



STATISTICS BOTSWANA

INDICES OF THE PHYSICAL VOLUME OF MINING PRODUCTION

SECOND QUARTER 2015 [STATS BRIEF]



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1.0 Preface

This statistical release presents quarterly Indices of Mining Production (IMP) for the period 2003 to the second quarter of 2015. Also carried in the report is the annual IMP for the period 2003 to 2014, derived as the average of 4 quarters of the year. This report uses 2013 as a base year. Data used in this publication is sourced from the Department of Mines, Ministry of Minerals, Energy and Water Resources.

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We sincerely thank all stakeholders involved in the formulation of this brief, for their continued support, as we strive to better serve users of our products and services.



A.N. Majelantle
Statistician General
October 2015

2.0 Summary of Findings

Data used in this Statistics Brief are not seasonally adjusted.

Table 1 presents key figures on the summary of findings for Indices of Mining Production (IMP). This table forms the basis of the discussion under sub-section 2.1. Reference however, will be made to this table and other tables throughout the report.

Table 1: Key Figures in the Volume of Mining Production, Q1 of 2013 - Q2 of 2015

Base Period : 2013 = 100			
Period	Index of the physical volume of mining production	Year-on-year percentage change, seasonal unadjusted	Quarter-on-Quarter percentage change, seasonal unadjusted
First Quarter 2013	82.5	(8.7)	(9.7)
Second Quarter 2013	111.6	25.2	35.3
Third Quarter 2013	97.1	38.4	(12.9)
Fourth Quarter 2013	108.8	19.1	12.0
First Quarter 2014	96.2	16.7	(11.5)
Second Quarter 2014	106.6	(4.5)	10.8
Third Quarter 2014	105.7	8.9	(0.8)
Fourth Quarter 2014	104.5	(4.0)	(1.2)
First Quarter 2015	95.6	(0.9)	(8.6)
Second Quarter 2015	98.5	(7.6)	3.1

Note: 1. () denotes negative numbers

2.1 Indices of Mining Production

The Index of Mining production stood at 98.5 in the second quarter of 2015, showing a negative year-on-year growth of 7.6 percent. This decline was largely influenced by the slowing down of diamond production growth.

The two largest contributors to the slump in growth of mining production were Diamonds contributing negative 4.6 percentage points and copper in concentrates contributing negative 4.1 percentage points, as indicated in Tables 2 and 5.

2.2 Mineral Production

Discussions on mineral production, which compare production during the second quarter of 2015 to the same quarter of 2014, are based on Table 4.

Diamond production declined for the third consecutive quarter, decreasing by 5.4 percent in the second quarter of 2015 as compared to a decline of 1.5 percent in the second quarter of 2014. This decline is mainly attributable to the weakening demand for diamonds in the global market. The first quarter of 2015 had registered a decline of 2.5 percent in production.

Copper-Nickle-Cobalt Matte production rose by 43.3 percent in the second quarter of 2015 marking the third consecutive quarter of positive growth. The increase for the quarter was realized despite the weak international copper prices which subsequently affected both matte and concentrates. The first quarter of 2015 had registered 87.3 percent growth in Copper-Nickle-Cobalt matte production.

Copper in concentrates production decreased by 69.7 percent in the second quarter of 2015. This is the second decline following a 23.3 percent decrease recorded in the first quarter of 2015. The decline is largely attributable to the liquidation in one of the copper producing mines, which is currently not producing owing to reorganization following new management take over.

Gold production registered a fifth consecutive decline during the second quarter of 2015, having recorded a decline of 33.0 percent. However, the decline is of lower magnitude when compared with the first quarter of 2015 when production had decreased by 46.3 percent. This decline is attributable to weak demand as well as stagnant gold prices.

Soda Ash production growth decreased by 54.2 percent in the second quarter of 2015 as compared to the second quarter of 2014. This was primarily due to the planned plant refurbishment which resulted in zero production in the third month of the quarter. During the first quarter of 2015, Soda Ash production declined by 32.6 percent.

