,000 t/yr of lead in concentrate in the first phase. In the second phase, production would increase to 4 Mt/yr of ore to produce 310,000 t/yr of zinc in concentrate grading 53% zinc at an 89% recovery rate and 60,000 t/yr of lead in concentrate grading 64% lead at a 69% recovery rate (Terramin Australia Ltd., 2010, 2015).

### **Industrial Minerals**

**Barite, Bentonite, and Kaolin.**—Barite production increased by 88% to 56,829 t in 2014 from 30,245 t in 2013. The increase was attributed to producers responding to increased domestic demand. Société des Mines de Baryte d'Algérie S.p.A. (SOMIBAR) produced barite from the Amin Mimoun Mine in Khenchela Province, the Boucaid Mine in Tissemsilt Province, and the Mellal Mine in Tlemcen Province. Production from the newly established company, Société Nationale de la Baryte S.p.A. (Barytal), was expected in 2017. Barytal was a joint venture of Sonatrach (60% interest) and Manal (40% interest) created to develop the Draissa barite deposit, which is located in Bechar Province in western Algeria. Barytal was expected to have the capacity to produce 100,000 t/yr of barite (table 1, 2; Bariyo and O'Driscoll, 2013).

ENOF operated 18 mines and quarries and produced nonferrous metal mineral commodities through 6 subsidiaries. These subsidiaries were La Société des Feldspaths d'Algérie (SOFELD), Société Algérienne des Granulats S.p.A. (ALGRAN), Société des Bentonites d'Algérie S.p.A. (BENTAL), Société des Diatomites d'Algérie (DIATAL),

Société des Kaolins d'Algérie S.p.A. (SOALKA), and SOMIBAR (table 2).

BENTAL produced 31,510 t of bentonite from the Maghnia Mine in Tlemcen Province and the M'Zila deposit in Mostagnem Province in 2014 compared with 27,668 t in 2013 (Entreprise d'Exploitation des Mines d'Or S.p.A., 2014). SOALKA increased its kaolin output by 326% to 181,068 t in 2014 from 42,504 t in 2013. The increase was a rebound of production to that of previous years at the El Milia and the Jebel Debbagh Mines. SOALKA was a joint venture of Federal White Cement Ltd. of Canada (63% interest) and ENOF (37% interest) (Société des Kaolins d'Algérie S.p.A., 2015).

**Cement.**—Consumption of cement in Algeria was estimated to have increased to about 30 Mt in 2014 owing to increased construction activities in general and in the housing sector in particular. The Government planned to expand its residential building capacity to 120,000 units per year from 80,000 units per year. New investments in the cement sector and expansion plans for existing plants were expected to increase cement output in Algeria to 36.6 Mt/yr by 2016 (International Cement Review, 2015, p. 30–31).

Cement production in Algeria increased by 14% in 2014 to an estimated 21.0 Mt from 18.5 Mt in 2013. The increase was attributed to the increase in capacity from commissioning greenfield plants as well as expansion projects at existing plants. Cement consumption, on the other hand, was estimated to be about 27 Mt in 2014 compared with about 23 Mt in 2013, and it was expected to further increase to 33 Mt in 2016. Thus, cement imports, which were estimated to have exceeded 5.7 Mt in 2014, were expected to decrease significantly to 3 Mt by 2015 and to zero by 2016 as more than 10 Mt/yr of added capacity would be in operation by yearend 2016 (International Cement Review, 2015, p. 30–31).

Lafarge Group of France was a significant cement producer in Algeria. The company owned and operated Lafarge Ciment de M'Sila and Lafarge Ciment d'Oggaz cement plants and two industrial aggregates facilities. The two plants had a combined production capacity of 9.4 Mt/yr of cement. The company claimed a 36% share of the Algerian cement market in 2014. Lafarge's output of cement increased slightly (0.7%) in 2014 compared with that of 2013. Lafarge was expanding its production capacity by an additional 2.7 Mt/yr by 2016 (Lafarge S.A., 2015, p. 40).

The state-owned Groupe Industriel des Ciments d'Algérie (GICA), which had 12 subsidiaries in the county and produced 11.5 Mt of cement in 2014, sought to increase its share of the cement market by expanding the capacities of its existing plants. GICA was ramping up its cement production capacity to 18.5 Mt/yr from 11.5 Mt/yr by 2017 (International Cement Review, 2015, p. 30–31).

**Nitrogen.**—Fertial S.p.A, which was a joint venture of Grupo Villar Mir of Spain (66% interest) and Asmidal Group (34% interest), was the sole producer of ammonia in Algeria for most of 2013. Fertial had the capacity to produce 660,000 t/yr and 330,000 t/yr of ammonia at its plants in Arzew and Annaba, respectively. Eighty-six percent of Fertial's output was exported mainly to France, Germany, Morocco, Portugal, Spain, and Turkey

(table 2; Arab Fertilizer Association, 2015, p. 35, 38; Fertial, S.p.A., 2016).

Algeria Oman Fertilizer Co. (Sharika El Djazairia El Omania lil Asmida S.p.A.), which was a joint venture of Suhail Bahwan Group (Holding) L.L.C. of Oman (51% interest) and Sonatrach (49% interest), completed the construction of a nitrogen fertilizer plant in the Arzew Industrial Zone near Oran in northwestern Algeria. The project, which had the capacity to produce 1.5 Mt/yr of ammonia and 2.6 Mt/yr of urea and cost \$2.4 billion to build, was commissioned during 2014, and production began after the amendment of the agreement between Sonatrach and Suhail Bahwan Group on natural gas allocations (Suhail Bahwan Group LLC, 2015).

