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**MINING & MINERAL
EXPLORATION**

WEEKLY BULLETIN:
RSC MINERAL INTELLIGENCE
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Week 51 (17 – 23 December 2018)

2018: Week 51 overview

	Number	Change
New technical reports published	103	5↑
Amended	4	1↓
Clarified	2	1↑
Resource estimation reports	24	9↑
Maiden resources	5	3↑
Exploration/drilling updates	68	5↓

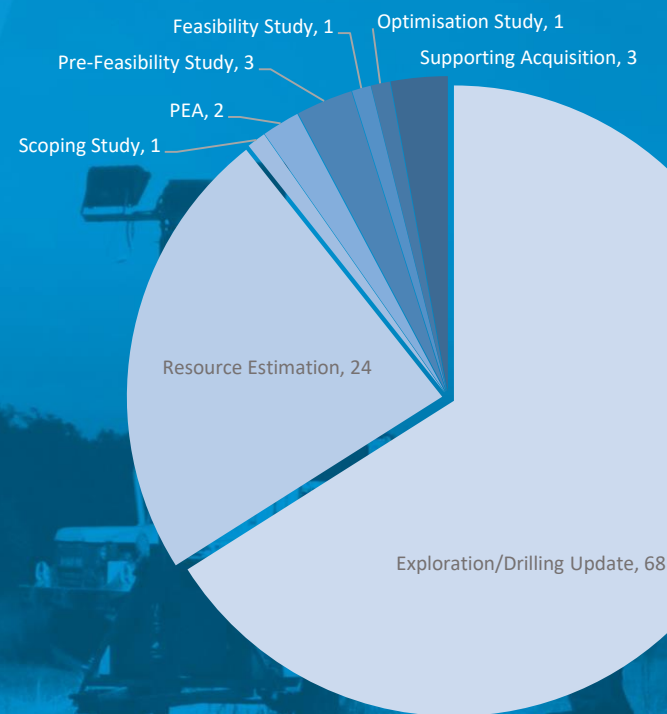
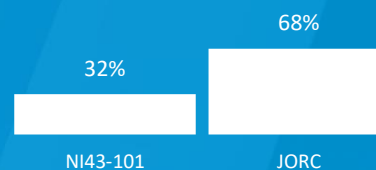
Other monitored reports

Filed NI43-101 technical reports	9	3↑
Environmental reports	0	1↓
Announced drilling	18	22↓

