SARACEN MINERAL HOLDINGS LIMITED

ACN: 009 215 347

Strong drill results confirm outstanding growth potential across the portfolio

Thick, high grade results point to further mine life extensions at both Carosue Dam and Thunderbox

Key Points

Carosue Dam

- At **Karari**, thick high-grade extensional drill results **outside Ore Reserves** included:
  - **19.1m @ 6.2g/t**
  - **12.3m @ 8.9g/t**
  - **10.5m @ 6.2g/t**
  - **8.9m @ 6.1g/t**
  - **8.5m @ 5.7g/t**
  - **4.3m @ 10.1g/t**
- **New results located up to ~60m below the Ore Reserve**, indicating further growth in mine life (annual vertical advance of mining ~60m)
- New northern drill drive at **Karari to target extensions up to ~900m below surface (~10 year life)**, with southern drill drive to be available later this quarter
- At **Whirling Dervish**, thick high-grade drill results included:
  - **6.1m @ 34.3g/t** *(outside Reserve)*
  - **32.3m @ 3.0g/t** *(outside Reserve)*
  - **29.0m @ 3.2g/t** *(outside Reserve)*
  - **19.1m @ 3.7g/t** *(outside Reserve)*
  - **11.1m @ 7.3g/t** *(in-fill)*
  - **7.8m @ 6.3g/t** *(in-fill)*
  - **4.5m @ 6.7g/t** *(in-fill)*
- Surface RC drilling underway at the **Carosue Dam Corridor** (despite being within ~10km of the 2.4Mtpa Carosue Dam mill, the corridor has been poorly explored, especially at depth)

Thunderbox

- At Thunderbox D Zone (within ~500m of Thunderbox mill), drill results included **27m @ 5.9g/t**, **38m @ 3.6g/t,** and **11.0m @ 4.7g/t** (amenable to open pit mining, within 100m of surface)
- At Otto Bore (just 9km north of Thunderbox mill), drill results included **20m @ 8.5g/t**, **17m @ 9.6g/t**, **13m @ 9.0g/t, 13m @ 6.6g/t** and **7m @ 12.1g/t** (amenable to open pit mining, within 100m of surface)

Saracen Managing Director Raleigh Finlayson said extensional drilling programs at both of the Company's key operational centres continued to demonstrate the exceptional growth potential close to its existing mills.

"The latest results show that our organic growth strategy is firmly on track and, in fact, gathering momentum on a number of fronts. We are ramping up our exploration efforts, drilling out a host of targets ranging from immediate extensions to known deposits to mine corridor anomalies targeting new discoveries."

Corporate Details:

1st May 2018

***ASX code*:** SAR

Corporate Structure:

Ordinary shares on issue: 817.8m

Unvested employee performance rights: 9.2m

Market Capitalisation: A$1.6b (share price A$1.91)

Cash, bullion and investments (31 March): A$101.5m

Debt: Nil

Directors:

Mr Geoff Clifford
Non-Executive Chairman

Mr Raleigh Finlayson
Managing Director

Mr Martin Reed
Non-Executive

Dr Roric Smith
Non-Executive

Ms Samantha Tough
Non-Executive

***Substantial Shareholders*:**

Van Eck Global 12.1%

Wroxby 6.0%

Paradice 5.2%

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Carosue Dam Operations – Drilling Update

Drilling at Carosue Dam has continued with three diamond rigs operating at Karari and Whirling Dervish.

Since the last exploration update in February (see ASX announcement, 15 February 2018), all three rigs were stationed at Whirling Dervish during March, with one rig mobilised back to Karari in early April.

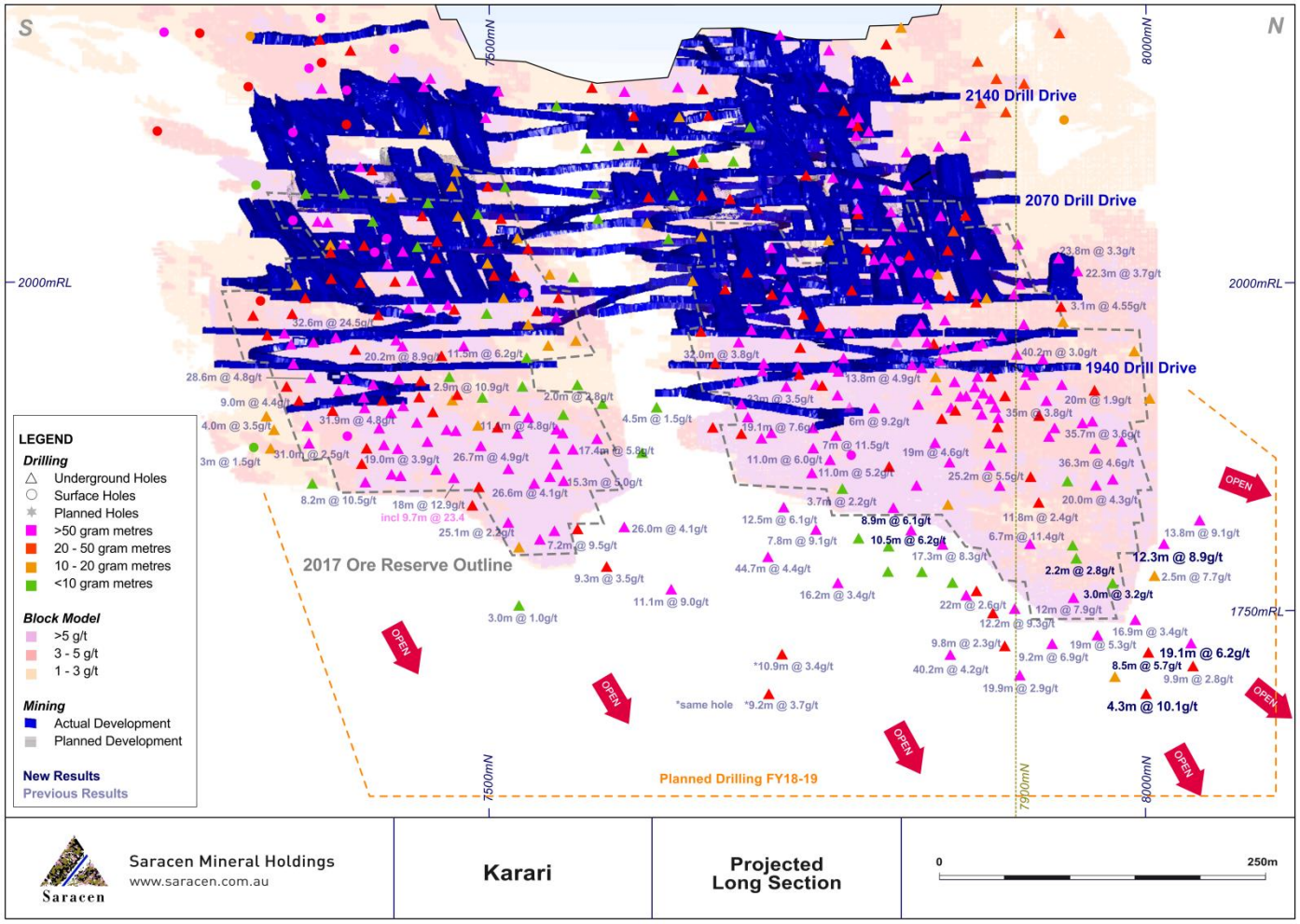
During the current quarter, the focus will be on defining the recently identified extensions, targeting Ore Reserve growth and additional mine life.

Karari Underground

Drilling from the 2070 drill drive has continued, testing the down-plunge position of the known high-grade shoots in the north of the mine. Recent results (Figure 1) continue to demonstrate the strength of the Karari system, with further thick, high-grade mineralisation identified.

Outstanding results include **19.1m @ 6.2g/t** and **12.3m @ 8.9g/t**.

Figure 1 – Karari Long Section, New Drill Results



Below is a table of significant Karari intercepts:

