# SARACEN MINERAL HOLDINGS LIMITED

# More strong drilling results show Saracen on track to grow inventory and production

## Key Points

### Carosue Dam

- At **Karari**, thick high-grade extensional drill results **outside current Ore Reserves** included:
  - **16.2m @ 16.2g/t**
  - **14.7m @ 10.2g/t**
  - **19.0m @ 6.3g/t**
  - **14.4m @ 8.3g/t**
  - **11.1m @ 9.8g/t**
  - **10.8m @ 8.4g/t**
- Drill testing of an offset target returned a highly encouraging **8m @ 5.3g/t**, 80m south of the current Karari mine infrastructure
- At **Whirling Dervish**, thick high-grade drill results included:
  - **34.3m @ 5.7g/t** *(outside the current Reserve)*
  - **18.9m @ 4.2g/t** *(outside the current Reserve)*
  - **26.0m @ 2.5g/t** *(outside the current Reserve)*
  - **6.4m @ 8.1g/t** *(outside the current Reserve)*
  - **9.0m @ 24.1g/t** *(in-fill)*
  - **30.2m @ 3.5g/t** *(in-fill)*
  - **15.8m @ 5.2g/t** *(in-fill)*

### Thunderbox

- At **Thunderbox D Zone**, drill results included **74.0m @ 1.6g/t** and **12.0m @ 5.4g/t** (amenable to open pit mining, within 60m of surface)
- At **Kailis**, early results from **Stage 2 drilling** confirms the presence of very high grades, including **9.0m @ 15.7g/t** and **7.0m @ 17.1g/t**

### Regional exploration

- Drilling continues at the **Carosue Dam Corridor**, within 10km of the mill
- At **Whirling Dervish North**, results include **15.0m @ 2.3g/t** and **9.0m @ 2.0g/t**, up to **600m north of the Whirling Dervish Ore Reserve**
- Drilling is underway at the **Omdurman prospect**

Saracen Managing Director Raleigh Finlayson said the drilling results continued to support the Company's growth strategy.

"These results provide further justification of our decision to invest in organic growth," Mr Finlayson said.

"We are confident that both Carosue Dam and Thunderbox will reward us with further increases in the inventory which will enable us to continue growing production in line with our seven-year plan."

### *Corporate Details:*

*31st July 2018*

***ASX code*:** SAR

***Corporate Structure:***

Ordinary shares on issue: 818.0m

Unvested employee performance rights: 9.2m

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

Cash, bullion and investments (June 30): A$118.3m

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 5.1%

***Registered Office*:**

Level 11
40 The Esplanade
Perth WA 6000
Telephone: +61 8 6229 9100
Facsimile: +61 8 6229 9199

***For further details contact:***

**Troy Irvin**
**Telephone +61 8 6229 9100**
**info@saracen.com.au**

# Carosue Dam Operations – Drilling Update

Recent drilling at Carosue Dam has focused on resource definition outside the 2017 Ore Reserve. The aim of this drilling is to extend and define additional Mineral Resource which can be assessed for future Ore Reserves. Three underground drills have operated between Karari and Whirling Dervish and continue to deliver outstanding results.

Surface drilling along the Carosue Dam Corridor has also commenced. Early results highlight the upside along the key stratigraphic and structural trend. A significant program is planned in FY19.

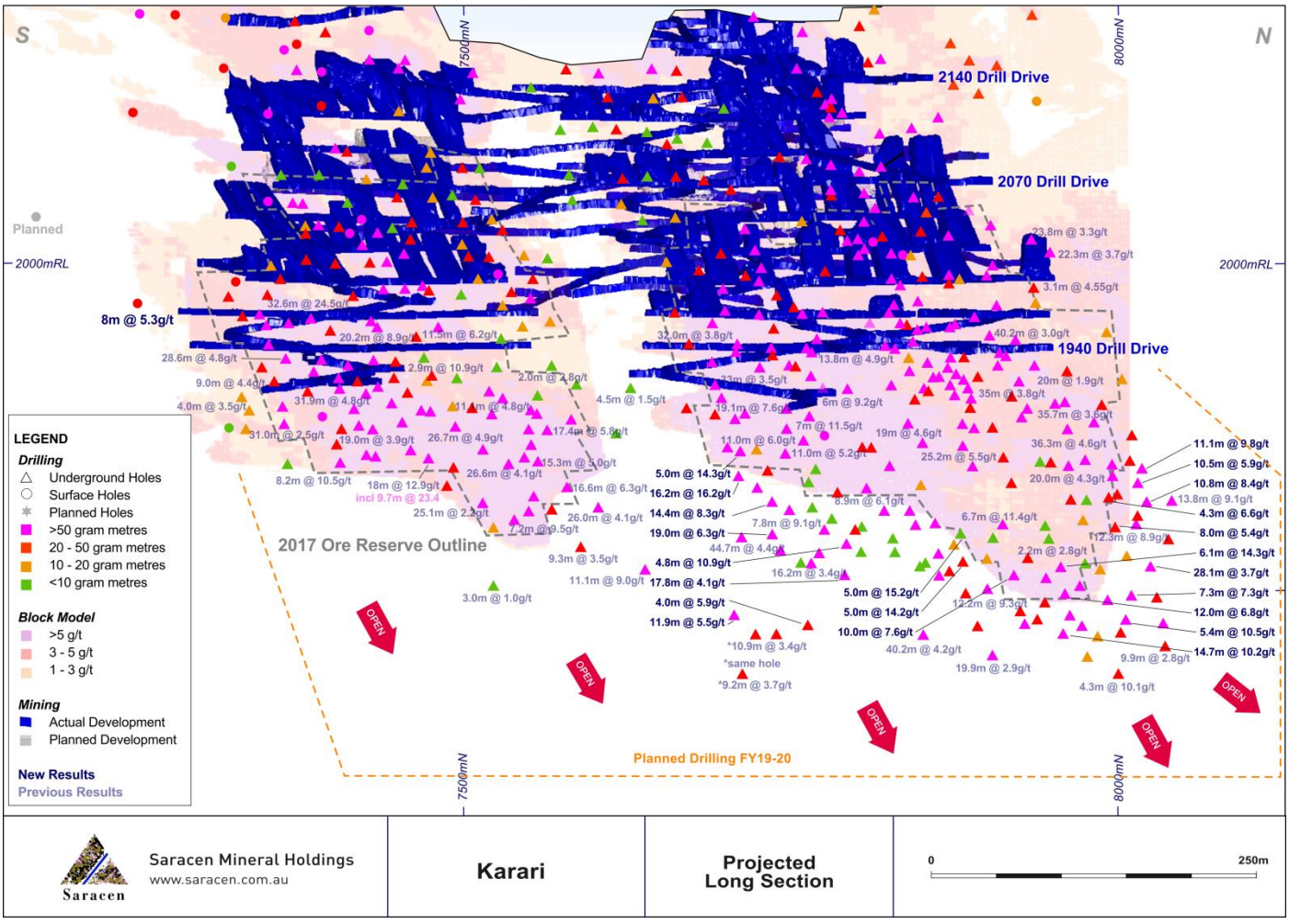
## *Karari Underground*

With the completion of the 1940 drill drive, two rigs have tested for extensions along strike and below the 2017 Ore Reserve. The new drive is well positioned to facilitate the drilling required for future Ore Reserve conversion.

The latest drilling results continue to demonstrate the outstanding growth opportunity that exists at Karari (Figure 1). Results include **16.2m @ 16.2g/t, 14.7m @ 10.2g/t, 19.0m @ 6.3g/t** and **14.4m @ 8.3g/t.**

Drilling will resume in the south of the mine upon completion of the next drill platform (1916 drill drive), anticipated in the current September quarter 2018.

***Figure 1 – Karari Long Section, New Drill Results***



Below is a table of significant Karari intercepts:

| Significant drill results include: | |
|---|---|
| KRGC548 | 16.2m @ 16.2g/t |
| KRRD285 | 14.7m @ 10.2g/t |
| KRGC550 | 19.0m @ 6.3g/t |
| KRGC549 | 14.4m @ 8.3g/t |
| KRGC581 | 11.1m @ 9.8g/t |
| KRRD263 | 6.1m @ 14.3g/t |

Undergound driling is ongoing at Karari with **over 65,000m planned for FY19**.

An **offset target** was tested **80m south of the Karari mine** in May. The target was drilled from surface using a combination of RC and diamond drilling. The hole intercepted mineralisation and returned a positive result of **8m** @ **5.3g/t**. The hole demonstrates the potential immediately adjacent to the current infrastructure and futher drilling is planned to test this target.

A deep surface hole is currently underway at Karari and will be used for vertical seismic profiling ahead of the planned 3D seismic survey. The target depth of this hole is ~1,600m below surface.

### *Whirling Dervish Underground*

Whirling Dervish drilling has continued to focus on both infill and extensional opportunities, with the growing deposit remaining open along strike and down dip.

Underground development recently commenced, and the infill programs have increased confidence in the upper levels of the mine plan across both the Footwall and Hangingwall lodes.

A combination of shorter holes and good ground conditions has resulted in terrific productivities from the single rig operating at Whirling Dervish in the June quarter 2018. Results from these programs have delivered some exceptional results which include **9.0m** @ **24.1g/t and 30.2m** @ **3.5g/t** (Figure 2). These results continue to support the existing drilling and highlight the potential of the mineralised system.

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

| Significant drill results include: | | |
|---|---|---|
| WDGC107 | 9.0m @ 24.1g/t | HW |
| WDGC109 | 15.8m @ 5.2g/t | HW |
| WDRD077 | 12.1m @ 5.3g/t | HW |
| WDGC116 | 30.2m @ 3.5g/t | FW |
| WDGC119A | 15.0m @ 4.5g/t | HW |

Extensional drilling along strike to the north and down dip has also returned some impressive results. Of note is the extension of the Footwall lode at the southern end of the deposit. An extensional hole was drilled 60m below the previous hole reported in May 2018, and intersected thick high grade mineralisation (**34.3m** @ **5.7g/t**, remains open at depth).

To the north extensional drilling has identified a new high grade zone, which is currently defined by two holes. These holes are located ~100m north of the 2017 Ore Reserve (Figure 2). Further drilling will be required to define the extent of this new northern zone. Significant results include **18.9m @ 4.2g/t** and **6.4m @ 8.1g/t.**

Below is a table of significant Whirling Dervish extensional intercepts:

| **Significant drill results include:** | | |
|---|---|---|
| WDEX035 | 34.3m @ 5.7g/t | FW |
| WDEX036 | 26.0m @ 2.5g/t | FW |
| WDEX038 | 18.9m @ 4.2g/t | FW |
| WDRD278 | 6.4m @ 8.1g/t | FW |
| WDRD063 | 20.7m @ 2.0g/t | FW |

***Figure 2 – Whirling Dervish Long Section, New Drill Results***

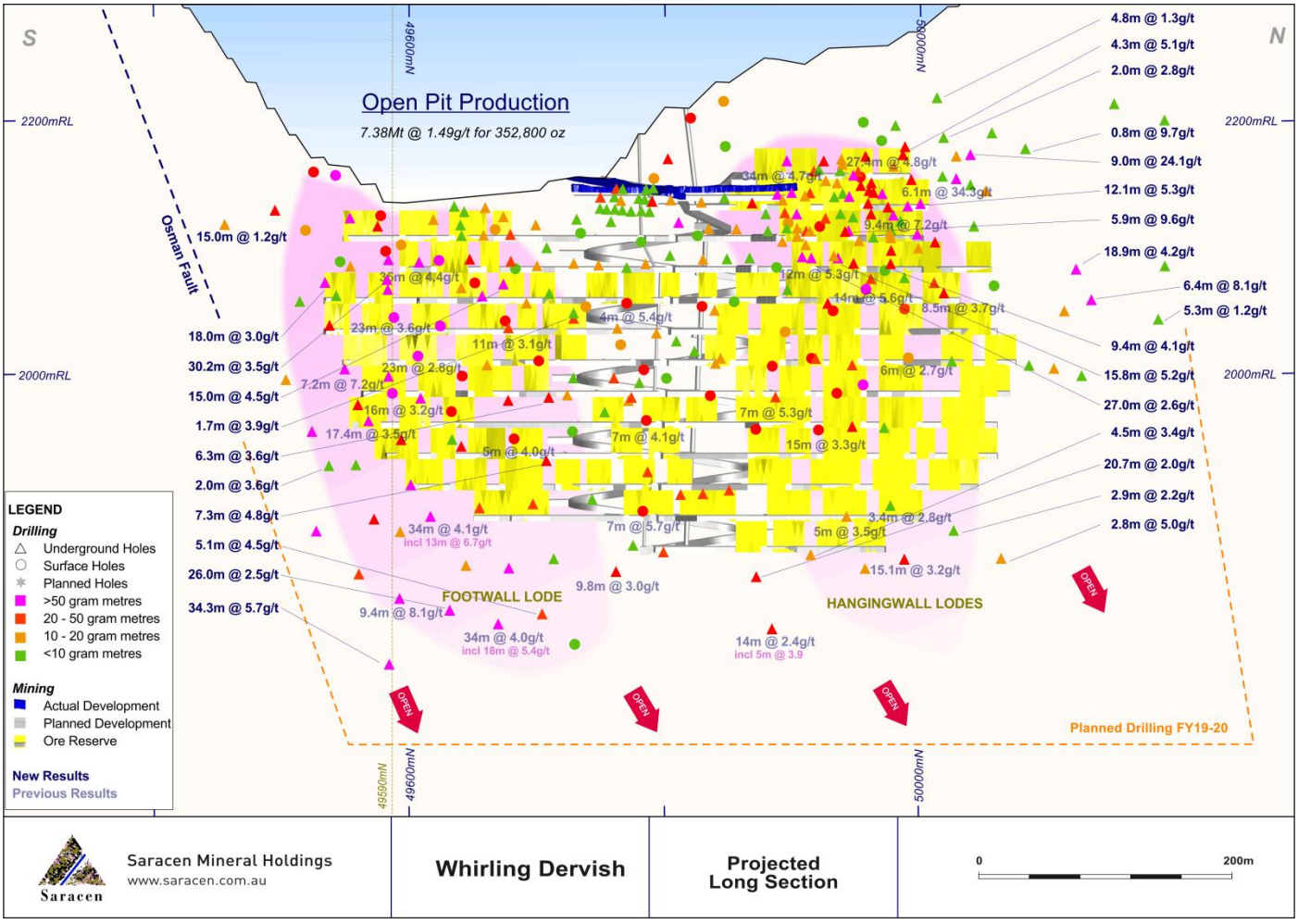
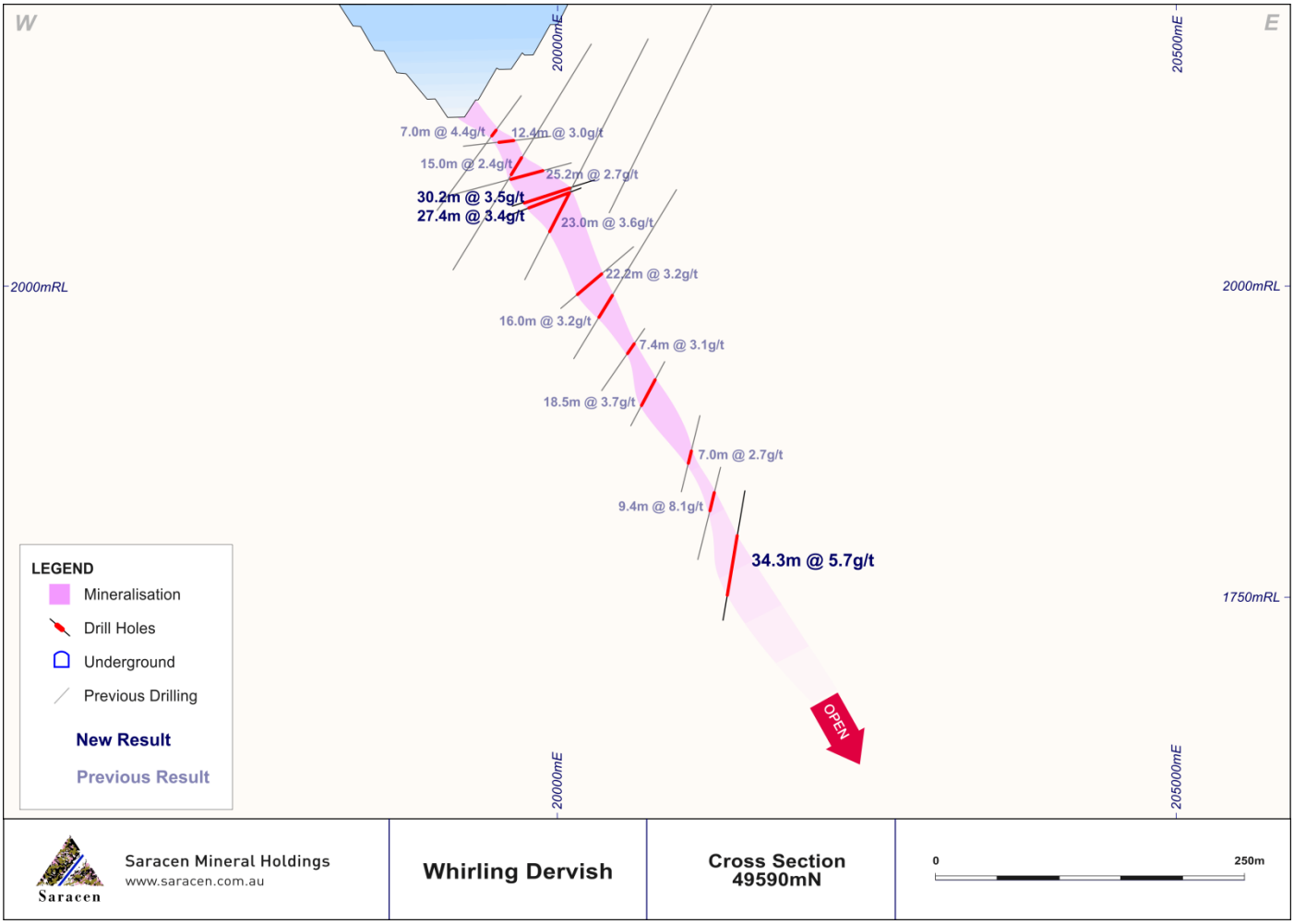


