

Inventory Estimate Assumptions

Analysis by wombat777, hotcopper

DIYOR. Not Qualified for Advice.

This is an assumed and theoretical valuation for the Rough Ruby Inventory leading to the inaugural October 2017 auction. This is based on ruby details published to date and broad assumptions on grade distribution and rough ruby wholesale rates.

Version: 1.6

Assumptions

We know that Mustang commenced operations in the lower-quality Alpha Deposit. In the October 2016 to June 2016 timeframe Mustang recovered their initial 120,000 carats of inventory from this lower-quality deposit that had a much broader distribution of Ruby qualities.

Then following the acquisition of the highly-strategic 8245L License Area, Mustang shifted their focus to bulk-sampling from a deposit that yields almost-exclusively high quality rubies.

October 2017 Auction (Auction 1)

Due to the change in focus from a lower-quality deposit to a higher quality deposit at the end of June 2017, valuation for the October 2017 auction has been developed with two separate valuations for the following groups of material.

- Initial 120,000 carats from the Alpha Deposit with 70% of this portion as lower-grade rubies within the small and medium sizes. The remainder of the inventory is considered to be High Quality rubies.
- Subsequent 210,000 carats from the 8245L Deposit with 90% of this portion as High Quality rubies and the remainder (10%) as Commercial Quality Rubies

Q2 2018 Auction (Auction 2)

For the second auction it is assumed that all material will be recovered from the 8245L License area and that 90% of the material will be High Quality Ruby with the remaining 10% being Commercial Quality Ruby. A 250,000 carat production target has been assumed.

Distribution of inventory carats by rough ruby size

Weibull distribution has been applied for carat size distribution for the Rough Gem inventory. Sizes are assumed to range from in the size range of 1 carat to 23 carats. Assumption is that rubies below or near 1 carat are likely to be discarded. Rubies greater than 23 carats are quite rare so have not been included.

Figure 1 - Distribution of 120,000 carats collected from October 2016 to June 2017 (material for October 2017 Auction)

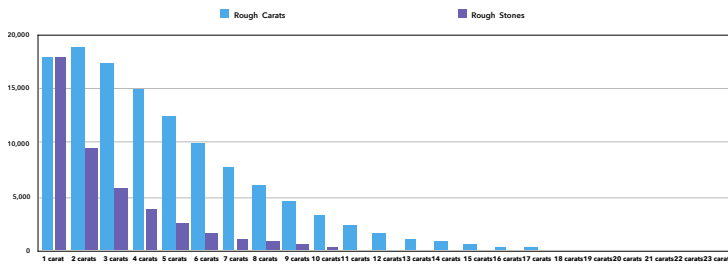


Figure 2 - Distribution of 210,000 carats collected from July to October 2017 (material for October 2017 Auction)

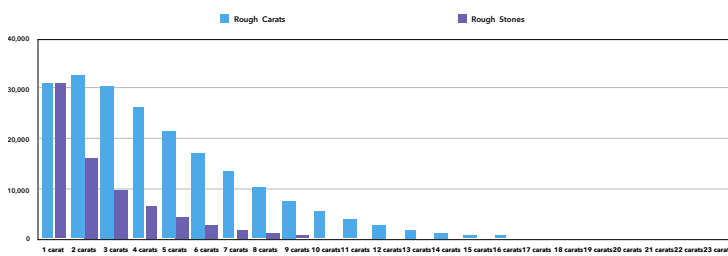
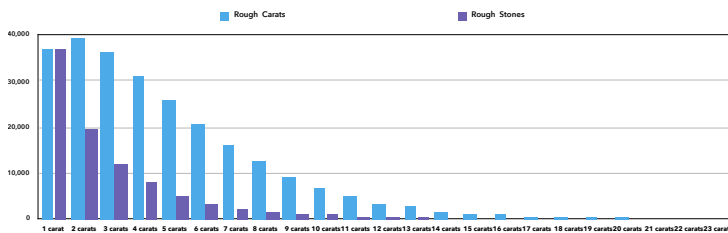
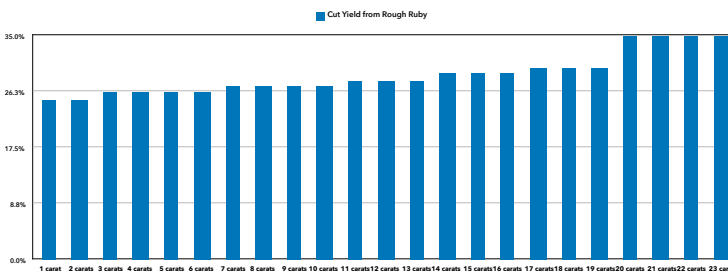


Figure 3 - Distribution of 200,000 carats collected for Q2 2018 Auction



Yield

Higher cutting yields have been assumed for the larger stones with yields reducing as the size reduces.



Reserve prices for rough rubies

Tender reserve prices have been calculated as a proportion of cut stone wholesale value. The logic for this margins has been determined based on gem industry guidance.

- 40% Large/special rough reserve rate as percentage of wholesale cut value. Higher wholesale values of cut gems allow for higher margins for tender sales of rough. Under tender sales conditions due to the increased competition for the highest quality material, strong reserve prices are realistic.
- 32.5% Medium sized rough reserve rate as percentage of wholesale cut value.
- 25% Small sized rough reserve rate as percentage of wholesale cut value. Lower margins for retail of smaller stones require lower margins for sales of rough.

Quality Distribution

It's assumed that 70% of the material collected before July 2017 is Commercial Quality Ruby with the remainder being high quality.

From July 2017 it is assumed that 8245L is yielding "almost exclusively" (80%) High Quality Ruby with the remaining 10% being Commercial Quality Ruby.

Figure 4 - Assumed grade distribution for 120,000 carats collected from October 2016 to June 2017

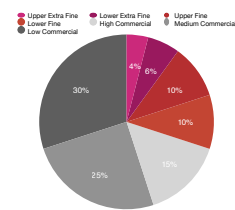


Figure 5 - Assumed grade distribution for 210,000 carats collected from July 2017 to October 2017

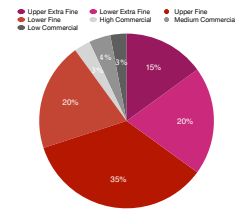
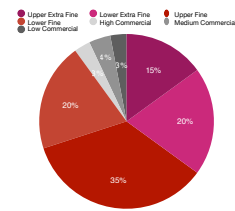


Figure 6 - Assumed grade distribution for 250,000 carats for Q2 2018 Auction



Summary of Results - Inventory Estimates

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Version 1.4

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2. Subsequent 210,000 carats from the 8245L Deposit with 90% of this portion as High Quality rubies and the remainder (10%) as Commercial Quality Rubies

Q2 2018 Auction (Auction 2)

For the second auction it is assumed that all material will be recovered from the 8245L License area and that 90% of the material will be High Quality Ruby with the remaining 10% being Commercial Quality Ruby. A 250,000 carat production target has been assumed.

Summary of Results

Auction 1

Inventory Portion	Size Group	Average Size of Rough Gem	Gems in Inventory	Carats in Inventory	Percentage of Inventory by Size Group	Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
Inventory October 2016 to June 2017	Large/Special Other	20.934	9 43,992	179 119,821	0.149% 99.851%	63 31,181	\$ 1,348,624 \$ 47,722,577	\$157,533 \$1,085	\$ 539,450 \$ 13,367,010	\$63,013 \$304	\$3,010 \$112
			Gems in Inventory	Carats in Inventory		Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
			44,001	120,000		31,244	\$ 49,071,201	\$1,115	\$ 13,906,459	\$316	\$114
Inventory July 2017 to October 2017	Large/Special Other	20.934	15 76,987	314 209,686	0.149% 99.851%	110 54,568	\$ 2,360,097 \$ 178,251,870	\$157,533 \$2,315	\$ 2,360,097 \$ 50,105,208	\$157,533 \$651	\$7,525 \$239
			Gems in Inventory	Carats in Inventory		Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
			77,002	210,000		54,677	\$ 180,611,967	\$2,346	\$ 52,465,306	\$681	\$250

Estimated Inventory Valuation for Auction 1 - October 2017

Gems in Inventory	Carats in Inventory	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
121,002	330,000	\$ 229,683,168	\$1,898	\$ 66,371,765	\$549	\$201

Auction 2

Inventory Portion	Size Group	Average Size of Rough Gem	Gems in Inventory	Carats in Inventory	Percentage of Inventory by Size Group	Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
Inventory October 2016 to June 2017	Large/Special Other	20.934	18 91,650	373 249,626	0.149% 99.851%	131 64,961	\$ 214,300,270 \$ 214,300,270	\$ 2,809,635 \$ 211,490,635	\$ 1,123,854 \$ 59,417,032	\$63,013 \$648	\$3,010 \$238
			Gems in Inventory	Carats in Inventory		Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
			91,668	250,000		65,092	\$ 428,600,539	\$ 4,675.56	\$ 60,540,886	\$660	\$242