Sorfert Algeria, which was a joint venture of OCI N.V. of the Netherlands (51% interest) and Sonatrach (49% interest), had its first full year of production in 2014. Sorfert produced 1.0 Mt of ammonia and about 1.3 Mt of urea at its fertilizer complex in the Arzew Industrial Zone that included two plants—a 1 Mt/yr-capacity anhydrous ammonia plant and a 1.4-Mt/yr-capacity granulated urea plant. Sorfert was expected to supply 1.1 Mt/yr of urea to the domestic market and 700,000 t/yr of ammonia for export, mainly to Western Europe (Arab Fertilizer Association, 2015, p. 35, 40; OCI N.V., 2015).

In 2014, the Government signed an energy and investment contract with Fertiberia S.A., which was owned by Grupo Villar Mir of Spain, to reactivate the construction of the El Bahia fertilizer plant at Arzew that had been proposed in 2007. The \$1.5 billion plant was expected to produce 1.1 Mt/yr of ammonia for export and would require 3 to 4 years to complete (ICIS News, 2014).

**Phosphate Rock.**—Despite the country's large reserves of 2.2 Gt of phosphate rock, Algeria's production of phosphate rock and phosphate-based fertilizers has been only 1.5 Mt/yr in recent years. Phosphate rock production, which was carried out solely by SOMIPHOS, increased by 23% to 1.42 Mt in 2014 from about 1.15 Mt in 2013 and most (98%) of the output was exported. Fertial produced 100,000 t of compound fertilizer (NPK) and 16,000 t of triple superphosphate. The Government planned to increase phosphate rock production to 6 Mt/yr by 2018 and to 10 Mt/yr by 2020 and has invited fertilizer manufacturers from India to carry out feasibility studies for building a phosphate-based fertilizer plant in Algeria similar to what these investors built in neighboring Morocco and Tunisia (Algerian Press Service, 2015a; Arab Fertilizer Association, 2015, p. 57, 69; Jasinski, 2015).

### **Mineral Fuels**

**Natural Gas and Petroleum.**—Algeria's production of crude oil and condensate decreased by 3.2% in 2014 compared with an increase of 3.2% in 2013. Gross natural gas output decreased by 27% to 130.9 billion cubic meters in 2014 from 179.5 billion cubic meters in 2013. Production of marketed (dry) natural gas increased, by 2.2% to 83.3 billion cubic meters in 2014 from 81.5 billion cubic meters in 2013. The number of producing wells in Algeria decreased to 2,042 in 2014 from 2,061 in 2013 and that of the completed wells increased to 215 in 2014 from

191 in 2013. Thirty-two hydrocarbon discoveries were made in Algeria in 2014, 30 of which were discovered by Sonatrach, and 2, by international oil companies. Seventeen discoveries were in the natural gas sector, and 15 discoveries were in the oil sector (Organization of Arab Petroleum Exporting Countries, 2015, p. 20, 22; Organization of the Petroleum Exporting Countries, 2015, p. 25–26, 96, Sonatrach S.p.A., 2015a).

In September, the Government, through Sonatrach, carried out an oil and gas licensing round and offered 33 blocks situated in four sedimentary basins with good prospective for shale oil and shale gas. Sonatrach, however, awarded only four blocks in the bidding round. Sonatrach planned to begin initial shale gas production in 2022 and had set a production target of 28.3 million cubic meters per day by 2025 based on favorable market conditions and the acquisition of production technology. Opposition to the Government's plan to exploit shale gas and oil resources may have made these resources less attractive to international investors (Baxter, 2014; Aloulou, 2015).

Algeria's installed refining capacity of crude oil and condensate remained at 652,500 barrels per day (bbl/d) in 2014 after it increased by 58,800 bbl/d in 2013 from 592,000 bbl/d in 2012. The increase in capacity in 2013 was the result of expansions at the existing five refineries. The Government was building four new 100,000-bbl/d-capacity refineries at Biskra, Ghardaia, Hassi Messaoud, and Tairt. Construction of the new refineries and expansion projects at the existing refineries were expected to be completed by 2018 (U.S. Energy Information Administration, 2014).

Sonatrach planned to invest \$90 billion from 2015 to 2019 in the crude oil and natural gas sectors to reverse the decline in production despite the decline of oil prices in global markets. The investment would be directed toward increasing offshore oil and gas reserves by raising exploration concessions to 79 by 2014 from 57 in 2012, by increasing the country's oil refining capacity by installing five new oil refineries, as well as by developing nonconventional natural gas resources (Oil & Gas 360, 2014; Nield, 2014).

### **Outlook**

The mineral industry of Algeria is expected to grow over the next 5 years to help offset the negative effects of reduced petroleum commodity prices in the country and to diversify the country's exports, which have been dominated by hydrocarbons. The Government's development plan from 2015 to 2019 provides funding for the implementation of important projects in the building, road construction, and transportation sectors. Production of cement, iron and steel, and exports of nitrogen fertilizers, phosphate rock, phosphate-based fertilizers, and zinc are expected to increase in the short and medium terms following the completion of projects that are currently under construction or in the feasibility stage. The Government is talking to international investors to develop the country's vast nonfuel mineral resources. Some investors, however, have been cautious, in part because of the golden share policy, which gives the Government a majority stake in all new projects (Nield, 2014).