***Figure 3 – Whirling Dervish Cross Section, New Drill Results***



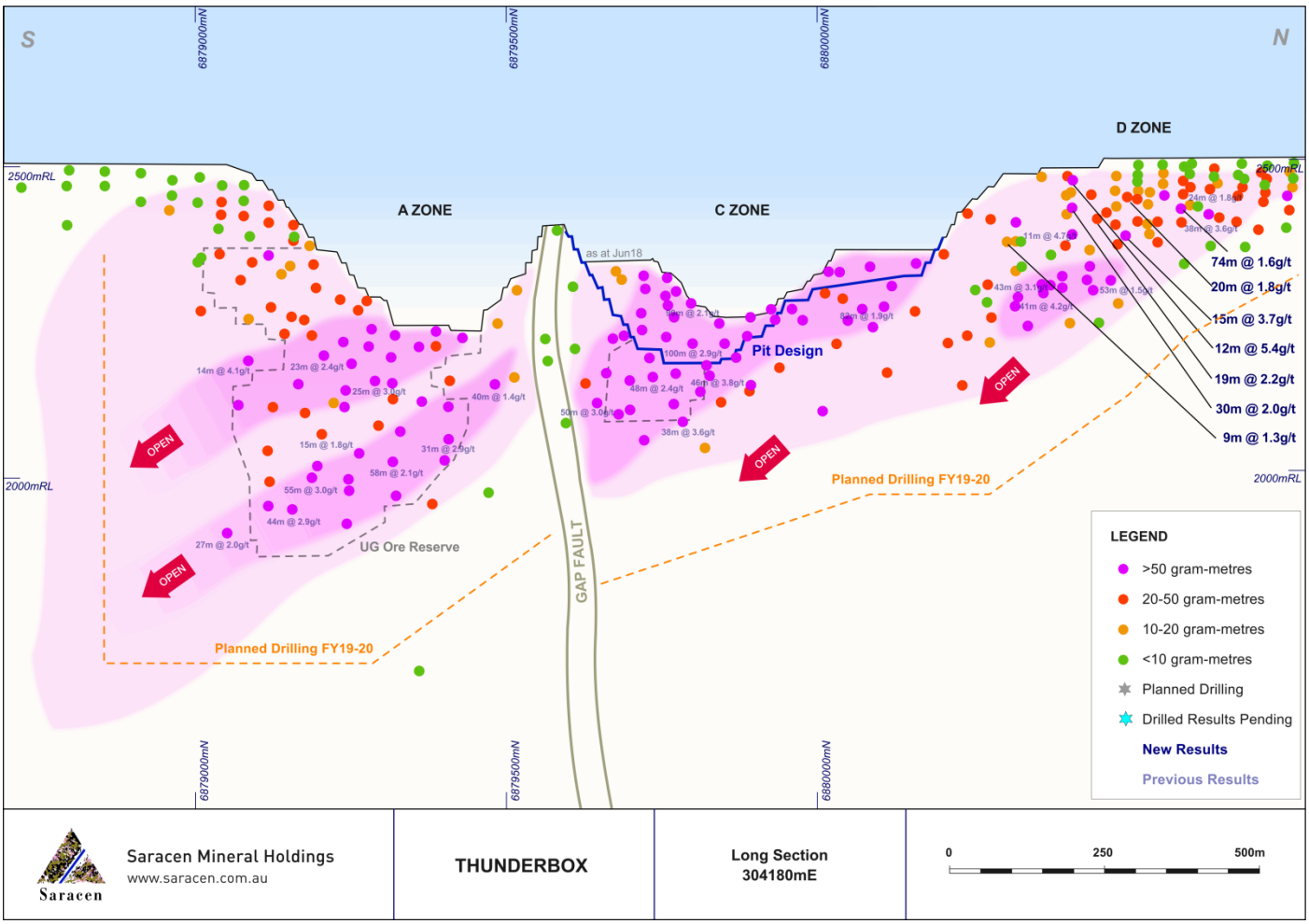
# Thunderbox Operations – Drilling Update

## *Thunderbox D Zone*

Following the successful program reported in May 2018, additional drilling has been completed to further define the Thunderbox D Zone open pit. The drilling has improved the confidence in the resource which is currently under review for potential Ore Reserve conversion.

The program intersected the mineralised Dacite unit which is the primary host to the Thunderbox deposit. A total of 11 holes were drilled with numerous promising results including **74.0m** @ **1.6g/t** and **12.0m** @ **5.4g/t** (Figure 4).

***Figure 4 – Thunderbox Long Section, New Drill Results***




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

| Significant drill results include: | |
|---|---|
| TBRC040 | 74.0m @ 1.6g/t |
| TBRC046 | 12.0m @ 5.4g/t |
| TBRC043 | 15.0m @ 3.7g/t |
| TBRC044 | 20.0m @ 1.8g/t |
| TBRC045 | 19.0m @ 2.2g/t |

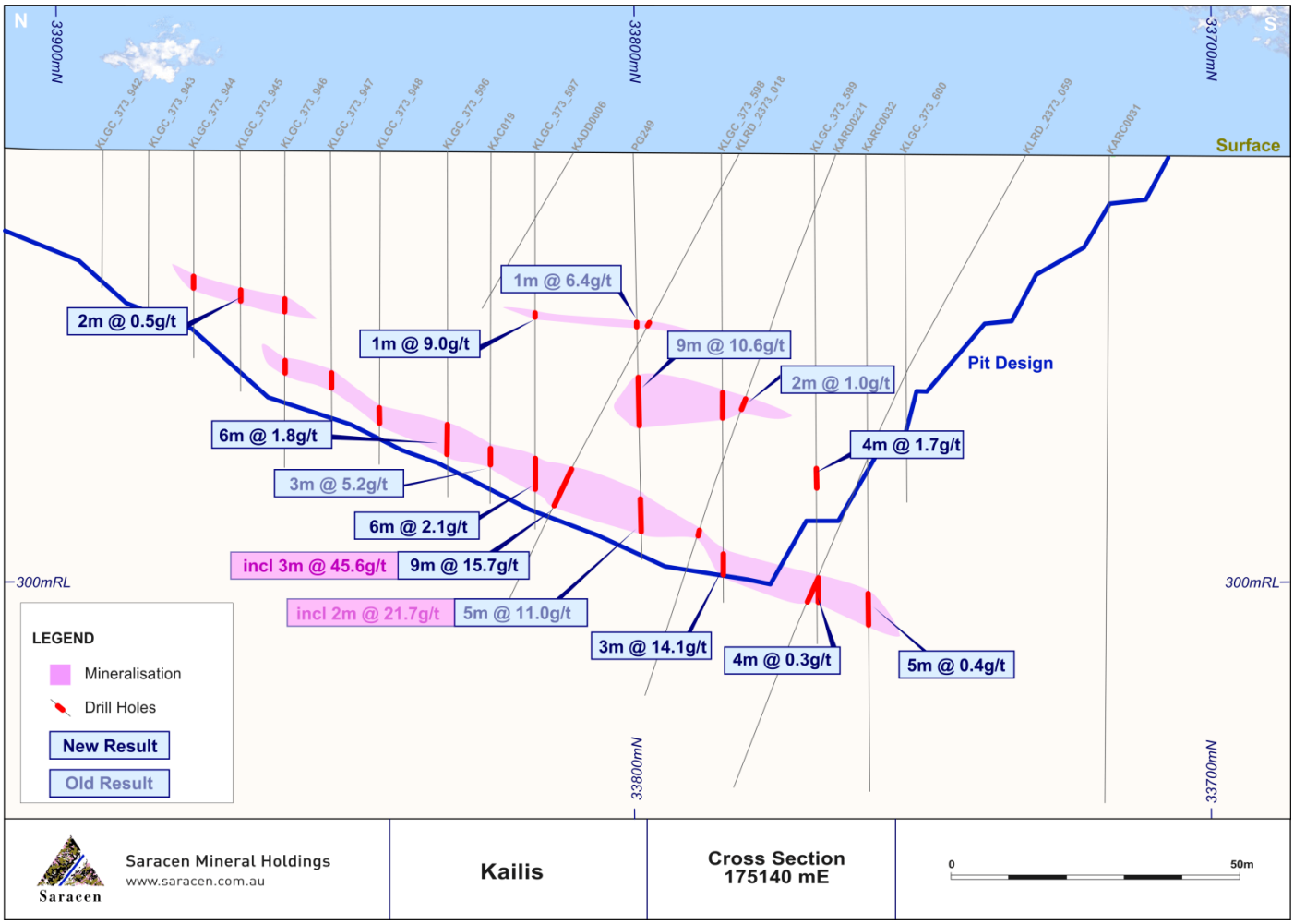
## *Kailis Stage 2*

Mining of the Kailis Stage 1 pit was completed at the end of June 2018. Resource infill drilling has been initiated ahead of the Stage 2 open pit commencing in the December half 2018.

The close spaced drilling aims to de-risk the production schedule and provide detail on the width and grade variability of the lodes which is a known characteristic of the mineralisation.

Early results from the drilling are again confirming the presence of very high grades. Results include **9.0m @ 15.7g/t** and **3.0m @ 14.1g/t**.

***Figure 5 – Kailis Stage 2***




Below is a table of significant Kailis Stage 2 intercepts:

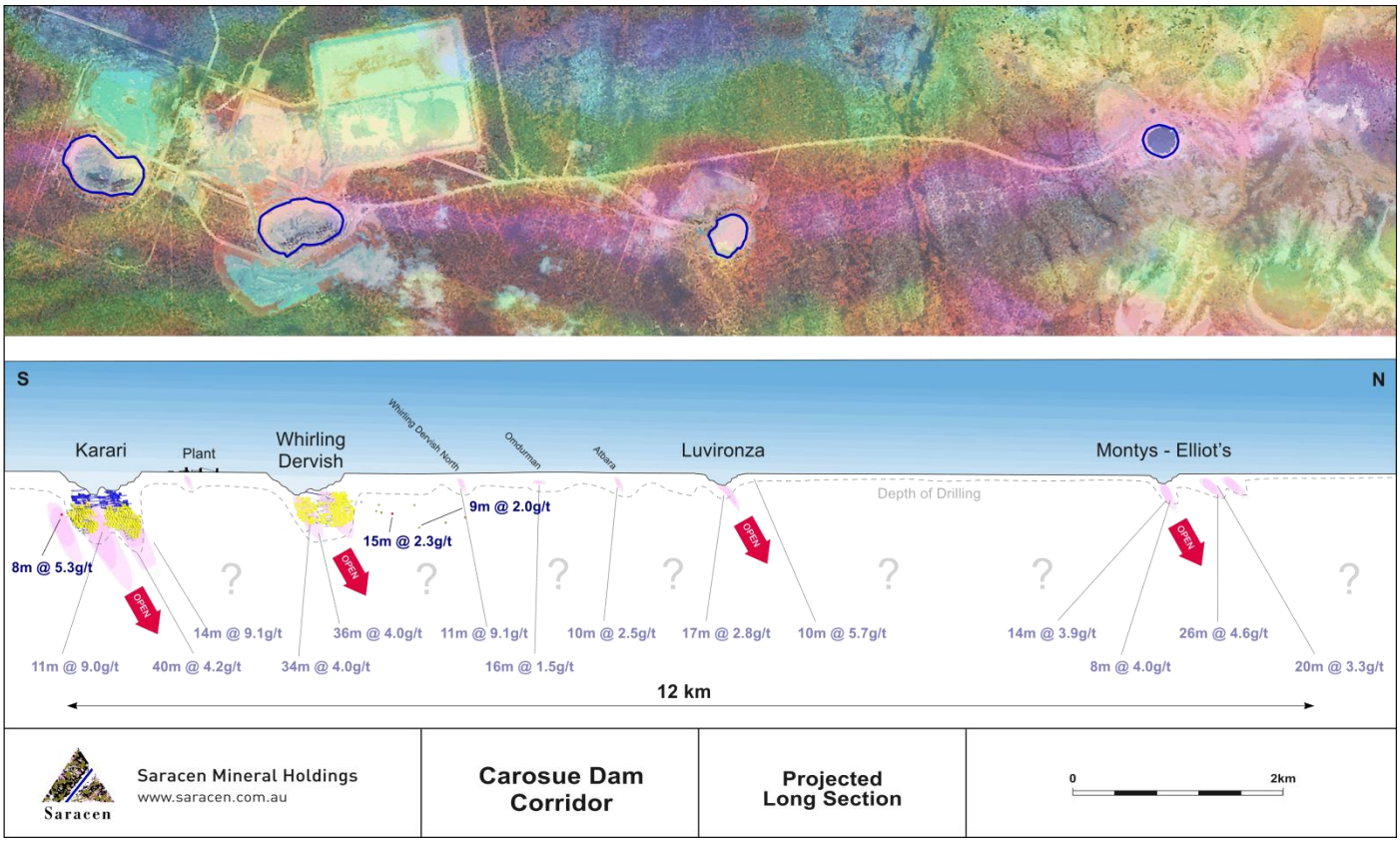
| Significant drill results include: | |
|---|---|
| KLRD_2373_018 | 9.0m @ 15.7g/t |
| KLGC_373_598 | 3.0m @ 14.1g/t |
| KLGC_373_591 | 7.0m @ 17.1g/t |
| KLGC_373_593 | 5.0m @ 13.8g/t |
| KLGC_373_605 | 14.0m @ 3.1g/t |

# Regional Exploration – Update

## *Carosue Dam Corridor*

Drilling along the highly prospective Carosue Dam Corridor (Figure 6) has commenced. Initial framework programs will test for the continuation of key stratigraphy, structure and alteration associated with mineralisation analogous to that of the Karari and Whirling Dervish deposits.

***Figure 6 – 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.

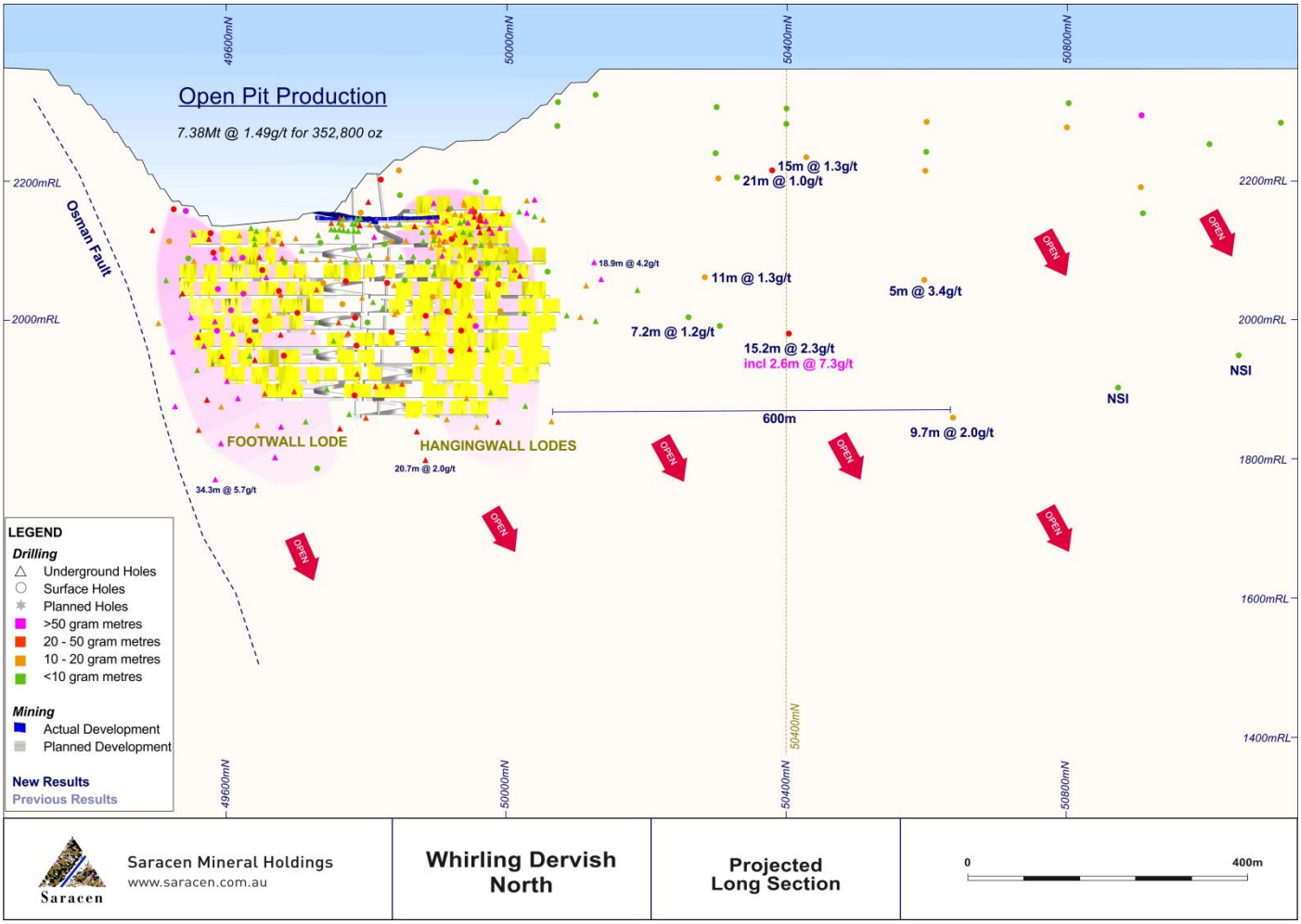
## *Whirling Dervish North*

Broad spaced surface RC and diamond drilling at Whirling Dervish North has successfully intercepted highly encouraging results including **15.2m** @ **2.3g/t** and **9.7m** @ **2.0g/t** (Figure 7).

