

## Introduction

Following on the success of last year's report we have decided to make the ranking of the world's gold deposits an annual endeavor highlighting trends in future mine supply, depletion, discoveries, and in-situ grades.

As far as we know, there has not been a similar effort to compile a comprehensive database of the world's gold mines and deposits. Nevertheless, we rose to the laborious challenge knowing the industry reliance on risk capital via public markets presented an opportunity to data mine regulatory filings which would result in a high quality database.

With this research our goal was to provide quantitative answers to some of the questions we kept asking ourselves as investors in the space. Questions such as:

How many ounces of in-situ gold exist?

How many gold mines exist in Canada?

How rare is a 1.0 million ounce undeveloped deposit?

The report answers these questions and more while providing insight into the scarcity of mines & deposits. Additionally, having a granular view of the supply mix is useful as it allows market participants to ascertain the long-term supply and demand fundamentals of the metal.

We have made some important changes this year to the methodology of the database adding grade, tonnage, and government owned mines/deposits. We also partnered with Visual Capitalists, an investor website that provides rich visual content, to assist in visualizing the data we compiled. The report is free for usage and distribution with acknowledgment of the author.

Sincerely,

Roy Sebag  
July 2012

“

How rare are 1  
million+ ounce  
gold deposits?

”

## Changes to Methodology

This year we implemented some important changes to our methodology leading to a higher quality database that is more comprehensive:

Introduction of Grade and Tonnage in grams per tonne providing a more qualitative analysis of each respective deposit.

The inclusion of Government owned deposits such as Murantao and Sukhoi Log.

The inclusion of South African mines and deposits.

The inclusion of Australian listed companies as well as Polyus, AngloGold Ashanti and Newcrest, companies that are harder to compile due to the opacity of their mineral resource disclosure.

While we still have serious reservations relating to what portion of delineated resources can actually be extracted in the South African deposits we felt that they warranted inclusion in order to provide readers with an all-encompassing database. That same logic led us to include government owned mines even though we are somewhat skeptical of their reported grades and often relied on an outdated technical report.

## Methodology

We started with a list of 1,892 publicly traded companies that are in some way involved in gold production, exploration, or development of over 7,000 geologic anomalies. Our goal was to find an undeveloped gold deposit or producing mine that hosted over 1 million troy ounces of in-situ resources under a globally respected mineral definition standard such as CIM NI 43-101, JORC, or SAMREC.

In an effort to provide the most comprehensive database and due to the fact that every proven or probable ounce starts off as inferred, we aggregate all resource categories into one figure (refer to last year's report for a discussion relating to aggregating all resource categories). Where there are reserves and resources we will most likely use the inclusive resource figure. When a cutoff grade is recommended by a geological consultancy we will rely on that cutoff grade unless the report was outdated and we felt a lower cutoff grade was warranted. It is important to stress that resources are not necessarily indicative of future mine supply given that metallurgical recovery rates and economic pit outlines are not applied. In the "Potential Mine Supply Exercise" section we discuss this further.

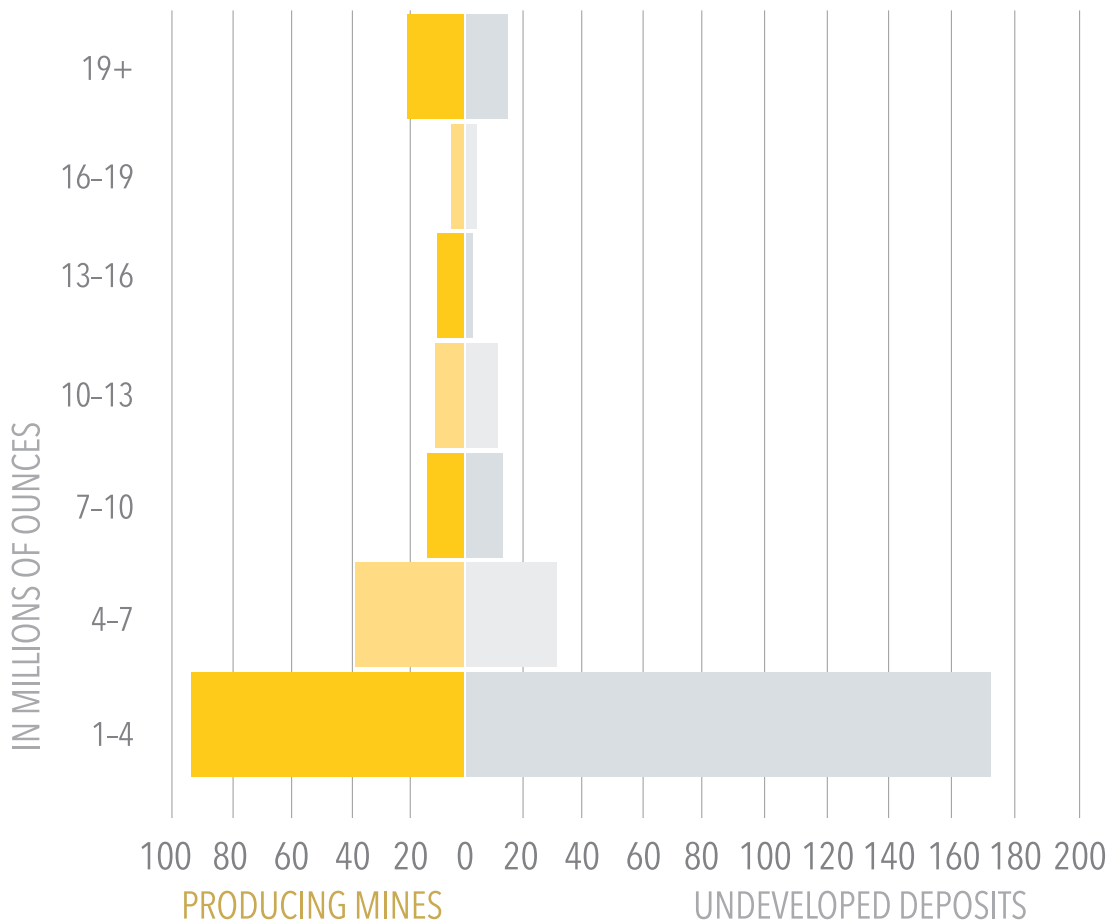
When it came to copper/gold porphyries it was difficult to draw the line as to what was a gold deposit vs. a copper deposit. In this year's report we included deposits such as Reko Diq and Galore Creek because we felt their global contained ounces were too large to disregard even though they are primarily copper deposits.

## 2012 Result Summary

From an initial list of 1,896 companies we were able to identify 212 entities (Public, Private and Government Sponsored Corporations) that own 439 gold deposits hosting over 1,000,000 ounces in all categories representing a total of 3,015,542,164 ounces of gold. The complete list can be found at the end of this report. [\[Skip to full list\]](#)

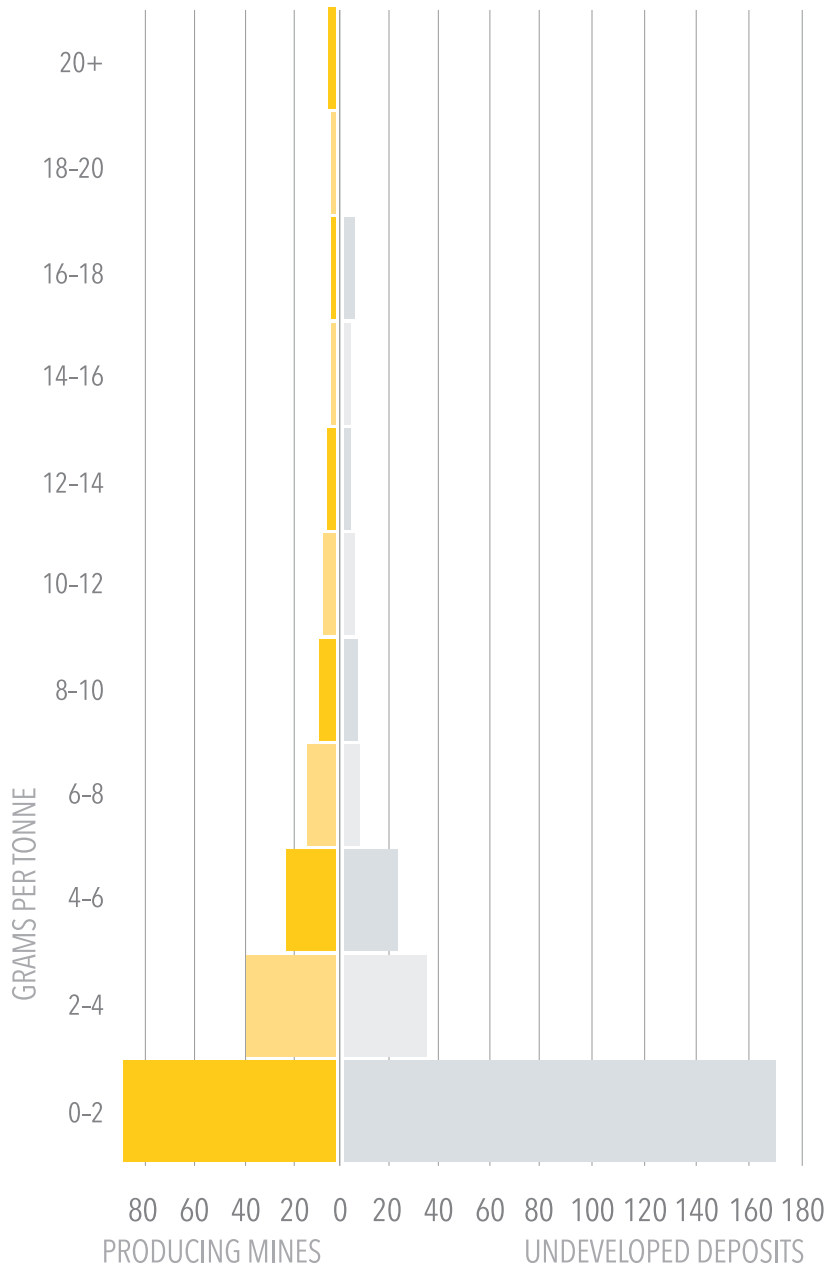
THROUGH OUR RESEARCH WE HAVE IDENTIFIED **439** DEPOSITS THROUGHOUT THE WORLD THAT CONTAIN OVER 1 MILLION OUNCES OF GOLD.

DISTRIBUTION BY DEPOSIT SIZE:



THROUGH OUR RESEARCH WE HAVE IDENTIFIED 439 DEPOSITS THROUGHOUT THE WORLD THAT CONTAIN OVER 1 MILLION OUNCES OF GOLD.

DISTRIBUTION BY GRADE:



189

250

AVERAGE GRADE (UNDEVELOPED DEPOSITS)

0.66

37% DECREASE FROM PRODUCING

AVERAGE GRADE (PRODUCING MINES)

1.06

AVERAGE GRADE (TOTAL)