## References Cited

- African Manager, 2014, National Society for Iron and Steel created in Algeria: African Manager Web page. (Accessed October 20, 2014, at [http://www.africanmanager.com/site\\_eng/detail\\_article.php?art\\_id=21109](http://www.africanmanager.com/site_eng/detail_article.php?art_id=21109).)
- Agence Nationale des Activités Minier, 2015, Promotion: Agence Nationale des Activités Minier. (Accessed December 15, 2015, at [http://www.anam.gov.dz/promotion/index.php?lang=\\_fr](http://www.anam.gov.dz/promotion/index.php?lang=_fr).)
- Agence Nationale du Patrimoine Minier, 2013, Mining law and related regulations: Agence Nationale du Patrimoine Minier Web page. (Accessed January 14, 2014, at [http://www.anpm.gov.dz/investisseurs/index.php?lang=\\_ang](http://www.anpm.gov.dz/investisseurs/index.php?lang=_ang).)
- Algerian Press Service, 2015a, Mining sector—Discussions ongoing for several partnership projects: Algerian Press Service, November 12. (Accessed April 25, 2016, at <http://www.aps.dz/en/economy/9355-mining-sector-discussions-ongoing-for-several-partnership-projects>.)
- Algerian Press Service, 2015b, Mining—Feasibility study of Gara Djebilet deposit project launched: Algerian Press Service, December 4. (Accessed December 30, 2015, at <http://www.aps.dz/en/economy/9682-mining-feasibility-study-of-gara-djebilet-deposit-project-launched>.)
- Aloulou, Faouzi, 2015, Today in energy—Algeria is reforming its laws to attract foreign investment in hydrocarbons: U.S. Energy Information Administration, August 4. (Accessed December 10, 2015, at <https://www.eia.gov/todayinenergy/detail.cfm?id=22352>.)
- Arab Fertilizer Association, 2015, Fertilizer statistical yearbook 2014: Cairo, Egypt, Arab Fertilizer Association, 92 p.
- ArcelorMittal, 2013, Strategic agreement between ArcelorMittal and Sider finalized for US\$763m investment in Algeria: ArcelorMittal press release, September 29. (Accessed October 9, 2014, at <http://corporate.arcelormittal.com/news-and-media/press-releases/2013/sept/29-09-2013?lang=english>.)
- Banque d'Algérie, 2015, Rapport 2014—Evolution économie et Monétaire en Algérie: Banque d'Algérie, 168 p. (Accessed December 14, 2015, at [http://www.bank-of-algeria.dz/pdf/rapportba\\_2014/rapportannuel\\_ba2014.pdf](http://www.bank-of-algeria.dz/pdf/rapportba_2014/rapportannuel_ba2014.pdf).)
- Bariyo, A., and O'Driscoll, M., 2013, Barite JV established to develop Draïssa deposit for drilling grades: Industrial Minerals, December 20. (Accessed October 15, 2014, at <http://www.indmin.com/Article/3291592/Issue/90596/Barite-jv-established-to-develop-Draïssa-deposit-for-drilling-grades.html>.)
- Baxter, Kevin, 2014, Algeria sets 2022 shale target: MEED, October 13. (Accessed October 14, 2014, at <http://www.meed.com/sectors/oil-and-gas/algeria-sets-2022-shale-target/3196207.article>.)
- BP p.l.c., 2015, BP statistical review of world energy—June: London, United Kingdom, BP p.l.c., 45 p. (Accessed December 28, 2015, at <http://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf>.)
- Cancor Mines Inc., 2015, Properties: Cancor Mines Inc. (Accessed November 28, 2015, at <http://www.cancor.ca/en/properties.html>.)
- Crangle, R.D., Jr., 2016a, Gypsum: U.S. Geological Survey Mineral Commodity Summaries 2016, p. 76–77.
- Crangle, R.D., Jr., 2016b, Pumicite and pumicite: U.S. Geological Survey Mineral Commodity Summaries 2016, p. 130–131.
- Entreprise d'Exploitation des Mines d'Or S.p.A., 2014, Feasibility study: Entreprise d'Exploitation des Mines d'Or S.p.A., 2 p. (Accessed October 6, 2014, at <http://www.enor.dz/documents/avis-appel-offre-english.pdf>.)
- EY, 2015, Algeria—A key player in North Africa: 2015 Pan-African oil and gas workshop, Paris, France, February 2015, Presentation. (Accessed December 7, 2016, at [http://www.ey.com/Publication/vwLUAssets/EY-algeria-a-key-player-in-north-africa/\\$FILE/EY-algeria-a-key-player-in-north-africa.pdf](http://www.ey.com/Publication/vwLUAssets/EY-algeria-a-key-player-in-north-africa/$FILE/EY-algeria-a-key-player-in-north-africa.pdf).)
- Fertial, S.p.A., 2016, L'Export: Fertial, S.p.A. (Accessed April 25, 2016, at <http://www.fertial-dz.com/societe>.)
- Hamak, J.E., 2016, Helium: U.S. Geological Survey Mineral Commodity Summaries 2016, p. 78–79.
- ICIS News, 2014, Plan for \$1.5 billion ammonia plant in Algeria back on track: ICIS News, May 12. (Accessed March 27, 2015, at <http://www.icis.com/Articles/2014/05/12/9779902/plans-for-1.5bn-ammonia-plant-in-algeria-back-on-track-gas.html>.)
- International Cement Review, 2015, Algeria, in *The global cement report* (11th ed.): Dorking, United Kingdom, International Cement Review, 386 p.
- International Monetary Fund, 2015, World economic outlook: International Monetary Fund, October, 2015. (Accessed April 26, 2016, at <http://www.imf.org/external/pubs/ft/weo/2015/02/pdf/text.pdf>.)
- Jasinski, S.M., 2016, Phosphate rock: U.S. Geological Survey Mineral Commodity Summaries 2016, p. 124–125.