These early results are **up to 600m north of the Whirling Dervish Ore Reserve** and highlight the potential of the corridor with follow up drilling currently being planned.

Mineralisation observed in this initial drilling is consistent with the characteristics of Whirling Dervish and Karari. The mineralisation is associated with fine to medium grained, volcanoclastic sandstone and is dominated by biotite-sericite-haematite-pyrite alteration proximal to quartz-carbonate veining.

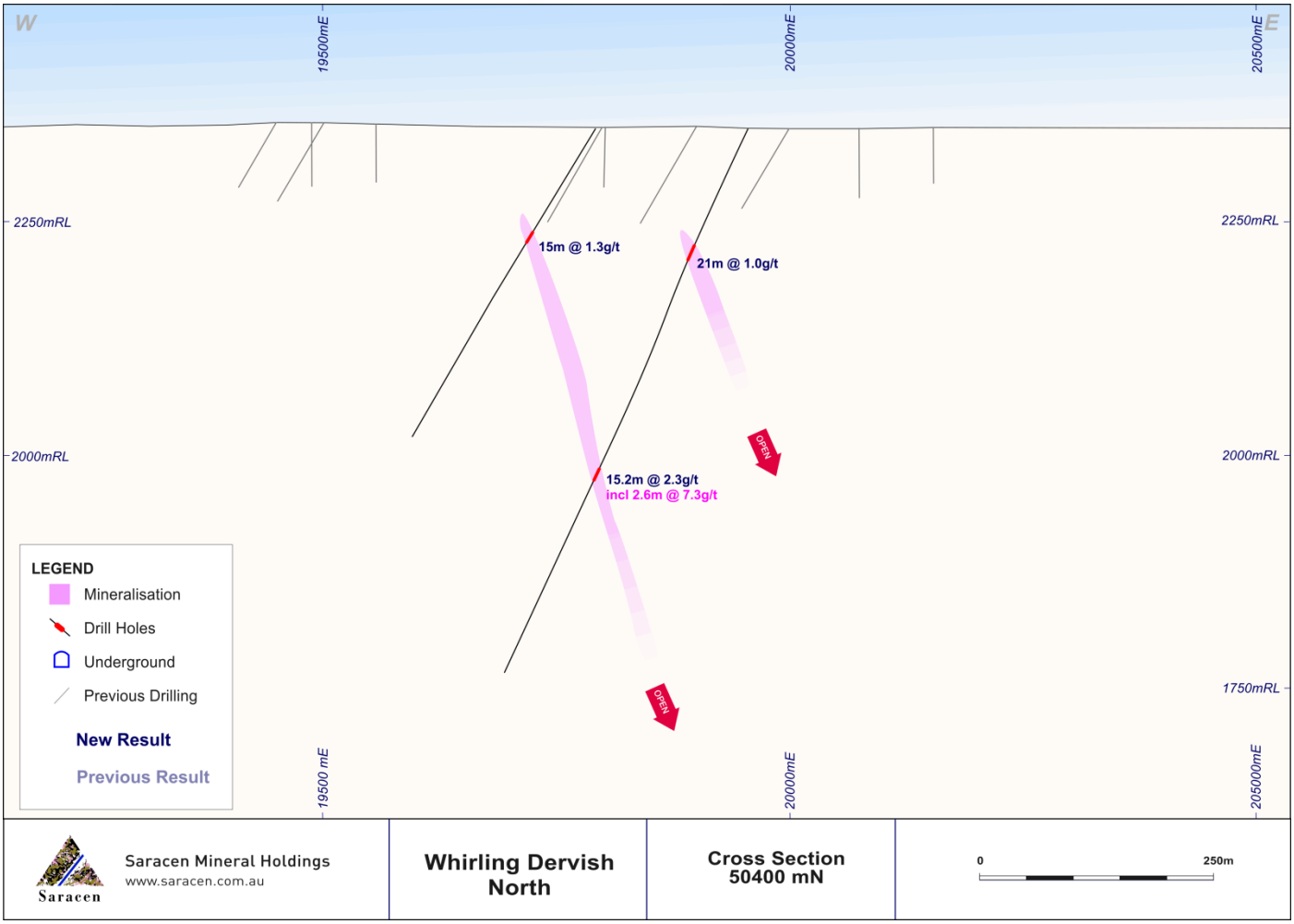
***Figure 7 – Whirling Dervish North Long Section, New Drill Results***




Below is a table of significant Whirling Dervish North exploration intercepts:

| **Significant drill results include:** | |
|---|---|
| | |
| CDC0037 | 15.2m @ 2.3g/t |
| CDC0038 | 9.7m @ 2.0g/t |
| CDC0036 | 15.0m @ 1.3g/t |
| CDC0038 | 5.0m @ 3.4g/t |

***Figure 8 – Whirling Dervish North Cross Section, New Drill Results***




A significant drilling program is planned for FY19 to test the Carosue Dam Corridor. Over 90,000m has been planned, which includes a combination of target generation air core drilling and RC and diamond drilling of existing resources and projects.

Drilling is underway at the Omdurman prospect located between Whirling Dervish and Luvironza.

**For further information please contact:**


**Investors:**

**Troy Irvin**
**Corporate Development Officer**
Email: info@saracen.com.au
www.saracen.com.au

**Media Enquiries:**

**Read Corporate**
**Paul Armstrong/Nicholas Read**
Contact: (08) 9388 1474
Email: info@readcorporate.com


**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 JULY 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 | 235.0 | -60.24 | | 92.4 | 93 | 0.6 | 6.70 |
| | | | | | | | and | 150.7 | 157 | 6.3 | 12.38 |
| KRGC539 | 438610.2 | 6663672 | -54.7 | 188 | 189.4 | -59.86 | | 112 | 119 | 7 | 4.90 |
| | | | | | | | and | 156.9 | 158.4 | 1.5 | 4.28 |
| | | | | | | | and | 168.35 | 172.85 | 4.5 | 3.40 |
| KRGC540 | 438610.2 | 6663672 | -54.7 | 185.1 | 190.1 | -48.61 | | 107.5 | 119.3 | 11.8 | 4.00 |
| | | | | | | | and | 126.15 | 127.35 | 1.2 | 3.48 |
| | | | | | | | and | 169.7 | 172.2 | 2.5 | 7.27 |
| KRGC541 | 438610.2 | 6663672 | -54.7 | 200.9 | 177.9 | -59.47 | | 122 | 129.75 | 7.75 | 2.76 |
| | | | | | | | and | 147.15 | 148 | 0.85 | 4.28 |
| | | | | | | | and | 167.6 | 170 | 2.4 | 2.72 |
| | | | | | | | and | 176 | 178 | 2 | 3.18 |
| | | | | | | | **and** | **182** | **186.8** | **4.8** | **10.86** |
| KRGC542 | 438610.2 | 6663672 | -54.7 | 203.92 | 178.4 | -53.29 | | 123.95 | 124.95 | 1 | 4.91 |
| | | | | | | | and | 132.5 | 133.35 | 0.85 | 6.74 |
| | | | | | | | and | 179.05 | 187.5 | 8.45 | 6.49 |
| KRGC543 | 438610.2 | 6663672 | -54.7 | 136 | 186.7 | -46.4 | | 183.2 | 184.1 | 0.9 | 5.91 |
| KRGC544 | 438609.6 | 6663672 | -54.737 | 186.5 | 185.3 | -42.01 | | 118.1 | 119 | 0.9 | 2.75 |
| | | | | | | | and | 145.9 | 146.55 | 0.65 | 5.58 |
| | | | | | | | and | 176.45 | 176.85 | 0.4 | 6.27 |
| KRGC545 | 438609.6 | 6663672 | -54.734 | 196.2 | 184.4 | -33.90 | | 165.85 | 166.7 | 0.85 | 5.84 |
| | | | | | | | and | 182.15 | 186.95 | 4.8 | 8.76 |
| KRGC546 | 438609.5 | 6663672 | -54.734 | 222 | 182.4 | -27.36 | | 142.75 | 144.7 | 1.95 | 3.71 |
| | | | | | | | and | 175.85 | 177 | 1.15 | 3.43 |
| | | | | | | | and | 181.5 | 181.9 | 0.4 | 2.83 |
| | | | | | | | **and** | **191.9** | **196.9** | **5** | **14.34** |
| KRGC547 | 438609.5 | 6663672 | -54.734 | 236.6 | 179.1 | -25.87 | | 192.1 | 192.98 | 0.88 | 3.90 |
| | | | | | | | and | 197.9 | 206.2 | 8.3 | 7.49 |
| KRGC548 | 438610.2 | 6663672 | -55.276 | 231.5 | 178.4 | -31.71 | | 145 | 146 | 1 | 2.72 |
| | | | | | | | **and** | **196** | **212.15** | **16.15** | **16.19** |
| KRGC549 | 438610.2 | 6663672 | -55.271 | 234.1 | 176.4 | -40.46 | | **194.65** | **209** | **14.35** | **8.32** |
| KRGC550 | 438610.1 | 6663673 | -55.238 | 249.1 | 174.7 | -45.33 | | 135 | 135.6 | 0.6 | 2.81 |
| | | | | | | | and | 197.6 | 198 | 0.4 | 2.91 |
| | | | | | | | **and** | **202** | **221** | **19** | **6.34** |
| | | | | | | | and | 227 | 231 | 4 | 2.56 |
| | | | | | | | and | 233 | 235 | 2 | 2.90 |
| KRGC551 | 438610.2 | 6663673 | -55.334 | 230.8 | 171.1 | -55.73 | | 189.7 | 205 | 15.3 | 4.18 |
| KRGC552 | 438609.8 | 6663673 | -55.081 | 249.74 | 165.9 | -62.22 | | 142 | 143 | 1 | 2.99 |
| | | | | | | | **and** | **195** | **212.8** | **17.8** | **4.13** |
| | | | | | | | and | 222.8 | 224 | 1.2 | 2.72 |
| KRGC553 | 438610.5 | 6663672 | -55.306 | 254.92 | 172.3 | -48.27 | | 181.2 | 182 | 0.8 | 2.71 |
| | | | | | | | and | 195.75 | 206.5 | 10.75 | 5.28 |
| | | | | | | | and | 214 | 233 | 19 | 4.45 |
| KRGC554 | 438610.3 | 6663672 | -55.294 | 257.44 | 168.1 | -52.88 | | 188.08 | 189 | 0.92 | 5.91 |
| | | | | | | | and | 196 | 197 | 1 | 11.90 |
| | | | | | | | and | 200.65 | 223.86 | 23.21 | 2.76 |
| KRGC555 | 438610.5 | 6663674 | -55.26 | 312 | 163.8 | -54.99 | | 201.35 | 203.4 | 2.05 | 6.74 |
| | | | | | | | and | 212 | 216.5 | 4.5 | 4.75 |
| | | | | | | | and | 225.6 | 231.78 | 6.18 | 2.69 |
| | | | | | | | and | 263 | 266.27 | 3.27 | 5.11 |
| | | | | | | | and | 273.2 | 283 | 9.8 | 3.30 |
| KRGC556 | 438610.3 | 6663673 | -55.205 | 297 | 159.8 | -59.20 | | 205.51 | 207.78 | 2.27 | 18.44 |
| | | | | | | | and | 218 | 219 | 1 | 2.66 |
| | | | | | | | and | 248 | 248.6 | 0.6 | 4.70 |
| | | | | | | | and | 251.93 | 255 | 3.07 | 4.02 |
| | | | | | | | **and** | **291** | **295** | **4** | **5.91** |

| KARARI DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| KRGC557 | 438608.8 | 6663674 | -55.029 | 333 | 167.2 | -48.60 | | 157.66 | 158.64 | 0.98 | 2.64 |
| | | | | | | | and | 193 | 193.3 | 0.3 | 2.95 |
| | | | | | | | and | 205 | 208 | 3 | 6.17 |
| | | | | | | | and | 262.68 | 264.47 | 1.79 | 5.64 |
| | | | | | | | **and** | **275.04** | **286.9** | **11.86** | **5.53** |
| | | | | | | | and | 294.76 | 295.2 | 0.44 | 3.18 |
| | | | | | | | and | 297 | 299 | 2 | 3.45 |
| | | | | | | | and | 316.55 | 319 | 2.45 | 6.42 |
| KRGC558 | 438609.9 | 6663672 | -55 | 365.5 | 160.3 | -53.07 | | 190.7 | 191.18 | 0.48 | 3.52 |
| | | | | | | | and | 277.6 | 288.85 | 11.25 | 3.92 |
| | | | | | | | and | 304 | 307.18 | 3.18 | 2.57 |
| | | | | | | | and | 320.63 | 321 | 0.37 | 4.15 |
| | | | | | | | and | 328.48 | 334 | 5.52 | 3.69 |
| | | | | | | | and | 359.9 | 360.2 | 0.3 | 3.05 |
| KRGC559 | 438620.2 | 6663774 | -63.162 | 133.8 | 274.0 | -14.09 | | 113.25 | 114 | 0.75 | 5.99 |
| KRGC562 | 438620.5 | 6663773 | -63.717 | 227.42 | 278.9 | -27.93 | | **205** | **215.5** | **10.5** | **5.87** |
| KRGC563 | 438620.3 | 6663773 | -63.762 | 204 | 267.4 | -40.62 | | 174.5 | 178 | 3.5 | 3.35 |
| | | | | | | | and | 193 | 194.5 | 1.5 | 4.05 |
| KRGC564 | 438620.3 | 6663773 | -63.568 | 206.97 | 273.6 | -37.73 | | **182** | **186.3** | **4.3** | **6.62** |
| KRGC565 | 438620.4 | 6663773 | -63.543 | 215.3 | 276.7 | -35.28 | | 186.3 | 190.4 | 4.1 | 5.31 |
| | | | | | | | and | 197 | 197.65 | 0.65 | 4.97 |
| | | | | | | | and | 201.4 | 202.2 | 0.8 | 19.90 |
| KRGC566 | 438620.3 | 6663773 | -63.675 | 240 | 285.1 | -32.53 | | **205** | **215.8** | **10.8** | **8.36** |
| KRGC567 | 438620.3 | 6663773 | -63.607 | 210.2 | 265.7 | -48.63 | | 172 | 174 | 2 | 7.67 |
| | | | | | | | and | 192.2 | 195.3 | 3.1 | 2.68 |
| KRGC568 | 438620.3 | 6663773 | -63.726 | 216 | 276.5 | -45.43 | | 175 | 176.2 | 1.2 | 3.88 |
| | | | | | | | **and** | **185** | **193** | **8** | **5.40** |
| | | | | | | | and | 197.8 | 198.3 | 0.5 | 3.23 |
| | | | | | | | and | 201.65 | 202.85 | 1.2 | 3.14 |
| KRGC569 | 438620.3 | 6663773 | -63.479 | 291 | 288.2 | -39.40 | | 224.35 | 227.1 | 2.75 | 8.48 |
| | | | | | | | and | 227.4 | 230.2 | 2.8 | 7.68 |
| KRGC570 | 438620.2 | 6663773 | -63.712 | 237 | 272.7 | -9.93 | | 196 | 199 | 3 | 3.85 |
| | | | | | | | and | 202.1 | 202.75 | 0.65 | 8.77 |
| | | | | | | | and | 206 | 214 | 8 | 3.74 |
| | | | | | | | and | 217.25 | 221 | 3.75 | 3.76 |
| KRGC571 | 438620.4 | 6663773 | -63.396 | 214.6 | 244.7 | -17.08 | | 135.1 | 140.15 | 5.05 | 2.82 |
| | | | | | | | and | 141.95 | 143 | 1.05 | 2.56 |
| | | | | | | | and | 155 | 159 | 4 | 3.58 |
| | | | | | | | and | 191 | 195.3 | 4.3 | 6.60 |
| KRGC572 | 438608.8 | 6663673 | -54.721 | 159.2 | 242.5 | -37.11 | | 78.74 | 92 | 13.26 | 4.21 |
| | | | | | | | and | 132.6 | 139 | 6.4 | 5.88 |
| KRGC573 | 438608.8 | 6663673 | -54.742 | 165 | 221.4 | -33.75 | | 84.3 | 85 | 0.7 | 9.80 |
| | | | | | | | and | 136.26 | 138.64 | 2.38 | 5.85 |
| KRGC580 | 438620.4 | 6663773 | -63.13 | 222 | 270.9 | -24.48 | | 193.4 | 195.85 | 2.45 | 9.45 |
| | | | | | | | and | 203.6 | 207.5 | 3.9 | 18.36 |
| KRGC581 | 438620.3 | 6663773 | -63.159 | 240 | 278.9 | -24.63 | | **207.5** | **218.6** | **11.1** | **9.83** |
| KRGC582 | 438620.5 | 6663774 | -63.201 | 207 | 253.3 | -24.56 | results pending | | | | |
| KRGC583 | 438620.5 | 6663774 | -63.201 | 201.2 | 253.7 | -33.32 | | 156.1 | 164.5 | 8.4 | 5.71 |
| | | | | | | | and | 172.8 | 174.8 | 2 | 5.41 |
| | | | | | | | and | 184.55 | 190.15 | 5.6 | 4.99 |
| KRGC584 | 438627.2 | 6663760 | -63.421 | 198 | 237.9 | -39.22 | results pending | | | | |
| KRGC585 | 438605.8 | 6663686 | -55.4 | 146.9 | 249.2 | -85.84 | results pending | | | | |
| KRGC587 | 438611 | 6663674 | -55.4 | 225 | 172.9 | -78.62 | | 143 | 143.6 | 0.6 | 4.93 |
| | | | | | | | and | 146.9 | 148.42 | 1.52 | 5.78 |
| | | | | | | | and | 174.07 | 174.56 | 0.49 | 2.67 |
| | | | | | | | and | 176 | 176.83 | 0.83 | 3.19 |
| KRRD255 | 438628.2 | 6663758 | -64.013 | 215.9 | 228.3 | -56.44 | | 126.55 | 127 | 0.45 | 3.34 |
| | | | | | | | and | 154.9 | 156.1 | 1.2 | 5.36 |
| | | | | | | | and | 162 | 162.3 | 0.3 | 3.50 |
| | | | | | | | and | 193.2 | 195.3 | 2.1 | 5.86 |