0.82

NUMBERS IN GRAMS PER TONNE

## Top 50 Producing Mines by Global In-Situ Resources:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
1	Grasberg	4,909	0.56	88,106,000	Indonesia	Freeport Mcmoran
2	Lihir	830	2.10	56,000,000	Papua New Guinea	Newcrest
3	Muruntau	625	2.49	50,000,000	Uzbekistan	Government of Uzbekistan
4	Mponeng	122	12.60	49,550,000	Africa, South Africa	Anglogold Ashanti
5	Olimpiada	459	3.22	47,500,000	Russia	Polyus Gold
6	Oyu Tolgoi	3,754	0.38	46,085,000	Mongolia	Ivanhoe
7	Pueblo Viejo	490	2.38	37,451,666	Dominican Republic	Barrick / Goldcorp
8	Cadia East	2,300	0.45	33,000,000	Australia	Newcrest
9	Obuasi	154	5.98	29,520,000	Africa, Ghana	Anglogold Ashanti
10	South Deep	149	6.16	29,500,000	Africa, South Africa	Goldfields
11	Boddington	1,474	0.58	27,576,000	Australia	Newmont
12	Hycroft	2,367	0.34	26,181,000	USA, Nevada	Allied Nevada Gold
13	Penasquito	2,278	0.35	25,276,000	Mexico	Goldcorp
14	Burnstone	139	5.08	22,692,701	Africa, South Africa	Great Basin Gold
15	Paracatu	1,788	0.39	22,692,000	Brazil	Kinross
16	Turquoise Ridge	121	5.57	21,650,000	USA, Nevada	Barrick / Newmont
17	Carlin	376	1.75	21,225,000	USA, Nevada	Newmont
18	Tasiast	610	1.04	20,418,000	Africa, Mauritania	Kinross
19	Moab Khotsong	30	21.37	20,310,000	Africa, South Africa	Anglogold Ashanti
20	Cortez Operation	348	1.78	19,860,000	USA, Nevada	Barrick
21	Ahafo	337	1.76	19,105,000	Africa, Ghana	Newmont
22	Driefontein	75	7.55	18,200,000	Africa, South Africa	Goldfields
23	Kisladag	960	0.55	17,016,000	Turkey	El Dorado
24	Bulyanhulu	54	9.67	16,859,269	Africa, Tanzania	Barrick
25	Sukari Mine	454	1.06	15,430,000	Egypt	Centamin Egypt
26	Maricunga	851	0.56	15,366,000	Chile	Kinross
27	Goldstrike	112	4.23	15,188,000	USA, Nevada	Barrick
28	Kumtor	140	3.15	14,194,000	Krygz Republic	Centerra
29	Cripple Creek	579	0.76	14,100,000	USA, Colorado	Anglogold Ashanti
30	Los Filos	520	0.81	13,564,000	Mexico	Goldcorp
31	Canadian Malartic	423	0.98	13,380,000	Canada, Quebec	Osisko
32	Yanacocha	470	0.88	13,288,600	Peru	Newmont / Buenaventura
33	Blagodatnoye	172	2.36	13,075,000	Russia	Polyus Gold
34	Porcupine	303	1.22	11,930,000	Canada, Ontario	Goldcorp
35	Porgera	120	3.07	11,826,262	Papua New Guinea	Barrick
36	Veladero	544	0.66	11,595,000	Argentina	Barrick
37	Phoenix	722	0.49	11,427,420	USA, Nevada	Newmont
38	Geita	102	3.44	11,270,000	Africa, Tanzania	Anglogold Ashanti
39	Choco 10	189	1.83	11,127,000	Venezuela	Rusoro
40	Sadiola	217	1.58	11,025,000	Africa, Mali	Anglogold Ashanti
41	Kloof	53	6.16	10,500,000	Africa, South Africa	Goldfields
42	Super Pit / Kalgoorlie	240	1.34	10,374,000	Australia	Barrick / Newmont
43	Batu Hijau	1,269	0.25	10,304,000	Indonesia	Newmont / Sumitomo
44	Tarkwa	244	1.26	9,900,000	Africa, Ghana	Goldfields
45	Malomir	376	0.81	9,810,000	Russia	Petropavlovsk
46	Verninskoye	127	2.33	9,537,000	Russia	Polyus Gold
47	Kopanang	24	11.79	9,130,000	Africa, South Africa	Anglogold Ashanti
48	Loulo	62	4.41	8,800,000	Africa, Mali	Randgold
49	Rosebel	276	0.99	8,772,000	Suriname	IAMGold
50	OK Tedi	250	1.06	8,520,000	Papua New Guinea	Inmet

## Top 50 Undeveloped Deposits by Global In-Situ Resources

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
1	Pebble Deposit	10,177	0.33	107,300,000	USA, Alaska	Northern Dynasty / Anglo American
2	KSM Deposit	3,906	0.51	63,979,000	Canada, BC	Seabridge Gold
3	Nataika	1,078	1.70	58,950,000	Russia	Polyus Gold
4	Donlin Creek	634	2.21	45,000,000	USA, Alaska	Barrick / NovaGold
5	Reko Diq	5,864	0.22	42,400,000	Pakistan	Barrick / Pakistan
6	Snowfield	2,203	0.49	34,950,000	Canada, BC	Pretium Resources
7	Sukhoi Log	384	2.67	33,000,000	Russia	Government of Russia
8	Cerro Cassale	1,995	0.51	32,587,666	Chile	Barrick / Kinross
9	Las Cristinas	1,116	0.86	30,804,000	Venezuela	Government of Venezuela
10	Detour Lake Mine	887	1.02	29,119,000	Canada, Ontario	Detour Gold
11	Pascua-Lama	662	1.21	25,810,000	Chile	Barrick
12	Caspiche	1,646	0.47	24,869,000	Chile	Exeter Gold
13	La Colosa	830	0.91	24,200,000	Colombia	Anglogold Ashanti
14	Livengood	1,190	0.54	20,631,000	USA, Alaska	Int'l Tower Hill Mines
15	Metates	1,246	0.49	19,828,000	Mexico	Chesapeake
16	Golpu	870	0.69	19,300,000	Papua New Guinea	Newcrest
17	Rosia Montana	556	1.03	18,500,000	Romania	Gabriel Resources
18	Conga	924	0.59	17,473,300	Peru	Newmont/ Buenaventura
19	BruceJack	30	17.45	17,056,000	Canada, BC	Pretium Resources
20	Marmato	489	0.91	14,377,000	Colombia	Gran Colombia
21	El Morro	804	0.53	13,788,000	Chile	Goldcorp / NewGold
22	King King	1,151	0.32	11,943,000	Philippines	St. Augustine Gold
23	Courageous Lake	156	2.27	11,403,000	Canada, BC	Seabridge Gold
24	Titiribi	635	0.54	11,079,000	Colombia	Sunward
25	Fruta del Norte	52	6.64	11,030,000	Equador	Kinross
26	Galore Creek	1,160	0.29	10,700,000	Canada, BC	Novagold/Teck
27	Hammond Reef	530	0.62	10,520,000	Canada, Ontario	Osisko
28	Volcan	456	0.71	10,383,000	Chile	Andina Minerals
29	Kyzil	40	8.05	10,354,000	Kazakhstan	Ivanhoe
30	Toroparu	419	0.74	10,006,000	Guyana	Sandspring Resources
31	Gaby	499	0.62	10,000,000	Equador	International Minerals/Chinese Firm
32	Agua Rica	1,752	0.18	9,929,000	Argentina	Yamana/Glencore/Goldcorp
33	Lobo Marte	311	0.98	9,757,000	Chile	Kinross
34	Orisyvo	278	1.05	9,400,000	Mexico	Fresnillo
35	Mt. Todd	341	0.83	9,036,000	Australia	Vista Gold
36	Tengrela	271	1.04	9,024,000	Africa, Ivory Coast	Perseus Mining
37	Blackwater	334	0.80	8,616,000	Canada, BC	Newgold
38	Casino Copper	1,058	0.24	8,300,000	Canada, BC	Western Copper
39	Kibali	82	3.14	8,300,000	Africa, DRC	Anglogold Ashanti
40	Prosperity Mine	831	0.29	7,700,000	Canada, BC	Taseko Mines
41	Maoling	317	0.76	7,700,000	China	Mundoro Capital
42	Akyem	146	1.64	7,684,000	Africa, Ghana	Newmont
43	Eleonore	26	9.19	7,680,000	Canada, Quebec	GoldCorp
44	Mount Milligan	727	0.32	7,468,000	Canada, BC	Thompson Creek Metals
45	Red Hill - Gold Rush	48	4.59	7,021,000	USA, Nevada	Barrick
46	Meliadine	38	5.76	6,977,000	Canada, Nunavut	Agnico Eagle
47	Rovina Valley	370	0.59	6,960,000	Romania	Carpathian Gold
48	Cote Lake	239	0.90	6,891,000	Canada, Ontario	IAMGold
49	Rainy River	194	1.08	6,736,000	Canada, Ontario	Rainy River Resources
50	La Bodega	139	1.50	6,700,000	Colombia	AUX

## Top 50 Producing Mines by Grade:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
1	Hollister	2	32.81	2,489,500	USA, Nevada	Great Basin Gold
2	Tautona	7	23.03	4,880,000	Africa, South Africa	Anglogold Ashanti
3	Moab Khotsong	30	21.37	20,310,000	Africa, South Africa	Anglogold Ashanti
4	Savuka	5	18.96	3,090,000	Africa, South Africa	Anglogold Ashanti
5	Kirkland Lake	5	16.39	2,371,000	Canada, Ontario	Kirkland Lake Gold
6	Gosowong	5	15.25	2,500,000	Indonesia	Newcrest
7	Zaruma	6	13.23	2,493,000	Equador	Dynasty Mining
8	Mponeng	122	12.60	49,550,000	Africa, South Africa	Anglogold Ashanti
9	Great Noligwa	11	12.41	4,510,000	Africa, South Africa	Anglogold Ashanti
10	Red Lake	21	11.81	8,014,000	Canada, Ontario	Goldcorp
11	Kopanang	24	11.79	9,130,000	Africa, South Africa	Anglogold Ashanti
12	Vatukoula	15	10.10	4,980,000	Fiji	Vatukoula Gold Mines
13	Kupol	10	10.06	3,203,000	Russia	Kinross
14	Olympias	12	10.00	3,987,000	Greece	El Dorado
15	Rolspruit	24	9.72	7,500,000	Africa, South Africa	Harmony Gold
16	Bulyanhulu	54	9.67	16,859,269	Africa, Tanzania	Barrick
17	Bambanani	5	9.33	1,500,000	Africa, South Africa	Harmony Gold
18	Phakisa	20	8.77	5,750,000	Africa, South Africa	Harmony Gold
19	Mnogovershinoe	7	8.44	1,900,000	Russia	Highland Gold
20	Efemcukuru	8	8.42	2,153,000	Turkey	El Dorado
21	Plutonic	8.5	8.27	2,260,000	Australia	Barrick
22	Poplar	14	8.00	3,600,000	Africa, South Africa	Harmony Gold
23	Driefontein	75	7.55	18,200,000	Africa, South Africa	Goldfields
24	Novoshirokinksoye	8	7.39	1,900,000	Russia	Highland Gold
25	Kusasaletu (Elandsrand)	38	6.79	8,300,000	Africa, South Africa	Harmony Gold
26	Granny Smith	11	6.69	2,313,000	Australia	Barrick
27	Corrego Do Sitio	18	6.58	3,860,000	Brazil	Anglogold Ashanti
28	Jundee	5	6.46	1,017,000	Australia	Newmont
29	Jerritt Canyon	15	6.45	3,071,000	USA, Nevada	Yukon-Nevada Gold
30	Kalana Gold Mine	6	6.35	1,143,000	Africa, Mali	Avnel Gold Mining
31	El Penon	19	6.30	3,755,000	Chile	Yamana
32	Target	14	6.22	2,800,000	Africa, South Africa	Harmony Gold
33	Kloof	53	6.16	10,500,000	Africa, South Africa	Goldfields
34	South Deep	149	6.16	29,500,000	Africa, South Africa	Goldfields
35	Seabee	7	6.10	1,299,000	Canada, Quebec	Claude Resources
36	Tshepong	24	6.09	4,700,000	Africa, South Africa	Harmony Gold
37	Musselwhite	17	6.08	3,344,000	Canada, Ontario	Goldcorp
38	Lamego	6	6.07	1,170,000	Brazil	Anglogold Ashanti
39	Obuasi	154	5.98	29,520,000	Africa, Ghana	Anglogold Ashanti
40	Lamaque	13	5.93	2,439,000	Canada, Quebec	White Tiger Gold
41	Holt	11	5.82	1,983,000	Canada, Ontario	St. Andrew Goldfields
42	Timmins West Mine	10	5.82	1,870,000	Canada, Ontario	Lake Shore Gold
43	Walhi	6	5.80	1,044,200	New Zealand	Newmont
44	Masimong	6	5.70	1,100,000	Africa, South Africa	Harmony Gold
45	Evander	21	5.63	3,800,000	Africa, South Africa	Harmony Gold
46	Turquoise Ridge	121	5.57	21,650,000	USA, Nevada	Barrick / Newmont
47	Tanami	28	5.20	4,732,000	Australia	Newmont
48	Black Fox	7	5.18	1,115,000	Canada, Ontario	Brigus Gold
49	Burnstone	139	5.08	22,692,701	Africa, South Africa	Great Basin Gold
50	Beatrix	41	4.86	6,400,000	Africa, South Africa	Goldfields