- Lafarge S.A., 2015, 2014 annual report: Paris, France, Lafarge S.A., March 23, 263 p. (Accessed November 19, 2016, at [http://www.lafarge.com/sites/default/files/atoms/files/03232015-press\\_publication-2014\\_annual\\_report-uk\\_0.pdf](http://www.lafarge.com/sites/default/files/atoms/files/03232015-press_publication-2014_annual_report-uk_0.pdf).)
- Med Africa Times, 2015, Algeria—Qatar Steel and Algerian Sider launch the construction of \$2 billion steel plant: Med Africa Times, March 12. (Accessed November 18, 2015, at <http://medafricatimes.com/5014-algeria-qatar-steel-and-algerian-sider-launch-the-construction-of-2-billion-steel-plant.html>.)
- Ministry of Energy, 2014, Manal S.p.a.: Ministry of Energy. (Accessed April 26, 2016, at <http://www.energy.gov.dz/francais/index.php?page=manal-spa>.)
- National Agency of Investment Development [Algeria], 2015, Mineral potential of Algeria: National Agency of Investment Development, 19 p. (Accessed December 30, 2015, at <http://www.andi.dz/PDF/Article/potentiel%20minier-%20algerien%20Ang.pdf>.)
- Nield, Richard, 2014, Algeria sets ambitious targets: MEED, October 2, 2014. (Accessed December 30, 2015, at <http://www.meed.com/sectors/construction/infrastructure/algeria-sets-ambitious-targets/3195808.article>.)
- Oil & Gas 360, 2014, Algeria's Government ready to invest \$102 billion on shale development: Oil & Gas 360, July 11. (Accessed October 14, 2014, at <http://www.oilandgas360.com/algerias-government-ready-invest-102-billion-shale-development>.)
- OCI N.V., 2015, Sorfert Algeria: OCI N.V. (Accessed December 10, 2015, at <http://www.oci.nl/oci-fcg/our-facilities/sorfert-algerie/>.)
- Organization of Arab Petroleum Exporting Countries, 2015, Annual statistical report 2015: Organization of Arab Petroleum Exporting Countries, 148 p. (Accessed December 30, 2015, at <http://www.oapecorg.org/media/4897ce10-7de6-4c78-83b7-f66f3a60797d/-902085559/Annual-Statistical-Report/Annual-Statistical-Report-2015--new.pdf>.)
- Organization of the Petroleum Exporting Countries, 2015, Annual statistics bulletin—2015: Organization of the Petroleum Exporting Countries, 112 p. (Accessed December 7, 2015, at [http://www.opec.org/opec\\_web/static\\_files\\_project/media/downloads/publications/ASB2015.pdf](http://www.opec.org/opec_web/static_files_project/media/downloads/publications/ASB2015.pdf).)
- Société des Kaolins d'Algérie S.p.A., 2015, Production units: Société des Kaolins d'Algérie S.p.A. (Accessed December 29, 2015, at <http://www.soalka.com/web/en/production-units>.)
- Sonatrach S.p.A., 2015a, Abstract 2014: Sonatrach S.p.A., 8 p. (Accessed December 15, 2015, at [http://www.sonatrach.com/Abstract\\_2014.pdf](http://www.sonatrach.com/Abstract_2014.pdf).)
- Sonatrach S.p.A., 2015b, Le Groupe Sonatrach: Sonatrach S.p.A. (Accessed December 15, 2015, at <http://www.sonatrach.com/sonatrach-groupe.html>.)
- Suhail Bahwan Group LLC, 2015, Algeria fertilizer JV: Suhail Bahwan Group LLC. (Accessed June 3, 2015, at <http://www.suhailbahwanguroup.com/algeria-fertilizer-jv>.)
- Terramin Australia Ltd., 2010, Positive DFS for Tala Hamza project: Terramin Australia Ltd. (Accessed January 8, 2014, at <http://www.terramin.com.au/2010/10/12/positive-dfs-tala-hamza-project>.)
- Terramin Australia Ltd., 2015, Tala Hamza project: Terramin Australia Ltd. (Accessed December 28, 2015, at <http://www.terramin.com.au/project/tala-hamza-project>.)
- Tosyali Holding, 2015, Chairman's message: Tosyali Holding. (Accessed November 18, 2015, at <http://www.tosyali-algerie.com/tosyali.asp?id0=1&id1=23>.)
- United Nations Statistics Division, 2015, Algeria—International merchandise trade statistics yearbook 2014: United Nations Statistics Division. (Accessed April 26, 2016, at <http://comtrade.un.org/pb/FileFetch.aspx?docID=5673&type=country%20pages>.)
- U.S. Census Bureau, 2015a, U.S. exports to Algeria by 5-digit end-use code 2005–2014: U.S. Census Bureau. (Accessed December 18, 2015, at <http://www.census.gov/foreign-trade/statistics/product/enduse/exports/c7210.html>.)
- U.S. Census Bureau, 2015b, U.S. imports to Algeria by 5-digit end-use code 2005–2014: U.S. Census Bureau. (Accessed December 18, 2015, at <http://www.census.gov/foreign-trade/statistics/product/enduse/imports/c7210.html>.)
- U.S. Energy Information Administration, 2014, Algeria: U.S. Energy Information Administration country analysis brief, July 24, 17 p. (Accessed September 28, 2014, at <http://www.eia.gov/countries/analysisbriefs/Algeria/algeria.pdf>.)
- World Steel Association, 2015a, Steel statistical yearbook: Brussels, Belgium, World Steel Association, 121 p. (Accessed December 15, 2015, at <https://www.worldsteel.org/dms/internetDocumentList/bookshop/2015/Steel-Statistical-Yearbook-2015/document/Steel-Statistical-Yearbook-2015.pdf>.)
- World Steel Association, 2015b, World steel in figures: Brussels, Belgium, World Steel Association, 30 p. (Accessed December 15, 2015, at <http://www.worldsteel.org/dms/internetDocumentList/bookshop/World-Steel-in-Figures-2015/document/World-Steel-in-Figures-2015-Final.pdf>.)