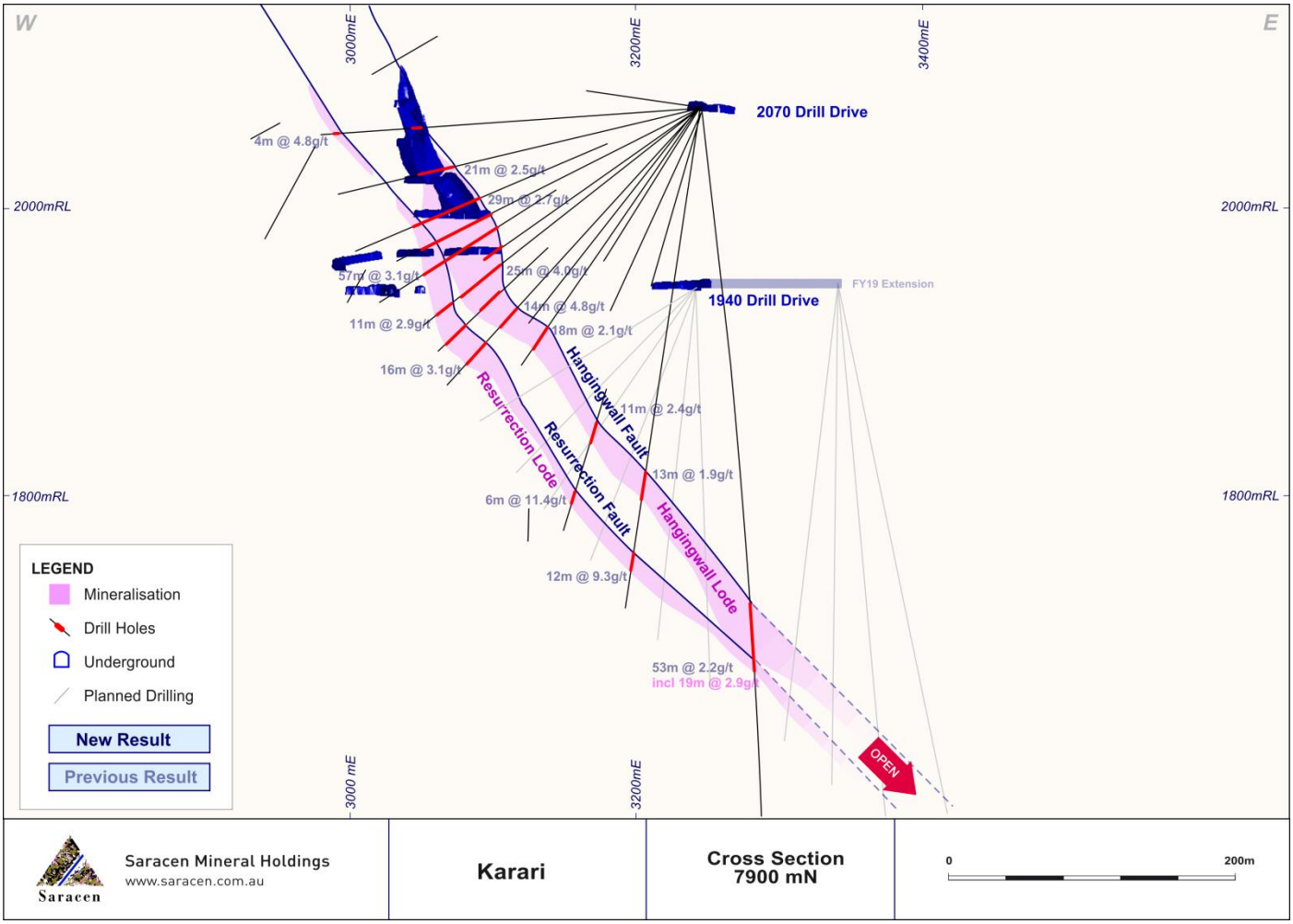
Significant drill results include:	
KRRD246	19.1m @ 6.2g/t
KRRD251	12.3m @ 8.9g/t
KRRD253	8.5m @ 5.7g/t
KRRD254	4.3m @ 10.1g/t
KRGC537	10.5m @ 6.2g/t

During April, the development of a new drill platform was completed 120m below the existing 2070 drill drive.

The new 1940 drill drive (Figure 2) is well positioned to:

- Facilitate the next phase of in-fill drilling (Ore Reserve conversion)
- Extend knowledge up to 200m below the existing data

Figure 2 – Karari Cross-Section, New Drill Platform (1940 Level)



Whirling Dervish Underground

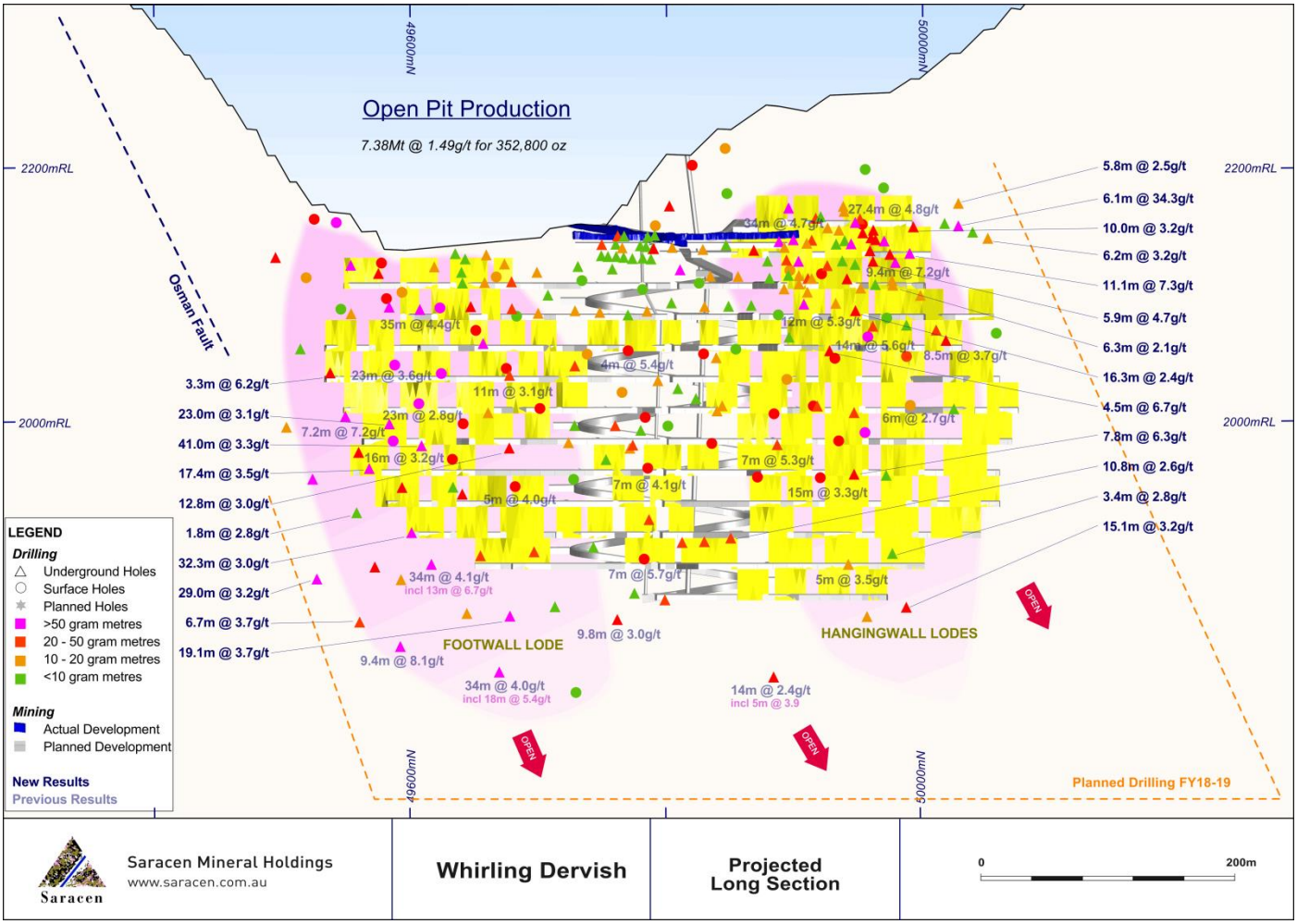
Drilling at Whirling Dervish has continued to focus on extensional drilling in the south and in-fill in the north. Drilling was expedited during March, with three underground rigs operating in the drill drive. Two rigs are currently located at Whirling Dervish until a second site in the Karari 1940 drill drive is established. At this point, the second rig will move to Karari.

Drilling in the south continues to deliver thick intersections of mineralisation outside the current Ore Reserve (Figure 3). Results include **41.0m** @ **3.3g/t** and **32.3m** @ **3.0g/t.**

In-fill results in the north have also been strong with further high-grade results returned. The northern hanging wall lodes remain open and will be the focus of extensional drilling during the current June quarter. Recent results include **6.1m** @ **34.3g/t, 11.0m** @ **7.3g/t** and **10.0m** @ **3.2g/t.**

Early extensional drilling in the north has shown encouragement with the northernmost down-plunge extensional hole returning **15.1m** @ **3.2g/t**.

Figure 3 – Whirling Dervish Long Section, New Drill Results



The weighted average intercept for all new drilling in Figure 3 is **12.9m** @ **4.1g/t** (53 gram/metres), demonstrating similar attributes to Whirling Dervish's sister deposit, Karari.