| KARARI DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| KRRD256 | 438628.2 | 6663758 | -64.005 | 221.85 | 239.3 | -59.92 | | **196** | **206** | **10** | **7.64** |
| KRRD257 | 438628.2 | 6663759 | -64.103 | 231.08 | 236.1 | -68.60 | | 115.7 | 117 | 1.3 | 4.25 |
| | | | | | | | and | 158.85 | 159.4 | 0.55 | 5.43 |
| | | | | | | | and | 212.1 | 218 | 5.9 | 3.67 |
| KRRD258 | 438628.1 | 6663758 | -64.057 | 234 | 251.9 | -65.46 | | 171.1 | 171.68 | 0.58 | 5.85 |
| | | | | | | | and | 209.02 | 213 | 3.98 | 5.78 |
| | | | | | | | and | 217 | 218 | 1 | 2.50 |
| | | | | | | | and | 220.78 | 221.78 | 1 | 3.09 |
| KRRD259 | 438628.1 | 6663759 | -64.049 | 213.04 | 247.0 | -55.61 | | 165 | 165.72 | 0.72 | 2.89 |
| | | | | | | | and | 185 | 186 | 1 | 9.87 |
| | | | | | | | and | 191.9 | 199.6 | 7.7 | 5.35 |
| KRRD260 | 438628.3 | 6663758 | -64.039 | 207 | 234.0 | -51.30 | | 154.85 | 155.15 | 0.3 | 2.69 |
| | | | | | | | and | 186.85 | 189.43 | 2.58 | 3.29 |
| KRRD261 | 438628.2 | 6663759 | -64.18 | 249 | 250.7 | -71.45 | | 215.62 | 223 | 7.38 | 4.20 |
| | | | | | | | and | 233.4 | 234 | 0.6 | 6.07 |
| KRRD262 | 438621.2 | 6663773 | -64.011 | 242.77 | 274.4 | -56.43 | | 202.13 | 206 | 3.87 | 3.56 |
| KRRD263 | 438621.2 | 6663773 | -63.945 | 221.6 | 257.4 | -57.72 | | **196** | **202.13** | **6.13** | **14.33** |
| KRRD264 | 438621.2 | 6663773 | -64.007 | 228.8 | 265.5 | -61.04 | | 205.5 | 212.77 | 7.27 | 9.11 |
| KRRD265 | 438621.1 | 6663773 | -63.98 | 241.66 | 285.3 | -58.95 | | **216.2** | **223.5** | **7.3** | **7.33** |
| KRRD266 | 438621.3 | 6663773 | -64 | 230.86 | 257.7 | -63.71 | | 179.45 | 180.6 | 1.15 | 4.09 |
| | | | | | | | **and** | **204** | **216** | **12** | **6.78** |
| KRRD267 | 438621.2 | 6663773 | -64.033 | 254.93 | 285.7 | -64.47 | | **225.7** | **231.12** | **5.42** | **10.53** |
| KRRD268 | 438621.2 | 6663773 | -64.042 | 240.02 | 266.6 | -69.09 | | 178.3 | 179 | 0.7 | 3.65 |
| | | | | | | | and | 219.92 | 239 | 19.08 | 6.49 |
| KRRD269 | 438609.7 | 6663672 | -54.393 | 191.96 | 186.5 | -27.15 | | 115.84 | 117 | 1.16 | 3.38 |
| | | | | | | | and | 148.5 | 149.25 | 0.75 | 3.76 |
| | | | | | | | and | 183 | 185 | 2 | 6.95 |
| KRRD270 | 438609.8 | 6663672 | -54.752 | 170 | 200.7 | -48.42 | | 96 | 106.66 | 10.66 | 3.07 |
| | | | | | | | and | 136 | 136.55 | 0.55 | 5.88 |
| | | | | | | | and | 158 | 161 | 3 | 13.73 |
| KRRD271 | 438609.4 | 6663674 | -55.278 | 185.4 | 286.3 | -76.04 | | 96.55 | 97 | 0.45 | 2.65 |
| KRRD272 | 438609.3 | 6663674 | -55.222 | 180 | 209.3 | -66.68 | | 109.4 | 111.05 | 1.65 | 5.32 |
| KRRD273 | 438609.4 | 6663674 | -55.236 | 207 | 241.3 | -73.74 | | 120 | 121 | 1 | 10.60 |
| | | | | | | | and | 124.7 | 132.4 | 7.7 | 2.64 |
| | | | | | | | **and** | **170** | **175** | **5** | **14.15** |
| | | | | | | | and | 178 | 179.2 | 1.2 | 2.93 |
| KRRD274 | 438609.9 | 6663674 | -55.144 | 228 | 206.5 | -86.10 | | 149 | 149.95 | 0.95 | 4.99 |
| | | | | | | | and | 155 | 156 | 1 | 3.56 |
| | | | | | | | and | 160 | 165.8 | 5.8 | 3.03 |
| | | | | | | | and | 173 | 173.6 | 0.6 | 4.99 |
| | | | | | | | and | 179.95 | 181.15 | 1.2 | 3.55 |
| | | | | | | | and | 186.35 | 187.05 | 0.7 | 3.04 |
| KRRD275 | 438605.7 | 6663685 | -55.314 | 186 | 240.2 | -63.37 | | 100.6 | 102.55 | 1.95 | 4.53 |
| | | | | | | | **and** | **156.05** | **161** | **4.95** | **15.24** |
| KRRD276 | 438605.7 | 6663686 | -55.314 | 192 | 253.4 | -73.54 | | 118 | 119.15 | 1.15 | 4.42 |
| | | | | | | | and | 125 | 130.3 | 5.3 | 3.67 |
| | | | | | | | and | 137 | 137.9 | 0.9 | 2.82 |
| | | | | | | | and | 140 | 141 | 1 | 3.05 |
| | | | | | | | and | 176.4 | 180 | 3.6 | 10.10 |
| | | | | | | | and | 184 | 185 | 1 | 2.69 |
| KRRD277 | 438605.7 | 6663686 | -55.316 | 189 | 254.3 | -67.26 | | 116 | 116.6 | 0.6 | 5.01 |
| KRRD278 | 438620 | 6663774 | -63.521 | 240 | 280.5 | -23.36 | | 201.16 | 201.7 | 0.54 | 2.90 |
| | | | | | | | and | 206 | 210.55 | 4.55 | 3.79 |
| | | | | | | | and | 214 | 217 | 3 | 7.97 |
| KRRD279 | 438620.1 | 6663774 | -63.443 | 216.1 | 274.2 | -29.60 | | 185 | 186.55 | 1.55 | 3.96 |
| | | | | | | | and | 191 | 199 | 8 | 6.33 |
| | | | | | | | and | 204.12 | 205.36 | 1.24 | 8.62 |

| KARARI DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| KRRD280 | 438620 | 6663774 | -63.581 | 229.4 | 282.5 | -39.73 | | 196 | 202 | 6 | 5.55 |
| | | | | | | | and | 212.75 | 213.7 | 0.95 | 3.64 |
| | | | | | | | and | 222 | 223 | 1 | 2.68 |
| KRRD281 | 438620.3 | 6663773 | -63.379 | 210 | 260.8 | -43.73 | | 165.6 | 169.33 | 3.73 | 11.14 |
| | | | | | | | and | 190 | 191 | 1 | 7.50 |
| KRRD282 | 438620.1 | 6663774 | -63.749 | 264 | 287.4 | -50.21 | | **200.9** | **229** | **28.1** | **3.66** |
| KRRD283 | 438620 | 6663774 | -63.982 | 261.2 | 290.1 | -54.48 | | 229 | 232.8 | 3.8 | 5.99 |
| | | | | | | | and | 235.95 | 239.3 | 3.35 | 9.29 |
| KRRD284 | 438621.3 | 6663773 | -64.017 | 248.9 | 272.5 | -70.58 | | 179 | 180 | 1 | 4.29 |
| | | | | | | | and | 230 | 232 | 2 | 8.37 |
| | | | | | | | and | 239 | 239.75 | 0.75 | 2.66 |
| KRRD285 | 438621.3 | 6663773 | -64.044 | 249 | 252.4 | -72.29 | | 183 | 184 | 1 | 5.92 |
| | | | | | | | **and** | **221** | **235.65** | **14.65** | **10.18** |
| KRRD286 | 438620.4 | 6663773 | -63.343 | 249 | 280.9 | -16.27 | | 191.85 | 193 | 1.15 | 13.07 |
| | | | | | | | and | 217 | 226 | 9 | 2.80 |
| KRRD287 | 438608.9 | 6663673 | -55 | 168 | 231.4 | -53.41 | | 86.84 | 88 | 1.16 | 4.32 |
| | | | | | | | | 93.33 | 93.65 | 0.32 | 2.77 |
| | | | | | | | | 143.3 | 147 | 3.7 | 7.51 |

## *Table 2 – Whirling Dervish Drill Results*

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WDEX020 | 438264.9 | 6665623 | 142.061 | 359.95 | 299.99 | -61.88 | | 298 | 298.9 | 0.9 | 2.66 |
| WDEX023 | 438264.8 | 6665623 | 142.025 | 354 | 302.7 | -56.36 | | 308 | 309 | 1 | 7.08 |
| | | | | | | | and | 335.7 | 337.75 | 2.05 | 5.95 |
| WDEX029 | 438382.1 | 6665507 | 142.694 | 381 | 168.3 | -2.96 | | **330** | **345** | **15** | **1.23** |
| WDEX031 | 438381.4 | 6665508 | 141.25 | 341.4 | 159.7 | -43.84 | | 183.5 | 184.17 | 0.67 | 2.70 |
| | | | | | | | **and** | **301.5** | **303.5** | **2** | **3.56** |
| WDEX035 | 438381.8 | 6665507 | 141.299 | 432 | 142.4 | -67.73 | | 291.75 | 292.4 | 0.65 | 4.86 |
| | | | | | | | **and** | **376.7** | **411** | **34.3** | **5.71** |
| | | | | | | | and | 413 | 413.8 | 0.8 | 2.92 |
| WDEX036 | 438380.8 | 6665508 | 141.333 | 396 | 147.7 | -72.82 | | 80 | 81 | 1 | 11.30 |
| | | | | | | | and | 272 | 272.85 | 0.85 | 3.04 |
| | | | | | | | and | 306 | 307 | 1 | 2.99 |
| | | | | | | | **and** | **322** | **348** | **26** | **2.51** |
| WDEX037 | 438262.4 | 6665627 | 143.551 | 366 | 286.1 | -16.27 | | 90 | 91 | 1 | 4.61 |
| | | | | | | | and | 131.6 | 135.4 | 3.8 | 2.97 |
| | | | | | | | and | 139.2 | 140.95 | 1.75 | 4.59 |
| | | | | | | | and | 158.5 | 159 | 0.5 | 2.67 |
| | | | | | | | and | 187 | 189 | 2 | 10.60 |
| | | | | | | | **and** | **346** | **351.26** | **5.26** | **1.16** |
| WDEX038 | 438262.1 | 6665627 | 142.891 | 347.83 | 273.9 | -10.12 | | 110.25 | 111.05 | 0.8 | 11.00 |
| | | | | | | | and | 123 | 124 | 1 | 2.78 |
| | | | | | | | and | 145.55 | 146 | 0.45 | 11.20 |
| | | | | | | | and | 150.55 | 151.55 | 1 | 4.16 |
| | | | | | | | and | 298.85 | 317 | 18.15 | 4.31 |

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WDEX042 | 438023 | 6665953 | 350 | 442.3 | 199.13 | -59.48 | | 391.9 | 393 | 1.1 | 5.37 |
| WDGC072 | 438380.9 | 6665508 | 142.461 | 317.85 | 193 | -19.34 | | 108 | 109 | 1 | 4.39 |
| | | | | | | | and | 145.3 | 151 | 5.7 | 2.88 |
| | | | | | | | and | 236 | 240.8 | 4.8 | 9.18 |
| | | | | | | | and | 246.05 | 246.92 | 0.87 | 4.35 |
| WDGC078 | 455530.1 | 6705571 | 140.302 | 284.6 | 184.3 | -23.18 | | 88 | 89 | 1 | 3.00 |
| | | | | | | | and | 111.36 | 112.06 | 0.7 | 8.75 |
| | | | | | | | and | 158.36 | 158.73 | 0.37 | 10.20 |
| | | | | | | | and | 170 | 170.7 | 0.7 | 3.17 |
| | | | | | | | and | 178.51 | 178.93 | 0.42 | 4.04 |
| | | | | | | | and | 235 | 237.48 | 2.48 | 3.30 |
| WDGC079 | 455529.1 | 6705570 | 141.148 | 264 | 201.4 | -25.36 | | 95.6 | 96.8 | 1.2 | 3.13 |
| | | | | | | | and | 103.3 | 109.4 | 6.1 | 3.30 |
| | | | | | | | and | 157.4 | 160.6 | 3.2 | 3.64 |
| | | | | | | | and | 208.6 | 210 | 1.4 | 7.57 |
| | | | | | | | and | 234 | 234.95 | 0.95 | 3.63 |
| WDGC082 | 438304.3 | 6665582 | 142.985 | 191.5 | 237.3 | -0.22 | | 118.6 | 118.9 | 0.3 | 5.35 |
| | | | | | | | and | 173.05 | 174 | 0.95 | 7.09 |
| WDGC084 | 438304.6 | 6665582 | 141.56 | 252 | 213.5 | -23.79 | | 205 | 207.34 | 2.34 | 3.48 |
| | | | | | | | and | 210.34 | 211.13 | 0.79 | 2.98 |
| | | | | | | | and | 216 | 216.31 | 0.31 | 2.83 |
| WDGC087 | 438303.6 | 6665584 | 141 | 174.03 | 234.3 | -9.27 | | 110 | 110.45 | 0.45 | 4.90 |
| | | | | | | | and | 148 | 151 | 3 | 4.36 |
| | | | | | | | and | 156 | 156.5 | 0.5 | 2.78 |
| WDGC088 | 438303.8 | 6665582 | 141.676 | 255.06 | 259.9 | -31.45 | | 88 | 89 | 1 | 3.26 |
| | | | | | | | and | 103.6 | 106.36 | 2.76 | 2.54 |
| | | | | | | | and | 144.68 | 148.88 | 4.2 | 2.60 |
| | | | | | | | and | 224.06 | 224.58 | 0.52 | 4.12 |
| | | | | | | | and | 228.84 | 230 | 1.16 | 3.18 |
| | | | | | | | and | 233.88 | 235.16 | 1.28 | 6.88 |
| WDGC089 | 438303.9 | 6665583 | 141.172 | 172.65 | 262 | -44.84 | | 90.5 | 91.05 | 0.55 | 8.65 |
| WDGC092 | 438263.8 | 6665622 | 143.928 | 269.4 | 258.9 | 9.86 | | 69.75 | 71 | 1.25 | 2.72 |
| | | | | | | | and | 90.95 | 92.8 | 1.85 | 12.58 |
| | | | | | | | and | 104.75 | 109 | 4.25 | 2.66 |
| | | | | | | | and | 111.9 | 112.65 | 0.75 | 4.20 |
| | | | | | | | and | 169.7 | 170.5 | 0.8 | 3.49 |
| | | | | | | | and | 218.35 | 219 | 0.65 | 4.26 |
| | | | | | | | and | 234.05 | 235.45 | 1.4 | 2.83 |
| WDGC103 | 438263.5 | 6665622 | 142.246 | 224.92 | 268.7 | -15.27 | | 117.18 | 117.52 | 0.34 | 4.30 |
| | | | | | | | and | 119.8 | 120.5 | 0.7 | 4.24 |
| | | | | | | | and | 122.47 | 124.2 | 1.73 | 3.55 |
| WDGC104 | 438380 | 6665508 | 141.567 | 267 | 213.8 | -47.04 | | 111 | 113 | 2 | 3.74 |
| | | | | | | | and | 150.6 | 151 | 0.4 | 2.59 |
| | | | | | | | and | 162 | 163 | 1 | 3.33 |
| | | | | | | | and | 215.5 | 221.8 | 6.3 | 3.55 |
| WDGC105 | 438380.2 | 6665508 | 141.566 | 252 | 202.4 | -47.07 | | 206.6 | 207 | 0.4 | 4.89 |
| | | | | | | | and | 213 | 216.95 | 3.95 | 3.85 |
| | | | | | | | and | 222.6 | 225.75 | 3.15 | 6.72 |
| WDGC106 | 438263.2 | 6665622 | 143.25 | 230.98 | 250.5 | 9.58 | | 88 | 89 | 1 | 3.77 |
| | | | | | | | and | 106 | 107 | 1 | 3.18 |
| | | | | | | | and | 140.63 | 141 | 0.37 | 3.70 |
| | | | | | | | and | 155.54 | 156.42 | 0.88 | 15.40 |
| | | | | | | | **and** | **215** | **219.27** | **4.27** | **5.14** |

