

# **Mineral Industry Surveys**

#### For information, contact:

Micheal W. George, Gold Commodity Specialist U.S. Geological Survey 989 National Center Reston, VA 20192 Telephone: (703) 648-4962, Fax: (703) 648-7757 E-mail: mgeorge@usgs.gov

Wanda G. Wooten (Data) Telephone: (703) 648-7967 Fax: (703) 648-7975 E-mail: wwooten@usgs.gov

Internet: http://minerals.usgs.gov/minerals

#### **GOLD IN DECEMBER 2011**

U.S. mines produced 22,000 kilograms (kg) of gold in December, a 10% increase compared with revised November production. The average daily gold production for U.S. mines was 711 kg in December, compared with 668 kilograms per day (kg/d) for November, and 656 kg/d for the full year 2011. Total production for 2011 was about 4% higher than that in 2010. Production in Nevada, which accounted for 74% of the total domestic gold production, increased by almost 7% while production from other States declined.

The average Engelhard gold price was \$1,649.50 per troy ounce for December, a 6% decrease compared with the average gold price in November. The gold price began the month at \$1,755.63 per troy ounce, the highest level of the month, and then fell to \$1,534.25 per troy ounce on December 29, the lowest level of the month, before ending the month at \$1,575.82 per troy ounce. The average annual price rose by 28% to a record-high of \$1,574 per troy ounce in 2011.

A second feasibility study on Barrick Gold Corp.'s (Toronto, Ontario, Canada) and NovaGold Resources Inc.'s (Vancouver, British Columbia, Canada) joint-venture Donlin gold project in southwestern Alaska was released. The \$6.7 billion project estimate, which was lower than the original \$7 billion estimate, included \$834 million for a 500-kilometer natural gas pipeline and \$984 million in contingencies. The proposed open pit operations would have a 27-year mine life and would produce an average of 34,200 kg of gold per year at an average cash cost of \$585 per troy ounce of gold (NovaGold Resources Inc., 2011). (See Gold in September 2011.)

In 2011, Barrick produced 98,100 kg of gold from its operations in the United States; this was 10% more than that in 2010. A 24% increase in production from the Cortez operations was the main reason for this increase. In 2011, Barrick restarted gold production from the Golden Sunlight Mine in Montana after an extended development phase. Except for the Goldstrike operation, which produced 12% less gold in 2011 compared with that in 2010, all Barrick operations produced more gold in 2011 (Barrick Gold Corp., 2012).

High Desert Gold Corp. (Vancouver) reported an initial resource estimate for the Jumbo zone at Gold Springs gold-silver project near the Nevada-Utah border. Using a 0.3-gram-

of-gold-equivalent-per-metric-ton cutoff, inferred resources were estimated to be 9.38 million metric tons (Mt) of ore at a grade of 0.57 gram per metric ton (g/t) of gold and 12.9 g/t silver for a contained resource of 5,390 kg of gold and 121,000 kg of silver (High Desert Gold Corp., 2011).

Fire River Gold Corp. (Vancouver) suspended operations at its Nixon Fork gold operations in western Alaska on December 10 for 4 days because severe weather prevented aircraft from landing for almost 2 weeks. The company reported updated indicated hardrock resources of 129,000 metric tons (t) of ore averaging 24.9 g/t gold and containing 3,220 kg of gold. The mine also has inferred hardrock resources of 54,000 t of ore averaging 28 g/t and containing 1,510 kg of gold (Fire River Gold Corp. 2011a, b).

International Minerals Corp. (Scottsdale, AZ) announced results of an independent preliminary economic assessment on the Converse gold deposit in northern Nevada. The base-case for the project was for a 14-year mine life processing 217 Mt of ore having an average grade of 0.52 g/t gold and 3.9 g/t silver and producing 67,500 kg of gold and 263,000 kg of silver. The total cash operating cost was estimated to be \$745 per troy ounce of gold produced with silver as a byproduct credit, and the initial capital cost was estimated to be \$455 million (International Minerals Corp., 2011).