Below is a table of significant Whirling Dervish extensional intercepts:

Significant drill results include:		
WDEX033	32.3m @ 3.0g/t	FW
WDEX011	29.0m @ 3.2g/t	FW
WDEX012A	17.4m @ 3.5g/t	FW
WDEX017	15.1m @ 3.2g/t	HW
WDRD061	19.1m @ 3.68g/t	FW

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

Significant drill results include:		
WDGC095	6.1m @ 34.3g/t	HW
WDGC097	11.1m @ 7.3g/t	HW
WDGC070	7.8m @ 6.3g/t	FW
WDGC075	4.5m @ 6.7g/t	FW
WDRD047	10.0m @ 3.2g/t	HW

Thunderbox Operations – Drilling Update

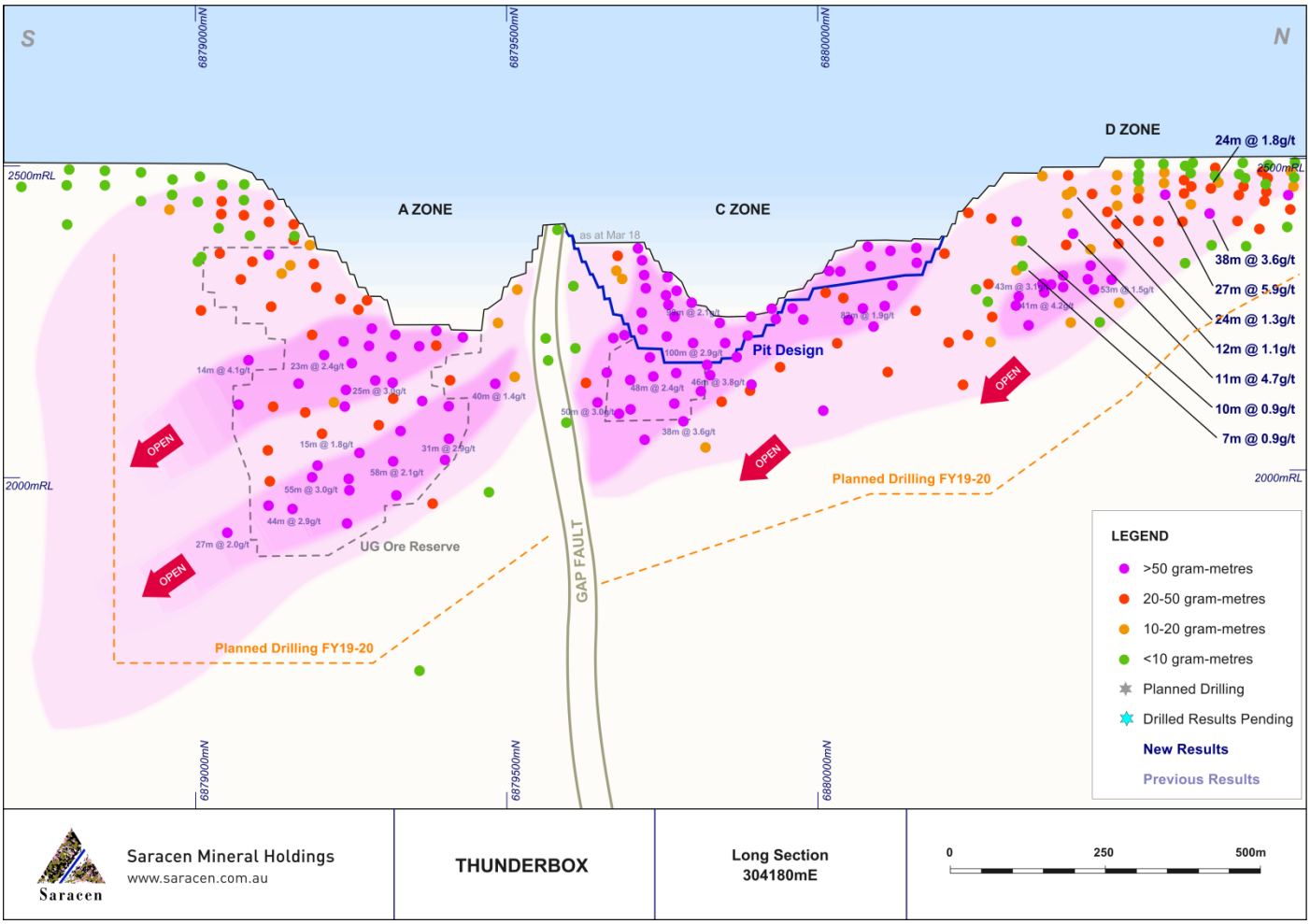
Thunderbox D Zone

A small resource definition program has been completed at Thunderbox D Zone. This program consisted of eight RC holes which were designed to test the continuity of mineralisation and in-fill some key areas where the drill spacing was inconsistent.

The results from this program were in line with expectations (Figure 4). A number of high-grade intercepts were returned, including **27m @ 5.9g/t** and **38m @ 3.6g/t** and will be the subject of future follow-up drilling.

Approval has been given by the Board and regulatory bodies to commence the Thunderbox underground diamond drill platform. This platform will facilitate a large resource in-fill and extension program. The drilling will assist with mining method selection by increasing the local scale knowledge of the orebody at depth. Future updates on this project will be provided in the coming months.

Figure 4 – Thunderbox Long Section, New Drill Results



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

Significant drill results include:	
TBRD103	27.0m @ 5.9g/t
TBRD101	38.0m @ 3.6g/t
TBRD106	11.0m @ 4.7g/t

Otto Bore

Given increased mill throughputs at Thunderbox following the introduction of softer oxide feed from the Kailis operation, a review on all oxide resources was carried out. This review identified Otto Bore (formally Mangilla) as a potential future source of oxide feed for the life-of-mine plan.

Otto Bore is located 9km north of the Thunderbox Plant. The Otto Bore resource consists of 53% oxide/transitional material and 43% fresh rock, and presents as another oxide source to maintain the higher mill throughputs.

The Otto Bore mineralisation is hosted in sheared and altered basalts with minor sediments. The mineralisation strikes north-south and dips ~60° to the west. The mineralisation is characterised by quartz-carbonate shear veins with pyrite – pyrrhotite – chalcopyrite sulphide assemblage, with moderate sericite alteration selvages proximal to the veins. A number of higher grade shoots plunge gently to the south and mimic a classic 'pinch-and-swell' geometry (Figure 6).

Until now, Saracen has not completed any drilling at the Otto Bore project. This first resource definition program aimed to validate the existing data previously reported by previous operators, as well as in-fill the higher grade (higher value) areas of the resource.

Results from this RC program (Figure 5) have further emphasised the high grade shoots and demonstrated that the mineralisation remains open in all directions. Notably all results returned are within 100m of surface, with depth extents yet to be fully tested.

Results from this program include: **17.0m @ 9.6g/t, 20.0m @ 8.5g/t** and **13.0m @ 9.0g/t**.