## Top 50 Undeveloped Deposits by Grade:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
1	Dvoinoye	2	17.82	1,318,000	Russia	Kinross
2	BruceJack	30	17.45	17,056,000	Canada, BC	Pretium Resources
3	Kencana	3	17.17	1,435,000	Indonesia	Newcrest
4	F2 Deposit	5	16.55	2,794,000	Canada, Ontario	Rubicon Minerals
5	Cerro Blanco	4	15.52	1,931,000	Peru	Goldcorp
6	Suyai	6	14.19	2,550,000	Argentina	Yamana
7	Tyrone	7	12.75	2,690,000	Ireland	Dalradian Resources
8	Buritica	8	12.30	3,164,000	Colombia	Continental Gold
9	Idaho-Maryland Deposit	4	11.88	1,490,000	USA, California	Emgold Mining Corporation
10	Jerusalem	3	11.88	1,295,000	Ecuador	Dynasty Mining
11	Westwood	10	11.48	3,727,000	Canada, Quebec	IAMGold
12	Cochenour	9	10.85	3,210,000	Canada, Ontario	Goldcorp
13	Madsen	4	9.47	1,225,000	Canada, Ontario	Claude Resources
14	Eleonore	26	9.19	7,680,000	Canada, Quebec	GoldCorp
15	Fire Creek	7	8.93	2,147,000	USA, Nevada	Klondex Mines
16	Cerro Negro	24	8.08	6,133,000	Argentina	Goldcorp
17	Kyzl	40	8.05	10,354,000	Kazakhstan	Ivanhoe
18	Cuiaba	21	7.71	5,170,000	Brazil	Anglogold Ashanti
19	Mongbwalu	8	7.34	1,900,000	Africa, DRC	Anglogold Ashanti
20	Taldybulak	9	7.23	2,077,000	Kyrgyz Republic	Zijin Mining / Kyrgyz Government
21	Fruta del Norte	52	6.64	11,030,000	Ecuador	Kinross
22	Quimsacocha	10	6.61	2,168,000	Ecuador	IAMGold
23	San Jose Mine	6	6.47	1,290,000	Argentina	Mcewen Mining/ Hochschild
24	Gold River Trend	6	5.97	1,144,000	Canada, Ontario	Lake Shore Gold
25	Back River	32	5.81	6,046,000	Canada, Nunavut	Sabina Gold & Silver
26	Meliadine	38	5.76	6,977,000	Canada, Nunavut	Agnico Eagle
27	Eastern Dragon	6	5.63	1,032,000	China	El Dorado
28	Modder East	8	5.44	1,400,000	Africa, South Africa	Gold One International
29	Rio Blanco	6	5.44	1,015,000	Ecuador	International Minerals
30	Angostura	14	5.38	2,405,000	Colombia	Eco Oro
31	Three Bluffs	9	5.31	1,507,000	Canada, Nunavut	North Country Gold
32	Coringa	7	5.12	1,095,000	Brazil	Magellan Minerals
33	El Valle-Boina	17	4.86	2,612,000	Spain	Orvana
34	Cerro Moro	7	4.80	1,106,000	Argentina	Extorre Gold
35	Dynasty	14	4.70	2,165,000	Ecuador	Dynasty Mining
36	Comtois	8	4.64	1,212,000	Canada, Quebec	Maudore Resources
37	Red Hill - Gold Rush	48	4.59	7,021,000	USA, Nevada	Barrick
38	Tabakoto	10	4.58	1,409,000	Africa	Avion Gold
39	Contact Project	20	4.33	2,784,000	Krygz Republic	Chaarat Gold Holdings
40	Main Project	11	4.23	1,511,000	Krygz Republic	Chaarat Gold Holdings
41	Albazino	17	4.21	2,300,000	Russia	Polymetal
42	Amantaytau	23	4.19	3,100,000	Uzbekistan	Oxus Gold
43	Crixas	14	4.11	1,915,000	Brazil	Kinross
44	Pilar (Jordino)	21	4.11	2,774,000	Brazil	Yamana
45	Hardrock	28	4.07	3,600,000	Canada, Ontario	Premier Gold Mines
46	Inmaculda	12	4.02	1,550,000	Peru	International Minerals
47	Changkeng	8	3.94	1,009,000	China	Minco Gold
48	Jeronimo	19	3.93	2,427,000	Chile	Yamana
49	Pickle Crow	10	3.86	1,260,000	Canada, Ontario	PC Gold
50	Lalor	13	3.85	1,560,000	Canada, Manitoba	Hudbay Minerals



## Top 25 Mines & Deposits in U.S. and Canada:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
1	Pebble Deposit	10,177	0.33	107,300,000	USA, Alaska	Northern Dynasty / Anglo	
2	KSM Deposit	3,906	0.51	63,979,000	Canada, BC	Seabridge Gold	
3	Donlin Creek	634	2.21	45,000,000	USA, Alaska	Barrick / NovaGold	
4	Snowfield	2,203	0.49	34,950,000	Canada, BC	Pretium Resources	
5	Detour Lake Mine	887	1.02	29,119,000	Canada, Ontario	Detour Gold	
6	Hycroft	2,367	0.34	26,181,000	USA, Nevada	Allied Nevada Gold	•
7	Turquoise Ridge	121	5.57	21,650,000	USA, Nevada	Barrick / Newmont	•
8	Carlin	376	1.75	21,225,000	USA, Nevada	Newmont	•
9	Livengood	1,190	0.54	20,631,000	USA, Alaska	Int'l Tower Hill Mines	
10	Cortez Operation	348	1.78	19,860,000	USA, Nevada	Barrick	•
11	BruceJack	30	17.45	17,056,000	Canada, BC	Pretium Resources	
12	Goldstrike	112	4.23	15,188,000	USA, Nevada	Barrick	•
13	Cripple Creek	579	0.76	14,100,000	USA, Colorado	Anglogold Ashanti	•
14	Canadian Malartic	423	0.98	13,380,000	Canada, Quebec	Osisko	•
15	Porcupine	303	1.22	11,930,000	Canada, Ontario	Goldcorp	•
16	Phoenix	722	0.49	11,427,420	USA, Nevada	Newmont	•
17	Courageous Lake	156	2.27	11,403,000	Canada, BC	Seabridge Gold	
18	Galore Creek	1,160	0.29	10,700,000	Canada, BC	Novagold/Teck	
19	Hammond Reef	530	0.62	10,520,000	Canada, Ontario	Osisko	
20	Blackwater	334	0.80	8,616,000	Canada, BC	Newgold	
21	Casino Copper	1,058	0.24	8,300,000	Canada, BC	Western Copper	
22	Red Lake	21	11.81	8,014,000	Canada, Ontario	Goldcorp	•
23	Prosperity Mine	831	0.29	7,700,000	Canada, BC	Taseko Mines	
24	Eleonore	26	9.19	7,680,000	Canada, Quebec	GoldCorp	
25	Bald Mountain	456	0.51	7,512,000	USA, Nevada	Barrick	•



## Top 25 Mines & Deposits in Latin America:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
1	Pueblo Viejo	490	2.38	37,451,666	Dominican Republic	Barrick / Goldcorp	•
2	Cerro Cassale	1,995	0.51	32,587,666	Chile	Barrick / Kinross	
3	Las Cristinas	1,116	0.86	30,804,000	Venezuela	Government of Venezuela	
4	Pascua-Lama	662	1.21	25,810,000	Chile	Barrick	
5	Penasquito	2,278	0.35	25,276,000	Mexico	Goldcorp	•
6	Caspiche	1,646	0.47	24,869,000	Chile	Exeter Gold	
7	La Colosa	830	0.91	24,200,000	Colombia	Anglogold Ashanti	
8	Paracatu	1,788	0.39	22,692,000	Brazil	Kinross	•
9	Metates	1,246	0.49	19,828,000	Mexico	Chesapeake	
10	Conga	924	0.59	17,473,300	Peru	Newmont/ Buenaventura	
11	Maricunga	851	0.56	15,366,000	Chile	Kinross	•
12	Marmato	489	0.91	14,377,000	Colombia	Gran Colombia	
13	El Morro	804	0.53	13,788,000	Chile	Goldcorp / NewGold	
14	Los Filos	520	0.81	13,564,000	Mexico	Goldcorp	•
15	Yanacocha	470	0.88	13,288,600	Peru	Newmont / Buenaventura	•
16	Veladero	544	0.66	11,595,000	Argentina	Barrick	•
17	Choco 10	189	1.83	11,127,000	Venezuela	Rusoro	•
18	Titiribi	635	0.54	11,079,000	Colombia	Sunward	
19	Fruta del Norte	52	6.64	11,030,000	Ecuador	Kinross	
20	Volcan	456	0.71	10,383,000	Chile	Andina Minerals	
21	Toroparu	419	0.74	10,006,000	Guyana	Sandspring Resources	
22	Gaby	499	0.62	10,000,000	Ecuador	International Minerals/Chinese Firm	
23	Agua Rica	1,752	0.18	9,929,000	Argentina	Yamana/Glencore/Goldcorp	
24	Lobo Marte	311	0.98	9,757,000	Chile	Kinross	
25	Orisyvo	278	1.05	9,400,000	Mexico	Fresnillo	



CHILE 7  
MEXICO 4  
COLOMBIA 3

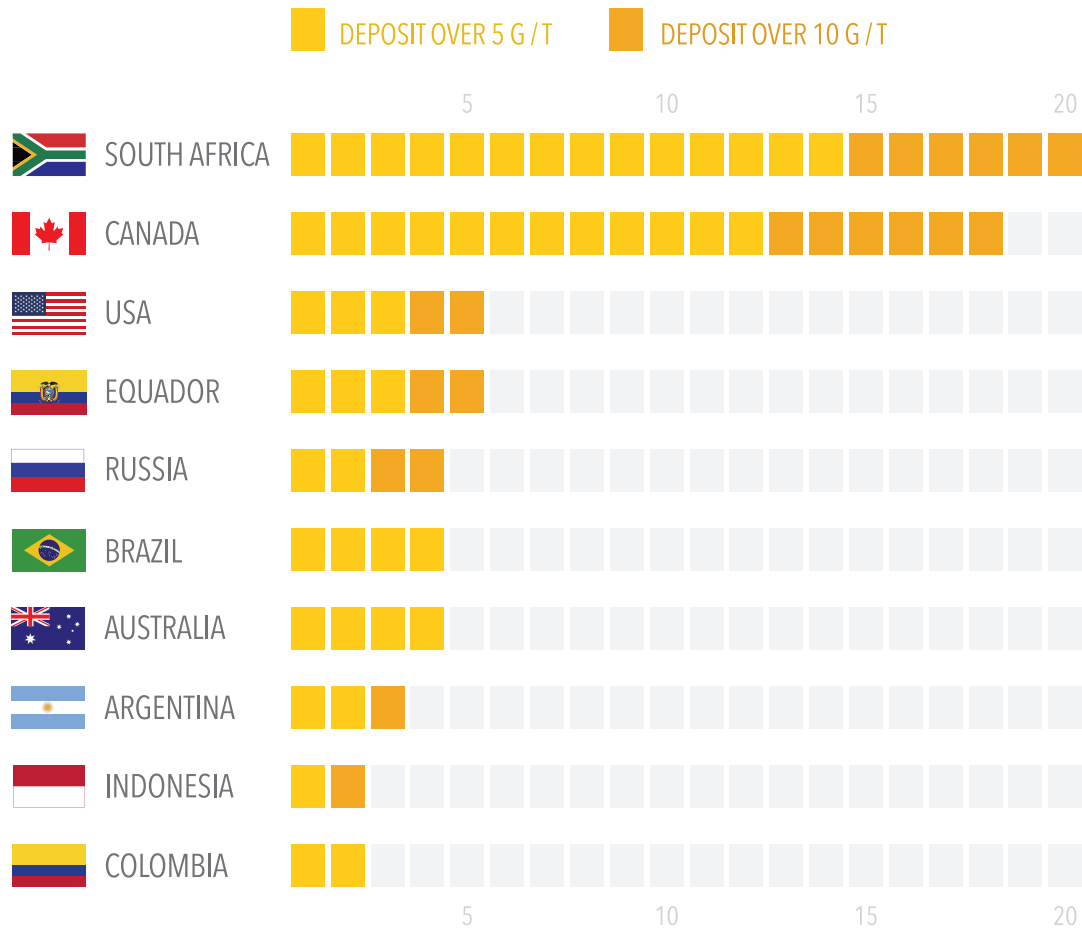
## Top 25 Mines & Deposits in Asia / Oceania:

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
1	Grasberg	4,909	0.56	88,106,000	Indonesia	Freeport Mcmoran	•
2	Natalka	1,078	1.70	58,950,000	Russia	Polyus Gold	
3	Lihir	830	2.10	56,000,000	Papua New Guinea	Newcrest	•
4	Muruntau	625	2.49	50,000,000	Uzbekistan	Government of Uzbekistan	•
5	Olimpiada	459	3.22	47,500,000	Russia	Polyus Gold	•
6	Oyu Tolgoi	3,754	0.38	46,085,000	Mongolia	Ivanhoe	•
7	Reko Diq	5,864	0.22	42,400,000	Pakistan	Barrick / Pakistan	
8	Sukhoi Log	384	2.67	33,000,000	Russia	Government of Russia	
9	Cadia East	2,300	0.45	33,000,000	Australia	Newcrest	•
10	Boddington	1,474	0.58	27,576,000	Australia	Newmont	•
11	Golpu	870	0.69	19,300,000	Papua New Guinea	Newcrest	
12	Kisladag	960	0.55	17,016,000	Turkey	El Dorado	•
13	Kumtor	140	3.15	14,194,000	Krygz Republic	Centerra	•
14	Blagodatnoye	172	2.36	13,075,000	Russia	Polyus Gold	•
15	King King	1,151	0.32	11,943,000	Philippines	St. Augustine Gold	
16	Porgera	120	3.07	11,826,262	Papua New Guinea	Barrick	•
17	Super Pit / Kalgoorlie	240	1.34	10,374,000	Australia	Barrick / Newmont	•
18	Kyzl	40	8.05	10,354,000	Kazakhstan	Ivanhoe	
19	Batu Hijau	1,269	0.25	10,304,000	Indonesia	Newmont / Sumitomo	•
20	Malomir	376	0.81	9,810,000	Russia	Petropavlovsk	•
21	Verninskoye	127	2.33	9,537,000	Russia	Polyus Gold	•
22	Mt. Todd	341	0.83	9,036,000	Australia	Vista Gold	
23	OK Tedi	250	1.06	8,520,000	Papua New Guinea	Inmet	•
24	Telfer Main Dome	390	0.67	8,400,000	Australia	Newcrest	•
25	Maoling	317	0.76	7,700,000	China	Mundoro Capital	