Estimated Inventory Valuation for Auction 2 - Q2 2018

Gems in Inventory	Carats in Inventory	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/ct
91,668	250,000	\$ 428,600,539	\$ 4,676	\$ 60,540,886	\$660	\$242

Inventory Estimate for October 2017 Auction (material to end June 2017)

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12 September 2017

Version 1.6

Assumptions

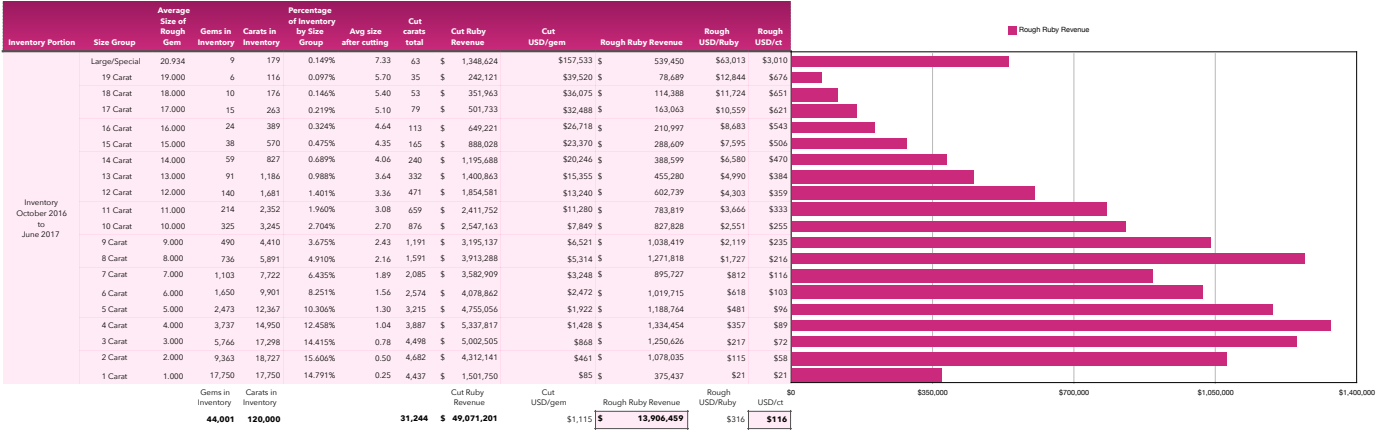
See page 1 for core assumptions and analysis method.

Reserve prices for rough rubies

Tender reserve prices have been calculated as a proportion of cut stone wholesale value. The logic for this margins has been determined based on gem industry guidance.

- 40% Large/special rough reserve rate as percentage of wholesale cut value. Higher wholesale values of cut gems allow for higher margins for tender sales of rough. Under tender sales conditions due to the increased competition for the highest quality material, strong reserve prices are realistic.
- 32.5% Medium sized rough reserve rate as percentage of wholesale cut value.
- 25% Small sized rough reserve rate as percentage of wholesale cut value. Lower margins for retail of smaller stones require lower margins for sales of rough.

Summary of Results



Auction 1 - Theoretical / Assumed Inventory Valuation for material collected October 2016 to June 2017 - 100,000 Carats

Rough Ruby				Cut Ruby			Assumed Grade and Distribution			Inventory		Cut Ruby Size Grades and Wholesale Prices				Cut Ruby Value Estimates				Rough Ruby			
Size Group	Average Size of Rough Gem	Quantity of rough gems	Carats in Inventory	Percent of Inventory by Size Group	Proportion of Ruby Retained after cutting	Avg size after cutting	Cut carats total	Category	Grade	Assumed % distribution of Grade in group	# Stones	Cut Size	Grade Ct Min	Grade Ct Max	Grade / Size Min	Grade / Size Max	Estimated Cut Value / Carat	Cut Ruby Revenue	Cut USD/gem	Rough Reserve Rate	Rough Ruby Revenue	Rough USD/Ruby	Group Rough Price per Stone
Large/Special	20.934	9	179	0.149%	35%	7.33	63	High Quality	Upper Extra Fine	14%	1.2	7.327	5.000	7.999	\$ 27,625	35,900	\$ 34,046	305,077	\$ 249,453	40%	\$ 122,031	\$ 99,781	\$ 63,013
								High Quality	Lower Extra Fine	29%	2.4	7.327	5.000	7.999	\$ 19,900	25,700	\$ 24,400	437,293	\$ 178,781	40%	\$ 174,917	\$ 71,512	
								High Quality	Upper Fine	57%	4.9	7.327	5.000	7.999	\$ 13,500	17,900	\$ 16,914	606,254	\$ 123,929	40%	\$ 242,501	\$ 49,572	
19 Carat	19.000	6	116	0.097%	30%	5.70	35	High Quality	Upper Extra Fine	4%	0.2	5.700	5.000	7.999	\$ 27,625	35,900	\$ 29,556	41,286	\$ 168,472	32.5%	\$ 13,418	\$ 54,753	\$ 30,586
								High Quality	Lower Extra Fine	6%	0.4	5.700	5.000	7.999	\$ 19,900	25,700	\$ 21,254	44,532	\$ 121,147	32.5%	\$ 14,473	\$ 39,373	
								High Quality	Upper Fine	10%	0.6	5.700	5.000	7.999	\$ 13,500	17,900	\$ 14,527	50,730	\$ 82,804	32.5%	\$ 16,487	\$ 26,911	
								High Quality	Lower Fine	10%	0.6	5.700	5.000	7.999	\$ 9,800	12,500	\$ 10,430	36,424	\$ 59,452	32.5%	\$ 11,838	\$ 19,322	
								Commercial	High Commercial	15%	0.9	5.700	5.000	7.999	\$ 5,785	7,410	\$ 6,164	32,290	\$ 35,136	32.5%	\$ 10,494	\$ 11,419	\$ 5,240
								Commercial	Medium Commercial	25%	1.5	5.700	5.000	7.999	\$ 2,295	4,160	\$ 2,730	23,836	\$ 15,563	32.5%	\$ 7,747	\$ 5,058	
								Commercial	Low Commercial	30%	1.8	5.700	5.000	7.999	\$ 910	2,335	\$ 1,243	13,023	\$ 7,085	32.5%	\$ 4,232	\$ 2,303	
18 Carat	18.000	10	176	0.146%	30%	5.40	53	High Quality	Upper Extra Fine	4%	0.4	5.400	5.000	7.999	\$ 27,625	35,900	\$ 28,729	60,542	\$ 155,135	32.5%	\$ 19,676	\$ 50,419	\$ 28,163
								High Quality	Lower Extra Fine	6%	0.6	5.400	5.000	7.999	\$ 19,900	25,700	\$ 20,674	65,350	\$ 111,637	32.5%	\$ 21,239	\$ 36,282	
								High Quality	Upper Fine	10%	1.0	5.400	5.000	7.999	\$ 13,500	17,900	\$ 14,087	74,215	\$ 76,069	32.5%	\$ 24,120	\$ 24,722	
								High Quality	Lower Fine	10%	1.0	5.400	5.000	7.999	\$ 9,800	12,500	\$ 10,160	53,528	\$ 54,865	32.5%	\$ 17,397	\$ 17,831	
								Commercial	High Commercial	15%	1.5	5.400	5.000	7.999	\$ 5,785	7,410	\$ 6,002	47,430	\$ 32,409	32.5%	\$ 15,415	\$ 10,533	\$ 4,479
								Commercial	Medium Commercial	25%	2.4	5.400	5.000	7.999	\$ 2,295	4,160	\$ 2,544	33,504	\$ 13,736	32.5%	\$ 10,889	\$ 4,464	
								Commercial	Low Commercial	30%	2.9	5.400	5.000	7.999	\$ 910	2,335	\$ 1,101	17,394	\$ 5,943	32.5%	\$ 5,653	\$ 1,931	
17 Carat	17.000	15	263	0.219%	30%	5.10	79	High Quality	Upper Extra Fine	4%	0.6	5.100	4.000	4.999	\$ 22,600	26,200	\$ 26,564	83,690	\$ 135,476	32.5%	\$ 27,199	\$ 44,030	\$ 24,736
								High Quality	Lower Extra Fine	6%	0.9	5.100	4.000	4.999	\$ 14,250	19,200	\$ 19,700	93,100	\$ 100,472	32.5%	\$ 30,258	\$ 32,653	
								High Quality	Upper Fine	10%	1.5	5.100	4.000	4.999	\$ 10,500	12,900	\$ 13,143	103,515	\$ 47,027	32.5%	\$ 33,443	\$ 21,784	
								High Quality	Lower Fine	10%	1.5	5.100	4.000	4.999	\$ 7,200	9,000	\$ 9,182	72,320	\$ 46,828	32.5%	\$ 23,504	\$ 15,219	
								Commercial	High Commercial	15%	2.3	5.100	4.000	4.999	\$ 4,065	5,525	\$ 5,673	67,019	\$ 28,930	32.5%	\$ 21,781	\$ 9,402	\$ 4,483
								Commercial	Medium Commercial	25%	3.9	5.100	4.000	4.999	\$ 1,950	2,600	\$ 2,666	52,490	\$ 13,595	32.5%	\$ 17,059	\$ 4,418	
								Commercial	Low Commercial	30%	4.6	5.100	4.000	4.999	\$ 935	1,224	\$ 1,253	29,599	\$ 6,389	32.5%	\$ 9,620	\$ 2,076	
16 Carat	16.000	24	389	0.324%	29%	4.64	113	High Quality	Upper Extra Fine	4%	1.0	4.640	4.000	4.999	\$ 22,600	26,200	\$ 24,906	112,324	\$ 115,565	32.5%	\$ 36,505	\$ 37,559	\$ 20,512
								High Quality	Lower Extra Fine	6%	1.5	4.640	4.000	4.999	\$ 14,250	19,200	\$ 17,421	117,850	\$ 80,834	32.5%	\$ 38,301	\$ 26,271	
								High Quality	Upper Fine	10%	2.4	4.640	4.000	4.999	\$ 10,500	12,900	\$ 12,038	135,719	\$ 55,854	32.5%	\$ 44,109	\$ 18,153	
								High Quality	Lower Fine	10%	2.4	4.640	4.000	4.999	\$ 7,200	9,000	\$ 8,533	94,179	\$ 38,759	32.5%	\$ 30,608	\$ 12,597	
								Commercial	High Commercial	15%	3.6	4.640	4.000	4.999	\$ 4,065	5,525	\$ 5,000	84,565	\$ 23,202	32.5%	\$ 27,484	\$ 7,541	\$ 3,614
								Commercial	Medium Commercial	25%	6.1	4.640	4.000	4.999	\$ 1,950	2,600	\$ 2,366	66,701	\$ 10,980	32.5%	\$ 21,678	\$ 3,569	
								Commercial	Low Commercial	30%	7.3	4.640	4.000	4.999	\$ 935	1,224	\$ 1,120	37,883	\$ 5,197	32.5%	\$ 12,312	\$ 1,689	
15 Carat	15.000	38	570	0.475%	29%	4.35	165	High Quality	Upper Extra Fine	4%	1.5	4.350	4.000	4.999	\$ 22,600	26,200	\$ 23,861	157,763	\$ 103,796	32.5%	\$ 51,273	\$ 33,734	\$ 18,052
								High Quality	Lower Extra Fine	6%	2.3	4.350	4.000	4.999	\$ 14,250	19,200	\$ 15,984	158,524	\$ 69,531	32.5%	\$ 51,520	\$ 22,598	
								High Quality	Upper Fine	10%	3.8	4.350	4.000	4.999	\$ 10,500	12,900	\$ 11,341	187,455	\$ 49,333	32.5%	\$ 60,923	\$ 16,033	
								High Quality	Lower Fine	10%	3.8	4.350	4.000	4.999	\$ 7,200	9,000	\$ 7,831	129,434	\$ 34,063	32.5%	\$ 42,066	\$ 11,071	
								Commercial	High Commercial	15%	5.7	4.350	4.000	4.999	\$ 4,065	5,525	\$ 4,577	113,469	\$ 19,908	32.5%	\$ 36,878	\$ 6,470	\$ 3,114
								Commercial	Medium Commercial	25%	9.5	4.350	4.000	4.999	\$ 1,950	2,600	\$ 2,178	89,990	\$ 9,473	32.5%	\$ 29,247	\$ 3,079	
								Commercial	Low Commercial	30%	11.4	4.350	4.000	4.999	\$ 935	1,224	\$ 1,036	51,391	\$ 4,508	32.5%	\$ 16,702	\$ 1,465	
14 Carat	14.000	59	827	0.689%	29%	4.06	240	High Quality	Upper Extra Fine	4%	2.4	4.060	4.000	4.999	\$ 22,600	26,200	\$ 22,816	218,831	\$ 92,634	32.5%	\$ 71,120	\$ 30,106	\$ 15,749
								High Quality	Lower Extra Fine	6%	3.5	4.060	4.000	4.999	\$ 14,250	19,200	\$ 14,547	209,285	\$ 59,062	32.5%	\$ 68,018	\$ 19,195	
								High Quality	Upper Fine	10%	5.9	4.060	4.000	4.999	\$ 10,500	12,900	\$ 10,644	255,221	\$ 43,215	32.5%	\$ 82,947	\$ 14,045	
								High Quality	Lower Fine	10%	5.9	4.060	4.000	4.999	\$ 7,200	9,000	\$ 7,308	175,231	\$ 29,671	32.5%	\$ 56,950	\$ 9,443	

