SARACEN MINERAL HOLDINGS LIMITED

More strong drilling results support plan to grow mine life and production

Latest resource extension and infill results show 400,000ozpa organic growth strategy is well on track

Key Points

Carosue Dam

- At **Karari**, thick high-grade extensional drill results included **69m @ 4.1g/t (including 21m @ 6.7g/t)** and **54m @ 3.4g/t (including 31m @ 5.0/t, 400m below current production, implies an additional 7 years of life**)
- At **Whirling Dervish**, thick high-grade infill drill results included **30m @ 4.9g/t, 30m @ 3.3g/t** and **10m @ 5.9g/t.**
- At **Deep South**, thick high-grade extensional drill results included **14m @ 8.7g/t, 11m @ 8.4g/t** and **26m @ 3.0g/t**

Thunderbox

- At **Thunderbox A Zone**, extensional drill results included **49m @ 2.3g/t** and **42m @ 2.4g/t;** grade control results included **13m @ 6.1g/t** and **19m @ 3.4g/t**
- At **Otto Bore**, 9km north of the mill, early highlights from the extensional and infill program include **10m @ 7.0g/t, 4m @ 11.0g/t** and **5m @ 8.3g/t**
- At **Bannockburn**, infill drill results included **17m @ 2.8g/t** and **15m @ 2.7g/t**

New discoveries

- **Two new discoveries** in the **Carosue Dam Corridor** (**within 4km of the mill**) were followed up on:
  - **Atbara** - Results include **17m @ 2.7g/t, 70m @ 1.0g/t** and **32m @ 1.2g/t**
  - **Qena** - Results include **21m @ 2.2g/t** and **8m @ 2.0g/t**

Regional exploration

- **Mt Celia (Carosue Dam)** - Regional aircore drilling is ongoing, following up on previously released results of **up to 70ppb, further results will be provided in the June quarter**
- **Bannockburn (Thunderbox)** - Regional aircore drilling is ongoing, following up on previously released results of **up to 904ppb** east of the Blue Tank Shear, **further results will be provided in the June quarter**
- **Carosue Dam Seismic Project** – 2D data has determined the location and orientation of the **3D seismic survey planned for the June quarter**

Saracen Managing Director Raleigh Finlayson said the latest results showed that the Company's organic growth strategy was progressing to plan.

"The record $60 million exploration budget we set for this financial year continues to deliver outstanding results across our assets," Mr Finlayson said.

"The results continue to pave the way for Resource increases and upgrades at both Carosue Dam and Thunderbox. This is central to our strategy of growing the inventory, which will then allow us to pursue our 400,000oz a year production target."

Corporate Details:

18th February 2019

***ASX code*:** SAR

Corporate Structure:

Ordinary shares on issue: 820.3m

Unvested employee performance rights: 12.0m

Market Capitalisation: A$2.6b (share price A$3.12)

Cash, bullion and investments (December 31): A$142.6m

Debt (31 December): Nil

Directors:

Mr Tony Kiernan
Non-Executive Chairman

Mr Raleigh Finlayson
Managing Director

Mr Geoff Clifford
Non-Executive

Mr Martin Reed
Non-Executive

Dr Roric Smith
Non-Executive

Ms Samantha Tough
Non-Executive

***Substantial Shareholders*:**

Van Eck 13.3%

Vinva 6.1%

BlackRock Group 5.0%

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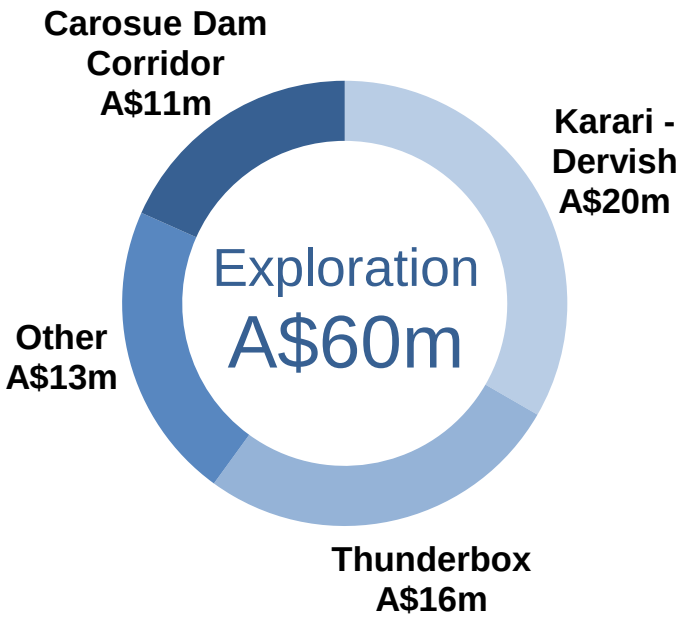
Next chapter of growth in FY19

Exploration and drilling has increased significantly across Saracen's portfolio with a **A$60m investment planned over FY19**.

The A$60m of exploration can be broken up into the following items and estimated spend:



At the end of January 2019 A$31m of the total has been invested with strong results across the portfolio.

The exploration success has prompted an increase in the FY19 capital development budget by A$35m (previously announced). This will accelerate underground development at Carosue Dam and Thunderbox, ensuring both the increased production rate and mine lives are maintained.

Carosue Dam Operations – Drilling Update

The accelerated exploration and resource definition effort continues across the key projects at Carosue Dam.

Further results from the increased activity highlight the potential to unlock significant value and extend mine life.

Drilling has been focused on:

- Key operating underground mines (Karari-Dervish and Deep South)
- High-ranking targets along the Carosue Dam Corridor, including recent discoveries at Atbara and Qena

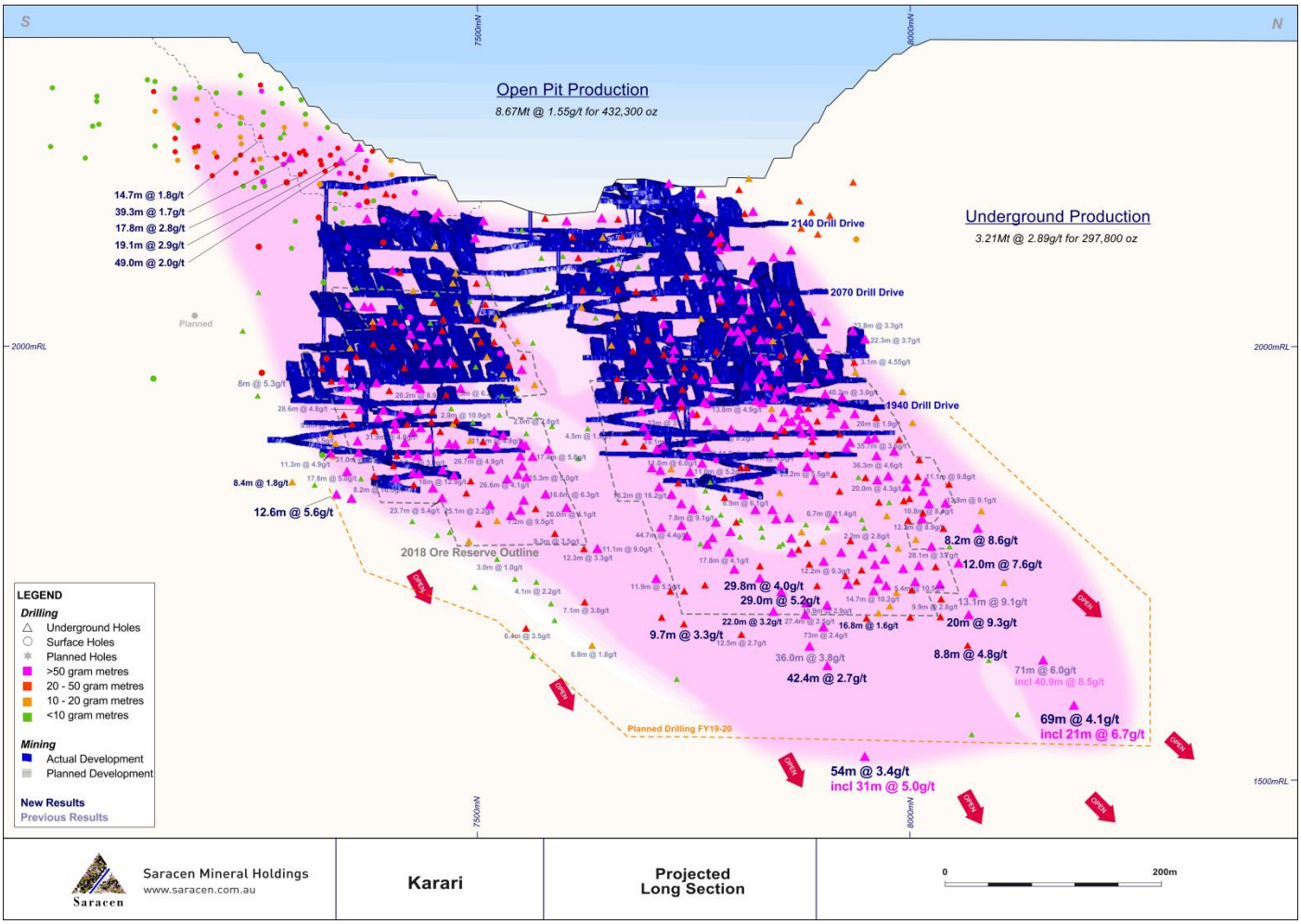
Karari Underground

Drilling at Karari has been focused in the north of the mine, comprising a combination of extensional exploration and the commencement of Resource definition drilling ahead of the next Ore Reserve update in the September quarter 2019.

Drilling in the northern area continues to deliver exceptional results. Two extensional exploration holes were drilled to test the down plunge positions of the known high grade trends. These holes were successful in intersecting the orebody up to 400m below current production (note annual vertical advance of mining 60m i.e. 400m implies an additional 7 years of life).

Significant results including **69m** @ **4.1g/t**, **54m** @ **3.4g/t** and **20m** @ **9.3g/t**. These highly encouraging results remain open at depth.

Figure 1 – Karari Long Section, New Drill Results



The immediate focus will continue to be resource infill drilling to increase the Indicated Resource ahead of the next Reserve update. This drilling has already highlighted a number of strong results including **29m** @ **5.2g/t, 30m** @ **4.0g/t, 12m** @ **7.6g/t** and **8m** @ **8.6g/t.**

A small program was completed higher in the mine at the southern end, specifically testing the upper extensions of the Dhoni Lode that is currently under review as a potential open pit ore source. Upper Dhoni results include **19.1m @ 2.9g/t, 17.8m @ 2.8g/t** and **49.0m @ 2.0g/t**.

Below is a table of significant Karari extensional intercepts:

Significant drill results include:	
KREX048	54.2m @ 3.4g/t
KREX046	20.2m @ 9.3g/t
KRRD342	29.0m @ 5.2g/t
KRRD354	29.8m @ 4.0g/t
KRRD294	8.2m @ 8.6g/t
KRRD296	12.0m @ 7.6g/t

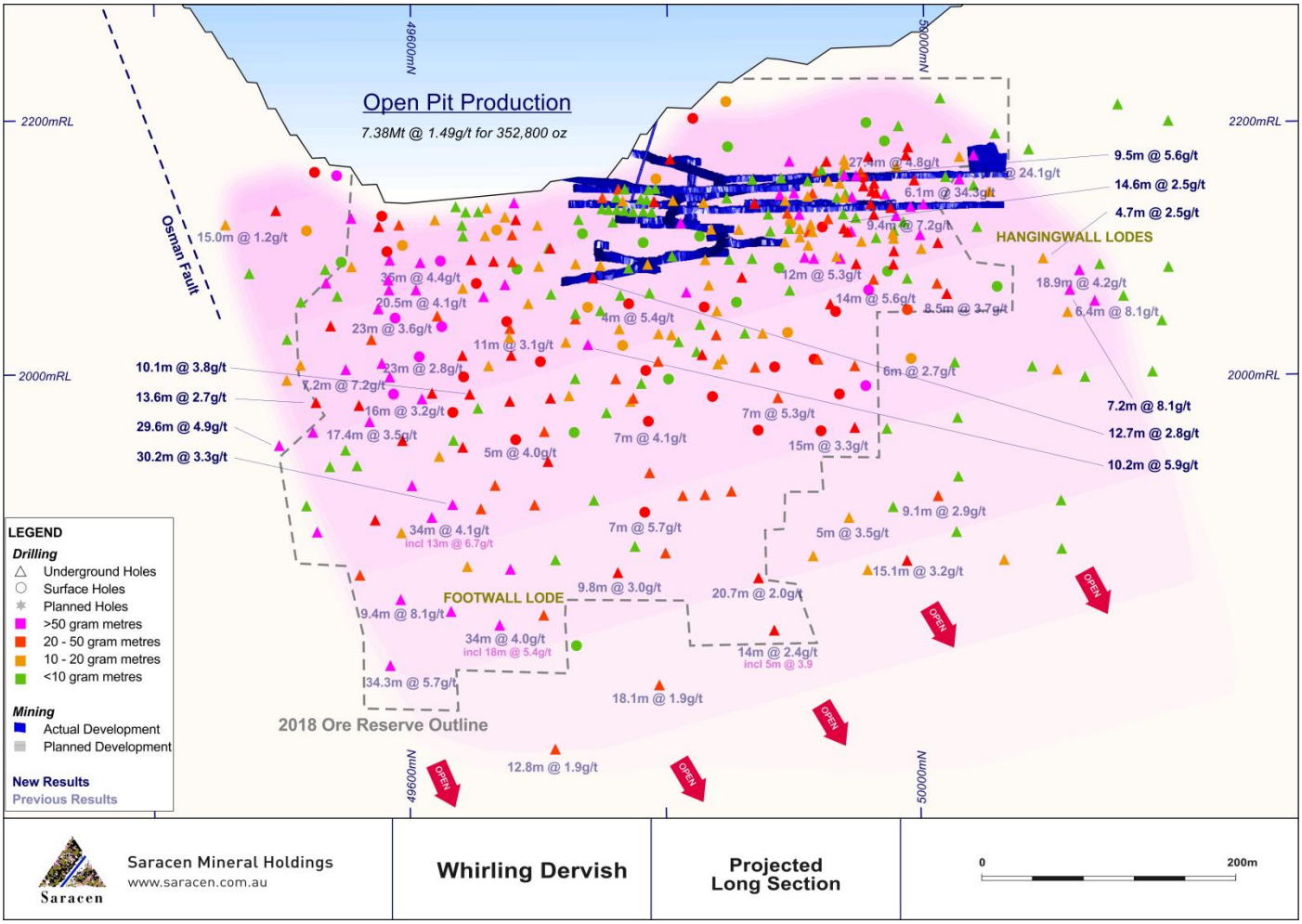
Drilling continues at Karari with two diamond rigs focused on extensional growth and Ore Reserve conversion.

Over 65,000m of drilling is planned during FY19.

Whirling Dervish Underground

Drilling at Whirling Dervish has been focused on increasing the drill density within the Resource ahead of future production activities. Drilling has progressed steadily with one rig, while the Deep South program was completed.

Figure 2 – Whirling Dervish Long Section, New Drill Results



The second rig has now returned to Whirling Dervish and has immediately commenced extensional exploration, targeting the southern high grade shoot.

Recent infill drilling has returned a number of strong results including **29.6m @ 4.9g/t**, **30.2m @ 3.3g/t** and **10.2m @ 5.9g/t.**

Below is a table of significant Whirling Dervish in-fill intercepts:

Significant drill results include:	
WDGC186	29.6 @ 4.9g/t
WDGC182	30.2m @ 3.3g/t
WDGC167	10.2m @ 5.9g/t
WDGC172	9.5m @ 5.6g/t
WDGC202	7.2m @ 8.1g/t

Exploration and resource definition drilling will continue during the remainder of the June half 2019.

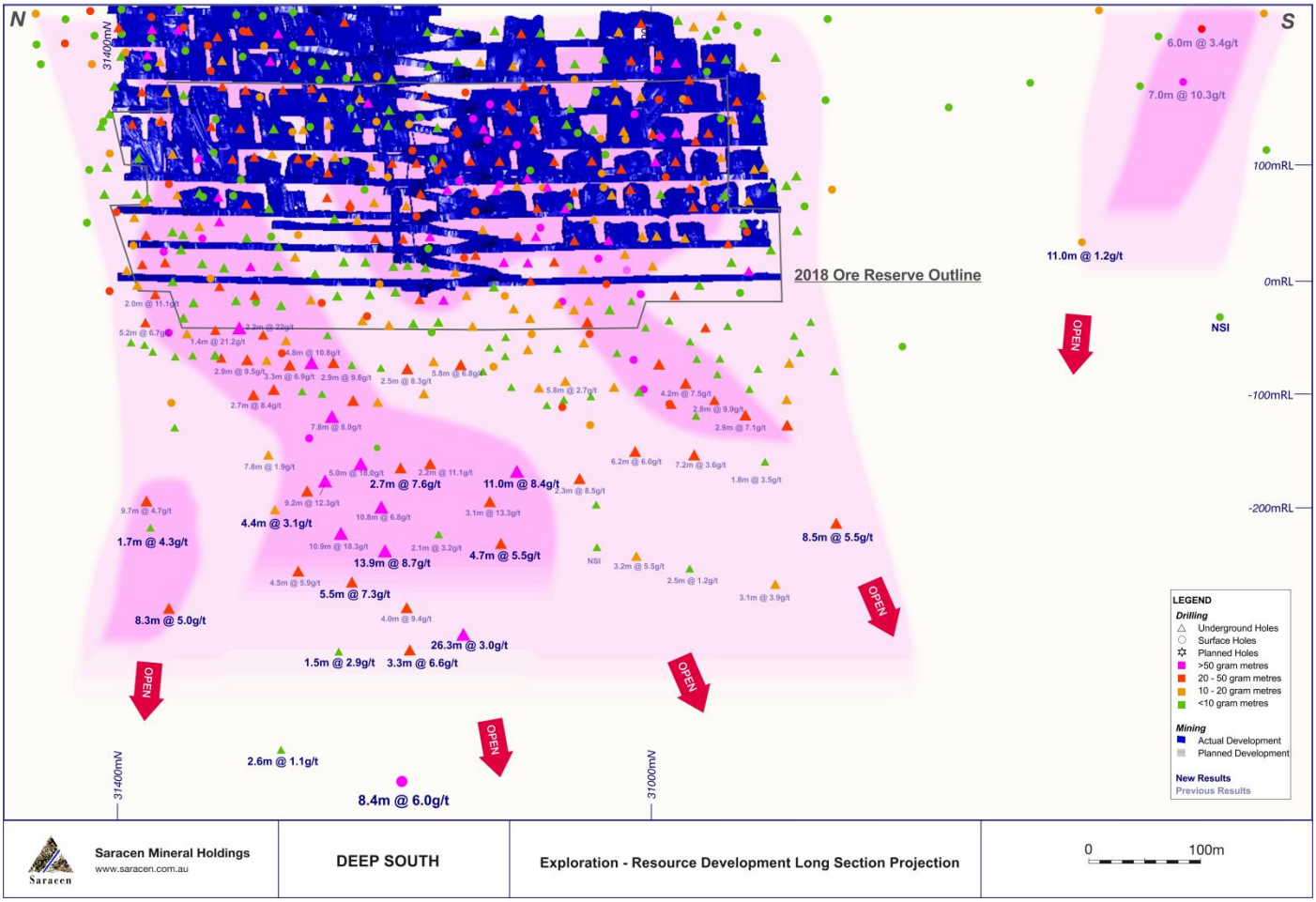
Deep South Underground

Drilling at Deep South was extended following previously reported highly encouraging results. The initial drilling successfully defined an extension to the known high grade trend.

Additional drilling was approved to increase the drill coverage allowing better definition of the high grade zone and increasing the confidence in future economic evaluations. This drilling has demonstrated the continuity and robustness of the strong mineralisation in this area.

Significant results include **13.9m @ 8.7g/t, 11.0m @ 8.4g/t, 26.3m @ 3.0g/t** and **8.3m @ 6.0g/t**.

Figure 3 – Deep South Long Section, New Drill Results



Below is a table of significant Deep South intercepts:

Significant drill results include:	
DSEX040	13.9m @ 8.7g/t
DSEX024	11.0m @ 8.4g/t
DSEX028	8.5m @ 5.5g/t
DSEX029	26.3m @ 3.0g/t
DSEX033	8.3m @ 5.0g/t
DSDP002w3a	8.4m @ 6.0g/t

The geological model is being updated and an economic assessment has commenced to review future mining options.