Salt production declined by 62.5 percent in the second quarter of 2015 as compared to the corresponding quarter of 2014. The decline in production was attributable to the planned plant refurbishment which resulted in zero production in the third month of the quarter. Comparison of the second quarter of 2015 and the first quarter of the same year shows a decline of 10.3 percent.

Silver production recorded zero growth during the second quarter of 2015. This is attributed to the shutdown of the mining operations following liquidation of the company.

Coal production increased by 9.0 percent in the second quarter of 2015 as compared to the corresponding quarter of 2014. Coal production increased despite operational challenges that were realized at the Morupule Power Plant. Some of the coal produced was sold to the international market.

Table 2: Index of Mining Production for the Second Quarter of 2015 by Mineral Groups and Minerals

Base:2013=100						
	Weights (2013)	April - June 2014	April - June 2015	Year-on-Year Percentage Change	Contribution (% points) to the percentage change in the total mining production	
Diamonds	82.5	110.0	104.1	(5.4)	(4.6)	
Copper-Nickel-Cobalt Matte	8.6	73.4	105.2	43.3	2.6	
Copper in Concentrates	5.5	114.7	34.8	(69.7)	(4.1)	
Gold	1.4	74.3	49.7	(33.0)	(0.3)	
Soda Ash	0.9	115.6	52.9	(54.2)	(0.5)	
Salt	0.5	100.8	37.8	(62.5)	(0.3)	
Silver	0.4	88.5	-	(100.0)	(0.4)	
Coal	0.3	123.9	135.1	9.0	0.0	
Total	100.0	106.6	98.5	(7.6)	(7.6)	

NB:1. The contribution (percentage points) of a mineral to the percentage change in the total mining production is calculated by multiplying the difference in the index for the mineral by the weight of the mineral and then dividing by the previous period's total index.

2. () denotes negative numbers

Table 3: Index of the Volume of Mining Production by Mineral Group and Mineral, Q1 of 2003 - Q2 of 2015

Base 2013 = 100									
	Diamonds	Copper-Nickel-Cobalt Matte	Copper in concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100.0
2003	131.3	117.1	n.a.	n.a.	102.8	44.0	n.a.	55.0	119.6
2004	134.2	99.4	n.a.	n.a.	116.1	41.6	n.a.	60.9	120.6
2005	137.6	133.7	n.a.	268.1	123.7	37.7	n.a.	65.8	130.1
2006	148.2	126.6	n.a.	250.4	104.8	40.0	n.a.	64.3	137.9
2007	145.4	111.4	n.a.	220.0	122.7	50.4	n.a.	55.4	134.0
2008	140.9	118.1	n.a.	263.2	115.6	32.8	n.a.	60.8	131.3
2009	76.7	121.1	n.a.	134.7	93.0	45.5	n.a.	49.3	76.7
2010	95.2	110.7	12.5	147.0	105.7	70.0	n.a.	66.1	92.2
2011	99.0	71.9	22.1	129.4	113.1	85.7	n.a.	52.7	92.4
2012	89.1	80.5	31.1	114.1	109.1	70.5	n.a.	97.2	85.3
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	106.6	67.1	114.0	79.4	117.8	98.9	98.6	114.4	103.3
2003 Q1	102.3	67.7	n.a.	n.a.	98.4	40.3	n.a.	51.6	91.3
Q2	134.6	143.4	n.a.	n.a.	111.0	50.4	n.a.	61.6	124.7
Q3	149.6	137.2	n.a.	n.a.	103.7	50.3	n.a.	59.8	136.5
Q4	138.7	120.0	n.a.	n.a.	97.9	35.1	n.a.	47.0	125.8
2004 Q1	99.9	133.3	n.a.	n.a.	90.3	39.2	n.a.	55.2	95.0
Q2	108.5	78.6	n.a.	n.a.	102.7	49.4	n.a.	60.7	97.5
Q3	166.1	43.8	n.a.	n.a.	128.8	37.9	n.a.	61.7	142.3
Q4	162.1	142.0	n.a.	n.a.	142.8	39.9	n.a.	66.0	147.5
2005 Q1	123.0	142.5	n.a.	304.3	132.7	43.2	n.a.	64.6	119.5
Q2	141.2	133.1	n.a.	352.6	108.7	33.2	n.a.	60.8	134.0
Q3	141.0	135.5	n.a.	215.4	130.7	36.9	n.a.	66.1	132.4
Q4	145.3	123.8	n.a.	200.1	122.8	37.5	n.a.	71.9	134.7
2006 Q1	143.8	115.5	n.a.	230.7	74.9	29.7	n.a.	66.9	132.7
Q2	136.8	131.1	n.a.	261.9	113.7	41.9	n.a.	67.4	129.1
Q3	154.1	136.1	n.a.	260.2	138.6	56.4	n.a.	59.9	144.0
Q4	158.3	123.8	n.a.	248.6	92.2	31.9	n.a.	63.2	145.8