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WDGC107 | 438263.7 | 6665622 | 143.901 | 258 | 264.8 | 8.39 | | 77.3 | 77.95 | 0.65 | 9.21 |
| | | | | | | | and | 92.7 | 100 | 7.3 | 4.17 |
| | | | | | | | and | 106.7 | 109.3 | 2.6 | 3.15 |
| | | | | | | | and | 111.45 | 113 | 1.55 | 3.01 |
| | | | | | | | and | 115.8 | 118.4 | 2.6 | 3.22 |
| | | | | | | | **and** | **226.4** | **235.4** | **9** | **24.10** |
| | | | | | | | and | 239.8 | 240.95 | 1.15 | 3.42 |
| WDGC108 | 438263.1 | 6665622 | 143.062 | 251.8 | 271.1 | -14.09 | | 119 | 120 | 1 | 4.42 |
| | | | | | | | and | 143.95 | 145 | 1.05 | 4.68 |
| | | | | | | | and | 164.5 | 165 | 0.5 | 3.14 |
| WDGC109 | 438263.3 | 6665622 | 143.067 | 174.04 | 245 | -21.58 | | 74.3 | 75 | 0.7 | 3.21 |
| | | | | | | | and | 86.1 | 86.9 | 0.8 | 5.99 |
| | | | | | | | and | 123.6 | 130 | 6.4 | 2.61 |
| | | | | | | | **and** | **134.9** | **150.7** | **15.8** | **5.15** |
| WDGC110 | 438263.2 | 6665622 | 143.041 | 263.97 | 256.3 | -17.69 | | 51.5 | 52.8 | 1.3 | 3.47 |
| | | | | | | | and | 98.8 | 104.65 | 5.85 | 9.61 |
| | | | | | | | and | 110.3 | 111 | 0.7 | 4.98 |
| | | | | | | | and | 170 | 174 | 4 | 6.82 |
| WDGC112 | 438263.3 | 6665622 | 143.073 | 240 | 235.7 | -21.42 | | 82 | 83 | 1 | 5.83 |
| | | | | | | | and | 100 | 102 | 2 | 3.10 |
| | | | | | | | **and** | **128** | **155** | **27** | **2.62** |
| | | | | | | | and | 179 | 180 | 1 | 2.71 |
| | | | | | | | and | 213 | 215 | 2 | 2.97 |
| | | | | | | | and | 219 | 220.2 | 1.2 | 7.37 |
| WDGC114 | 438336.2 | 6665533 | 140.305 | 254.6 | 187.6 | -60.61 | | 114.9 | 116 | 1.1 | 3.66 |
| | | | | | | | and | 118.25 | 122.05 | 3.8 | 2.68 |
| | | | | | | | and | 125.63 | 127.17 | 1.54 | 3.83 |
| | | | | | | | and | 159.7 | 160.53 | 0.83 | 3.05 |
| | | | | | | | and | 166.52 | 167.47 | 0.95 | 4.21 |
| | | | | | | | and | 178 | 182 | 4 | 3.54 |
| | | | | | | | and | 221.22 | 222 | 0.78 | 4.08 |
| | | | | | | | **and** | **235.72** | **243** | **7.28** | **4.83** |
| WDGC115 | 438380.1 | 6665508 | 142.065 | 280.1 | 197.3 | -18.56 | | 102.9 | 106.4 | 3.5 | 2.76 |
| | | | | | | | and | 140.3 | 142 | 1.7 | 5.36 |
| | | | | | | | and | 153.4 | 156.6 | 3.2 | 3.10 |
| | | | | | | | and | 228.35 | 233.79 | 5.44 | 2.97 |
| | | | | | | | and | 241.06 | 243.85 | 2.79 | 6.75 |
| | | | | | | | and | 250 | 251 | 1 | 2.74 |
| | | | | | | | and | 256.95 | 257.42 | 0.47 | 13.20 |
| WDGC116 | 438380.2 | 6665508 | 142.017 | 312 | 182.5 | -16.54 | | 118.1 | 118.4 | 0.3 | 3.20 |
| | | | | | | | and | 125.8 | 126.58 | 0.78 | 4.75 |
| | | | | | | | **and** | **226.2** | **256.45** | **30.25** | **3.54** |
| | | | | | | | and | 264.05 | 265 | 0.95 | 8.53 |
| | | | | | | | and | 292 | 293 | 1 | 3.09 |
| WDGC117 | 438380.2 | 6665508 | 142.072 | 308.3 | 186.5 | -16.91 | | 156.55 | 157.3 | 0.75 | 10.70 |
| | | | | | | | and | 179.06 | 179.6 | 0.54 | 3.15 |
| | | | | | | | **and** | **227.5** | **254.85** | **27.35** | **3.37** |
| | | | | | | | and | 262.2 | 262.9 | 0.7 | 7.08 |
| | | | | | | | and | 278.4 | 279.2 | 0.8 | 4.61 |
| WDGC118 | 438380.3 | 6665508 | 142.106 | 330.77 | 178.6 | -16.91 | | 264 | 265 | 1 | 3.10 |
| | | | | | | | and | 274 | 277 | 3 | 3.01 |
| | | | | | | | and | 322 | 323 | 1 | 3.74 |
| WDGC119A | 438335.2 | 6665532 | 141.119 | 276 | 195.2 | -17.65 | | 88.25 | 88.65 | 0.4 | 3.51 |
| | | | | | | | and | 93.05 | 94 | 0.95 | 3.58 |
| | | | | | | | and | 99.4 | 99.8 | 0.4 | 4.17 |
| | | | | | | | and | 104.7 | 105.6 | 0.9 | 5.82 |
| | | | | | | | and | 115.1 | 118.5 | 3.4 | 2.95 |
| | | | | | | | and | 158.75 | 160 | 1.25 | 4.57 |
| | | | | | | | **and** | **222.05** | **237** | **14.95** | **4.45** |

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| | | | | | | | and | 244.9 | 246.85 | 1.95 | 3.10 |
| WDGC120 | 438335.5 | 6665532 | 141.111 | 255 | 205.1 | -18.57 | | 49 | 49.75 | 0.75 | 3.62 |
| | | | | | | | and | 91.6 | 91.95 | 0.35 | 3.92 |
| | | | | | | | and | 103.5 | 104.65 | 1.15 | 3.05 |
| | | | | | | | and | 109.55 | 111.4 | 1.85 | 8.28 |
| | | | | | | | and | 163.85 | 164.6 | 0.75 | 8.76 |
| | | | | | | | and | 185.05 | 185.45 | 0.4 | 4.66 |
| | | | | | | | and | 187.4 | 187.9 | 0.5 | 3.33 |
| | | | | | | | and | 215.1 | 216.3 | 1.2 | 2.92 |
| | | | | | | | and | 221.8 | 224.7 | 2.9 | 2.99 |
| WDGC121 | 438334.9 | 6665532 | 141.137 | 258 | 199.8 | -18.55 | | 100.9 | 102 | 1.1 | 3.82 |
| | | | | | | | and | 160.6 | 160.95 | 0.35 | 4.71 |
| | | | | | | | and | 213.95 | 215.7 | 1.75 | 7.69 |
| | | | | | | | and | 219.7 | 220 | 0.3 | 3.48 |
| | | | | | | | and | 233.45 | 236.6 | 3.15 | 5.14 |
| | | | | | | | and | 243.45 | 244 | 0.55 | 4.04 |
| WDGC122 | 438335.1 | 6665533 | 141.254 | 243 | 216.9 | -30.99 | | 64.05 | 65 | 0.95 | 2.64 |
| | | | | | | | and | 176.7 | 178 | 1.3 | 2.90 |
| | | | | | | | and | 202.3 | 203 | 0.7 | 7.82 |
| | | | | | | | and | 209 | 209.93 | 0.93 | 4.07 |
| WDGC123 | 438335.1 | 6665533 | 141.254 | 255.8 | 210.8 | -29.41 | results pending | | | | |
| WDGC124 | 438335.1 | 6665532 | 141.136 | 242.2 | 203.9 | -28.26 | | 99 | 100 | 1 | 3.36 |
| | | | | | | | and | 103.2 | 111.4 | 8.2 | 3.21 |
| | | | | | | | and | 159 | 159.5 | 0.5 | 3.47 |
| | | | | | | | and | 169.85 | 170.65 | 0.8 | 26.30 |
| | | | | | | | and | 175.2 | 175.8 | 0.6 | 3.75 |
| | | | | | | | and | 194 | 195 | 1 | 21.30 |
| | | | | | | | **and** | **204** | **205.7** | **1.7** | **3.86** |
| WDGC125 | 438335.1 | 6665532 | 141.132 | 258 | 197.4 | -27.58 | results pending | | | | |
| WDGC126 | 438261.8 | 6665626 | 144.926 | 146 | 273.9 | 26.08 | | 107.3 | 107.9 | 0.6 | 2.82 |
| | | | | | | | and | 123.1 | 123.75 | 0.65 | 5.10 |
| | | | | | | | and | 130.05 | 130.5 | 0.45 | 4.53 |
| WDGC127 | 438261.8 | 6665626 | 144.959 | 185 | 279.3 | 27.51 | | **159** | **163.8** | **4.8** | **1.31** |
| WDGC128 | 438263.5 | 6665622 | 142.325 | 126 | 280 | 12.48 | | 98 | 100 | 2 | 8.36 |
| | | | | | | | and | 108 | 110.5 | 2.5 | 6.37 |
| WDGC129 | 438261.7 | 6665626 | 144.986 | 193.7 | 287 | 18.28 | | 114.76 | 117 | 2.24 | 3.92 |
| | | | | | | | **and** | **143** | **145** | **2** | **2.84** |
| WDGC131 | 438261.8 | 6665624 | 144.379 | 263.2 | 244.5 | 15.11 | | 91 | 95 | 4 | 5.15 |
| | | | | | | | and | 125.4 | 125.78 | 0.38 | 5.64 |
| | | | | | | | and | 148 | 153 | 5 | 2.71 |
| | | | | | | | and | 223.2 | 224 | 0.8 | 14.40 |
| | | | | | | | and | 248.4 | 248.9 | 0.5 | 5.05 |
| WDRD063 | 438304.8 | 6665583 | 141.09 | 324 | 265.2 | -78.25 | | 151.1 | 153 | 1.9 | 3.99 |
| | | | | | | | and | 263.5 | 263.8 | 0.3 | 4.10 |
| | | | | | | | and | 269.5 | 273.15 | 3.65 | 3.45 |
| | | | | | | | and | 284.18 | 284.9 | 0.72 | 5.43 |
| | | | | | | | and | 295 | 297.7 | 2.7 | 5.20 |
| | | | | | | | and | 304 | 305.7 | 1.7 | 3.19 |
| | | | | | | | and | 311.58 | 312.3 | 0.72 | 3.04 |
| | | | | | | | and | 313.4 | 314.4 | 1 | 3.52 |
| WDRD064 | 438269.8 | 6665617 | 142.078 | 336 | 261.01 | -79.61 | | 149.64 | 150.67 | 1.03 | 2.57 |
| | | | | | | | and | 153 | 154 | 1 | 3.84 |
| | | | | | | | and | 270.79 | 272.29 | 1.5 | 5.72 |
| | | | | | | | and | 285 | 287 | 2 | 5.31 |
| | | | | | | | and | 292.88 | 294 | 1.12 | 4.46 |
| | | | | | | | and | 306 | 307 | 1 | 3.61 |

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WDRD066 | 438335.2 | 6665534 | 140.307 | 331.1 | 159.94 | -64.65 | | 151 | 152.15 | 1.15 | 2.74 |
| | | | | | | | and | 244.7 | 245.6 | 0.9 | 2.84 |
| | | | | | | | and | 292.05 | 292.85 | 0.8 | 2.97 |
| | | | | | | | and | 297.1 | 297.8 | 0.7 | 2.61 |
| | | | | | | | and | 301.55 | 306 | 4.45 | 4.43 |
| WDRD067 | 438335.7 | 6665533 | 140.166 | 393 | 141.3 | -77.65 | | 169 | 178 | 9 | 3.57 |
| | | | | | | | and | 183 | 184.86 | 1.86 | 3.02 |
| | | | | | | | and | 190 | 191 | 1 | 9.54 |
| | | | | | | | and | 260 | 261.72 | 1.72 | 3.87 |
| | | | | | | | **and** | **332** | **337.14** | **5.14** | **4.48** |
| | | | | | | | and | 358 | 359 | 1 | 3.44 |
| WDRD068 | 438264 | 6665622 | 142.769 | 305.96 | 266.2 | -12.01 | | 108 | 108.9 | 0.9 | 3.01 |
| | | | | | | | and | 127.3 | 128.1 | 0.8 | 3.34 |
| | | | | | | | and | 131 | 131.85 | 0.85 | 2.61 |
| | | | | | | | and | 158 | 159 | 1 | 2.79 |
| | | | | | | | and | 266 | 267 | 1 | 3.69 |
| | | | | | | | and | 275 | 275.57 | 0.57 | 3.77 |
| WDRD069 | 438262.3 | 6665627 | 142.999 | 345 | 277.9 | -8.63 | | 113.7 | 114.5 | 0.8 | 2.89 |
| | | | | | | | and | 131.75 | 132.35 | 0.6 | 3.20 |
| | | | | | | | and | 160.6 | 161.05 | 0.45 | 2.55 |
| | | | | | | | and | 175.1 | 175.4 | 0.3 | 4.82 |
| | | | | | | | and | 185.35 | 186.8 | 1.45 | 4.19 |
| | | | | | | | and | 336 | 337 | 1 | 4.57 |
| WDRD070 | 438380.2 | 6665508 | 142.091 | 357 | 177 | -14.18 | | 20 | 20.55 | 0.55 | 3.29 |
| | | | | | | | and | 134.5 | 135.2 | 0.7 | 6.37 |
| | | | | | | | and | 187 | 188 | 1 | 3.00 |
| | | | | | | | **and** | **268.7** | **286.7** | **18** | **2.98** |
| WDRD077 | 438263.7 | 6665622 | 143.617 | 323.9 | 258.3 | -0.26 | | 60.8 | 62 | 1.2 | 3.09 |
| | | | | | | | and | 97.2 | 100.6 | 3.4 | 3.48 |
| | | | | | | | and | 118.25 | 118.6 | 0.35 | 5.03 |
| | | | | | | | and | 127.65 | 129 | 1.35 | 3.21 |
| | | | | | | | and | 152.45 | 153.45 | 1 | 2.50 |
| | | | | | | | **and** | **195** | **207.1** | **12.1** | **5.32** |
| | | | | | | | and | 211 | 216 | 5 | 3.04 |
| | | | | | | | and | 272.2 | 273.1 | 0.9 | 3.26 |
| | | | | | | | and | 276 | 277 | 1 | 2.99 |
| WDRD078 | 438262.2 | 6665626 | 142.596 | 278.7 | 271.1 | -25.14 | | 76 | 77 | 1 | 3.19 |
| | | | | | | | and | 118.05 | 119 | 0.95 | 2.68 |
| | | | | | | | and | 124.2 | 133.6 | 9.4 | 4.09 |
| | | | | | | | and | 138.9 | 140.6 | 1.7 | 4.89 |
| WDRD079 | 438260.8 | 6665625 | 143.546 | 270 | 259 | 15.53 | | 95.5 | 96 | 0.5 | 3.18 |
| | | | | | | | and | 113 | 114 | 1 | 2.84 |
| | | | | | | | and | 115 | 117 | 2 | 2.75 |
| | | | | | | | and | 171 | 172 | 1 | 5.43 |
| | | | | | | | and | 244 | 245 | 1 | 6.55 |
| WDRD080 | 438260.9 | 6665625 | 143.546 | 416.4 | 266.8 | 13.22 | | 33 | 35 | 2 | 8.32 |
| | | | | | | | and | 92 | 92.75 | 0.75 | 2.77 |
| | | | | | | | and | 98 | 98.4 | 0.4 | 3.86 |
| | | | | | | | and | 134.95 | 143 | 8.05 | 2.51 |
| | | | | | | | and | 175 | 175.54 | 0.54 | 4.96 |
| | | | | | | | and | 244 | 245 | 1 | 2.50 |
| | | | | | | | and | 249.5 | 250.5 | 1 | 3.00 |
| | | | | | | | and | 289.35 | 290 | 0.65 | 4.70 |
| | | | | | | | and | 292.5 | 293 | 0.5 | 2.72 |