Lincoln Mining Corp. (Vancouver) released the preliminary economic assessment for its Pine Grove project in Lyon County, NV. The proposed open-pit and heap leach operations would have a mine life of 6 years and a total production of 3,380 kg of gold. The total capital cost was \$27.4 million. At a 0.22 g/t cut off grade, total measured and indicated resources at the Pine Grove project were estimated to be 6.06 Mt at a grade of 1.06 g/t of gold for a contained resource of 6,340 kg of gold (Lincoln Mining Corp., 2011).

Freegold Ventures Ltd. (Vancouver) released updated resource estimates on the Golden Summit project near Fairbanks, AK. The Dolphin zone contains indicated resources of 14.84 Mt of ore having an average grade of 0.66 g/t of gold and contains 9,830 kg of gold. The Dolphin zone has additional inferred resources of 50.5 Mt of ore averaging 0.61 g/t gold and contains 30,800 kg of gold (Freegold Ventures Ltd., 2011).

#### **References Cited**

- Barrick Gold Corp., 2012, Supplemental information—Fourth quarter & yearend mine statistics: Toronto, Ontario, Canada, Barrick Gold Corp., 7 p.
- Fire River Gold Corp., 2011a, Fire River Gold Corp. provides updated resource estimate: Vancouver, British Columbia, Canada, Fire River Gold Corp. news release, December 21, 3 p.
- Fire River Gold Corp., 2011b, Fire River Gold Corp. resumes full operations at Nixon Fork mine: Vancouver, British Columbia, Canada, Fire River Gold Corp. news release, December 14, 1 p.
- Freegold Ventures Ltd., 2011, Freegold announces 43-101 resources estimate for Golden Summit project, Alaska: Vancouver, British Columbia, Canada, Freegold Ventures Ltd. news release, December 13, 3 p.
- High Desert Gold Corp., 2011, High Desert Gold reports initial independent NI 43-101 qualified resource estimate for the Jumbo zone at Gold Springs: Vancouver, British Columbia, Canada, High Desert Gold Corp. press release, December 11, 3 p.
- International Minerals Corp., 2011, International Minerals announces positive preliminary economic assessment at Converse gold project, Nevada: Scottsdale, AZ, International Minerals Corp. news release, December 19, 5 p.
- Lincoln Mining Corp., 2011, Lincoln Mining announces positive preliminary economic assessment at its Pine Grove project, Lyon County, Nevada: Vancouver, British Columbia, Canada, Lincoln Mining Corp. news release, December 8, 4 p.
- NovaGold Resources Inc., 2011, NovaGold passes key milestone on path to becoming premier North American gold producer: Vancouver, British Columbia, Canada, NovaGold Resources news release, December 5, 9 p.

## TABLE 1 MINE PRODUCTION OF RECOVERABLE GOLD IN THE UNITED STATES, BY STATE $^{\rm 1}$

(Kilograms)

		Other						
	Alaska	Nevada	States <sup>2</sup>	Total				
2010: <sup>p</sup>								
December	2,540	11,800	3,170	17,500				
January-December	28,100	166,000	36,900	231,000				
2011:								
January	1,870	15,300	3,060	20,200				
February	1,800	13,000	2,680	17,500				
March	2,060	14,000	3,240	19,300				
April	2,360	12,800	2,930	18,100				
May	2,540	14,400 <sup>r</sup>	3,230	20,200 <sup>r</sup>				
June	2,350	15,600	2,840	20,800				
July	2,500	14,200	2,940	19,700				
August	2,380	14,900	3,070	20,300				
September	2,400	15,300	2,790	20,500				
October	2,140	15,700 <sup>r</sup>	2,930	20,800 r				
November	2,020	14,900 <sup>r</sup>	3,110	20,000 r				
December	2,010	17,100	2,960	22,000				
January-December	26,400	177,000	35,800	239,000				

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes Arizona, California, Colorado, Idaho, Montana, New Mexico, South Dakota, Utah, and Washington.