RUSSIA 6  
 AUSTRALIA 5  
 PAPUA NEW GUINIEA 4

# TOP TEN COUNTRIES BY GRADE (GRAMS PER TONNE)

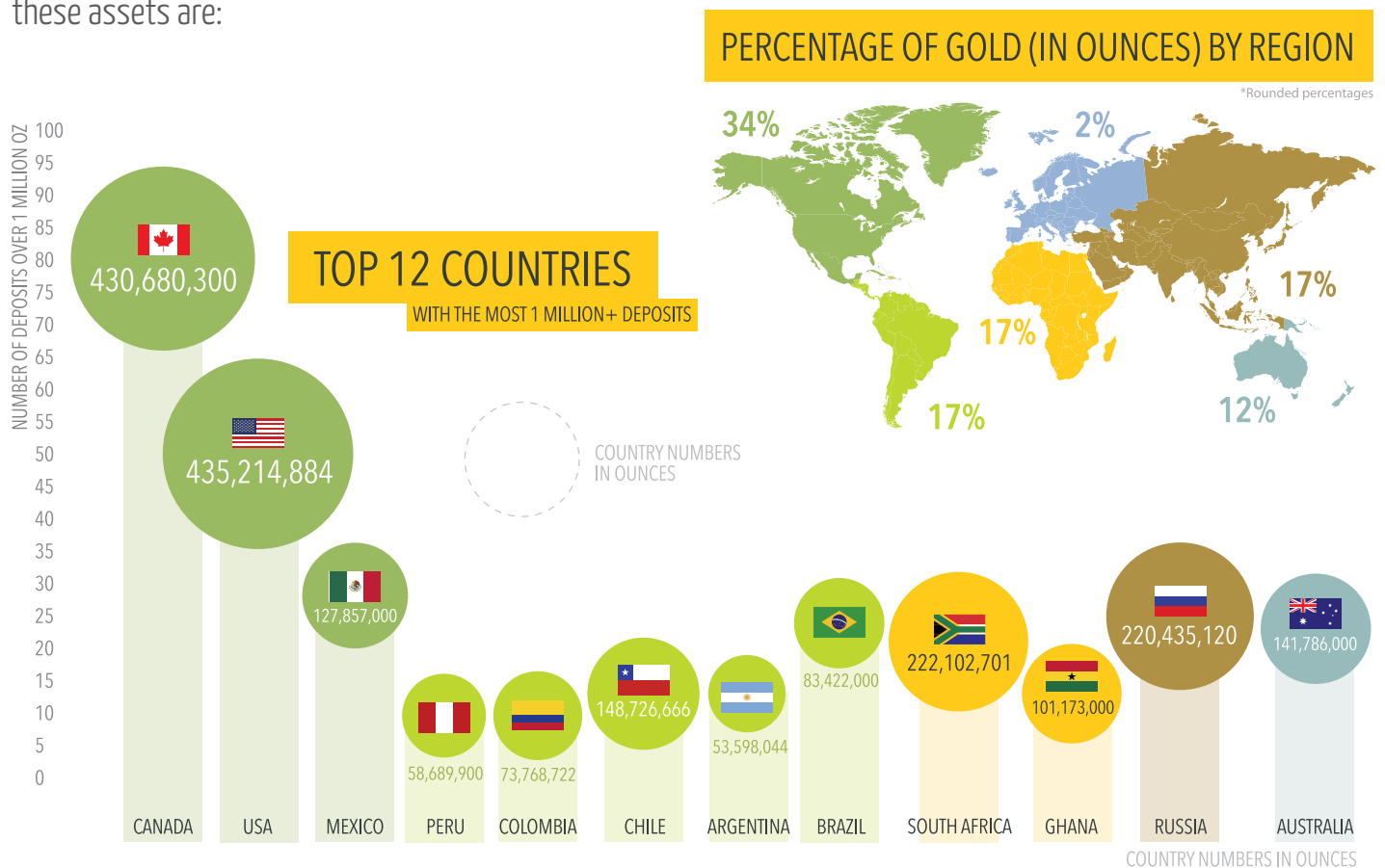


## 2012 Results Discussion

This year's results confirmed both the scarcity of gold deposits as well as the lower-grade production trends facing the industry. Even with our generous thresholds allowing inferred resources to be included in the database, we were able to identify only 439 mines or deposits containing over 1 million ounces of gold.

In our view a mine or deposit is an asset no different than a farm, commercial property, or financial security. Yet when it comes to gold, there are only 439 assets that meet the industry perceived economic threshold of 1 million ounces. Last year, we compared this figure to the tens of thousands of commercial real estate properties in the world or the nearly 72,000 financial securities. While the crustal abundance of gold is fixed, and discovery grades continue to decline, there is no limit to the creation of financial securities and plenty of land and building materials to construct more property. Simply put, a gold mine or deposit with over 1 million ounces is a very rare asset. This is especially true when viewing the geographical distribution of the mines & deposits:

Geographically, the distribution of the 439 deposits further confirms just how rare these assets are:



## Independently Owned Undeveloped Deposits

Another data point we found fascinating was that out of 439 mines or deposits, 189 are in fact producing mines owned by companies with an average market capitalization of \$1.8 Billion. This leaves us with a universe of undeveloped deposits over 1 million ounces of just 250. Of course some of these 250 deposits are owned by miners (84) while just 166 are owned by independent junior companies, private companies, or government sponsored enterprises. Investors seeking leverage to gold should focus on these companies as they provide the best exposure to a rising gold price environment. We have attached a table with these deposits and companies at the end of the report titled "Undeveloped Deposits over 1mm oz owned by Independent Juniors".

It is interesting to note that in Canada we were able to find only 59 undeveloped deposits over 1mm ounces owned by 49 companies (41 Independents). In the United States we found only 33 deposits owned by 26 companies (23 Independents).

Internally, the purpose of this report was to identify potential short-comings in the theories employed by leading thinkers in the gold industry. After reviewing nearly 2,000 companies in the space we can objectively say that are no such red flags. Annual discoveries in 2011 lacked the gravitas required to move the needle on the aggregate in-situ figures after incorporating depletion. This was surprising as historically high gold prices have provided nearly unprecedented capital to gold exploration companies and we had assumed that after tallying up the year's discoveries there would be a significant nominal gain in ounces.

Another important data point was observed with regards to the grade of producing mines vs. undeveloped deposits with grades for undeveloped deposits being markedly lower (37%) guaranteeing the need for higher energy input in the future only to sustain current production figures.

Another caveat with the undeveloped deposits in the database is that some of the largest ones face significant permitting headwinds. Pebble, Reko Diq, Donlin, KSM, and Rosia Montana which represent nearly 20% of the undeveloped ounces in the database may not become mines for 10, 20 and even 30 years.

## Quality Deposits are Rare

While this report and the accompanying database provide an accurate view of global mine supply, there are crucial qualitative metrics still missing. Even high grade deposits with no infrastructure are inferior to easily mined bulk tonnage deposits with close proximity to infrastructure in stable geopolitical jurisdictions.

Looking at the matrix of undeveloped deposits, one can see why size and even grade are not the most important attributes when predicting which deposit will become a mine. Let us compare Cerro Cassale in Chile with 32.5mm ounces to Titiribi in Colombia with 11.1mm ounces (and continues to grow). While Cerro Cassale is nearly three times the size, its remote location in the Maricunga desert has forced Barrick to budget over \$500mm for a 120km water pipeline. Titiribi, owned by independent junior Sunward Resources, is located on a paved road with both water and power running directly to the site. While it is too early to estimate CAPEX for Titiribi, it is not farfetched to assume that for the amount Barrick will be spending transporting water from point A to point B, Titiribi will be producing a few hundred thousand ounces of gold per annum.

In conclusion, we would like to stress that while this database serves as an effective starting point we urge investors to incorporate additional metrics such as geopolitical risk, permitting challenges, and most importantly infrastructure when ranking deposits for investment.

## Global Mine Supply Exercise

In this section we will attempt to make sense of the 3,015,542,164 ounce (93,796 tonnes) figure which is the sum of all in-situ ounces in the database. As we previously explained this figure is inaccurate as it relates to potentially mined ounces in the future due to the following factors:

- Inclusion of inferred resources in global contained ounces.

- Not applying any economic pit outlines.

- Not applying any metallurgical recovery rates.

- The inclusion of undeveloped deposits with no clear path towards permitting.

In order to project an accurate figure we will adjust the 3,015,542,164 ounce number through an exercise that incorporates metallurgical recovery rates, economic pit outlines, and physical constraints that come with moving the billions of tonnes that host these ounces.

First, we will apply a metallurgical recovery rate. Industry averages tend to be 70-90% depending on the type of mineralization. Casting a wide net, we will use 80% as our metallurgical recovery rate. Following this step we are left with 2,412,433,133 ounces.

Next, we will apply economic pit outlines to the resource figure. Once again in an effort to include the most possible ounces we will apply only a 10% reduction for potential pit outlines. Given the amount of inferred ounces in our database this is a very generous figure. Following this step we are left with 2,171,190,358 ounces or 67,533 tonnes.

Next, we will estimate the physical constraints required to mine the remaining ounces. As these ounces exist within 81 billion tonnes of ore (49 billion tonnes for undeveloped deposits containing 1.05 billion ounces after applying economic pit outlines and metallurgical recoveries) they cannot be immediately extracted from the earth's crust.

As we are estimating future potential supply, the 189 producing mines are less important given their production is already factored in the existing supply mix. A more relevant exercise is one projecting future supply from undeveloped deposits as only they could meaningfully disrupt the supply & demand fundamentals.

Let us assume for a moment that all 250 undeveloped deposits were somehow permitted and financed tomorrow. With 49 billion tonnes to mine at an average grade of .66 g/t it would take no less than 25 years to extract the 1,050,000,000 ounces contained within these deposits. Arriving at this figure, we assume that the average build time would be 3 years and the average mill size would be 25,000 tonnes per day.

Even with our unrealistic scenario introducing all 250 undeveloped deposits into the supply mix at once, we can only quantify an increase of roughly 42mm ounces of gold production or 1,306 tonnes per annum. Compare that to current gold production of roughly 2,800 tonnes or 90mm ounces per annum.

Realistically, 50% or more of the deposits in the database will most likely remain deposits 25 years from now for a variety of factors including: permitting, ability to finance a mine, and attractiveness to a producer (producer balance sheets are so large they require significant projects to be accretive, making even most 1mm-2mm ounce deposits unattractive).

Consequently, the guaranteed depletion in the existing production mix coupled with a more realistic introduction of new mines into the mix (as opposed to our theoretical tomorrow scenario) makes it clear that barring multiple high-grade, multi-million ounce discoveries each year, a significant increase in gold production is unlikely. Moreover our back of the envelope calculations point towards gold production peaking at some point between 2022 and 2025 assuming the 90mm ounce per year figure is maintained.



## All 439 Mines & Deposits (Descending Order by Global In Situ Resource)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
1	Pebble Deposit	10,177	0.33	107,300,000	USA, Alaska	Northern Dynasty / Anglo	
2	Grasberg	4,909	0.56	88,106,000	Indonesia	Freeport Mcmoran	•
3	KSM Deposit	3,906	0.51	63,979,000	Canada, BC	Seabridge Gold	
4	Natalka	1,078	1.70	58,950,000	Russia	Polyus Gold	
5	Lihir	830	2.10	56,000,000	Papua New Guinea	Newcrest	•
6	Muruntau	625	2.49	50,000,000	Uzbekistan	Government of Uzbekistan	•
7	Mponeng	122	12.60	49,550,000	Africa, South Africa	Anglogold Ashanti	•
8	Olimpiada	459	3.22	47,500,000	Russia	Polyus Gold	•
9	Oyu Tolgoi	3,754	0.38	46,085,000	Mongolia	Ivanhoe	•
10	Donlin Creek	634	2.21	45,000,000	USA, Alaska	Barrick / NovaGold	
11	Reko Diq	5,864	0.22	42,400,000	Pakistan	Barrick / Pakistan	
12	Pueblo Viejo	490	2.38	37,451,666	Dominican Republic	Barrick / Goldcorp	•
13	Snowfield	2,203	0.49	34,950,000	Canada, BC	Pretium Resources	
14	Cadia East	2,300	0.45	33,000,000	Australia	Newcrest	•
15	Sukhoi Log	384	2.67	33,000,000	Russia	Government of Russia	
16	Cerro Cassale	1,995	0.51	32,587,666	Chile	Barrick / Kinross	
17	Las Cristinas	1,116	0.86	30,804,000	Venezuela	Government of Venezuela	
18	Obuasi	154	5.98	29,520,000	Africa, Ghana	Anglogold Ashanti	•
19	South Deep	149	6.16	29,500,000	Africa, South Africa	Goldfields	•
20	Detour Lake Mine	887	1.02	29,119,000	Canada, Ontario	Detour Gold	
21	Boddington	1,474	0.58	27,576,000	Australia	Newmont	•
22	Hycroft	2,367	0.34	26,181,000	USA, Nevada	Allied Nevada Gold	•
23	Pascua-Lama	662	1.21	25,810,000	Chile	Barrick	
24	Penasquito	2,278	0.35	25,276,000	Mexico	Goldcorp	•
25	Caspiche	1,646	0.47	24,869,000	Chile	Exeter Gold	
26	La Colosa	830	0.91	24,200,000	Colombia	Anglogold Ashanti	
27	Burnstone	139	5.08	22,692,701	Africa, South Africa	Great Basin Gold	•
28	Paracatu	1,788	0.39	22,692,000	Brazil	Kinross	•
29	Turquoise Ridge	121	5.57	21,650,000	USA, Nevada	Barrick / Newmont	•
30	Carlin	376	1.75	21,225,000	USA, Nevada	Newmont	•
31	Livengood	1,190	0.54	20,631,000	USA, Alaska	Int'l Tower Hill Mines	
32	Tasiast	610	1.04	20,418,000	Africa, Mauritania	Kinross	•
33	Moab Khotsong	30	21.37	20,310,000	Africa, South Africa	Anglogold Ashanti	•
34	Cortez Operation	348	1.78	19,860,000	USA, Nevada	Barrick	•
35	Metates	1,246	0.49	19,828,000	Mexico	Chesapeake	
36	Golpu	870	0.69	19,300,000	Papua New Guinea	Newcrest	
37	Ahafo	337	1.76	19,105,000	Africa, Ghana	Newmont	•
38	Rosia Montana	556	1.03	18,500,000	Romania	Gabriel Resources	
39	Driefontein	75	7.55	18,200,000	Africa, South Africa	Goldfields	•
40	Conga	924	0.59	17,473,300	Peru	Newmont/ Buenaventura	
41	BruceJack	30	17.45	17,056,000	Canada, BC	Pretium Resources	
42	Kisladag	960	0.55	17,016,000	Turkey	El Dorado	•
43	Bulyanhulu	54	9.67	16,859,269	Africa, Tanzania	Barrick	•
44	Sukari Mine	454	1.06	15,430,000	Egypt	Centamin Egypt	•
45	Maricunga	851	0.56	15,366,000	Chile	Kinross	•
46	Goldstrike	112	4.23	15,188,000	USA, Nevada	Barrick	•
47	Marmato	489	0.91	14,377,000	Colombia	Gran Colombia	
48	Kumtor	140	3.15	14,194,000	Krygz Republic	Centerra	•
49	Cripple Creek	579	0.76	14,100,000	USA, Colorado	Anglogold Ashanti	•
50	El Morro	804	0.53	13,788,000	Chile	Goldcorp / NewGold	

