

# QUARTERLY ACTIVITIES REPORT DECEMBER 2017

# Opuwo Cobalt Project, Namibia (CLA 95%)

#### Resource Drilling Program Completed

During the Quarter, the Company completed a resource drilling program designed to allow a maiden JORC compliant Mineral Resource to be declared. The program consisted of 99 holes, for a total of 17,266 metres. This drilling comprised 76 Reverse Circulation (RC) holes (11,785.5 m) and 23 Diamond Core (DC) holes (5,840.5 m).

The final batches of samples are expected to be received in early February, with resource modelling and estimation to follow later in Q1, 2018.

Significant intercepts (Figure 1/Table 1) from assays received from this drilling program during the Quarter were:

- 7 m @ 0.12% Co and 0.46% Cu, from 59 m (DOFR0076)
- 4.37 m @ 0.17% Co and 0.46% Cu, from 136 m (DOFD0066)
- 5 m @ 0.12% Co and 0.52% Cu, from 162 m (DOFR0067)
- 5 m @ 0.12% Co and 0.39% Cu, from 233 m (DOFD0071)
- 4.54 m @ 0.12% Co and 0.48% Cu, from 56.92 m AND
  4.24 m @ 0.15% Co and 0.45% Cu, from 80.76 m (DOFD0062)
- 4.94 m @ 0.12% Co and 0.40% Cu, from 28 m (DOFD0065)
- 5 m @ 0.09% Co and 0.33% Cu, from 165.2 m (DOFR0081)
- 4 m @ 0.14% Co and 0.36% Cu, from 219 m (DOFR0070)
- 4 m @ 0.13% Co and 0.40% Cu, from 480.0 m (DOFD0077)
- 4 m @ 0.12% Co and 0.29% Cu, from 260 m (DOFR0064)
- 4 m @ 0.14% Co and 0.34% Cu, from 219 m (DOFR0073)
- 4 m @ 0.13% Co and 0.34% Cu, from 134 m (DOFR0075)
- 4 m @ 0.09% Co and 0.33% Cu, from 69 m (DOFR0083)
- 4 m @ 0.10% Co and 0.42% Cu, from 80 m (DOFR0084)
- 4 m @ 0.13% Co and 0.43% Cu, from 77 m (DOFR0086)
- 3 m @ 0.14% Co and 0.49% Cu, from 221 m (DOFR0069)
- 3 m @ 0.12% Co and 0.31% Cu, from 161 m (DOFR0082)
- 3 m @ 0.11% Co and 0.54% Cu, from 66 m (DOFR0068)
- 2.8 m @ 0.13% Co and 0.60% Cu, from 165.2 m (DOFR0080)





Figure 1: Resource Drilling Significant Intercepts

#### Metallurgical Testwork

The initial phases of test work completed at SGS Australia were focused on maximising recovery of sulphide minerals into a mineral concentrate. Currently, a recovery of **88% of the cobalt** and **87.3% of the copper** present in the head grade sample (0.14% Co) has been achieved. This demonstrates that the mineralisation at Opuwo is amenable to conventional flotation techniques. A recovery of **64.2% of the cobalt** has so far been achieved at a fast flotation time of only **2 minutes**, with a **cobalt in concentrate grade of 1.11%**. A subsequent larger sample created for leaching tests, using the same parameters, yielded a concentrate grade of **1.22% Co**.

The continuing test work is aiming to improve the grade of the concentrate, by "cleaning", to remove minerals such as pyrite and carbonates from the concentrate, thereby increasing the cobalt and copper grade, and reducing the mass. This work will include re-grinding of rougher concentrates to achieve the target liberation of the minerals and re-float as a cleaning stage, with results expected to be available during the current Quarter.

Concurrently, a series of initial leaching tests has commenced, to determine the feasibility of producing cobalt sulphate chemical from the Opuwo mineral concentrates. Cobalt sulphate is a key precursor chemical for the production of cathode material for the lithium ion battery industry. Results from this work are also expected during the current Quarter.



#### Geophysical Surveys

The Company's geophysical contractor is currently conducting downhole electromagnetic (EM) surveys and a ground audio magnetotelluric (AMT) survey, aiming to search for strong conductors which may represent the source of the extensive mineralisation seen at Opuwo.