[illegible]

	Cut Gem Wholesale		Rough Wholesale
Average per cut carat	\$ 1,571	Cut	\$ 445
Qty Cut Cts	31,244		31,244
Average per uncut carat	\$ 409	Uncut	\$ 116
Qty Uncut Cts	120,000		120,000

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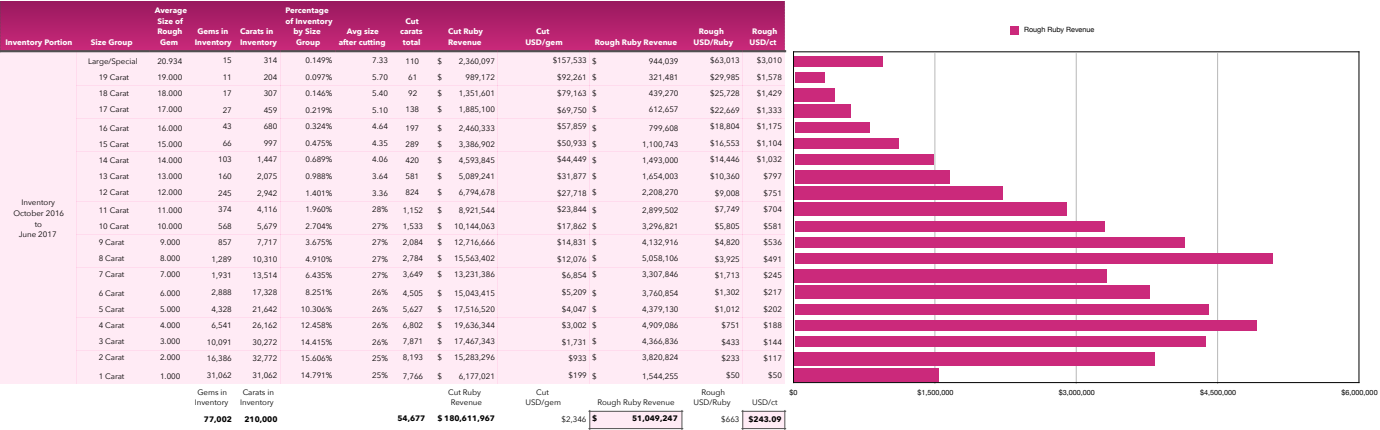
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Summary of Results



Auction 1 - Theoretical / Assumed Inventory Valuation for material collected July 2017 to October 2017 - 100,000 Carats