## All 439 Mines & Deposits (51-100)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
51	Los Filos	520	0.81	13,564,000	Mexico	Goldcorp	
52	Canadian Malartic	423	0.98	13,380,000	Canada, Quebec	Osisko	•
53	Yanacocha	470	0.88	13,288,600	Peru	Newmont / Buenaventura	•
54	Blagodatnoye	172	2.36	13,075,000	Russia	Polyus Gold	•
55	King King	1,151	0.32	11,943,000	Philippines	St. Augustine Gold	•
56	Porcupine	303	1.22	11,930,000	Canada, Ontario	Goldcorp	
57	Porgera	120	3.07	11,826,262	Papua New Guinea	Barrick	•
58	Veladero	544	0.66	11,595,000	Argentina	Barrick	•
59	Phoenix	722	0.49	11,427,420	USA, Nevada	Newmont	•
60	Courageous Lake	156	2.27	11,403,000	Canada, BC	Seabridge Gold	•
61	Geita	102	3.44	11,270,000	Africa, Tanzania	Anglogold Ashanti	
62	Choco 10	189	1.83	11,127,000	Venezuela	Rusoro	•
63	Titiribi	635	0.54	11,079,000	Colombia	Sunward	•
64	Fruta del Norte	52	6.64	11,030,000	Equador	Kinross	
65	Sadiola	217	1.58	11,025,000	Africa, Mali	Anglogold Ashanti	
66	Galore Creek	1,160	0.29	10,700,000	Canada, BC	Novagold/Teck	•
67	Hammond Reef	530	0.62	10,520,000	Canada, Ontario	Osisko	
68	Kloof	53	6.16	10,500,000	Africa, South Africa	Goldfields	
69	Volcan	456	0.71	10,383,000	Chile	Andina Minerals	•
70	Super Pit / Kalgoorlie	240	1.34	10,374,000	Australia	Barrick / Newmont	
71	Kyzyl	40	8.05	10,354,000	Kazakhstan	Ivanhoe	•
72	Batu Hijau	1,269	0.25	10,304,000	Indonesia	Newmont / Sumitomo	
73	Toroparu	419	0.74	10,006,000	Guyana	Sandspring Resources	•
74	Gaby	499	0.62	10,000,000	Equador	International Minerals/Chinese Firm	
75	Agua Rica	1,752	0.18	9,929,000	Argentina	Yamana/Glencore/Goldcorp	
76	Tarkwa	244	1.26	9,900,000	Africa, Ghana	Goldfields	
77	Malomir	376	0.81	9,810,000	Russia	Petropavlovsk	•
78	Lobo Marte	311	0.98	9,757,000	Chile	Kinross	•
79	Verninskoye	127	2.33	9,537,000	Russia	Polyus Gold	
80	Orisyvo	278	1.05	9,400,000	Mexico	Fresnillo	•
81	Kopanang	24	11.79	9,130,000	Africa, South Africa	Anglogold Ashanti	
82	Mt. Todd	341	0.83	9,036,000	Australia	Vista Gold	•
83	Tengrela	271	1.04	9,024,000	Africa, Ivory Coast	Perseus Mining	
84	Loulo	62	4.41	8,800,000	Africa, Mali	Randgold	
85	Rosebel	276	0.99	8,772,000	Suriname	IAMGold	•
86	Blackwater	334	0.80	8,616,000	Canada, BC	Newgold	•
87	OK Tedi	250	1.06	8,520,000	Papua New Guinea	Inmet	
88	Telfer Main Dome	390	0.67	8,400,000	Australia	Newcrest	•
89	Kusasaletu (Elandsrand)	38	6.79	8,300,000	Africa, South Africa	Harmony Gold	•
90	Kibali	82	3.14	8,300,000	Africa, DRC	Anglogold Ashanti	•
91	Casino Copper	1,058	0.24	8,300,000	Canada, BC	Western Copper	
92	Red Lake	21	11.81	8,014,000	Canada, Ontario	Goldcorp	
93	Maoling	317	0.76	7,700,000	China	Mundoro Capital	•
94	Prosperity Mine	831	0.29	7,700,000	Canada, BC	Taseko Mines	
95	Akyem	146	1.64	7,684,000	Africa, Ghana	Newmont	
96	Eleonore	26	9.19	7,680,000	Canada, Quebec	GoldCorp	
97	Copler	158	1.49	7,550,000	Turkey	Alacer Gold	
98	Bald Mountain	456	0.51	7,512,000	USA, Nevada	Barrick	•
99	Rolspruit	24	9.72	7,500,000	Africa, South Africa	Harmony Gold	•
100	Mount Milligan	727	0.32	7,468,000	Canada, BC	Thompson Creek Metals	•

## All 439 Mines & Deposits (101-150)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
101	Edikan	207	1.07	7,118,000	Africa, Ghana	Perseus Mining	•
102	Red Hill - Gold Rush	48	4.59	7,021,000	USA, Nevada	Barrick	
103	Meliadine	38	5.76	6,977,000	Canada, Nunavut	Agnico Eagle	
104	Rovina Valley	370	0.59	6,960,000	Romania	Carpathian Gold	
105	Cote Lake	239	0.90	6,891,000	Canada, Ontario	IAMGold	
106	Mulatos	250	0.84	6,785,000	Mexico	Alamos Gold	•
107	Lagunas Norte	234	0.90	6,765,000	Peru	Barrick	•
108	Kuranakh	170	1.24	6,754,000	Russia	Polyus Gold	•
109	Rainy River	194	1.08	6,736,000	Canada, Ontario	Rainy River Resources	
110	La Herradura	309	0.68	6,731,000	Mexico	Newmont/Fresnillo	•
111	La Bodega	139	1.50	6,700,000	Colombia	AUX	
112	Chapada	1,072	0.19	6,687,000	Brazil	Yamana	•
113	Aurora	57	3.60	6,600,000	Guyana	Guyana Goldfields	
114	Laronde	52	3.88	6,462,000	Canada, Quebec	Agnico Eagle	•
115	Round Mountain	372	0.54	6,426,000	USA, Nevada	Barrick / Kinross	•
116	Beatrix	41	4.86	6,400,000	Africa, South Africa	Goldfields	•
117	Dublin - Eagle Gold	300	0.66	6,355,000	Canada, Yukon	Victoria Gold	
118	Kittilia	43	4.64	6,341,000	Finland	Agnico Eagle	•
119	Panimba	71	2.77	6,286,000	Russia	Polyus Gold	
120	Young-Davidson	79	2.46	6,218,000	Canada, Ontario	Aurico	•
121	Spanish Mountain	477	0.40	6,210,000	Canada, BC	Spanish Mountain Gold	
122	Twin Creeks	98	1.97	6,188,400	USA, Nevada	Newmont	•
123	Skouries	361	0.53	6,170,000	Greece	El Dorado	•
124	Cerro Negro	24	8.08	6,133,000	Argentina	Goldcorp	
125	Batero Quinchia	490	0.39	6,087,000	Colombia	Batero	
126	La Arena	743	0.25	6,048,000	Peru	Ria Alto	
127	Back River	32	5.81	6,046,000	Canada, Nunavut	Sabina Gold & Silver	
128	Mesquite	412	0.46	6,035,000	USA ,California	NewGold	•
129	Fort Knox	448	0.42	6,028,000	USA, Alaska	Kinross	•
130	Simberi	169	1.10	6,010,000	Papua New Guinea	Allied Gold Mining	•
131	Twangiza	115	1.62	6,003,000	Africa, DRC	Banro	•
132	Mana	85	2.17	5,963,000	Africa, Burkina Faso	Semafo	•
133	Paddington	112	1.65	5,941,000	Australia	Zijin Mining	•
134	Golden Meadows	95	1.91	5,820,000	USA, Idaho	Midas Gold	
135	Essakane	164	1.10	5,791,000	Africa, Burkina Faso	IAMGold	•
136	Borden Lake	268	0.67	5,780,000	Canada, Ontario	Probe Mines	
137	Jacobina	66	2.71	5,764,000	Brazil	Yamana	•
138	Phakisa	20	8.77	5,750,000	Africa, South Africa	Harmony Gold	•
139	Macraes	152	1.17	5,740,000	New Zealand	OceanaGold	•
140	Converse Deposit	351	0.51	5,700,000	USA, Nevada	International Minerals	
141	Siguiri	222	0.78	5,550,000	Africa, Guinea	Anglogold Ashanti/Guinea Gov.	
142	Iduapriem	112	1.46	5,270,000	Africa, Ghana	Anglogold Ashanti	•
143	Waisoi	1,500	0.11	5,200,000	Fiji	Newcrest	
144	Esaase	145	1.12	5,190,000	Africa, Ghana	Keegan Resources	
145	Deno Gold	336	0.48	5,182,000	Armenia	Dundee Precious Metals	•
146	Cuiaba	21	7.71	5,170,000	Brazil	Anglogold Ashanti	
147	North Mara	53	2.96	5,052,000	Africa, Tanzania	Barrick	•
148	Kiaka	147	1.06	5,029,000	Africa, Burkina Faso	Volta Resources	
149	Vatukoula	15	10.10	4,980,000	Fiji	Vatukoula Gold Mines	•
150	Tautona	7	23.03	4,880,000	Africa, South Africa	Anglogold Ashanti	•