#### **Engineering Studies**

The Company is currently evaluating a combination of open pit and underground mining methods as part of the Scoping Study for Opuwo. A team of Mining Engineers from the Freiberg University of Mining and Technology in Germany has recently visited the Opuwo Project, to advance the evaluation of underground mining feasibility and costings for the deeper parts of the Opuwo mineralisation. The Freiberg University has well established links with mining operations in Namibia. These studies are anticipated to assist mine design work which will be completed once the JORC compliant mineral resource is available.

#### Forward Exploration Plan

One diamond drill rig has re-commenced operations at the Project, with the following initial aims:

- Extending the resource drilling area to the west, on a nominal 200 m x 100 m grid. This area has been deemed a priority based on visual observations during the recent resource drilling campaign (assays pending).
- Drilling in the gap between the eastern and western resource drilling areas, on a nominal 200 m x 100 m grid.
- Further definition drilling in areas where multiple mineralised horizons were identified during the recent resource drilling program.
- Testing of any conductors identified by the geophysical surveys being conducted in January.

The new licences acquired by Celsius during the previous Quarter extend the prospective cobalt and copper stratigraphic horizon to over **100 km**. Historical sampling and laboratory assays over this additional strike zone, consisting of just 16 samples, yielded results of up to **8.3% copper** and **0.32% cobalt**, illustrating the high potential to identify further cobalt and copper mineralisation on the new licences. In addition to the cobalt-copper mineralisation investigated by Celsius to date, and other similar targets, the new licences are considered to have significant potential for other commodities including zinc-lead-vanadium (Otuziru Prospect), copper-gold (Chirumbu Prospect), chromium-vanadium (Jimi Prospect) and lead-zinc-silver (NOTZ Prospect). (Refer ASX announcement 4 September, 2017)

A sampling and mapping program has commenced at the DOF North prospects, located on licence EPL 4351 (Figure 2), with the aim of further defining drilling targets for testing later in 2018.





Figure 2: Regional Exploration Targets



	<b>F</b>	Marcal Proc			et I							
	Easting	Northing	Diamad	Planned	Final	Intercent	Intercent	Interval	Cabalt	Common		
Hole ID	(01W Zone 33S)	(011vi Zone 33S)	Din (deg)	(grid)	(m)	from (m)	to (m)	(m)	(%)	(%)	7inc (%)	
DOED0062	370503	8026297	-55	180	92.16	56.92	61 46	4 54	0 12	0 48	0 44	
AND	0,0000	0020207		100	52.20	80.76	85.00	4.24	0.15	0.45	0.54	
DOFR0064	372107	8026347	-55	180	267.00	260	264	4	0.12	0.29	0.31	
DOFD0065	371902	8026153	-55	180	38.06	28	32.94	4.94	0.12	0.40	0.38	