Table 3 continued ... Index of the Volume of Mining Production by Mineral Group and Mineral, Q1 of 2003 - Q2 of 2015

Base 2013 = 100									
	Diamonds	Copper-Nickel-Cobalt Matte	Copper in Concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100
2007 Q1	141.9	123.6	n.a.	174	100.4	14.8	n.a.	59.4	131.2
Q2	141.8	128.2	n.a.	249.6	122.4	56.4	n.a.	56	133
Q3	157.8	44.9	n.a.	228.4	147.3	70.3	n.a.	57.5	139
Q4	140.1	149.1	n.a.	228.1	120.6	60.1	n.a.	48.7	133
2008 Q1	140.7	130	n.a.	217	113.8	31.3	n.a.	61.3	131.6
Q2	138.9	111.2	n.a.	257.6	100.7	21.1	n.a.	59.3	128.8
Q3	158	124.3	n.a.	266.4	123.5	44.3	n.a.	62	146.2
Q4	126	106.8	n.a.	311.7	124.5	34.5	n.a.	60.7	118.8
2009 Q1	n.a	92.5	n.a.	140.2	86.7	43.4	n.a.	58.7	11
Q2	67.7	131	n.a.	155.5	67.4	32.6	n.a.	50.2	70.1
Q3	101.3	136.9	n.a.	133.8	116.8	43.5	n.a.	45.6	98.5
Q4	137.7	123.9	n.a.	109.4	101.2	62.7	n.a.	42.8	127
2010 Q1	79.4	127.4	6.1	134.7	103.7	58.5	n.a.	63.4	80
Q2	98.1	81.8	10.5	135	91.2	56.7	n.a.	63.8	91.6
Q3	103.5	134.1	16.8	160.9	109.8	95.8	n.a.	71.9	101.7
Q4	99.7	99.7	18.6	157.6	118	68.9	n.a.	65.2	95.5
2011 Q1	93.3	95.2	15.7	111.1	98.7	71.8	n.a.	55.6	88.9
Q2	102.5	85.9	23.8	111.8	101.6	69.5	n.a.	72.4	96.2
Q3	119.8	7.2	25.8	134.3	130.9	106.5	n.a.	56.9	104.6
Q4	80.3	99.3	23.1	160.4	121.4	94.7	n.a.	25.8	79.9
2012 Q1	92.5	110.1	23.8	134.6	105.9	65.8	n.a.	62.6	90.3
Q2	92.4	99.6	22.9	119.8	99.2	78.3	n.a.	60.1	89.1
Q3	75.8	25.6	41	108.9	129.1	58.2	n.a.	118.8	70.2
Q4	95.7	86.9	36.6	93.1	102.1	79.9	n.a.	147.4	91.4
2013 Q1	80.5	88	94	76.6	122.9	97	102.3	107.5	82.5
Q2	111.7	112.4	115.5	98.5	89	116.8	118.1	74.6	111.6
Q3	95.8	107.8	93.2	102.4	112.9	118.6	108	113.8	97.1
Q4	111.9	91.9	97.4	122.5	75.2	67.6	71.7	104.1	108.8
2014 Q1	101.5	46.8	96.9	96.4	109	68.6	73.2	95	96.2
Q2	110	73.4	114.7	74.3	115.6	100.8	88.5	123.9	106.6
Q3	109.3	51.6	136	84.5	117.3	119.5	135.4	130.6	105.8
Q4	105.5	96.5	108.5	62.3	129.5	109.7	97.5	108.3	104.5
2015 Q1	99.1	87.6	74.3	51.7	73.4	61.6	49.6	126.9	95.6
Q2	104.1	105.2	34.8	49.7	52.9	37.8	n.a.	135.1	98.5