## All 439 Mines & Deposits (151-200)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
151	Haile Deposit	91	1.65	4,840,000	USA, North Carolina	Romarco Minerals	
152	Volta Grande	88	1.70	4,818,000	Brazil	Belo Sun	
153	Chang Shan Hao	230	0.64	4,739,000	China	China Gold Int'l	•
154	Tanami	28	5.20	4,732,000	Australia	Newmont	•
155	Pinos Altos	90	1.62	4,718,000	Mexico	Agnico Eagle	•
156	Tshepong	24	6.09	4,700,000	Africa, South Africa	Harmony Gold	•
157	Nyanzaga	97	1.48	4,600,000	Africa, Tanzania	Barrick	
158	Buzwagi	107	1.33	4,579,000	Africa, Tanzania	Barrick	•
159	Chelopech	37	3.85	4,530,000	Bulgaria	Dundee Precious Metals	•
160	Great Nologwa	11	12.41	4,510,000	Africa, South Africa	Anglogold Ashanti	•
161	Obotan	60	2.35	4,510,000	Africa, Ghana	PMI Gold	
162	Bogoso Prestea	74	1.88	4,486,000	Africa, Ghana	Golden Star Resources	•
163	Navachab	119	1.17	4,480,000	Africa, Namibia	Anglogold Ashanti	•
164	Sleeper	303	0.46	4,458,000	USA, Nevada	Paramount Gold	
165	Josemaria	460	0.30	4,436,700	Argentina	NGEX	
166	Sinchao	416	0.33	4,414,000	Peru	Andean American	
167	Xietongmen	219	0.61	4,310,000	Tibet	Continental Minerals	
168	Pioneer	147	0.90	4,250,000	Russia	Petropavlovsk	•
169	Sawayaerdun	110	1.18	4,190,000	China	GobiMin	
170	Marigold Mine	253	0.51	4,172,544	USA, Nevada	GoldCorp/Barrick	•
171	Cerro Vanguardia	42	3.05	4,140,000	Argentina	Anglogold Ashanti	•
172	Spring Valley	249	0.52	4,131,000	USA, Nevada	Midway Gold	
173	South Arturo (Dee)	91	1.40	4,103,000	USA, Nevada	Barrick / Goldcorp	
174	Mount Margaret	523	0.24	4,036,000	USA, Washington	Ascot Resources	
175	Olympias	12	10.00	3,987,000	Greece	El Dorado	•
176	MeadowBank	45	2.73	3,979,000	Canada, Nunavut	Agnico Eagle	•
177	Gualcamayo	102	1.20	3,946,000	Argentina	Yamana	•
178	Jinfeng	36	3.43	3,944,000	China	El Dorado	•
179	Magino Gold	122	1.00	3,897,000	Canada, Ontario	Prodigy Gold	
180	Ventersburg	34	3.57	3,890,000	South Africa	Gold One International	
181	Aurizona	93	1.30	3,886,000	Brazil	Luna Gold	•
182	Corrego Do Sitio	18	6.58	3,860,000	Brazil	Anglogold Ashanti	•
183	Morelos	37	3.20	3,858,000	Mexico	Torex Gold	
184	Certej	70	1.72	3,837,000	Romania	El Dorado	
185	Dachang	39	3.08	3,810,000	China	Inter-Citic	
186	Evander	21	5.63	3,800,000	Africa, South Africa	Harmony Gold	•
187	Cowal	104	1.13	3,770,000	Australia	Barrick	•
188	El Penon	19	6.30	3,755,000	Chile	Yamana	•
189	Westwood	10	11.48	3,727,000	Canada, Quebec	IAMGold	
190	Carrapateena	203	0.57	3,700,000	Australia	Oz Minerals	
191	Tropicana	54	2.15	3,690,000	Australia	Anglogold Ashanti	
192	Goldex	68	1.69	3,680,000	Canada, Quebec	Agnico Eagle	•
193	Springpole	90	1.27	3,670,000	Canada, Ontario	Gold Canyon Resources	
194	Amulsar	144	0.79	3,666,000	Armenia	Lydian International	
195	Poplar	14	8.00	3,600,000	Africa, South Africa	Harmony Gold	•
196	Tongon	38	2.95	3,600,000	Africa, Ivory Coast	Randgold	•
197	Hardrock	28	4.07	3,600,000	Canada, Ontario	Premier Gold Mines	
198	Merian	86	1.30	3,579,000	Suriname	Newmont	
199	Pinson	30	3.69	3,573,500	USA, Nevada	Atna / Barrick	
200	Casa Berardi Mine	24	4.57	3,570,000	Canada, Quebec	Aurizon Mines	•

## All 439 Mines & Deposits (201-250)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
201	Nevada Stock Piles	68	1.61	3,530,000	USA, Nevada	Newmont	
202	Bombore	122	0.89	3,462,000	Africa, Burkina Faso	Orezone	
203	Ruby Hill	118	0.90	3,419,000	USA, Nevada	Barrick	•
204	Shahuindo	182	0.58	3,407,000	Peru	Sulliden	
205	Robertson	178	0.59	3,381,000	USA, Nevada	Coral Gold	
206	Sunrise Dam	37	2.86	3,360,000	Australia	Anglogold Ashanti	•
207	Duparquet	61	1.72	3,353,000	Canada, Quebec	Clifton Star Resources	
208	La Pepa	187	0.56	3,348,000	Chile	Yamana	
209	Musselwhite	17	6.08	3,344,000	Canada, Ontario	Goldcorp	•
210	Joanna Gold	78	1.33	3,339,000	Canada, Quebec	Aurizon Mines	
211	Zeravshan	60	1.69	3,247,000	Uzbekistan	Zijin Mining	•
212	El Castillo	328	0.31	3,244,000	Mexico	Argonaut Gold	•
213	Cochenour	9	10.85	3,210,000	Canada, Ontario	Goldcorp	
214	Kupol	10	10.06	3,203,000	Russia	Kinross	•
215	Buritica	8	12.30	3,164,000	Colombia	Continental Gold	
216	Camino Rojo	168	0.59	3,160,000	Mexico	Goldcorp	
217	Golden Highway	81	1.20	3,140,000	Canada, Ontario	Moneta Porcupine	
218	Gurupi Project	88	1.10	3,134,000	Brazil	Jaguar Mining	
219	Passendro	53	1.83	3,131,000	Central African Republic	Axmin	
220	CMD Gold Mine	252	0.39	3,130,000	Chile	Lachlan Star	•
221	Whistler Deposit	225	0.43	3,130,000	USA, Alaska	Kiska Metals	
222	Amantaytau	23	4.19	3,100,000	Uzbekistan	Oxus Gold	
223	Wafi	52	1.85	3,100,000	Papua New Guinea	Newcrest	
224	Savuka	5	18.96	3,090,000	Africa, South Africa	Anglogold Ashanti	•
225	Song Jiaguo	73	1.32	3,074,000	China	Majestic Gold	•
226	Jerritt Canyon	15	6.45	3,071,000	USA, Nevada	Yukon-Nevada Gold	•
227	Chertovo Koryto	53	1.80	3,044,000	Russia	Polyus Gold	
228	Lefa	66	1.41	3,000,000	Africa, Guinea	Severstal	•
229	Titimukhta	31	3.01	2,999,000	Russia	Polyus Gold	•
230	Dolores Mine	180	0.51	2,970,000	Mexico	Minefinders	•
231	Alumbrara	256	0.36	2,963,344	Argentina	Goldcorp / Yamana	•
232	Lindero	182	0.51	2,950,000	Argentina	Mansfield Minerals	
233	Bonikro & Hire Deposit	67	1.35	2,900,000	Africa, Ivory Coast	Newcrest	
234	Bronson Slope	187	0.48	2,858,000	Canada, BC	SnipGold	
235	South Kalgoorlie	41	2.11	2,815,000	Australia	Alacer Gold	•
236	Target	14	6.22	2,800,000	Africa, South Africa	Harmony Gold	•
237	Prominent Hill	58	1.51	2,800,000	Australia	Oz Minerals	•
238	Cerro Corona	111	0.78	2,800,000	Peru	Goldfields	
239	F2 Deposit	5	16.55	2,794,000	Canada, Ontario	Rubicon Minerals	
240	Cerro San Pedro	212	0.41	2,786,000	Mexico	NewGold	•
241	Contact Project	20	4.33	2,784,000	Krygz Republic	Chaarat Gold Holdings	
242	Pilar (Jordino)	21	4.11	2,774,000	Brazil	Yamana	
243	Harmony Gold	64	1.35	2,770,000	Canada, BC	Taseko Mines	
244	San Andres	155	0.55	2,748,000	Brazil	Aura Minerals	•
245	Quartz Mountain	103	0.83	2,744,000	USA, Oregon	Seabridge Gold	
246	Lugushwa	37	2.30	2,735,000	Africa, DRC	Banro	
247	Karma	91	0.93	2,731,000	Africa, Burkina Faso	Riverstone Resources	
248	Hidden Valley Kaveroi	57	1.47	2,700,000	Papua New Guinea	Newcrest	
249	Ajax	500	0.17	2,700,000	Canada, BC	Abacus Mining	
250	Tyrone	7	12.75	2,690,000	Ireland	Dalradian Resources	

## All 439 Mines & Deposits (251-300)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
251	Increible	41	2.04	2,690,000	Venezuela	Rusoro	
252	Wasamac	32	2.58	2,685,000	Canada, Quebec	Richmont Mines	
253	Soledad Mountain	123	0.68	2,673,000	USA, California	Golden Queen	
254	Gold Ridge	64	1.26	2,613,000	Solomon Islands	Allied Gold Mining	•
255	El Valle-Boina	17	4.86	2,612,000	Spain	Orvana	
256	Kemess	142	0.57	2,600,000	Canada, BC	Aurico	•
257	Kwanika	537	0.15	2,585,000	Canada, BC	Serengeti Resources	
258	Didipio	100	0.80	2,570,000	Philippines	OceanaGold	
259	Burnside Project	30	2.69	2,567,000	Australia	Crocodile Gold	
260	Suyai	6	14.19	2,550,000	Argentina	Yamana	
261	Tocantinzinho	77	1.03	2,541,000	Brazil	El Dorado	
262	Chirano	31	2.59	2,535,000	Africa, Ghana	Kinross	•
263	Samira Hill	55	1.43	2,534,000	Africa, Niger	Semafo	•
264	C1- Santa Luz	49	1.62	2,525,000	Brazil	Yamana	
265	Caete Deposit	24	3.28	2,505,000	Brazil	Jaguar Mining	•
266	Gosowong	5	15.25	2,500,000	Indonesia	Newcrest	•
267	Syama	27	2.88	2,500,000	Africa, Mali	Resolute Mining	•
268	Randalls Gold Deposit	30	2.59	2,500,000	Australia	Integra Mining	
269	Zaruma	6	13.23	2,493,000	Equador	Dynasty Mining	•
270	Visokoe	68	1.14	2,490,000	Russia	Petropavlovsk	
271	Hollister	2	32.81	2,489,500	USA, Nevada	Great Basin Gold	•
272	Ocampo	137	0.56	2,452,000	Mexico	Aurico	•
273	Lamaque	13	5.93	2,439,000	Canada, Quebec	White Tiger Gold	•
274	Jeronimo	19	3.93	2,427,000	Chile	Yamana	
275	Agi Dagi	120	0.63	2,415,000	Turkey	Alamos Gold	
276	Angostura	14	5.38	2,405,000	Colombia	Eco Oro	
277	Red Mountain	181	0.41	2,396,000	Canada, Yukon	AM Gold	
278	Gatsuurt	28	2.68	2,394,000	Mongolia	Centerra	
279	Gramalote	74	1.00	2,390,000	Colombia	B2Gold / AngloGold Ashanti	
280	Comstock Project	77	0.97	2,388,000	USA, Nevada	Comstock Mining	
281	Sabodala	71	1.05	2,380,000	Africa, Senegal	Teranga Gold	•
282	Kirkland Lake	5	16.39	2,371,000	Canada, Ontario	Kirkland Lake Gold	•
283	Wilco	159	0.46	2,346,000	USA, Nevada	Rye Patch Gold	
284	Granny Smith	11	6.69	2,313,000	Australia	Barrick	•
285	Borealis	101	0.71	2,312,000	USA, Nevada	Gryphon Gold	
286	Miraflores	121	0.59	2,302,000	Colombia	Seafield Resources	
287	Goukoto	18	3.97	2,300,000	Africa, Mali	Randgold	•
288	St. Ives	30	2.38	2,300,000	Australia	Goldfields	•
289	Albazino	17	4.21	2,300,000	Russia	Polymetal	
290	Premier Project	117	0.61	2,284,000	Canada, BC	Ascot Resources	
291	Concordia	78	0.90	2,277,000	Mexico	Vista Gold	
292	Plutonic	8.5	8.27	2,260,000	Australia	Barrick	•
293	Albyn	35	1.99	2,240,000	Russia	Petropavlovsk	•
294	New Afton	99	0.70	2,229,000	Canada, BC	NewGold	
295	Ormsby	20	3.46	2,215,000	Yellowknife	Tyhee	
296	Golden Eagle	50	1.39	2,213,000	USA, Washington	Midway Gold	
297	Kanowna Belle	16	4.26	2,206,000	Australia	Barrick	•
298	Awak Mas	62	1.10	2,195,000	Indonesia	Vista Gold	
299	Quimsacocho	10	6.61	2,168,000	Equador	IAMGold	
300	Dynasty	14	4.70	2,165,000	Equador	Dynasty Mining	



