

27<sup>th</sup> April 2018

# MARCH 2018 QUARTERLY REPORT

# Highlights.

Assay highlights include;

- HR0036 12m @ 12.2% TGC from 26m including 5m @ 23.1% TGC;
- HR0060 20m @ 19.3% TGC from 30m incl. 13m @ 25.8% TGC mineralised to end of hole;
- HR0069 6m @ 9.5% TGC from 38m including 2m @ 16.2% TGC and 6m @ 18.3% TGC from 47m including 5m @ 21.7% TGC;
- HR0082 19m @ 14.2% TGC from 20m incl. 6m @ 27.3% TGC and 1m @ 33% TGC;
- HR0083 21m @ 14.6% TGC from 37m incl. 12m @ 21.8% TGC;
- HR0086 22m @ 7.6% TGC from 29m incl. 6m @ 15.2% TGC;

High grade graphite discovery in Northern Zone;

Eastern Zone graphitic horizon confirmed for at least <u>800m</u> strike with high grade graphite (>20% TGC) defined for <u>500m</u>;

Drilling targeting the Eastern Zone successfully intersected the graphitic horizon on every drill line;

Springdale now has three highly prospective drill tested graphite target zones and greater than 20km of untested priority aeromagnetic targets; and

Drill program completed (final results pending).



Figure 1. Sample farm at Springdale Project



Cut core from 55 metres HD018

**Exfoliation of Core from HD018** 

#### CORPORATE.

Comet has received \$189,999 Research and Development (R&D) rebate for research conducted during 2017 financial year and an additional \$80,000 as part payment of the Western Australian Exploration Initiative Scheme (EIS) drilling refund.

Comet has also updated its website to reflect the Company's technology focus and studies in graphene and graphite production and uses:

#### **Overview**

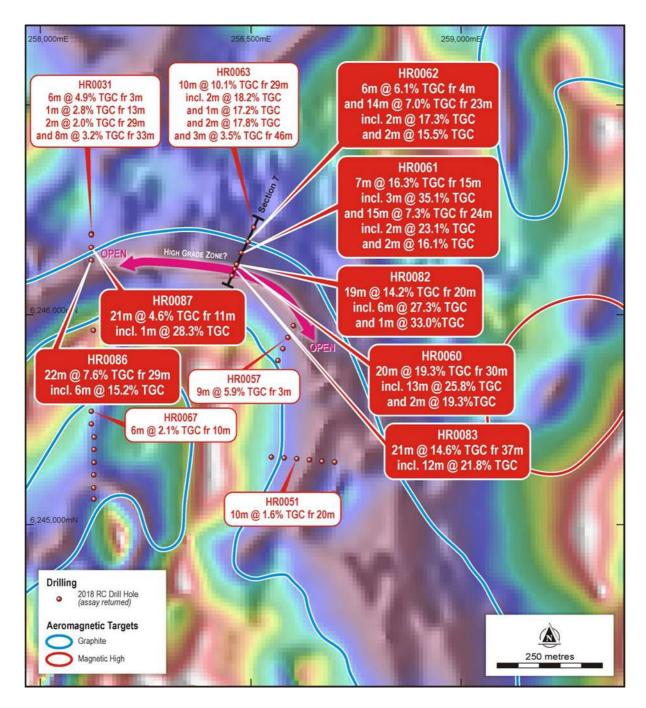
In September 2017 Comet Resources Limited (ASX: CRL) (Comet) conducted a 220 sq km detailed aeromagnetic survey over the Springdale Graphite Project in Western Australia (ASX release 10<sup>th</sup> November 2017). Interpretation of this survey delineated 26 kilometres of stratigraphy deemed to be prospective for graphite mineralisation (currently less than 20% tested). This new discovery (Northern Zone) along with the Western Zone, discovered in 2016, and the Eastern Zone, discovered in 2017, demonstrates the prospectivity for high grade graphite mineralisation at the Springdale Project (figure4).