Rough Ruby				Cut Ruby			Assumed Grade and Distribution		Inventory		Cut Ruby Size Grades and Wholesale Prices						Cut Ruby Value Estimates			Rough Ruby			
Size Group	Average Size of Rough Gem	Quantity of rough gems	Carats in Inventory	Percentage of Inventory by Size Group	Proportion of Ruby Retained after cutting	Avg size after cutting	Cut carats total	Category	Grade	Assumed % distribution of Grade in group	# Stones	Cut Size	Grade Ct Min	Grad Ct Max	Grade / Size Min	Grade / Size Max	Estimated Cut Value / Carat	Cut Ruby Revenue	Cut USD/gem	Rough Reserve Rate	Rough Ruby Revenue	Rough USD/Ruby	Group Price per Stone
Large/Special	20.934	15	314	0.149%	35%	7.33	110	High Quality	Upper Extra Fine	14%	2.1	7.327	5.000	7.999	\$ 27,625	\$ 35,900	\$ 34,046	\$ 533,886	\$ 249,453	40%	\$ 213,554	\$ 99,781	\$ 63,013
								High Quality	Lower Extra Fine	29%	4.3	7.327	5.000	7.999	\$ 19,900	\$ 25,700	\$ 24,400	\$ 765,265	\$ 178,781	40%	\$ 306,106	\$ 71,512	
								High Quality	Upper Fine	57%	8.6	7.327	5.000	7.999	\$ 13,500	\$ 17,900	\$ 16,914	\$ 1,060,946	\$ 123,929	40%	\$ 424,379	\$ 49,572	
19 Carat	19.000	11	204	0.097%	30%	5.70	61	High Quality	Upper Extra Fine	15%	1.6	5.700	5.000	7.999	\$ 27,625	\$ 35,900	\$ 29,556	\$ 270,939	\$ 168,472	32.5%	\$ 88,055	\$ 54,753	\$ 32,634
								High Quality	Lower Extra Fine	20%	2.1	5.700	5.000	7.999	\$ 19,900	\$ 25,700	\$ 21,254	\$ 259,773	\$ 121,147	32.5%	\$ 84,426	\$ 39,373	
								High Quality	Upper Fine	35%	3.8	5.700	5.000	7.999	\$ 13,500	\$ 17,900	\$ 14,527	\$ 310,722	\$ 82,804	32.5%	\$ 100,985	\$ 26,911	
								High Quality	Lower Fine	20%	2.1	5.700	5.000	7.999	\$ 9,800	\$ 12,500	\$ 10,430	\$ 127,483	\$ 59,452	32.5%	\$ 41,432	\$ 19,322	
								Commercial	High Commercial	3%	0.3	5.700	5.000	7.999	\$ 5,785	\$ 7,410	\$ 6,164	\$ 11,301	\$ 35,136	32.5%	\$ 3,673	\$ 11,419	\$ 6,140
								Commercial	Medium Commercial	4%	0.4	5.700	5.000	7.999	\$ 2,295	\$ 4,160	\$ 2,730	\$ 6,674	\$ 15,563	32.5%	\$ 2,169	\$ 5,058	
Commercial	Low Commercial	3%	0.3	5.700	5.000	7.999	\$ 910	\$ 2,335	\$ 1,243	\$ 2,279	\$ 7,085	32.5%	\$ 741	\$ 2,303									
18 Carat	18.000	17	307	0.146%	30%	5.40	92	High Quality	Upper Extra Fine	10%	1.7	5.400	5.000	7.999	\$ 27,625	\$ 35,900	\$ 28,729	\$ 264,872	\$ 155,135	32.5%	\$ 86,083	\$ 50,419	\$ 27,973
								High Quality	Lower Extra Fine	15%	2.6	5.400	5.000	7.999	\$ 19,900	\$ 25,700	\$ 20,674	\$ 285,908	\$ 111,637	32.5%	\$ 92,920	\$ 36,282	
								High Quality	Upper Fine	45%	7.7	5.400	5.000	7.999	\$ 13,500	\$ 17,900	\$ 14,087	\$ 584,448	\$ 76,069	32.5%	\$ 189,946	\$ 24,722	
								High Quality	Lower Fine	20%	3.4	5.400	5.000	7.999	\$ 9,800	\$ 12,500	\$ 10,160	\$ 187,348	\$ 54,865	32.5%	\$ 60,888	\$ 17,831	
								Commercial	High Commercial	3%	0.5	5.400	5.000	7.999	\$ 5,785	\$ 7,410	\$ 6,002	\$ 16,600	\$ 32,409	32.5%	\$ 5,395	\$ 10,533	\$ 5,525
								Commercial	Medium Commercial	4%	0.7	5.400	5.000	7.999	\$ 2,295	\$ 4,160	\$ 2,544	\$ 9,381	\$ 13,736	32.5%	\$ 3,049	\$ 4,464	
Commercial	Low Commercial	3%	0.5	5.400	5.000	7.999	\$ 910	\$ 2,335	\$ 1,101	\$ 3,044	\$ 5,943	32.5%	\$ 989	\$ 1,931									
17 Carat	17.000	27	459	0.219%	30%	5.10	138	High Quality	Upper Extra Fine	10%	2.7	5.100	4.000	4.999	\$ 22,600	\$ 26,200	\$ 26,564	\$ 366,146	\$ 135,476	32.5%	\$ 118,997	\$ 44,030	\$ 24,608
								High Quality	Lower Extra Fine	15%	4.1	5.100	4.000	4.999	\$ 14,250	\$ 19,200	\$ 19,700	\$ 407,314	\$ 100,472	32.5%	\$ 132,377	\$ 32,653	
								High Quality	Upper Fine	45%	12.2	5.100	4.000	4.999	\$ 10,500	\$ 12,900	\$ 13,143	\$ 815,186	\$ 67,027	32.5%	\$ 264,935	\$ 21,784	
								High Quality	Lower Fine	20%	5.4	5.100	4.000	4.999	\$ 7,200	\$ 9,000	\$ 9,182	\$ 253,121	\$ 46,828	32.5%	\$ 82,264	\$ 15,219	
								Commercial	High Commercial	3%	0.8	5.100	4.000	4.999	\$ 4,065	\$ 5,525	\$ 5,673	\$ 23,457	\$ 28,930	32.5%	\$ 7,623	\$ 9,402	\$ 5,211
								Commercial	Medium Commercial	4%	1.1	5.100	4.000	4.999	\$ 1,950	\$ 2,600	\$ 2,666	\$ 14,697	\$ 13,595	32.5%	\$ 4,777	\$ 4,418	
Commercial	Low Commercial	3%	0.8	5.100	4.000	4.999	\$ 935	\$ 1,224	\$ 1,253	\$ 5,180	\$ 6,389	32.5%	\$ 1,683	\$ 2,076									
16 Carat	16.000	43	680	0.324%	29%	4.64	197	High Quality	Upper Extra Fine	10%	4.3	4.640	4.000	4.999	\$ 22,600	\$ 26,200	\$ 24,906	\$ 491,418	\$ 115,565	32.5%	\$ 159,711	\$ 37,559	\$ 20,427
								High Quality	Lower Extra Fine	15%	6.4	4.640	4.000	4.999	\$ 14,250	\$ 19,200	\$ 17,421	\$ 515,597	\$ 80,834	32.5%	\$ 167,569	\$ 26,271	
								High Quality	Upper Fine	45%	19.1	4.640	4.000	4.999	\$ 10,500	\$ 12,900	\$ 12,038	\$ 1,068,788	\$ 55,854	32.5%	\$ 347,356	\$ 18,153	
								High Quality	Lower Fine	20%	8.5	4.640	4.000	4.999	\$ 7,200	\$ 9,000	\$ 8,533	\$ 329,626	\$ 38,759	32.5%	\$ 107,129	\$ 12,597	
								Commercial	High Commercial	3%	1.3	4.640	4.000	4.999	\$ 4,065	\$ 5,525	\$ 5,000	\$ 29,598	\$ 23,202	32.5%	\$ 9,619	\$ 7,541	\$ 4,196
								Commercial	Medium Commercial	4%	1.7	4.640	4.000	4.999	\$ 1,950	\$ 2,600	\$ 2,366	\$ 18,676	\$ 10,980	32.5%	\$ 6,070	\$ 3,569	
Commercial	Low Commercial	3%	1.3	4.640	4.000	4.999	\$ 935	\$ 1,224	\$ 1,120	\$ 6,629	\$ 5,197	32.5%	\$ 2,155	\$ 1,689									
15 Carat	15.000	66	997	0.475%	29%	4.35	289	High Quality	Upper Extra Fine	10%	6.6	4.350	4.000	4.999	\$ 22,600	\$ 26,200	\$ 23,861	\$ 690,216	\$ 103,796	32.5%	\$ 224,320	\$ 33,734	\$ 17,991
								High Quality	Lower Extra Fine	15%	10.0	4.350	4.000	4.999	\$ 14,250	\$ 19,200	\$ 15,984	\$ 693,545	\$ 69,531	32.5%	\$ 225,402	\$ 22,598	
								High Quality	Upper Fine	45%	29.9	4.350	4.000	4.999	\$ 10,500	\$ 12,900	\$ 11,341	\$ 1,476,214	\$ 49,333	32.5%	\$ 479,770	\$ 16,033	
								High Quality	Lower Fine	20%	13.3	4.350	4.000	4.999	\$ 7,200	\$ 9,000	\$ 7,831	\$ 453,021	\$ 34,063	32.5%	\$ 147,232	\$ 11,071	
								Commercial	High Commercial	3%	2.0	4.350	4.000	4.999	\$ 4,065	\$ 5,525	\$ 4,577	\$ 39,714	\$ 19,908	32.5%	\$ 12,907	\$ 6,470	\$ 3,612
								Commercial	Medium Commercial	4%	2.7	4.350	4.000	4.999	\$ 1,950	\$ 2,600	\$ 2,178	\$ 25,197	\$ 9,473	32.5%	\$ 8,189	\$ 3,079	
Commercial	Low Commercial	3%	2.0	4.350	4.000	4.999	\$ 935	\$ 1,224	\$ 1,036	\$ 8,993	\$ 4,508	32.5%	\$ 2,923	\$ 1,465									
14 Carat	14.000	103	1,447	0.689%	29%	4.06	420	High Quality	Upper Extra Fine	10%	10.3	4.060	4.000	4.999	\$ 22,600	\$ 26,200	\$ 22,816	\$ 957,388	\$ 92,634	32.5%	\$ 311,515	\$ 30,106	\$ 15,710
								High Quality	Lower Extra Fine	15%	15.5	4.060	4.000	4.999	\$ 14,250	\$ 19,200	\$ 14,547	\$ 915,626	\$ 59,062	32.5%	\$ 297,578	\$ 19,195	
								High Quality	Upper Fine	45%	46.5	4.060	4.000	4.999	\$ 10,500	\$ 12,900	\$ 10,644	\$ 2,009,869	\$ 43,215	32.5%	\$ 653,207	\$ 14,045	
								High Quality	Lower Fine	20%	20.7	4.060	4.000	4.999	\$ 7,200	\$ 9,000	\$ 7,308	\$ 613,309	\$ 29,671	32.5%	\$ 199,325	\$ 9,643	
								Commercial	High Commercial	3%	3.1	4.060	4.000	4.999	\$ 4,065	\$ 5,525	\$ 4,153	\$ 52,275	\$ 16,860	32.5%	\$ 16,989	\$ 5,479	\$ 3,071
								Commercial	Medium Commercial	4%	4.1	4.060	4.000	4.999	\$ 1,950	\$ 2,600	\$ 1,989	\$ 33,385	\$ 8,075	32.5%	\$ 10,850	\$ 2,625	
Commercial	Low Commercial	3%	3.1	4.060	4.000	4.999	\$ 935	\$ 1,224	\$ 953	\$ 11,993	\$ 3,868	32.5%	\$ 3,898	\$ 1,257									
13 Carat	13.000	160	2,075	0.988%	28%	3.64	581	High Quality	Upper Extra Fine	10%	16.0	3.640	3.000	3.999	\$ 16,850	\$ 21,000	\$ 19,509	\$ 1,133,720	\$ 71,012	32.5%	\$ 388,459	\$ 23,079	\$ 11,228
								High Quality	Lower Extra Fine	15%	23.9	3.640	3.000	3.999	\$ 10,500	\$ 13,700	\$ 12,550	\$ 1,093,995	\$ 45,682	32.5%	\$ 355,548	\$ 14,847	
								High Quality	Upper Fine	45%	71.8	3.640	3.000	3.999	\$ 6,750	\$ 8,200	\$ 7,679	\$ 2,008,129	\$ 27,951	32.5%	\$ 652,442	\$ 9,084	
								High Quality	Lower Fine	20%	31.9	3.640	3.000	3.999	\$ 5,625	\$ 6,625	\$ 6,266	\$ 728,239	\$ 22,807	32.5%	\$ 236,678	\$ 7,412	
								Commercial	High Commercial	3%	4.8	3.640	3.000	3.999	\$ 3,190	\$ 4,375	\$ 3,949	\$ 68,850	\$ 14,375	32.5%	\$ 23,376	\$ 4,672	\$ 2,548
								Commercial	Medium Commercial	4%	6.4	3.640	3.000	3.999	\$ 1,455	\$ 2,000	\$ 1,804	\$ 41,938	\$ 6,567	32.5%	\$ 13,630	\$ 2,134	
Commercial	Low Commercial	3%	4.8	3.640	3.000	3.999	\$ 664	\$ 914	\$ 824	\$ 14,369	\$ 3,000	32.5%	\$ 4,670	\$ 975									
12 Carat	12.000	245	2,942	1.401%	28%	3.36	824	High Quality	Upper Extra Fine	10%	24.5	3.360	3.000	3.999	\$ 16,850	\$ 21,000	\$ 18,345	\$ 1,511,037	\$ 61,641	32.5%	\$ 491,087	\$ 20,033	\$ 9,770
								High Quality	Lower Extra Fine	15%	36.8	3.360	3.000	3.999	\$ 10,500	\$ 13,700	\$ 11,653	\$ 1,439,728	\$ 39,155	32.5%	\$ 467,912	\$ 12,725	
								High Quality	Upper Fine	45%	110.3	3.360	3.000	3.999	\$ 6,750	\$ 8,200	\$ 7,273	\$ 2,695,524	\$ 24,436	32.5%	\$ 876,045	\$ 7,942	
								High Quality	Lower Fine	20%	49.0	3.360	3.000	3.999	\$ 5,625	\$ 6,625	\$ 5,985	\$ 985,975	\$ 20,111	32.5%	\$ 320,442	\$ 6,536	
								Commercial	High Commercial	3%	7.4	3.360	3.000	3.999	\$ 3,190	\$ 4,375	\$ 3,617	\$ 89,376	\$ 12,153	32.5%	\$ 29,047	\$ 3,950	\$ 2,153
								Commercial	Medium Commercial	4%	9.8	3.360	3.000	3.999	\$ 1,455	\$ 2,000	\$ 1,651	\$ 54,407	\$ 5,549	32.5%	\$ 17,682	\$ 1,803	
Commercial	Low Commercial	3%	7.4	3.360	3.000	3.999	\$ 664	\$ 914	\$ 754	\$ 18,630	\$ 2,533	32.5%	\$ 6,055	\$ 823									
11 Carat	11.000	374	4,116	1.960%	28%	3.08	1,152	High Quality	Upper Extra Fine	10%	37.4	3.080	3.000	3.999	\$ 16,850	\$ 21,000	\$ 17,182	\$ 1,980,159	\$ 52,922	32.5%	\$ 643,552	\$ 17,200	\$ 8,411
								High Quality	Lower Extra Fine	15%	56.1	3.080	3.000	3.999	\$ 10,500	\$ 13,700	\$ 10,756	\$ 1,859,390	\$ 33,129	32.5%	\$ 604,302	\$ 10,767	
								High Quality	Upper Fine	45%	168.4	3.080	3.000	3.999	\$ 6,750	\$ 8,200	\$ 6,866	\$ 3,560,752	\$ 21,148	32.5%	\$ 1,157,244	\$ 6,873	