TABLE I  
ALGERIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2010	2011	2012	2013	2014
METALS					
Gold, mine output, Au content kilograms	723	449	264	140	85
Iron and steel:					
Iron ore:					
Gross weight	1,469	1,320	1,784	1,067	911
Fe content	771	693	946	565	483
Metal:					
Pig iron	696	360	350	300 <sup>r</sup>	300
Steel:					
Crude	662	551	557	440	415
Continuous cast	657	545	550	432 <sup>r</sup>	410
Silver, mine output, Ag content kilograms	147	91	42	27	16
Zinc:					
Metal, smelter output metric tons	21,127	15,611	16,000 <sup>e,r</sup>	20,000 <sup>e,r</sup>	22,000 <sup>e</sup>
Alloys do.	390	686	700 <sup>e</sup>	700 <sup>e</sup>	700 <sup>e</sup>
INDUSTRIAL MINERALS					
Barite, crude do.	42,254	40,000	36,211	30,245	56,829
Cement, hydraulic	19,100	19,000	19,000	18,500 <sup>r</sup>	21,000
Calcite	339	339	232	267	335
Clays:					
Bentonite metric tons	34,126	29,000	26,278	27,668	31,510
Common	10,973	11,000	10,167	11,829	12,467
Kaolin metric tons	71,065	71,065	100,970	42,504	181,068
Diatomite do.	2,104	2,132	2,398	2,224	2,426
Dolomite do.	2,260	2,260	743	60	60 <sup>e</sup>
Feldspar	164	148	163	259	230
Gypsum	1,610	1,610	1,958	2,078	2,130
Lime, hydraulic	63	63	66	48	49
Nitrogen:					
N content of ammonia	600	593	713	580 <sup>r</sup>	1,130
N content of urea	--	--	--	40 <sup>e</sup>	420
Phosphate rock:					
Gross weight	1,525	1,287	1,250	1,151	1,418
P <sub>2</sub> O <sub>5</sub> content <sup>e</sup>	458	386	375	345	425
Pozzolan	237	141	325	388	315
Salt, brine and sea salt	107	238	178	173	193
Sand and gravel:					
Construction sand thousand cubic meters	3,164	4,100	2,898	2,635	2,998
Granulates:					
Aggregates, crushed stone and gravel do.	13,095	41,000	56,040	54,898	60,905
Crushed sand <sup>e</sup> do.	12,286 <sup>3</sup>	14,000 <sup>r</sup>	16,000 <sup>r</sup>	18,000 <sup>r</sup>	20,000
Silica sand <sup>e</sup>	95 <sup>3</sup>	100 <sup>r</sup>	125 <sup>r</sup>	150 <sup>r</sup>	170
Stone:					
Marble:					
Blocks do.	9	9	15	18	32
Crushed	114	119	287	239	203
Limestone	20,000 <sup>e,r</sup>	20,000 <sup>e,r</sup>	20,000 <sup>e</sup>	21,932 <sup>3</sup>	24,880 <sup>3</sup>
Tuff <sup>e</sup> thousand cubic meters	1,819 <sup>3</sup>	1,700	1,700	1,700	1,700
Sulfur:					
S content, byproduct of petroleum processing	16	14	110	110	110
S content, sulfuric acid <sup>e</sup>	70	70	100	100	100

See footnotes at end of table.



TABLE 1—Continued  
ALGERIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2010	2011	2012	2013	2014
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
<b>Gas, natural:</b>					
Gross million cubic meters	192,209	190,127	182,599	179,489	130,900
Dry do.	83,370	82,060	85,195	81,543	83,300
Helium, liquid <sup>c</sup> do.	17 <sup>r</sup>	17 <sup>r</sup>	17 <sup>r</sup>	25 <sup>r</sup>	25
Methanol	93	118	112	78	90 <sup>c</sup>
Natural gas plant liquids million cubic meters	19,501	17,067	15,155	15,513	15,500
<b>Petroleum:</b>					
Crude, including condensate thousand 42-gallon barrels	616,485	599,330	561,005	574,875	556,625
<b>Refinery products:</b>					
Liquefied petroleum gas do.	90,874 <sup>r</sup>	83,358 <sup>r</sup>	76,572 <sup>r</sup>	76,699 <sup>r</sup>	95,120
Gasoline, normal do.	9,128	10,710	10,000	9,600	13,000
Gasoline, super do.	8,308	9,131	8,944	8,618	10,105
Naphtha do.	60,988	57,017	52,101	53,755	54,100
Kerosene and jet fuel do.	11,050	8,893	9,600	13,584	15,403
Distillate fuel oil do.	55,618	55,654	51,474	52,533	69,496
Lubricants do.	1,058	821	2,100	2,100	2,500
Residual fuel oil do.	48,884	49,778	31,646	35,684	50,881
Bitumen do.	1,279	1,058	1,060	1,000	1,000
Total do.	287,187 <sup>r</sup>	276,420 <sup>r</sup>	243,000 <sup>r</sup>	254,000 <sup>r</sup>	312,000

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto. --Zero.