Thunderbox Operations – Drilling Update

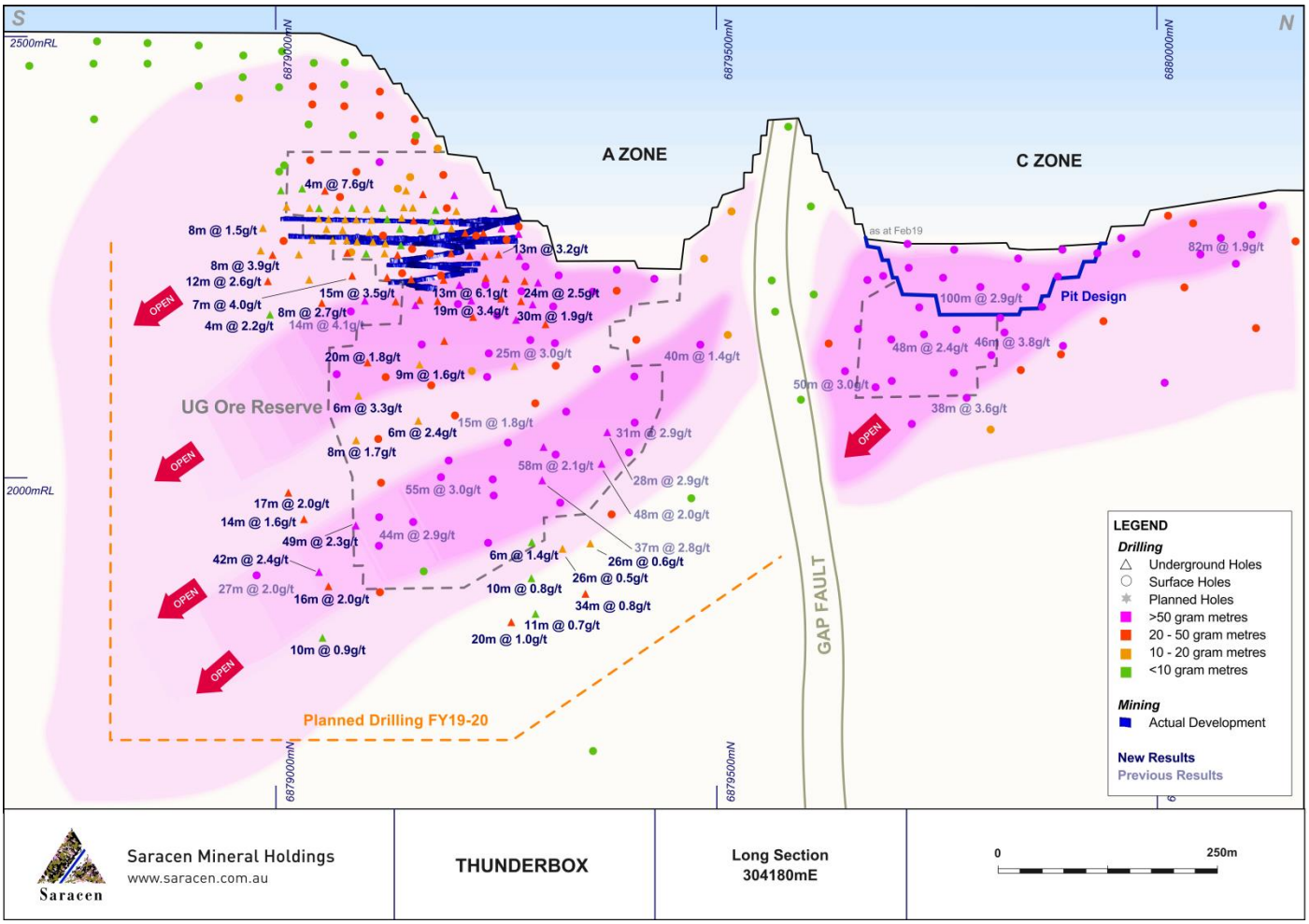
Thunderbox Underground

Underground drilling continues to provide valuable data necessary to optimise the planned underground mining method.

Initial drilling has been focused on close space infill to better define the upper areas of future mining, and has now progressed to extensional exploration. Infill results include **13m @ 6.0g/t** and **19m @ 3.4g/t.**

Early results from the first extensional holes in the known bulk trends confirm **consistent and persistent mineralisation**. Highlights include **49m @ 2.3g/t** and **42m @ 2.4g/t**.

Figure 4 – Thunderbox Long Section, New Drill Results



Below is a table of significant Thunderbox A-Zone UG in-fill intercepts:

Significant drill results include:	
THEX005	49.0m @ 2.3g/t
THEX002	42.0m @ 2.4g/t
THGC113	13.2m @ 6.1g/t
THGC112	19.2m @ 3.4g/t
THGC068	14.8m @ 3.5g/t
THGC096	24.2m @ 2.5g/t

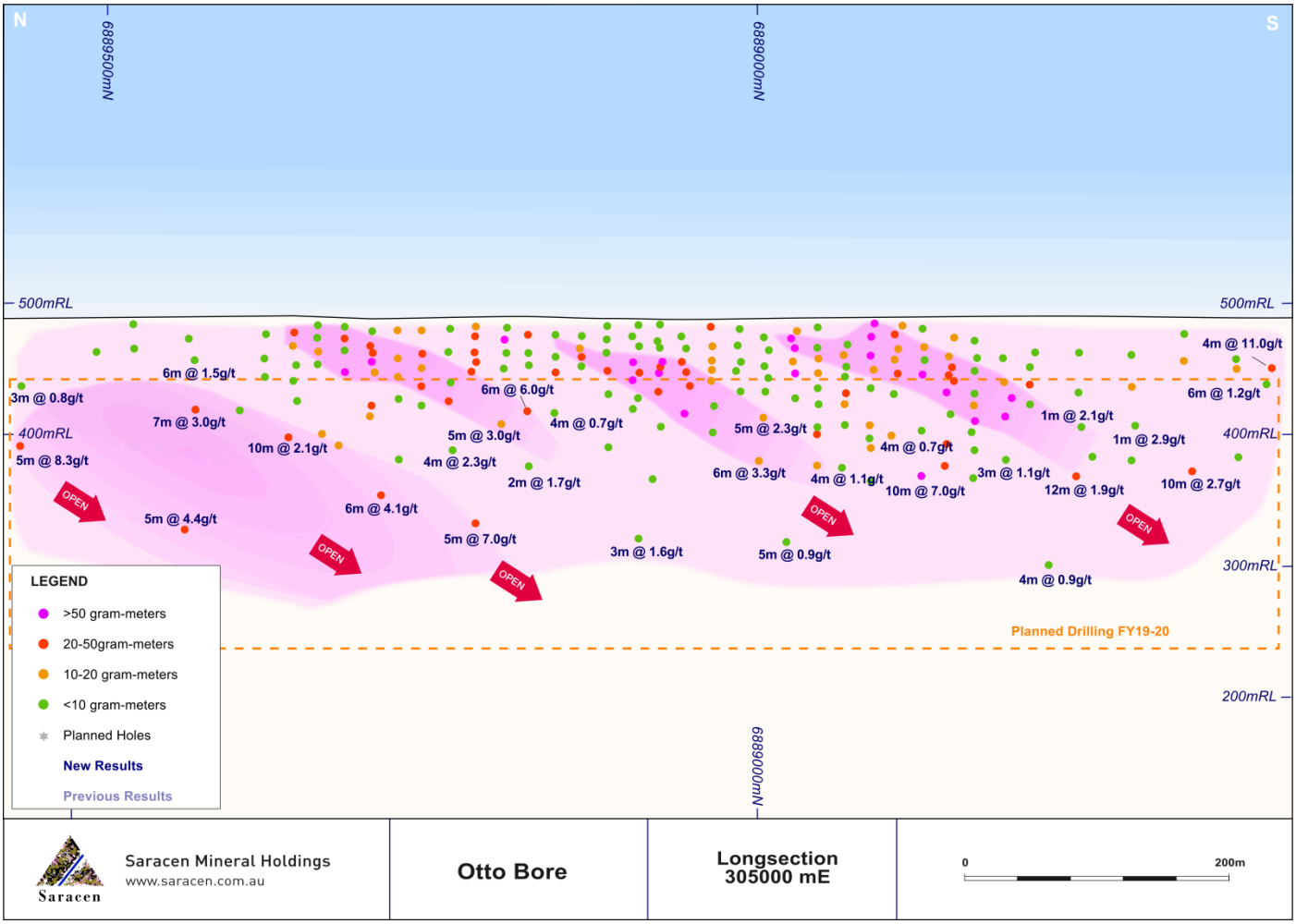
Otto Bore

Otto Bore is located **9km north of the Thunderbox mill**. The current Resource consists of 53% oxide/transitional material and presents as another **oxide source** to maintain **higher mill throughputs at Thunderbox**.

Following drilling success in the June quarter 2018, additional resource drilling was budgeted for in FY19 to test for potential extensions of the known shoots and explore for additional shoot repetitions.

Early results from the extensional and infill program have demonstrated the potential for growth both along strike and down plunge. Highlights include **10m @ 7.0g/t**, **4m @ 11.0g/t** and **5m @ 8.3g/t**.

Figure 5 – Otto Bore Long Section, New Drill Results



Below is a table of significant Otto Bore intercepts:

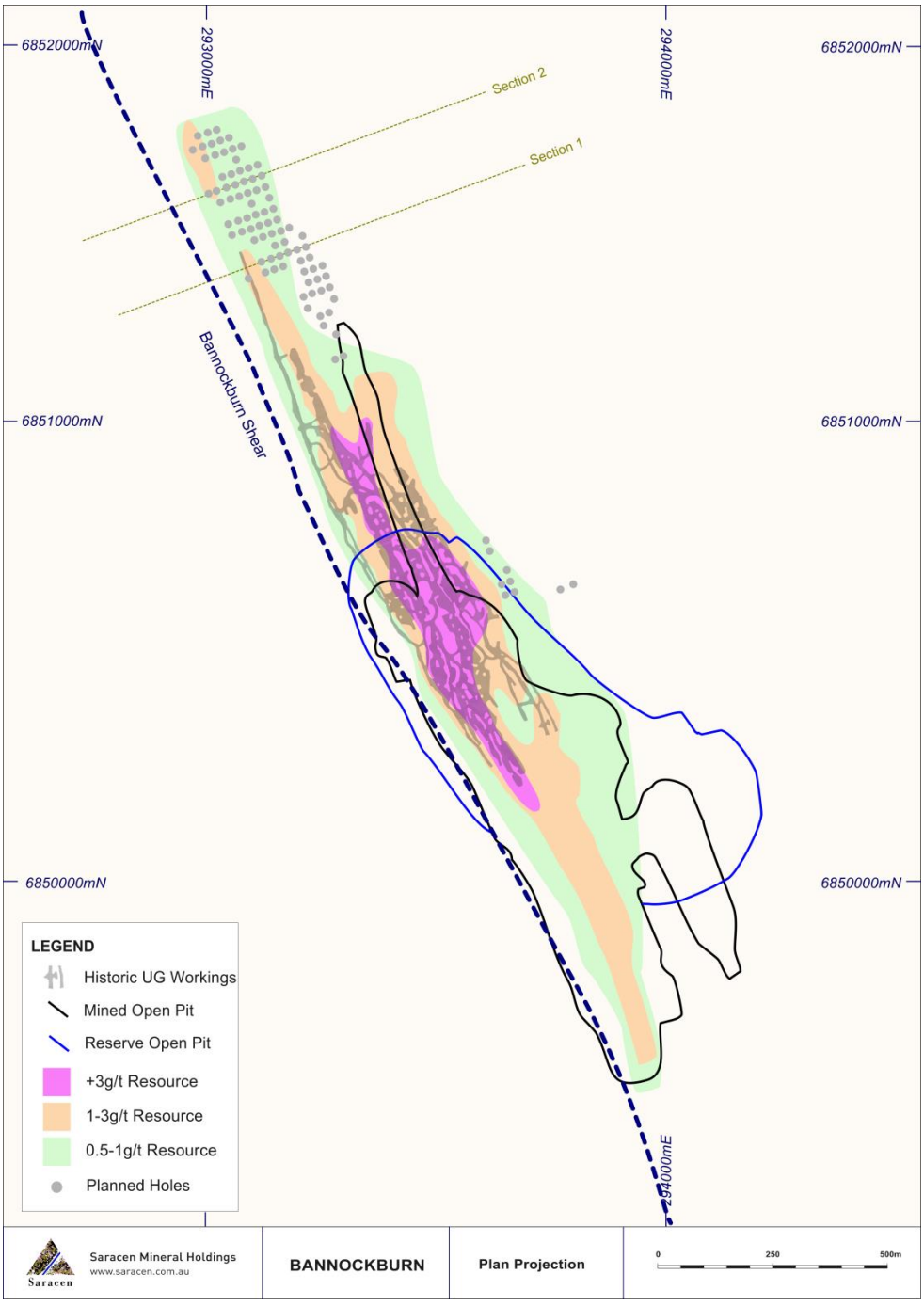
Significant drill results include:	
OBRC038	10.0m @ 7.0g/t
OBRC048	4.0m @ 11.0g/t
OBRC026	5.0m @ 8.3g/t
OBRC034	6.0m @ 6.0g/t
OBRC053	5.0m @ 7.0g/t

Bannockburn

At Bannockburn a total of 15,388 meters of RC drilling was successfully completed with three rigs.

The drilling has improved the definition of the known lodes and the mineralisation widths and grades are in line with expectations.

Figure 6 – Bannockburn Plan



The drilling has returned a number of positive results including **17.0m @ 2.8g/t, 15.0m @ 2.9g/t** and **15.0m @ 2.7g/t**. All results are within 150m of surface and remains open to the north.

Figure 7 – Bannockburn Cross Section, New Drill Results

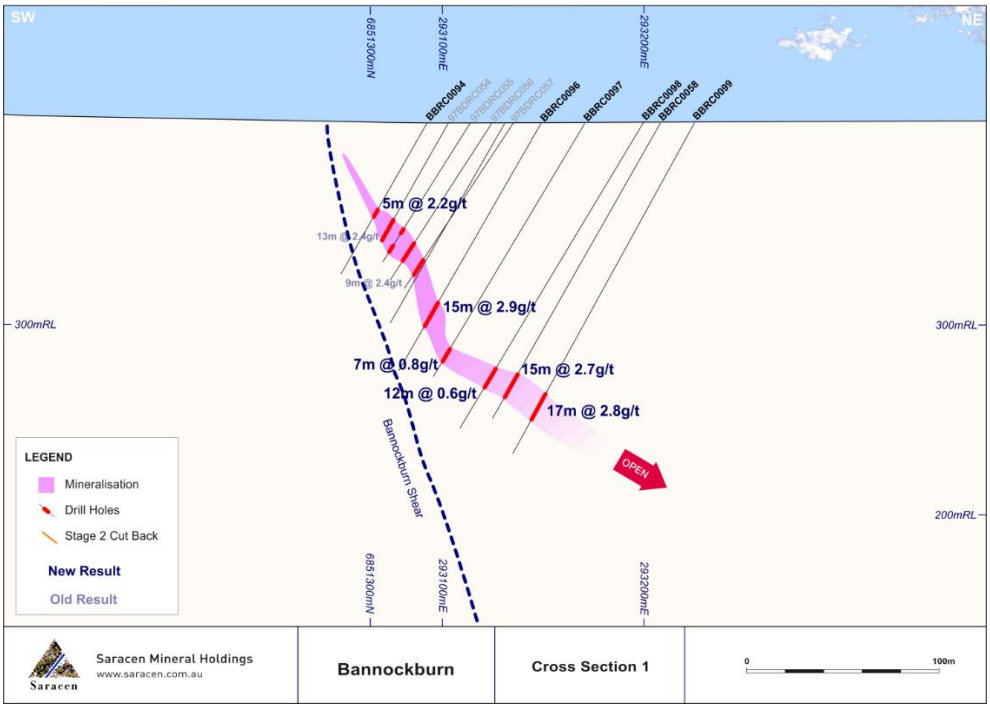
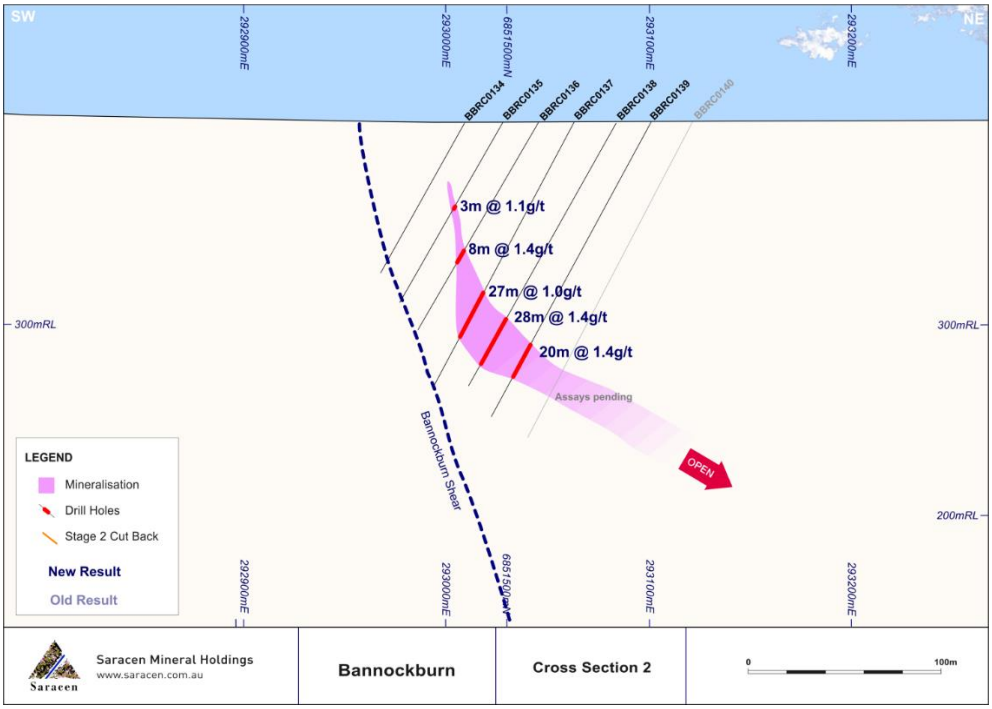


Figure 8 – Bannockburn Cross Section, New Drill Results



Below is a table of significant Bannockburn in-fill intercepts:

Significant drill results include:	
BBRC0099	17.0m @ 2.8g/t
BBRC0058	15.0m @ 2.7g/t
BBRC0096	15.0m @ 2.9g/t
BBRC0138	28.0m @ 1.4g/t

The Mineral Resource will be updated when the remaining results have been returned.

Regional Exploration – Update

Carosue Dam Corridor

Drilling along the highly prospective Carosue Dam Corridor has delivered early success, with **significant new discoveries at Atbara and Qena**, only **4km north of the mill**.

Figure 9 – Drilling, three rigs on the 'Corridor of Riches'

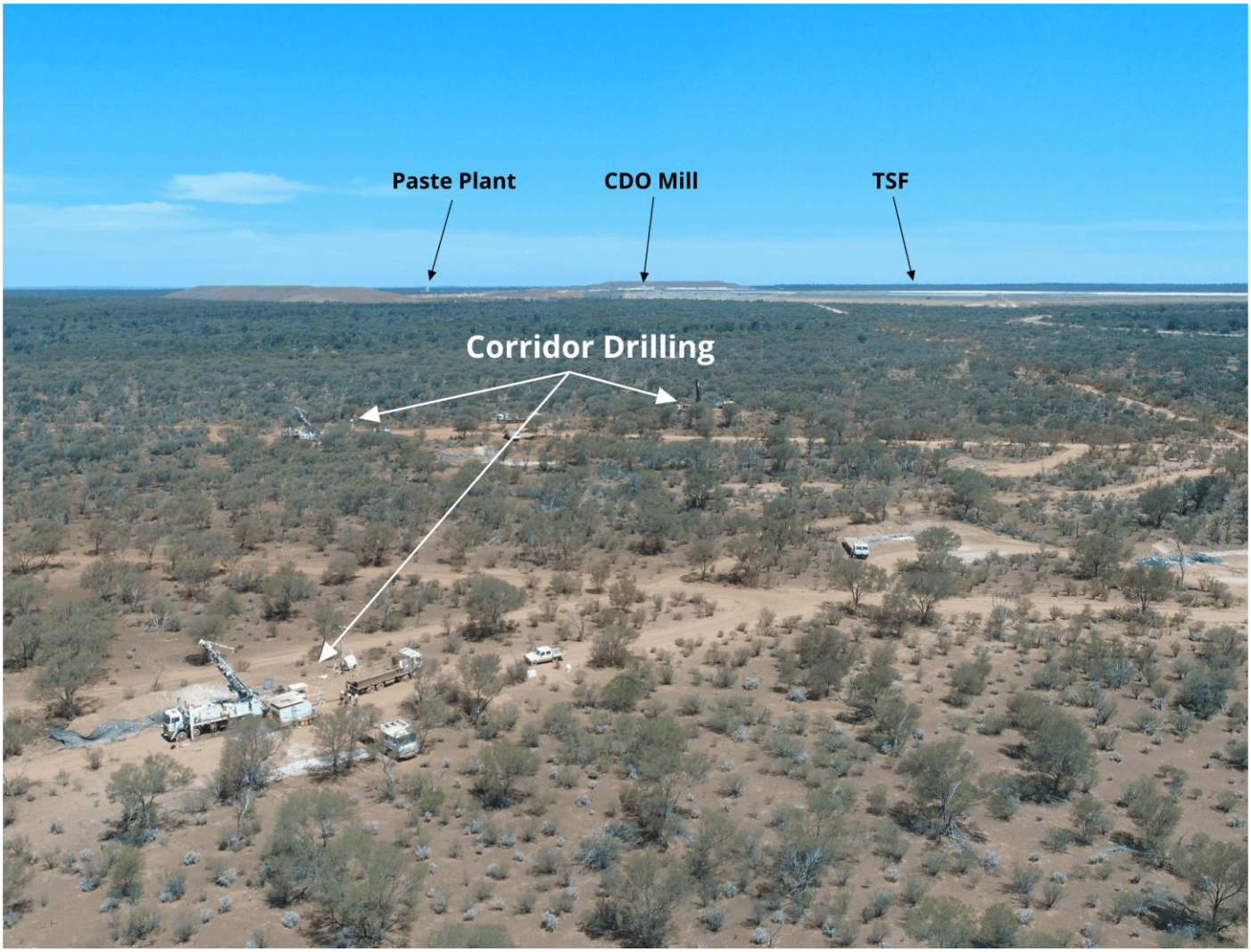


Figure 9 highlights the scarcity of cleared drill lines between the Carosue Dam mill and the Atbara discovery, where three drill rigs (two RC and one diamond core) are currently active.

The phase 1 framework drill testing has been highly successful in identifying thick high grade mineralisation in areas where prior drill testing has been shallow and broad.

These new discoveries have been the subject to detailed geological investigation and further follow up drilling.