| WHIRLING DERVISH DRILLING JULY 2018 | | | | | | | | Downhole | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WDRD081 | 438261.1 | 6665625 | 143.89 | 441 | 269 | 7.29 | | 88.65 | 90 | 1.35 | 3.80 |
| | | | | | | | and | 101.3 | 102.34 | 1.04 | 7.78 |
| | | | | | | | and | 138.45 | 139 | 0.55 | 2.60 |
| | | | | | | | and | 250.9 | 251.25 | 0.35 | 2.85 |
| | | | | | | | and | 268 | 268.78 | 0.78 | 9.69 |
| | | | | | | | and | 288.64 | 289.24 | 0.6 | 4.30 |
| | | | | | | | and | 319.75 | 320.05 | 0.3 | 7.09 |
| WDRD082 | 438260.9 | 6665625 | 142.638 | 312 | 283.2 | -25.46 | | 136.2 | 136.76 | 0.56 | 2.55 |
| | | | | | | | and | 144 | 145.15 | 1.15 | 9.72 |
| | | | | | | | and | 151 | 152 | 1 | 6.36 |
| | | | | | | | and | 158.4 | 160.8 | 2.4 | 2.83 |
| | | | | | | | and | 281 | 284.55 | 3.55 | 3.11 |
| WDRD083 | 438261.1 | 6665625 | 143.552 | 402 | 282.8 | -9.35 | | 120.15 | 120.9 | 0.75 | 2.97 |
| | | | | | | | and | 131.2 | 132.4 | 1.2 | 17.10 |
| | | | | | | | and | 139.3 | 141 | 1.7 | 10.32 |
| | | | | | | | and | 177.05 | 186.05 | 9 | 2.63 |
| | | | | | | | and | 191.2 | 191.6 | 0.4 | 3.19 |
| | | | | | | | and | 241.6 | 242.5 | 0.9 | 5.69 |
| | | | | | | | and | 246.5 | 249.5 | 3 | 5.05 |
| WDRD278 | 438260.9 | 6665625 | 142.8 | 338.4 | 279.9 | -12.6 | | 41 | 42 | 1 | 3.27 |
| | | | | | | | and | 116 | 122 | 6 | 3.32 |
| | | | | | | | and | 126.04 | 130 | 3.96 | 3.63 |
| | | | | | | | and | 135 | 139 | 4 | 3.41 |
| | | | | | | | and | 144 | 145 | 1 | 4.03 |
| | | | | | | | and | 149.6 | 151.76 | 2.16 | 3.46 |
| | | | | | | | and | 163 | 164 | 1 | 3.23 |
| | | | | | | | and | 164.8 | 166.38 | 1.58 | 2.75 |
| | | | | | | | and | 299.2 | 304.6 | 5.4 | 9.21 |

## *Table 3 – Thunderbox Drill Results*

| THUNDERBOX DRILLING JULY 2018 | | | | | | | | | Downhole | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | | From (m) | To (m) | Width (m) | Grade g/t |
| TBDD0132 | 304150.3 | 6879350 | 494.229 | 500 | 96.26 | -45.71 | | | **355.35** | **364.5** | **9.15** | **2.93** |
| TBDD0133 | 304177.2 | 6879315 | 494.677 | 386.55 | 94.02 | -47.11 | | | **342** | **351.2** | **9.2** | **2.47** |
| TBDD0134A | 304189.5 | 6879302 | 494.443 | 400.1 | 93.89 | -54.51 | | | **351.5** | **364** | **12.5** | **1.86** |
| TBDD0135A | 304248.4 | 6879267 | 493.341 | 369.5 | 95.17 | -56.94 | | | **313** | **319** | **6** | **1.96** |
| TBRC038 | 304118.6 | 6880768 | 500.954 | 180 | 92.4 | -60.26 | | | 74 | 77 | 3 | 1.53 |
| | | | | | | | | and | 85 | 106 | 21 | 0.87 |
| | | | | | | | | and | 110 | 145 | 35 | 1.27 |
| TBRC039 | 304188.7 | 6880734 | 498.528 | 120 | 93.63 | -59.82 | | | 0 | 3 | 3 | 1.18 |
| | | | | | | | | and | 24 | 27 | 3 | 0.60 |
| | | | | | | | | and | 30 | 33 | 3 | 0.60 |
| | | | | | | | | and | 39 | 44 | 5 | 0.63 |
| | | | | | | | | and | 49 | 50 | 1 | 4.71 |
| | | | | | | | | and | 58 | 59 | 1 | 0.70 |
| | | | | | | | | and | 69 | 70 | 1 | 1.45 |
| | | | | | | | | and | 76 | 77 | 1 | 0.75 |
| | | | | | | | | and | 81 | 83 | 2 | 1.59 |
| | | | | | | | | and | 93 | 94 | 1 | 0.73 |
| | | | | | | | | and | 99 | 103 | 4 | 2.07 |
| TBRC040 | 304133 | 6880706 | 499.511 | 180 | 91.04 | -59.99 | | | **70** | **144** | **74** | **1.65** |
| TBRC041 | 304178.7 | 6880655 | 499.145 | 180 | 90.84 | -59.61 | | | 1 | 7 | 6 | 1.14 |
| | | | | | | | | and | 63 | 64 | 1 | 0.54 |
| | | | | | | | | and | 69 | 79 | 10 | 1.40 |
| | | | | | | | | and | 84 | 88 | 4 | 0.76 |
| | | | | | | | | and | 130 | 131 | 1 | 0.58 |
| | | | | | | | | and | 148 | 151 | 3 | 3.26 |
| | | | | | | | | and | 155 | 161 | 6 | 1.23 |

| THUNDERBOX DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| TBRC042 | 304214.8 | 6880655 | 498.689 | 180 | 90.75 | -60.31 | | 4 | 5 | 1 | 0.53 |
| | | | | | | | and | 6 | 7 | 1 | 0.50 |
| | | | | | | | and | 25 | 31 | 6 | 0.56 |
| | | | | | | | and | 54 | 58 | 4 | 1.09 |
| | | | | | | | and | 80 | 81 | 1 | 0.63 |
| | | | | | | | and | 90 | 103 | 13 | 1.34 |
| | | | | | | | and | 130 | 131 | 1 | 0.66 |
| | | | | | | | and | 135 | 140 | 5 | 2.23 |
| | | | | | | | and | 144 | 151 | 7 | 0.84 |
| TBRC043 | 304138.2 | 6880618 | 499.159 | 210 | 91.33 | -60.09 | | 48 | 49 | 1 | 1.00 |
| | | | | | | | and | 68 | 72 | 4 | 0.94 |
| | | | | | | | and | 80 | 82 | 2 | 1.94 |
| | | | | | | | and | 87 | 96 | 9 | 1.30 |
| | | | | | | | and | 106 | 110 | 4 | 0.69 |
| | | | | | | | and | 133 | 134 | 1 | 1.46 |
| | | | | | | | **and** | **148** | **163** | **15** | **3.72** |
| | | | | | | | and | 168 | 181 | 13 | 0.95 |
| TBRC044 | 304184.9 | 6880621 | 498.777 | 180 | 92.43 | -60.04 | | 1 | 4 | 3 | 0.78 |
| | | | | | | | **and** | **74** | **94** | **20** | **1.81** |
| | | | | | | | and | 111 | 112 | 1 | 1.47 |
| | | | | | | | and | 117 | 118 | 1 | 0.91 |
| | | | | | | | and | 133 | 135 | 2 | 0.70 |
| | | | | | | | and | 143 | 151 | 8 | 1.00 |
| | | | | | | | and | 165 | 168 | 3 | 4.65 |
| TBRC045 | 304171 | 6880574 | 498.832 | 230 | 90.44 | -60.41 | | **116** | **135** | **19** | **2.20** |
| | | | | | | | and | 145 | 146 | 1 | 0.53 |
| | | | | | | | and | 153 | 154 | 1 | 0.56 |
| | | | | | | | and | 156 | 158 | 2 | 0.70 |
| | | | | | | | and | 160 | 162 | 2 | 0.61 |
| | | | | | | | and | 174 | 185 | 11 | 0.53 |
| | | | | | | | and | 189 | 199 | 10 | 0.67 |
| TBRC046 | 304244.5 | 6880528 | 480.864 | 150 | 91.89 | -60.11 | | **25** | **37** | **12** | **5.41** |
| | | | | | | | and | 46 | 54 | 8 | 0.50 |
| | | | | | | | **and** | **70** | **100** | **30** | **2.03** |
| | | | | | | | and | 112 | 116 | 4 | 0.65 |
| | | | | | | | and | 136 | 148 | 12 | 1.39 |
| TBRC047 | 304206.1 | 6880500 | 480.491 | 210 | 91.9 | -60.22 | | 88 | 93 | 5 | 0.69 |
| | | | | | | | and | 111 | 112 | 1 | 1.05 |
| | | | | | | | and | 119 | 121 | 2 | 2.30 |
| | | | | | | | and | 141 | 142 | 1 | 1.14 |
| | | | | | | | and | 154 | 157 | 3 | 1.12 |
| | | | | | | | and | 161 | 162 | 1 | 0.86 |
| | | | | | | | and | 168 | 177 | 9 | 0.61 |
| TBRC048 | 304212.2 | 6880432 | 480.274 | 210 | 92.68 | -59.92 | | 101 | 116 | 15 | 0.84 |
| | | | | | | | and | 122 | 124 | 2 | 0.86 |
| | | | | | | | and | 138 | 139 | 1 | 0.92 |
| | | | | | | | **and** | **143** | **152** | **9** | **1.33** |
| | | | | | | | and | 158 | 159 | 1 | 0.87 |
| | | | | | | | | | | | |

## *Table 4 – Kailis Stage 2 Drill Results*

| KAILIS DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hole** | **Easting** | **Northing** | **RL** | **Depth** | **Azimuth** | **Dip** | | **From (m)** | **To (m)** | **Width (m)** | **Grade g/t** |
| KLRD_2373_010 | 332731.658 | 6808583.836 | 360.315 | 90 | 27.004 | -59.94 | | 42 | 43 | 1 | 0.51 |
| | | | | | | | and | 59 | 72 | 13 | 21.09 |
| | | | | | | | and | 76 | 77 | 1 | 0.57 |
| | | | | | | | and | 82 | 89 | 7 | 1.19 |
| KLRD_2373_011 | 332792.573 | 6808615.009 | 360.099 | 60 | 27.004 | -60.51 | no significant results | | | | |
| KLRD_2373_012 | 332741.858 | 6808518.153 | 372.098 | 120 | 27.004 | -59.488 | | 102 | 106 | 4 | 3.28 |
| KLRD_2373_013 | 332841.511 | 6808622.391 | 359.946 | 66 | 27.004 | -60.78 | | 36 | 37 | 1 | 0.50 |
| KLRD_2373_014 | 332803.543 | 6808555.051 | 359.85 | 90 | 27.004 | -59.31 | | 45 | 46 | 1 | 2.54 |
| | | | | | | | and | 52 | 53 | 1 | 2.30 |
| | | | | | | | and | 58 | 72 | 14 | 1.47 |
| | | | | | | | and | 76 | 77 | 1 | 3.23 |
| | | | | | | | and | 81 | 82 | 1 | 0.70 |
| KLRD_2373_015 | 332866.943 | 6808584.439 | 360.1 | 72 | 27.004 | -59.2 | | 17 | 19 | 2 | 0.94 |
| | | | | | | | and | 25 | 26 | 1 | 1.22 |
| | | | | | | | and | 47 | 48 | 1 | 0.80 |
| | | | | | | | and | 62 | 63 | 1 | 0.51 |
| | | | | | | | and | 71 | 72 | 1 | 0.89 |
| KLRD_2373_016 | 332837.13 | 6808526.654 | 359.9 | 90 | 27.004 | -59.13 | | 49 | 54 | 5 | 1.06 |
| | | | | | | | and | 67 | 70 | 3 | 5.04 |
| | | | | | | | and | 71 | 73 | 2 | 2.61 |
| | | | | | | | and | 80 | 87 | 7 | 2.30 |
| KLRD_2373_017 | 332804.304 | 6808461.019 | 372.209 | 150 | 27.004 | -59.527 | | 123 | 124 | 1 | 2.64 |
| KLRD_2373_018 | 333312.167 | 6808362.03 | 374.141 | 90 | 27.004 | -60.2031 | | 33 | 34 | 1 | 1.75 |
| | | | | | | | **and** | **62** | **71** | **9** | **15.67** |
| KLRD_2373_019 | 332843.406 | 6808450.753 | 372.123 | 150 | 27.004 | -59.26 | | 65 | 66 | 1 | 1.29 |
| | | | | | | | and | 86 | 87 | 1 | 0.71 |
| | | | | | | | and | 105 | 107 | 2 | 0.89 |
| | | | | | | | and | 111 | 120 | 9 | 1.71 |
| | | | | | | | and | 126 | 127 | 1 | 2.10 |
| KLRD_2373_020 | 333230.782 | 6808422.308 | 373.784 | 78 | 27.004 | -60.1121 | | 51 | 53 | 2 | 1.33 |
| KLRD_2373_055 | 333171.226 | 6808381.477 | 372.998 | 100 | 27.004 | -60.6573 | | 44 | 45 | 1 | 0.59 |
| | | | | | | | and | 53 | 54 | 1 | 0.51 |
| | | | | | | | and | 55 | 58 | 3 | 0.54 |
| | | | | | | | and | 63 | 65 | 2 | 0.88 |
| | | | | | | | and | 70 | 74 | 4 | 1.95 |
| | | | | | | | and | 83 | 84 | 1 | 0.81 |
| KLRD_2373_056 | 333180.099 | 6808322.733 | 373.163 | 150 | 27.004 | -60.418 | | 34 | 35 | 1 | 0.82 |
| | | | | | | | and | 59 | 63 | 4 | 0.81 |
| | | | | | | | and | 68 | 69 | 1 | 0.73 |
| | | | | | | | and | 106 | 110 | 4 | 1.74 |
| KLRD_2373_057 | 333190.944 | 6808255.928 | 372.964 | 150 | 27.004 | -59.6491 | | 49 | 50 | 1 | 0.54 |
| | | | | | | | and | 60 | 61 | 1 | 0.62 |
| | | | | | | | and | 130 | 136 | 6 | 0.55 |
| KLRD_2373_058 | 333260.235 | 6808311.071 | 373.476 | 136 | 27.004 | -60.7032 | | 68 | 70 | 2 | 1.35 |
| | | | | | | | and | 84 | 92 | 8 | 2.44 |
| | | | | | | | and | 104 | 105 | 1 | 0.76 |
| KLRD_2373_059 | 333286.57 | 6808319.747 | 373.569 | 120 | 27.004 | -60.4697 | | 39 | 46 | 7 | 0.51 |
| | | | | | | | and | 56 | 66 | 10 | 0.56 |
| | | | | | | | and | 71 | 72 | 1 | 2.24 |
| | | | | | | | and | 81 | 82 | 1 | 0.88 |
| | | | | | | | and | 85 | 86 | 1 | 1.14 |

