

# Mineral Industry Surveys

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#### **GOLD IN SEPTEMBER 2011**

U.S. mines produced 20,600 kilograms (kg) of gold in September, a slight increase compared with revised August production. The average daily gold production for U.S. mines was 688 kg in September, compared with 660 kilograms per day (kg/d) for August, and 634 kg/d for the full year of 2010.

The average Engelhard gold price was \$1,769.64 per troy ounce in September, a slight increase compared with the average gold price in August. The gold price began the month at \$1,824.75 per troy ounce, then rose to \$1,898.87 per troy ounce on September 6, the highest level of the month and of the year-to-date 2011, before starting a steady fall to \$1,601.37 per troy ounce on September 26, the lowest level of the month. The price rebounded slightly and closed the month at \$1,623.40 per troy ounce.

Barrick Gold Corp. (Toronto, Ontario, Canada) announced two new discoveries at its 2,800-square-kilometer Cortez property. The two new discoveries, Goldrush and Red Hill, were 6 kilometers (km) southeast of the Cortez Hills Mine and 24 km southeast of the Pipeline Mine in northern Nevada. The company reported that the Red Hill deposit had an inferred resource of 28.8 million metric tons (Mt) of ore at a grade of 3.8 grams per ton (g/t) (0.123 troy ounces per metric ton) gold and contained 109,000 kg (3.5 million troy ounces) of gold (Barrick Gold Corp., 2011).

Rio Tinto plc (London, United Kingdom) increased the estimated mineral resources by 20 Mt to total 106 Mt at its subsidiary Kennecott Utah Copper's Bingham Canyon Mine through the addition of the North Rim Skarn. The total mineral resources (measured, indicated, and inferred) had grades of 0.81% copper, 0.006% molybdenum, 0.39 g/t gold, and 4.9 g/t silver and contained an estimated 0.85 Mt of copper, 10,000 metric tons (t) of molybdenum, 40 t of gold, and 500 t of silver. The North Rim Skarn was a high grade copper-gold deposit, which was 300 meters below the current open pit and was expected to be developed by underground methods (Rio Tinto plc, 2011).

Fire River Gold Corp. (Vancouver, British Columbia, Canada) announced that it received an advance payment of \$1.8 million from Glencore International plc (Baar, Switzerland) for the first shipment of gold-rich copper concentrates from the

Nixon Fork Mine. The mine, 56 km northeast of McGrath, AK, was restarted in July 2011, and the company plans to ramp up production to 1,560 kilograms per year (kg/yr) of gold by late fall 2011 (Fire River Gold Corp., 2011).

A worker at the Coeur d'Alene Mines Corp.'s (Coeur d'Alene, ID) Kensington Mine, near Juneau, AK, was killed in a blasting-related accident on September 7. This marks the second mining death this year in Alaska. A worker at the Fort Knox open-pit gold mine near Juneau fell to his death in June. The area of the mining accident was closed for a week and blasting was not allowed to continue until the U.S. Mine Safety and Health Administration (MSHA) approved the blasting plan. As of September 15, the mine was operating at full capacity, and the company did not expect gold production to be reduced because of the accident (Coeur d'Alene Mines Corp., 2011; Rosen, 2011).

Companies that were developing several projects in Idaho released exploration updates. Premium Exploration Inc. (Vancouver), which had several active exploration projects in Idaho, reported resources containing an estimated 37,000 kg of gold (Allan, 2011). Terraco Gold Inc. (Vancouver) estimated its total gold resources (measured, indicated and inferred) at its Almaden project in Washington County, ID, to be 48.3 Mt of ore grading 0.62 g/t gold and containing 29,400 kg of gold (Terraco Gold Corp., 2011). The Midas Gold Corp. (Vancouver) consolidated several deposits into the Golden Meadows project in the Stibnite-Yellow Pine mining district and collaborated with Vista Gold Corp. (Littleton, CO) to explore the area further. Midas's share of the gold resources were estimated to be 65,300 kg of indicated gold resources and 115,000 kg of inferred gold resources (Northern Miner, The, 2011b).