Figure 5 – Otto Bore Long Section, New Drill Results

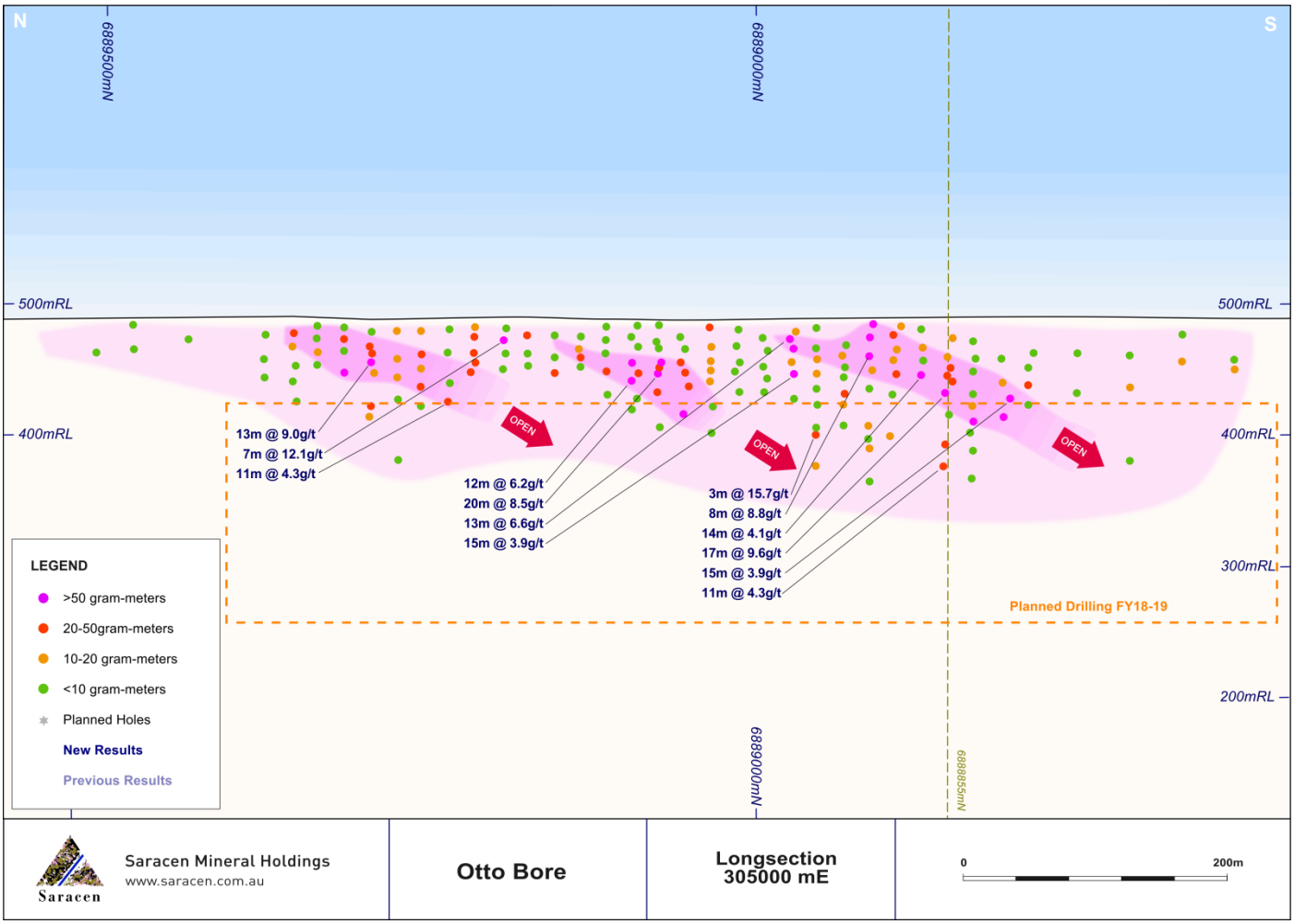
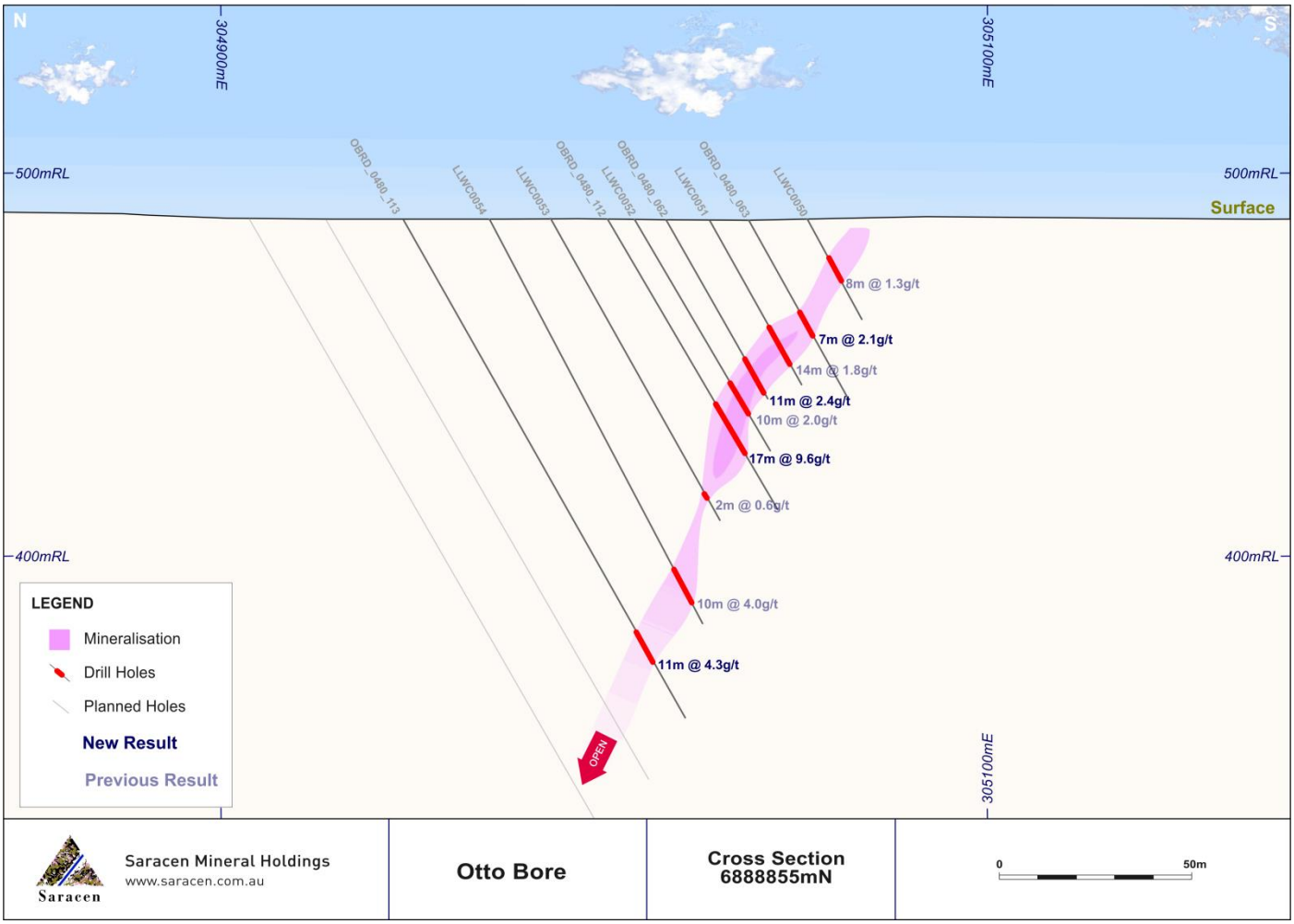


Figure 6 – Otto Bore Cross Section, New Drill Results



Below is a table of significant Otto Bore intercepts:

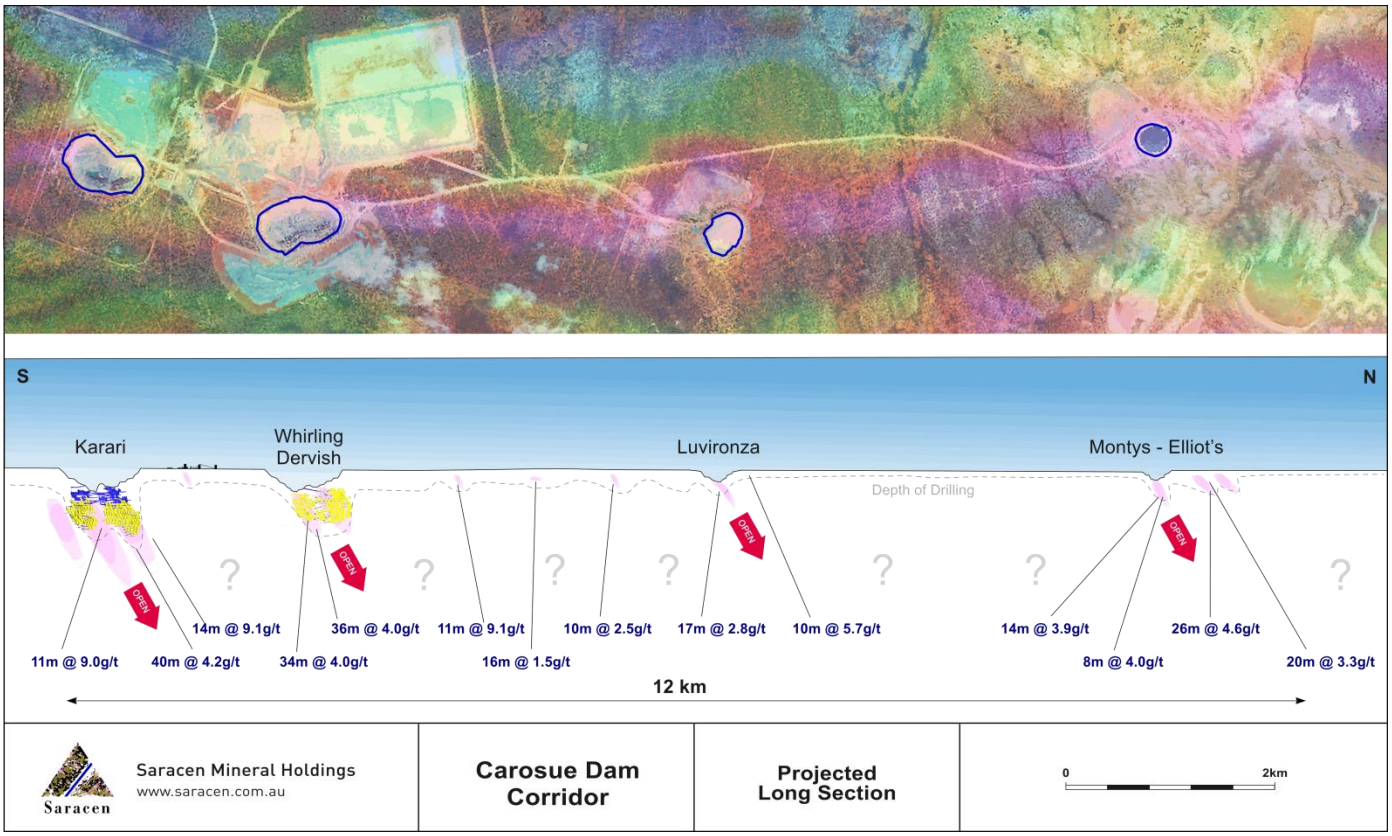
Significant drill results include:	
OBRD_0480_040	20.0m @ 8.5g/t
OBRD_0480_112	17.0m @ 9.6g/t
OBRD_0480_112	13.0m @ 9.0g/t
OBRD_0480_052	13.0m @ 6.6g/t
OBRD_0480_026	7.0m @ 12.1g/t

Regional Exploration – Update

Carosue Dam Corridor

Recent detailed geological investigations at Karari and Whirling Dervish have shed new light on the outstanding prospectivity of the ~12km long Carosue Dam corridor. The key stratigraphy host to the district's largest deposits is mapped in the coarse gravity data shown below.

Figure 7 – Corridor of riches



Despite being within ~10km of the 2.4Mtpa Carosue Dam mill, the Carosue Dam corridor has been poorly explored, especially at depth. Drilling is underway, following up on multiple ore grade intercepts from shallow historical drilling.