Inventory Estimate for Auction 2 - Q2 2018

Analysis by wombat777, hotcopper

DYOR. Not Qualified for Advice.

This is an assumed and theoretical valuation for the Rough Ruby Inventory for the Q2 2018 auction. This is based on ruby details published to date and broad assumptions on grade distribution and rough ruby wholesale rates.

12 September 2017

Version 1.6

Assumptions

See page 1 for core assumptions and analysis method.

Reserve prices for rough rubies

Tender reserve prices have been calculated as a proportion of cut stone wholesale value. The logic for this margins has been determined based on gem industry guidance.

- 40% Large/special rough reserve rate as percentage of wholesale cut value. Higher wholesale values of cut gems allow for higher margins for tender sales of rough. Under tender sales conditions due to the increased competition for the highest quality material, strong reserve prices are realistic.
- 32.5% Medium sized rough reserve rate as percentage of wholesale cut value.
- 25% Small sized rough reserve rate as percentage of wholesale cut value. Lower margins for retail of smaller stones require lower margins for sales of rough.

Summary of Results

Inventory Portion	Size Group	Average Size of Rough Gem	Gems in Inventory	Carats in Inventory	Percentage of Inventory by Size Group	Avg size after cutting	Cut carats total	Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/Ct
Inventory October 2016 to June 2017	Large/Special	20.934	18	373	0.149%	7.33	131	\$ 2,809,635	\$157,533	\$ 1,123,854	\$63,013	\$3,010
	19 Carat	19.000	13	243	0.097%	5.70	73	\$ 1,177,584	\$92,261	\$ 732,715	\$29,985	\$1,578
	18 Carat	18.000	20	366	0.146%	30%	110	\$ 1,609,046	\$79,163	\$ 522,940	\$25,728	\$1,429
	17 Carat	17.000	32	547	0.219%	30%	164	\$ 2,244,163	\$69,750	\$ 729,353	\$22,669	\$1,333
	16 Carat	16.000	51	810	0.324%	29%	235	\$ 2,928,963	\$57,859	\$ 951,913	\$18,804	\$1,175
	15 Carat	15.000	79	1,187	0.475%	29%	344	\$ 4,032,019	\$50,933	\$ 1,310,406	\$16,553	\$1,104
	14 Carat	14.000	123	1,723	0.689%	29%	500	\$ 4,755,229	\$38,649	\$ 1,545,450	\$12,561	\$897
	13 Carat	13.000	190	2,471	0.988%	28%	692	\$ 6,058,610	\$31,877	\$ 1,969,048	\$10,360	\$797
	12 Carat	12.000	292	3,502	1.401%	28%	981	\$ 8,088,889	\$27,718	\$ 2,628,889	\$9,008	\$751
	11 Carat	11.000	445	4,900	1.960%	28%	1,372	\$ 10,620,868	\$23,844	\$ 3,451,782	\$7,749	\$704
	10 Carat	10.000	676	6,761	2.704%	27%	1,825	\$ 12,076,246	\$17,862	\$ 3,924,780	\$5,805	\$581
	9 Carat	9.000	1,021	9,187	3.675%	27%	2,480	\$ 15,138,863	\$14,831	\$ 4,920,131	\$4,820	\$536
	8 Carat	8.000	1,534	12,274	4.910%	27%	3,314	\$ 18,527,829	\$12,076	\$ 6,021,545	\$3,925	\$491
	7 Carat	7.000	2,298	16,088	6.435%	27%	4,344	\$ 15,751,624	\$6,854	\$ 3,937,906	\$1,713	\$245
	6 Carat	6.000	3,438	20,628	8.251%	26%	5,363	\$ 17,908,797	\$5,209	\$ 4,477,199	\$1,302	\$217
	5 Carat	5.000	5,153	25,764	10.306%	26%	6,699	\$ 20,852,965	\$4,047	\$ 5,213,241	\$1,012	\$202
	4 Carat	4.000	7,786	31,145	12.458%	26%	8,098	\$ 23,376,521	\$3,002	\$ 5,844,140	\$751	\$188
	3 Carat	3.000	12,013	36,038	14.415%	26%	9,370	\$ 20,794,422	\$1,731	\$ 5,198,606	\$433	\$144
	2 Carat	2.000	19,507	39,014	15.606%	25%	9,754	\$ 18,194,370	\$933	\$ 4,548,592	\$233	\$117
	1 Carat	1.000	36,979	36,979	14.791%	25%	9,245	\$ 3,353,585	\$199	\$ 1,838,396	\$50	\$50
		Gems in Inventory	Carats in Inventory					Cut Ruby Revenue	Cut USD/gem	Rough Ruby Revenue	Rough USD/Ruby	Rough USD/Ct
		91,668	250,000					65,092	\$214,300,270	\$2,338	\$ 60,540,886	\$242