NB: 1. 2015 Figures are provisional

2. n.a signifies data not available/no production at the specified period

Table 4: Year-on-Year Percentage Change in the Volume of Mining Production by Mineral Group and Mineral, Q1 of 2014 - Q2 of 2015

(Base 2013 = 100)									
	Diamonds	Copper-Nickel-Cobalt/Matte	Copper in Concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100.0
2004	2.2	(15.1)	n.a.	n.a.	13.0	(5.5)	n.a.	10.7	0.8
2005	2.6	34.5	n.a.	...	6.5	(9.4)	n.a.	8.1	7.9
2006	7.7	(5.3)	n.a.	(6.6)	(15.3)	6.1	n.a.	(2.3)	6.0
2007	(1.9)	(12.0)	n.a.	(12.1)	17.0	26.1	n.a.	(14.0)	(2.8)
2008	(3.1)	6.0	n.a.	19.6	(5.7)	(34.9)	n.a.	9.8	(2.0)
2009	(45.6)	2.5	n.a.	(48.8)	(19.6)	38.8	n.a.	(18.9)	(41.6)
2010	24.2	(8.5)	n.a.	9.1	13.6	53.6	n.a.	33.9	20.3
2011	4.0	(35.1)	76.5	(12.0)	7.0	22.4	n.a.	(20.3)	0.2
2012	(10.0)	12.0	40.6	(11.8)	(3.6)	(17.6)	n.a.	84.7	(7.7)
2013	12.2	24.2	221.9	(12.4)	(8.3)	41.8	...	2.8	17.3
2014	6.6	(32.9)	14.0	(20.6)	17.8	(1.1)	(1.4)	14.4	3.3
2004 Q1	(2.3)	96.8	n.a.	...	(8.3)	(2.8)	n.a.	6.8	4.0
Q2	(19.4)	(45.2)	n.a.	...	(7.5)	(2.1)	n.a.	(1.4)	(21.8)
Q3	11.0	(68.1)	n.a.	...	24.2	(24.6)	n.a.	(3.2)	4.2
Q4	16.9	18.3	n.a.	...	45.8	13.8	n.a.	40.5	17.2
2005 Q1	23.1	7.0	n.a.	...	46.9	10.3	n.a.	17.1	25.8
Q2	30.1	69.3	n.a.	...	5.9	(32.8)	n.a.	0.2	37.4
Q3	(15.1)	209.2	n.a.	...	1.5	(2.7)	n.a.	7.1	(6.9)
Q4	(10.4)	(12.9)	n.a.	...	(14.0)	(6.1)	n.a.	8.9	(8.7)
2006 Q1	16.9	(19.0)	n.a.	(24.2)	(43.6)	(31.4)	n.a.	3.7	11.1
Q2	(3.1)	(1.5)	n.a.	(25.7)	4.6	26.4	n.a.	10.7	(3.7)
Q3	9.3	0.5	n.a.	20.8	6.0	53.0	n.a.	(9.3)	8.8
Q4	9.0	0.0	n.a.	24.2	(24.9)	(14.8)	n.a.	(12.1)	8.2
2007 Q1	(1.3)	7.0	n.a.	(24.6)	34.1	(50.2)	n.a.	(11.3)	(1.2)
Q2	3.7	(2.2)	n.a.	(4.7)	7.7	34.6	n.a.	(16.9)	3.0
Q3	2.4	(67.0)	n.a.	(12.2)	6.3	24.8	n.a.	(4.1)	(3.5)
Q4	(11.5)	20.4	n.a.	(8.3)	30.8	88.3	n.a.	(22.9)	(8.8)

Table 4 continued... Year-on-Year Percentage Change in the Volume of Mining Production by Mineral Group and Mineral, Q1 of 2014 - Q2 of 2015

