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Cordillera Administrative Region

SPECIAL RELEASE

CAR Asset Accounts for Mineral Resources: 2004-2016 Gold Ore Reserve

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The Cordillera Administrative Region (CAR) Asset Accounts for Mineral Resources under the Environment and Natural Resource Accounting (ENRA) Project present estimates on physical and monetary valuation of mineral resources covering the period 2004 to 2016. The UN System of Environmental-Economic Accounting (SEEA) 2012 – Central Framework was used in the accounting of mineral resources.

Gold ore reserves increase on average by almost 20% annually

• The closing stocks of Class A gold ore reserve fluctuated through time during the accounting period. The level of ore increased from 3.6 million MT in 2004 to 9.9 million MT in 2016 with an annual average growth of 19.9 percent or 523.4 thousand MT. The closing stock in 2016 posted the highest level of ore reserve with 9.9 million MT, while the lowest ore reserve was recorded in 2009 with 2.7 million MT.

١	(ear	Extraction in Ore Form (in '000 MT)	Closing Stock in Ore Form (in '000 MT)
2	2004	537.4	3,647.0
2	2005	459.6	4,088.0
2	2006	571.2	5,170.5
2	2007	586.2	5,049.4
2	2008	474.1	5,193.7
2	2009	389.3	2,684.2
2	2010	337.0	3,030.7
2	2011	529.2	9,128.1
2	2012	568.7	8,559.3
2	2013	745.3	8,344.4
2	2014	381.4	7,714.1
2	2015	349.8	5,558.1
2	2016	295.5	9,928.1

Table 1. Extraction and Closing Stock of Class A Gold Reserve,Ore Form, CAR: 2004-2016

Source: Philippine Statistics Authority – CAR

Level of extraction for Class A gold reserve declined by an annual average of 1.3 percent or 20.2 thousand MT of ore within the 13-year accounting period. Extraction of gold ore reached to a maximum in 2013 with 745.3 thousand MT. On the contrary, the lowest extracted ore was in 2016 with 295.5 thousand MT. In summary, the total extracted ore from 2004 to 2016 aggregated to 6.2 million MT.

Additions to stock peak in 2011 with 6.6 million MT

- The highest additions to stock was posted in 2011 at 6.6 million MT contributed by the upward reappraisals while additions recorded the lowest in 2007 at 465.2 thousand MT. There were no recorded additions to stock for the years 2009, 2012, 2014 and 2015.
- There was a recorded increase equal to 4.7 million MT of gold ore reserve that can be attributed to the high level of reserve by the end of 2016. All additions to stock totaled 19.8 million MT from 2004 to 2016 with an average increase of 1.5 million MT yearly.



Figure 1. Closing Stock and Changes in Stock of Class A, Gold Reserve, Ore Form, CAR: 2004-2016 (in thousand MT)

Source: Philippine Statistics Authority - CAR

- Reductions to stock added up to 10.3 million MT from 2004 to 2016. Reduction in stock
 was lowest in 2016 and dipped between 2008 and 2009 with 48.3 percent change in
 the closing stock.
- In 2009, a total of 2.5 million MT of gold ore was deducted from the stocks, where 84.5 percent or 2.1 million MT was considered as downward reappraisal. The remaining 15.5 percent constituted the level of extraction for the year.

Class B gold ore reserve increases while Class C decreases

- Class B gold ore reserve generally increased although the level of reserve fluctuated across the accounting period. Stocks increased from 1.6 million MT in 2004 to 5.6 million MT in 2016 with an average addition of 334.2 thousand MT yearly (Table 2).
- The maximum level of class B gold reserve was recorded in 2009 with 9.8 million MT, while the minimum level was recorded in 2009 with 815.3 thousand MT.
- Class C gold ore reserve also varied from year to year but generally followed a decreasing trend. Stocks declined by an annual average of 4.8 percent or an average of 1.2 million MT annually.
- The largest Class C gold reserve was declared in year 2011 with 24.3 million MT of gold ore which remained until the closing stock of 2012. The lowest reserve was registered in 2015 with 288.8 thousand MT.

Year	Class B	Clas C
2004	1,634.1	14,482.1
2005	1,630.9	21,116.1
2006	1,424.0	20,948.7
2007	1,538.2	16,941.2
2008	1,786.8	18,045.9
2009	815.3	18,703.7
2010	9,753.6	22,677.4
2011	9,344.8	24,288.3
2012	1,201.2	24,288.3
2013	1,545.9	15,588.3
2014	2,420.6	15,588.3
2015	5,207.3	288.8
2016	5,644.3	655.3

Table 2. Closing Stock of Class B and C Gold Reserve, Ore Form. CAR: 2004-2016 (in MT)

Source: Philippine Statistics Authority - CAR

Class C has the largest share to the total gold ore reserve

• Figure 2 shows the shares of Classes A, B and C to the total gold ore reserve from 2004 to 2016. Class C contributed the largest to the total stock. It accounted the highest in 2009 where it posted 84.2 percent that was equivalent to 18.7 million MT of gold reserves. On the average, Class C contributed 59.8 percent from 2004 to 2016 to the total gold reserve.

• Class A came second with an average contribution of 25.8 percent to the total stock of gold ore reserve within the period covered. The share of Class A ranged from 8.5 percent in 2010 to 61.2 percent in 2016.

• Class B contributed the least to the share of total stock of gold ore reserve with an average of 14.4 percent during the accounting period. The share of Class B ranged from 3.5 percent in 2012 to 47.1 percent in 2015.



Figure 2. Share of Class A, B and C Gold Reserve to the Total Stock, Ore Form, CAR: 2004-2016 (in thousand MT)

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Technical Notes

Class A gold ore refers to commercially recoverable gold ore reserves/resources.

Class B gold ore refers to potentially commercially recoverable gold ore reserves/resources.

Class C gold ore refers to non-commercial and other known gold deposits.

Extraction is the quantity of the resource physically removed from the deposit.

Reappraisals relate to either additions or reductions in the estimated available stock of a specific deposit or to changes in the categorization of specific deposits between class A, B or C based on changes in geologic information, technology, resource price or a combination of these factors.

System of Environmental-Economic Accounting (SEEA) 2012 – Central Framework is an international statistical standard for environmental-economic accounting. It is a multipurpose conceptual framework for understanding the interaction between the economy and the environment.