Auction 2 - Theoretical / Assumed Inventory Valuation for Q2 2018 Auction

Rough Ruby				Cut Ruby			Assumed Grade and Distribution			Inventory		Cut Ruby Size Grades and Wholesale Prices				Cut Ruby Value Estimates				Rough Ruby			
	Average Size of Rough Gem	Quantity of rough gems	Carats in Inventory	Percentage of Inventory by Size Group	Proportion of Ruby Retained after cutting	Avg size after cutting	Cut carats total	Category	Grade	Assumed % distribution of Grade in group	# Stones	Cut Size	Grade Ct Min	Grade Ct Max	Grade / Size Min	Grade / Size Max	Estimated Cut Value / Carat	Cut Ruby Revenue	Cut USD/gem	Rough Reserve Rate	Rough Ruby Revenue	Rough USD/Ruby	Group Rough Price per Stone
Large/Special	20.934	18	373	0.149%	35%	7.33	131	High Quality	Upper Extra Fine	14%	2.5	7.327	5.000	7.999	\$ 27,625	\$ 35,900	\$ 34,046	\$ 435,578	\$ 249,453	40%	\$ 254,231	\$ 99,781	\$ 63,013
								High Quality	Lower Extra Fine	29%	5.1	7.327	5.000	7.999	\$ 19,900	\$ 25,700	\$ 24,400	\$ 911,028	\$ 178,781	40%	\$ 364,411	\$ 71,512	
								High Quality	Upper Fine	57%	10.2	7.327	5.000	7.999	\$ 13,500	\$ 17,900	\$ 16,914	\$ 1,263,029	\$ 123,929	40%	\$ 505,212	\$ 49,572	
19 Carat	19.000	13	243	0.097%	30%	5.70	73	High Quality	Upper Extra Fine	15%	1.9	5.700	5.000	7.999	\$ 27,625	\$ 35,900	\$ 29,556	\$ 322,546	\$ 168,472	32.5%	\$ 104,828	\$ 54,753	\$ 32,634
								High Quality	Lower Extra Fine	20%	2.6	5.700	5.000	7.999	\$ 19,900	\$ 25,700	\$ 21,254	\$ 309,253	\$ 121,147	32.5%	\$ 100,507	\$ 39,373	
								High Quality	Upper Fine	35%	4.5	5.700	5.000	7.999	\$ 13,500	\$ 17,900	\$ 14,527	\$ 369,907	\$ 82,804	32.5%	\$ 120,220	\$ 26,911	
								High Quality	Lower Fine	20%	2.6	5.700	5.000	7.999	\$ 9,800	\$ 12,500	\$ 10,430	\$ 151,765	\$ 59,452	32.5%	\$ 49,324	\$ 19,322	
								Commercial	High Commercial	3%	0.4	5.700	5.000	7.999	\$ 5,785	\$ 7,410	\$ 6,164	\$ 13,454	\$ 35,136	32.5%	\$ 4,373	\$ 1,419	\$ 6,140
								Commercial	Medium Commercial	4%	0.5	5.700	5.000	7.999	\$ 2,295	\$ 4,160	\$ 2,730	\$ 7,945	\$ 15,563	32.5%	\$ 2,582	\$ 5,058	
								Commercial	Low Commercial	3%	0.4	5.700	5.000	7.999	\$ 910	\$ 2,335	\$ 1,243	\$ 2,713	\$ 7,085	32.5%	\$ 882	\$ 2,303	
								High Quality	Upper Extra Fine	10%	2.0	5.400	5.000	7.999	\$ 27,625	\$ 35,900	\$ 28,729	\$ 315,323	\$ 155,135	32.5%	\$ 102,480	\$ 50,419	\$ 27,973
								High Quality	Lower Extra Fine	15%	3.0	5.400	5.000	7.999	\$ 19,900	\$ 25,700	\$ 20,674	\$ 340,366	\$ 111,637	32.5%	\$ 110,619	\$ 36,282	
								High Quality	Upper Fine	45%	9.1	5.400	5.000	7.999	\$ 13,500	\$ 17,900	\$ 14,087	\$ 695,771	\$ 76,069	32.5%	\$ 226,125	\$ 24,722	
18 Carat	18.000	20	366	0.146%	30%	5.40	110	High Quality	Lower Fine	20%	4.1	5.400	5.000	7.999	\$ 9,800	\$ 12,500	\$ 10,160	\$ 223,032	\$ 54,865	32.5%	\$ 72,486	\$ 17,831	
								Commercial	High Commercial	3%	0.6	5.400	5.000	7.999	\$ 5,785	\$ 7,410	\$ 6,002	\$ 19,762	\$ 32,409	32.5%	\$ 4,423	\$ 10,533	\$ 5,525
								Commercial	Medium Commercial	4%	0.8	5.400	5.000	7.999	\$ 2,295	\$ 4,160	\$ 2,544	\$ 11,168	\$ 13,736	32.5%	\$ 3,630	\$ 4,464	
								Commercial	Low Commercial	3%	0.6	5.400	5.000	7.999	\$ 910	\$ 2,335	\$ 1,101	\$ 3,624	\$ 5,943	32.5%	\$ 1,178	\$ 1,931	
								High Quality	Upper Extra Fine	10%	3.2	5.100	4.000	4.999	\$ 22,600	\$ 26,200	\$ 26,544	\$ 435,887	\$ 135,476	32.5%	\$ 141,663	\$ 44,030	\$ 24,608
								High Quality	Lower Extra Fine	15%	4.8	5.100	4.000	4.999	\$ 14,250	\$ 19,200	\$ 19,700	\$ 484,896	\$ 100,472	32.5%	\$ 157,591	\$ 32,653	
								High Quality	Upper Fine	45%	14.5	5.100	4.000	4.999	\$ 10,500	\$ 12,900	\$ 13,143	\$ 970,458	\$ 67,027	32.5%	\$ 315,399	\$ 21,784	
								High Quality	Lower Fine	20%	6.4	5.100	4.000	4.999	\$ 7,200	\$ 9,000	\$ 9,182	\$ 301,334	\$ 46,828	32.5%	\$ 97,933	\$ 15,219	
								Commercial	High Commercial	3%	1.0	5.100	4.000	4.999	\$ 4,065	\$ 5,525	\$ 5,673	\$ 27,924	\$ 28,930	32.5%	\$ 9,075	\$ 9,402	\$ 5,211
								16 Carat	16.000	51	810	0.324%	29%	4.64	235	Commercial	Medium Commercial	4%	1.3	5.100	4.000	4.999	\$ 1,950
Commercial	Low Commercial	3%	1.0	5.100	4.000	4.999	\$ 935									\$ 1,224	\$ 1,253	\$ 6,166	\$ 6,389	32.5%	\$ 2,004	\$ 2,076	
High Quality	Upper Extra Fine	10%	5.1	4.640	4.000	4.999	\$ 22,600									\$ 26,200	\$ 24,906	\$ 585,020	\$ 115,565	32.5%	\$ 190,132	\$ 37,559	\$ 20,427
High Quality	Lower Extra Fine	15%	7.6	4.640	4.000	4.999	\$ 14,250									\$ 19,200	\$ 17,421	\$ 613,805	\$ 80,834	32.5%	\$ 199,486	\$ 26,271	
High Quality	Upper Fine	45%	22.8	4.640	4.000	4.999	\$ 10,500									\$ 12,900	\$ 12,038	\$ 1,272,365	\$ 55,854	32.5%	\$ 413,519	\$ 18,153	
High Quality	Lower Fine	20%	10.1	4.640	4.000	4.999	\$ 7,200									\$ 9,000	\$ 8,353	\$ 392,412	\$ 38,759	32.5%	\$ 127,534	\$ 12,597	
Commercial	High Commercial	3%	1.5	4.640	4.000	4.999	\$ 4,065									\$ 5,525	\$ 5,000	\$ 35,236	\$ 23,202	32.5%	\$ 11,452	\$ 7,541	\$ 4,196
Commercial	Medium Commercial	4%	2.0	4.640	4.000	4.999	\$ 1,950									\$ 2,600	\$ 2,366	\$ 22,234	\$ 10,980	32.5%	\$ 7,226	\$ 3,569	