#### TABLE 2 GOLD PRICES

#### (Dollars per troy ounce)

Engelhard:	
2010:	
Low/date	1,060.45 Feb. 5
High/date	1,424.07 Nov. 9
Average	1,227.51
2011:	
November	
Low/date	1,684.51/23
High/date	1,798.70/8
Average	1,747.44
December	
Low/date	1,534.25/29
High/date	1,755.63/1
Average	1,649.50
Year to date:	
Low/date	1,321.89 Jan. 28
High/date	1,898.87 Sep. 6
Average	1,573.57
Handy and Harman:	
2010, Average	1,224.74
2011:	
November	1,743.83
December	1,643.60
Year to date	1,570.66
London Final:	
2010, Average	1,224.66
2011:	
November	1,738.98
December	1,652.31
Year to date	1,571.08

Source: Platts Metals Week.

### TABLE 3 U.S. IMPORTS AND EXPORTS OF GOLD<sup>1</sup>

#### (Kilograms of gold content, unless otherwise specified)

	Ores and	Doré and	Refined		Waste and scrap	Metal powder	Gold compounds
Period and country	concentrates <sup>2</sup>	precipitates	bullion <sup>3</sup>	Total <sup>4</sup>	(gross weight)	(gross weight)	(gross weight)
Imports for consumption:							
2010	257,000	148,000	199,000	604,000	46,100	652	43,500
2011:							
October	192	11,900	13,400	25,500	3,880	53	6
November:							
Australia			1,210	1,210			
Bolivia		531 <sup>5</sup>		531			
Brazil			152	152			
Canada	51 <sup>5</sup>	43	2,420 5	2,510	1,570 5	(6)	
Chile		191		191	8 5		
Colombia		4,090	953	5,040	10		
Costa Rica		16		16	335 5		
Curacao		1,100		1,100	8		
Dominican Republic		16	25	41	722 5		
Ecuador		78	30	108	3		
El Salvador					373		
Guatemala		1,100		1,100	121 5		
Guyana		725	187	912			
Honduras		14	190	204	405 5		
Jamaica		11	170	12	247		
Mexico	162	7,850 5	4,900 5	12,900	328 <sup>5</sup>		
Nicaragua		213	4,900	213	136		
Peru		381	48	429			
Switzerland			48 349	429 349			
		119 <sup>5</sup>	184 <sup>5</sup>		702 5	 52 <sup>5</sup>	18 5
Other				302		52	
Total		16,500	10,600	27,300	4,970		18
January–November	203,000	161,000	143,000	507,000	57,400	439	37,600
Exports:	2.470	04.400	205.000	202.000	660.000	2 220	4 270 000
2010	3,470	84,400	295,000	383,000	660,000	2,330	4,270,000
2011:	• • •						
October	360	12,300	45,800	58,400	74,400	74	439,000
November:							
Australia			1,770	1,770			
Canada		64	54	118	5,670	3	71,300 5
China	506 <sup>5</sup>			506			1,780
Germany	140			140	120	(6)	1,510 5
Hong Kong			13,000	13,000			
Israel							906
Italy					3,020		
Korea, Republic of							3,130
Malaysia							64,300
Mexico	417 <sup>5</sup>		48	465		2	38,400 5
Netherlands							10,300
Singapore			15	15			96,100
Switzerland		8,130	577	8,700	12,700		165
Taiwan							667
		1,180		1,180	160	8	
United Arab Emirates							
United Arab Emirates United Kingdom			8.830	8.830	25.400	11	665
United Kingdom		3	8,830 115	8,830 125	25,400 29	11 38	
	  10 <sup>5</sup> 1,070	3	8,830 115 24,400	8,830 125 34,900	25,400 29 47,100	11 38 62	665 <sup>5</sup> 40 <sup>5</sup> 289,000

See footnotes at end of table.

#### TABLE 3—Continued U.S. IMPORTS AND EXPORTS OF GOLD<sup>1</sup>

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes gold content of base metal ores, concentrates, and matte imported for refining.

<sup>3</sup>Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

<sup>4</sup>"Waste and scrap," "Metal powder," and "Gold compounds" not included in "Total."

<sup>5</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

<sup>6</sup>Less than <sup>1</sup>/<sub>2</sub> unit.

Source: U.S. Census Bureau.