DOFD0066	371900	8026249	-55	180	143.37	136	140.37	4.37	0.17	0.46	0.47	
DOFR0067	372100	8026245	-55	180	173.00	162	167	5	0.12	0.52	0.50	
DOFR0068	371702	8026197	-55	180	75.00	66	69	3	0.11	0.54	0.23	
DOFR0069	371707	8026396	-55	180	231.00	221	224	3	0.14	0.49	0.49	
DOFR0070	371702	8026302	-55	180	151.00	143	147	4	0.14	0.36	0.55	
DOFD0071	371901	8026350	-55	180	254.37	233	238	5	0.12	0.39	0.49	
DOFR0073	371503	8026397	-55	180	227.00	219	223	4	0.14	0.34	0.49	
DOFR0074	371500	8026197	-55	180	81.00		Mineral	ised below	500ppm C	o cutoff		
DOFR0075	371503	8026295	-55	180	147.00	134	138	4	0.13	0.34	0.41	
DOFR0076	371302	8026199	-55	180	73.00	59	66	7	0.12	0.46	0.34	
DOFD0077	370901	8026747	-55	180	500.34	490	494	4	0.13	0.40	0.32	
DOFR0078	371302	8026298	-55	180	153.00	146	147	1	0.08	0.56	0.56	
DOFR0079	371303	8026398	-55	180	225.00	Mineralised below 500ppm Co cutoff						
DOFD0080	370503	8026398	-55	180	173.16	165.2	168	2.8	0.13	0.60	0.42	
DOFR0081	371099	8026243	-55	180	78.00	66	71	5	0.09	0.33	0.27	
DOFR0082	371099	8026347	-55	180	171.00	161	164	3	0.12	0.31	0.36	
DOFR0083	370902	8026248	-55	180	84.00	69	73	4	0.09	0.33	0.32	
DOFR0084	370700	8026301	-55	180	90.00	80	84	4	0.1	0.42	0.36	
DOFD0085	370499	8026499	-55	180	251.18			Results	Pending			
DOFR0086	370299	8026297	-55	180	90.00	77	81	4	0.13	0.43	0.42	
DOFR0087	371101	8026448	-55	180	282.00	Results Pending						
DOFR0088	370102	8026348	-55	180	93.00	Results Pending						
DOFR0089	369901	8026347	-55	180	62.00	Results Pending						
DOFR0090	369701	8026353	-55	180	57.00	Results Pending						
DOFR0091	369303	8026400	-55	180	66.00	Results Pending						
DOFR0092	370699	8026400	-55	180	184.00	Results Pending						
DOFR0093	369100	8026401	-55	180	69.00	Results Pending						
DOFD0094	369502	8026602	-55	180	278.42	Results Pending						
DOFR0095	370702	8026502	-55	180	279.00	Results Pending						
DOFR0096	370304	8026398	-55	180	144.00	Results Pending						
DOFD0097	369502	8026503	-55	180	146.36	Results Pending						
DOFR0098	370902	8026450	-55	180	372.00	Hole Abandoned						
DOFR0099	370898	8026348	-55	180	215.00	Results Pending						
DOFD0100	369500	8026400	-55	180	59.18			Results	Pending			
DOFR0101	370101	8026447	-55	180	156.00			Results	Pending			
DOFD0102	367350	8026548	-55	180	236.40			Results	Pending			
DOFD0103	366551	8026947	-55	180	464.36			Results	Pending			
DOFR0104	369903	8026447	-55	180	129.00			Results	Pending			
DOFR0105	369699	8026450	-55	180	126.00			Results	Pending			
DOFR0106	369302	8026499	-55	180	137.00			Results	renaing			
DOFD0107	367349	8026451	-55	180	167.30			Results	Pending			
DOFRO108	370102	8026551	-55	180	261.00			Results	Penaing			
DOFRU109	3/0302	8026498	-55	180	221.00			Results	Penuing			
	36/349	8026352	-55	180	86.11			Results	Penaing			
DOFRUITI	369902	8026550	-55	180	219.00	Results Pending						
DOFRUIIZ	260201	0020549	-55	100	198.00			Populto	Pondina			
DOLKOT12	309301	0U206U2	-55	180	231.00			Results	renang			