## **RC Drilling**

A reverse circulation (**RC**) drill program was designed to test selected aeromagnetic targets. 93 shallow, reconnaissance style, RC holes were drilled between December 2017 and February 2018 for a total of 5320 metres (**m**).

#### Northern Zone.

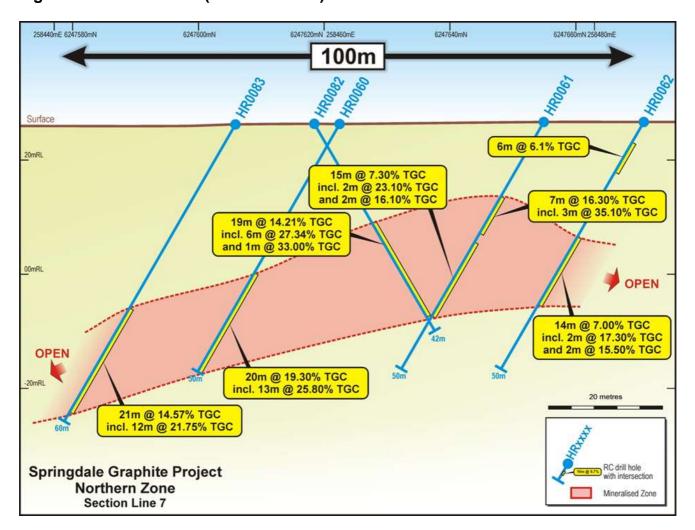
Figure 1 – Location of recent RC drilling covering the Northern Zone. Significant intersections for assays returned. Reduced to the pole (RTP) aeromagnetic image underlay.



The Northern Zone (figure 4) is located within an interpreted fold closure (Figure 1). The aeromagnetic survey identified this as a high priority structural target with the potential for a thicker and higher grade graphite horizons. RC holes were drilled 30m apart to a nominal depth of 50m along lines. Five irregular 200-300m spaced lines, utilising existing tracks, tested different sections

of the prospective stratigraphy (Figure 1). This was a previously untested target and the objective was to locate any graphitic horizons for further drill testing. This drilling has been successful in locating a new high grade graphite zone (Figure 1 and 2).

Figure 2: Section Line 7 (Northern Zone)



This Northern zone is open at depth and along strike. Assay highlights include:

- HR0082
  - > 19m @ 14.21% TGC (Total Graphitic Carbon) from 20m including 6m @ 27.34% TGC and 1m @ 33% TGC
- HR0083
  - 21m @ 14.57% TGC from 37m including 12m @ 21.75% TGC
- HR0086
  - > 22m @ 7.63% TGC from 29m including 6m @ 15.23% TGC
- HR0087
  - > 21m @ 4.57% TGC from 11m including 1m @ 28.3% TGC
- HR0060
  - 20m @ 19.3% TGC from 30m including 13m @ 25.8% TGC mineralised to end of hole.
- HR0061
  - > 7m @ 16.3% TGC from 15m including 3m @ 35.1% TGC
  - > 15m @ 7.3% TGC from 24m including 2m @ 23.1% TGC and 2m @ 16.1% TGC
- HR0062
  - > 14m @ 7% TGC from 23m including 2m @ 17.3% TGC and 2m @ 15.5% TGC
- HR0063
  - > 10m @ 10.1% TGC from 29m including 2m @ 18.2% TGC, 1m @ 17.2% TGC and 2m @ 17.8% TGC

This discovery demonstrates the potental for near surface high grade graphite mineralisation at the Sprigdale project. A full list of significant intersections are given in Table 1.

## **Eastern Zone**

The Eastern Zone (figure 4) which hosts the high grade diamond drill hole HD018. This hole recorded several high grade intersections the most spectacular being 11m @ 25.6% Total Graphitic Carbon (TGC) from 49.4m including 9m @ 30.2% TGC. Other significant intersections in HD018 include; 5.6m @ 7% TGC from 15.5m, 2.6m @ 5.3% TGC from 33.3m, and 4.6m @ 15.8% TGC from 39.8m including 3.1m @ 21% TGC.