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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 APRIL 2018										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
KRGC536	438610.2	6663672	-54.7	183	235.04	-60.24	results outstanding				
KRGC537	438610.2	6663672	-54.7	170.5	218.1	-58.92		95.9	102.7	6.8	4.81
							and	**153.7**	**164.2**	**10.5**	**6.22**
KRGC538	438610.2	6663672	-54.7	165.5	216.4	-50.8		81.5	81.85	0.35	8.80
							and	88.7	92.7	4	7.05
							and	**145.7**	**154.6**	**8.9**	**6.10**
KRGC539	438610.2	6663672	-54.7	188	189.4	-59.86	results outstanding				
KRGC540	438610.2	6663672	-54.7	185.1	190.1	-48.61	results outstanding				
KRGC541	438610.2	6663672	-54.7	200.9	177.9	-59.47	results outstanding				
KRGC542	438610.2	6663672	-54.7	203.92	178.4	-53.29	results outstanding				
KRGC543	438610.2	6663672	-54.7	136	186.7	-46.4	results outstanding				
KRRD245	438607.5	6663696	67.644	335.82	296.6	-68.44		**295.9**	**298.1**	**2.2**	**2.77**
KRRD246	438600.4	6663708	67.763	473.2	320.85	-67.48		**361**	**380.06**	**19.06**	**6.23**
KRRD251	438600.1	6663708	67.992	338.8	310.5	-59.83		**298.15**	**310.47**	**12.32**	**8.93**
							and	317	321.35	4.35	3.22
KRRD252	438597.9	6663709	67	375.95	304.7	-69.21		**313**	**316**	**3**	**3.16**
KRRD253	438600.5	6663708	68.021	422.97	338.8	-68.31		**360.5**	**369**	**8.5**	**5.72**
							and	375	376.5	1.5	3.94
							and	393	393.4	0.4	6.52
KRRD254	438600.6	6663708	68.002	411	340.8	-74.8		323.95	324.4	0.45	4.25
							and	**388**	**392.3**	**4.3**	**10.06**

Table 2 – Whirling Dervish Drill Results

WHIRLING DERVISH DRILLING APRIL 2018										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
WDEX008	438379.8	6665509	141.254	414	207.70	-71.65		240.7	243	2.3	3.50
							and	295.35	296.75	1.4	3.28
							and	303.85	309.05	5.2	3.32
							and	315.7	317.95	2.25	4.85
WDEX011	438380.5	6665508	141.381	425.1	160.30	-48.90		163	164	1	3.04
							and	253.7	254	0.3	4.20
							and	256.5	256.9	0.4	3.91
							and	263.7	264	0.3	2.97
							and	308.5	309.5	1	4.30
							and	314	314.6	0.6	5.56
							and	317.6	318	0.4	3.48
							and	**328**	**357**	**29**	**3.16**
WDEX012A	438382.2	6665507	141.243	344.8	168.00	-42.09		154.7	155	0.3	4.19
							and	155.95	157.2	1.25	3.67
							and	175	176	1	2.51
							and	224.8	225.15	0.35	7.30
							and	**256.65**	**274**	**17.35**	**3.47**
WDEX015	438269.6	6665617	142.058	326.6	286.8	-73.34		288.5	289	0.5	2.82
							and	304.2	305.15	0.95	17.40
WDEX016	438264.8	6665623	142.052	293.3	277.2	-64.79		130.55	130.95	0.4	4.00
							and	270	271	1	5.41
							and	**297.6**	**298.4**	**0.8**	**3.00**
WDEX017	438264.8	6665623	142.116	348	294.2	-68.72		147.14	148.6	1.46	3.46
							and	285	286.17	1.17	2.80
							and	**296.2**	**311.33**	**15.13**	**3.17**
							and	315	315.81	0.81	3.70
WDEX020	438264.9	6665623	142.061	359.95	299.99	-61.88	results pending				
WDEX023	438264.8	6665623	142.025	354	302.7	-56.36	results pending				

WHIRLING DERVISH DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDEX027	438381.4	6665507	142.461	386	165.2	-14.9	no significant results				
WDEX028	438382.1	6665507	141.317	413.8	148.2	-60.23		**337.6**	**344.3**	**6.7**	**3.70**
							and	360	362	2	4.94
							and	373.3	373.7	0.4	24.30
WDEX029	438382.1	6665507	142.694	381	168.3	-2.96	results pending				
WDEX030	438381.9	6665507	141.5	305.7	168.8	-36.92		153.97	156.41	2.44	4.67
							and	215.86	217.73	1.87	6.63
							and	261.3	267.8	6.5	2.70
							and	272	272.86	0.86	2.90
							and	275.44	277.8	2.36	2.80
WDEX031	438381.4	6665508	141.25	341.4	159.7	-43.84	results pending				
WDEX032	438382.2	6665507	141.31	314.8	165.9	-46.91		203.4	204.4	1	3.37
							and	225.21	225.6	0.39	3.93
							and	235.82	236.43	0.61	2.91
							and	243.55	246.08	2.53	3.00
							and	285.45	286.1	0.65	2.80
							and	**289.9**	**291.7**	**1.8**	**2.80**
WDEX033	438381.3	6665507	141.35	315.1	170.3	-54.7		199	199.73	0.73	3.10
							and	211.5	213.5	2	8.18
							and	232	233	1	2.64
							and	240.6	241.7	1.1	2.70
							and	246.5	247.37	0.87	4.66
							and	**261**	**293.27**	**32.27**	**2.95**
WDEX034	438381.4	6665508	141.261	358.9	154.7	-61.09		297.63	299.13	1.5	5.84
							and	302.57	303.35	0.78	2.57
							and	306.76	308.13	1.37	3.40
							and	316.09	316.57	0.48	4.26
							and	323	323.96	0.96	3.76
							and	331.12	332	0.88	6.65
							and	336.4	338.16	1.76	4.22
WDGC068	438379	6665509	141.318	308.8	206.50	-68.69		138.74	140.8	2.06	22.47
							and	221.85	223.9	2.05	2.92
							and	226.63	227.5	0.87	3.69
							and	247	248	1	3.28
							and	262.83	264	1.17	11.25
							and	268.15	269.05	0.9	5.56
WDGC070	438266	6665620	142.252	245.1	255.1	-55.97		113.1	114.13	1.03	3.35
							and	**218.2**	**226**	**7.8**	**6.26**
WDGC071	438381.4	6665507	142.705	354	174.9	-1.93		169.6	172.12	2.52	8.19
							and	186.62	186.98	0.36	2.52
							and	190.4	191.14	0.74	3.87
							and	239.85	240.63	0.78	6.43
							and	312.2	314.1	1.9	4.38
WDGC072	438380.9	6665508	142.461	317.85	193	-19.34	results pending				
WDGC073	438380.8	6665507	141.94	281.5	187.6	-51.41		163.16	163.9	0.74	2.62
							and	175.4	176.1	0.7	5.81
							and	201.4	202	0.6	3.21
							and	233.6	234.08	0.48	3.11
							and	248.44	249.53	1.09	6.36
WDGC074	438381.4	6665507	141.57	317	173.3	-22.56		254.79	255.09	0.3	5.67
							and	**265.24**	**268.53**	**3.29**	**6.23**
WDGC075	438263.9	6665622	142.286	230.3	245.6	-40.74		102.25	104	1.75	5.14
							and	120.85	121.5	0.65	5.33
							and	**129.7**	**134.2**	**4.5**	**6.77**
							and	139.3	140.3	1	2.79
							and	151.85	153	1.15	2.67
							and	202.7	203.35	0.65	2.90
							and	208.45	212.25	3.8	9.34

WHIRLING DERVISH DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDGC076	438381.7	6665507	141.408	265.55	181.2	-41.94		168.08	168.77	0.69	4.10
							and	174.74	175.38	0.64	8.66
							and	182	183	1	3.17
							and	**219**	**260**	**41**	**3.34**
							and	265	265.5	0.5	4.96
WDGC077	438380.9	6665507	141.391	320.3	180.8	-56.8		131.2	132	0.80	3.56
							and	186.2	189	2.80	6.26
							and	204.96	206.1	1.14	3.43
							and	233.14	243.75	10.61	2.55
							and	254.46	254.92	0.46	9.33
							and	258.19	258.54	0.35	2.89
							and	265.45	270.5	5.05	3.80
WDGC078	455530.1	6705571	140.302	284.6	184.3	-23.18	results pending				
WDGC079	455529.1	6705570	141.148	264	201.4	-25.36	results pending				
WDGC080	438304.3	6665582	142.961	240	246.9	10.44		139.5	140.4	0.9	2.83
							and	172	177	5	6.76
							and	190.3	192.35	2.05	3.22
WDGC081	438304.6	6665582	142.943	207	235.5	9.32		130.1	130.55	0.45	2.88
							and	156.85	157.8	0.95	3.31
							and	160	160.9	0.9	4.27
							and	166	168	2	4.23
							and	173.8	190.9	17.1	2.62
WDGC082	438304.3	6665582	142.985	191.5	237.3	-0.22	results pending				
WDGC083	438303.6	6665584	141	213.03	268.1	-17.87		101	102	1	2.92
							and	111.45	112.19	0.74	2.52
							and	116.53	117	0.47	4.61
							and	126	126.94	0.94	2.75
							and	156	157	1	4.83
							and	170	171	1	6.12
							and	175	176	1	4.47
							and	181	184	3	3.04
							and	190	191	1	2.66
WDGC084	438304.6	6665582	141.56	252	213.5	-23.79	results pending				
WDGC085	438304.4	6665582	141.536	252	199.4	-47.12		143.03	144	0.97	4.71
							and	188.85	189.6	0.75	5.08
							and	193.2	194.05	0.85	7.63
							and	216.8	223	6.2	4.41
WDGC086	438305.3	6665583	141.157	285.2	197.3	-64.11		126.2	127.1	0.9	2.68
							and	237.85	246	8.15	2.72
							and	247.75	249	1.25	2.87
WDGC087	438303.6	6665584	141	174.03	234.3	-9.27	results pending				
WDGC088	438303.8	6665582	141.676	255.06	259.9	-31.45	results pending				
WDGC089	438303.9	6665583	141.172	172.65	262	-44.84	results pending				
WDGC090	438381.9	6665507	141.626	336	178.16	-32.58		122	123	1	3.22
							and	166.8	167.5	0.7	3.11
							and	215.43	217.41	1.98	3.62
							and	221.7	224.6	2.9	6.75
							and	**246.3**	**269.3**	**23**	**3.11**
WDGC091	438263.6	6665622	142.503	238.2	242.59	11.45		121.87	122.3	0.43	8.06
							and	161.63	162.85	1.22	2.80
							and	197	198	1	20.90
							and	201.1	201.8	0.7	6.92
							and	227.13	228.18	1.05	4.06
							and	233.8	234.2	0.4	2.71