Commercial	Low Commercial	3%	1.5	4.640	4.000	4.999	\$ 935									\$ 1,224	\$ 1,120	\$ 7,892	\$ 5,197	32.5%	\$ 2,565	\$ 1,689	
15 Carat	15.000	79	1,187	0.475%	29%	4.35	344									High Quality	Upper Extra Fine	10%	7.9	4.350	4.000	4.999	\$ 22,600
								High Quality	Lower Extra Fine	15%	11.9	4.350	4.000	4.999	\$ 14,250	\$ 19,200	\$ 15,984	\$ 825,648	\$ 69,531	32.5%	\$ 268,335	\$ 22,598	
								High Quality	Upper Fine	45%	35.6	4.350	4.000	4.999	\$ 10,500	\$ 12,900	\$ 11,341	\$ 1,757,395	\$ 49,333	32.5%	\$ 571,153	\$ 16,033	
								High Quality	Lower Fine	20%	15.8	4.350	4.000	4.999	\$ 7,200	\$ 9,000	\$ 7,831	\$ 539,310	\$ 34,063	32.5%	\$ 175,276	\$ 11,071	
								Commercial	High Commercial	3%	2.4	4.350	4.000	4.999	\$ 4,065	\$ 5,525	\$ 4,577	\$ 47,279	\$ 19,908	32.5%	\$ 15,366	\$ 6,470	\$ 3,612
								Commercial	Medium Commercial	4%	3.2	4.350	4.000	4.999	\$ 1,950	\$ 2,600	\$ 2,178	\$ 29,997	\$ 9,473	32.5%	\$ 9,749	\$ 3,079	
								Commercial	Low Commercial	3%	2.4	4.350	4.000	4.999	\$ 935	\$ 1,224	\$ 1,036	\$ 10,706	\$ 4,508	32.5%	\$ 3,480	\$ 1,465	
								High Quality	Upper Extra Fine	10%	12.3	4.060	3.000	3.999	\$ 16,850	\$ 21,000	\$ 21,253	\$ 1,061,678	\$ 86,289	32.5%	\$ 345,045	\$ 28,044	\$ 13,601
								High Quality	Lower Extra Fine	15%	18.5	4.060	3.000	3.999	\$ 10,500	\$ 13,700	\$ 13,895	\$ 1,041,182	\$ 56,415	32.5%	\$ 338,384	\$ 18,335	
								High Quality	Upper Fine	45%	55.4	4.060	3.000	3.999	\$ 6,750	\$ 8,200	\$ 8,289	\$ 1,863,180	\$ 33,651	32.5%	\$ 605,534	\$ 10,937	
14 Carat	14.000	123	1,723	0.68%	29%	4.06	500	High Quality	Lower Fine	20%	24.6	4.060	3.000	3.999	\$ 5,625	\$ 6,625	\$ 6,686	\$ 667,982	\$ 27,145	32.5%	\$ 217,094	\$ 8,822	
								Commercial	High Commercial	3%	3.7	4.060	3.000	3.999	\$ 3,190	\$ 4,375	\$ 4,447	\$ 66,648	\$ 18,056	32.5%	\$ 21,661	\$ 5,868	\$ 3,202
								Commercial	Medium Commercial	4%	4.9	4.060	3.000	3.999	\$ 1,455	\$ 2,000	\$ 2,033	\$ 40,628	\$ 8,255	32.5%	\$ 13,204	\$ 2,683	
								Commercial	Low Commercial	3%	3.7	4.060	3.000	3.999	\$ 664	\$ 914	\$ 930	\$ 13,931	\$ 3,774	32.5%	\$ 5,328	\$ 1,227	
								High Quality	Upper Extra Fine	10%	19.0	3.640	3.000	3.999	\$ 16,850	\$ 21,000	\$ 19,599	\$ 1,349,665	\$ 71,012	32.5%	\$ 438,641	\$ 23,079	\$ 11,228
								High Quality	Lower Extra Fine	15%	28.5	3.640	3.000	3.999	\$ 10,500	\$ 13,700	\$ 12,550	\$ 1,202,372	\$ 45,482	32.5%	\$ 423,271	\$ 14,847	
								High Quality	Upper Fine	45%	85.5	3.640	3.000	3.999	\$ 6,750	\$ 8,200	\$ 7,679	\$ 2,290,626	\$ 27,951	32.5%	\$ 776,953	\$ 9,084	
								High Quality	Lower Fine	20%	38.0	3.640	3.000	3.999	\$ 5,625	\$ 6,625	\$ 6,266	\$ 866,950	\$ 22,807	32.5%	\$ 281,759	\$ 7,412	
								Commercial	High Commercial	3%	5.7	3.640	3.000	3.999	\$ 3,190	\$ 4,375	\$ 3,949	\$ 81,964	\$ 14,375	32.5%	\$ 26,638	\$ 4,672	\$ 2,548
								Commercial	Medium Commercial	4%	7.6	3.640	3.000	3.999	\$ 1,455	\$ 2,000	\$ 1,804	\$ 49,926	\$ 6,567	32.5%	\$ 16,226	\$ 2,134	
Commercial	Low Commercial	3%	5.7	3.640	3.000	3.999	\$ 664	\$ 914	\$ 824	\$ 17,106	\$ 3,000	32.5%	\$ 5,560	\$ 975									
12 Carat	12.000	292	3,502	1.401%	28%	3.36	981	High Quality	Upper Extra Fine	10%	29.2	3.360	3.000	3.999	\$ 16,850	\$ 21,000	\$ 18,345	\$ 1,798,851	\$ 61,641	32.5%	\$ 584,626	\$ 20,033	\$ 9,770
								High Quality	Lower Extra Fine	15%	43.8	3.360	3.000	3.999	\$ 10,500	\$ 13,700	\$ 11,653	\$ 1,713,959	\$ 39,155	32.5%	\$ 557,037	\$ 12,725	
								High Quality	Upper Fine	45%	131.3	3.360	3.000	3.999	\$ 6,750	\$ 8,200	\$ 7,273	\$ 3,208,952	\$ 24,436	32.5%	\$ 1,042,910	\$ 7,942	
								High Quality	Lower Fine	20%	58.4	3.360	3.000	3.999	\$ 5,625	\$ 6,625	\$ 5,985	\$ 1,173,778	\$ 20,111	32.5%	\$ 381,478	\$ 6,536	
								Commercial	High Commercial	3%	8.8	3.360	3.000	3.999	\$ 3,190	\$ 4,375	\$ 3,617	\$ 106,399	\$ 12,153	32.5%	\$ 34,580	\$ 3,950	\$ 2,153
								Commercial	Medium Commercial	4%	11.7	3.360	3.000	3.999	\$ 1,455	\$ 2,000	\$ 1,651	\$ 64,770	\$ 5,549	32.5%	\$ 21,050	\$ 1,803	
								Commercial	Low Commercial	3%	8.8	3.360	3.000	3.999	\$ 664	\$ 914	\$ 754	\$ 22,179	\$ 2,533	32.5%	\$ 7,208	\$ 823	
								High Quality	Upper Extra Fine	10%	44.5	3.080	3.000	3.999	\$ 16,850	\$ 21,000	\$ 17,182	\$ 2,357,329	\$ 52,922	32.5%	\$ 766,132	\$ 17,200	\$ 8,411
								High Quality	Lower Extra Fine	15%	66.8	3.080	3.000	3.999	\$ 10,500	\$ 13,700	\$ 10,756	\$ 2,213,556	\$ 33,129	32.5%	\$ 719,406	\$ 10,767	
								High Quality	Upper Fine	45%	200.4	3.080	3.000	3.999	\$ 6,750	\$ 8,200	\$ 6,866	\$ 4,238,983	\$ 21,148	32.5%	\$ 1,377,670	\$ 6,873	

\$60,540,886

22

Cut / Faceted Ruby Wholesale Price Data (Per Carat)

Analysis by wombat777, hotcopper

Data sourced from Mustang Q3 2016 Quarterly 2016 prices. These are the [per carat](#) wholesale prices for cut rubies. To work back to prices of rough ruby, a "reserve price" ratio (%) is used to calculate rough ruby price as a proportion of cut ruby. See page 1 of this analysis for assumed reserve ratios.