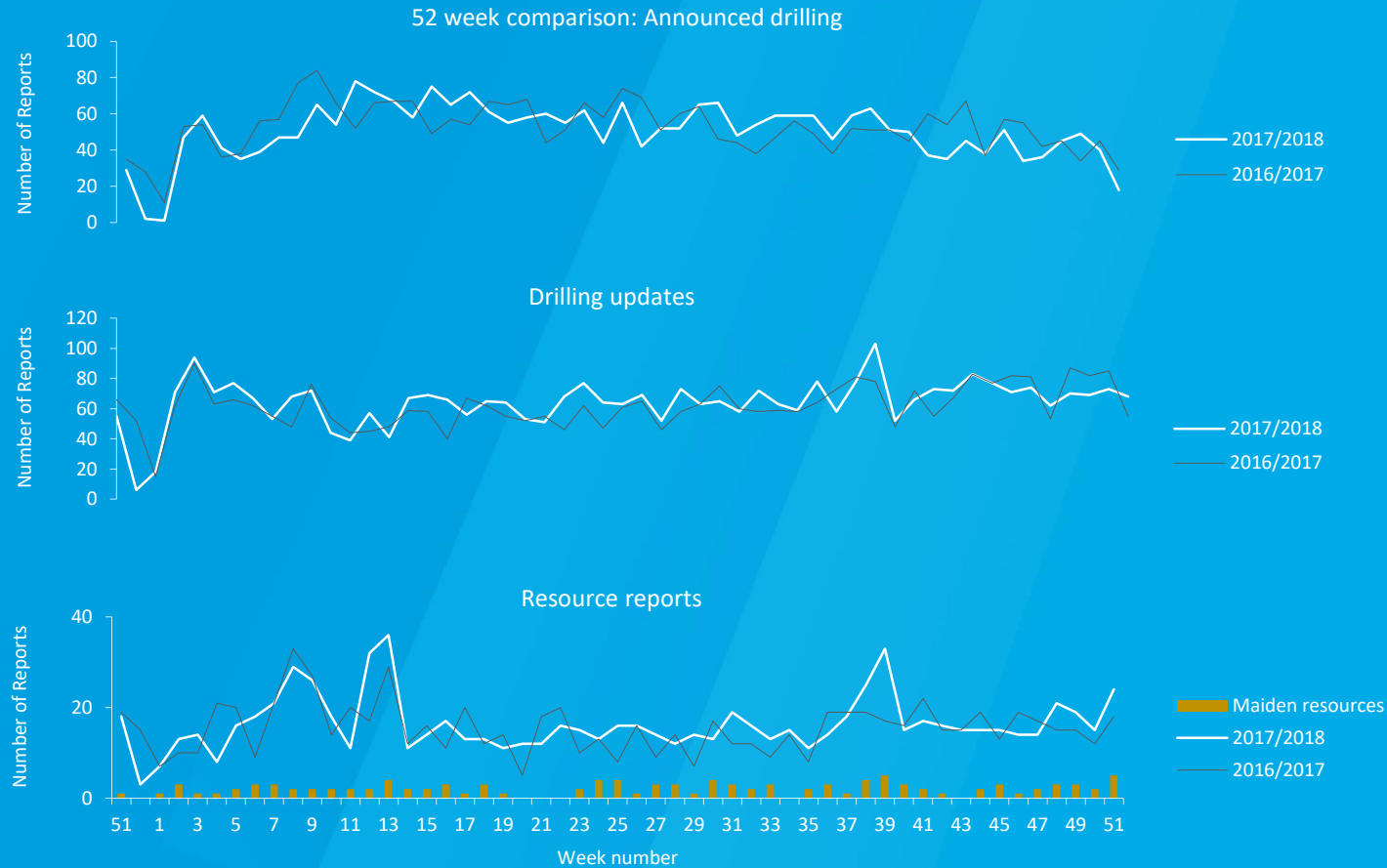
↑↓ shows increase or decrease compared to last week's reporting

Reports included in this publication are from the public reporting domain, using internationally recognised reporting codes and national instruments such as JORC, SAMREC, NI43-101, PERC and other codes in line with CRIRSCO.

Number of reports by code



Number of reports by report type



Resource reports increased this week to a pre-Christmas holiday 12-week high. Both drilling updates and announced drilling were down.

4 CORRECTED ANNOUNCEMENTS RELEASED THIS WEEK

company	project	report type	original report release date	share price change*	corrected report release date	share price change*
Surefire Resources NL (ASX)	Unaly Hill	Exploration/Drilling Update	11-Dec-18	↑ 40.0%	17-Dec-18	0.0%
Walkabout Resources Ltd. (ASX)	Lindi	Resource Estimation	19-Dec-18	↑ 1.1%	19-Dec-18	↑ 1.1%
Lodestar Minerals Ltd. (ASX)	Neds Creek	Exploration/Drilling Update	19-Dec-18	↓ -29.4%	19-Dec-18	↓ -29.4%
Champion Bear resources Ltd. (TSX-V)	Plomp Farm	Resource Estimation	21-Nov-17	↓ -14.3%	18-Dec-18	↓ -10.0%
Galena Mining Ltd. (ASX)	Abra	Resource Estimation	17-Dec-18	↓ -2.8%	18-Dec-18	↓ -2.8%
Avino Silver & Gold Mines Ltd. (TSX-V)	Avino	Resource Estimation	21-Feb-18	↓ -0.6%	21-Dec-18	↑ 1.4%

*between close of trade the day prior to the announcement and open of trade the day after the announcement date.