(Base 2013 = 100)									
	Diamonds	Copper-Nickel-Cobalt Matte	Copper Concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100.0
2008 Q1	(0.8)	5.2	n.a.	24.7	13.4	111.8	n.a.	3.2	0.3
Q2	(2.1)	(13.2)	n.a.	3.2	(17.7)	(62.6)	n.a.	6.0	(3.1)
Q3	0.1	176.9	n.a.	16.6	(16.2)	(37.0)	n.a.	7.9	5.1
Q4	(10.0)	(28.3)	n.a.	36.7	3.2	(42.6)	n.a.	24.6	(10.6)
2009 Q1	(100.0)	(28.9)	n.a.	(35.4)	(23.8)	38.7	n.a.	(4.1)	(91.6)
Q2	(51.3)	17.7	n.a.	(39.6)	(33.1)	54.6	n.a.	(15.4)	(45.6)
Q3	(35.9)	10.2	n.a.	(49.8)	(5.5)	(1.8)	n.a.	(26.4)	(32.6)
Q4	9.3	16	n.a.	(64.9)	(18.7)	81.6	n.a.	(29.5)	6.9
2010 Q1	...	37.8	...	(3.9)	19.6	34.8	n.a.	7.9	626.4
Q2	44.9	(37.5)	...	(13.2)	35.4	73.9	n.a.	27.2	30.6
Q3	2.2	(2.1)	...	20.2	(5.9)	120.3	n.a.	57.6	3.2
Q4	(27.6)	(21.8)	...	44.0	16.6	9.9	n.a.	52.4	(24.8)
2011 Q1	17.5	(25.3)	158.6	(17.5)	(4.8)	22.8	n.a.	(12.3)	11.1
Q2	4.5	5.0	126.7	(17.2)	11.3	22.5	n.a.	13.4	5.0
Q3	15.8	(94.6)	53.2	(16.5)	19.1	11.3	n.a.	(20.9)	2.9
Q4	(19.4)	(0.4)	24.6	1.7	2.8	37.5	n.a.	(60.4)	(16.4)
2012 Q1	(0.8)	15.6	51.4	21.1	7.3	(8.4)	n.a.	12.7	1.6
Q2	(9.8)	15.9	(3.9)	7.2	(2.3)	12.6	n.a.	(17.0)	(7.3)
Q3	(36.7)	255.4	59.1	(18.9)	(1.3)	(45.4)	n.a.	109.0	(32.9)
Q4	19.2	(12.5)	58.4	(42.0)	(15.9)	(15.6)	n.a.	471.1	14.4
2013 Q1	(13.0)	(20.1)	294.5	(43.1)	16.1	47.4	...	71.6	(8.7)
Q2	20.9	12.8	405.1	(17.8)	(10.3)	49.3	...	24.1	25.2
Q3	26.4	320.7	127.4	(5.9)	(12.6)	103.7	...	(4.2)	38.4
Q4	16.9	5.7	165.9	31.6	(26.3)	(15.4)	...	(29.4)	19.1
2014 Q1	26	(46.8)	3.1	25.8	(11.4)	(29.3)	(28.4)	(11.7)	16.7
Q2	(1.5)	(34.7)	(0.7)	(24.6)	29.8	(13.7)	(25.1)	66.1	(4.5)
Q3	14.1	(52.1)	46.0	(17.5)	3.9	(2.0)	25.4	14.7	8.9
Q4	(5.7)	5.0	11.4	(49.1)	72.2	62.3	35.9	4.0	(4.0)
2015 Q1	(2.5)	87.3	(23.3)	(46.3)	(32.6)	(10.3)	(32.3)	33.7	(0.9)
Q2	(5.4)	43.3	(69.7)	(33.0)	(54.2)	(62.5)	(100.0)	9.0	(7.6)

Note: 1. 2015 Figures are provisional

2. () denotes negative numbers

3. ...data is not zero but the figure is not significant enough to be measured

Table 5: Contribution of each Mineral Group and Mineral to the Year-on-Year Percentage Change in the Volume of Mining Production, Q1 of 2014 - Q2 of 2015