WHIRLING DERVISH DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDGC092	438263.8	6665622	143.928	269.4	258.9	9.86	results pending				
WDGC093	438263.3	6665622	142.621	237	248.4	7.65		80.95	82.6	1.65	5.62
							and	85.95	88	2.05	3.24
							and	185	189.5	4.5	4.15
							and	200	201	1	3.89
							and	207.15	210	2.85	6.94
							and	213.4	217.85	4.45	6.16
							and	222	223	1	6.51
							and	226.1	227.3	1.2	2.76
							and	232.15	235.95	3.8	2.99
WDGC094	438263.3	6665622	142.849	252	260.6	7.24		90.6	93.8	3.2	5.92
							and	106	108.5	2.5	3.42
							and	128	129	1	2.98
							and	223	225.55	2.55	3.41
WDGC095	438264.3	6665622	143.646	335	261.9	3.68		72	73	1	4.19
							and	89.55	92.5	2.95	4.86
							and	97.15	98.3	1.15	12.94
							and	104.5	105	0.5	4.56
							and	108.8	112	3.2	3.17
							and	124.3	124.7	0.4	2.67
							and	216	217	1	6.71
							and	**224**	**230.1**	**6.1**	**34.31**
							and	239	240	1	2.64
							and	262.8	264.85	2.05	2.79
							and	294	295	1	16.60
							and	327	328.1	1.1	2.94
WDGC096	438263.8	6665622	143.849	243.3	263.3	2.36		66.85	67.6	0.75	3.79
							and	99.7	100.7	1	3.68
							and	108	115	7	5.49
							and	231.15	232.5	1.35	8.58
WDGC097	438263.3	6665622	143.072	230.3	257.1	-0.85		96.5	98	1.5	5.50
							and	125.35	125.75	0.4	4.85
							and	**185.1**	**196.2**	**11.1**	**7.29**
WDGC098	438263.7	6665622	143.584	254.62	269.31	1.85		96.66	97.9	1.24	36.10
							and	101.87	102.87	1	4.87
							and	129.8	130.28	0.48	3.29
							and	132	132.7	0.7	3.04
							and	156.05	156.4	0.35	7.12
							and	**230.85**	**237.04**	**6.19**	**3.22**
WDGC099	438263.9	6665622	143.575	186.08	248.7	-11.02		82.9	93.25	10.35	3.29
							and	160.14	161.05	0.91	4.01
WDGC100	438263.8	6665622	143.56	236	266.7	-8.49		61	62.25	1.25	3.47
							and	**100.11**	**106**	**5.89**	**4.70**
							and	113	114	1	4.15
							and	116.72	118.4	1.68	3.71
							and	130.83	137.03	6.2	4.12
							and	158	159	1	4.17
WDGC101	438264	6665622	142.297	194.11	263.3	-16.01		120.53	120.96	0.43	3.48
							and	153	154.2	1.2	17.10
WDGC102	438264.1	6665622	142.264	179	261	-29.27		**102**	**118.3**	**16.3**	**2.40**
							and	134	136.1	2.1	8.09
							and	168	170	2	5.75
WDGC103	438264	6665622	142.297	224.92	314.69	-29.7		**122.47**	**128.8**	**6.33**	**2.07**
WDGC105	438382.2	6665507	141.243	252	251.52	-47.21		**213**	**225.75**	**12.75**	**3.03**
WDRD047	438262.4	6665623	143.623	332.9	250.40	5.74		87	87.75	0.75	4.38
							and	92.5	101.55	9.05	1.99
							and	119.05	120	0.95	2.86
							and	130.8	131.8	1	3.27
							and	192.6	193.9	1.3	7.31
							and	**212**	**222**	**10**	**3.21**
							and	289.7	307	17.3	2.06

WHIRLING DERVISH DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
WDRD048	438262.4	6665623	143.623	341.8	260.13	4.51	and	159.4	160	0.6	3.22
							and	173.3	174.1	0.8	2.82
							and	221.5	224	2.5	5.74
							and	**236.2**	**242**	**5.8**	**2.50**
							and	329.65	330.5	0.85	17.80
WDRD049	438268.9	6665616	143.287	287.1	264.8	-10.7		69.75	70.75	1	3.56
							and	73.75	74.75	1	2.71
							and	109.35	109.75	0.4	7.67
							and	115.7	116.25	0.55	3.26
							and	118.25	118.7	0.45	3.98
							and	128.48	129	0.52	5.88
							and	134	135	1	6.60
							and	154	155	1	3.00
							and	156.7	157	0.3	12.60
							and	211.56	212.5	0.94	2.76
							and	266.75	267.59	0.84	2.75
							and	268.13	269.08	0.95	2.63
							and	276.26	277.01	0.75	4.14
WDRD051A	438263	6665623	143.803	306.04	263.8	-4.4		82.55	83.4	0.85	2.52
							and	103.1	106.28	3.18	3.77
							and	108	109	1	10.10
							and	116	117	1	8.36
							and	129.25	129.55	0.3	3.50
							and	131.27	131.8	0.53	3.70
							and	134.1	135.64	1.54	2.98
							and	215.05	215.4	0.35	7.40
WDRD052	438262.6	6665623	143.392	332.5	270.3	-5.8		101.3	102.5	1.2	7.76
							and	**110**	**120.9**	**10.9**	**4.58**
							and	139.75	140.4	0.65	2.66
							and	148.62	150	1.38	3.11
							and	224.9	226	1.1	4.57
							and	302.18	303	0.82	2.61
							and	307.02	307.6	0.58	8.71
							and	320.7	321.84	1.14	2.82
WDRD056	438304.8	6665583	141.098	279	236.1	-70.95		133.95	135.2	1.25	8.42
							and	**238**	**248.8**	**10.8**	**2.58**
							and	253.65	254	0.35	7.98
							and	261.15	263	1.85	5.25
							and	269.45	270	0.55	5.31
WDRD057	438305.3	6665582	141.124	342	193.85	-78.86		288.04	289.87	1.83	6.37
WDRD058	438334.3	6665533	140.307	357	229.32	-80.14		148	148.8	0.8	3.47
							and	265.2	266.15	0.95	4.23
							and	272.3	273	0.7	3.07
							and	280.7	281.15	0.45	7.17
WDRD061	438335	6665533	140.312	344.38	232.82	-74.67		**290.8**	**309.9**	**19.1**	**3.68**
WDRD062	438335	6665533	140.312	309	259.8	-68.16		241	244.05	3.05	3.42
								249.95	253	3.05	2.68
								255	256	1	2.56
								258	258.6	0.6	2.65
								259	260	1	2.64
WDRD063	438304.8	6665583	141.09	324	265.2	-78.25	results pending				
WDRD064	438269.8	6665617	142.078	336	261.01	-79.61	results pending				
WDRD065	438263.6	6665622	142.356	254.9	264.2	-54.39		48.15	52.1	3.95	3.85
							and	224.7	225.9	1.2	5.28

Table 3 – Thunderbox Drill Results

THUNDERBOX DRILLING APRIL 2018								Downhole			
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
TBRD_2500_101	304127.9	6880750	500.376	178	92.8	-60.59		68	69	1	0.58
							and	74	78	4	1.01
							and	87	88	1	2.21
							and	**99**	**137**	**38**	**3.56**
TBRD_2500_102	304146.6	6880751	500.097	142	89.21	-58.53		41	45	4	0.75
							and	48	58	10	1.05
							and	**69**	**93**	**24**	**1.75**
							and	110	111	1	0.52
TBRD_2500_103	304169.6	6880680	499.632	165	91.42	-59.92		1	3	2	0.60
							and	5	6	1	0.54
							and	50	51	1	0.73
							and	**70**	**97**	**27**	**5.92**
TBRD_2500_104	304177.9	6880590	499.003	188	90.3	-60.2		4	5	1	0.55
							and	56	57	1	0.53
							and	**100**	**124**	**24**	**1.30**
							and	145	148	3	1.01
							and	157	158	1	0.50
							and	162	166	4	0.62
							and	170	175	5	1.65
							and	180	185	5	1.28
TBRD_2500_106	304152.8	6880530	498.76	212	91.49	-56.86		55	56	1	0.61
							and	73	78	5	1.13
							and	**155**	**166**	**11**	**4.70**
							and	196	197	1	1.57
							and	204	211	7	1.03
TBRD_2500_107	304226.2	6880530	480.557	260	87.36	-70.18		**46**	**58**	**12**	**1.08**
							and	66	69	3	0.62
							and	79	80	1	0.93
							and	83	84	1	0.68
							and	92	94	2	2.40
							and	100	101	1	0.50
							and	135	136	1	0.56
							and	151	153	2	0.80
							and	161	166	5	2.60
							and	213	215	2	0.76
							and	222	225	3	0.87
							and	229	231	2	0.62
TBRD_2500_108	304196.7	6880450	479.96	260	89.59	-60.74		123	132	9	0.84
							and	144	145	1	0.61
							and	**184**	**191**	**7**	**0.93**
							and	197	206	9	0.62
							and	257	259	2	1.85
TBRD_2500_109	304225.5	6880451	479.956	218	90	-60		71	85	14	1.44
							and	106	107	1	0.60
							and	**136**	**146**	**10**	**0.94**
							and	193	194	1	1.07