Location	Projects	Change
North America	29	7↓
Oceania	52	18↑
Africa	15	
South America	7	2↑
Europe	4	2↓
Asia	2	2↓
Seabed Resources		

↓↑ shows increase or decrease compared to last week's reporting

- Reported project
- Maiden Resource
- Maiden Reserve

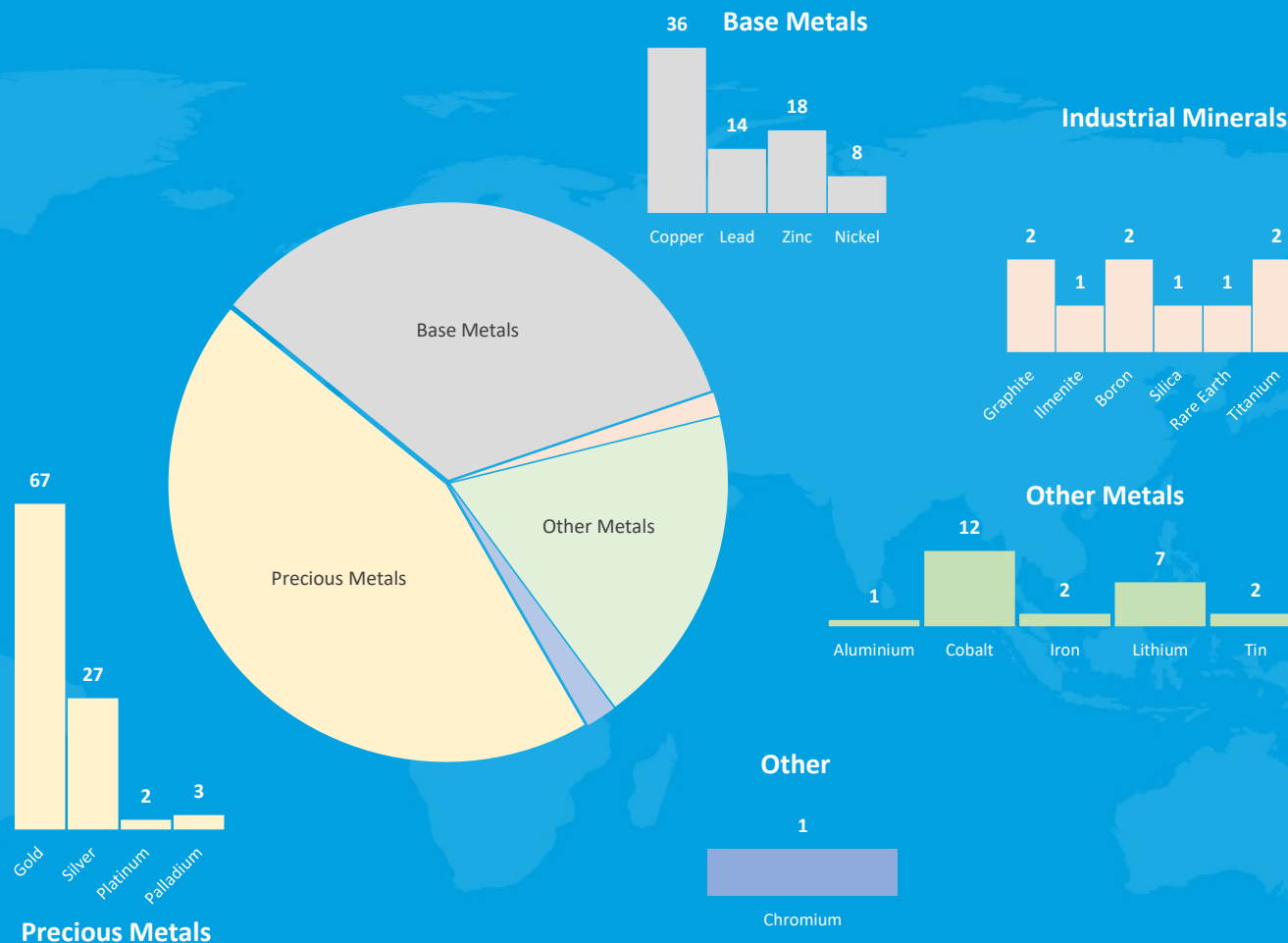
Map does not include projects mentioned from announced drilling reports.