Carats		Low Commercial		Medium Commercial (Lower Good)		High Commercial (Upper Good)		Lower Fine		Upper Fine		Lower Extra Fine		Upper Extra Fine	
Size Min	Size Max	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
0.020	0.099	\$ 44.47	\$ 64.80	\$ 65.00	\$ 90.00	\$ 95.00	\$ 125.00	\$ 140.00	\$ 280.00	\$ 315.00	\$ 345.00	\$ 345.00	\$ 440.00	\$ 440.00	\$ 750.00
0.100	0.249	\$ 54.70	\$ 106.78	\$ 95.00	\$ 155.00	\$ 165.00	\$ 225.00	\$ 280.00	\$ 345.00	\$ 375.00	\$ 440.00	\$ 440.00	\$ 565.00	\$ 565.00	\$ 815.00
0.250	0.499	\$ 109.74	\$ 153.85	\$ 150.00	\$ 200.00	\$ 205.00	\$ 260.00	\$ 300.00	\$ 720.00	\$ 840.00	\$ 1,080.00	\$ 1,080.00	\$ 1,800.00	\$ 1,800.00	\$ 3,000.00
0.500	0.999	\$ 220.03	\$ 282.11	\$ 445.00	\$ 640.00	\$ 900.00	\$ 1,140.00	\$ 1,360.00	\$ 1,680.00	\$ 1,800.00	\$ 2,400.00	\$ 2,400.00	\$ 3,720.00	\$ 3,720.00	\$ 4,500.00
1.000	1.999	\$ 302.59	\$ 375.56	\$ 595.00	\$ 780.00	\$ 1,170.00	\$ 1,620.00	\$ 1,980.00	\$ 2,400.00	\$ 2,640.00	\$ 3,600.00	\$ 3,600.00	\$ 4,800.00	\$ 4,800.00	\$ 8,100.00
2.000	2.999	\$ 465.52	\$ 600.39	\$ 900.00	\$ 1,170.00	\$ 1,740.00	\$ 2,280.00	\$ 3,000.00	\$ 4,800.00	\$ 5,400.00	\$ 7,200.00	\$ 7,200.00	\$ 10,200.00	\$ 10,750.00	\$ 12,200.00
3.000	3.999	\$ 663.64	\$ 914.29	\$ 1,455.00	\$ 2,000.00	\$ 3,190.00	\$ 4,375.00	\$ 5,625.00	\$ 6,425.00	\$ 6,750.00	\$ 8,200.00	\$ 10,500.00	\$ 13,700.00	\$ 16,850.00	\$ 21,000.00
4.000	4.999	\$ 935.42	\$ 1,223.53	\$ 1,950.00	\$ 2,600.00	\$ 4,045.00	\$ 5,525.00	\$ 7,200.00	\$ 9,000.00	\$ 10,500.00	\$ 12,900.00	\$ 14,250.00	\$ 19,200.00	\$ 22,600.00	\$ 26,200.00
5.000	7.999	\$ 910.46	\$ 2,335.44	\$ 2,295.00	\$ 4,160.00	\$ 5,785.00	\$ 7,410.00	\$ 9,800.00	\$ 12,500.00	\$ 13,500.00	\$ 17,900.00	\$ 19,900.00	\$ 25,700.00	\$ 27,625.00	\$ 35,900.00

	Low	High
Carat Size Range	5.000	7.999
Upper Extra Fine	\$ 27,625.00	\$ 35,900.00
Lower Extra Fine	\$ 19,900.00	\$ 25,700.00
Upper Fine	\$ 13,500.00	\$ 17,900.00
Lower Fine	\$ 9,800.00	\$ 12,500.00
High Commercial (Upper Good)	\$ 5,785.00	\$ 7,410.00
Medium Commercial (Lower Good)	\$ 2,295.00	\$ 4,160.00
Low Commercial	\$ 910.46	\$ 2,335.44

	Low	High
Carat Size Range	4.000	4.999
Upper Extra Fine	\$ 22,600.00	\$ 26,200.00
Lower Extra Fine	\$ 14,250.00	\$ 19,200.00
Upper Fine	\$ 10,500.00	\$ 12,900.00
Lower Fine	\$ 7,200.00	\$ 9,000.00
High Commercial (Upper Good)	\$ 4,045.00	\$ 5,525.00
Medium Commercial (Lower Good)	\$ 1,950.00	\$ 2,600.00
Low Commercial	\$ 935.42	\$ 1,223.53

	Low	High
Carat Size Range	3.000	3.999
Upper Extra Fine	\$ 16,850.00	\$ 21,000.00
Lower Extra Fine	\$ 10,500.00	\$ 13,700.00
Upper Fine	\$ 6,750.00	\$ 8,200.00
Lower Fine	\$ 5,625.00	\$ 6,425.00
High Commercial (Upper Good)	\$ 3,190.00	\$ 4,375.00
Medium Commercial (Lower Good)	\$ 1,455.00	\$ 2,000.00
Low Commercial	\$ 663.64	\$ 914.29

	Low	High
Carat Size Range	2.000	2.999
Upper Extra Fine	\$ 10,750.00	\$ 13,200.00
Lower Extra Fine	\$ 7,200.00	\$ 10,200.00
Upper Fine	\$ 5,400.00	\$ 7,200.00
Lower Fine	\$ 3,000.00	\$ 4,800.00
High Commercial (Upper Good)	\$ 1,740.00	\$ 2,280.00
Medium Commercial (Lower Good)	\$ 900.00	\$ 1,170.00
Low Commercial	\$ 465.52	\$ 600.39

	Low	High
Carat Size Range	1.000	1.999
Upper Extra Fine	\$ 4,800.00	\$ 8,100.00
Lower Extra Fine	\$ 3,600.00	\$ 4,800.00
Upper Fine	\$ 2,640.00	\$ 3,600.00
Lower Fine	\$ 1,980.00	\$ 2,400.00
High Commercial (Upper Good)	\$ 1,170.00	\$ 1,620.00
Medium Commercial (Lower Good)	\$ 595.00	\$ 780.00
Low Commercial	\$ 302.59	\$ 375.56

	Low	High
Carat Size Range	0.500	0.999
Upper Extra Fine	\$ 3,720.00	\$ 4,500.00
Lower Extra Fine	\$ 2,400.00	\$ 3,720.00
Upper Fine	\$ 1,800.00	\$ 2,400.00
Lower Fine	\$ 1,360.00	\$ 1,680.00
High Commercial (Upper Good)	\$ 900.00	\$ 1,140.00
Medium Commercial (Lower Good)	\$ 445.00	\$ 660.00
Low Commercial	\$ 220.03	\$ 282.11

	Low	High
Carat Size Range	0.250	0.499
Upper Extra Fine	\$ 1,800.00	\$ 3,000.00
Lower Extra Fine	\$ 1,080.00	\$ 1,800.00
Upper Fine	\$ 840.00	\$ 1,080.00
Lower Fine	\$ 300.00	\$ 720.00
High Commercial (Upper Good)	\$ 205.00	\$ 260.00
Medium Commercial (Lower Good)	\$ 150.00	\$ 200.00
Low Commercial	\$ 109.74	\$ 153.85

	Low	High
Carat Size Range	0.100	0.249
Upper Extra Fine	\$ 565.00	\$ 815.00
Lower Extra Fine	\$ 440.00	\$ 565.00
Upper Fine	\$ 375.00	\$ 440.00
Lower Fine	\$ 280.00	\$ 345.00
High Commercial (Upper Good)	\$ 165.00	\$ 225.00
Medium Commercial (Lower Good)	\$ 95.00	\$ 155.00
Low Commercial	\$ 54.70	\$ 106.78

	Low	High
Carat Size Range	0.020	0.099
Upper Extra Fine	\$ 440.00	\$ 750.00
Lower Extra Fine	\$ 345.00	\$ 440.00
Upper Fine	\$ 440.00	\$ 565.00
Lower Fine	\$ 140.00	\$ 280.00
High Commercial (Upper Good)	\$ 95.00	\$ 125.00
Medium Commercial (Lower Good)	\$ 65.00	\$ 90.00
Low Commercial	\$ 44.47	\$ 64.80

At the 1 September General Meeting, I asked C3 about how "Lower Good" and "Upper Good" in this cut/faceted pricing table would relate back to the "Commercial Quality" grading they are using for pre-sorting. He indicated that there would need to be another lower price grouping. Therefore I have proportionally created a lower-price group "Low Commercial" to account for the wider price ranges needed for Commercial Quality rough rubies.

Note - Mustang are pre-grading rubies into Commercial Quality and High Quality lots at the mine site. The lots will then be transferred to Mauritius for the final sorting into the more precise grades used at the tender.