<sup>1</sup>Table includes data available through December 31, 2015.

<sup>2</sup>In addition to the commodities listed, secondary aluminum, secondary copper, and secondary lead may have been produced in small quantities, and crude construction materials (for local consumption), caustic soda, fertilizer, fuller's earth, perlite, and rhyolite were produced, but available information was inadequate to make reliable estimates of output.

TABLE 2  
ALGERIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Barite	Société des Mines de Baryte d'Algérie S.p.A. (SOMIBAR) [Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles, S.p.A. (ENOF)]	Amin Mimoun Mine, Khenchela Province	35,000
Do.	do.	Boucaid Mine, Tissemsilt Province	20,000
Do.	do.	Mellal Mine, Tlemcen Province	NA
Do.	Société Nationale de la Baryte (BARYTAL) S.p.A.	Draissa, Bechar Province	100,000 <sup>1</sup>
Do.	Société des Baryte SARL (SOBAR)	Chaabet Abou Fares, Tipaza Province	7,000
Bentonite	Société des Bentonites d'Algérie S.p.A. (BENTAL) [a subsidiary of Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles, S.p.A. (ENOF)]	Hammam Boughrara, Tlemcen Province	18,000
Do.	do.	M'Sila Province	17,000
Do.	do.	Maghnia Mine, Tlemcen Province	16,000
Cement:			
Portland	Lafarge Ciment de M'Sila (Lafarge S.A., 99.99%)	M'Sila Province	5,000,000
Do.	Lafarge Ciment d'Oggaz (Lafarge S.A., 99.99%)	Oggaz, Mascara Province	4,400,000
Do.	Entreprise des Ciments et Dérivés d'Ech—Cheliff [Groupe Industriel des Ciments d'Algérie (GICA)]	Ech Cheliff	2,000,000
Do.	Société des Ciments Beni Saf [Groupe Industriel des Ciments d'Algérie (GICA), 65%, and Pharoan Group, 35%]	Beni Saf, Ain Temouchent	1,200,000
Do.	Société des Ciments Zahana [Groupe Industriel des Ciments d'Algérie (GICA), 65%, and ASEC Cement., 35%]	Zahana, Djefla Province	1,200,000
Do.	Société des Ciments d'Aïn-Touta [Groupe Industriel des Ciments d'Algérie (GICA)]	Ain Touta	1,000,000
Do.	Société des Ciments d'Aïn-Kébira [Groupe Industriel des Ciments d'Algérie (GICA)]	Ain El Kebira, Setif	1,000,000
Do.	Société des Ciments de Hamma-Bouziane [Groupe Industriel des Ciments d'Algérie (GICA)]	Hamma-Bouziane, Constantine	1,000,000
Do.	Société des Ciments de Sour El Ghoulane [Groupe Industriel des Ciments d'Algérie (GICA), 65%, and Buzzi Unicem S.p.A., 35%]	Sour El Ghoulane, Bouira	1,000,000
Do.	Société des Ciments de Hadjar Soud [Groupe Industriel des Ciments d'Algérie (GICA)]	Annaba	900,000
Do.	Société des Ciments de la Mitidja [Groupe Industriel des Ciments d'Algérie (GICA), 65%, and Lafarge S.A., 35%]	Blida, Meftah	800,000
Do.	Société des Ciments Saïda [Groupe Industriel des Ciments d'Algérie (GICA)]	Hassasna	500,000
Do.	Tabessa Cement Company S.p.A.	Tebessa	500,000
Do.	Société des Ciments de l'Algérois [Groupe Industriel des Ciments d'Algérie (GICA)]	Rais-Hamidou	450,000
White	Ciment Blanc d'Algérie S.p.A. (Lafarge S.A., 100%)	Oggaz, Mascara Province	550,000
Coke	ArcelorMittal Annaba S.p.A. (ArcelorMittal, 70%, and Groupe Industriel Sider, 30%)	El Hadjar, Annaba Province	1,200,000
Copper, cathode	Société Algérienne du Zinc S.p.A. (Entreprise Nationale de Métallurgie de Transformation des Métaux Non Ferreux, S.p.A., 100%)	Ghazaouet	30,000
Diatomite	Société des Diatomées d'Algérie (DIATAL) [Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles, S.p.A. (ENOF)]	Tahalaït quarry, Sig	2,000
Dolomite	Société Algérienne des Granulats S.p.A. (ALGRAN)	Djebel Taioualet	8,000
Feldspar	Tufeal SARL	Bouaita	83,000
Do.	La Société des Feldspaths d'Algérie (SOFELD) [Entreprise des Nationale des Produits Miniers Non Ferreux et des Substances Utiles, S.p.A. (ENOF), 57%, and Entreprise de la Céramique Ouest, 43%]	Ain Barbar	200,000

See footnotes at end of table.