Up

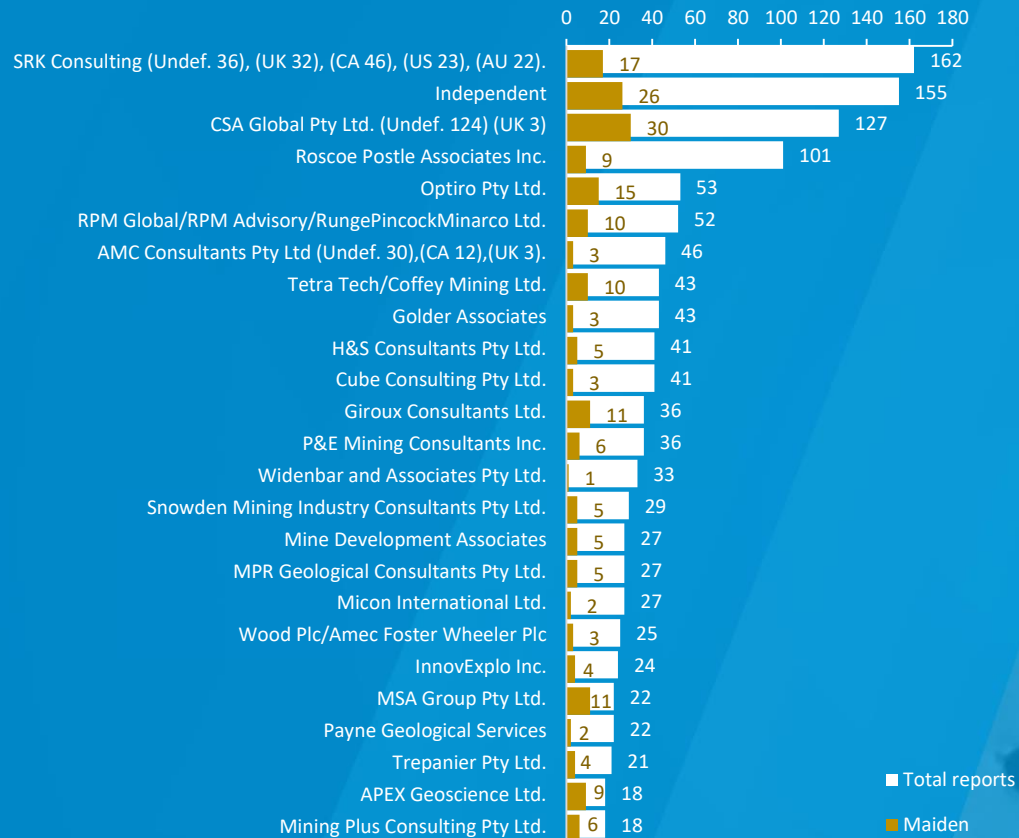
Copper	8
Vanadium	5
Uranium	5
Lithium	4
Lead	2
Zinc	2
Boron	2
Tin	1
Titanium	1
Chromium	1
Palladium	1
Molybdenum	1
Ilmenite	1
Rare Earth	1
Gold	1

Down

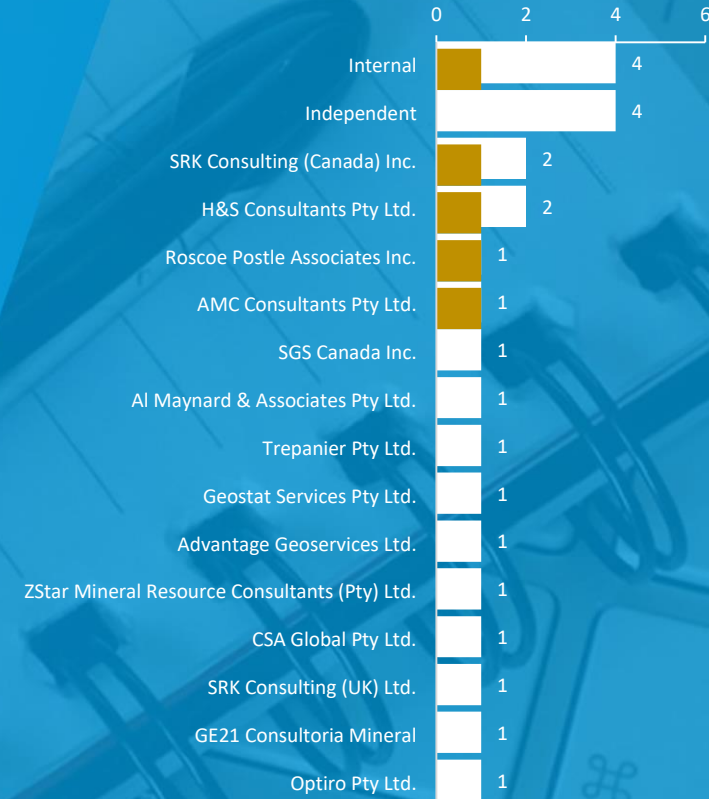
Silver	-4
Tungsten	-2
Scandium	-2
Manganese	-2
Graphite	-2
Platinum	-1
PGM	-1
Tellurium	-1
Phosphate	-1
Tantalum	-1
Coal	-1