Table 4 – Otto Bore Drill Results

OTTO BORE DRILLING APRIL 2018								Downhole			
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
OBRD_0480_001	304948.5	6889379	486.713	54	90	-60		28	29	1	0.53
							and	48	54	6	1.65
OBRD_0480_002	304960.7	6889379	486.676	54	90	-60		23	24	1	0.63
OBRD_0480_003	304975.1	6889379	486.592	54	90	-60		9	13	4	0.64
							and	31	32	1	0.61
							and	38	39	1	0.51
							and	53	54	1	0.56
OBRD_0480_004	304947.8	6889359	486.83	54	90	-60		24	31	7	1.18
							and	41	42	1	1.41
							and	47	48	1	0.91
							and	52	53	1	1.05
OBRD_0480_005	304969.4	6889359	486.729	54	90	-60		3	15	12	0.68
							and	20	30	10	1.48
							and	40	41	1	2.72
							and	48	53	5	0.61
OBRD_0480_006	304988.4	6889359	486.629	54	90	-60		15	16	1	1.07
							and	23	26	3	0.90
OBRD_0480_007	304956	6889339	486.884	54	90	-60		22	33	11	1.64
							and	45	46	1	0.66
OBRD_0480_008	304981.3	6889339	486.717	54	90	-60		7	8	1	1.05
							and	16	17	1	0.98
							and	20	21	1	0.57
							and	23	24	1	0.55
							and	26	27	1	1.01
OBRD_0480_009	304945.5	6889319	486.953	54	90	-60		35	54	19	3.76
OBRD_0480_010	304966.4	6889319	486.88	54	90	-60		0	27	27	1.95
							and	31	36	5	0.55
							and	41	47	6	3.41
OBRD_0480_011	304986.2	6889319	486.674	54	90	-60		22	25	3	3.07
OBRD_0480_012	304951.8	6889299	486.956	54	90	-60		**25**	**38**	**13**	**9.04**
							and	47	51	4	0.67
OBRD_0480_013	304971.9	6889299	486.924	54	90	-60		4	7	3	2.16
							and	14	18	4	1.23
							and	22	26	4	9.19
							and	30	34	4	1.06
OBRD_0480_014	304992.7	6889299	486.742	54	90	-60		4	5	1	1.04
							and	9	10	1	0.74
							and	25	26	1	0.67
OBRD_0480_015	304985.2	6889279	486.902	54	90	-60		2	8	6	2.26
							and	25	36	11	1.81
OBRD_0480_016	304948.4	6889279	487.009	54	90	-60		23	24	1	0.52
							and	34	37	3	0.77
							and	44	49	5	1.20
							and	52	54	2	2.12
OBRD_0480_017	304972.8	6889279	486.969	54	90	-60		3	9	6	2.15
							and	14	15	1	2.28
							and	27	29	2	1.00
							and	36	37	1	1.82
OBRD_0480_018	304950.9	6889259	487.072	54	90	-60		37	42	5	2.00
OBRD_0480_019	304973	6889259	486.978	54	90	-60		5	7	2	3.01
							and	13	15	2	1.79
							and	23	24	1	0.53
							and	25	26	1	0.74
							and	30	31	1	0.56
							and	49	50	1	5.75

OTTO BORE DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
OBRD_0480_020	304990.7	6889259	486.896	54	90	-60		3	11	8	0.99
							and	20	21	1	0.95
OBRD_0480_021	304980.2	6889239	487.013	54	90	-60		24	27	3	0.66
							and	43	44	1	0.66
OBRD_0480_022	304997.4	6889239	486.905	54	90	-60		3	10	7	0.60
							and	23	24	1	0.90
OBRD_0480_023	304959.7	6889219	487.121	54	90	-60		28	39	11	4.29
OBRD_0480_024	304986.9	6889219	486.972	54	90	-60		11	16	5	4.30
							and	18	20	2	2.72
							and	25	34	9	2.56
OBRD_0480_025	304953.9	6889199	487.219	54	90	-60		39	42	3	0.98
OBRD_0480_026	304978.9	6889198	487.037	54	90	-60		**12**	**19**	**7**	**12.08**
							and	26	33	7	0.92
							and	42	44	2	1.12
							and	48	52	4	0.54
OBRD_0480_027	305000.1	6889199	486.906	54	90	-60		1	3	2	0.64
OBRD_0480_028	304963.8	6889178	487.111	54	90	-60		31	33	2	1.00
OBRD_0480_029	304985.5	6889178	487.046	54	90	-60		9	18	9	3.96
							and	25	31	6	0.71
							and	48	49	1	0.72
OBRD_0480_030	304956.9	6889158	487.226	54	90	-60	no significant intercepts				
OBRD_0480_031	304977.8	6889158	487.098	54	90	-60		24	26	2	1.54
							and	27	30	3	0.73
							and	33	34	1	0.67
							and	40	49	9	3.13
OBRD_0480_032	304998.1	6889158	486.969	54	90	-60		0	3	3	0.83
							and	15	16	1	0.72
							and	50	51	1	0.65
OBRD_0480_033	304958	6889138	487.275	54	90	-60		46	47	1	0.54
OBRD_0480_034	304982.6	6889138	487.072	54	90	-60		11	14	3	1.81
							and	25	39	14	2.77
							and	53	54	1	0.76
OBRD_0480_035	305002.5	6889138	486.918	54	90	-60		31	33	2	3.09
							and	48	49	1	0.69
OBRD_0480_036	305003.8	6889119	486.949	54	90	-60		49	50	1	0.84
OBRD_0480_037	304978.6	6889119	487.077	54	90	-60		31	45	14	2.85
OBRD_0480_038	304983.3	6889098	487.054	54	90	-60		31	47	16	3.25
OBRD_0480_039	305002.7	6889099	486.928	54	90	-60	no significant intercepts				
OBRD_0480_040	304977.8	6889079	487.127	54	90	-60		**33**	**53**	**20**	**8.54**
OBRD_0480_041	305000.2	6889079	486.924	54	90	-60		34	35	1	0.77
OBRD_0480_042	304979.8	6889059	487.164	54	90	-60		42	48	6	5.17
OBRD_0480_043	304998.8	6889059	487.036	54	90	-60		34	36	2	1.57
OBRD_0480_044	304988.6	6889039	487.156	54	90	-60		34	40	6	2.03
OBRD_0480_045	305014.4	6889039	486.97	54	90	-60		4	6	2	21.66
							and	44	49	5	1.97
OBRD_0480_046	304990.3	6889019	487.184	54	90	-60		32	33	1	1.42
							and	41	42	1	0.95
OBRD_0480_047	305009.3	6889019	487.106	54	90	-60		40	41	1	0.79
OBRD_0480_048	304996.5	6888999	487.32	54	90	-60		36	47	11	0.88
OBRD_0480_049	305018	6888999	487.183	54	90	-60		33	35	2	0.87
							and	44	45	1	0.52
OBRD_0480_050	304998	6888978	487.471	54	90	-60		**36**	**51**	**15**	**3.86**
OBRD_0480_051	305010.8	6888978	487.377	54	90	-60		31	44	13	1.21
OBRD_0480_052	305025.6	6888978	487.301	54	90	-60		**12**	**25**	**13**	**6.58**
							and	29	31	2	0.91
							and	42	44	2	0.85
							and	47	49	2	0.59
							and	52	53	1	1.87