HD018 is located within a distinct magnetic low that strikes NE-SW for approximately 1.5km (Figure 2). RC drilling was carried out on mainly 160m spaced drill lines with holes nominally 30m apart. The graphitic horizon was intersected on every drill line confirming its continuity for at least

**800m.** High grade graphite mineralisation (>20% TGC) was defined for a strike of 500m. The Eastern Zone is open at depth and along strike. Assay highlights include;

#### HR0036

> 12m @ 12.2% TGC from 26m including 5m @ 23.1% TGC (160m north of HD018)

#### HR0069

- > 6m @ 9.5% TGC from 38m including 2m @ 16.2% TGC
- 6m @ 18.3% TGC from 47m including 5m @ 21.7% TGC (320m south of HD018)

#### HR0064

- > 5m @ 11.3% TGC from 24m including 4m @ 13.7% TGC
- > 16m @ 10.8% TGC from 42m including 7m @ 17.5% TGC

## HR0065

- > 18m @ 5.4% TGC from 1m including 1m @ 15.5% TGC
- > 5m @ 13.6% TGC from 69m including 3m @ 20% TGC
- > 3m @ 19.8%TGC from 82m
- > 2m @ 6.1% TGC from 89m

A full list of significant intersections are provided in Table 1.

Figure 3 – Location of recent RC drilling covering the Eastern Zone. Significant intersections for assays returned. Reduced to the pole (RTP) aeromagnetic image underlay

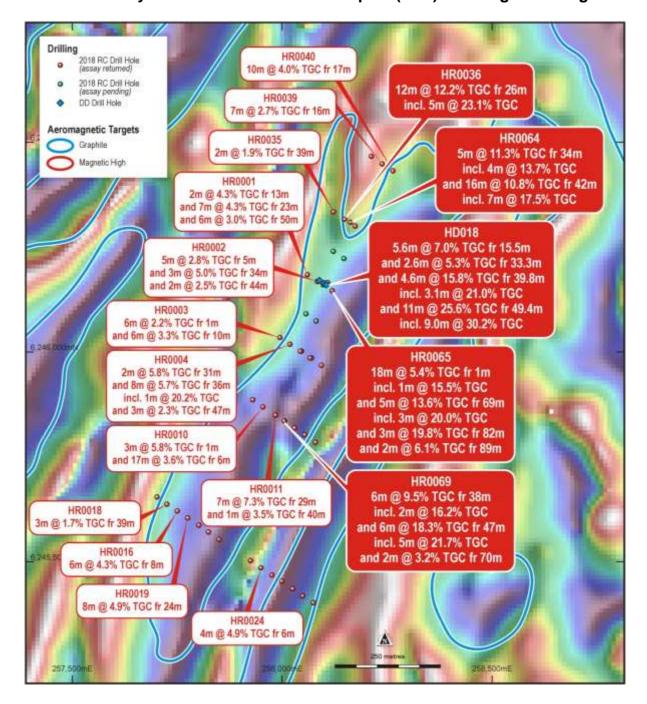


Table 1 – Significant intersections assays returned for holes drilled December 2017 to February 2018 over the Northern Zone (>=1% TGC, up to 1m of internal waste).

HOLEID	HIGH GRADE ZONE	SIGNIFICANT GRAPHITE INTERSECTIONS
HR0001	Eastern	2m @ 4.3% TGC from 13m
and	Eastern	7m @ 4.3% TGC from 23m
and	Eastern	6m @ 3% TGC from 50m

