

# 2016 Minerals Yearbook

**IRAQ** 

## THE MINERAL INDUSTRY OF IRAQ

### By Loyd M. Trimmer III

Hydrocarbons were a leading segment of the economy of Iraq in 2016, accounting for the majority of the country's exports of goods (Organization of the Petroleum Exporting Countries, 2017, p. 19–20). The country ranked fourth in the world among the leading producers of crude petroleum (Organization of the Petroleum Exporting Countries, 2017, p. 32). The nonfuel minerals and hydrocarbons sectors are regulated by law No. 38 of 2011 and law No. 84 of 1985, respectively. 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 Iraq can be found in previous editions of

the U.S. Geological Survey Minerals Yearbook, Volume III, Area Reports—International—Africa and the Middle East, which are available at https://www.usgs.gov/centers/nmic/africa-and-middle-east.

#### **Reference Cited**

Organization of the Petroleum Exporting Countries, 2017, Annual statistical bulletin: Organization of the Petroleum Exporting Countries, 124 p. (Accessed July 12, 2017, at http://www.opec.org/opec\_web/static\_files\_project/media/downloads/publications/ASB2017\_13062017.pdf.)

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 $\label{eq:table 1} \textbf{TABLE 1} \\ \textbf{IRAQ: PRODUCTION OF MINERAL COMMODITIES}^1$ 

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

Commodity	2012	2013	2014	2015	2016
METALS					
Iron and steel, raw steel			r	<sup>r</sup>	
INDUSTRIAL MINERALS					
Cement, hydraulic	10,000 e	12,000 e	9,000 r, e	10,000 r	10,000 e
Clay and shale:					
Bentonite metric tons	6,530	6,288	255		
Kaolin do.	3,000				
Unspecified	33,380	34,000 <sup>e</sup>	34,000 <sup>e</sup>	34,000 <sup>e</sup>	
Gypsum	1,370 <sup>2</sup>	1,500 <sup>r</sup>	1,200	1,000 e	1,000 e
Nitrogen, N content:					
Ammonia	143	146	182	40 r, e	35 <sup>e</sup>
Urea	129	135	142	29 <sup>r</sup>	25 <sup>e</sup>
Phosphate fertilizer	80	68	64		
Phosphate rock:					
Gross weight	250	350 <sup>r</sup>	34		
P <sub>2</sub> O <sub>5</sub> content	44	64 <sup>r</sup>	7 e		
Salt	143	182	200	209 <sup>r</sup>	200 <sup>e</sup>
Stone and sand and gravel:					
Sand and gravel, construction, unspecified	$23,200^{-3}$	24,000 e	24,000 e	24,000 e	25,000 e
Silica, mine production, unspeci metric tons	1,439	12,900	3,100 <sup>r</sup>	r, e	
Stone, crushed, limestone:					
For cement	4,648	5,000 e	2,460	7,360	6,000 e
For construction	326	500 e	400 <sup>e</sup>	400 e	500 <sup>e</sup>
Sulfur, S content, native	20	38	37	40 <sup>r</sup>	40 <sup>e</sup>
MINERAL FUELS AND RELATED MATERIALS					
Natural gas, marketable million cubic meters	6,675 <sup>r</sup>	7,445 <sup>r</sup>	7,927 <sup>r</sup>	7,685 <sup>r</sup>	10,416 <sup>r</sup>
Petroleum:					
Crude, including condensate thousand 42-gallon barrels	1,137,340	1,146,465	1,199,025	1,471,315	1,629,725
Refinery production					
Distillate fuel oil do.	46,574	48,326	38,070	26,390	17,960
Gasoline do.	27,886	31,354	24,163	20,440	12,370
Kerosene, including jet fuel do.	16,243	15,184	11,279	10,147	24,460
Liquefied petroleum gas do.	910 <sup>r</sup>	840 <sup>r</sup>	1,100 <sup>r</sup>	1,300 <sup>r</sup>	1,350 e
Residual fuel oil do.	103,076	106,945	90,958	80,957	80,520
Other do.	18,068	17,666	26,353	24,346	28,580
Total	213,000 <sup>r</sup>	220,000 <sup>r</sup>	192,000 <sup>r</sup>	164,000 <sup>r</sup>	165,000

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>r</sup>Revised. Do. Ditto. -- Zero.

<sup>&</sup>lt;sup>1</sup>Table includes data available through February 28, 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.

<sup>&</sup>lt;sup>2</sup>Reported in cubic meters and converted to metric tons; includes only primary gypsum.

<sup>&</sup>lt;sup>3</sup>Reported in cubic meters and converted to metric tons.