Top 25 since Oct 2014

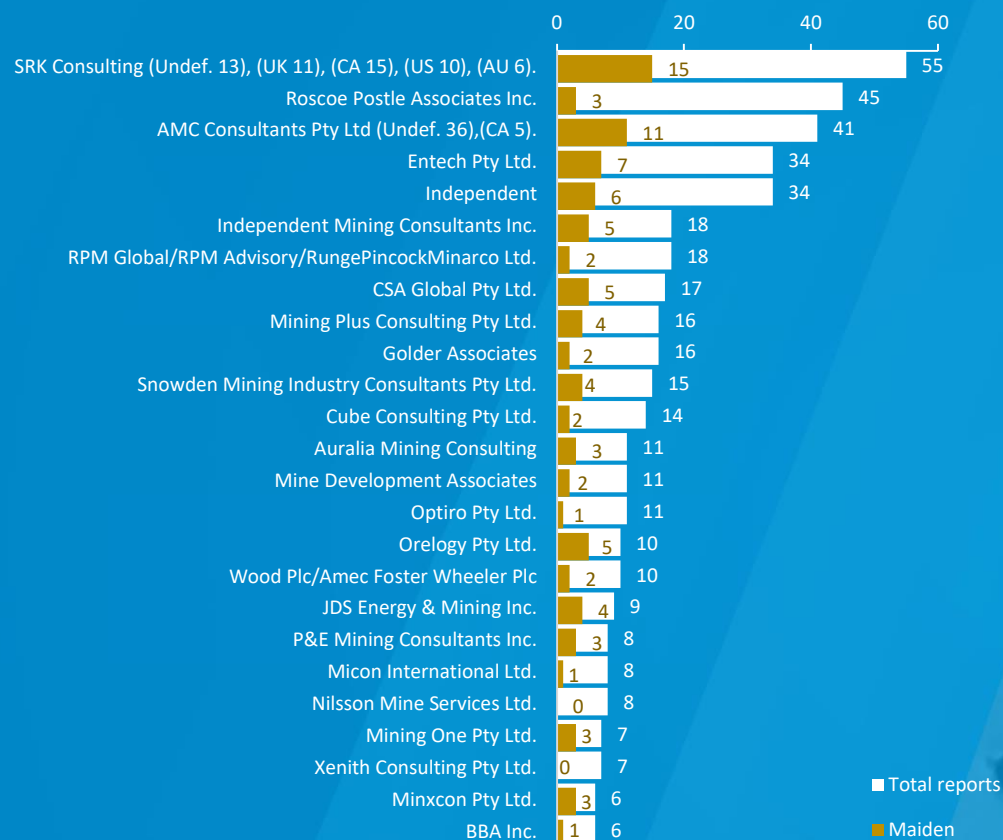


This Week

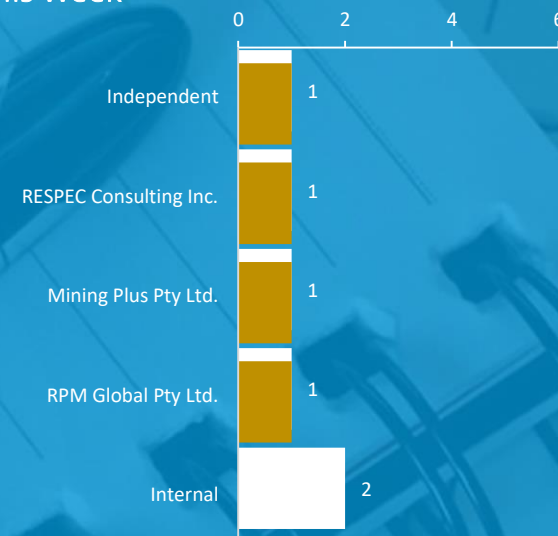


Note: Some reports can contain multiple resource QP's and consulting companies, therefore numbers may not add up to total. Reports are only counted where the resource status is maiden, updated or upgraded.

Top 25 since Oct 2014











This Week







Note: Some reports can contain multiple reserve QP's and consulting companies, therefore numbers may not add up to total. Reports are only counted where the reserve status is maiden, updated or upgraded.

ASX Top 3:

rank	country	company	project	status	commodity	date	hole	intersection	share price chg*	(AuEq.)m**
1		Northern Star Resources Ltd. (ASX)	Kanowna	Resource development		20-Dec	KDU4623	10.9m @ 671.0g/t Au from 76.8m	 -1.0%	7314
2		AVZ Minerals Ltd. (ASX)	Manono	Resource development		21-Dec	MO18DD069	169.52m @ 1.49% Li ₂ O, 1061ppm Sn from 0.35m	 -1.5%	1244
3		AuStar Gold Ltd. (ASX)	Rose of Denmark	Exploration		19-Dec	RDS024	1.20m @ 529.0g/t Au from 15.60m	0.0%	635

TSX/TSX-V Top 3:

rank	country	company	project	status	commodity	date	hole	intersection	share price chg*	(AuEq.)m**
1		Calibre Mining Corp. (TSX-V)	Eastern Borosi	Resource development		18-Dec	SC18-002	8.04m @ 10.92g/t Au, 859.0g/t Ag, 951ppm Pb, 2031ppm Zn from 87.82m	 -15.0%	170
2		Azucar Minerals Ltd. (TSX-V)	El Cobre	Exploration		18-Dec	EC-18-053	231.50m @ 0.45g/t Au, 0.17% Cu from 375.00m	0.0%	163