HOLEID	HIGH GRADE ZONE	SIGNIFICANT GRAPHITE INTERSECTIONS
HR0002	Eastern	5m @ 2.8% TGC from 5m
and	Eastern	3m @ 5% TGC from 34m
and	Eastern	2m @ 2.5% TGC from 44m
HR0003	Eastern	6m @ 2.2% TGC from 1m
and	Eastern	6m @ 3.3% TGC from 10m
HR0004	Eastern	2m @ 5.8% TGC from 31m
and	Eastern	8m @ 5.7% TGC from 36m including 1m @ 20.2% TGC
and	Eastern	3m @ 2.3% TGC from 47m
HR0010	Eastern	3m @ 5.8% TGC from 1m
and	Eastern	17m @ 3.6% TGC from 6m
HR0011	Eastern	7m @ 7.3% TGC from 29m
and	Eastern	1m @ 3.5% TGC from 40m
HR0012	Eastern	3m @ 6.8% TGC from 37m including 1m @ 15.6% TGC
HR0016	Eastern	6m @ 4.3% TGC from 8m
HR0018	Eastern	3m @ 1.7% TGC from 39m
HR0019	Eastern	8m @ 4.9% TGC from 24m
HR0024	Eastern	4m @ 4.9% TGC from 6m
HR0035	Eastern	2m @ 1.9% TGC from 39m
HR0036	Eastern	12m @ 12.2% TGC from 26m including 5m @ 23.1%
		TGC
HR0039	Eastern	7m @ 2.7% TGC from 16m
HR0040	Eastern	10m @ 4% TGC from 17m
HR0064	Eastern	5m @ 11.3% TGC from 34m including 4m @ 13.7% TGC
and	Eastern	16m @ 10.8% TGC from 42m including 7m @ 17.5% TGC
HR0065	Eastern	18m @ 5.4% TGC from 1m including 1m @ 15.5% TGC
and	Eastern	5m @ 13.6% TGC from 69m including 3m @ 20% TGC
and	Eastern	3m @ 19.8% TGC from 82m
and	Eastern	2m @ 6.1% TGC from 89m
HR0069	Eastern	6m @ 18.3% TGC from 47m including 5m @ 21.7% TGC
and	Eastern	6m @ 9.5% TGC from 38m including 2m @ 16.2% TGC
and	Eastern	2m @ 3.2% TGC from 70m
HR0030	Northern	8m @ 5% TGC from 2m
and	Northern	3m @ 4.4% TGC from 33m
HR0031	Northern	6m @ 4.9% TGC from 3m
and	Northern	1m @ 2.8% TGC from 13m
and	Northern	2m @ 2% TGC from 29m
and	Northern	8m @ 3.2% TGC from 33m
HR0047	Northern	2m @ 1.8% TGC from 13m
HR0051	Northern	10m @ 1.6% TGC from 20m
HR0056	Northern	2m @ 4.8% TGC from 7m
HR0057	Northern	9m @ 5.9% TGC from 3m
HR0059	Northern	2m @ 2% TGC from 35m
HR0060	Northern	20m @ 19.3% TGC from 30m including 13m @ 25.8% TGC
HR0061	Northern	7m @ 16.3% TGC from 15m including 3m @ 35.1% TGC
and	Northern	15m @ 7.3% TGC from 24m including 2m @ 23.1% TGC and 2m @ 16.1% TGC
HR0062	Northern	6m @ 6.1% TGC from 4m
and	Northern	14m @ 7% TGC from 23m including 2m @ 17.3% TGC and 2m @ 15.5% TGC
HR0063	Northern	10m @ 10.1% TGC from 29m including 2m @ 18.2% TGC and 1m @ 17.2% TGC and 2m @ 17.8% TGC

HOLEID	HIGH GRADE ZONE	SIGNIFICANT GRAPHITE INTERSECTIONS
and	Northern	3m @ 3.5% TGC from 46m
HR0067	Northern	6m @ 2.1% TGC from 10m
HR0082	Northern	19m @ 14.21% TGC from 20m including 6m @ 27.34% TGC and 1m @ 33% TGC
HR0083	Northern	21m @ 14.57% TGC from 37m including 12m @ 21.75% TGC
HR0086	Northern	22m @ 7.63% TGC from 29m including 6m @ 15.23% TGC
HR0087	Northern	2m @ 1.27% TGC from 0m
and	Northern	21m @ 4.57% TGC from 11m including 1m@ 28.3% TGC

Figure 4 – Location of recent RC drilling covering the Northern Zone. Significant intersections for assays returned. Reduced to the pole (RTP) aeromagnetic image underlay.