## $\label{eq:table 2} \text{IRAQ: STRUCTURE OF THE MINERAL INDUSTRY IN 2016}$

#### (Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity	
	· <i>y</i>	and major equity officers	Zovanon of main monitor	Jupuonij	
Cement: Portland		Southern Cement State Co. (Government, 100%)	Five plants: Al Basrah plant An Najaf Al plant Kufa plant Muthena Nora plant As Samawa plant	7,500,000.	
Do.		Iraqi Cement State Co. (Government, 100%)	Five plants: Al Qaim plant Al Maamil plant (Baghdad) Kirkuk plant Al Fallujah plant Kubaisa plant	5,200,000.	
Do.		Northern Cement State Co. (Government, 100%)	Seven plants: Al Tamin plant Badoosh I, II, and III plants (Mosul) Hammam Al Aleel I and II plants (Mosul) Sinjar plant (Mosul)	3,740,000.	
Do.		Bazian Cement Company (LafargeHolcim Group, 70%, and Faruk Group Holding, 30%)	Bazian plant at Sarchinar, near Hayasi 40 kilometers west of Suleimaniyah	2,500,000.	
Do.		United Cement Company (LafargeHolcim Group, 60%, and Faruk Group Holding, 40%)	Tasluja plant, near Suleimaniyah	2,300,000.	
Do.		Karbala Cement Manufacturing Ltd. (Lafarge S.A., 51%, and Merchant Bridge Co., 49%)	Karbala plant, Karbala Governorate	1,000,000.	
Do.		Lucky Cement Co. (Lucky Cement of Pakistan, 50%, and Al Shawi family, 50%)	Al Basrah plant	1,100,000.	
Do.		Mass Group Holding Ltd. of Jordan (100%)	Bazian plant 35 kilometers west of Suleimaniyah	6,000,000.	
Do.		do.	Al Shamal cement factory, Atbara	1,500,000.	
White		Iraqi Cement Co. (Government, 100%)	Fallujah white cement plant, Fallujah	300,000.	
Gypsum		Five companies: Al Ahlia Gypsum Industrial Co. Ltd. Al Ameen Gypsum Production Co. Ltd. Al Ma'moon Building Materials Co. Ltd. Al Rashid Gypsum Co. Ltd. Al Shemal Gypsum Industries Co. Ltd.	Baghdad	1,368,750.	
Iron and steel	thousand metric tons	Al Anmaa Co. for Constructional Material Production [Al Tanmiya Co. for Steel Industries (100%)]	Plant at Khawr az Zubayr, Al Basrah Governorate	450.	
Do.	do.	FF Steel Co., 100%	Erbil plant	580.	
Do.	do.	Mass Iraq Iron and Steel Industry Co. (Mass Group Holding Ltd., 100%)	As Sulaymaniyah Governorate	1,250.	
Do.	do.	State Company for Iron and Steel (SCIS) (Government, 100%)	Khawr az Zubayr, Al Basrah Governorate	NA.	
Natural gas	million cubic meters	Basrah Gas Co. (BGC) [South Gas Co., 51%; Royal Dutch Shell plc, 44%; Mitsubishi Corp., 5%]	Hammar Mishrif and Rafidhiya facilities, Al Basrah Governorate	310.	
Do.	do.	DNO International ASA, 40%; Genel Enerji A.S., 40%; Kurdistan Regional Government (KRG), 20%	Summail gasfield, Dahuk Iraqi Kurdistan Region	2,044.	
Do.	do. Pearl Petroleum Co. Ltd. (PPCL) [Crescent Chemchamal and the Khor Mor fields Petroleum, 40%; Dana Gas PJSC, 40%; Iraqi Kurdistan Region MOL Hungarian Oil and Gas Co. p.l.c. (MOL), 10%; OMV Aktiengesellschaft, 10%]		350.		

See footnotes at end of table.

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## $\label{table 2-Continued}$ IRAQ: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