3		Probe Metals Inc. (TSX-V,OTCQB)	Val-d'Or East	Resource development		17-Dec	PC-18-424	61.1m @ 2.2g/t Au from 101.5m	 -2.1%	141

*between close of trade the day prior to the announcement and open of trade the day after the announcement date.

** see metal prices and formula relevant to AuEq conversions on page 15.













Any of the companies mentioned in this week's table should not use excerpts of this bulletin in their public reporting, including company presentations, websites or social media unless these comply with the relevant clauses of the reporting code for the respective jurisdiction. For ASX-listed companies, this includes clause 50 of the JORC Code (2012). Readers are also advised to review the cautionary statement on the last page of this bulletin.

10 SIGNIFICANT DRILL INTERSECTIONS OF THE MONTH: DECEMBER

ASX Top 5:

rank	country	company	project	status	commodity	date	hole	intersection	share price chg*	(AuEq.)m**
1		Ramelius Resources Ltd. (ASX)	Mt Magnet	Resource development		10-Dec	GXMM027554	20.0m @ 645g/t Au from 28.0m	 12.5%	12900
2		Northern Star Resources Ltd. (ASX)	Kanowna	Resource development		20-Dec	KDU4623	10.9m @ 671.0g/t Au from 76.8m	 -1.0%	7314
3		Kirkland Lake Gold Ltd. (TSX,ASX,NYSE)	Fosterville	Resource development		13-Dec	UDH2643A	6.40m @ 598g/t Au from 344.5m	 3.7%	3830
4		AVZ Minerals Ltd. (ASX)	Manono	Resource development		21-Dec	MO18DD069	169.52m @ 1.49% Li2O, 1061ppm Sn from 0.35m	 -1.5%	1244
5		AuStar Gold Ltd. (ASX)	Rose of Denmark	Exploration		19-Dec	RDS024	1.20m @ 529.0g/t Au from 15.60m	 0.0%	635