(Base 2013 = 100)									
	Diamonds	Copper-Nickel-Cobalt Matte	Copper in Concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100.0
2004	2.0	(1.3)	n.a.	...	0.1	(0.0)	n.a.	0.0	0.8
2005	2.4	2.4	n.a.	...	0.1	(0.0)	n.a.	0.0	7.9
2006	6.7	(0.5)	n.a.	(0.2)	(0.1)	0.0	n.a.	(0.0)	6.0
2007	(1.7)	(0.9)	n.a.	(0.3)	0.1	0.0	n.a.	(0.0)	(2.8)
2008	(2.8)	0.4	n.a.	0.4	(0.0)	(0.1)	n.a.	0.0	(2.0)
2009	(40.3)	0.2	n.a.	(1.4)	(0.2)	0.0	n.a.	(0.0)	(41.6)
2010	19.9	(1.2)	n.a.	0.2	0.1	0.2	n.a.	0.1	20.3
2011	3.4	(3.6)	n.a.	(0.3)	0.1	0.1	n.a.	(0.0)	0.2
2012	(8.8)	0.8	n.a.	(0.2)	(0.0)	(0.1)	n.a.	0.1	(7.7)
2013	10.5	2.0	...	(0.2)	(0.1)	0.2	...	0.0	17.3
2014	5.4	(2.8)	0.8	(0.3)	0.2	(0.0)	...	0.0	3.3
2004 Q1	(2.1)	6.1	n.a.	...	(0.1)	(0.0)	n.a.	0.0	4.0
Q2	(17.3)	(4.5)	n.a.	...	(0.1)	(0.0)	n.a.	(0.0)	(21.8)
Q3	10.0	(5.9)	n.a.	...	0.2	(0.0)	n.a.	0.0	4.2
Q4	15.3	1.5	n.a.	...	0.3	0.0	n.a.	0.0	17.2
2005 Q1	20.0	0.8	n.a.	...	0.4	0.0	n.a.	0.0	25.8
Q2	27.6	4.8	n.a.	...	0.1	(0.1)	n.a.	0.0	37.4
Q3	(14.6)	5.5	n.a.	...	0.0	(0.0)	n.a.	0.0	(6.9)
Q4	(9.4)	(1.1)	n.a.	...	(0.1)	(0.0)	n.a.	0.0	(8.7)
2006 Q1	14.4	(1.9)	n.a.	(0.9)	(0.4)	(0.1)	n.a.	0.0	11.1
Q2	(2.7)	(0.1)	n.a.	(0.9)	0.0	0.0	n.a.	0.0	(3.7)
Q3	8.2	0.0	n.a.	0.5	0.1	0.1	n.a.	(0.0)	8.8
Q4	8.0	0.0	n.a.	0.5	(0.2)	(0.0)	n.a.	(0.0)	8.2
2007 Q1	(1.2)	0.5	n.a.	(0.6)	0.2	(0.1)	n.a.	(0.0)	(1.2)
Q2	3.2	(0.2)	n.a.	(0.1)	0.1	0.1	n.a.	(0.0)	3.0
Q3	2.2	(5.4)	n.a.	(0.3)	0.1	0.0	n.a.	(0.0)	(3.5)
Q4	(10.3)	1.5	n.a.	(0.2)	0.2	0.1	n.a.	(0.0)	(8.8)

Table 5 continued... Contribution of each Mineral Group and Mineral to the Year-on-Year Percentage Change in the Volume of Mining Production, Q1 of 2014 - Q2 of 2015