OTTO BORE DRILLING APRIL 2018										Downhole	
Hole	Easting	Northing	RL	Depth	Azimuth	Dip		From (m)	To (m)	Width (m)	Grade g/t
OBRD_0480_053	304996.9	6888958	487.537	54	90	-60		30	31	1	0.59
							and	34	35	1	1.18
							and	41	42	1	0.61
							and	43	48	5	3.12
OBRD_0480_054	305016.4	6888958	487.459	54	90	-60		31	33	2	2.03
							and	47	48	1	0.53
OBRD_0480_055	304996.3	6888937	487.575	54	90	-60		30	32	2	0.85
							and	44	45	1	0.60
							and	50	51	1	0.67
OBRD_0480_056	305018.8	6888938	487.477	54	90	-60		2	5	3	0.93
							and	19	20	1	0.69
							and	27	33	6	2.21
							and	42	43	1	0.79
OBRD_0480_057	305018.6	6888918	487.496	54	90	-60		**30**	**38**	**8**	**8.78**
OBRD_0480_058	305023	6888898	487.453	54	90	-60		31	38	7	2.46
OBRD_0480_059	305039.4	6888899	487.248	54	90	-60		3	15	12	4.41
							and	34	35	1	0.72
OBRD_0480_060	305014	6888878	487.528	54	90	-60		**37**	**51**	**14**	**4.13**
OBRD_0480_061	305057.6	6888879	487.101	54	90	-60		0	4	4	0.97
OBRD_0480_062	305016.3	6888860	487.586	54	90	-60		42	53	11	2.41
OBRD_0480_063	305037.5	6888859	487.38	54	90	-60		28	35	7	2.14
							and	39	43	4	1.60
							and	44	47	3	2.97
OBRD_0480_101	304917.9	6889300	487.253	130	90	-60		72	75	3	1.32
							and	82	88	6	2.60
							and	93	94	1	1.01
							and	104	106	2	3.43
OBRD_0480_102	304925.8	6889260	487.171	126	91.1	-59.91		68	69	1	0.56
							and	73	76	3	1.15
							and	83	84	1	1.55
							and	102	107	5	0.59
							and	112	113	1	0.95
OBRD_0480_103	304933.2	6889240	487.187	114	89.94	-59.32		57	58	1	0.93
							and	63	64	1	0.67
							and	**66**	**77**	**11**	**4.30**
							and	92	93	1	2.40
							and	100	105	5	0.82
OBRD_0480_104	304970.4	6889100	487.143	76	90.19	-59.91		35	36	1	1.47
							and	42	43	1	0.57
							and	**47**	**59**	**12**	**6.23**
							and	64	65	1	1.32
OBRD_0480_105	304942.3	6889100	487.291	100	90.37	-59.82		68	69	1	2.08
							and	77	80	3	1.19
							and	85	86	1	2.03
OBRD_0480_106	304971.1	6889040	487.225	130	93.21	-59.93		51	62	11	1.45
							and	64	66	2	4.05
OBRD_0480_107	304943.8	6888960	487.592	148	91.32	-60.02		76	77	1	0.84
							and	**101**	**104**	**3**	**15.67**
							and	113	114	1	0.66
							and	131	133	2	0.77
OBRD_0480_108	304979.7	6888940	487.648	106	93.5	-59.55		38	39	1	1.58
							and	46	48	2	0.56
							and	53	54	1	0.77
							and	63	76	13	1.12
							and	97	98	1	0.62
OBRD_0480_109	304951.3	6888919	487.808	148	92.2	-60.21		108	109	1	0.54
							and	110	111	1	0.55

OTTO BORE DRILLING APRIL 2018										Downhole	
Hole	**Easting**	**Northing**	**RL**	**Depth**	**Azimuth**	**Dip**		**From (m)**	**To (m)**	**Width (m)**	**Grade g/t**
OBRD_0480_110	304991.9	6888900	487.804	118	92.11	-60.31		64	70	6	1.76
							and	74	75	1	1.98
							and	95	98	3	0.60
							and	104	108	4	2.16
OBRD_0480_111	304962.3	6888900	487.868	148	90.6	-60.44		102	109	7	2.13
							and	128	129	1	0.95
OBRD_0480_112	305001.1	6888860	487.713	88	91.75	-60.36		**55**	**72**	**17**	**9.64**
OBRD_0480_113	304947.7	6888860	487.894	154	92.03	-60.25		48	49	1	1.51
							and	**121**	**132**	**11**	**4.32**
							and	139	140	1	0.72
							and	148	151	3	0.79
OBRD_0480_114	304990.2	6888840	487.708	104	90.65	-60.16		49	50	1	1.34
							and	67	76	9	1.23
							and	83	84	1	1.41
OBRD_0480_115	304970.4	6888840	487.751	160	90.29	-60.58		63	64	1	0.53
							and	97	101	4	2.10
							and	109	111	2	0.90
							and	117	118	1	1.64
OBRD_0480_116	304997.8	6888810	487.418	94	91.51	-60.55		**62**	**77**	**15**	**3.88**

Karari 2012 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 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 13 surface RC precollars with HQ and NQ diamond tail drill holes (precollars averaging 287m, diamond tails averaging 168m) , 73 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. 649 NQ diamond holes have been drilled underground. 1231 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. 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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		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.
	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*	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

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	whether the technique is considered partial or total.	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.
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

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
		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 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. 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).

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		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.
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: 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	*In reporting Exploration Results, weighting averaging*	All underground diamond drillhole significant intercepts have been length weighted with a minimum Au

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
methods	*techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	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 (eg '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.*	No substantive data acquisition has been completed in recent times.
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*	Exploration drilling below the current Ore Reserve will be conducted later in FY18.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	interpretations and future drilling areas, provided this information is not commercially sensitive	

Whirling Dervish 2012 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 50 surface RC precollar with NQ diamond tail drill holes (precollars averaging 193m, diamond tails averaging 200m) , 12 diamond geotechnical holes , 72 RC holes from both surface and within the pit,4039 grade control RC holes within the pit and 64 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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
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. 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.
	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.

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
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.
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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	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.
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

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		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.
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*	All material data is periodically released on the ASX: 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**
	• *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 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 (eg '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*	No substantive data acquisition has been completed in recent times.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
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*	Deeper exploration drilling will be conducted later in FY18.

Thunderbox 2012 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. *Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of*	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. 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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	detailed information	
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 21RC drillholes, 8 diamond geotechnical holes, 17 RC precollar diamond tail drillholes (precollars averaging 277m, diamond tails averaging 200m) and 689 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 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 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. 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.

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 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 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 25^{th} 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.
	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.

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.	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
	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 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 458 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. All material data is periodically released on the ASX: 25/11/2015, 29/04/2015, 23/03/2015
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade*	All significant intercepts have been length weighted with a minimum Au grade of 0.5ppm. No high grade cut off has been applied.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	
	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.
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*	Saracen is currently working on establishing exploration opportunities which will extend the known mineralisation at depth. This will primarily focus on understanding the key geological relationships and critical continuity directions to target depth extensions.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	

Otto Bore 2012 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 at Otto Bore by previous owners have included aircore (AC), rotary air blast (RAB), reverse circulation (RC) and diamond drillholes (DD). Saracen has not carried out any sampling activities at Otto Bore due to only recently acquiring the deposit.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	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*	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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
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.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Recoveries for some more recent RC drilling have been recorded based on a visual weight estimate. It is unknown historic recoveries were recorded.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	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.	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, AC, RAB and RC chips record lithology, mineralogy, texture, mineralisation, weathering, alteration and veining. 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	The majority of drillholes appear to 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.	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 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.	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.	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.	It is assumed sample sizes were appropriate for the grain size of material being sampled. Some recent campaigns included sizing analysis (90% passing 75 microns) to ensure this.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and*	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

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	whether the technique is considered partial or total.	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.	QAQC information from historic Otto Bore sampling data is limited therefore all drilling is assumed to have been carried out to industry standard. More recent drilling carried out at the deposit adhered to strict QAQC protocols involving weighing of samples, collection of field duplicates and insertion of blanks and standards. Laboratory repeats were also carried out. Analysis of this data displayed acceptable precision and accuracy.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	It is unknown if historic intercepts were verified by alternative company 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	Limited documentation of this nature has been provided. Data has been stored in an 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.*	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.
	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.*	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.

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
	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.*	Information on sample security measures has not been provided
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No evidence of external reviews has been supplied. Saracen has not had access to this information during the acquisition process.

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 M36/462, M36/421, M36/428 and M36/177. Mining Leases M36/421 and M36/462 are currently held by Norilsk Nickel Wildara Pty Ltd (54%), Dalrymple Resources Pty Ltd (36%) and Black Mountain Gold NL (10%). The tenements are the subject of a purchase agreement with Saracen Metals Pty Limited whereby Saracen has purchased a 90% share of the tenements from Norilsk and Dalrymple. 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. 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. Mining Lease M36/177 is held by Barrick (Plutonic) Limited (67.8%) and Agnew Gold Mining Company Pty Ltd (32.2%). Norilsk Nickel Wildara Pty Ltd has earned a 67.8% stake in the tenement which is the subject of a purchase agreement with Saracen Metals Pty Limited whereby Saracen has purchased the 67.8% share from Norilsk. Mining Lease M37/177 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. Mining Lease M36/428 is subject to the Spider Well Joint Venture and is held by Norilsk Nickel Wildara Pty Ltd (39%), Dalrymple Resources Pty Ltd (26%) and Devant Pty Ltd (35%). Mining Lease M36/428 is subject to a joint venture agreement (Agreement 124H/012 (129646)) between Oresearch NL, Dalrymple Resources NL, Devant Pty Ltd and Charles George Chitty. as assigned to Saracen Metals Pty Limited. The mining leases have a 21 year life: Mining Lease M36/462 is held until 2022, Mining Leases M36/421 and M36/428 are held until 2023 and Mining Lease M36/177 is held until 2032. All are renewable for a further 21 years on a continuing basis.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
		All production is subject to a Western Australian state government NSR royalty of 2.5%. The tenements are all subject to a 1.5% royalty on all minerals which are capable of being sold or otherwise disposed of, multiplied by the Net Smelter Return, capped at $17 million, payable to Norilsk Nickel Wildara Pty Ltd. There are no caveats or bank mortgages relating to the tenements. There are no registered Aboriginal Heritage sites 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.	Mining Lease M36/177 is subject to forfeiture for non-compliance with survey conditions pursuant to Section 80 of the Western Australian Mining Act 1978. 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 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 240 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.

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.*	No exploration results are reported in this release.
	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.	No exploration results are reported in this release.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No exploration results are 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').*	Saracen has not previously reported exploration results nor are any included in this release.
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.*	Saracen has not previously reported exploration results nor are any included in this release.
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*	Geophysical surveys including aeromagnetics and gravity have been carried out by previous owners to highlight and interpret prospective structures in the project area.

Section 2: Reporting of Exploration Results		
Criteria	**JORC Code Explanation**	**Commentary**
	contaminating substances.	
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.