TSX/TSX-V Top 5:





















rank	country	company	project	status	commodity	date	hole	intersection	share price chg*	(AuEq.)m**
1		Kirkland Lake Gold Ltd. (TSX,ASX,NYSE)	Fosterville	Resource development		13-Dec	UDH2643A	6.40m @ 598g/t Au from 344.5m	 3.7%	3830
2		Seabridge Gold Inc. (TSX)	KSM	Resource development		12-Dec	IC-18-82A	1018.2m @ 0.44g/t Au, 0.37% Cu. 1.6g/t Ag from 428.0m	 1.1%	1046
3		Wesdome Gold Mines Ltd. (TSX-V)	Kiena	Resource development		12-Dec	Hole 6370	8.90m @ 120.6g/t Au from 129.4m	 -13.7%	1073
4		White Gold Corp. (TSX-V)	White Gold	Resource development		6-Dec	RAB14/RC13	30.46m @ 22.47g/t Au, 154.0g/t Ag from 0m	 8.3%	740
5		Osisko Mining Inc. (TSX)	Windfall	Resource development		5-Dec	OSK-W-18-1768	4.3m @ 161.0g/t Au from 268.7m	 2.0%	692

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** see details relating to AuEq conversions on page 15

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ASX:





















rank	country	company	project	status	commodity	date	hole	intersection	share price chg* (AuEq.)m**
1		Ramelius Resources Ltd. (ASX)	Mt Magnet	Resource development		10-Dec	GXMM027554	20.0m @ 645g/t Au from 28.0m	↑ 12.5% 12900
2		Northern Star Resources Ltd. (ASX)	Kanowna	Resource development		20-Dec	KDU4623	10.9m @ 671.0g/t Au from 76.8m	↓ -1.0% 7314
3		Kirkland Lake Gold Ltd. (TSX,ASX,NYSE)	Fosterville	Resource development		13-Dec	UDH2643A	6.40m @ 598g/t Au from 344.5m	↑ 3.7% 3830
4		Northern Star Resources Ltd. (ASX)	Kundana	Resource development		20-Feb	PEGRSD17205	3.2m @ 1183.6g/t Au from 187.7m	↑ 1.0% 3788
5		Gascoyne Resources Ltd. (ASX)	Dalgaranga	Resource development		19-Sep	DGRC509	8m @ 373.5g/t Au from 53m	↑ 14.5% 2988
6		AVZ Minerals Ltd. (ASX)	Manono	Resource development		5-Sep	MO18DD035	286.75m @ 1.74% Li ₂ O, 822ppm Sn from 54.55m	↑ 1.0% 2618
7		Resolute Mining Ltd. (ASX)	Syama	Resource development		5-Jul	TARD619	5.0m @ 493.0g/t Au from 167.0m	↑ 4.0% 2465
8		BHP Group Plc (LSE,ASX)	EL 5941	Exploration		27-Nov	AD23	425.7m @ 3.04% Cu, 0.59g/t Au, 6.03g/t Ag from 1063m	↑ 0.1% 2308
9		Adriatic Metals Plc (ASX)	Rupice	Exploration		12-Jun	BR-2-18	64m @ 4.6g/t Au, 537g/t Ag, 0.9% Cu, 7.7% Pb, 10.8% Zn from 214m	↑ 53.8% 1665
10		First Au Ltd. (ASX)	Gimlet	Exploration		9-Oct	18GAC063	4m @ 393g/t Au from 52m	↑ 26.1% 1572