(Base 2013: 100)									
	Diamonds	Copper-Nickel-Cobalt Matte	Copper in Concentrates	Gold	Soda Ash	Salt	Silver	Coal	Total Index
Weights	82.5	8.6	5.5	1.4	0.9	0.5	0.4	0.3	100.0
2008 Q1	(0.7)	0.4	n.a	0.5	0.1	0.1	n.a	0.0	0.3
Q2	(1.8)	(1.1)	n.a	0.1	(0.1)	(0.1)	n.a	0.0	(3.1)
Q3	0.1	4.9	n.a	0.4	(0.2)	(0.1)	n.a	0.0	5.1
Q4	(8.7)	(2.7)	n.a	0.9	0.0	(0.1)	n.a	0.0	(10.6)
2009 Q1	(88.2)	(2.4)	n.a.	(0.8)	(0.2)	0.0	n.a.	(0.0)	(91.6)
Q2	(45.6)	1.3	n.a.	(1.1)	(0.2)	0.0	n.a.	(0.0)	(45.6)
Q3	(32.0)	0.7	n.a.	(1.3)	(0.0)	(0.0)	n.a.	(0.0)	(32.6)
Q4	8.1	1.2	n.a.	(2.4)	(0.2)	0.1	n.a.	(0.0)	6.9
2010 Q1	594.7	27.2	...	(0.7)	1.4	0.7	n.a.	0.1	626.4
Q2	35.7	(6.0)	...	(0.4)	0.3	0.2	n.a.	0.0	30.6
Q3	1.9	(0.2)	...	0.4	(0.1)	0.3	n.a.	0.1	3.2
Q4	(24.7)	(1.6)	...	0.5	0.1	0.0	n.a.	0.0	(24.8)
2011 Q1	14.3	(3.4)	0.7	(0.4)	(0.1)	0.1	n.a.	(0.0)	11.1
Q2	4.0	0.4	0.8	(0.4)	0.1	0.1	n.a.	0.0	5.0
Q3	13.2	(10.7)	0.5	(0.4)	0.2	0.1	n.a.	(0.0)	2.9
Q4	(16.7)	(0.0)	0.3	0.0	0.0	0.1	n.a.	(0.1)	(16.4)
2012 Q1	(0.7)	1.4	0.5	0.4	0.1	(0.0)	n.a.	0.0	1.6
Q2	(8.6)	1.2	(0.1)	0.1	(0.0)	0.0	n.a.	(0.0)	(7.3)
Q3	(34.7)	1.5	0.8	(0.3)	(0.0)	(0.2)	n.a.	0.1	(32.9)
Q4	15.9	(1.3)	0.9	(1.2)	(0.2)	(0.1)	n.a.	0.4	14.4
2013 Q1	(11.0)	(2.1)	4.3	(0.9)	0.2	0.2	...	0.1	(8.7)
Q2	17.9	1.2	5.7	(0.3)	(0.1)	0.2	...	0.0	25.2
Q3	23.5	10.0	4.1	(0.1)	(0.2)	0.4	...	(0.0)	38.4
Q4	14.6	0.5	3.6	0.5	(0.3)	(0.1)	...	(0.1)	19.1
2014 Q1	21.0	(4.3)	0.2	0.3	(0.2)	(0.2)	(0.2)	(0.0)	16.7
Q2	(1.3)	(3.0)	(0.0)	(0.3)	0.2	(0.1)	(0.1)	0.1	(4.5)
Q3	11.4	(5.0)	2.4	(0.3)	0.0	(0.0)	0.1	0.0	8.9
Q4	(4.8)	0.4	0.6	(0.8)	0.4	0.2	0.1	0.0	(4.0)
2015 Q1	(2.2)	3.6	(1.3)	(0.6)	(0.3)	(0.0)	(0.1)	0.1	(0.9)
Q2	(4.6)	2.6	(4.1)	(0.3)	(0.5)	(0.3)	(0.4)	0.0	(7.6)

Note: 1. 2015 Figures are provisional
 2. () denotes negative numbers
 3. ...data is not zero but the figure is not significant enough to be measured

3.0 Technical Notes

3.1 Background Information

Mining activity in Botswana started in the 19th century with the production of Gold by Europeans from the Tati Reefs which is now the modern Francistown area. However, much of this activity could not be accounted for, despite its significant contribution to the economy at that time. Modern mining in Botswana started with the mining of Diamonds at Orapa in 1971 followed by Copper-Nickel production in 1973 at Selibe- Phikwe. Since the early 1980s, the mining industry has been the largest contributor to real gross domestic product (GDP), contributing between 30 and 50 percent. Its value has been increasing at an annual rate of nearly 20 percent.

These mineral contributions enabled the Government to undertake investments in both human and physical infrastructure development over time. In 2013, mining accounted for 22.4 percent of Botswana's GDP, and more than 50 percent of Government revenues. Even though the mining sector's contribution to GDP has been below 25 percent since the 2009 recession, available data indicates that the sector still leads in terms of value added contribution to GDP. Despite its great contribution to Botswana's GDP, the mining industry is capital intensive and accounts for less than 5 percent of employment in the private sector.