Klondex Mines Ltd. (Vancouver) announced an updated technical report for its Fire Creek gold project in the Battle Mountain-Eureka Trends in northern Nevada. The estimated indicated mineral resources, at a 4 g/t gold cut-off grade, was 5.18 Mt of ore at a grade of 9.9 g/t gold, equivalent to 51,200 kg of contained gold. The estimated inferred resources were 1.73 Mt of ore at a grade of 8.22 g/t gold, or 14,300 kg of contained gold (Klondex Mines Ltd., 2011).

NovaGold Resources Inc. (Vancouver) was updating the feasibility study for its Donlin joint venture project in Alaska, formerly Donlin Creek, to include a powerplant using natural gas delivered by a 500-km gas pipeline from the Cook Inlet to the mine site. Donlin Gold LLC, a wholly owned subsidiary of NovaGold and Barrick, released the preliminary capital cost of \$6 billion for the project, with an additional \$1 billion for the natural gas pipeline. This was significantly higher than the April 2009 estimate of \$4.5 billion. The feasibility study was anticipated to be completed by the end of 2011, with permitting to begin in the first half of 2012 (NovaGold Resources Inc., 2011).

International Tower Hill updated its preliminary economic assessment of the Livengood deposit, 100 km north of Fairbanks, AK. The new assessment demonstrated pretax cash flows of \$3.1 billion with a net present value of \$1.2 billion. Also, the new assessment updated the indicated mineral resources to 933 Mt of ore at a grade of 0.55 g/t gold, equivalent to 513 t of gold, with an additional 257 Mt of ore at a grade of 0.22 g/t gold, equivalent to 128 t of gold in the inferred category (Northern Miner, The, 2011a).

Yukon-Nevada Gold Corp. (Vancouver) expected to start open pit mining at Burns Basin, which was a part of the Jerritt Canyon property in Nevada, by the fourth quarter 2012. A preliminary mine plan estimated the measured and indicated resources for the pit to be 2,230 t of ore at a grade of 3.36 g/t gold, containing 7,510 kg of gold (Yukon-Nevada Gold Corp., 2011).

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## TABLE 1 $\label{eq:mine_production} \mbox{ MINE PRODUCTION OF RECOVERABLE GOLD IN THE UNITED } \mbox{ STATES, BY STATE}^1$

#### (Kilograms)

		Other			
	Alaska	Nevada	States <sup>2</sup>	Total	
2010: <sup>p</sup>	<u></u>				
September	2,760	16,200	2,590	21,500	
October	2,360	13,600	2,530	18,500	
November	2,410	13,800	3,050	19,200	
December	2,540	11,800	3,170	17,500	
January-December	28,100	166,000	36,900	231,000	
2011:					
January	1,870	15,200	3,050	20,200	
February	1,800	13,100	2,680	17,600	
March	2,050	14,200	3,230	19,500	
April	2,300	13,100 <sup>r</sup>	2,920	18,300 <sup>r</sup>	
May	2,460	13,900 <sup>r</sup>	3,220	19,500 <sup>r</sup>	
June	2,290	15,900 <sup>r</sup>	2,820	21,000 r	
July	2,440	14,400 <sup>r</sup>	2,890	19,700 <sup>r</sup>	
August	2,290	15,100 °	3,040	20,500 r	
September	2,340	15,500	2,770	20,600	
January-September	19,800	131,000	26,600	177,000	

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>&</sup>lt;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:	<del></del>	
Low/date	1,060.45 Feb. 5	
High/date	1,424.07 Nov. 9	
Average	1,227.51	
2011:		
August:		
Low/date	1,626.41/1	
High/date	1,881.34/22	
Average	1,760.91	
September:		
Low/date	1,601.37/26	
High/date	1,898.87/6	
Average	1,769.64	
Year to date:		
Low/date	1,321.89 Jan. 28	
High/date	1,898.87 Sep. 6	
Average	1,536.76	
Handy and Harman:		
2010, Average	1,224.74	
2011:		
August	1,757.21	
September	1,765.99	
Year to date	1,533.70	
London Final:		
2010, Average	1,224.66	
2011:		
August	1,755.81	
September	1,771.85	
Year to date	1,533.54	

Source: Platts Metals Week.