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TSX:

rank	country	company	project	status	commodity	date	hole	intersection	share price chg* (AuEq.)m**
1		Fission Uranium Corp. (TSX, OTCQX, FWB)	Patterson Lake South	Resource development		3-Jan	PLS17-MET-C	108.0m @ 8.46% U3O8 from 56.5m	↑ 1.2% 11334
2		Kirkland Lake Gold Ltd. (TSX,ASX,NYSE)	Fosterville	Resource development		13-Dec	UDH2643A	6.40m @ 598g/t Au from 344.5m	↑ 3.7% 3830
3		NexGen Energy Ltd. (TSX, OTCQX)	Rook 1	Resource development		17-Jan	AR-17-159C1	26.5m @ 10.60% U3O8 from 427.5m	↑ 3.5% 3412
4		K92 Mining Inc. (TSX-V, OTCQB)	Kainantu	Resource development		25-Apr	KMDD0084	5.82m @ 486.78g/t Au, 6g/t Ag, 0.16% Cu from 48.30m	↑ 4.8% 2835
5		Osisko Mining Inc. (TSX)	Windfall	Resource development		23-Oct	OSK-W-18-1725	2.7m @ 1026g/t Au from 283.3m	↑ 2.6% 2770
6		Aurion Resources Ltd. (TSX-V)	Risti	Exploration		19-Sep	AM18042	2.90m @ 789.06g/t Au from 116.10m	↑ 0.5% 2288
7		Frontier Lithium Inc. (TSX-V)	PAK	Resource development		16-Oct	PL-028-18	219.75m @ 2.07% Li2O from 62.25m	0.0% 2249
8		Erdene Resource Development Corp. (TSX)	Bayan Khundii	Exploration		10-Jan	BKD-231	14m @ 158.3g/t Au from 193m	↑ 22.4% 2216
9		SolGold Plc (LSE,TSX-V)	Cascabel	Resource development		13-Nov	CSD-18-067	1028m @ 0.71% Cu, 0.91g/t Au from 886m	↑ 1.6% 2097
10		TMAC Resources Inc. (TSX)	Hope Bay	Resource development		14-Jun	TM50152	1.5m @ 1255.00g/t Au from 74.3m	↑ 9.3% 1883

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Click [here](#) for a summary table for all published reports for this week



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A full list with links to all individual Public Announcements for each company mentioned in this information bulletin is provided through <http://intel.rscmme.com>. RSC takes no responsibility for the compliance of those Public Reports, and it is up to each individual company to make sure that drilling intercepts are reported in a material and transparent manner in compliance with the relevant reporting codes for the respective jurisdiction. For ASX-listed companies, the relevant JORC Code (2012) clauses are 4, 18, 19, and 50. Investors or potential investors using the information in this bulletin are recommended to download the full reports either directly from the company's website or through the links in weekly lists provided by RSC.

Drill intercept grades from week 51 have been converted into AuEq using the following metal prices (USD): \$1,248.80/oz Au, \$14.66/oz Ag, \$6,043.00/t Cu, \$1,939.00/t Pb, \$2,600.00/t Zn, \$19,300.00/t Sn, \$18,399.00/t Li₂O sourced from <https://www.quandl.com/collections/markets/commodities>, <https://commoprices.com>, <https://www.uxc.com>, <http://markets.businessinsider.com/commodities> or <http://markets.businessinsider.com/commodities/historical-prices/iron-ore-price>.

The formula used to convert drill intercept grades to gold equivalence using stated metal price is as follows:

$$\text{AuEq}(g/t) = \sum_{n=1}^z C_n(g/t) \times \frac{C_n(\$ / g)}{\text{Au}(\$ / g)}$$

Where z is the number of listed components (e.g. Au, Ag, Pb, Cu, Zn, Li₂O, Sn, Co etc) and C_n is the nth component in that list.

Gold has been chosen as the metal equivalent for all conversions as it is the most widely-used and best-understood benchmark to determine or appreciate the grade tenor of a drilling intercept.

Monthly and yearly intercept grades were converted to AuEq using metal prices from the week of the public announcement. To view previously used metal prices please see the RSC – Weekly Bulletin from the relevant week.

RSC has not investigated and is not aware of the detail of metallurgical recoveries used in the conversions for each drilling intercept mentioned in this bulletin. It is uncertain that all the elements included in the metal equivalents calculations have a reasonable potential to be recovered and sold. For many projects at the Exploration Results stage mentioned in this information bulletin, metallurgical recovery information may not be available or able to be estimated with reasonable confidence. The reader needs to use reasonable caution to avoid being misled in these instances.