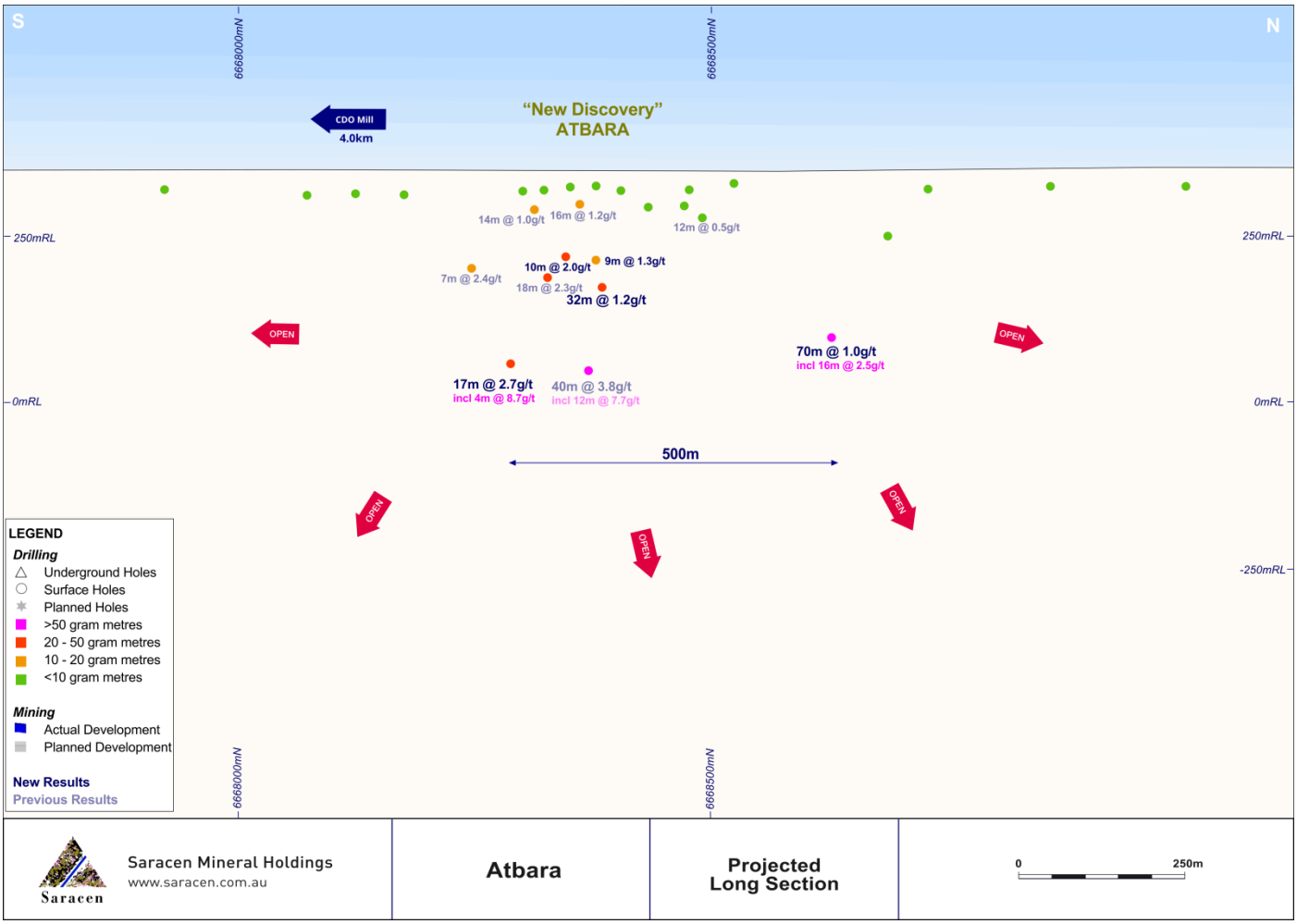
The significant investment in exploration along the Carosue Dam Corridor is well underway and these new discoveries and additional targets will be aggressively followed up during the remainder of FY19.

NEW DISCOVERY - Atbara

Following the significant result at the Atbara discovery (**40m @ 3.8g/t, including 12m @ 7.7g/t**) late in the December quarter 2018, a staged follow up program is currently being executed.

Atbara is located only 4km north of the Carosue Dam mill.

Figure 10 – Atbara Cross Section, New Drill Results



Additional diamond drilling is underway to better understand the potential of this growing system. The system has now been tested over 500m and is open in all directions.

Significant results include **17m @ 2.7g/t (including 4m @ 8.7g/t), 70m @ 1.0g/t* (including 16m @ 2.5g/t)** and **32m @ 1.2g/t**.

Below is a table of significant Atbara exploration intercepts:

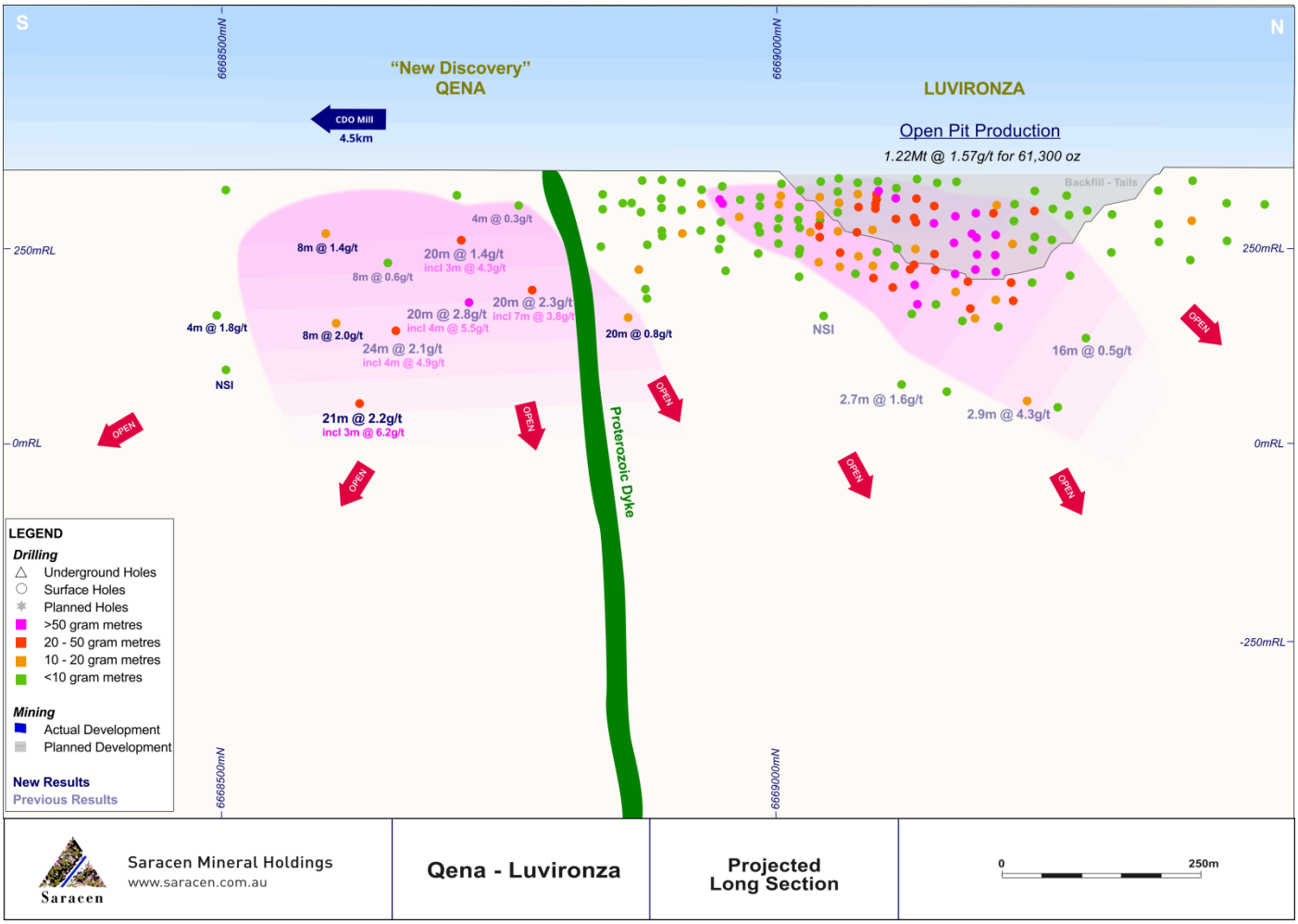
Significant drill results include:	
ATEX006	17.0m @ 2.7g/t
QEEX002	70.0m @ 1.0g/t* Sample quality poor
ATEX010	32.0m @ 1.2g/t
ATEXDD001	10.0m @ 2.0g/t

***NEW DISCOVERY* - Qena**

Following the significant result at the Qena discovery (**20m @ 2.8g/t**) late in the December quarter 2018, a staged follow up program is currently being executed.

Qena is located south of the historic Luvironza open pit and only 4.5km north of the Carosue Dam mill.

Figure 11 – Qena-Luvironza Long Section, New Drill Results



Significant results include **21.0m** @ **2.2g/t,** and **8.0m** @ **2.0g/t**.

The Qena mineralisation is focused on the north-east dipping hangingwall contact of the large Atbara monzonite intrusive complex. The mineralisation is developed in a succession of psammite and fragmental tuffaceous sediments. Alteration (biotite, carbonate ± pyrite) is consistent with other deposits in the district.

Below is a table of significant Qena exploration intercepts:

Significant drill results include:	
QEEX004	21.0m @ 2.2g/t
QEEX007	8.0m @ 2.0 g/t

Drilling is ongoing to advance the knowledge of this growing project.

Carosue Dam Seismic Project

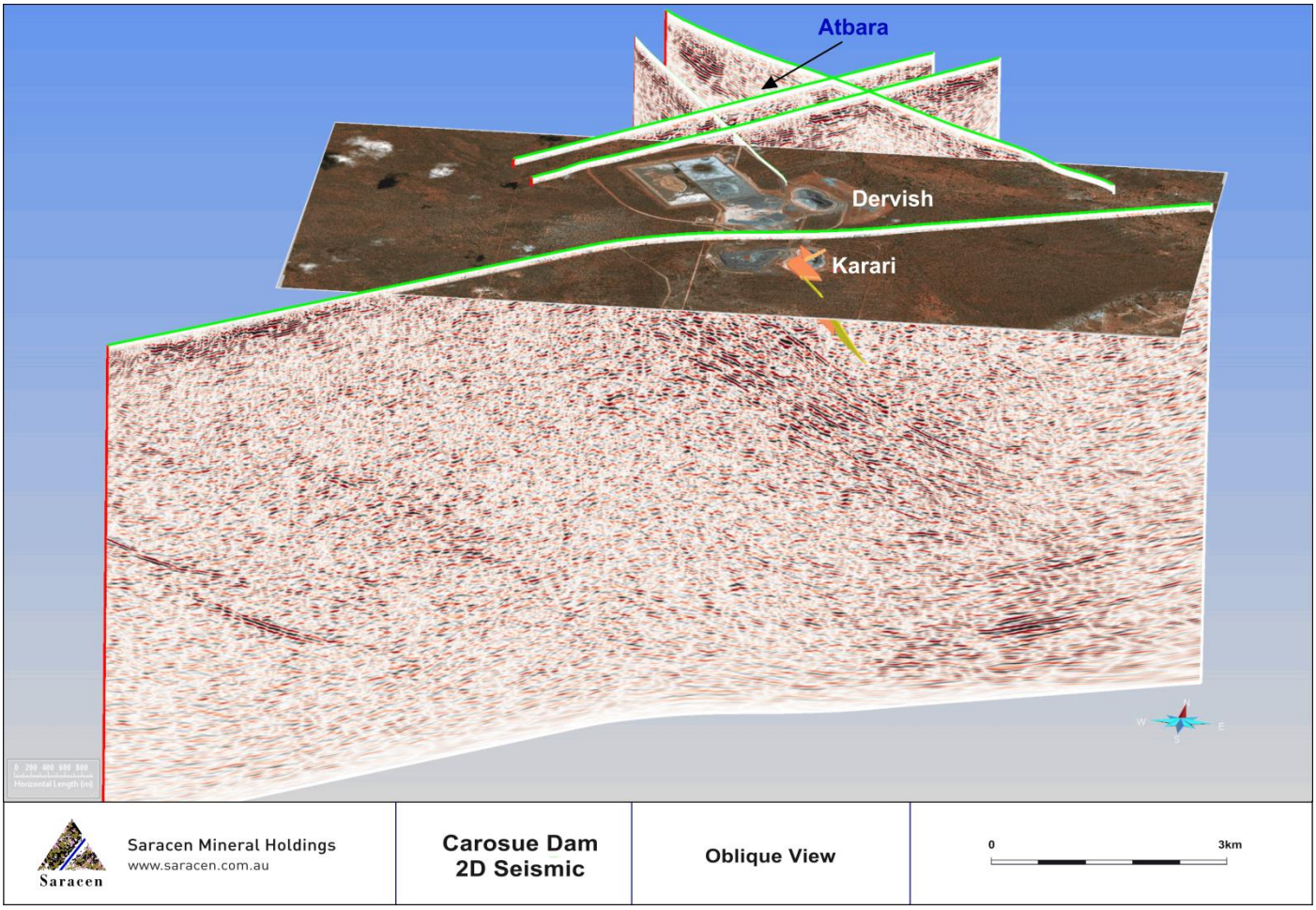
Over the past two years the Karari-Dervish underground mine has grown substantially, both in terms of Ore Reserves and production.

Having baseload ore supply within 500m of the mill has been instrumental in the success of the Carosue Dam Operations. Building a long life operation around the nucleus of the Karari-Dervish mine remains a high priority.

To fully unlock the potential value from the district, a seismic project has been initiated to further assist the geological interpretation and shorten the pathway to discovery.

The seismic project is well advanced with five 2D seismic lines collected in January 2019. The early data is preliminary.

Figure 12 – Carosue Dam, 2D Seismic data



Further data processing will refine the details and allow further investigation and interpretation.

Importantly the data has been highly instructive in determining the location and orientation of the **3D seismic survey planned for the June quarter 2019**.

Mt Celia

The stratigraphy in the western Mt Celia district, west of the Two Lids Fault, is largely unknown due to extensive transported cover, minimal outcrop exposure and limited drilling.

Detailed gravity data has highlighted a number of stratigraphic and structural features previously undefined in earlier datasets. Previous auger and soils programs failed to detect anomalism due to the extensive calcrete and striped regolith profile.

A wide spaced regional aircore program is ongoing and will continue for the remainder of the June half 2019. A total of **18,962 meters** have been drilled to date in this program. This broad phase 1 program has **59,800 meters remaining**. An update on results will be provided in the June quarter 2019.

Bannockburn

The Bannockburn project is a large mineralised system that extends over a 7.5km strike length. The major regional Bannockburn shear has been variably tested by previous operators, and recent MT-AMT along with detailed gravity surveys have highlighted complex structural architecture in the hangingwall of the Bannockburn Shear.

A large regional full field aircore program continues with **21,917 meters** drilled in the December quarter 2018 and early March quarter 2019. Drilling has progressed in the North Well area over the last month.

Early results previously reported confirmed known mineralised trends. Drilling is ongoing and further results will be available in the June quarter 2019.

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Competent Person Statements

The information in the report to which this statement is attached that relates to Exploration Results and Mineral Resources related to Gold is based upon information compiled by Mr Daniel Howe, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Daniel Howe is a full-time employee of the company. Daniel Howe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Daniel Howe consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

Table 1 – Karari Drill Results

KARARI DRILLING FEBRUARY 2019										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
KREX043	438613.7	6663674	-55.444	384.44	106.1	-69.54		341	343	2	3.33
KREX044	3253.972	7885.847	-55.3377	452.95	130.4	-64.24		364.6	365.4	0.8	4.16
							and	369.15	370	0.85	3.90
							and	415	416	1	2.63
							and	446	447	1	2.50
KREX046	3261.355	7987.461	-63.15	411	309.6	-58.24		204.8	205.5	0.7	5.61
							and	206.75	207.5	0.75	2.58
							and	**270.9**	**291.15**	**20.25**	**9.27**
KREX048	3297.08	7914.2	-60.8	595.11	62.34	-73.66		**400.82**	**455**	**54.18**	**3.35**
							incl	**402.65**	**433.17**	**30.52**	**4.98**
KREX049	3261.6	7987.6	-63.8	515.3	324.37	-53.9		**384.65**	**454**	**69.3**	**4.14**
							incl	**391.7**	**413**	**20.9**	**6.70**
KRRD294	438620	6663775	-63.138	300	293	-35.65		**247.8**	**254.8**	**7**	**9.88**
KRRD295	438620	6663775	-63.138	265.75	293.5	-45.64		228	231.7	3.7	2.90
							and	232.2	233	0.8	5.14
KRRD296	438620	6663775	-63.138	264	297.2	-48.9		**237**	**249**	**12**	**7.56**
KRRD330	3253.972	7885.847	-55.3377	357.1	71.3	-77.65		246.99	256	9.01	4.25
							and	262	269	7	3.78
							and	274	276	2	6.81
							and	280.37	282	1.63	7.67
							and	286.06	290.13	4.07	5.08
							and	300.98	304.15	3.17	3.61
							and	309.6	310	0.4	8.94
							and	317	318	1	4.89
KRRD331	438433.1	6663189	192.7057	212.3	206.74	10.74		103	104	1	7.34
							and	155	155.7	0.7	3.46
							and	156.3	157	0.7	2.63
							and	167.5	168.3	0.8	7.88
KRRD332	438432.9	6663189	192.1758	213	217.7	17.43		**145**	**159.65**	**14.65**	**1.78**
							and	170	171	1	3.55
							and	185	185.85	0.85	13.20
KRRD333	438432.9	6663189	192.0535	215.1	227.1	13.84		100	100.4	0.4	2.86
							and	**118.75**	**158**	**39.25**	**1.68**
							and	179	180.55	1.55	6.43
KRRD334	438432.3	6663189	192.4361	236.7	230.9	22.32		88	89	1	2.99
							and	178.2	179.2	1	2.69
							and	191.6	192.4	0.8	2.80
KRRD335	438431.1	6663190	191.7384	201	230.9	7.38		97.7	98.4	0.7	4.38
							and	**110.1**	**127.9**	**17.8**	**2.77**
							and	131.5	132.05	0.55	2.83
							and	141.1	141.5	0.4	4.18
							and	171.3	173.8	2.5	4.36
KRRD336	438431	6663190	192.5804	237	243.2	22.65	results pending				
KRRD337	438431.1	6663191	191.9793	218.7	254.5	11.56		82.15	83.05	0.9	3.62
							and	84.4	85.3	0.9	2.77
							and	**124.7**	**143.05**	**19.05**	**2.93**
							and	160	161.95	1.95	4.08
							and	177.4	178.2	0.8	2.73
							and	181.3	182.95	1.65	7.02
							and	189	190	1	5.87
KRRD338	438431.2	6663193	191.9311	257.8	264.7955	14.5		14.05	14.45	0.4	3.06
							and	127.75	128.7	0.95	5.10
							and	**137.4**	**186.45**	**49.05**	**1.98**
							and	188.4	189.05	0.65	2.80
							and	204	206.25	2.25	4.42
							and	209.7	210.35	0.65	11.50

KARARI DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
KRRD339	438431.2	6663193	191.8623	86.8	277.0955	7.1	results pending				
KRRD341	438611.7	6663673	-55.106	254.75	129	-78.19		192.15	194.6	2.45	3.24
							and	204	204.6	0.6	3.61
							and	209.45	219.65	10.2	3.12
							and	225.1	229.9	4.8	4.32
							and	235.35	241.1	5.75	3.38
KRRD342	438611.7	6663673	-55.106	297	90.8	-80.2		221	223	2	3.15
							and	230	230.7	0.7	3.70
							and	**235**	**264**	**29**	**5.22**
KRRD344	438612.7	6663672	-55.106	323.9	117	-70.4		241	242.35	1.35	3.20
							and	**253**	**275**	**22**	**3.22**
KRRD345	438612.7	6663672	-55.106	363	148.3	-62.67		211.75	217.4	5.65	5.75
							and	221.35	222.1	0.75	3.88
							and	226.3	227	0.7	4.07
							and	239.37	240.27	0.9	7.37
							and	245	245.5	0.5	6.83
							and	290	291.3	1.3	4.64
							and	298	299	1	2.54
							and	303	304	1	2.67
KRRD346	438612.7	6663672	-55.106	380.78	150.4	-57.05		286	286.86	0.86	2.94
							and	289	289.6	0.6	2.94
							and	**303.7**	**313.4**	**9.7**	**3.31**
							and	318	318.5	0.5	9.00
							and	359.5	360.33	0.83	12.20
KRRD347	438621.7	6663776	-64.106	129	320	-62.69	no significant results				
KRRD349A	438620.7	6663774	-64.106	313	319.5	-68.15		285.63	286	0.37	6.82
							and	**293.19**	**302**	**8.81**	**4.77**
KRRD352	438629.9	6663760	-64	287.8	262.6	-78.9		217	217.5	0.5	3.02
							and	226	227.05	1.05	5.30
							and	233.1	235	1.9	3.88
							and	244	244.98	0.98	8.80
KRRD353	438629.9	6663760	-64	276	221.6	-84.71		207	208	1	2.67
							and	213.1	213.5	0.4	6.52
							and	**244.24**	**261**	**16.76**	**1.57**
KRRD354	438614	6663674	-55.4459	290.5	138.5	-69.39		**211.55**	**241.34**	**29.79**	**4.02**
							and	249.6	252.8	3.2	2.87
							and	257.93	258.75	0.82	2.94
KRRD355	438613.4	6663674	-55.4095	410	76.1	-73.11		**300.65**	**343**	**42.35**	**2.69**
KRRD357B	438733.1	6663300	-92.906	245.7	171.8	-18.82		177.2	177.5	0.3	4.62
							and	194.55	195	0.45	2.58
							and	209.17	210.3	1.13	2.78
KRRD358	438733.1	6663300	-92.906	267	168.9	-13.26		235.55	238.55	3	3.83
							and	252.55	254.5	1.95	3.72
KRRD359	438733.1	6663300	-92.906	257.97	168.1	-24.07		**190.4**	**203**	**12.6**	**5.58**
							and	221	222	1	3.51
KRRD360	438733.1	6663300	-92.906	269.85	165.4	-22.21		204	205	1	2.56
KRRD361	438613.7	6663674	-55.4437	234	165.9	-72.4		146.4	150.95	4.55	2.61
							and	169.35	170.85	1.5	4.30
							and	198.1	198.8	0.7	2.90
							and	203	204.3	1.3	2.60
							and	206.9	208.1	1.2	3.05
							and	212.3	213.1	0.8	4.00
KRRD362	438613.7	6663674	-55.4437	237.1	157.4	-76.39		159.97	160.4	0.43	3.76
							and	178	178.5	0.5	4.79
							and	189.3	194.95	5.65	2.51
							and	198	198.4	0.4	2.65
							and	209.9	210.35	0.45	3.39