#### (Metric tons unless otherwise specified)

Co	mmodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
itrogen	thousand	State Enterprise for Fertilizer and Petrochemical	Plant at Abu Al-khasib, Al Basrah	230 ammonia
ntrogen	metric tons	(South) (Government, 100%)	Governorate	350 urea.
Do.	do.	State Company for Fertilizers Northern Area	Plant at Baiji, Salah ad Din	231 ammonia
D0.	do.	(Government, 100%)	-	
D	1		Governorate	202 urea.
Do.	do.	1st Global Company for Chemical Fertilizers	do.	365 ammonia
. 1		Production Ltd., 100%		525 urea.
etroleum:	4 1	DD 1 47.60/ 1.CL: N. C. 1.D. (1	D I AID I C	1.250
rude	thousand	BP p.l.c., 47.6%, and China National Petroleum	Rumaila, Al Basrah Governorate	1,350.
	42-gallon barrels	Corp. (CNPC), 46.4%		
	per day			
Do.	do.	China National Petroleum Corp. (CNPC), 75%, and North Oil Co., 25%	Al-Ahdab, Wasit Governorate	140.
Do.	do.	China National Petroleum Corp. (CNPC), 37.5%;	Halfaya, Maysan Governorate	70.
		South Oil Co., 25%; Petronas Carigali		
		International Sdn Bhd, 18.75%; Total S.A.,		
		18.75%		
Do.	do.	CNOOC Ltd., 63.75%; Iraq Drilling Co., 25%;	Maysan, Maysan Governorate	450.
D0.	uo.		Maysan, Maysan Governorate	450.
		Türkiye Petrolleri Anonim Ortaklığı (TPAO), 11.25%		
Do	do		Tawke, Iraqi Kurdistan Region	100
Do.	do.	DNO International ASA, 55%; Genel Energi A.S.,	rawke, iraqi Kurdistan Region	100.
	1	25%; Kurdistan National Oil Co., 20%	W +0 1 HP 1 G	100
Do.	do.	Exxon Mobil Corp., 60%; Royal Dutch Shell	West Qurna 1, Al Basrah Governorate	400.
		plc, 15%; Oil Exploration Co., 25%		
Do.	do.	Eni S.p.A., 41.56%; Occidental Petroleum	Zubair, Al Basrah Governorate	270.
		Corp., 26.69%; Korean Gas Corp. (Kogas),		
		23.75%; Missan Oil Co., 5%		
Do.	do.	Gazprom OAO, 30%; Oil Exploration Co., 25%;	Badra, Wasit Governorate	170.
		Korean Gas Corp. (Kogas), 22.5%; Petronas		
		Carigali International Sdn Bhd, 15%; Türkiye		
		Petrolleri Anonim Ortaklığı (TPAO), 7.5%		
Do.	do.	Lukoil Oil Co., 56.25%; South Oil Co., 25%;	West Qurna 2, Al Basrah Governorate	NA.
		Statoil ASA, 18.75%	,	
Do.	do.	North Oil Co. (Government, 100%)	Kirkuk, Kirkuk Governorate	280.
	do.	Petronas Carigali International Sdn Bhd, 45%;	Garraff, Dhi Qar Governorate	35.
	40.	Japex Corp., 30%; North Oil Co., 25%	Garrari, Diri Qui Governorate	55.
Do.	do.	Royal Dutch Shell plc, 45%; Petronas Carigali	Majnoon, Al Basrah Governorate	18.
ъ.	do.	International Sdn Bhd, 30%; Missan Oil	Majnoon, Ai Basian Governorate	10.
D.	1	Co., 25%	O' 1 N' C 4	120
Do.	do.	Sociedade Nacional de Petróleos de Angola	Qiayarah, Ninawa Governorate	120.
		(Sonagol), 75%, and South Oil Co., 25%		
Do.	do.	Sociedade Nacional de Petróleos de Angola	Najmah, Ninawa Governorate	110.
		(Sonagol), 75%, and North Oil Co., 25%		
Do.	do.	Taq Taq Operating Co. Ltd. (Genel Enerji A.S.,	Taq Taq, Iraqi Kurdistan Region	105.
		55%, and Addax Petroleum Corp., 45%)		
Refinery produc	ets do.	Midland Refineries Co. (Government, 100%)	Daura refinery at Daura	140,000.
Do.	do.	do.	An Najaf Governorate	30,000.
Do.	do.	do.	Samawah	30,000.
Do.	do.	do.	Diwanya	20,000.
Do.	do.	North Refineries Co. (Government, 100%)	Baiji	230,000.
Do.	do.	do.	Kirkuk	30,000.
		do.	Haditha	16,000.
Do.	an			
Do. Do.	do.	do.	Qaiyarah	16,000.

See footnotes at end of table.

#### $\label{eq:table 2-Continued}$ IRAQ: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

#### (Metric tons unless otherwise specified)

		Major operating companies		Annual
Commodity		and major equity owners	Location of main facilities	capacity
Petroleum:				
Refinery products—	thousand	South Refineries Co. (Government, 100%)	Al Basrah Governorate	135,000.
Continued	42-gallon barrels			
	per day			
Do.	do.	do.	Nassiriyah-Samawah	30,000.
Do.	do.	do.	Missan	20,000.
Do.	do.	Kar Oil & Gas Co. (private)	Kalak, Erbil	80,000.
Do.	do.	Bazian refinery (Qaiwan Group, 100%)	Suleimaniyah	20,000.
Phosphate rock		General Company for Phosphate (Government,	Mines at Akashat, Al Anbar	3,400,000.
		100%)	Governorate	
Phosphoric acid <sup>1</sup>		do.	Plant at Al-Qaim	400,000.
Phosphatic fertilizer <sup>2, 3</sup>		do.	do.	600,000 TSP; 280,000 MAP; 650,000 NPK.
Sulfur	do.	Mishraq Sulphur State Co. (MSSC) (Government, 100%)	Qaiyarah	820,000.
Sulfuric acid <sup>1</sup>		do.	do.	500.000.
Do.	do.	General Company for Phosphate (Government, 100%)	Phosphatic fertilizer plant at Al-Qaim	1,500,000.

Do., do. Ditto. NA Not available.

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<sup>&</sup>lt;sup>1</sup>No production has been reported since 2003.

<sup>&</sup>lt;sup>2</sup>The fertilizer production unit U400 produced triple superphosphate (TSP), monoammonium phosphate (MAP), and compound fertilizer (nitrogen, phosphorus, and potassium, or NPK).

<sup>&</sup>lt;sup>3</sup>Fluoride salts production unit U500, which had the capacity to produce 11,000 metric tons per year of aluminum fluoride, was idle for technical problems but was being used to produce unknown quantities of ammonium chloride, pure silica, silica gel, sodium fluorosilicate, sodium phosphate, and zeolites.