| KAILIS DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| KLRD_2373_060 | 333368.552 | 6808259.491 | 373.698 | 108 | 27.004 | -60.4408 | | 39 | 40 | 1 | 0.82 |
| | | | | | | | and | 53 | 55 | 2 | 0.54 |
| | | | | | | | and | 60 | 61 | 1 | 0.51 |
| | | | | | | | and | 69 | 70 | 1 | 2.14 |
| | | | | | | | and | 81 | 83 | 2 | 0.56 |
| | | | | | | | and | 85 | 86 | 1 | 0.61 |
| | | | | | | | and | 98 | 99 | 1 | 0.70 |
| KLRD_2373_061 | 333202.85 | 6808374.516 | 373.397 | 120 | 27.004 | -59.4976 | | 20 | 21 | 1 | 1.66 |
| | | | | | | | and | 59 | 60 | 1 | 31.00 |
| | | | | | | | and | 64 | 72 | 8 | 1.01 |
| | | | | | | | and | 91 | 95 | 4 | 2.08 |
| | | | | | | | and | 99 | 100 | 1 | 0.90 |
| KLRD_2373_062 | 333459.753 | 6808332.848 | 374.404 | 58 | 27.004 | -60.221 | | 6 | 12 | 6 | 2.40 |
| | | | | | | | and | 25 | 26 | 1 | 0.65 |
| | | | | | | | and | 41 | 42 | 1 | 0.55 |
| | | | | | | | and | 57 | 58 | 1 | 0.51 |
| KLRD_2373_063 | 333437.353 | 6808292.537 | 374.267 | 70 | 27.004 | -60.2084 | | 48 | 49 | 1 | 0.94 |
| | | | | | | | and | 54 | 55 | 1 | 1.41 |
| | | | | | | | and | 68 | 69 | 1 | 0.83 |
| KLRD_2373_064 | 333440.524 | 6808217.176 | 373.655 | 94 | 27.004 | -60.807 | | 25 | 26 | 1 | 0.60 |
| | | | | | | | and | 72 | 73 | 1 | 1.61 |
| | | | | | | | and | 77 | 80 | 3 | 1.17 |
| KLGC_373_591 | 333316.047 | 6808390.664 | 374.149 | 66 | 27.004 | -90 | | 38 | 39 | 1 | 4.05 |
| | | | | | | | and | 59 | 66 | 7 | 17.06 |
| KLGC_373_592 | 333308.461 | 6808376.665 | 374.194 | 72 | 27.004 | -90 | | 38 | 41 | 3 | 0.68 |
| | | | | | | | and | 55 | 60 | 5 | 0.76 |
| | | | | | | | and | 63 | 68 | 5 | 2.06 |
| KLGC_373_593 | 333301.591 | 6808362.244 | 373.982 | 78 | 27.004 | -90 | | 50 | 56 | 6 | 1.59 |
| | | | | | | | and | 70 | 75 | 5 | 13.75 |
| KLGC_373_594 | 333294.375 | 6808347.68 | 373.694 | 90 | 27.004 | -90 | | 54 | 55 | 1 | 0.52 |
| | | | | | | | and | 61 | 62 | 1 | 0.73 |
| | | | | | | | and | 74 | 84 | 10 | 2.56 |
| KLGC_373_595 | 333286.774 | 6808333.664 | 373.622 | 78 | 27.004 | -90 | | 53 | 54 | 1 | 1.23 |
| | | | | | | | and | 67 | 68 | 1 | 1.05 |
| KLGC_373_596 | 333335.352 | 6808407.131 | 374.692 | 60 | 27.004 | -90 | | **47** | **53** | **6** | **1.84** |
| KLGC_373_597 | 333328.228 | 6808393.738 | 374.648 | 66 | 27.004 | -90 | | **28** | **29** | **1** | **8.98** |
| | | | | | | | **and** | **53** | **59** | **6** | **2.13** |
| KLGC_373_598 | 333314.009 | 6808364.587 | 374.178 | 78 | 27.004 | -90 | | 41 | 42 | 1 | 1.06 |
| | | | | | | | and | 55 | 56 | 1 | 0.76 |
| | | | | | | | **and** | **39** | **42** | **3** | **0.47** |
| | | | | | | | **and** | **70** | **73** | **3** | **14.10** |
| KLGC_373_599 | 333306.702 | 6808350.443 | 374.007 | 84 | 27.004 | -90 | | **54** | **58** | **4** | **1.67** |
| | | | | | | | **and** | **74** | **78** | **4** | **0.26** |
| KLGC_373_600 | 333298.013 | 6808335.374 | 373.616 | 60 | 27.004 | -90 | | 45 | 46 | 1 | 1.18 |
| | | | | | | | and | 53 | 54 | 1 | 1.17 |
| KLGC_373_601 | 333341.13 | 6808395.838 | 374.124 | 60 | 27.004 | -90 | | 43 | 44 | 1 | 0.61 |
| | | | | | | | and | 52 | 58 | 6 | 1.81 |
| KLGC_373_602 | 333333.866 | 6808381.584 | 374.087 | 66 | 27.004 | -90 | | 32 | 34 | 2 | 3.23 |
| | | | | | | | and | 57 | 61 | 4 | 5.33 |
| | | | | | | | and | 63 | 64 | 1 | 1.13 |
| KLGC_373_603 | 333326.601 | 6808367.329 | 374.095 | 72 | 27.004 | -90 | | 30 | 34 | 4 | 1.09 |
| | | | | | | | and | 40 | 45 | 5 | 3.52 |
| | | | | | | | and | 56 | 65 | 9 | 0.91 |
| | | | | | | | and | 70 | 71 | 1 | 1.18 |

| KAILIS DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| KLGC_373_604 | 333318.834 | 6808353.439 | 374.207 | 84 | 27.004 | -90 | | 37 | 41 | 4 | 1.09 |
| | | | | | | | and | 50 | 52 | 2 | 54.53 |
| | | | | | | | and | 71 | 72 | 1 | 0.56 |
| | | | | | | | and | 74 | 75 | 1 | 0.65 |
| KLGC_373_605 | 333311.557 | 6808338.755 | 373.965 | 60 | 27.004 | -90 | | 36 | 37 | 1 | 0.63 |
| | | | | | | | and | 46 | 60 | 14 | 3.03 |
| KLGC_373_940 | 333331.248 | 6808431.426 | 374.379 | 48 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_941 | 333327.334 | 6808424.346 | 374.371 | 54 | 27.004 | -90 | | 45 | 46 | 1 | 0.79 |
| KLGC_373_942 | 333358.311 | 6808462.451 | 374.591 | 24 | 27.004 | -90 | | | | | |
| KLGC_373_943 | 333354.676 | 6808455.328 | 374.589 | 30 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_944 | 333351.171 | 6808448.296 | 374.463 | 36 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_945 | 333347.666 | 6808441.174 | 374.515 | 42 | 27.004 | -90 | | 21 | 22 | 1 | 0.68 |
| | | | | | | | **and** | **24** | **26** | **2** | **0.45** |
| | | | | | | | and | 30 | 31 | 1 | 0.51 |
| KLGC_373_946 | 333344.139 | 6808434.036 | 374.542 | 48 | 27.004 | -90 | | 25 | 28 | 3 | 0.62 |
| KLGC_373_947 | 333340.298 | 6808427.025 | 374.492 | 48 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_948 | 333336.438 | 6808419.665 | 374.311 | 54 | 27.004 | -90 | | 45 | 47 | 2 | 0.90 |
| KLGC_373_949 | 333367.113 | 6808457.661 | 374.527 | 24 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_950 | 333363.693 | 6808450.727 | 374.663 | 30 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_951 | 333360.049 | 6808443.653 | 374.582 | 36 | 27.004 | -90 | | 25 | 26 | 1 | 0.56 |
| KLGC_373_952 | 333356.572 | 6808436.448 | 374.581 | 42 | 27.004 | -90 | no significant results | | | | |
| KLGC_373_953 | 333352.882 | 6808429.015 | 374.478 | 48 | 27.004 | -90 | | 24 | 26 | 2 | 0.71 |
| KLGC_373_954 | 333349.283 | 6808422.351 | 373.85 | 48 | 27.004 | -90 | | 27 | 28 | 1 | 0.51 |
| | | | | | | | and | 30 | 31 | 1 | 0.64 |
| KLGC_373_955 | 333345.428 | 6808415.465 | 374.455 | 54 | 27.004 | -90 | | 6 | 7 | 1 | 1.34 |
| | | | | | | | and | 37 | 44 | 7 | 0.50 |

## *Table 5 – Carosue Dam Corridor Drill Results*

| KARARI SOUTH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| CDC0030 | 438903 | 6663147 | 367 | 520 | 225.38 | -60.5 | | 296 | 297 | 1 | 2.45 |
| | | | | | | | and | 400 | 401 | 1 | 0.55 |
| | | | | | | | and | 414 | 425 | 11 | 4.55 |
| | | | | | | | and | 450 | 458 | 8 | 0.89 |
| CDC0031 | 438940 | 6663145 | 358 | 643.4 | 235.8 | -74.86 | | 422.1 | 423.06 | 0.96 | 3.90 |
| | | | | | | | and | 458.46 | 459.5 | 1.04 | 0.59 |
| | | | | | | | and | 524.29 | 525 | 0.71 | 0.61 |
| | | | | | | | and | 557 | 558 | 1 | 0.51 |
| CDC0032 | 438914 | 6663000 | 367 | 520 | 235.9 | -69.49 | | 367 | 368 | 1 | 1.03 |
| | | | | | | | and | 406 | 407 | 1 | 0.88 |
| | | | | | | | and | 464 | 465 | 1 | 0.61 |

| WHIRLING DERVISH NORTH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hole | Easting | Northing | RL | Depth | Azimuth | Dip | | From (m) | To (m) | Width (m) | Grade g/t |
| WNEX001 | 437847 | 6666507 | 350 | 675.7 | 225.47 | -59.5 | | 68 | 69 | 1 | 1.48 |
| | | | | | | | and | 143 | 151 | 8 | 1.36 |
| | | | | | | | and | 340 | 341 | 1 | 1.55 |
| | | | | | | | and | 360 | 361 | 1 | 2.48 |
| | | | | | | | and | 402 | 403 | 1 | 2.44 |
| | | | | | | | and | 409 | 412 | 3 | 1.17 |
| | | | | | | | and | 423 | 424 | 1 | 1.27 |
| | | | | | | | and | 462 | 463 | 1 | 1.22 |
| WNEX002 | 437689 | 6666619 | 350 | 604 | 227.57 | -60.67 | | 4 | 8 | 4 | 1.40 |
| | | | | | | | and | 44 | 48 | 4 | 1.21 |
| | | | | | | | and | 64 | 68 | 4 | 0.67 |
| | | | | | | | and | 80 | 84 | 4 | 0.80 |
| | | | | | | | and | 124 | 128 | 4 | 2.05 |
| | | | | | | | and | 136 | 140 | 4 | 1.25 |
| | | | | | | | and | 180 | 184 | 4 | 1.27 |
| | | | | | | | and | 200 | 204 | 4 | 0.82 |
| | | | | | | | and | 328 | 332 | 4 | 4.16 |
| | | | | | | | and | 348 | 352 | 4 | 0.51 |
| | | | | | | | and | 412 | 420 | 8 | 1.23 |
| | | | | | | | and | 436 | 440 | 4 | 0.85 |
| | | | | | | | and | 576 | 580 | 4 | 1.65 |
| WNEX003 | 437832 | 6666684 | 350 | 448 | 223.03 | -59.62 | | 63 | 71 | 8 | 0.53 |
| | | | | | | | and | 120 | 121 | 1 | 0.58 |
| | | | | | | | and | 135 | 136 | 1 | 0.65 |
| | | | | | | | and | 210 | 220 | 10 | 3.86 |
| | | | | | | | and | 248 | 252 | 4 | 0.68 |
| | | | | | | | and | 307 | 311 | 4 | 1.28 |
| | | | | | | | and | 329 | 334 | 5 | 0.68 |
| WNEX004 | 437621 | 6666821 | 351 | 571 | 226.82 | -59.46 | | 64 | 68 | 4 | 0.64 |
| | | | | | | | and | 72 | 76 | 4 | 0.66 |
| | | | | | | | and | 116 | 120 | 4 | 0.54 |
| | | | | | | | and | 124 | 128 | 4 | 1.02 |
| | | | | | | | and | 132 | 136 | 4 | 0.91 |
| | | | | | | | and | 144 | 148 | 4 | 1.65 |
| | | | | | | | and | 152 | 156 | 4 | 0.59 |
| | | | | | | | and | 228 | 232 | 4 | 0.55 |

| WHIRLING DERVISH NORTH DRILLING JULY 2018 | | | | | | | | | | Downhole | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hole** | **Easting** | **Northing** | **RL** | **Depth** | **Azimuth** | **Dip** | | **From (m)** | **To (m)** | **Width (m)** | **Grade g/t** |
| CDC0033 | 438272 | 6666130 | 350 | 406 | 235.1 | -60.91 | | 294 | 301 | 7 | 0.54 |
| | | | | | | | **and** | **324** | **335** | **11** | **1.29** |
| CDC0035 | 438053 | 6665964 | 350 | 448 | 235.11 | -60.22 | | 76 | 82 | 6 | 1.06 |
| | | | | | | | and | 288 | 289 | 1 | 1.57 |
| | | | | | | | and | 317 | 321 | 4 | 0.92 |
| | | | | | | | and | 401.7 | 404.2 | 2.5 | 0.78 |
| CDC0036 | 437966 | 6666078 | 350 | 388 | 235.12 | -59.9 | | 68 | 70 | 2 | 0.87 |
| | | | | | | | **and** | **130** | **145** | **15** | **1.28** |
| | | | | | | | and | 247 | 248 | 1 | 0.55 |
| | | | | | | | and | 298 | 299 | 1 | 0.95 |
| CDC0037 | 438118 | 6666156 | 350 | 644.24 | 235.13 | -65.17 | | 95 | 97 | 2 | 1.76 |
| | | | | | | | and | 126 | 131 | 5 | 0.56 |
| | | | | | | | and | 136 | 138 | 2 | 1.46 |
| | | | | | | | **and** | **140** | **161** | **21** | **1.00** |
| | | | | | | | and | 167 | 171 | 4 | 0.86 |
| | | | | | | | and | 177 | 178 | 1 | 0.57 |
| | | | | | | | and | 180 | 181 | 1 | 0.91 |
| | | | | | | | and | 186 | 190 | 4 | 1.00 |
| | | | | | | | and | 201 | 202 | 1 | 1.06 |
| | | | | | | | and | 204 | 205 | 1 | 0.55 |
| | | | | | | | and | 208 | 212 | 4 | 0.57 |
| | | | | | | | and | 220 | 221 | 1 | 2.03 |
| | | | | | | | and | 226 | 230 | 4 | 0.86 |
| | | | | | | | and | 243 | 245 | 2 | 1.22 |
| | | | | | | | and | 258 | 259 | 1 | 0.54 |
| | | | | | | | and | 349 | 350 | 1 | 0.51 |
| | | | | | | | **and** | **398** | **413.18** | **15.18** | **2.34** |
| | | | | | | | incl | 410.6 | 413.18 | 2.58 | 7.25 |
| | | | | | | | and | 431 | 443.96 | 12.96 | 0.96 |
| | | | | | | | and | 452.55 | 454.25 | 1.7 | 0.74 |
| | | | | | | | and | 482 | 483 | 1 | 6.80 |
| | | | | | | | and | 519 | 520.7 | 1.7 | 1.24 |
| | | | | | | | and | 524.21 | 525 | 0.79 | 0.92 |
| | | | | | | | and | 530.2 | 530.77 | 0.57 | 1.01 |
| | | | | | | | and | 538.53 | 538.91 | 0.38 | 0.65 |
| | | | | | | | and | 552.32 | 554 | 1.68 | 1.26 |
| | | | | | | | and | 603.5 | 604.75 | 1.25 | 0.53 |
| CDC0038 | 438010 | 6666342 | 350 | 722.67 | 235.14 | -65.3 | | 170 | 172 | 2 | 1.25 |
| | | | | | | | **and** | **315** | **320** | **5** | **3.39** |
| | | | | | | | **and** | **252.67** | **535.34** | **9.67** | **2.01** |
| | | | | | | | and | 552 | 553.2 | 1.2 | 0.89 |
| | | | | | | | and | 556.68 | 558.27 | 1.59 | 1.35 |
| | | | | | | | and | 561.8 | 562.85 | 1.05 | 0.75 |
| | | | | | | | and | 575.42 | 576.5 | 1.08 | 0.67 |
| | | | | | | | and | 601 | 602.25 | 1.25 | 5.46 |