TABLE 2—Continued  
ALGERIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
<b>Fertilizer:</b>				
<b>Nitrogenous:</b>				
Ammonia		Fertial S.p.A. (Grupo Villar Mir, 66%, and Asmidal Group, 34%)	Arzew	660,000
Do.		do.	Annaba	330,000
Do.		Sofert Algerie S.p.A. (OCI N.V., 51%, and Somatrach S.p.A., 49%)	Arzew	1,000,000
Do.		Sharika El Djazairia El Omania lil Asmida S.p.A. [Suhail Bahwan Group (Holding) L.L.C., 51%, and Sonatrach S.p.A., 49%]	do.	1,460,000
Ammonium nitrate		Fertial S.p.A. (Grupo Villar Mir, 66%, and Asmidal Group, 34%)	do.	580,000
Urea		Sofert Algerie S.p.A. [Orascom Construction Industries, S.A.E. (OCI), 100%]	Arzew	1,400,000
Do.		Fertial S.p.A. (Grupo Villar Mir, 66%, and Asmidal Group, 34%)	do.	400,000
Do.		Sharika El Djazairia El Omania lil Asmida S.p.A. [Suhail Bahwan Group (Holding) L.L.C., 51%, and Sonatrach S.p.A., 49%]	do.	2,555,000
Compound, NPK		Fertial S.p.A. (Grupo Villar Mir, 66%, and Asmidal Group, 34%)	do.	150,000
Phosphatic		do.	do.	280,000
Do.		do.	Annaba	300,000
Gold	kilograms	Entreprise d'Exploitation des Mines d'Or S.p.A. (ENOR) (Sonatrach S.p.A., 100%)	Amesmessa-Terik gold mine	500
Gypsum		32 private sector units and 13 public sector units	Batn, Bejaia, Biskra, Bouira, Chlef, Ghardaia, Mascara, Medbea, Milla, M'Sila, Oum El Bouaghi, Oran, Setif, Tiara	2,000,000
Helium	million cubic meters	Helios S.p.A. (Sonatrach Valorisation Hydrocarbonés, 51%, and Helaps S.A., 49%)	GL1Z and GL3Z complexes, Arzew	17
Do.	do.	Helison Production S.p.A. (Linde AG, 50%, and Sonatrach S.p.A., 50%)	GL1K and GNL2K complexes, Skikda	25
<b>Iron and steel:</b>				
Crude steel		ArcelorMittal Annaba S.p.A. (Groupe Industriel Sider, 51%, and ArcelorMittal, 49%)	Electric arc furnace at El Hadjar, Annaba	400,000
Do.		do.	Hot-strip mill at El Hadjar, Annaba Province	1,800,000
Do.		Tosyali Industrie du Fer et de l'acier Algerie (Tosyali Holding)	Steel mill at Oran	1,250,000
Processed		do.	Cold-rolling mill at El Hadjar, Annaba Province	1,050,000
Do.		do.	Bar and wire rod mills at El Hadjar, Annaba Province	850,000
Do.		do.	Seamless tube mill at El Hadjar, Annaba Province	700,000
Do.		Entreprise Nationale de Tubes et de Transformation de Produits Plats (Groupe Industriel Sider, 100%)	Welded tube plant at Ghardaia	128,000
Do.		Société Algérienne de Fabrication Tubes en Spirale (Groupe Industriel Sider, 100%)	Welded tube plant at El Hadjar, Annaba Province	70,000
Iron ore		ArcelorMittal Tebessa S.p.A. (Ferphos S.p.A., 51%, and ArcelorMittal, 49%)	Ouenza Mine, Tebessa Province	1,200,000
Do.		do.	Boukhadra Mine, Tebessa Province	525,000
Do.		Société des Mines de Fer d'Algérie S.p.A. (SOMIFER)	Khanguet Mine, Tebessa Province	50,000
Do.		do.	Anini Mine, Setif Province	170,000
Do.		do.	Rouina Mine, Ain Defla Province	140,000
Kaolin		Société des Kaolins d'Algérie S.p.A. (SOALKA) [Federal White Cement Ltd., 63%, and Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles S.p.A. (ENOF), 37%]	El Milia Mine, Jijel Province	50,000
Do.		do.	Jebel Debbagh Mine, Guelma Province	15,000

See footnotes at end of table.