With such a significant contribution to the GDP, and or the national economy, the need for a measure of change in the production of minerals in Botswana cannot be over emphasized. The index of physical volume of mining production is such a measure that provides a relative change over time in mining production. IMP can also be used as a deflator to calculate the gross domestic product (GDP) at constant prices.

3.2 Data collection

A mining production survey is carried out by the Department of Mines at the Ministry of Minerals, Energy and Water Resources, covering all mining establishments operating in the country. After the completion of data collection, the Department of Mines through its data sharing agreement with Statistics Botswana provides the data to Statistics Botswana. Following international standards and guidelines, Statistics Botswana cleans and tabulates the data, then produces reports for publishing and dissemination to users.

3.3 Scope of the survey

The survey covers all mining establishments conducting activities relating to the extraction of minerals occurring naturally as solids such as Diamonds, Matte (Copper-Nickel-Cobalt), Copper in Concentrates, Gold, Soda Ash, Salt, Coal, Semi-precious stones and the quarrying of building materials. The activities are classified according to the International Standard of Industrial Classification of all Economic Activities (ISIC) Rev 4, and Central Product Classification (CPC) Version 2.

The results of the survey are used to calculate the indices of the physical volume of mining production on quarterly basis and subsequently to estimate GDP, also on a quarterly basis.

4.0 Concepts, Definitions and Methods

4.1 Index of the volume of mining productions

The index of the volume of mining production is a ratio that indicates the increase or decrease of a magnitude (Allen, 1975). The index form is used not only for intertemporal comparisons but for comparisons between countries (Bal, 2008).

The IMP is an important macro-economic indicator which monitors progress and fluctuation of the mineral sector production in the economy. The Index is also known to be an effective tool that measures current production which indicates relative changes over time in the physical volume of mining production.

4.2 Base Period

The base period, usually a year, is the period against which other periods are compared to and whose values provide the weights for an index (UNSD, 2010). The base period, also referred to as reference period used in this brief is 2013 and it is set at 100.

4.3 Index weighting

The weight of the mineral group is the ratio of the estimated value of production of a mineral group to the total estimated value of production of the mining industry. The weight of a mineral group reflects the importance of the mineral group in the total mining industry. The relative importance of various mineral groups is different and these differentials need to be reflected while measuring the performance of the entire mining sector.

4.4 Seasonal Adjustment (SA)

Seasonal adjustment is a means of removing the estimated effects of normal seasonal fluctuations and typical calendar effects from the series so that the effects of other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove irregular or non-seasonal influences which may be present in any particular month.

The data contained in this report is not seasonally adjusted. However, there is a further scope of producing and disseminating an additional seasonally adjusted series.

4.5 Year-on-year percentage change

Year-on-Year percentage change in a variable for any given period is the rate of change expressed over the same period (OECD, 2007).

4.6 Index Contribution (percentage points)

The contribution (percentage points) of a mineral group or mineral to the percentage change in the total mining production for a given period is calculated by multiplying the difference in the index for each mineral group or mineral by the weight of the mineral group or mineral and then dividing by the previous period's total index. It indicates the extent to which each mineral group affects the overall growth of mining production.

4.7 Calculation of the Index of Mining Production

To calculate the evolution of physical volume of mining production on a quarterly basis, a Laspeyres indicator, base year 2013=100, was used. The index is calculated as the weighted arithmetic mean of the production relatives in respect of selected items. The weighted average is done to measure the importance of various mineral groups in the mining sector when calculating the comprehensive growth rate of the sector.

$$I = \frac{\sum R_i * W_i}{\sum W_i}$$

Where; I is the index, R_i is the production relative of item i and W_i is the weight allocated to item i

The production relative (R_i) of the i^{th} item for the quarter has been calculated by using the formula:

$$(R_i) = \frac{P_{ic}}{P_{i0}} * 100$$

Where P_{ic} is the production of the i^{th} item in the current quarter and P_{i0} is the production of the i^{th} item in the base year.