Table 2 – Whirling Dervish Drill Results

WHIRLING DERVISH DRILLING FEBRUARY 2019										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
WDEX047W1	438976.9	6666512	350.455	1510.2	232.4	-73.1		1388.76	1391.82	3.06	2.63
WDEX047W2	438976.9	6666512	350.455	1156.23	232.4	-73.1	no significant results				
WDEX047W3	438976.9	6666512	350.455	1533	230.08	-73.47		1349.8	1351	1.2	10.46
WDEX048	438339	6665538	140.189	621	46.3955	-77.26	results pending				
WDGC162	438383.6	6665508	142.6864	192	167.7955	-24.63		138	140	2	1.84
							and	158	158.8	0.8	2.09
WDGC163	438381.1	6665507	141.6993	338.3	163.5955	-29.29		222.15	223.1	0.95	4.86
							and	282	289.55	7.55	1.59
WDGC164	438377.3	6665509	141.2336	245.97	231.5955	-37.88		**105**	**117.7**	**12.7**	**2.84**
							and	142.3	142.75	0.45	2.21
							and	168.95	169.25	0.3	3.09
							and	175.15	175.9	0.75	2.32
							and	178.3	179	0.7	1.53
							and	186.25	187.25	1	11.00
							and	195.6	196.4	0.8	10.10
							and	219.47	220	0.53	4.27
WDGC165	438377.1	6665509	141.1909	251.9	223.3955	-45.98		95	98	3	1.92
							and	108.2	108.92	0.72	4.19
							and	144.59	157	12.41	2.15
							and	194	199.65	5.65	1.50
WDGC166	438377.1	6665509	141.403	267	207.8955	-36.54		87.46	88.75	1.29	1.79
							and	103	104	1	8.15
							and	118.55	119	0.45	3.53
							and	152.68	154.09	1.41	1.91
							and	205	217.7	12.7	2.23
WDGC167	438377	6665509	141.4915	254.4	230.6955	-45.9		91	92	1	1.51
							and	107.1	114.5	7.4	2.38
							and	**164**	**174.15**	**10.15**	**5.94**
WDGC168	438377	6665509	141.3877	282.05	195.3955	-43.5		109.7	110.3	0.6	2.13
							and	141.7	145	3.3	3.12
							and	168.05	171.7	3.65	2.75
							and	**221.5**	**231.55**	**10.05**	**3.84**
WDGC169	438378.4	6665508	142.2459	273.1	185.0955	-39.09		114.6	115.63	1.03	2.03
							and	177	178	1	32.40
							and	223.3	226	2.7	3.10
							and	233	248	15	2.11
WDGC170	438378.1	6665509	142.3585	378.1	165.9955	-12.12		234.1	235.6	1.5	2.23
WDGC171	438378.1	6665509	142.6112	249	165.0955	-13.36		176.86	177.3	0.44	4.68
							and	239.5	240.25	0.75	2.62
WDGC172	438052.4	6665434	104.2213	92.7	330.7955	43.34		**64.4**	**73.85**	**9.45**	**5.59**
							and	85	87.77	2.77	2.45
WDGC173	438052.3	6665434	104.986	70.93	351.0955	61.95		50.1	53.37	3.27	1.96
WDGC174	438052.4	6665434	103.2441	80.6	345.1955	29.69		57	60.74	3.74	3.30
WDGC175	438053.6	6665434	102.249	87.2	358.8955	6.31		**58.8**	**73.35**	**14.55**	**2.51**
WDGC176	438053.2	6665434	102.1321	66	21.3955	9.03		43.77	52.17	8.4	2.22
WDGC177	438057.4	6665432	105.4401	56.6	31.1955	69.38		39.95	44.61	4.66	1.77
WDGC178	438071	6665415	105.2637	60.1	37.9955	68.7		43	43.63	0.63	3.44
							and	47	47.6	0.6	1.68
WDGC179	438379	6665509	141.1735	248.9	212.5955	-56.76		117.52	118.36	0.84	11.96
							and	215.1	216.76	1.66	4.04
							and	225.56	227.57	2.01	6.50
WDGC180	438379	6665509	141.1735	275.31	194.4955	-62.16		127.1	128.25	1.15	2.47
							and	131.3	133.9	2.6	1.83
							and	187.3	188.35	1.05	1.76
							and	199.5	207.29	7.79	3.02
							and	223.02	224.35	1.33	1.94
							and	247	248	1	3.51
							and	255.96	260.38	4.42	4.03

WHIRLING DERVISH DRILLING FEBRUARY 2019								Downhole			
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDGC181	438380.4	6665508	141.2938	258	192.4955	-49.67		115	117.6	2.6	1.78
							and	150.7	151.4	0.7	1.75
							and	153.75	154.5	0.75	2.34
							and	219.02	219.4	0.38	2.34
							and	221.6	223	1.4	2.32
							and	230.96	231.28	0.32	6.23
							and	236.35	237.25	0.9	2.99
WDGC182	438380.3	6665508	141.3156	303	175.2955	-61.73		141.1	142	0.9	3.42
							and	144.8	145.25	0.45	3.95
							and	195	220	25	1.53
							and	222.6	223	0.4	1.57
							and	224.7	225.3	0.6	2.67
							and	238.85	245.25	6.4	1.55
							and	246.8	248	1.2	1.53
							and	**257.85**	**288**	**30.15**	**3.25**
							and	300	300.6	0.6	2.51
WDGC183	438380.4	6665508	141.3246	285	180.5455	-51.39		172.26	173	0.74	3.74
							and	175.47	178.6	3.13	1.54
							and	209	210	1	1.90
							and	229.85	233	3.15	3.77
							and	242	244.5	2.5	2.34
							and	256.37	262	5.63	3.13
WDGC184	438380.5	6665508	141.4268	305.6	161.7955	-33.61		223.6	227.5	3.9	3.03
							and	**278**	**291.6**	**13.6**	**2.73**
WDGC185	438380.3	6665508	141.5545	314.4	161.0955	-42.91		153.9	154.55	0.65	1.55
							and	165.2	167	1.8	2.70
							and	220.6	221.15	0.55	1.70
							and	232	236.5	4.5	2.77
							and	278.6	279.6	1	2.71
							and	310	312	2	3.08
WDGC186	438380.4	6665508	141.2924	365	155.5955	-39.48		238	240.97	2.97	1.55
							and	**302.4**	**332**	**29.6**	**4.86**
WDGC187	438380.4	6665508	141.3404	371.7	152.6955	-46.49		267.15	268.1	0.95	1.67
							and	318	319	1	1.86
WDGC188	438303	6665583	141.067	237	237.4955	-21.54	results pending				
WDGC190	438303	6665583	141.067	234	231.3955	-45.09	results pending				
WDGC197	438272.6	6665612	142.9952	149.8	266.0955	-16.22	results pending				
WDGC199	438159.4	6665631	149.872	119.93	266.6255	-18.59		2.85	3.8	0.95	2.81
							and	25.9	27.05	1.15	1.62
							and	52.3	53.1	0.8	2.72
WDGC199a	438159.4	6665631	149.872	221.68	268.6955	-16.22		1	1.8	0.8	3.72
							and	**25.72**	**30.42**	**4.7**	**2.45**
							and	55	56	1	1.77
							and	78	79	1	2.19
							and	192.55	198	5.45	1.70
							and	200	201	1	2.11
							and	203.65	205	1.35	1.84
WDGC200	438159.4	6665631	149.872	207	271.1955	-24.04	results pending				
WDGC201	438159.4	6665631	149.872	258.9	279.5955	-14.96		2.8	3.65	0.85	4.04
							and	36.5	38.23	1.73	8.28
							and	80	84	4	1.72
							and	217.6	221	3.4	1.54
							and	222.7	223.15	0.45	2.74
							and	224	225.44	1.44	3.17
							and	234.4	235	0.6	1.86
WDGC202	438159.4	6665631	149.872	246.05	279.2955	-22.86		3	3.75	0.75	2.62
							and	34.15	36	1.85	4.53
							and	63	63.5	0.5	3.19
							and	74	75	1	1.63
							and	86	87	1	2.21
							and	**201.76**	**209**	**7.24**	**8.06**

WHIRLING DERVISH DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDGC203	438159.4	6665631	149.872	260.7	286.4855	-21.04		3	3.5	0.5	2.03
							and	37.8	38.65	0.85	1.82
							and	67	67.46	0.46	3.94
							and	70	70.35	0.35	4.07
							and	90	91	1	1.87
							and	235.35	237.55	2.2	2.85

Table 3 – Deep South Drill Results

DEEP SOUTH DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
DSEX020	456058.9	6731381	43	309	95.598	-83.31		258	258.48	0.48	14.20
							and	**265.5**	**270.96**	**5.46**	**7.31**
DSEX021	456027.5	6731424	43.606	264	75.098	-75.58		203.5	204.66	1.16	3.75
							and	216	220.35	4.35	3.11
							and	223.9	225	1.1	2.59
DSEX022	456024.2	6731434	43.893	194.6	69.098	-60.64		160	160.35	0.35	2.53
							and	161.2	161.85	0.65	4.03
							and	165.25	165.7	0.45	35.30
							and	177.5	178.05	0.55	12.70
DSEX023A	456125.1	6731269	30.841	171	57.198	-70.94	no significant results				
DSEX024	456127.7	6731258	30.942	204	92.598	-79.36		**170**	**181**	**11**	**8.38**
DSEX025	456127.6	6731258	30.93	293.96	57.998	-85.86		217.5	221.48	3.98	3.92
							and	**225.33**	**230**	**4.67**	**5.48**
							and	235.52	236	0.48	5.48
							and	289	290	1	4.17
DSEX026A	456021	6731438	43.874	303	356.298	-71.74		243.4	244.4	1	6.60
							and	248.2	248.7	0.5	3.54
							and	253.55	254.4	0.85	5.67
DSEX027	456021.1	6731438	43.869	321	352.998	-57.59		94.25	95	0.75	8.85
DSEX028	456104.5	6731144	85.79	374	138.898	-56.37		**321.5**	**330**	**8.5**	**5.50**
DSEX029	456056.4	6731380	42.489	366	147.398	-71.39		**313.17**	**339.5**	**26.33**	**3.03**
DSEX030	456056.8	6731379	42.468	417	70.198	-86.44		262.8	263.15	0.35	7.57
							and	291.3	292.15	0.85	3.24
							and	318.95	319.9	0.95	4.31
DSEX031	456056.7	6731379	42.492	363	146.498	-78.19		313.15	313.65	0.5	15.30
							and	**321.64**	**324.97**	**3.33**	**6.59**
DSEX033	456021	6731439	43.862	364.8	352.798	-76.71		275.35	276.55	1.2	3.26
							and	277.8	281.5	3.7	3.62
							and	283.2	283.5	0.3	3.66
							and	287.6	289.8	2.2	7.14
							and	**292.65**	**300.95**	**8.3**	**5.04**
DSEX040	456056.5	6731380	42.472	279	116.498	-76.54		**244.07**	**258**	**13.93**	**8.68**
DSRD072	456056.7	6731380	42.444	222	114.998	-66.29		**197.7**	**200.42**	**2.72**	**7.59**
DSRD073	456056.6	6731380	42.461	207	56.398	-67.87		164.35	169.2	4.85	11.76
DSRD074	456056.4	6731379	42.434	339	143.608	-67.52		284.7	285.6	0.9	4.66
							and	292.35	298.7	6.35	5.58
							and	303.75	304.45	0.7	12.00
							and	309.45	309.8	0.35	3.32
DSRC189	456186	6730821	408	490	68.21	-62.06		263	266	3	0.82
								411	419	8	1.06
								423	425	2	2.67
DSRC190	456171	6730704	408	550	67.98	-59.39		275	276	1	1.14
								525	527	2	1.34
								536	537	1	0.84
DSDP002	455690	6731366	410	506.9	77.89	-72.1		131	133	2	1.08
DSDP002W1B	455690	6731366	410	585.6	80	-72	no significant results				
DSDP002W1E	455690	6731366	410	906.2	80	-72		783.05	783.45	0.4	4.37
							and	850.55	850.85	0.3	8.60
							and	876.52	877.41	0.89	2.68
DSDP002W2	455690	6731366	410	695	80	-72	no significant results				
DSDP002W3A	455690	6731366	410	938.07	80	-72		657.7	658.44	0.74	0.67
								748	749	1	0.67
								888.45	**896.85**	**8.4**	**6.00**
								920.75	921.3	0.55	0.65
								922.05	922.95	0.9	2.08

Table 4 – Thunderbox Drill Results

THUNDERBOX DRILLING FEBRUARY 2019										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
THEX001	304231.2	6879256	253.4466	383.8	98.2	-68.4		**316.73**	**365.8**	**49.01**	**2.30**
THEX002	304239.2	6879182	253.62	411.43	102.6	-63.8698		182	182.8	0.8	2.08
							and	**307**	**323.9**	**16.9**	**2.03**
THEX003	304239.2	6879182	253.62	580	114.1	-77.07	results pending				
THEX004	304239.2	6879182	253.62	387.2	89	-68.01		186	186.58	0.58	2.32
							and	**329.9**	**344**	**14.1**	**1.63**
THEX005	304239.2	6879182	253.62	437.78	82.2	-75.46		359.98	361	1.02	2.13
							and	**365**	**407**	**42**	**2.35**
							and	374.14	388	13.86	3.74
							and	393.6	395	1.4	2.80
							and	401	405	4	2.30
THEX006A	304239.2	6879182	253.62	519.19	88.2	-80.57		**446.6**	**456.5**	**9.9**	**0.85**
THEX009	304170.7	6879435	251.81	543	80.2	-82.2		262	265	3	7.56
							and	268.51	269.2	0.69	2.40
							and	278.8	279.39	0.59	4.64
							and	281.97	282.8	0.83	2.35
							and	**414**	**425**	**11**	**0.73**
							and	485.32	487.31	1.99	16.76
THEX011	304183.6	6879388	250.512	560.94	78.8	-84.7949		**418.4**	**438**	**19.6**	**0.99**
							and	501.4	502	0.6	3.65
THEX012	304169.8	6879435	251.44	559.92	35.6	-78.39		270	271	1	2.30
							and	350.5	354.5	4	2.96
							and	364	365	1	2.27
							and	**386**	**420**	**34**	**0.75**
THEX013	304231.2	6879256	253.446	509.86	117.5	-73.99		390.9	406.4	15.5	1.99
THGC040	304514.1	6879312	253.8	135.04	222.5	3.58		97.71	102.12	4.41	3.19
THGC059	304514.2	6879311	252.098	176.8	199.9	-5.92		**156.9**	**165**	**8.1**	**3.90**
THGC060	304515.2	6879311	252.825	174.95	193.9	11.59		138.95	143	4.05	2.81
							and	160	163	3	2.02
							and	164	164.6	0.6	3.53
THGC061	304514.9	6879311	252.254	192	194.2	2.11		**156.94**	**165.27**	**8.33**	**1.52**
							and	163.13	163.75	0.62	2.41
							and	170.55	171.25	0.7	2.85
THGC062	304513.2	6879314	251.233	135	255.4	-23.43		106.44	114	7.56	3.13
THGC064	304513.6	6879313	251.259	143.92	232.4	-21.29		**109.61**	**117**	**7.39**	**4.05**
THGC065	304513.7	6879313	251.235	155.91	213.1	-18.36		139.34	143	3.66	2.58
THGC066	304514.7	6879311	251.172	188.29	200.3	-15.17		**166.6**	**179**	**12.4**	**2.64**
THGC068	304513.3	6879314	250.956	153.04	241.5	-31.99		**122.77**	**136.55**	**14.78**	**3.54**
THGC070	304513.7	6879313	250.983	162.09	220.2	-28.75		143.51	150.88	7.37	2.75
THGC072	304514.6	6879311	250.967	230.68	205.2	-25.565		**187.84**	**192**	**4.16**	**2.22**
THGC076	304514.7	6879311	253.527	148.1	205.3	26.09		**111.75**	**116.3**	**4.55**	**7.59**
							and	120	121.85	1.85	5.87
THGC077	304514.9	6879311	253.375	173.13	197.3	22.48		131.05	132.74	1.69	2.33
							and	134.04	135	0.96	2.17
THGC078	304515	6879311	253.205	205.87	191.4	18.75		153.23	154.05	0.82	2.80
							and	180.9	181.46	0.56	3.18
THGC079	304514.9	6879312	252.117	197.58	196.2	-5.99		167.9	175.1	7.2	2.10
THGC095	304184.3	6879388	251.98	225.4	82.6	-4.00		99.07	104.85	5.78	2.13
							and	**195**	**207.5**	**12.5**	**3.20**
THGC096	304184.2	6879388	251.619	222.45	66	-12.68		102.5	103.5	1	3.71
							and	**184.5**	**208.67**	**24.17**	**2.45**

THUNDERBOX DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
THGC097	304184.2	6879388	251.701	221.7338	73.3	-12.5302		185.3	188	2.7	3.22
							and	192.75	206	13.25	2.35
THGC098	304184.4	6879388	251.572	222.25	80.1	-12.6349		189	201.29	12.29	2.34
							and	205	208	3	2.70
THGC099	304184.2	6879388	251.244	219.5	68.6	-19.98		98.19	99	0.81	6.66
							and	187.66	188.13	0.47	3.09
							and	192	196.06	4.06	2.62
							and	201	206	5	2.17
							and	209	213	4	2.43
THGC100	304184.2	6879388	251.191	222.56	75.8	-19.93		93.37	94.37	1	5.77
							and	99.62	103	3.38	4.25
							and	185.37	193	7.63	2.40
							and	201.14	204.27	3.13	2.26
							and	210	211.89	1.89	2.40
THGC101	304184.3	6879388	251.2	225.21	83.3	-19.7748		99.52	101.4	1.88	2.83
							and	187.9	196.5	8.6	2.66
							and	208.6	209	0.4	2.60
THGC102	304184.2	6879388	250.993	250	64	-28.06		191	201.3	10.3	2.52
							and	205.15	206.55	1.4	2.60
THGC111	304184.4	6879388	251.636	222.4	86.3	-12.28		98.5	99	0.5	2.18
							and	100.4	101	0.6	3.19
							and	103.7	105	1.3	2.77
							and	191.45	210	18.55	2.35
THGC112	304184.3	6879388	251.543	225.48	90.9	-18.98		99	99.6	0.6	2.37
							and	104.2	108.8	4.6	6.38
							and	186	187	1	3.20
							and	**196**	**215.2**	**19.2**	**3.41**
							and	213.5	215.2	1.7	2.27
THGC113	304205.2	6879311	252.386	219.4	71	-12.93		101	103.35	2.35	4.15
							and	108.6	109.25	0.65	2.11
							and	**192**	**205.25**	**13.25**	**6.11**
THGC114	304205.3	6879311	252.374	216.56	76.8	-12.7545		96.33	96.91	0.58	3.67
							and	110.25	110.74	0.49	2.46
							and	111.28	112	0.72	2.63
							and	**191.63**	**200.06**	**8.43**	**2.70**
THGC115	304205.3	6879311	252.358	218.1	83.4	-12.5696	no significant results				
THGC116	304205.2	6879311	252.121	219.4	77.2	-20.0595		102.1	103	0.9	2.71
							and	194.6	195	0.4	2.21
							and	200	201.96	1.96	2.10
							and	208	208.95	0.95	2.41
THGC117	304205.3	6879311	252.111	228.45	83.8	-19.4946		101	105	4	2.06
							and	197.5	211	13.5	2.34
							and	216	216.7	0.7	2.69
THRD001	304205.1	6879311	251.325	242.11	75.6	-32.75		107.9	108.38	0.48	2.66
							and	200.93	202.93	2	3.33
							and	208.77	213.43	4.66	2.10
							and	213.86	214.25	0.39	2.37
							and	222.67	223.3	0.63	2.24
THRD002	304205.1	6879311	251.256	254.93	85	-39.29		114	115	1	4.51
							and	**215.56**	**224.27**	**8.71**	**1.58**
							and	231	233	2	2.15
							and	236	236.61	0.61	2.30
THRD003	304205.1	6879311	251.174	296.96	91.6	-51.5		257	263	6	2.42
THRD004	304231.2	6879256	253.4466	272.53	87.6	-39.44		105	105.92	0.92	3.08
							and	112	113	1	3.15
							and	188.53	188.95	0.42	37.10
							and	**205.03**	**225.31**	**20.28**	**1.77**

THUNDERBOX DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
THRD005	304231.2	6879256	253.4466	278.49	88.8	-48.59		207.28	207.9	0.62	2.34
							and	**225.52**	**232**	**6.48**	**3.35**
							and	243	244	1	2.30
THRD006	304231.2	6879256	253.4466	302.69	90.1	-56.01		133	133.43	0.43	2.37
							and	136	136.7	0.7	3.69
							and	138.46	138.99	0.53	2.73
							and	**263.5**	**271**	**7.5**	**1.71**
							and	280	280.6	0.6	2.51
THRD008	304169.9	6879435	251.557	413.85	50.8	-68.7347		**350**	**376**	**26**	**0.59**
							and	388.25	389.12	0.87	4.12
THRD009	304170.1	6879435	251.499	450	67.2	-72.85		**352.41**	**378**	**25.59**	**0.46**
							and	396.47	397	0.53	2.25
							and	404.22	407.11	2.89	3.06
THRD010	304183.7	6879388	250.513	422.53	65.1	-70.95		138.79	139.6	0.81	2.06
							and	355.5	356.5	1	2.53
							and	367.83	368.21	0.38	2.57
THRD011	304183.6	6879388	250.51	462.2	61.9	-75.25		367.2	367.78	0.58	6.39
							and	**381.6**	**392**	**10.4**	**0.83**
							and	390.95	392	1.05	2.06
							and	424.3	424.6	0.3	3.49