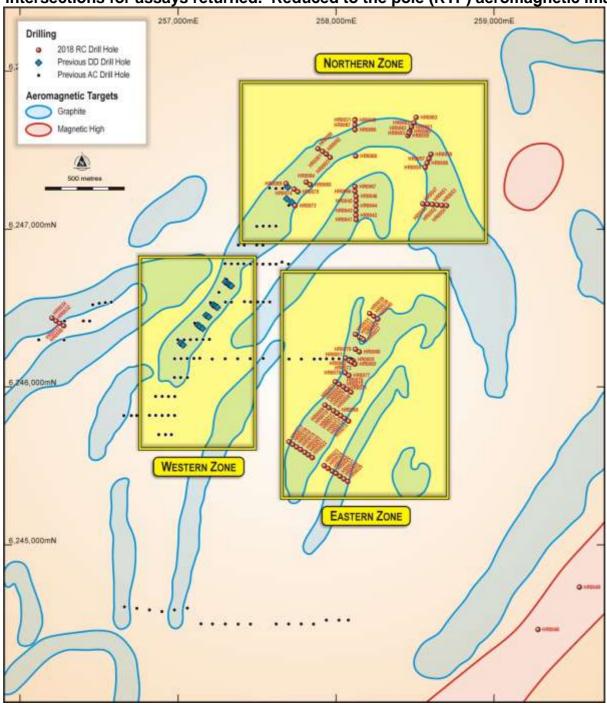


Figure 4 – Collar location plan December 2017 – February 2018 RC drilling.

## **Metalugical Testwork**

Metallurgical testwork continues during this quarter.

More exfoliation trst have been conducted to test new processes and solutions to increase graphene production and recovery. Result from this work are expected this quarter.

Designing and construction of a bench scale exfoliation device has commenced this will alow for more production and testing and also supply graphene product for trials with potental end users. Results from this work will help in designing Comet's first pilot scale plant. This is expected to be operating this quarter.

Comet has submitted several samples to determining the amenability of Comet's high grade beneficiated graphite concentrate as a lithium ion battery feedstock. This is part of Comet's plan to asses all potential commercial products from Springdale ore. Result from this work are expected this quarter.

## **Moving Forward.**

Comet plans to progress the assessment of the graphite and graphene at Springdale Project through the following work programs:

<u>Geological/Structural Interpretation</u> – Review drill results with aeromagnetic data to identify the most prospective stratigraphic horizons to test. Conduct further drilling to extend strike and depth of the Northern Zone and other targets.

<u>Diamond Drilling</u> – A diamond drill program is being planned to follow up high grade intersections. This will provide sample for metallurgical testwork and high quality information to move the geological understanding and resource modelling forward.

<u>Resources Calculations</u> – This will be undertaken in areas where it is considered that sufficient drill data is available.

<u>Metallurgical Testwork</u> – Metallurgical testwork will continue on existing and newly generated diamond core. Understanding the amenability of the graphite at Springdale to convert to graphene and/or to be used in battery anodes and other technologies is an integral part of understanding and realising its commercial value.

## **Background**

Comet's Springdale project is located approximately 30km east of Hopetoun, Western Australia. The tenements lie within the deformed southern margin of the Yilgarn Craton and constitute part of the Albany-Fraser Orogen. The tenement is over freehold land with sealed road access within 20km and is located approximately 150km from the port of Esperance. Comet owns 100% of the three tenements' E74/562, E74/583 and E74/612 that make up Springdale project. The total land holding at Springdale is approximately 220 square kilometres.