## Karari 2012 JORC Table 1 (Including KA Sth)

| Section 1: Sampling Techniques and Data | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| Sampling Techniques | *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* | Sampling methods undertaken by Saracen at Karari have included reverse circulation drillholes (RC), diamond drillholes (DD) and RC grade control drilling within the pit, and diamond drilling and face chip sampling underground.<br>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.<br>RC chips and diamond core provide high quality representative samples for analysis.<br>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.*<br>*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.<br>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.<br>Some grade control RC chips were analysed in the Saracen on site laboratory using a PAL (pulverise and leach) method.<br>Visible gold is sometimes encountered in underground drillcore and face samples.<br>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.<br>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.<br>Diamond tails were oriented using an Ezi-mark tool.<br>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.<br>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.<br>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking.<br>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.<br>During GC campaigns the sample bags weight versus bulk reject weight are compared to ensure adequate and even sample recovery.<br>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.<br>Diamond drilling has high recoveries due to the competent nature of the ground meaning loss of material is minimal.<br>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.*<br>*Core (or costean, channel, etc) photography.* | Logging of RC chips and diamond drill core records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining.<br>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.<br>All faces are photographed and mapped.<br>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.<br>Core is photographed in both dry and wet state.<br>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.<br>Every second drill line is logged in grade control programs with infill logging carried out as deemed necessary.<br>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.<br>Underground faces are chip sampled using a hammer.<br>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.<br>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.<br>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.<br>No duplicates have been taken of underground core or face samples.<br>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.<br>Some GC samples were analysed in the Saracen onsite laboratory using pulverise and leach method. This method is a partial digest.<br>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.<br>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.<br>QAQC data is reported monthly.<br>Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns.<br>The laboratory performs a number of internal processes including standards, blanks, repeats and checks.<br>QAQC data analysis demonstrates sufficient accuracy and precision.<br>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.<br>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.<br>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.<br>All underground drillhole collars are picked up by company surveyors using a Leica TS15i (total station) with an expected accuracy of +/-2mm.<br>Underground faces are located using a Leica D5 disto with and accuracy of +/- 1mm from a known survey point.<br>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.<br>A number of drillholes have also been gyroscopically surveyed.<br>Previous holders' survey accuracy and quality is unknown |
| | *Specification of the grid system used.* | A local grid system (Karari) is used.<br>The two point conversion to MGA_GDA94 zone 51 is<br>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<br>Point 2 3000 7400 0 438359.84 6663187.72 0<br>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.<br>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.<br>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.<br>Underground diamond drilling is designed to intersect the orebody in the best possible orientation given the constraints of underground drill locations.<br>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.<br>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<br>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.<br>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.<br>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).<br>All production is subject to a Western Australian state government NSR royalty of 2.5%.<br>The tenements are subject to the Pinjin Pastoral Compensation Agreement.<br>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.<br>Further drilling by Aberfoyle defined mineralisation over a 600m strike length.<br>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.<br>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.<br>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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation*<br>• *above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>• *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:<br>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.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*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).*<br>*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 (Including WD North)

| 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.<br>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.<br>RC chips and diamond core provide high quality representative samples for analysis.<br>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.*<br>*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.<br>RC chips are riffle or cone split and sampled into 1m intervals with total sample weights under 3kg<br>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.<br>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.<br>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.<br>Diamond tails were oriented using an Ezy-mark tool.<br>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.<br>Recoveries average >90%.<br>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.<br>Depths are checked against depth given on the core blocks.<br>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.<br>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.<br>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.*<br>*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.<br>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.<br>Chips from all RC holes (exploration and GC) are stored in chip trays for future reference.<br>Core is photographed in both dry and wet state.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>QAQC data is reported monthly.<br>Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns.<br>The laboratory performs a number of internal processes including standards, blanks, repeats and checks.<br>QAQC data analysis demonstrates sufficient accuracy and precision.<br>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.<br>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.<br>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.<br>All underground drillhole collars are picked up by company surveyors using a Leica TS15i (total station) with an expected accuracy of +/-2mm.<br>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.<br>A number of drillholes have also been gyroscopically surveyed.<br>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.<br>The one point conversion to MGA_GDA94 zone 51 is<br>WDEast WDNorth RL MGAEast MGANorth RL<br>Point 1 20003.8190 50277.5540 0 437865.3740 6665770.2100 0<br>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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>M28/166, M31/220 and M28/245 are the subject of the Maduwongga native title claim (WC2017/001).<br>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.<br>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.<br>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.<br>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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation*<br>• *above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth* | All material data is periodically released on the ASX:<br>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.*<br>• *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.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*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).*<br>*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.<br>Sampling methods undertaken by previous owners have included rotary air blast (RAB), DD and RC drilling and blast hole sampling within the pit.<br>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.<br>RC chips and diamond core provide high quality representative samples for analysis<br>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.*<br>*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<br>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.<br>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.<br>All historic RAB, RC and DD and sampling is assumed to have been carried out to industry standard at that time.<br>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.<br>Some diamond drilling carried out for geotechnical studies was oriented (the method is unknown), it is unknown if other core was oriented.<br>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.<br>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.<br>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.<br>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.<br>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking.<br>Depths are checked against depth given on the core blocks.<br>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.<br>Diamond drilling has high recoveries meaning loss of material is minimal.<br>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.*<br>*Core (or costean, channel, etc) photography.* | Logging of RC chips and diamond drill core records lithology, mineralogy, texture, mineralisation, weathering, alteration and veining.<br>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.<br>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.<br>Core is photographed in both dry and wet state.<br>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.<br>The sampling method for historic RAB and RC drilling is unknown.<br>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.<br>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.<br>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.<br>It is unknown if duplicate sampling was performed on historic exploration RAB, RC and DD drilling.<br>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.<br>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.<br>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.<br>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.<br>QAQC data is reported monthly.<br>Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns.<br>The laboratory performs a number of internal processes including standards, blanks, repeats and checks.<br>QAQC data analysis demonstrates sufficient accuracy and precision.<br>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.<br>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.<br>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.<br>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.<br>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.<br>There are no native title claims over the Thunderbox deposit.<br>A number of heritage surveys have been undertaken with Aboriginal groups with no sites of significance identified.<br>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.<br>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.<br>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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation*<br>• *above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>• *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.<br><br>All material data is periodically released on the ASX:<br>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.*<br>*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>*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.<br>The geometry of the mineralisation is well known and true thickness can be calculated.<br><br>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.<br><br>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.<br>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.<br>An environmental survey investigated the erosional characteristics of the soil, surface hydrology and groundwater and identified no issues.<br>A partial leach soil sampling program carried out over the deposit was deemed effective in identifying anomalous gold values associated with the deposit.<br>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).*<br>*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* | |

## Kailis 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.* | Saracen has completed reverse circulation drilling (RC) at Kailis.<br>Sampling methods undertaken at Kailis by previous owners have included rotary air blast (RAB), (RC), aircore (AC) and diamond drillholes (DD).<br>Limited historical data has been provided by previous owners. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used* | Sampling for RC drilling is carried out as specified within Saracen sampling and QAQC procedures as per industry standard. RC chips provide high quality representative samples for analysis.<br>RC, RAB, AC and DD core drilling is assumed to have been completed by previous holders to industry standard at that time (1980- 2008). |
| | *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems.*<br>*Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information* | RC Chips are cone split and sampled into 1m intervals with total sample weights under 3kg to ensure total sample inclusion at the pulverisation stage.<br>Saracen chip samples are crushed, dried and pulverised to a nominal 90% passing 75µm to produce a 40g sub sample for analysis by FA/AAS.<br><br>All RAB, RC, AC and DD and sampling is assumed to have been carried out to industry standard at that time.<br>The majority of recent drillholes have been riffle or cone split to provide 1m samples for analysis. Older drillholes have been sampled via spear sampling or unknown methods.<br>Analysis methods include aqua regia, fire assay and unknown 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 156 RAB holes. Further drilling included 51 RAB holes, 1186 RC holes (assumed standard 5 ¼" face sampling hammer bit) 220 AC holes and 54 HQ (mostly standard tube, a limited number were triple tube) and unknown diameter diamond drillholes. A number of these were diamond tails on existing RC drillholes.<br>Saracen has completed 95 RC drill holes, completed with a 5.5 inch diameter bit with a face sampling hammer. The rig was equipped with an external auxiliary booster. 1133 grade control RC drillholes have |

| Section 1: Sampling Techniques and Data | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| | | been completed within the pit.<br>It is unknown if diamond drill core was oriented. |
| Drill Sample Recovery | *Method of recording and assessing core and chip sample recoveries and results assessed* | Recoveries for RC drilling are recorded as a percentage based on a visual weight estimate.<br>In historical data it has been noted that recoveries were rarely less than 100% although recovery data has not been provided. Some problems were reported with wet samples from RC drilling.<br>Core loss through the ore zone was reported occasionally however recoveries for diamond drilling programs were around 95%. |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples* | During RC drilling daily rig inspections are carried out to check splitter condition, general site and address general issues.<br>It is unknown what, if any, measures were taken to ensure sample recovery and representivity. |
| | *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | There is no known relationship between sample recovery and grade for RC drilling.<br>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.*<br>*Core (or costean, channel, etc) photography.* | Logging of RC chips has recorded lithology, mineralogy, texture, mineralisation, weathering, alteration and veining.<br>Chips from all RC holes are stored in chip trays for future reference.<br>Some diamond drilling has been geotechnically logged to provide data for geotechnical studies.<br>It is unknown if diamond core was photographed. |
| | *The total length and percentage of the relevant intersections logged* | All drillholes completed by Saracen have been logged in full. |
| Sub-sampling techniques and sample preparation | *If core, whether cut or sawn and whether quarter, half or all core taken.* | The sampling method for most drill core is unknown, a small amount is recorded as half core sampled. |
| | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | All RC samples are cone split. Occasional wet samples are encountered.<br>The sampling method for the majority of the historic RAB, AC and RC drilling is unknown: a small number have been recorded as spear sampled.<br>Some wet sampling has been reported in historic drilling but only a small proportion of these had poor recoveries |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | The sample preparation of RC chips adheres to industry best practice. It is conducted by a commercial laboratory and involves oven drying, coarse crushing then total grinding to a size of 90% passing 75 microns.<br>The sampling techniques for historic RAB, RC, AC and DD drilling are unknown, best practice is assumed. |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | All subsampling activities are carried out by commercial laboratory and are considered to be satisfactory.<br>Best practice is assumed at the time of historic RAB, DD, AC and RC sampling.<br>Procedures adopted to ensure sample representivity for more recent drilling included sizing analysis, with an expected return of 85% 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.<br>It is unknown if duplicate sampling was performed on historic RAB, RC, AC and DD drilling. |

| Section 1: Sampling Techniques and Data | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| | | |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | Analysis of data determined sample sizes were considered to be appropriate. |
| Quality of assay data and laboratory tests | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | RC chip samples are analysed by an external laboratory using a 40g fire assay with AAS finish. This method is considered suitable for determining gold concentrations in rock and is a total digest method. Methods for historic RC, RAB, AC and DD drilling included fire assay, aqua regia 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 at the Kailis project |
| | *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | Certified reference material (standards and blanks) with a wide range of values are inserted into every drillhole at a rate of 1:25 for RC drilling. These are not identifiable to the laboratory.<br>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.<br>QAQC data is reported monthly.<br>Sample preparation checks for fineness are carried out to ensure a grindsize of 90% passing 75 microns.<br>The laboratory performs a number of internal processes including standards, blanks, repeats and checks.<br>QAQC data analysis demonstrates sufficient accuracy and precision.<br><br>Industry best practice is assumed for previous holders. |
| Verification of sampling and assaying | *The verification of significant intersections by either independent or alternative company personnel.* | Significant intercepts are verified by the Geology Manager and corporate personnel |
| | *The use of twinned holes.* | A number of historic DDH holes were drilled to twin original RC 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.<br>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.* | Drillhole are located using a Trimble R8 GPS/GNSS with an accuracy of +/- 10mm.<br>Downhole surveys are carried out using a hired Reflex EZ-gyro by the respective drilling companies on a regular basis, between 10-30m.<br>Historic drilling was located using mine surveyors and standard survey equipment; more recent drilling has been surveyed using a Real Time Kinetic GPS system.<br>The majority of downhole surveys for RC drilling were carried out using an Eastman single shot camera at regular intervals. Some drillholes were gyroscopically surveyed and some survey methods remain unknown. |
| | *Specification of the grid system used.* | MGA Zone 51 grid coordinate system is used |
| | *Quality and adequacy of topographic control.* | DTM surveys were obtained for the project area from Tesla Airborne Geoscience |
| Data spacing and distribution | *Data spacing for reporting of Exploration Results.* | No exploration results reported in this release |
| | *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade* | Data spacing is nominally 20m N-S by 20m E-W and 20m N-S by 40m EW in more sparsely drilled areas of the resource. 5m N-S by 10m E-W grade control drilling is available over mined areas. Drilling data is |

| Section 1: Sampling Techniques and Data | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| | *continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* | sufficient to establish continuity of the main lode. |
| Orientation of data in relation to geological structure | *Whether sample compositing has been applied.* | No samples have been composited.<br>Some historic RAB and AC drilling was sampled with 3-4m composite samples. Anomalous zones were resampled at 1m intervals in some cases, 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.* | Sampling is perpendicular to the main mineralisation orientation and is well understood from past production. |
| | *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.* | There is no record of any sample bias that has been introduced because of the relationship between the orientation of the drilling and that of the mineralised structures. There is the possibility of crosscutting high grade veins which may locally introduce bias. This is factored into account in any estimation with aggressive topcuts. |
| 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.<br>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 Kailis pit and near mine exploration are located on M37/46, M37/219, M37/564, and M37/902 which are granted until 2027, 2031, 2020, and 2030 respectively. All mining leases have a 21 year life and are renewable for a further 21 years on a continuing basis.<br>The mining leases are 100% held and managed by Saracen Metals Pty Limited, a wholly owned subsidiary of Saracen Minerals Holdings Limited.<br>Mining Leases 37/46, 37/219, 37/564, and 37/902 are subject to a 1.5% International Royalty Corporation (IRC) royalty, IRC caveats (Caveats 68H/067, 87H/067, 122H/067, and 403551 respectively) and St Barbara Limited caveats (Caveats 498250, 498249, 498248, and 498251 respectively).<br>All production is subject to a Western Australian state government NSR royalty of 2.5%.<br>The Mining Rehabilitation Fund applies to the tenements.<br>There are currently no native title claims applied for or determined across these mining leases. However, an agreement for Heritage Protection with the Wutha People still applies. Lodged Aboriginal Heritage site 17587, which is an Other Heritage Place referred to as the “Kailis Project Quartz Site”, is located in M37/46. |
| | *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. |

| Section 2: Reporting of Exploration Results | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| Exploration done by other parties | *Acknowledgment and appraisal of exploration by other parties.* | Mineralisation was discovered in the Kailis project area in the early 1980s after RAB drilling returned anomalous gold and arsenic values. Carr Boyd minerals intersected mineralisation with an initial RC program targeting these anomalies in 1982. Esso, City Resources and Sons of Gwalia all held the project at various times and carried out RAB, RC, AC and DDH programs delineating the resource. The deposit was mined in 2000-2001 by Sons of Gwalia. Mining was carried out by St Barabara at the nearby Trump deposit between 2008-2009. |
| Geology | *Deposit type, geological setting and style of mineralisation.* | Gold mineralisation at Kailis is hosted in quartz-sericite schist within a broad north trending, shallow to moderately dipping (40-50 degrees east) shear zone with a strike length in excess of 1800m. Mineralised intervals are often narrow (3-8m) but thicken to 15-20m in places. Structural studies identified narrow sub vertical NE-SW trending quartz vein sets that cross cut the main shear zone as possible controls on high grade mineralisation. The best gold grades tend to occur in the oxide and transitional zones with lower grades in the fresh rock. Mineralisation is open at depth but closed along strike. |
| 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:*<br>*- easting and northing of the drill hole collar*<br>*elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>*- dip and azimuth of the hole*<br>*- down hole length and interception depth*<br>*- hole length.*<br>*• 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 1700 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.<br><br>All material data is periodically released on the ASX:<br>01/05/2017<br><br>Future drill hole data will be periodically released or when a results materially change the economic value of the project.<br><br>Exclusion of the drilling information will not detract from the reader's view of the report. |
| Data aggregation methods | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* | All significant intercepts have been length weighted with a minimum Au grade of 0.5ppm. No high grade cut off has been applied. |
| | *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* | Intercepts are aggregated with minimum width of 1m and maximum width of 3m for internal dilution. |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | There are no metal equivalents reported in this release. |
| Relationship between mineralisation widths and intercept lengths | *These relationships are particularly important in the reporting of Exploration Results.*<br>*If the geometry of the mineralisation with respect to* | Saracen has not previously reported exploration results nor are any included in this release.<br><br>The geometry of the mineralisation is well known and true thickness can be calculated. |

| Section 2: Reporting of Exploration Results | | |
|---|---|---|
| **Criteria** | **JORC Code Explanation** | **Commentary** |
| | *the drill hole angle is known, its nature should be reported.*<br>*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').* | Mineralisation at Kailis has been mainly intersected by vertical drill holes which have an average intersection angle to mineralisation of approximately 68 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 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.* | 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 contaminating substances.* | Historic activities have included drilling to obtain samples for metallurgical, geotechnical and hydrological test work.<br>A number of geophysical surveys including airborne magnetics, radiometrics, and gravity have been carried out over the project area by various companies to identify strike extensions and /or strike parallel mineralisation. Drilling of identified targets proved successful identifying several anomalous zones.<br>A detailed structural review of the nearby Trump deposit was carried out in 2012, highlighting the importance of the cross cutting structures as possible controls on the high grade mineralisation. |
| Further work | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>*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 not actively exploring proximal to the Kailis deposit. |