Table 5 – Otto Bore Drill Results

OTTO BORE DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
OBRC0013	304711	6889974	485	310	90	-60	results pending				
OBRC0014	304767	6889974	485	232	90	-60		35	37	2	3.24
							and	41	42	1	2.23
							and	48	53	5	1.18
							and	100	101	1	11.10
							and	107	108	1	2.16
							and	156	157	1	1.60
OBRC0015	304823	6889974	485	154	94.55	-60.65		62	63	1	1.24
OBRC0018	304650	6890050	489	200	90	-60		152	153	1	1.35
							and	164	166	2	4.59
OBRC0020	304720	6890050	489	150	90	-60		118	124	6	7.63
							and	128	131	3	1.67
							and	145	146	1	6.62
OBRC0021	304760	6890100	489	100	90	-60	results pending				
OBRC0023	304710	6890100	489	130	90	-60	results pending				
OBRC0025	304796	6889651	485	280	91.75	-60.24		123	124	1	3.73
							and	132	133	1	26.40
							and	139	143	4	1.10
OBRC0026	304858	6889568	482	226	90	-60		88	89	1	1.06
							and	**100**	**105**	**5**	**8.31**
OBRC0027	304900	6889568	482	148	93.17	-60.71		**49**	**52**	**3**	**0.77**
OBRC0028	304908	6889434	482	226	90	-60		**66**	**73**	**7**	**2.95**
OBRC0029	304964	6889434	482	148	93.72	-60.28		**24**	**30**	**6**	**1.46**
							and	55	56	1	1.24
OBRC0030	304923.4	6889337	487.503	130	90.6	-60.57		74	79	5	1.08
							and	97	102	5	1.77
OBRC0031	304915	6889238	487.517	166	90	-60		91	92	1	1.50
							and	**112**	**116**	**4**	**2.27**
OBRC0032	304920.4	6889200	487.714	136	90.43	-60.54		**88**	**93**	**5**	**2.95**
							and	113	114	1	1.31
OBRC0033	304920.2	6889179	487.829	148	92.55	-60.76		94	95	1	2.23
							and	101	102	1	1.01
							and	103	104	1	1.19
							and	117	118	1	5.41
							and	122	123	1	1.02
							and	**126**	**128**	**2**	**1.66**

OTTO BORE DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
OBRC0034	304939.8	6889180	487.737	118	90	-60		68	71	3	2.91
							and	**46**	**82**	**6**	**6.03**
OBRC0035	304940.4	6889160	487.758	130	90	-60		72	73	1	1.16
							and	**80**	**84**	**4**	**0.69**
							and	109	110	1	1.11
OBRC0036	304960.5	6889000	487.932	160	86.3	-60.53		54	55	1	1.11
							and	**82**	**87**	**5**	**2.30**
							and	128	129	1	1.56
OBRC0037	304940.4	6888940	488.158	184	94.45	-60.87		93	96	3	1.44
							and	99	100	1	1.34
							and	**128**	**132**	**4**	**1.11**
OBRC0038	304933.6	6888880	488.415	220	96.26	-60.28		104	105	1	1.10
							and	**132**	**142**	**10**	**6.97**
OBRC0039	304973.4	6888879	488.292	154	93.56	-60.78		56	57	1	1.39
							and	**97**	**101**	**4**	**0.71**
OBRC0040	304961.7	6888810	488.196	142	90	-60		**125**	**128**	**3**	**1.13**
OBRC0041	304901.7	6888757	488.667	310	90.34	-60.08		179	180	1	1.26
							and	**200**	**204**	**4**	**0.86**
							and	209	210	1	1.26
OBRC0042	304959.1	6888758	488.315	178	89.5	-59.91		**127**	**139**	**12**	**1.86**
							and	146	147	1	2.19
OBRC0043	304995.1	6888757	488.204	124	90	-60		**94**	**95**	**1**	**2.06**
							and	118	119	1	1.67
OBRC0044	305018.8	6888715	488.042	142	90	-60		**90**	**91**	**1**	**2.90**
OBRC0045	305015.3	6888672	488.118	160	90	-60		**124**	**134**	**10**	**2.66**
							and	139	140	1	2.48
OBRC0046	304992.1	6888616	488.397	310	91.74	-60.69	no significant results				
OBRC0047	305047.5	6888616	488.143	232	92.65	-60		**52**	**58**	**6**	**1.16**
							and	65	66	1	1.20
OBRC0048	305103.1	6888612	487.828	148	90	-60		**38**	**42**	**4**	**10.96**
OBRC0049	304996.6	6888535	488.858	316	92.08	-60.52		77	79	2	1.63
OBRC0050	305052.5	6888533	488.658	232	90.9	-61.2		91	92	1	4.07
							and	96	97	1	4.64
							and	116	117	1	4.11
OBRC0051	305109.1	6888533	488.43	154	90	-60		77	78	1	1.72
							and	81	82	1	1.17
OBRC0052	304780	6889425	488.9465	299	90.41	-60.45		85	86	1	3.25
							and	**186**	**191**	**5**	**4.40**
OBRC0053	304825	6889200	488.9241	300	84.8	-60.7		148	149	1	1.47
							and	**177**	**182**	**5**	**7.00**
OBRC0054	304834.2	6889079	488.431	300	90	-60		**192**	**195**	**3**	**1.59**
							and	219	220	1	1.00
							and	246	247	1	1.21
OBRC0055	304849.5	6888957	488.69	300	84.77	-60.05		**192**	**197**	**5**	**0.94**
OBRC0056	304907	6889401	484	200	90.22	-59.95		70	77	7	0.74
							and	111	112	1	1.19
OBRC0057	304889	6889361	487	200	91.63	-59.64		**95**	**105**	**10**	**2.09**
							and	119	121	2	4.37
							and	154	155	1	2.49
OBRC0058	304887	6889323	486	200	88.64	-59.96		97	107	10	1.24
							and	113	114	1	2.52
OBRC0059	304858	6889283	488	200	90	-60		**151**	**157**	**6**	**4.06**
OBRC0060	304918	6889120	484	170	90	-60		101	109	8	0.96
							and	111	112	1	1.75
							and	118	119	1	1.09
							and	121	122	1	2.24
							and	141	142	1	2.00
OBRC0061	304897	6889081	485	200	91.64	-60.27		77	78	1	1.04
							and	134	135	1	1.63
							and	141	142	1	1.24
OBRC0062	304916	6889001	486	200	89.14	-60.08		**117**	**123**	**6**	**3.25**
							and	155	156	1	1.28

Table 6 – Bannockburn Drill Results

BANNOCKBURN DRILLING FEBRUARY 2019										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
BBRC0086	293249.8	6851287	405.484	200	250.5	-60		156	157	1	1.21
							and	174	180	6	3.73
BBRC0087	293265.6	6851294	405.087	200	253.62	-60.82		183	194	11	2.27
BBRC0088	293222.7	6851305	405.542	190	250.5	-60		143	145	2	2.00
							and	163	169	6	1.78
BBRC0090	293260.5	6851318	405.539	215	250.5	-60		169	175	6	1.92
							and	184	197	13	2.26
BBRC0091	293214.5	6851328	405.547	192	250.5	-60		136	141	5	15.64
							and	145	148	3	2.52
							and	163	168	5	4.11
BBRC0092	293233.4	6851335	405.585	200	250.5	-60		156	159	3	1.03
							and	169	176	7	2.62
BBRC0093	293252.3	6851341	405.596	200	250.5	-60		10	11	1	3.47
							and	168	170	2	3.83
							and	193	197	4	3.40
BBRC0094	293091.8	6851312	404.777	90	251.4	-60.74		51	56	5	2.22
BBRC0095	293130.4	6851326	404.984	120	250.49	-60.81	no significant results				
BBRC0096	293148.2	6851332	404.936	150	249.2	-60.52		82	83	1	1.46
							and	**107**	**122**	**15**	**2.86**
BBRC0097	293206.3	68513540	405.502	165	250.6	-60		**139**	**146**	**7**	**0.77**
BBRC0098	293206.3	6851352	405.502	187	250.5	-60		140	141	1	1.06
							and	**150**	**162**	**12**	**0.56**
							and	156	157	1	2.19
							and	161	162	1	1.28
BBRC0099	293225.2	6851358	405.54	198	250.5	-60		**161**	**178**	**17**	**2.84**
BBRC0100	293123.1	6851350	404.912	126	253.47	-59.93		85	86	1	7.41
BBRC0101	293141.4	6851356	405.52	150	250.5	-60		83	84	1	2.01
							and	93	94	1	1.57
							and	114	118	4	3.47
							and	120	127	7	1.62
							and	132	133	1	1.29
BBRC0102	293160.3	6851362	405.473	196	250.5	-60		97	98	1	1.87
							and	137	140	3	1.26
							and	149	153	4	2.07
BBRC0103	293179.2	6851369	405.441	176	250.5	-60	results pending				
BBRC0104	293198.1	6851375	405.457	194	250.5	-60		141	158	17	2.46
							and	162	163	1	3.68
							and	167	172	5	1.33
BBRC0105	293217.1	6851382	405.372	204	247.77	-60.68		164	184	20	2.52
BBRC0106	293150.1	6851386	405.051	168	254.89	-60.06		94	95	1	1.00
							and	122	126	4	2.41
							and	139	141	2	2.31
							and	147	156	9	1.55
							and	164	165	1	2.83
BBRC0107	293171.9	6851393	405.298	180	254.28	-60.18		88	89	1	1.10
							and	134	135	1	1.69
							and	148	150	2	4.12
							and	159	161	2	1.12
BBRC0108	293208.4	6851406	405.27	192	250.49	-60.55		165	180	15	1.07

BANNOCKBURN DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
BBRC0109	293106.2	6851396	405.688	132	250.5	-60		1	2	1	1.02
							and	85	88	3	2.17
							and	92	95	3	1.15
							and	98	99	1	1.70
BBRC0110	293124.1	6851403	405.034	168	254	-60.16		76	78	2	2.05
							and	110	124	14	1.61
BBRC0111	293142	6851409	405.118	166	253.09	-59.78		122	123	1	1.25
							and	124	125	1	1.00
							and	140	143	3	2.23
							and	157	158	1	1.28
BBRC0112	293163.1	6851416	405.152	186	258.82	-60.66		134	135	1	1.46
							and	146	147	1	1.03
							and	152	154	2	3.10
BBRC0113	293181.8	6851423	405.589	180	250.5	-60		156	160	4	1.62
BBRC0114	293059.8	6851407	405.065	96	251.25	-60.66	no significant results				
BBRC0115	293078.3	6851413	405.051	114	251.06	-60.87	no significant results				
BBRC0116	293097.5	6851420	405.028	132	249.04	-60.57		69	70	1	1.10
							and	84	89	5	1.97
BBRC0117	293116.3	6851427	405.067	163	251.51	-60.27		112	132	20	1.99
BBRC0118	293135	6851433	405.099	168	251.75	-61.01		95	96	1	14.30
							and	130	134	4	2.88
							and	141	143	2	1.81
							and	159	165	6	1.24
BBRC0120	293052	6851431	405.616	94	250.5	-60	results pending				
BBRC0121	293070.2	6851438	405.117	114	252.07	-59.82		63	70	7	1.25
BBRC0122	293089.8	6851444	405.777	129	250.5	-60		70	71	1	1.24
							and	89	99	10	1.64
BBRC0123	293105.2	6851449	405.125	150	251.38	-60.79		110	113	3	1.20
							and	118	126	8	1.67
							and	133	136	3	4.09
BBRC0124	293127.6	6851457	405.792	163	250.5	-60		97	98	1	2.89
							and	101	102	1	1.36
							and	130	137	7	2.57
							and	159	160	1	1.07
							and	162	163	1	1.70
BBRC0125	293145	6851464	405.293	180	253.72	-61.17		136	138	2	1.57
							and	144	145	1	1.76
BBRC0126	293100	6851474	405.188	192	255.33	-60.86		77	78	1	2.07
							and	99	100	1	6.18
							and	115	123	8	2.83
							and	132	133	1	1.69
							and	139	140	1	7.65
							and	146	147	1	1.74
BBRC0127	293137.4	6851487	405.326	180	251.67	-60.83		137	140	3	1.16
							and	144	147	3	2.02
							and	155	156	1	1.60
							and	157	158	1	1.10
							and	165	166	1	1.17
							and	168	169	1	1.22
BBRC0128	293035.7	6851478	405.591	103	250.5	-60	no significant results				
BBRC0129	293053.9	6851485	405.123	120	254.18	-60.5		74	76	2	2.84
							and	80	81	1	1.94
BBRC0130	293073.5	6851491	405.779	137	250.5	-60		74	75	1	2.01
							and	80	81	1	2.78
							and	99	102	3	1.95
							and	107	113	6	1.37

BANNOCKBURN DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
BBRC0131	293092.4	6851498	405.866	156	250.5	-60		109	110	1	3.33
							and	117	123	6	3.91
							and	129	130	1	1.90
							and	132	133	1	1.15
							and	134	135	1	1.14
BBRC0133	293129.1	6851510	405.328	186	249.92	-60.99		109	112	3	1.99
							and	138	147	9	1.50
BBRC0134	293007.5	6851495	405.1	90	251.83	-60.77	no significant results				
BBRC0135	293026.5	6851502	405.1	108	255.31	-60.37		**49**	**52**	**3**	**1.12**
BBRC0136	293044.3	6851508	405.197	125	250.15	-60.51		**76**	**84**	**8**	**1.36**
BBRC0137	293065.3	6851515	405.753	156	250.5	-60		**99**	**126**	**27**	**1.02**
							and	133	134	1	1.13
							and	135	136	1	1.33
BBRC0138	293083.1	6851521	405.331	157	251.08	-60.59		104	105	1	2.00
							and	**116**	**144**	**28**	**1.35**
BBRC0139	293100.3	6851527	405.317	174	253.12	-61.07		**131**	**151**	**20**	**1.43**
							and	155	156	1	1.13
BBRC0140	293122	6851534	405.996	185	250.5	-60		139	140	1	1.02
							and	142	147	5	3.13
							and	182	183	1	1.95
BBRC0141	293022.9	6851527	405.182	132	252.26	-65.47		70	80	10	1.91
							and	87	89	2	1.40
							and	93	94	1	1.44
							and	98	101	3	1.29
							and	105	108	3	1.76
BBRC0142	293057.1	6851538	405.727	156	250.5	-60		84	85	1	3.25
							and	104	110	6	2.36
							and	114	123	9	1.19
							and	127	136	9	1.35
BBRC0143	293075.3	6851545	405.332	168	253.02	-60.22		120	124	4	2.30
							and	134	137	3	2.70
							and	145	146	1	1.43
							and	148	149	1	1.20
							and	155	156	1	1.19
BBRC0144	293094.9	6851551	405.904	177	250.5	-60		131	140	9	1.20
							and	148	151	3	1.43
							and	163	164	1	1.06
BBRC0145	293113.7	6851558	405.452	192	248.32	-59.81		140	141	1	1.21
							and	145	149	4	1.00
							and	150	151	1	1.16
							and	172	175	3	1.36
BBRC0146	293066.9	6851569	405.313	167	252.23	-61.09		122	127	5	1.03
							and	132	136	4	1.16
							and	146	147	1	1.39
BBRC0147	292987	6851568	405.179	116	251.67	-65.46		52	53	1	1.58
BBRC0149	293041.1	6851585	405.381	150	251.23	-60.19		79	82	3	3.31
							and	111	122	11	2.02
BBRC0150	293060.9	6851592	405.268	166	249.21	-59.9		89	90	1	1.09
							and	127	131	4	1.87
							and	143	145	2	1.25
BBRC0151	293079.1	6851598	405.447	179	248.13	-60.44		134	145	11	5.62
							and	150	151	1	1.98
BBRC0152	292968.9	6851587	405.219	96	253.13	-62.45	no significant results				

BANNOCKBURN DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
BBRC0153	292990.2	6851594	405.016	100	252.25	-63.47		76	79	3	2.18
							and	95	96	1	1.05
BBRC0154	293012.4	6851603	405.266	144	251.84	-60.67		91	98	7	3.90
							and	105	108	3	4.16
							and	112	117	5	1.54
							and	124	134	10	1.63
							and	138	139	1	1.33
BBRC0155	293033.6	6851609	405.327	146	250.36	-60.75		115	117	2	2.39
							and	122	126	4	3.25
BBRC0156	293054.6	6851617	405.484	168	249.6	-60.49		106	107	1	1.69
							and	109	110	1	1.01
							and	132	140	8	1.77
							and	144	145	1	1.21
BBRC0157	292987	6851620	405.164	114	251.94	-60.15		70	71	1	1.42
							and	73	74	1	1.18
							and	76	79	3	1.43
							and	83	84	1	1.31
BBRC0158	293005.3	6851626	405.384	126	249.28	-60.2		85	87	2	6.29
							and	98	104	6	4.29
							and	110	115	5	2.25
BBRC0159	293024.2	6851633	405.509	144	251.81	-60.03		102	104	2	2.64
							and	115	120	5	2.80
							and	124	127	3	2.42

Table 7 – Greater Luvironza (Atbara, Qena, Luvironza) Drill Results

GREATER LUVIRONZA DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
QEEX002	437151	6668796	345	322	240	-58		196	200	4	0.86
							and	208	212	4	0.73
							and	240	244	4	0.51
							and	**252**	**322**	**70**	**1.00**
							incl	**264**	**280**	**16**	**2.48**
							and	304	322	18	0.90
QEEX004	437545	6668716	345	382	230	-60		133	134	1	0.52
							and	229	236	7	2.73
							and	243	245	2	4.10
							and	**325**	**346**	**21**	**2.20**
QEEX006	437435	6668611	345	180	231.16	-61.01		**76**	**84**	**8**	**1.36**
QEEX007	437484	6668660	345	310	230.4	-61.04		208	212	4	0.93
							and	**216**	**224**	**8**	**1.99**
							and	240	244	4	4.02
QEEX010	437536	6668502	345	233	230	-60		**200**	**204**	**4**	**1.83**
QEEX011	437595	6668555	345	380	230	-60	no significant results				
QEEX012	437268	6669002	345	320	210	-55		124	128	4	0.50
							and	**204**	**224**	**20**	**0.84**

GREATER LUVIRONZA DRILLING FEBRUARY 2019										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
ATEX003	437100	6668430	350	287	240	-60	results pending				
ATEX004	437151.5	6668331	348.343	400	242.12	-60.19		49	60	11	0.99
							and	85	86	1	1.40
							and	109	110	1	1.25
							and	**155**	**164**	**9**	**1.28**
							and	223	224	1	0.71
							and	237	238	1	0.56
							and	250	253	3	0.98
							and	261	263	2	0.56
ATEX006	437401.5	6668345	347.564	450	244.85	-54.22		128	129	1	0.67
							and	141	149	8	1.05
							and	153	156	3	0.83
							and	168	170	2	1.01
							and	194	199	5	1.01
							and	215	216	1	0.50
							and	220	226	6	1.95
							and	267	270	3	1.57
							and	295	296	1	0.61
							and	306	309	3	1.09
							and	**326**	**343**	**17**	**2.65**
							incl	**326**	**330**	**4**	**8.70**
							and	355	361	6	1.82
							and	375	376	1	0.57
ATEX007	437253.3	6668452	347.424	156	245	-58		75	76	1	0.64
							and	84	85	1	2.11
							and	91	101	10	1.30
							and	113	117	4	4.15
ATEX010	437106	6668352	345	393	57	-71		72	76	4	1.63
							and	124	136	12	1.18
							and	**160**	**192**	**32**	**1.16**
							and	212	216	4	0.57
							and	252	260	8	1.68
							and	284	288	4	1.16
							and	312	316	4	0.58
							and	340	344	4	0.54
							and	348	352	4	0.55
							and	360	364	4	0.52
							and	388	392	4	0.64
ATEX011	437478.9	6668308	345	76	235	-55	results pending				
ATEXDD001	437302.4	6668439	347.595	431.7	232.85	-54.7		89	107	18	0.84
							and	126	127	1	0.72
							and	130	130.4	0.4	2.37
							and	137	138	1	0.72
							and	**148**	**158**	**10**	**2.04**
							and	164.7	166	1.3	0.55
							and	184	197	13	0.66
							and	203	207	4	0.78
							and	250	251	1	1.93
							and	257	259	2	0.53
							and	263	264	1	1.04
							and	267	268	1	0.87
							and	281.1	282	0.9	1.50
							and	285	293	8	0.86
							and	304	305	1	0.92
QEEX001	437203.6	6668641	345	208	225	-55		76	80	4	0.61
							and	84	88	4	0.60
							and	104	108	4	0.67
							and	192	196	4	0.52

Karari 2012 JORC Table 1 (Including KA Sth)