## All 439 Mines & Deposits (301-350)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
301	Efemcukuru	8	8.42	2,153,000	Turkey	El Dorado	•
302	Fire Creek	7	8.93	2,147,000	USA, Nevada	Klondex Mines	
303	Ayanfuri	56	1.17	2,100,000	Africa, Ghana	Perseus Mining	
304	Sekisovskoye	29	2.27	2,090,730	Kazakhstan	Hambledon Mining	•
305	Damang	41	1.58	2,080,000	Africa, Ghana	IAMGold	•
306	Taldybulak	9	7.23	2,077,000	Kyrgyz Republic	Zijin Mining / Kyrgyz Government	
307	Maclellan Deposit	34	1.87	2,058,700	Canada, Manitoba	Carlisle Goldfields	
308	Fenn Gibb	65	0.98	2,050,000	Canada, Ontario	Lake Shore Gold	
309	GJ	176	0.36	2,050,000	Canada, BC	NGEX	
310	Salave	22	2.90	2,021,000	Spain	Astur Gold	
311	Namoya	34	1.83	2,020,000	Africa, DRC	Banro	
312	Masbate	37	1.68	2,000,000	Philippines	CGA Mining	
313	Tepal	223	0.28	1,986,000	Mexico	Geologix Explorations	
314	Holt	11	5.82	1,983,000	Canada, Ontario	St. Andrew Goldfields	•
315	Minera Florida	17	3.61	1,960,000	Chile	Yamana	•
316	Perama Hill	21	2.84	1,936,000	Greece	El Dorado	
317	Cerro Blanco	4	15.52	1,931,000	Peru	Goldcorp	
318	Hemlo	22	2.72	1,923,000	Canada, Ontario	Barrick	•
319	Crixas	14	4.11	1,915,000	Brazil	Kinross	
320	Mnogovershinoe	7	8.44	1,900,000	Russia	Highland Gold	•
321	Novoshirokinksoye	8	7.39	1,900,000	Russia	Highland Gold	•
322	Massawa	13	4.55	1,900,000	Singapore	Randgold	•
323	Fresnillo	84	0.71	1,900,000	Mexico	Fresnillo	•
324	Mongbwalu	8	7.34	1,900,000	Africa, DRC	Anglogold Ashanti	
325	Paul Isnard	37	1.61	1,900,000	French Guiana	Columbus Gold	
326	Douay	44	1.34	1,885,000	Canada, Quebec	Aurvista	
327	Bjorkdal	33	1.76	1,874,000	Sweden	Gold Ore Resources	•
328	Timmins West Mine	10	5.82	1,870,000	Canada, Ontario	Lake Shore Gold	•
329	Somituri	36	1.63	1,870,000	Africa, Congo	Kilo Gold Mines	
330	La India Deposit	80	0.72	1,870,000	Mexico	Agnico Eagle	
331	Otjikoto	41	1.39	1,820,000	Africa, Namibia	B2gold	
332	Bucium	43	1.29	1,800,000	Romania	Gabriel Resources	
333	Tonkin	41	1.36	1,784,000	USA, Nevada	Mcewen Mining	
334	Long Valley	92	0.60	1,783,000	USA, California	Vista Gold	
335	Fosterville	19	2.89	1,765,000	Australia	Aurico	•
336	Troilus	37	1.46	1,745,000	Canada, Quebec	Inmet	
337	Vinasale Project	49	1.09	1,735,000	USA, Alaska	Freegold Ventures	
338	Minera Cienega	26	2.03	1,700,000	Mexico	Fresnillo	•
339	Pokrovskiy	70	0.75	1,700,000	Russia	Petropavlovsk	•
340	Voro	19	2.78	1,700,000	Russia	Polymetal	
341	Nucleus	90	0.59	1,700,000	Canada, Yukon	Northern Freegold	
342	White Mountain	13	4.17	1,689,000	China	El Dorado	•
343	Wa Gold Project	35	1.51	1,675,000	Africa, Ghana	Azumah Resources	
344	San Antonio	54	0.96	1,668,000	Mexico	Argonaut Gold	
345	Mercedes	14	3.58	1,659,000	Mexico	Yamana	
346	Goldfield Deposit	39	1.31	1,640,000	USA, Nevada	International Minerals	
347	Garrcon	54	0.94	1,639,000	Canada, Ontario	Northern Gold	
348	Goliath Gold	25	2.02	1,630,000	Canada, Ontario	Treasury Metals	
349	Bisha Mine	28	1.78	1,620,000	East Africa	Nevsun Resources	•
350	White Gold	19	2.58	1,583,000	Canada, Yukon	Kinross	

## All 439 Mines & Deposits (351-400)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
351	Cevizlidere	446	0.11	1,576,000	Turkey	Alacer Gold	
352	Lalor	13	3.85	1,560,000	Canada, Manitoba	Hudbay Minerals	
353	Bousquet	18	2.76	1,553,000	Canada, Quebec	Agnico Eagle	
354	Bissa	30	1.61	1,552,500	Russia	High River Gold	
355	Inmaculda	12	4.02	1,550,000	Peru	International Minerals	
356	La Coipa	37	1.31	1,546,000	Chile	Kinross	•
357	RDM Mine	29	1.64	1,523,000	Brazil	Carpathian Gold	
358	Minera Saucito	24	1.96	1,520,000	Mexico	Fresnillo	•
359	Turmalina	11	4.16	1,513,000	Brazil	Jaguar Mining	•
360	Liberty Gold	13	3.73	1,513,000	Africa, Liberia	Aureus Mining	
361	Main Project	11	4.23	1,511,000	Krygz Republic	Chaarat Gold Holdings	
362	Moss Lake	51	0.92	1,510,000	Canada, Ontario	Moss Lake Gold	
363	Three Bluffs	9	5.31	1,507,000	Canada, Nunavut	North Country Gold	
364	Bambanani	5	9.33	1,500,000	Africa, South Africa	Harmony Gold	•
365	Idaho-Maryland Deposit	4	11.88	1,490,000	USA, California	Emgold Mining Corporation	
366	Granada Gold Deposit	43	1.09	1,486,700	Canada, Quebec	Gold Bullion Development	
367	Crucitas	38	1.23	1,481,000	Costa Rica	Infinito Gold	
368	Golden Summit	82	0.56	1,478,000	USA, Alaska	Freemgold Ventures	
369	Valle Hondo	51	0.89	1,451,000	Venezuela	Rusoro	
370	Bell Creek Complex	10	4.40	1,443,900	Canada, Ontario	Lake Shore Gold	•
371	Kencana	3	17.17	1,435,000	Indonesia	Newcrest	
372	Tokur	39	1.15	1,430,000	Russia	Petropavlovsk	
373	Uzboy Project	33	1.36	1,424,000	Kazakhstan	Alhambra Resources	
374	Amisk	59	0.75	1,416,000	Saskatchewan	St Eugene/ Claude Resources	
375	Tabakoto	10	4.58	1,409,000	Africa	Avion Gold	
376	Modder East	8	5.44	1,400,000	Africa, South Africa	Gold One International	
377	Runruno	26	1.68	1,390,000	Philippines	Metals Exploration	
378	Mara Rosa	24	1.69	1,330,000	Brazil	Amarillo Gold	
379	Dvoynoye	2	17.82	1,318,000	Russia	Kinross	
380	Cui Cui	34	1.18	1,300,000	Brazil	Magellan Minerals	
381	Varvarinskoye	36	1.12	1,300,000	Russia	Polymetal	
382	San Jorge	190	0.21	1,300,000	Argentina	Coro Mining	
383	Seabee	7	6.10	1,299,000	Canada, Quebec	Claude Resources	•
384	Jerusalem	3	11.88	1,295,000	Ecuador	Dynasty Mining	
385	San Jose Mine	6	6.47	1,290,000	Argentina	Mcewen Mining/ Hochschild	
386	El Chanate	62	0.65	1,285,000	Mexico	Aurico	•
387	San Dimas Mine	9	4.58	1,281,000	Mexico	Primero Mining	•
388	Pickle Crow	10	3.86	1,260,000	Canada, Ontario	PC Gold	
389	Copper Canyon	54	0.73	1,260,000	Canada, BC	Novagold/Teck	
390	Don Sixto	30	1.32	1,259,000	Argentina	Extorre Gold	
391	Goldfields 2	25	1.53	1,251,000	Canada, Saskatchewan	Brigus Gold	
392	Higginsville	11	3.50	1,250,000	Australia	Alacer Gold	•
393	Marlin	8	4.76	1,248,000	Guatemala	Goldcorp	•
394	San Nicolas	80	0.48	1,238,000	Mexico	Teck/ Goldcorp	•
395	Agbaou	16	2.32	1,228,000	Africa, Ivory Coast	Endeavour Mining	
396	Madsen	4	9.47	1,225,000	Canada, Ontario	Claude Resources	
397	Ernesto/ Pau a Pique	15	2.49	1,223,000	Brazil	Yamana	
398	Comtois	8	4.64	1,212,000	Canada, Quebec	Maudore Resources	
399	Noche Buena	89	0.42	1,207,000	Mexico	Fresnillo/Newmont	
400	Big Springs	14	2.60	1,200,000	USA, Nevada	Victoria Gold	



## All 439 Mines & Deposits (401-439)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
401	Hasbrouck	129	0.29	1,200,000	USA, Nevada	Allied Nevada Gold	
402	Marsden	220	0.17	1,200,000	Australia	Newcrest	
403	Peak Mines	10	3.72	1,197,000	Australia	NewGold	•
404	Columbia	25	1.50	1,196,000	USA, Montana	Atna	
405	La Colorada	55	0.67	1,187,000	Mexico	Argonaut Gold	
406	Reefton	17	2.20	1,180,000	New Zealand	OceanaGold	•
407	Tanjianshan	12	2.96	1,171,000	China	El Dorado	•
408	Lamego	6	6.07	1,170,000	Brazil	Anglogold Ashanti	•
409	Cerro Jumil	43	0.84	1,168,000	Mexico	Esperanza Resources	
410	Gold River Trend	6	5.97	1,144,000	Canada, Ontario	Lake Shore Gold	
411	Kalana Gold Mine	6	6.35	1,143,000	Africa, Mali	Avnel Gold Mining	•
412	El Cubo	17	2.11	1,139,000	Mexico	Aurico	•
413	Briggs	53	0.67	1,137,520	USA, California	Atna	•
414	Paciencia	9	3.84	1,133,000	Brazil	Jaguar Mining	•
415	Campamento	24	1.44	1,128,000	Dominican Republic	Brigus Gold	
416	Berezitovy	14	2.52	1,126,620	Russia	High River Gold	•
417	Brewery Creek	53	0.66	1,121,000	Canada, Yukon	Golden Predator	
418	Aquarius	23	1.51	1,120,000	Canada, Ontario	St. Andrew Goldfields	
419	Black Fox	7	5.18	1,115,000	Canada, Ontario	Brigus Gold	•
420	Cerro Moro	7	4.80	1,106,000	Argentina	Extorre Gold	
421	Masimong	6	5.70	1,100,000	Africa, South Africa	Harmony Gold	•
422	Revenue	101	0.34	1,100,000	Canada, Yukon	Northern Freegold	
423	Coringa	7	5.12	1,095,000	Brazil	Magellan Minerals	
424	Carmen	33	1.01	1,080,000	Brazil	Kimber Resources	
425	Pan Project	66	0.51	1,079,000	USA, Nevada	Midway Gold	
426	Petropavlovskoye	33	1.00	1,070,000	Russia	Petropavlovsk	
427	La Mina	49	0.68	1,064,722	Colombia	Bellhaven Copper & Gold	
428	Taurus	33	0.99	1,055,000	Canada, BC	China Minerals	
429	Walhi	6	5.80	1,044,200	New Zealand	Newmont	•
430	Back Forty	21	1.52	1,042,000	USA, Michigan	Aquila Resources/Hudbay Minerals	
431	Fazenda Brasileiro	12	2.73	1,036,000	Brazil	Yamana	•
432	Eastern Dragon	6	5.63	1,032,000	China	El Dorado	
433	Jundee	5	6.46	1,017,000	Australia	Newmont	•
434	Maud Creek	10	3.08	1,017,000	Australia	Crocodile Gold	
435	Rio Blanco	6	5.44	1,015,000	Equador	International Minerals	
436	Magambazi	22	1.44	1,013,700	Africa, Tanzania	Canaco Resources	
437	Invicta	25	1.26	1,013,000	Peru	Andean American	
438	Changkeng	8	3.94	1,009,000	China	Minco Gold	
439	Mount Rawdon	37	0.84	1,000,000	Australia	Newcrest	