Comet completed a successful first pass aircore drilling program in February 2016. This program confirmed that graphite was present in a prospective zone/horizon (Western Zone). Comet has now drilled 93 RC holes for a total of 5,320m, 113 aircore holes for 2,901 metres and 20 diamond holes for 1,193 metres.

Comet discovered in April 2017 that graphene can be produced from Springdale graphite by electrical exfoliation. It is very rare for a graphite deposit to be able to produce graphene using the exfoliation method.

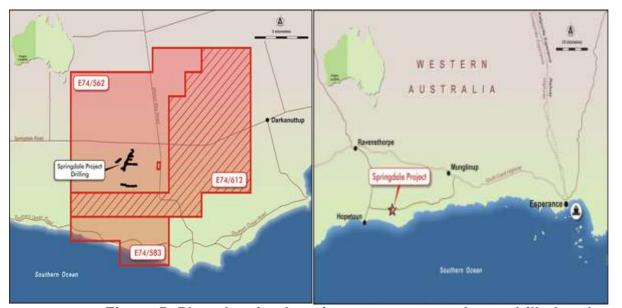


Figure 5: Plan showing location, tenements and area drilled to date.

# WHAT IS GRAPHENE?

Graphene is a natural material. Researchers discovered graphene in the 1940s; it was only in 2004 that a graphene sheet was isolated. In 2010 this achievement was awarded a Nobel Prize. Graphite is stacked graphene sheets (a 1mm thick piece of graphite would be made from approximately 3 million sheets of graphene). Consider graphene as being a 2 dimensional (**2D**) material and graphite a 3 dimensional material, the challenge is to separate the sheet. Graphene is the most expensive material in the world and some commentator's call 2004 the start of the graphene Era.

## WHY GRAPHENE

- It is the thinnest and toughest 2D material. 200 times stronger then steel.
- Graphene is flexible and transparent, has the largest surface area of all materials, and is the most stretchable crystal. The material is also extremely impermeable, even helium atoms cannot go through it.
- Graphene is currently the best electricity conductor known to man and is the perfect thermal conductor.
- Graphene is light it weighs just 0.77 milligrams per square meter. Because it is a single 2D sheet, it has the highest surface area of all materials.

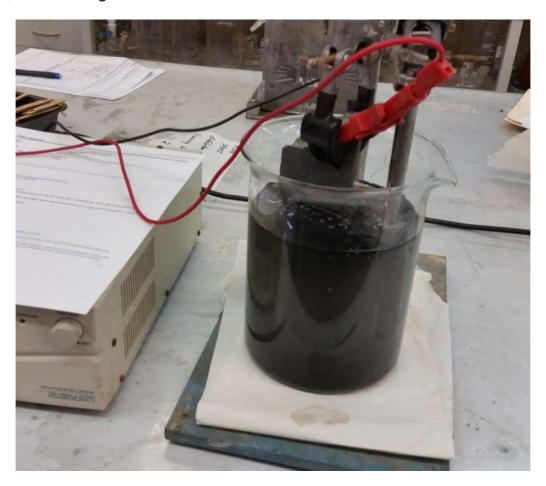


Figure 6: Exfoliation of HD002 Core

For further information please contact:

## Mr. Tony Cooper

Comet Resources Limited Tel (08) 9466 7770

Email tony.cooper@cometres.com.au

Web <u>www.cometres.com.au</u>

Comet listed on the Australian Stock Exchange in 1994. The Company discovered and studied the Ravensthorpe Nickel Project. In 2001 Comet successfully sold its final equity to BHP Billiton and returned to Comet shareholders \$32 million. Comet has a number of exciting projects that it is currently exploring and advancing. Comet has cash assets of approximately \$0.5 million and has approximately 176 million shares on issue.

The information in the report to which this statement is attached relates to Exploration Results, Mineral Resources or Ore Reserves compiled by Mr. A Cooper, who is a Consultant and director to Comet is also a Member of The Australian Institute of Mining and Metallurgy, with over 30 years' experience in the mining industry. Mr. Cooper has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Cooper consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.