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Karari have included reverse circulation drillholes (RC), diamond drillholes (DD) and RC grade control drilling within the pit, and diamond drilling and face chip sampling underground. Historic sampling methods conducted since 1991 have included aircore (AC), rotary air blast (RAB), reverse circulation and diamond drillholes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for diamond and RC drilling and face chip sampling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC chips and diamond core provide high quality representative samples for analysis. RC, RAB, AC and DD core drilling was completed by previous holders to industry standard at that time (1991- 2004).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	RC chips are cone or riffle split and sampled into 1m intervals, diamond core is NQ or HQ sized, sampled to 1m intervals or geological boundaries where necessary and cut into half core and underground faces are chip sampled to geological boundaries (0.2-1m). All methods are used to produce representative sample of less than 3 kg. Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g or 50 g sub sample for analysis by FA/AAS. Some grade control RC chips were analysed in the Saracen on site laboratory using a PAL (pulverise and leach) method. Visible gold is sometimes encountered in underground drillcore and face samples. Historical AC, RAB, RC and diamond sampling was carried out to industry standard at that time. Analysis methods include fire assay and unspecified methods.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The deposit was initially sampled by 11 AC holes, 452 RAB holes, 496 RC holes (assumed standard 5 ¼ ''bit size) and 25 surface unknown diameter diamond core holes. Saracen has completed 14 surface RC precollars with HQ and NQ diamond tail drill holes (precollars averaging 287m, diamond tails averaging 168m) , 76 RC holes from both surface and within the pit (recent drilling utilised a 143mm diameter bit with a face sampling hammer and an external auxiliary booster) and 3052 grade control RC holes within the pit. 786 NQ diamond holes have been drilled underground. 2002 underground faces and walls have been chip sampled. Diamond tails were oriented using an Ezi-mark tool. Some historic surface diamond drill core appears to have been oriented by unknown methods.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	RC sampling recoveries are recorded in the database as a percentage based on a visual weight estimate; no historic recoveries have been recorded.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		Diamond core recovery percentages calculated from measured core versus drilled intervals are logged and recorded in the database. Recoveries average >90%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	RC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues. Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on the core blocks. UG faces are sampled from left to right across the face at the same height from the floor. During GC campaigns the sample bags weight versus bulk reject weight are compared to ensure adequate and even sample recovery. Historical AC, RAB, RC and diamond drilling to industry standard at that time.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	There is no known relationship between sample recovery and grade for RC drilling. Diamond drilling has high recoveries due to the competent nature of the ground meaning loss of material is minimal. Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc) photography.*	Logging of RC chips and diamond drill core records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. Geotechnical and structural logging is carried out on all diamond holes to record recovery, RQD, defect number, type, fill material, shape and roughness and alpha and beta angles. All faces are photographed and mapped. Chips from all RC holes (exploration and GC) are stored in chip trays for future reference while remaining core is stored in core trays and archived on site. Core is photographed in both dry and wet state. Qualitative and quantitative logging of historic data varies in its completeness.
	The total length and percentage of the relevant intersections logged	All RC and diamond drillholes holes are logged in full and all faces are mapped. Every second drill line is logged in grade control programs with infill logging carried out as deemed necessary. Historical logging is approximately 95% complete.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All drill core is cut in half onsite using an automatic core saw. Samples are always collected from the same side.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All exploration and grade control RC samples are cone or riffle split. Occasional wet samples are encountered. Underground faces are chip sampled using a hammer. AC, RAB and RC drilling has been sampled using riffle and unknown methods.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of diamond core and RC and underground face chips adhere to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. Best practice is assumed at the time of historic sampling.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory. Sampling by previous holders assumed to be industry standard at the time.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	RC field duplicate samples are carried out at a rate of 1:20 and are sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. No duplicates have been taken of underground core or face samples. Sampling by previous holders assumed to be industry standard at the time.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes of 3kg are considered to be appropriate given the grain size (90% passing 75 microns) of the material sampled.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples, grade control chip samples, underground face chip samples and diamond core are analysed by external laboratories using a 40g or 50g fire assay with AAS finish. These methods are considered suitable for determining gold concentrations in rock and are total digest methods. Some GC samples were analysed in the Saracen onsite laboratory using pulverise and leach method. This method is a partial digest. Historic sampling includes fire assay and unknown methods.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools have been utilised for reporting gold mineralisation.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration RC and DD, and 1:40 for GC drilling. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel.
	The use of twinned holes.	No specific twinned holes have been drilled at Karari but grade control drilling and underground diamond drilling has confirmed the width and grade of previous exploration drilling.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database.
	Discuss any adjustment to assay data.	No adjustments have been made to assay data. First gold assay is utilised for resource estimation.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Drillhole collars within the pit and immediate surrounds are picked up by company surveyors using a Trimble R8 GNSS (GPS) with an expected accuracy of +/-8mm. All underground drillhole collars are picked up by company surveyors using a Leica TS15i (total station) with an expected accuracy of +/-2mm. Underground faces are located using a Leica D5 disto with and accuracy of +/- 1mm from a known survey point. Downhole surveys are carried out using the DeviFlex RAPID continuous inrod survey instrument taking readings every 5 seconds, In and Out runs and reported in 3m intervals, survey accuracy +-3:1000. A number of drillholes have also been gyroscopically surveyed. Previous holders' survey accuracy and quality is unknown
	Specification of the grid system used.	A local grid system (Karari) is used. The two point conversion to MGA_GDA94 zone 51 is KAREast KARNorth RL MGAEast MGANorth RL Point 1 4000 8000 0 439359.94 6663787.79 0 Point 2 3000 7400 0 438359.84 6663187.72 0 Historic data is converted to the Karari local grid upon export from the database.
	Quality and adequacy of topographic control.	Topographic control originally used site based survey pickups in addition to Kevron aerial photogrammetric surveys with +/- 5m resolution. Pre mining, new and more detailed topography has since been captured and will be used in future updates and for subsequent planning purposes.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The nominal spacing for drilling is 25m x 25m.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource	Data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for JORC classifications applied.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	and Ore Reserve estimation procedure(s) and classifications applied.	
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	Sample compositing is not applied until the estimation stage. Some historic RAB and RC sampling was composited into 3-4m samples with areas of interest re-sampled to 1m intervals. It is unknown at what threshold this occurred.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The majority of drillholes are positioned to achieve optimum intersection angles to the ore zone as are practicable. Underground diamond drilling is designed to intersect the orebody in the best possible orientation given the constraints of underground drill locations. UG faces are sampled left to right across the face allowing a representative sample to be taken.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No significant sampling bias has been recognised due to orientation of drilling in regards to mineralised structures.
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures. No external audits or reviews have been conducted.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Karari pit is located on M28/166 and M28/167 Mining Leases M28/166 and M28/167 are held 100% by Saracen Gold Mines Pty Ltd a wholly owned subsidiary of Saracen Mineral Holdings Limited. Mining Leases M28/166 and M28/167 have a 21 year life (held until 2020) and are renewable for a further 21 years on a continuing basis. There are no registered Aboriginal Heritage sites within Mining Leases M28/166 and M28/167. M28/166 and M28/167 are the subject of the Maduwongga native title claim (WC2017/001). Mining Leases M28/166 and M28/167 are subject to two third party royalties payable on the tenements, a bank mortgage (Mortgage 499142) and two caveats (Caveat 51H/067 and 52H/067, respectively). All production is subject to a Western Australian state government NSR royalty of 2.5%. The tenements are subject to the Pinjin Pastoral Compensation Agreement. The Mining Rehabilitation Fund applies to the tenements.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and the licence to operate already exists
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	The Carosue Dam project area in which the Karari deposit is located has been subjected to extensive gold exploration by numerous companies since 1991. Karari was highlighted as an area of interest following an aeromagnetic survey conducted by CRA Exploration. Auger sampling of the target defined a widespread gold anomaly with follow up RAB drilling intersecting significant gold mineralisation. RC and DD drilling further defined the mineralisation before Aberfoyle entered into a joint venture agreement with CRA. Further drilling by Aberfoyle defined mineralisation over a 600m strike length. Aberfoyle were subject to a hostile takeover by Western Metals with PacMin then purchasing the Carosue Dam project. An intensive resource definition program consisting of both RC and DD drilling was carried out before mining of Karari commenced in 2000.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Karari deposit sits along the regional NNW-trending Keith-Kilkenny fault zone within the eastern edge of the Norseman-Wiluna greenstone belt. The deposit itself is lithologically and structurally controlled and sits within an altered volcaniclastic sandstone unit that has been offset along a series of major faults running NE-SW and NW-SE, as well as intruded by large lamprophyre units post mineralization. Mineralization is dominated by pyrite and hosted in broad hematite altered sandstone units with a central high grade siliceous core light-moderately dipping to the North.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation* • *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	All material data is periodically released on the ASX: 31/07/2018, 01/05/2018,15/02/2018, 27/11/2017, 26/09/2017, 13/07/2017, 01/05/2017, 21/02/2017, 13/04/2016, 23/02/2016, 10/12/2015, 03/07/2015, 25/05/2015, 05/05/2015, 11/03/2015, 16/01/2014, 14/10/2013, 25/01/2013, 28/07/2011, 03/06/2011, 21/04/2011, 09/02/2011, 03/11/2008
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All underground diamond drillhole significant intercepts have been length weighted with a minimum Au grade of 2.5ppm. No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 0.5m and maximum width of 3m for internal dilution. Where stand out higher grade zone exist with in the broader mineralised zone, the higher grade interval is reported also.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Previous announcements included sufficient detail to clearly illustrate the geometry of the mineralisation and the recent drilling. All results are reported as downhole lengths.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	No Diagrams are referenced in this release.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from previous campaigns have been reported, irrespective of success or not.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No substantive data acquisition has been completed in recent times.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Further infill drilling may be carried out inside the reserve UG design to improve confidence. The drilling is getting to the depth where exploration is expensive and the approach needs to be carefully considered. Underground drilling continues and surface drilling is being evaluated. A seismic project is also being assessed.

Whirling Dervish JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Whirling Dervish have included reverse circulation (RC), surface and underground diamond drillholes (DD) and RC grade control drilling within the pit. Historic methods conducted since 1993 have included aircore (AC), rotary air blast (RAB), reverse circulation and diamond drillholes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for diamond and RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC chips and diamond core provide high quality representative samples for analysis. RC, RAB, AC and DD core drilling was completed by previous holders to industry standard at that time (1993- 2002).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	Diamond core is NQ sized, sampled to 1m intervals and geological boundaries where necessary and cut into half core to give sample weights under 3 kg. Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. RC chips are riffle or cone split and sampled into 1m intervals with total sample weights under 3kg Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g or 50 g sub sample for analysis by FA/AAS. Historical AC, RAB, RC and diamond sampling was carried out to industry standard at that time. Analysis methods include fire assay, aqua regia, B/ETA and unspecified methods.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The deposit was initially sampled by 35 AC holes, 159 RAB holes, 407 RC holes (assumed standard 5 ¼ ''bit size) and 53 surface diamond HQ core and unknown diameter holes. Saracen has completed 51 surface RC precollar with NQ diamond tail drill holes (precollars averaging 193m, diamond tails averaging 200m) , 12 diamond geotechnical holes , 80 RC holes from both surface and within the pit,4039 grade control RC holes within the pit and 222 NQ underground diamond drillholes. Diamond tails were oriented using an Ezy-mark tool. Some historic surface diamond drill core appears to have been oriented by unknown methods.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Diamond core recovery percentages calculated from measured core versus drilled intervals are logged and recorded in the database. Recoveries average >90%. RC sampling recoveries are recorded as a percentage based on a visual weight estimate; no historic recoveries have been recorded.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on the core blocks. During GC campaigns daily rig inspections are carried out to check splitter condition, general site and address general issues. The sample bags weight versus bulk reject weight is compared to ensure adequate and even sample recovery. Historical AC, RAB, RC and diamond drilling to industry standard at that time.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Diamond drilling has high recoveries meaning loss of material is minimal. There is no known relationship between sample recovery and grade for RC drilling. Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc.) photography.*	Logging of diamond drill core and RC chips records lithology, mineralogy, texture, mineralisation, weathering, alteration, veining and other features. Geotechnical and structural logging is carried out on all diamond holes to record recovery, RQD, defect number, type, fill material, shape and roughness and alpha and beta angles. Chips from all RC holes (exploration and GC) are stored in chip trays for future reference. Core is photographed in both dry and wet state. Qualitative and quantitative logging of historic data varies in its completeness.
	The total length and percentage of the relevant intersections logged	All diamond drillholes and exploration RC holes are logged in full. Every drill line is logged in grade control programs. Historical logging is approximately 95% complete.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All drill core is cut in half onsite using an automatic core saw. Samples are always collected from the same side. Historic diamond drilling has been half core sampled.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All exploration and GC RC samples are cone or riffle split. Occasional wet samples are encountered; increased air capacity is routinely used to aid in keeping the sample dry when water is encountered. Historic AC, RAB and RC drilling was sampled using spear, grab, riffle and unknown methods.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of diamond core and RC chips adhere to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. Best practice is assumed at the time of historic sampling.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory. Sampling by previous holders assumed to be industry standard at the time.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	Duplicate sampling is carried out at a rate of 1:10 for exploration drilling and 1:20 for GC drilling and is sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. Sampling by previous holders assumed to be industry standard at the time.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered to be appropriate.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples, grade control chip samples and diamond core are analysed by external laboratories using a 40g or 50g fire assay with AAS finish. These methods are considered suitable for determining gold concentrations in rock and are total digest methods. Historic sampling includes fire assay, aqua regia, B/ETA and unknown methods.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools have been utilised for reporting gold mineralisation at Whirling Dervish.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration RC and DD, and 1:40 for GC drilling. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel.
	The use of twinned holes.	No specific twinned holes have been drilled at Whirling Dervish but grade control drilling has confirmed the width and grade of previous exploration drilling.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database.
	Discuss any adjustment to assay data.	No adjustments have been made to assay data. First gold assay is utilised for resource estimation.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Drillhole collars within the pit and immediate surrounds are picked up by company surveyors using a Trimble R8 GNSS (GPS) with an expected accuracy of +/-8mm. All underground drillhole collars are picked up by company surveyors using a Leica TS15i (total station) with an expected accuracy of +/-2mm. Downhole surveys are carried out using the DeviFlex RAPID continuous inrod survey instrument taking readings every 5 seconds, In and Out runs and reported in 3m intervals, survey accuracy +-3:1000. A number of drillholes have also been gyroscopically surveyed. Previous holders' survey accuracy and quality is unknown
	Specification of the grid system used.	A local grid system (Whirling Dervish) is used. It is rotated 45 degrees west of MGA_GDA94. The one point conversion to MGA_GDA94 zone 51 is WDEast WDNorth RL MGAEast MGANorth RL Point 1 20003.8190 50277.5540 0 437865.3740 6665770.2100 0 Historic data is converted to Whirling Dervish local grid upon export from the database.
	Quality and adequacy of topographic control.	Topographic control originally used site based survey pickups in addition to Kevron aerial photogrammetric surveys with +/- 5m resolution. Pre mining, new and more detailed topography has since been captured and will be used in future updates and for subsequent planning purposes.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The nominal spacing for exploration drilling is 25m x 25m
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for JORC classifications applied.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	Sample compositing is not applied until the estimation stage. Some historic RAB and RC sampling was composited into 3-4m samples with areas of interest re-sampled to 1m intervals. It is unknown at what threshold this occurred.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The majority of drillholes are positioned to achieve optimum intersection angles to the ore zone as are practicable.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No significant sampling bias is thought to occur due to orientation of drilling in regards to mineralised structures.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Whirling Dervish pit is located on M28/166 and M31/220, while near mine exploration has been carried out on M28/245. The tenements are held 100% by Saracen Gold Mines Pty Ltd, a wholly owned subsidiary of Saracen Mineral Holdings Limited. Mining Leases M28/166 and M31/220 have a 21 year life (held until 2020) and are renewable for a further 21 years on a continuing basis. Mining Lease M28/245 has a 21 year life (held until 2029) and is renewable for a further 21 years on a continuing basis. Mining Lease M28/166 is subject to two third party royalties and one caveat (Caveat 51H/067). Mining Lease M31/220 is subject to two third party royalties and one caveat (Caveat 64H/067) and Mining Lease M28/245 is subject to one third party royalty. There are no caveats associated with Mining Lease M28/245. Mining Leases M28/166, M28/245 and M31/220 are subject to a bank mortgage (Mortgage 499142). All production is subject to a Western Australian state government NSR royalty of 2.5%. Mining Leases M28/166, M31/220 and M28/245 are subject to the Pinjin Pastoral Compensation Agreement. Mining Lease M31/220 is subject to the Pinjin and Gindalbie Pastoral Compensation Agreements. M28/166, M31/220 and M28/245 are the subject of the Maduwongga native title claim (WC2017/001). The Mining Rehabilitation Fund applies to the tenements.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and the licence to operate already exists.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	The Carosue Dam project area in which the Whirling Dervish deposit is located has been subjected to extensive gold exploration by numerous companies since 1991. Airborne geophysics conducted by Aberfoyle Resources in 1997 highlighted numerous targets in the project area with subsequent RAB drilling intersecting the Whirling Dervish mineralisation and an extensive RC campaign confirming it. Oriole Resources obtained the project in 1998 and, through wholly owned subsidiary company PacMin, completed closely spaced RC drilling to develop the resource through to reserve status. Sons of Gwalia carried out minor drilling before their collapse and takeover of the project by St Barbara.
Geology	*Deposit type, geological setting and style of mineralisation.*	Whirling Dervish is situated along the Kilkenny-Yilgangi fault zone on the boundary of the Steeple Hill and Mulgabbie domains. The lithology comprises primarily intermediate felsic volcaniclastic sandstones, intermediate tuffs and intermediate porphyry units intruded by granites of varying composition, with stratigraphy dipping generally to the east at approx. 60 degrees. Mineralization has a combined lithological and structurally control dipping parallel to the stratigraphy. Mineralization is continuous along strike in the footwall but is very discontinuous and patchy in the hanging wall structures and overall controlled by the general NW trending ductile faulting and is characterized by weak Hematite banding on the margins to intense hematite-silica alteration hosted in breccia zones adjacent to the faulting with high grade cores typically sericite-silica breccia. Pyrite is the dominant sulphide. The mineralization is terminated to the west by the by a NW trending shear zone dipping 60 degrees to the east.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation* • *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	All material data is periodically released on the ASX: 31/07/2018, 01/05/2018, 15/02/2018, 27/11/2017, 15/10/2015, 14/10/2013, 23/07/2013, 03/12/2012, 10/10/2012, 31/07/2012, 27/04/2012, 06/03/2012, 27/01/2012, 06/01/2012, 26/10/2011, 01/08/2011, 28/07/2011, 03/06/2011, 21/04/2011, 09/02/2011

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 1ppm. No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution. Where stand out higher grade zone exist with in the broader mineralised zone, the higher grade interval is reported also.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Previous announcements included sufficient detail to clearly illustrate the geometry of the mineralisation and the recent drilling. All results are reported as downhole lengths.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	No Diagrams are referenced in this release.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from previous campaigns have been reported, irrespective of success or not.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Drilling is on going on surface and underground. A seismic project is also being assessed.