 $\label{eq:table 3} \text{U.S. IMPORTS AND EXPORTS OF GOLD}^{\,1}$ 

(Kilograms of gold content, unless otherwise specified)

Period and country	Ores and concentrates <sup>2</sup>	Doré and precipitates	Refined bullion <sup>3</sup>	Total <sup>4</sup>	Waste and scrap (gross weight)	Metal powder (gross weight)	Gold compounds (gross weight)
Imports for consumption:	concentrates	precipitates	bullion	Total	(gross weight)	(gross weight)	(gross weight)
2010	257,000	148,000	199,000	604,000	46,100	652	43,500
2011:	237,000	110,000	1,,,,,,,,,,	001,000	10,100	032	13,300
July	32,800	12,300	11,300	56,400	3,880	52	6,510
August:	32,000	12,500	11,500	30,400	3,000	32	0,510
Bolivia		401	24	425			
Canada		42 5	3,670 5	3,710	749 5	1 5	
Chile		134		134	20		
Colombia		2,960	313	3,270	7 5		
Costa Rica		42		42	228 5		
Curacao		541	1	542	26		
Dominican Republic		53	1	54	649 <sup>5</sup>	5 5	
El Salvador			2	2	333	3	<del></del>
Germany			23	23		19 <sup>5</sup>	4,030 5
Guatemala		7		23 7	132 5		4,030
Guyana		326	136 <sup>5</sup>	462	132	<del></del>	<del></del>
Honduras		1	247	248	463 5		<del></del>
Mexico	1,220 5	9,090 5	4,250 <sup>5</sup>	14,500	340 5	9 5	
	,	169	4,230 2 <sup>5</sup>	14,300	138	9	<del></del>
Nicaragua					47		
Panama		55	38	93			
Peru	23	86	6	115			
Switzerland			241	241			504 <sup>5</sup>
United Kingdom		63 5	95 <sup>5</sup>	158	230 5		504
Other Total	1 240					35	4.520
Year to date	1,240	14,000	9,040	24,300 41 <b>5,000</b> <sup>6</sup>	3,360 41 <b>,500</b> <sup>6</sup>		4,530
	198,000	114,000	103,000	415,000 "	41,500	297	37,500
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:	4.000	2 200	2 - 000	10.100	<b>72</b> 000	100	444.000
July	1,230	3,200	36,000	40,400	72,900	102	441,000
August:			0.450	2.450			
Australia			3,170	3,170	 5 550 5		 54.700.5
Canada	8 5	46	357	411	5,550 5	3 5	54,700 <sup>5</sup>
China	131			131		1 5	21,700 5
Dominican Republic							3,690 5
Germany	141		(6)	141	181		1,530 5
Hong Kong	29		45	75	7 5	3 5	
India			3,530	3,530		17	2,000 5
Korea, Republic of	29			29			2,840 5
Malaysia			31	31			41,400 5
Mexico	419 5		108	527		2	87,200 5
Oman			47	47			
Singapore			12	12		1	111,000 5
Switzerland		213	12,500	12,700	13,900		
Taiwan						(6)	16,200 5
Thailand	2 5		1,000	1,000			
United Arab Emirates		2,750	22	2,770	229	21	
United Kingdom	1 5	2 5	16,900	17,000	12,500 5	14 5	1,810 5
Uruguay		52		52			
Other	20 5	5 5	32 5	57	131 5	5 5	
Total	780	3,060	37,800	41,600	32,500	67	344,000
Year to date	6,670	38,000	269,000	313,000	455,000	421	2,690,000

See footnotes at end of table.

### $\label{eq:table 3-Continued} \text{U.S. IMPORTS AND EXPORTS OF GOLD}^1$

Source: U.S. Census Bureau.

<sup>--</sup> Zero.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

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

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

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

<sup>&</sup>lt;sup>6</sup>Includes revisions to previously published data.

<sup>&</sup>lt;sup>7</sup>Less than ½ unit.