TABLE 2—Continued  
ALGERIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Kaolin—Continued	SARL Faïenceries Algériennes		Adjarda, Chekfa	95,000
Lime	SODEPAC (ERCO Group)		Hassasna	93,000
Do.	Société de Chaux de l'Ouest		Oran	65,000
Do.	Unité Chaux de Chettaba (Société des Produits Dérivés de l'Est, 100%)		Chettaba	11,000
Limestone	Mittal Steel Annaba SPA		Oued N'hal	250,000
Marble:				
Blocks	cubic meters	Entreprise Nationale du Marbre S.p.A.	Oran and Skikda Province	70,000
Do.	do.	SMS Bouhouita SARL	Skikda Province	160
Crushed	Commercialisation du Marbre et de Dérivés de Marbre S.p.A. and Entreprise Nationale du Marbre S.p.A.		Chlef, Oran, Skikda, Tizi Ouzou, and Tlemcen Provinces	17,000
Methanol	Société Nationale de Pétrochimie S.p.A. (Sonatrach S.p.A., 100%)		Methanol plant, Arzew	113,000
Natural gas:				
Crude	million cubic meters	Sonatrach S.p.A.	Numerous gasfields, including Adrar, Hamra, Hassi R'Mel, and Sbaa	45,000
Do.	do.	Statoil ASA, 49.5%; BP p.l.c., 46%; Sonatrach S.p.A., 4.5% <sup>2</sup>	In Amenas	6,270
Do.	do.	Sonatrach S.p.A., 35%; BP p.l.c., 33.15%; Statoil ASA, 31.85%	In Salah	6,900
Do.	do.	Sonatrach S.p.A., 35%; Total S.A., 35%; Repsol, 30%	Tin Fouye Tabankort	5,640
Do.	do.	Compañía Española de Petróleos, S.A.U. (CEPSA), 39%; Sonatrach S.p.A., 36%; Anadarko Petroleum Corp., 9%; Eni S.p.A., 5%; Maersk Olie og Gas AS, 5%; Talisman Algeria, 2%	Ourhoud	22,000
Refined	do.	Société Nationale de Raffinage de Pétrole S.p.A. (NAFTEC)	RAIK refinery, Skikda	352,700
Liquefied	do.	do.	GL2Z complex, Azrew	17,820
Do.	do.	do.	GL1Z complex, Azrew	17,560
Do.	do.	do.	GL3Z complex, Azrew	5,576
Do.	do.	do.	GL1K complex, Skikda	6,942
Do.	do.	do.	GL2K complex, Arzew	2,992
Petroleum:				
Crude	42-gallon barrels per day	do.	About 50 oilfields, including Acheb West, Amassak/Tin-Yaguene, Draa Tamra, Edjeleh, El Borma, El Gassi, Gassi-Touil East, Guellala, Hassi Messaoud North and South, Ohanet North, Rhourde El Baguel, Tin-Fouye Tabankort, and Zarzaitine	1,700,000
Do.	do.	Sonatrach S.p.A., 25%; Anadarko Petroleum Corp., 25%; Lasmo Oil Ltd., 25%; Maersk Olie og Gas AS, 25%	Hassi Berkine oilfield	285,000
Do.	do.	Sonatrach S.p.A., 37.70%; Anadarko Petroleum Corp., 18.10%; ConocoPhillips Algeria, 16.90%; Eni Oil Algeria, Maersk Olie Algeriet, and Talisman Algeria, 9.10% each	El Merk oilfield	135,000
Refined	do.	Société Nationale de Raffinage de Pétrole S.p.A. (NAFTEC)	RAIK refinery, Skikda	352,700
Do.	do.	do.	RHM refinery, Hassi Messaoud	163,500
Do.	do.	do.	RAIG refinery, El Harrach	63,400
Do.	do.	do.	RAIZ refinery, Arzew	58,500
Do.	do.	Société Nationale de Raffinage de Pétrole S.p.A. (NAFTEC), 70%, and China National Petroleum Corp. (CNPC), 30%	Adrar	14,400
Phosphate:				
Phosphate rock	Société des Mines de Phosphates S.p.A. (SOMIPHOS) (a subsidiary of Ferphos Group S.p.A)		Djebel Onk (Djemidjema and Kef Essenoun), Tebessa Province	1,600,000
Pozzolan	Société des Pozzolanés et des Matériaux de Construction S.p.A.		Rockbet El Hassi	452,000
Do.	Entreprise Nationale de Fer et de Phosphate		Beni Saf	600,000

See footnotes at end of table.

TABLE 2—Continued  
ALGERIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Salt, crude:			
Rock	Entreprise Nationale d'Exploitation des Carrières de Sels Industriels et Domestiques et Commercialisation des Sels (ENASEL) S.p.A.	El Outaya, Biskra Province	30,000
Solar	do.	Bethioua, Oran Province; El Méghaïer, El Oued Province; Guergour Lamri, Sétif Province; Ouled Zouaï, Oum El Bouaghi Province; Sidi Bouziane, Relizane Province	400,000
Stone	Société Algérienne des Granulats S.p.A. (ALGRAN) [Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles S.p.A. (ENOF)]	Aggregate quarries at Adrad, Oufamou, Arzew, Ghedir, Gustar, Keddara, Oued Fodda, Teioueit, and Timezrit	3,000,000
Do.	Société des Diatomites d'Algérie S.p.A. (DIATAL) [Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles S.p.A. (ENOF)]	Oggaz limestone quarry, near Sig	12,500
Do.	Société des Bentonites d'Algérie S.p.A. (BENTAL) [Entreprise Nationale des Produits Miniers Non Ferreux et des Substances Utiles S.p.A. (ENOF)]	Limestone quarries near Beni Saf and M'Said	12,000
Sulfuric acid	Société Algérienne du Zinc (Entreprise Nationale de Métallurgie et de Transformation des Métaux Non Ferreux, 100%)	Ghazaouet	70,000
Do.	Fertial S.p.A. (Grupo Villar Mir, 66%, and Asmidal Group, 34%)	Annaba and Arzew	50,000
Tuff	cubic meters CTIC-CRCC Group (China)	Annaba, Boumerdes, Sidi Bel Abbes, Mustganem, Mascara, Oran, Relizane	10,300,000
Do.	do. Six public sector units and 59 private units	Ain Temouhent, Tipaza, Tiaret	2,000,000

Do., do. Ditto. NA Not available.

<sup>1</sup>Under construction.

<sup>2</sup>Working interest.