Deep South JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Deep South have included reverse circulation drillholes (RC), aircore drilling (AC), surface and underground diamond drillholes (DD), underground face chip sampling and RC grade control drilling within the pit. Historic sampling methods conducted since 1983 have included rotary air blast (RAB), reverse circulation and diamond drillholes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for diamond, face chip and RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC and UG face chips and diamond core provide high quality representative samples for analysis. RC, RAB and DD core drilling was completed by previous holders to industry standard at that time (1983-2004).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	RC chips are cone or riffle split and sampled into 1m intervals with total sample weights under 3kg Diamond core is NQ sized, sampled to 1m intervals or geological boundaries where necessary and cut into half core to give sample weights under 3 kg. UG faces are chip sampled to geological intervals (0.2 to 1m). Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g or 50 g sub sample for analysis by FA/AAS. Some grade control RC chips were analysed in the Saracen on site laboratory using a PAL (pulverise and leach) method. Historical RAB, RC and diamond sampling was carried out to industry standard at that time. Analysis methods include fire assay, aqua regia, atomic absorption spectroscopy and unspecified methods.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The deposit was initially sampled by 114 RAB holes, 211 RC holes (assumed standard 5 ¼ '' bit size) and 29 surface HQ and unknown diameter diamond core holes. Saracen has completed 15 surface RC precollars with NQ diamond tail drill holes (precollars averaging 185m, diamond tails averaging 140m) , 3 geotechnical surface diamond NQ drillholes, 57 RC holes from surface and 107 grade control RC holes within the pit. Underground sampling activities have included 646 NQ diamond drillholes and 1596 faces. Exploration of the broader Deep South area has included 312AC holes. Diamond tails were oriented using an Ezi-mark tool. A limited amount of historic surface diamond drill core appears to have been oriented by unknown methods.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	RC sampling recoveries are recorded in the database as a percentage based on a visual weight estimate; limited historic recoveries have been recorded.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		Diamond core recovery percentages calculated from measured core versus drilled intervals are logged and recorded in the database. Recoveries average >98%. Limited historic diamond recoveries have been recorded.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	During AC and RC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues. Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on the core blocks. UG faces are sampled left to right across the face allowing a representative sample to be taken due to the vertical nature of the orebody. During GC campaigns the sample bags weight versus bulk reject weight are compared to ensure adequate and even sample recovery. Historical RAB, RC and diamond drilling to industry standard at that time.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	There is no known relationship between sample recovery and grade for RC or AC drilling. Diamond drilling has high recoveries meaning loss of material is minimal. Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc) photography.*	Logging of RC and AC chips and diamond drill core records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. Geotechnical and structural logging is carried out on all diamond holes to record recovery, RQD, defect number, type, fill material, shape and roughness and alpha and beta angles. Chips from all RC holes (exploration and GC) are stored in chip trays for future reference while remaining core is stored in core trays and archived on site. All faces are photographed and mapped. Core is photographed in both dry and wet state. Qualitative and quantitative logging of historic data varies in its completeness.
	The total length and percentage of the relevant intersections logged	All AC, RC and diamond drillholes and grade control holes are logged in full. Historical logging is complete.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All drill core is cut in half onsite using an automatic core saw. Some grade control diamond holes have been full core sampled. Samples are always collected from the same side. Some historic drillcore was half core sampled, or sampled via unknown methods.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All exploration and grade control RC samples are cone or riffle split. AC drillholes are spear sampled. Occasional wet samples are encountered; increased air capacity is routinely used to aid in keeping the sample dry when water is encountered. UG faces are chip sampled using a hammer. Historic RAB and RC drilling was sampled using riffle and unknown methods.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of diamond core, UG face chips and RC chips adhere to industry best practice. It is conducted by a commercial laboratory or onsite laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. Best practice is assumed at the time of historic sampling.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory or onsite laboratory and are considered to be satisfactory. Sampling by previous holders assumed to be industry standard at the time.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	RC field duplicate samples are carried out at a rate of 1:20 and are sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. Sampling by previous holders assumed to be industry standard at the time.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes of 3kg are considered to be appropriate given the grain size (90% passing 75 microns) of the material sampled.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC and UG chip samples and diamond core are analysed by external laboratories using a 50g fire assay with AAS finish. AC samples are analysed using a 25g aqua regia digest. These methods are considered suitable for determining gold concentrations in rock and are total digest methods. GC samples were analysed in the Saracen onsite laboratory using a pulverise and leach method. This method is a partial digest. Historic sampling includes fire assay, aqua regia, atomic absorption spectroscopy and unspecified methods.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools have been utilised for reporting gold mineralisation.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration AC, RC and DD, and 1:40 for GC drilling. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel.
	The use of twinned holes.	No specific twinned holes have been drilled at Deep South but grade control drilling has confirmed the width and grade of previous exploration drilling.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database.
	Discuss any adjustment to assay data.	No adjustments have been made to assay data. First gold assay is utilised for resource estimation.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Drillhole collars within the pit and immediate surrounds are picked up by company surveyors using a Trimble R8 GNSS (GPS) with an expected accuracy of +/-8mm. All underground drillhole collars are picked up by company surveyors using a Leica TS15i (total station) with an expected accuracy of +/-2mm. Underground faces are located using a Leica D5 disto with and accuracy of +/- 1mm from a known survey point. Downhole surveys are carried out using the DeviFlex RAPID continuous inrod survey instrument taking readings every 5 seconds, In and Out runs and reported in 3m intervals, survey accuracy +-3:1000. A number of drillholes have also been gyroscopically surveyed. Previous holders' survey accuracy and quality is unknown
	Specification of the grid system used.	A local grid system (Safari Bore) is used at Deep South. The two point conversion to MGA_GDA94 zone 51 is: SBEast SBNorth RL MGAEast MGANorth RL Point 1 51000 34000 0 451137.753 6734157.921 0 Point 2 51000 30000 0 451137.896 6730157.896 0 Historic data is converted to the Safari Bore local grid upon export from the database.
	Quality and adequacy of topographic control.	Topographic control originally used site based survey pickups in addition to Kevron aerial photogrammetric surveys with +/- 5m resolution. Pre mining, new and more detailed topography has since been captured and will be used in future updates and for subsequent planning purposes.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The nominal spacing for drilling is 20m x 40m and 40m x 40m
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for JORC classifications applied.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	AC drilling is sampled in 4m composites, no other sample compositing has been utilised Some historic RAB and RC sampling was composited into 3-4m samples with areas of interest re-sampled to 1m intervals. It is unknown at what threshold this occurred.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The majority of drillholes are positioned to achieve optimum intersection angles to the ore zone as are practicable.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No significant sampling bias has been recognised due to orientation of drilling in regards to mineralised structures.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures. No external audits or reviews have been conducted.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Deep South pit is located on M39/740. The tenement is held 100% by Saracen Gold Mines Pty Ltd, a wholly owned subsidiary of Saracen Mineral Holdings Limited. Mining Lease M39/740 has a 21 year life (held until 2024) and is renewable for a further 21 years on a continuing basis. Mining Lease M39/740 is subject to one royalty agreement, one caveat (151H/067) and a bank mortgage (499142). All production is subject to a Western Australian state government NSR royalty of 2.5%. Mining Lease M39/740 is subject to the Edjudina Pastoral Compensation Agreement. There are no registered Aboriginal Heritage sites within Mining Lease M39/740. The Mining Rehabilitation Fund applies to Mining Lease 39/740.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is in good standing and the licence to operate already exists
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	Exploration in the vicinity of Deep South commenced in the 1980's with drilling around the historic Deep Well workings 500m north of Deep South, as well as regional RC drilling carried out by Western Mining Corporation. Initial auger sampling carried out over Deep South by Pancontinental Mining in 1994 failed to detect mineralisation due to the transported material overlying the deposit. Wide spaced east angled RAB drilling carried out by Goldfields in 1999 intersected mineralisation, but results were not repeated in further drilling and the project area was sold to Sons of Gwalia. Sons of Gwalia completed extensive RC and diamond drilling to define the Deep South resource, with mining operations undertaken in 2004 before their collapse and takeover by St Barbara.
Geology	*Deposit type, geological setting and style of mineralisation.*	Deep South lies on the eastern margin of the Norseman – Wiluna greenstone belt. This belt is differentiated into numerous structural-stratigraphic domains separated by major regional structures, with Deep South located within the narrow NNW trending Linden Domain. The lithology comprises metasedimentary and felsic volcaniclastic rocks with an ultramafic and high magnesium basalt layer. Mineralisation occurs in two loads concordant to geology, the Butler and Scarlett lodes, and is confined between layered metasedimentary and felsic volcaniclastic units on both the hangingwall and footwall. The two lodes are separated by a high magnesium basalt and an ultramafic unit.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		The Butler lode is located in the hangingwall and is strongly silica and pyrrhotite-pyrite altered, and well laminated (appearing like a BIF within the oxidise portion). The contrasting physical properties of this unit to the surrounding unit have created fluid pathways and traps, as well as the high iron content of the unit providing a chemical trap, for gold deposition The Scarlett lode is strongly weathered in the upper oxide portion to a gossanous material comprising hematite, goethite and quartz fragments. Weathering at Deep South has been preferential along Scarlett lode due to its high carbonate content. Where fresh, the lode is a fine grained banded carbonate unit with variable pyrrhotite, pyrite and magnetite. It is weakly foliated in line with the regional foliation.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation* • *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	All material data is periodically released on the ASX: 15/02/2018, 27/11/2017, 26/09/2017, 01/05/2017, 21/02/2017, 17/12/2016, 07/09/2016, 11/05/2016, 23/02/2016, 23/07/2013, 10/10/2012, 31/07/2012, 03/06/2011, 29/07/2010 Future drill hole data will be periodically released or when a results materially change the economic value of the project. Exclusion of the drilling information will not detract from the reader's view of the report.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 1ppm, or 20ppb for AC drilling No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution. Where stand out higher grade zone exist with in the broader mineralised zone, the higher grade interval is reported also.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be*	Previous announcement included sufficient detail to clearly illustrate the geometry of the mineralisation and the recent drilling. All results are reported as downhole lengths. This remains consistent with other announcements.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	reported. *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	All significant exploration results released by Saracen are accompanied by the appropriate diagrams and maps at the time of the release.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from the recent campaign have been reported, irrespective of success or not.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	A small geochemical program was undertaken in 2013 to determine the key features associated with mineralisation. The program gave some insight into the local characteristics of the Scarlett and Butler lodes. More work is needed to fully appreciate the geochemical signature associated with the mineralisation. A detailed gravity survey was recently completed at Deep South on a 400m x 100m grid to assist in the interpretation of the basement geology. The data is currently being processed and interpreted. Saracen has recently completed a biogeochemical sampling program at Deep South involving the sampling of new leaf growth on established *Acacia* trees on a 100m x 800m spacing. Samples were collected from trees of a consistent species and height. The biogeochemical program was an orientation survey only and results will not be used in any calculation of mineralisation. The leaves were washed, dried and pulverised followed by an aqua regia digest for multielement determination.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Surface and underground drilling will continue, and regional aircore program will continue across the Mt Celia district.

Thunderbox JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Thunderbox include diamond drilling (DD) and reverse circulation (RC) drilling. Sampling methods undertaken by previous owners have included rotary air blast (RAB), DD and RC drilling and blast hole sampling within the pit. Limited historical data has been provided by previous owners.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for diamond and RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC chips and diamond core provide high quality representative samples for analysis Historic RC, RAB, and DD core drilling is assumed to have been completed by previous holders to industry standard at that time (1999- 2007).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems.	RC chips are cone split and sampled into 4m or 1m intervals with total sample weights under 3kg Diamond core is NQ or HQ sized, sampled to 1m intervals or geological boundaries where necessary and cut into half core to give sample weights under 3 kg. Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g sub sample for analysis by FA/AAS.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	All historic RAB, RC and DD and sampling is assumed to have been carried out to industry standard at that time. RC grade control drilling was used to obtain 1m samples or 2m composite samples from which 3 kg was pulverised to create a 50g charge for fire assay, while blast hole samples were composited into 2.5m before a 3kg sample was obtained for pulverising to a final 50g charge for fire assay.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The deposit was initially sampled by 470 RAB holes. Further drilling included 306 RC holes (assumed standard 5 ¼ ‘’bit size) , 216 HQ, NQ and PQ diamond drillholes , approximately 15,400 blast holes and 2,400 RC grade control holes. Some diamond drilling carried out for geotechnical studies was oriented (the method is unknown), it is unknown if other core was oriented. Saracen completed 46 RC drillholes, 8 diamond geotechnical holes, 65 RC precollar diamond tail drillholes (precollars averaging 122m, diamond tails averaging 351m), 93 underground DD holes and 1998 RC grade control holes. The RC drilling was completed with a 5.5 inch diameter bit with a face sampling hammer. The rig was equipped with an external auxiliary booster. Diamond drilling was HQ or NQ diameter. Drill core was oriented utilising an ACT II core orientation tool.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Recoveries for RC drillholes and precollars are recorded as a percentage based on a visual weight estimate. Recoveries for some grade control drilling and blast hole sampling have been recorded based on a visual weight estimate. No other recoveries have been provided, it is unknown if they were recorded
	Measures taken to maximise sample recovery andensure representative nature of the samples	During RC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues. Measures were taken to supress groundwater. Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on the core blocks. Historical drilling is assumed completed to industry standard at that time
	Whether a relationship exists between sample recovery and grade and whether sample bias may	There is no known relationship between sample recovery and grade for RC drilling. Diamond drilling has high recoveries meaning loss of material is minimal.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	have occurred due to preferential loss/gain of fine/coarse material.	Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc) photography.*	Logging of RC chips and diamond drill core records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. Geotechnical and structural logging is carried out on all diamond holes to record recovery, RQD, defect number, type, fill material, shape and roughness and alpha and beta angles. Chips from all RC holes are stored in chip trays for future reference while remaining core is stored in core trays and archived on site. Core is photographed in both dry and wet state. Qualitative and quantitative logging of historic data varies in its completeness.
	The total length and percentage of the relevant *intersections logged*	All drillholes completed by Saracen have been logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All drill core is cut in half onsite using an automatic core saw. Duplicate core samples are quarter cored. Samples are always collected from the same side.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All exploration RC samples are cone split. Occasional wet samples are encountered. The sampling method for historic RAB and RC drilling is unknown. Grade control RC drilling has been cone split while blast hole sampling has been riffle split. Wet drilling was rarely encountered, and extra care was taken to clean the splitter after encountering wet samples. Drillholes in puggy, wet clays were abandoned and redrilled once dewatering of the pit had commenced. Care was taken to adjust the splitter orifice for grade control drilling to ensure the sample weight did not exceed 3kg, meaning no subsampling was needed at the preparation stage.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of diamond core and RC chips adhere to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90%

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		passing 75 microns. The sampling techniques for historic exploration RAB, RC and DD drilling are unknown, best practice is assumed. The sample preparation of RC grade control drilling and blast hole sampling involved oven drying, coarse crushing and total grinding in an LM5.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory. Best practice is assumed at the time of historic RAB, DD and RC sampling. Procedures adopted to ensure sample representivity for RC grade control and blast hole sampling included weight analysis to determine split ratio (at least 2 holes per program) and sizing analysis of every 25th sample, with an expected return of 90% passing 75um.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	RC field duplicate samples are carried out at a rate of 1:20 and are sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. It is unknown if duplicate sampling was performed on historic exploration RAB, RC and DD drilling. Field duplicates were carried out on RC grade control drilling at a rate of one per hole, collected from the second sample port on the cone splitter. Duplicates were carried out at a rate of 1 in 20 for blast hole sampling.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Analysis of data determined sample sizes were considered to be appropriate.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples and diamond core are analysed by an external laboratory using a 40g fire assay with AAS finish. This method is considered suitable for determining gold concentrations in rock and is a total digest method. A 50 gram fire assay with AAS finish was used to determine the gold concentration for all grade control samples. This method is considered suitable for determining gold concentrations in rock and is a total digest method. Methods for exploration RC, RAB and DD drilling included fire assay with AAS finish, BAAS and unknown methods.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	The clay mineralogy of the deposit was investigated using PIMA (Portable Infra-red Microscopic Analyser) analysis to assist with geological interpretation. This data was not used in the estimation process.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration RC and DD. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel
	The use of twinned holes.	A number of exploration RC holes were drilled to twin original RAB holes and verify results.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database
	Discuss any adjustment to assay data.	No adjustments have been made to assay data. First gold assay is utilised for resource estimation.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Downhole surveys are carried out using a hired Reflex EZ-gyro by the respective drilling companies on a regular basis, between 10-30m.
	Specification of the grid system used.	MGA Zone 51 grid coordinate system is used

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Quality and adequacy of topographic control.	Kevron Geomatic Services flew and processed aerial photography and provided ortho images at 1:5000 scale over the Thunderbox deposit and environs.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The nominal spacing for drilling is varied from 20mx20m to 40mx40m
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The drilling is distributed and spaced such that geological and grade continuity can be established to estimate the mineral resource and ore reserve appropriately. The mineralisation is continuous over a 2km strike length, therefore the 80m x 80m exploration drill spacing effectively defines the continuity.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	RC precollar sampling was composted into 4m samples. Historic RAB drilling was sampled with 4m composite samples. Grade control RC drilling was carried out on 2m composite samples, while blast hole sampling was carried out on 2.5m composites.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The bulk of the drilling has been oriented to the east in order to provide the best intersection angles possible for the steeply west dipping orebody.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	All drilling from surface has been drilled as close to perpendicular as possible. This has reduced the risk of introducing a sampling bias as far as possible.
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures. No external audits or reviews have been conducted

Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	M36/504, M36/512 and M36/542 form part of the Thunderbox project and are in good standing. There are no native title claims over the Thunderbox deposit. A number of heritage surveys have been undertaken with Aboriginal groups with no sites of significance identified. In addition a detailed archaeological survey has been conducted with no sites of significance identified
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and the license to operate already exists.
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	Extensive nickel exploration was undertaken in the area during the 1960s and 1970s. Grassroots gold and PGE exploration was undertaken during and since the 1980s by BHP, Dominion, Dalrymple Resources and Forrestania Gold. Thunderbox was discovered in 1999.
Geology	*Deposit type, geological setting and style of* *mineralisation.*	Thunderbox is a mesothermal lode gold deposit located at the southern end of the Yandal greenstone belt in an area where several major shear zones converge and join with the Perseverance Fault. The shear zone dips at 30° to 60° WSW, with the exception in the vicinity of the mineralisation, where the shear is vertical to steeply dipping. Mineralisation is hosted by strongly deformed, silicified and carbonate altered albite-quartz porphyry in the hangingwall of the shear zone. The shear juxtaposes foliated basalts and intrusive porphyries in the hangingwall against sedimentary rocks in the footwall. The zone of shearing is over 200m wide. An ultramafic unit occurs within the shear, in the footwall of the deposit and is attenuated along the shear. The main gold related hydrothermal alteration assemblage comprises quartz-ankerite-arsenopyrite-pyrrhotite-galena and gold. This assemblage has been overprinted by a retrograde chlorite-epidote-white mica-biotite-quartz and pyrite assemblage. Syn-mineralisation veins have a continuum of vein textures ranging from laminated to pseudo-breccias.
Drillhole information	*A summary of all information material to the* *understanding of the exploration results including a*	A total of 2722 holes have been used in the mineral resource and are deemed to be material. It is not practical to summarise all of the holes here in this release. Exclusion of the drilling information will not detract from the reader's view of the report.

Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
	tabulation of the following information for all Material drill holes: • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation* • *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	All material data is periodically released on the ASX: 31/07/2018, 01/05/2018, 13/07/2017, 21/02/2017, 07/12/2016, 25/11/2015, 29/04/2015, 23/03/2015
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 0.5ppm. No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	This announcement includes sufficient detail to clearly illustrate the geometry of the mineralisation and the recent drilling. All results are reported as downhole lengths. The geometry of the mineralisation is well known and true thickness can be calculated. Drilling intersects the mineralisation perpendicular and at an average intersection angle of 45 degrees.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Included in this release is an appropriately orientated longsection of the mineralisation, illustrating the centroids of the intercept point projected to a plane. Included also in this release are cross section views of the mineralisation which provides the visual perspective of the typical drilling angle.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from the recent campaign have been reported, irrespective of success or not.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Historic activities have included drilling to obtain samples for metallurgical test work, bulk density analyses and geotechnical analyses. A number of geophysical surveys including dipole-dipole IP, Gradient array IP and TEM were carried out over known mineralisation to determine effectiveness in delineating mineralisation/alteration. None were deemed effective. An environmental survey investigated the erosional characteristics of the soil, surface hydrology and groundwater and identified no issues. A partial leach soil sampling program carried out over the deposit was deemed effective in identifying anomalous gold values associated with the deposit. A detailed structural review of the mineralisation has been conducted by Model Earth
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Underground drilling is ongoing in the A zone area and future deep surface drilling is still being assessed under A and D Zones.

Otto Bore JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Otto Bore include reverse circulation (RC) drillholes Sampling methods undertaken at Otto Bore by previous owners have included aircore (AC), rotary air blast (RAB), RC and diamond drillholes (DD).
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for diamond and RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. AC, RC, RAB, and DD core drilling is assumed to have been completed by previous holders to industry standard at that time (1988- 2012).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	RC chips are cone split and sampled into 1m intervals with total sample weights under 3kg Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g sub sample for analysis by FA/AAS. Limited information has been found for historic drilling so it is assumed all AC, RAB, RC and DD and sampling was carried out to industry standard at that time. More recent RAB and RC drilling has involved a total preparation sample protocol involving 4m composite or 1m samples from which a 50g charge is produced for aqua regia or fire assay digest and flame AAS finish.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Drilling activities at Otto Bore have included 31 AC holes, 748 RAB holes, 141 RC holes (assumed standard 5 ¼" bit size) and 4 DD holes (HQ and unknown diameter). Limited historic diamond core hole was oriented by unknown methods. Saracen completed 79 RC holes. The RC drilling was completed with a 5.5 inch diameter bit with a face sampling hammer. The rig was equipped with an external auxiliary booster. Historical drilling is assumed completed to industry standard at that time
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Recoveries for RC drillholes and precollars are recorded as a percentage based on a visual weight estimate.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Measures taken to maximise sample recovery and ensure representative nature of the samples	During RC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues. Measures were taken to supress groundwater.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	There is no known relationship between sample recovery and grade for RC drilling. Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc) photography.*	Logging of RC chips records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. Chips from all RC holes are stored in chip trays for future reference while remaining core is stored in core trays and archived on site. Some diamond drilling has had limited geotechnical logging carried out. It is unknown if any diamond core was photographed.
	The total length and percentage of the relevant intersections logged	All drillholes completed by Saracen have been logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Diamond core was half core or quarter core sampled.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All exploration RC samples are cone split. Occasional wet samples are encountered. The sampling methods for much of the historic AC, RC and RAB drilling are unknown. More recent RC and RAB drilling has been riffle split or spear sampled. It is unknown if wet samples were encountered.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of RC chips adhere to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. The sampling techniques for much of the historic AC, RAB, RC and DD drilling are unknown, best practice is assumed.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory Best practice is assumed at the time of historic AC, RAB, DD and RC sampling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	RC field duplicate samples are carried out at a rate of 1:20 and are sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. It is unknown if duplicate sampling was performed on the majority of historic AC, RAB, RC and DD drilling. There is evidence of field duplicate sampling being conducted in more recent campaigns.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Analysis of data determined sample sizes were considered to be appropriate.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples are analysed by an external laboratory using a 40g fire assay with AAS finish. This method is considered suitable for determining gold concentrations in rock and is a total digest method.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		Numerous assay techniques have been used in the history of the deposit, most commonly fire assay, fire assay with flame finish and aqua regia. These methods are considered suitable for determining gold concentrations in rock and are total digest methods. Other assay methods utilised for gold determination include BETA, atomic absorption spectrometry and unknown methods.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	It is unknown if any instruments of this nature have been used at Otto Bore.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration RC and DD. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel
	The use of twinned holes.	Specific drilling programs consisting of twinned holes are not apparent.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database
	Discuss any adjustment to assay data.	No adjustment to assay data appears to have been made
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Downhole surveys are carried out using a hired Reflex EZ-gyro by the respective drilling companies on a regular basis, between 10-30m. The survey quality and control is unknown for the majority of historic drilling. More recent drilling has collar locations surveyed by unspecified GPS and DGPS equipment. Downhole survey methods recorded include Eastman single and multishot, gyro, inferred and unknown methods.
	Specification of the grid system used.	MGA Zone 51 grid coordinate system is used. Some historic data drilled on local grid systems has been converted to this grid system
	Quality and adequacy of topographic control.	Digital ortho-imagery of the area from Kevron Aerial Surveys was used in the early 2000s to establish topographic control.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	No exploration results reported in this release. The nominal drillhole spacing is 20 m (northing) by 20 m (easting) in the core of the deposit, and increases to the margins of the deposit.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The mineralised domains at Otto Bore have demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resources, and the classifications applied under the 2012 JORC Code.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	No sample composting has been carried out Historic 1990s RAB and RC drilling was generally sampled on 3 - 4m composites with significant gold results being resampled in 1m intervals Some more recent RAB and RC drilling was composited into 4m samples with any assay >250ppb, or >500ppb in resource definition programs, resampled to 1m.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The deposit is drilled towards grid east at angles varying from -60^0 and -90^0 to intersect the mineralised zones at a close to perpendicular relationship for the bulk of the deposit.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	All drilling from surface has been drilled as close to perpendicular as possible. This has reduced the risk of introducing a sampling bias as far as possible. No orientation based sampling bias has been identified at Otto Bore in the data at this point.
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures. No external audits or reviews have been conducted

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Otto Bore resource is located on M36/421, M36/462, and M36/177. The mining leases have a 21 year life: M36/462 is held until 2022, M36/421 is held until 2023, and Mining Lease M36/177 is held until 2032. All are renewable for a further 21 years on a continuing basis. Mining Leases M36/421 and M36/462 are currently held by Saracen Metals Pty Limited (90%) and Black Mountain Gold NL (10%). The tenements are the subject of a purchase agreement with Saracen Metals Pty Limited whereby Saracen purchased a 90% share of the tenements from Norilsk Nickel Wildara Pty Ltd and Dalrymple Resources Pty Ltd. Mining Lease M36/462 is subject to a joint venture agreement (Agreement 127H/012 (129675)) between Oresearch NL, Dalrymple Resources NL, and Black Mountain Gold NL, as assigned to Saracen Metals Pty Limited at the time of purchase.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		Mining Lease M36/177 is held by Saracen Metals Pty Limited (67.8%) and Agnew Gold Mining Company Pty Ltd (32.2%). The tenement is the subject of a purchase agreement between Norilsk Nickel Wildara Pty Ltd and Saracen Metals Pty Limited whereby Saracen has purchased the 67.8% share from Norilsk. Mining Lease M36/177 is the subject of a joint venture agreement (Agreement 163H/945 (104991)) between Plutonic Operations Ltd and Black Mountain Gold NL, as assigned to Saracen Metals Pty Limited at the time of purchase. There are no caveats relating to the tenements. All production is subject to a Western Australian state government NSR royalty of 2.5%. Tenement M36/462 is subject to a Westpac Mortgage (499141). All tenements are subject to a pastoral compensation agreement between Saracen Metals Pty Ltd and Weebo Station. There are no native title claims over the tenements. There is a newly identified Aboriginal Heritage on M36/462 that is yet to be confirmed and registered by an Anthropologist.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	No known impediment to obtaining a licence to operate exists and the remainder of the tenements are in good standing.
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	Gold exploration was conducted near Otto Bore in the 1950s following the discovery of the nearby Goanna Patch mineralisation. Nippon picked up the ground to the north of Otto Bore in the late 1980s and intersected anomalous zones at the Otto Bore prospect, but mineralisation was not deemed extensive enough. Otto Bore was discovered by Kismet in 1990 after they followed up regional RAB traverses at Goanna Patch and encountered mineralisation. It was deemed not large enough for consideration. Leader Resources picked up the area and completed RAB drilling before also deeming the area not worthy of follow up. They did however mine the nearby Double A open cut between March 1990 and May 1991 and concentrated much of the exploration in this area. Forrestania and LionOre entered into a JV on the area in the early 2000s. RAB drilling following up anomalous values from historic drilling intersected mineralisation and was followed up with RC and DD drilling and the Otto Bore resource was defined. Norilsk acquired the deposit but conducted no further exploration in the Otto Bore region.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Otto Bore deposit is situated wholly within a sequence of sheared basalts. The shear zone strikes roughly north-south and dips moderately (50-60degrees) to the west. Mineralisation has been tested along a strike length of 620m.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation*	A total 319 holes have been used in the mineral resource and are deemed to be material. It is not practical to summarise all of the holes here in this release. All material data is periodically released on the ASX: 01/05/2018 Exclusion of the drilling information will not detract from the reader's view of the report.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	• *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 0.5ppm. No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The intercepts target the orebody in a suitable orientation. Downhole lengths are reported.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	An appropriate long section is provided for reference.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be*	All results from the recent campaign have been reported, irrespective of success or not.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Geophysical surveys including aeromagnetics and gravity have been carried out by previous owners to highlight and interpret prospective structures in the project area.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Saracen is currently working on establishing an exploration program which will identify areas of opportunity to extend or enhance the Otto Bore mineral resource.