## Undeveloped Deposits over 1mm oz owned by Independent Juniors

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
1	Pebble Deposit	10,177	0.33	107,300,000	USA, Alaska	Northern Dynasty / Anglo American
2	KSM Deposit	3,906	0.51	63,979,000	Canada, BC	Seabridge Gold
3	Snowfield	2,203	0.49	34,950,000	Canada, BC	Pretium Resources
4	Sukhoi Log	384	2.67	33,000,000	Russia	Government of Russia
5	Las Cristinas	1,116	0.86	30,804,000	Venezuela	Government of Venezuela
6	Detour Lake Mine	887	1.02	29,119,000	Canada, Ontario	Detour Gold
7	Caspiche	1,646	0.47	24,869,000	Chile	Exeter Gold
8	Livengood	1,190	0.54	20,631,000	USA, Alaska	Int'l Tower Hill Mines
9	Metates	1,246	0.49	19,828,000	Mexico	Chesapeake
10	Rosia Montana	556	1.03	18,500,000	Romania	Gabriel Resources
11	BruceJack	30	17.45	17,056,000	Canada, BC	Pretium Resources
12	Marmato	489	0.91	14,377,000	Colombia	Gran Colombia
13	King King	1,151	0.32	11,943,000	Philippines	St. Augustine Gold
14	Courageous Lake	156	2.27	11,403,000	Canada, BC	Seabridge Gold
15	Titiribi	635	0.54	11,079,000	Colombia	Sunward
16	Galore Creek	1,160	0.29	10,700,000	Canada, BC	Novagold/Teck
17	Volcan	456	0.71	10,383,000	Chile	Andina Minerals
18	Toroparu	419	0.74	10,006,000	Guyana	Sandspring Resources
19	Gaby	499	0.62	10,000,000	Equador	International Minerals/Chinese Firm
20	Mt. Todd	341	0.83	9,036,000	Australia	Vista Gold
21	Tengrela	271	1.04	9,024,000	Africa, Ivory Coast	Perseus Mining
22	Casino Copper	1,058	0.24	8,300,000	Canada, BC	Western Copper
23	Prosperity Mine	831	0.29	7,700,000	Canada, BC	Taseko Mines
24	Maoling	317	0.76	7,700,000	China	Mundoro Capital
25	Mount Milligan	727	0.32	7,468,000	Canada, BC	Thompson Creek Metals
26	Rovina Valley	370	0.59	6,960,000	Romania	Carpathian Gold
27	Rainy River	194	1.08	6,736,000	Canada, Ontario	Rainy River Resources
28	La Bodega	139	1.50	6,700,000	Colombia	AUX
29	Aurora	57	3.60	6,600,000	Guyana	Guyana Goldfields
30	Dublin - Eagle Gold	300	0.66	6,355,000	Canada, Yukon	Victoria Gold
31	Panimba	71	2.77	6,286,000	Russia	Polyus Gold
32	Spanish Mountain	477	0.40	6,210,000	Canada, BC	Spanish Mountain Gold
33	Batero Quinchia	490	0.39	6,087,000	Colombia	Batero
34	La Arena	743	0.25	6,048,000	Peru	Ria Alto
35	Back River	32	5.81	6,046,000	Canada, Nunavut	Sabina Gold & Silver
36	Golden Meadows	95	1.91	5,820,000	USA, Idaho	Midas Gold
37	Borden Lake	268	0.67	5,780,000	Canada, Ontario	Probe Mines
38	Converse Deposit	351	0.51	5,700,000	USA, Nevada	International Minerals
39	Esaase	145	1.12	5,190,000	Africa, Ghana	Keegan Resources
40	Kiaka	147	1.06	5,029,000	Africa, Burkina Faso	Volta Resources
41	Haile Deposit	91	1.65	4,840,000	USA, North Carolina	Romarco Minerals
42	Volta Grande	88	1.70	4,818,000	Brazil	Belo Sun
43	Obotan	60	2.35	4,510,000	Africa, Ghana	PMI Gold
44	Sleeper	303	0.46	4,458,000	USA, Nevada	Paramount Gold
45	Josemaria	460	0.30	4,436,700	Argentina	NGEX
46	Sinchao	416	0.33	4,414,000	Peru	Andean American
47	Xietongmen	219	0.61	4,310,000	Tibet	Continental Minerals
48	Sawayaerdun	110	1.18	4,190,000	China	GobiMin
49	Spring Valley	249	0.52	4,131,000	USA, Nevada	Midway Gold
50	Mount Margaret	523	0.24	4,036,000	USA, Washington	Ascot Resources

## Undeveloped Deposits over 1mm oz owned by Independent Juniors (51-100)

	Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
51	Magino Gold	122	1.00	3,897,000	Canada, Ontario	Prodigy Gold
52	Ventersburg	34	3.57	3,890,000	South Africa	Gold One International
53	Morelos	37	3.20	3,858,000	Mexico	Torex Gold
54	Dachang	39	3.08	3,810,000	China	Inter-Citic
55	Springpole	90	1.27	3,670,000	Canada, Ontario	Gold Canyon Resources
56	Amulsar	144	0.79	3,666,000	Armenia	Lydian International
57	Hardrock	28	4.07	3,600,000	Canada, Ontario	Premier Gold Mines
58	Pinson	30	3.69	3,573,500	USA, Nevada	Atna / Barrick
59	Bombore	122	0.89	3,462,000	Africa, Burkina Faso	Orezone
60	Shahuindo	182	0.58	3,407,000	Peru	Sulliden
61	Robertson	178	0.59	3,381,000	USA, Nevada	Coral Gold
62	Duparquet	61	1.72	3,353,000	Canada, Quebec	Clifton Star Resources
63	Joanna Gold	78	1.33	3,339,000	Canada, Quebec	Aurizon Mines
64	Buritica	8	12.30	3,164,000	Colombia	Continental Gold
65	Golden Highway	81	1.20	3,140,000		Moneta Porcupine
66	Passendro	53	1.83	3,131,000	Central African Republic	Axmin
67	Whistler Deposit	225	0.43	3,130,000	USA, Alaska	Kiska Metals
68	Amantaytau	23	4.19	3,100,000	Uzbekistan	Oxus Gold
69	Lindero	182	0.51	2,950,000	Argentina	Mansfield Minerals
70	Bronson Slope	187	0.48	2,858,000	Canada, BC	SnipGold
71	F2 Deposit	5	16.55	2,794,000	Canada, Ontario	Rubicon Minerals
72	Contact Project	20	4.33	2,784,000	Krygz Republic	Chaarat Gold Holdings
73	Harmony Gold	64	1.35	2,770,000	Canada, BC	Taseko Mines
74	Quartz Mountain	103	0.83	2,744,000	USA, Oregon	Seabridge Gold
75	Karma	91	0.93	2,731,000	Africa, Burkina Faso	Riverstone Resources
76	Ajax	500	0.17	2,700,000	Canada, BC	Abacus Mining
77	Tyrone	7	12.75	2,690,000	Ireland	Dalradian Resources
78	Incredible	41	2.04	2,690,000	Venezuela	Rusoro
79	Wasamac	32	2.58	2,685,000	Canada, Quebec	Richmont Mines
80	Soledad Mountain	123	0.68	2,673,000	USA, California	Golden Queen
81	El Valle-Boina	17	4.86	2,612,000	Spain	Orvana
82	Kwanika	537	0.15	2,585,000	Canada, BC	Serengeti Resources
83	Burnside Project	30	2.69	2,567,000	Australia	Crocodile Gold
84	Randalls Gold Deposit	30	2.59	2,500,000	Australia	Integra Mining
85	Visokoe	68	1.14	2,490,000	Russia	Petropavlovsk
86	Angostura	14	5.38	2,405,000	Colombia	Eco Oro
87	Red Mountain	181	0.41	2,396,000	Canada, Yukon	AM Gold
88	Gramalote	74	1.00	2,390,000	Colombia	B2Gold / Anglogold Ashanti
89	Comstock Project	77	0.97	2,388,000	USA, Nevada	Comstock Mining
90	Wilco	159	0.46	2,346,000	USA, Nevada	Rye Patch Gold
91	Borealis	101	0.71	2,312,000	USA, Nevada	Gryphon Gold
92	Miraflores	121	0.59	2,302,000	Colombia	Seafield Resources
93	Albazino	17	4.21	2,300,000	Russia	Polymetal
94	Premier Project	117	0.61	2,284,000	Canada, BC	Ascot Resources
95	Concordia	78	0.90	2,277,000	Mexico	Vista Gold
96	Ormsby	20	3.46	2,215,000	Yellowknife	Tyhee
97	Golden Eagle	50	1.39	2,213,000	USA, Washington	Midway Gold
98	Awak Mas	62	1.10	2,195,000	Indonesia	Vista Gold
99	Fire Creek	7	8.93	2,147,000	USA, Nevada	Klondex Mines
100	Ayanfuri	56	1.17	2,100,000	Africa, Ghana	Perseus Mining

## Undeveloped Deposits over 1mm oz owned by Independent Juniors (101-150)

Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership
101 Maclellan Deposit	34	1.87	2,058,700	Canada, Manitoba	Carlisle Goldfields
102 GJ	176	0.36	2,050,000	Canada, BC	NGEX
103 Salave	22	2.90	2,021,000	Spain	Astur Gold
104 Masbate	37	1.68	2,000,000	Philippines	CGA Mining
105 Tepal	223	0.28	1,986,000	Mexico	Geologix Explorations
106 Paul Isnard	37	1.61	1,900,000	French Guiana	Columbus Gold
107 Douay	44	1.34	1,885,000	Canada, Quebec	Aurvista
108 Somituri	36	1.63	1,870,000	Africa, Congo	Kilo Gold Mines
109 Otjikoto	41	1.39	1,820,000	Africa, Namibia	B2gold
110 Bucium	43	1.29	1,800,000	Romania	Gabriel Resources
111 Tonkin	41	1.36	1,784,000	USA, Nevada	Mcewen Mining
112 Long Valley	92	0.60	1,783,000	USA, California	Vista Gold
113 Troilus	37	1.46	1,745,000	Canada, Quebec	Inmet
114 Vinasale Project	49	1.09	1,735,000	USA, Alaska	Freegold Ventures
115 Nucleus	90	0.59	1,700,000	Canada, Yukon	Northern Freegold
116 Voro	19	2.78	1,700,000	Russia	Polymetal
117 Wa Gold Project	35	1.51	1,675,000	Africa, Ghana	Azumah Resources
118 Goldfield Deposit	39	1.31	1,640,000	USA, Nevada	International Minerals
119 Garrcon	54	0.94	1,639,000	Canada, Ontario	Northern Gold
120 Goliath Gold	25	2.02	1,630,000	Canada, Ontario	Treasury Metals
121 Inmaculda	12	4.02	1,550,000	Peru	International Minerals
122 RDM Mine	29	1.64	1,523,000	Brazil	Carpathian Gold
123 Liberty Gold	13	3.73	1,513,000	Africa, Liberia	Aureus Mining
124 Main Project	11	4.23	1,511,000	Krygz Republic	Chaarat Gold Holdings
125 Moss Lake	51	0.92	1,510,000	Canada, Ontario	Moss Lake Gold
126 Three Bluffs	9	5.31	1,507,000	Canada, Nunavut	North Country Gold
127 Idaho-Maryland Deposit	4	11.88	1,490,000	USA, California	Emgold Mining Corporation
128 Granada Gold Deposit	43	1.09	1,486,700	Canada, Quebec	Gold Bullion Development
129 Crucitas	38	1.23	1,481,000	Costa Rica	Infinito Gold
130 Golden Summit	82	0.56	1,478,000	USA, Alaska	Freegold Ventures
131 Valle Hondo	51	0.89	1,451,000	Venezuela	Rusoro
132 Tokur	39	1.15	1,430,000	Russia	Petropavlovsk
133 Uzboy Project	33	1.36	1,424,000	Kazakhstan	Alhambra Resources
134 Amisk	59	0.75	1,416,000	Saskatchewan	St Eugene/ Claude Resources
135 Tabakoto	10	4.58	1,409,000	Africa	Avion Gold
136 Modder East	8	5.44	1,400,000	Africa, South Africa	Gold One International
137 Runruno	26	1.68	1,390,000	Philippines	Metals Exploration
138 Mara Rosa	24	1.69	1,330,000	Brazil	Amarillo Gold
139 San Jorge	190	0.21	1,300,000	Argentina	Coro Mining
140 Cui Cui	34	1.18	1,300,000	Brazil	Magellan Minerals
141 Varvarinskoye	36	1.12	1,300,000	Russia	Polymetal
142 San Jose Mine	6	6.47	1,290,000	Argentina	Mcewen Mining/ Hochschild
143 Copper Canyon	54	0.73	1,260,000	Canada, BC	Novagold/Teck
144 Pickle Crow	10	3.86	1,260,000	Canada, Ontario	PC Gold
145 Don Sixto	30	1.32	1,259,000	Argentina	Extorre Gold
146 Agbaou	16	2.32	1,228,000	Africa, Ivory Coast	Endeavour Mining
147 Comtois	8	4.64	1,212,000	Canada, Quebec	Maudore Resources
148 Big Springs	14	2.60	1,200,000	USA, Nevada	Victoria Gold
149 Cerro Jumil	43	0.84	1,168,000	Mexico	Esperanza Resources
150 Brewery Creek	53	0.66	1,121,000	Canada, Yukon	Golden Predator

## Undeveloped Deposits over 1mm oz owned by Independent Juniors (151-164)

Deposit Name	Tonnes (mt)	Grade	Contained Oz	Location	Ownership	Producing
151 Aquarius	23	1.51	1,120,000	Canada, Ontario	St. Andrew Goldfields	
152 Cerro Moro	7	4.80	1,106,000	Argentina	Extorre Gold	
153 Revenue	101	0.34	1,100,000	Canada, Yukon	Northern Freegold	
154 Coringa	7	5.12	1,095,000	Brazil	Magellan Minerals	
155 Pan Project	66	0.51	1,079,000	USA, Nevada	Midway Gold	
156 Petropavlovskoye	33	1.00	1,070,000	Russia	Petropavlovsk	
157 La Mina	49	0.68	1,064,722	Colombia	Bellhaven Copper & Gold	
158 Taurus	33	0.99	1,055,000	Canada, BC	China Minerals	
159 Back Forty	21	1.52	1,042,000	USA, Michigan	Aquila Resources/Hudbay Minerals	
160 Maud Creek	10	3.08	1,017,000	Australia	Crocodile Gold	
161 Rio Blanco	6	5.44	1,015,000	Ecuador	International Minerals	
162 Magambazi	22	1.44	1,013,700	Africa, Tanzania	Canaco Resources	
163 Invicta	25	1.26	1,013,000	Peru	Andean American	
164 Changkeng	8	3.94	1,009,000	China	Minco Gold	



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Learn more at: <http://www.nrh.co.il>

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