Bannockburn JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Bannockburn include reverse circulation (RC) drilling and aircore (AC) drilling. Sampling methods undertaken at Bannockburn by previous owners have included rotary air blast (RAB), reverse circulation (RC) and diamond drillholes (DD). Limited historical data has been provided by previous owners.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for RC and AC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		RC, RAB, and DD core drilling is assumed to have been completed by previous holders to industry standard at that time (1990- 2008).
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	RC chips are cone split, while AC samples are spear sampled, with both sampled into 4m or 1m intervals with total sample weights under 3kg. Samples are selected to weigh less than 3 kg to ensure total sample inclusion at the pulverisation stage. Saracen chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g sub sample for analysis by FA/AAS. Initial RC drilling in the early 1990s included single stage mix and grind sample preparation to create a 300g pulp from which a 50g charge was used for assay determination. More recent RC drilling involved total preparation of a 4m composite sample to provide a 40g charge for fire assay. No other information has been found or supplied so it is assumed all RAB, RC and DD and sampling was carried out to industry standard at that time.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Historic drilling activities at Bannockburn have included 684 RAB holes, 1694 RC holes (some with diamond tails) and 78 DD holes (HQ, NQ, and unknown diameter). Saracen has completed 138 RC drillholes and 332 AC holes. The RC drilling was completed with a 5.5 inch diameter bit with a face sampling hammer. The rig was equipped with an external auxiliary booster. Some historic HQ core was oriented by unknown methods.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Recoveries for RC and AC drillholes are recorded as a percentage based on a visual weight estimate. No other recoveries have been provided, it is unknown if they were recorded.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	During RC and AC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues. Measures were taken to supress groundwater. It is unknown what, if any, measures were taken to ensure sample recovery and representivity.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	There is no known relationship between sample recovery and grade for RC or AC drilling. Any historical relationship is not known.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	Logging of RC and AC chips record lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. Chips from all RC holes are stored in chip trays for future reference. Some historic diamond drilling has been photographed and geotechnically logged. It is unknown if all diamond core was photographed.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Whether logging is qualitative or quantitative in nature. *Core (or costean, channel, etc.) photography.*	Qualitative and quantitative logging of historic data varies in its completeness
	The total length and percentage of the relevant intersections logged	All drillholes completed by Saracen have been logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	The sampling method for most drill core is unknown. Some historic core was half core sampled.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All RC samples were cone split. Occasional wet samples were encountered. AC drillholes were spear sampled RC drilling carried out in the 1990s includes spear sampled composites and riffle split 1m samples. RAB drilling was spear sampled. More recent RC drilling has been riffle split or spear sampled. Some sampling methods remain unknown.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of RC and AC chips adheres to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. The sample preparation of 1990s RC drilling involved a single stage mix and grind method, more recent RC drilling involved a total preparation method. The sampling techniques for much of the remaining historic RAB, RC and DD drilling are unknown, best practice is assumed.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory Best practice is assumed at the time of historic RAB, DD and RC sampling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	Field duplicate samples are carried out at a rate of 1:20 and are sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions It is unknown if duplicate sampling was performed on historic RAB, RC and DD drilling. Limited field duplicates were carried out on some more recent RC grade control drilling at a rate of one per hole.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Analysis of data determined sample sizes were considered to be appropriate.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples are analysed by an external laboratory using a 40g fire assay with AAS finish. AC samples are analysed using a 25g aqua regia digest. Both method are considered suitable for determining gold concentrations in rock and are total digest methods. Limited historic samples were assayed using a leachwell digest and AAS finish in the onsite laboratory. More recent RC drilling has been assayed using a 50g aqua regia or 40g fire assay with AAS finish. Other assay methods for exploration RC, RAB and DD drilling included fire assay with AAS finish, aqua regia with AAS finish and unknown methods.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	It is unknown if any instruments of this nature have been used at Bannockburn.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for RC and AC. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel
	The use of twinned holes.	Specific drilling programs consisting of twinned holes are not apparent. However, grade control from both open pit and underground operations have confirmed the width and grade of previous exploration drilling.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database
	Discuss any adjustment to assay data.	No adjustment to assay data appears to have been made
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Saracen drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Downhole surveys are carried out using a hired Reflex EZ-gyro by the respective drilling companies on a regular basis, between 10-30m. Collar locations for early 1990s RC, RAB and DD drilling were surveyed using an EDM theodolite. The precision of this equipment in unknown. Downhole surveys were carried out using a CHAMP downhole electronic multishot system. More recent drilling has collar locations surveyed by unknown GPS and DGPS equipment, while downhole surveys have been carried out at regular intervals by unknown methods.
	Specification of the grid system used.	MGA Zone 51 grid coordinate system is used. Some historic data drilled on local grid systems has been converted to this grid system
	Quality and adequacy of topographic control.	No detail of topographic control was supplied or found.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	AC drilling was carried out on a broad 400x200m to 600x800m grid, with some closer spacing (50x50m) designed to test geophysical and geochemical targets
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The drilling is distributed and spaced such that geological and grade continuity can be established to estimate the mineral resource and ore reserve appropriately. The mineralisation is continuous over a 2km strike length, therefore the 25m x 25m exploration drill spacing effectively defines the continuity. The tight drill spacing at the exploration and mineral resource definition stage highlight the complex nature of some areas of the resource.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	RC and ACsampling was composited into 4m samples with mineralised areas resampled to 1m intervals Historic 1990s RC drilling was sampled on 6m composites due to the depth of overburden, with significant gold results being resampled in 1m intervals. Historic RAB drilling was generally 4m composite sampled with anomalous zones resampled to 1m intervals. Some more recent RC drilling was composited into 3m or 4m samples with areas of interest resampled to 1m.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Due to the variability in the dip direction of the various lodes at Bannockburn, drilling has been orientated in multiple directions to ensure all mineralisation has been tested effectively. This ensures that minimal bias is introduced when sampling.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	All drilling from surface has been drilled as close to perpendicular as possible. This has reduced the risk of introducing a sampling bias as far as possible. Multiple drill orientations have been used to test the variably orientated mineralisation.
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures. No external audits or reviews have been conducted

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Bannockburn pit and associated infrastructure is located across M37/339, M37/340, M37/360, and M37/361. The tenements are 100% held by Saracen Metals Pty Ltd. The mining leases have a 21 year life and are all held until 2034. All are renewable for a further 21 years on a continuing basis. The tenements are the subject of a purchase and sale agreement between Norilsk Nickel Wildara Pty Ltd and Saracen Metals Pty Limited dated the 6 May 2014, whereby Saracen purchased 100% shares in the tenements. The tenements are all subject to a royalty of $25 p/oz over 33,000 and up to 73,000 oz of gold produced from the Resources, and $1 p/oz on each ounce of gold after 73,000 oz of gold produced from the Resource payable to Challenger Gold Operations Pty Ltd.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		Mining Lease 37/340 is subject to a Westpac mortgage (499139). All production is subject to a Western Australia state government NSR royalty of 2.5%. There are two registered heritage sites located over the tenements: Bannockburn 1 site (Place ID 1119) located over M37/361 and Koara Camp site (Place ID 1522) located over M37/339 and M37/340 There are no caveats relating to the tenements. There are no native title claims or pastoral compensation agreements over the tenements.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and the license to operate already exists.
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	Gold was discovered at Bannockburn in the late 1800s with intermittent working of the deposit until the 1950s. Modern exploration began in the late 1970s with initial exploration targeting nickel sulphides before gold exploration began in 1979. Exploration activities by numerous companies including Freeport of Australia, Kulim Limited and Arboyne took place until Dominion purchased the project and commenced mining in 1991. The mine was placed on care and maintenance in 1995. The project changed hands numerous times after this with owners including Consolidated Gold Mines, Arrow Resources, Breakaway Resources, LionOre Australia and Norilsk Nickel Australia carrying out exploration activities leading to the discovery of numerous other deposits in the vicinity.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Bannockburn deposit is located along the western margin within the central portion of the Norseman-Wiluna greenstone belt. Locally the project area is dominated by an extensive sequence of tholeiitic, high-Mg and komatiitic basalts with intercalated sedimentary and intermediate volcaniclastic horizons. Dolerite and gabbro sills intrude the sequence. The deposit is complex with multiple controlling factors. The gross geometry of the deposit is controlled by the Bannockburn fault, a steeply dipping NNW trending fault that is continuous over at least 2.3km on the western margin of the orebody. The fault separates an ultramafic unit in the west from the Bannockburn host sequence in the east. It dips steeply east, rolling to vertical and steep west dipping in the northern part of the orebody. The Bannockburn fault is effectively the western boundary to the orebody with very little mineralisation penetrating the western side of the fault. The Central fault which hosts the Central orebody has a shallow northerly plunge and is the orebody on which the majority of the underground workings have focused on. There are a series of steeply east dipping lodes in the hangingwall of the central lode; these are interpreted as either tensional veins of reverse faults with shearing present along the veins. Black graphic shale units present within the stratigraphy have acted as a localised control on the mineralisation. The black shale units have taken up some of the deformation with stratigraphy parallel shearing and mafic sequences between the shales have extended to form steep east dipping extension veins.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation*	A total of 17642 holes have been used in the mineral resource and are deemed to be material. It is not practical to summarise all of the holes here in this release. Future drill hole data will be periodically released or when a results materially change the economic value of the project.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	• *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Exclusion of the drilling information will not detract from the reader's view of the report.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 1ppm for RC drilling or 20ppb for AC drilling . No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution. Where stand out higher grade zone exist with in the broader mineralised zone, the higher grade interval is reported also
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The geometry of the mineralisation is highly variable and the complex nature of the orebodies makes the definitive calculation of true thickness difficult. Drilling has been orientated to intersect the various orebodies at most optimum angle where possible. This has not always been achieved. Where holes have drilled parallel to or within a lode, additional holes have been drilled at a more suitable orientation to account for the poor angle.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	All significant exploration results released by Saracen are accompanied by the appropriate diagrams and maps at the time of the release.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from the recent campaign have been reported, irrespective of success or not.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Various geophysical surveys have been carried out over the Bannockburn deposit in an effort to delineate structure and mineralisation including magnetics, gravity, CSMAT (Controlled Source Audio Magneto Telluric), radiometrics and SAM (sub-audio magnetics). CSMAT was deemed ineffective due to penetration issues while other methods returned varying results.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Saracen is currently working on establishing an exploration program which will identify areas of opportunity to extend or enhance the Bannockburn mineral resource. A regional aircore program is currently underway testing the regional structures.

Greater Luvironza JORC Table 1

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling methods undertaken by Saracen at Greater Luvironza has consisted of reverse circulation (RC) drilling. Historic methods conducted since 1993 have included aircore (AC), rotary air blast (RAB), reverse circulation and diamond drillholes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Sampling for RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC chips provide high quality representative samples for analysis. RC, RAB, AC and DD core drilling was completed by previous holders to industry standard at that time (1993- 2002).

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	RC chips are cone split and sampled into 4m composite intervals and 1m intervals with total sample weights under 3kg Saracen core and chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g or 50 g sub sample for analysis by FA/AAS. Historical AC, RAB, RC and diamond sampling was carried out to industry standard at that time. Analysis methods include fire assay, aqua regia, B/ETA and unspecified methods.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The Greater Luvironza area was initially sampled by 85 AC holes, 170 RAB holes, 224 RC holes (assumed standard 5 ¼ ''bit size) and 22 surface diamond HQ core and unknown diameter holes. Saracen has completed 10 surface RC drill holes, 5 surface diamond holes Diamond holes were oriented using an Ezy-mark tool. Some historic surface diamond drill core appears to have been oriented by unknown methods.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Diamond core recovery percentages calculated from measured core versus drilled intervals are logged and recorded in the database. Recoveries average >90%. RC sampling recoveries are recorded as a percentage based on a visual weight estimate; no historic recoveries have been recorded.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on the core blocks. Daily rig inspections are carried out to check splitter condition, general site and address general issues. The sample bags weight versus bulk reject weight is compared to ensure adequate and even sample recovery. Historical AC, RAB, RC and diamond drilling to industry standard at that time.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Diamond drilling has high recoveries meaning loss of material is minimal. There is no known relationship between sample recovery and grade for RC drilling. Any historical relationship is not known.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature.* *Core (or costean, channel, etc.) photography.*	Logging of diamond drill core and RC chips records lithology, mineralogy, texture, mineralisation, weathering, alteration, veining and other features. Geotechnical and structural logging is carried out on all diamond holes to record recovery, RQD, defect number, type, fill material, shape and roughness and alpha and beta angles. Chips from all RC holes (exploration and GC) are stored in chip trays for future reference. Core is photographed in both dry and wet state. Qualitative and quantitative logging of historic data varies in its completeness.
	The total length and percentage of the relevant intersections logged	All diamond drillholes and exploration RC holes are logged in full. Every drill line is logged in grade control programs. Historical logging is approximately 95% complete.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All drill core is cut in half onsite using an automatic core saw. Samples are always collected from the same side. Historic diamond drilling has been half core sampled.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All exploration and GC RC samples are cone or riffle split. Occasional wet samples are encountered; increased air capacity is routinely used to aid in keeping the sample dry when water is encountered. Historic AC, RAB and RC drilling was sampled using spear, grab, riffle and unknown methods.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of diamond core and RC chips adhere to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns. Best practice is assumed at the time of historic sampling.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory. Sampling by previous holders assumed to be industry standard at the time.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second half sampling.	Duplicate sampling is carried out at a rate of 1:10 for exploration drilling and 1:20 for GC drilling and is sampled directly from the on-board splitter on the rig. These are submitted for the same assay process as the original samples and the laboratory are unaware of such submissions. Sampling by previous holders assumed to be industry standard at the time.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered to be appropriate.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	RC chip samples, grade control chip samples and diamond core are analysed by external laboratories using a 40g or 50g fire assay with AAS finish. These methods are considered suitable for determining gold concentrations in rock and are total digest methods. Historic sampling includes fire assay, aqua regia, B/ETA and unknown methods.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools have been utilised for reporting gold mineralisation at Whirling Dervish.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for exploration RC and DD, and 1:40 for GC drilling. These are not identifiable to the laboratory. QAQC data returned are checked against pass/fail limits with the SQL database and are passed or failed on import. A report is generated and reviewed by the geologist as necessary upon failure to determine further action. QAQC data is reported monthly. Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns. The laboratory performs a number of internal processes including standards, blanks, repeats and checks. QAQC data analysis demonstrates sufficient accuracy and precision. Industry best practice is assumed for previous holders.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intercepts are verified by the Geology Manager and corporate personnel.
	The use of twinned holes.	No specific twinned holes have been drilled at Greater Luvironza
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols	Primary data is collated in a set of excel templates utilising lookup codes. This data is forwarded to the Database Administrator for entry into a secure acQuire database with inbuilt validation functions. Data from previous owners was taken from a database compilation and validated as much as practicable before entry into the Saracen acQuire database.
	Discuss any adjustment to assay data.	No adjustments have been made to assay data. First gold assay is utilised for resource estimation.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Exploration drillholes are located using a Leica 1200 GPS with an accuracy of +/- 10mm. Downhole surveys are carried out using the Axis Champ north seeking Gyroscopic continuous inrod survey instrument taking readings every 18m (diamond drilling) or 30m (RC drilling) down hole as drilling progresses, with a continuous survey conducted at the end of the hole taking a reading every 1m metre. Previous holders' survey accuracy and quality is unknown
	Specification of the grid system used.	MGA_GDA94 zone 51 is used
	Quality and adequacy of topographic control.	Topographic control originally used site based survey pickups in addition to Kevron aerial photogrammetric surveys with +/- 5m resolution.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The nominal spacing for early stage exploration drilling is 80m x 80m. Later stage exploration drilling is 40m x 40m
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for JORC classifications applied.
Orientation of data in relation to geological structure	*Whether sample compositing has been applied.*	RC drillholes were composited into 4m samples, with mineralised areas being resampled to 1m intervals. Some historic RAB and RC sampling was composited into 3-4m samples with areas of interest re-sampled to 1m intervals. It is unknown at what threshold this occurred.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The majority of drillholes are positioned to achieve optimum intersection angles to the ore zone as are practicable.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No significant sampling bias is thought to occur due to orientation of drilling in regards to mineralised structures.
Sample security	*The measures taken to ensure sample security.*	Samples are prepared on site under supervision of Saracen geological staff. Samples are selected, bagged into tied numbered calico bags then grouped into secured cages and collected by the laboratory personnel. Sample submissions are documented via laboratory tracking systems and assays are returned via email.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An internal review of companywide sampling methodologies was conducted to create the current sampling and QAQC procedures.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Greater Luvironza area is located on M31/210, M31/219, and M31/220 The tenements are held 100% by Saracen Gold Mines Pty Ltd, a wholly owned subsidiary of Saracen Mineral Holdings Limited. Mining Leases M31/219 and M31/220 have a 21 year life (held until 2020) and are renewable for a further 21 years on a continuing basis. Mining Lease M31/210 has a 21 year life (held until 2023) and is renewable for a further 21 years on a continuing basis. Mining Lease M31/210 is subject to two third party royalties and associated caveats (Caveat 62H/067 and Caveat 513935) Mining Lease M31/219 is subject to two third party royalties and one caveat (Caveat 63H/067). Mining Lease M31/220 is subject to two third party royalties and one caveat (Caveat 64H/067). Mining Lease M31/220 is subject to a bank mortgage (Mortgage 499142). All production is subject to a Western Australian state government NSR royalty of 2.5%. Mining Leases M31/210 and M31/219 are subject to the Gindalbie Pastoral Compensation Agreement. Mining Lease M31/220 is subject to the Pinjin and Gindalbie Pastoral Compensation Agreements. Mining Leases M31/210, M31/220, and M31/219 are the subject of the Maduwongga native title claim (WC2017/001). The Mining Rehabilitation Fund applies to the tenements.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and the licence to operate already exists.
Exploration done by other parties	A*cknowledgment and appraisal of exploration by other parties.*	The Carosue Dam project area in which the Greater Luvironza area is located has been subjected to extensive gold exploration by numerous companies since 1991. Airborne geophysics conducted by Aberfoyle Resources in 1997 highlighted numerous targets in the project area with subsequent AC, RAB and RC drilling intersecting mineralisation.. Oriole Resources obtained the project in 1998 and, through wholly owned subsidiary company PacMin, completed closely spaced RC drilling to develop the Luvironza resource through to reserve status. Sons of Gwalia carried out minor drilling before their collapse and takeover of the project by St Barbara.
Geology	*Deposit type, geological setting and style of mineralisation.*	The Greater Luvironza area is situated along the Kilkenny-Yilgangi fault zone on the boundary of the Steeple Hill and Mulgabbie domains. The lithology comprises primarily intermediate felsic volcaniclastic sandstones, intermediate tuffs and intermediate porphyry units intruded by granites of varying composition, with stratigraphy dipping generally to the east at approx. 60 degrees. Mineralization has a combined lithological and structurally control dipping parallel to the stratigraphy. Mineralization is continuous along strike in the footwall but is very discontinuous and patchy in the hanging wall structures and overall controlled by the general NW trending ductile faulting and is characterized by weak Hematite banding on the margins to intense hematite-silica alteration hosted in breccia zones adjacent to the faulting with high grade cores typically sericite-silica breccia. Pyrite is the dominant sulphide.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation* • *above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	A total of 868 holes have been used in the mineral resource and are deemed to be material. It is not practical to summarise all of the holes here in this release. Future drill hole data will be periodically released or when a results materially change the economic value of the project. Exclusion of the drilling information will not detract from the reader's view of the report.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	All significant intercepts have been length weighted with a minimum Au grade of 1ppm. No high grade cut off has been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution. Where stand out higher grade zone exist with in the broader mineralised zone, the higher grade interval is reported also.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	There are no metal equivalents reported in this release.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Previous announcements included sufficient detail to clearly illustrate the geometry of the mineralisation and the recent drilling. All results are reported as downhole lengths.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	No Diagrams are referenced in this release.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results are not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results from previous campaigns have been reported, irrespective of success or not.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No substantive data acquisition has been completed in recent times.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	Extensional exploration for the Greater Luvironza area at this time is under review. Recent results are likely to be followed up with urgency.