# Table 1: Drilling Results, Opuwo Cobalt Project Resource Drilling (end of Quarter Status)



	Easting	Northing		Planned	Final							
	(UTM	(UTM	Planned	Azimuth	Depth	Intercept	Intercept	Interval	Cobalt	Copper		
Hole ID	Zone 33S)	Zone 33S)	Dip (deg)	(grid)	(m)	from (m)	to (m)	(m)	(%)	(%)	Zinc (%)	
DOFD0114	366350	8027048	-55	180	602.38	Results Pending						
DOFD0115	370907	8026450	-55	180	428.50	Results Pending						
DOFR0116	369100	8026499	-55	180	126.00	Results Pending						
DOFR0117	369100	8026601	-55	180	213.00	Results Pending						
DOFR0118	367751	8026450	-55	180	216.00	Results Pending						
DOFR0119	367950	8026448	-55	180	209.00	Results Pending						
DOFR0120	367948	8026348	-55	180	225.00	Results Pending						
DOFR0121	367751	8026352	-55	180	138.00	Results Pending						
DOFR0122	367954	8026251	-55	180	147.00			Results	Pending			
DOFR0123	367548	8026501	-55	180	210.00			Results	Pending			
DOFR0124	367548	8026403	-55	180	138.00			Results	Pending			
DOFD0125	366548	8026650	-55	180	254.49	Results Pending						
DOFR0126	367548	8026299	-55	180	57.00	Results Pending						
DOFR0127	367150	8026550	-55	180	226.00	Results Pending						
DOFR0128	367151	8026343	-55	180	54.00	Results Pending						
DOFR0129	366950	8026543	-55	180	189.00	Results Pending						
DOFD0130	366148	8026799	-55	180	392.48	Results Pending						
DOFR0131	366750	8026453	-55	180	220.00	Results Pending						
DOFR0132	367150	8026451	-55	180	133.00	Results Pending						
DOFR0133	366943	8026451	-55	180	117.00	Results Pending						
DOFD0134	366351	8026950	-55	180	200.38	Results Pending						
DOFR0135	366552	8026850	-55	180	290.50	Results Pending						
DOFR0136	366553	8026545	-55	180	225.00	Results Pending						
DOFR0137	366154	8026600	-55	180	130.00	Results Pending						
DOFR0138	366153	8026504	-55	180	60.00	Results Pending						
DOFR0139	366351	8026453	-55	180	99.00	Results Pending						
DOFR0140	366751	8026549	-55	180	261.00	Results Pending						
DOFR0141	366353	8026552	-55	180	157.00	Results Pending						
DOFR0142	365949	8026549	-55	180	75.00			Results	Pendina			
DOFD0143	366150	8026699	-55	180	176.48	Results Pending						
DOFD0144	365948	8026749	-55	180	227.36	Results Pending						
DOFR0145	366354	8026650	-55	180	184.00	Results Pendina						
DOFR0146	365749	8026551	-55	180	69.00	Results Pending						
DOFR0147	365945	8026661	-55	180	147.00	Results Pendina						
DOFR0148	365550	8026650	-55	180	36.00	Results Pending						
DOFR0149	365349	8026667	-55	180	45.00	Results Pending						
DOFR0150	365750	8026747	-55	180	191.00		Results Pending					
DOFR0151	364953	8026701	-55	180	54.00		Results Pending					
DOFR0152	365550	8026850	-55	180	219.00	Results Pendina						
DOFD0153	365347	8026871	-55	180	206.36	Results Pending						
DOFR0154	365751	8026650	-55	180	109.00	Results Pending						
DOFR0155	365548	8026751	-55	180	150.00	Results Pending						
DOFR0156	364952	8026898	-55	180	206.00	Results Pending						
DOFR0157	365350	8026770	-55	120	129.00	Results Pendina						
DOFR0158	364951	8026799		180	125.00	Results Pendina						
DOFD0159	366351	8026746	-55	180	101 33	Results Pending						
DOEB0160	3651/0	80260/40	-55	100	274.00			Regulto	Pondina			
POLUOTO0	505149	0020949	-55	190	2/4.00			Results	renung			

### Table 1: Drilling Results, Opuwo Cobalt Resource Drilling (end of Quarter status) - Continued

Note: Significant intercepts reported at 0.05% (500 ppm) cobalt cutoff

Note: Please refer to ASX releases dated November 22, 2017, December 12, 2017 and December 29, 2017 for further detail regarding these assay results.



# Abednegno Hill Project, WA (CLA 100%)

The Abednegno Hill Nickel Project is located to the south and west of Minara Resources' Murrin Murrin nickel mine.

Celsius completed a ground EM survey over its Leonora tenements during October – November 2017 with the aim of detecting bedrock anomalies which may be indicative of nickel sulphide mineralisation. (Figures 3 and 4)

A broad bedrock conductor was delineated in the centre of E39/1684, parallel to a known ultramafic unit and the regional stratigraphy. The area is overlain by recent cover, including a creek system, and therefore the geological setting for this conductor is unknown. The Company is currently reviewing gravity data from this area with follow up surveys and field work likely to be required to characterise the setting.

A smaller, local anomaly was identified in the west of the tenement area. This lies in the centre of the Corkscrew Anticline, where thickening of the known ultramafic units may have occurred based on the Company's high resolution aeromagnetic survey completed in January 2017 (refer ASX Announcement 25 January 2017). Shallow historic drilling of these sills reported nickel contents averaging 1,500ppm, with enhancement from weathering in saprolite clays (ASX Announcement 24 November 2017). The aim of the EM survey was to test for the presence of sulphide mineral concentrations below the weathered zone. Follow up field work is planned and drill testing of this anomaly may be required.



Figure 3: EM over aeromagnetic (interpreted ultramafic highlighted)





Figure 4: EM over surface geology (GSWA 1:100K mapsheet 3240)

# Carnilya Hill Project, WA (CLA 30%)

Celsius (through View Nickel Pty Ltd) owns a 30% joint venture interest in the Carnilya Hill Joint Venture in Western Australia with Mincor Resources NL. Mincor Resources NL (ASX:MCR) is the operator of the Carnilya Hill JV. No activity was reported by Mincor during the quarter.

# Hann River Project, WA (E80/5117 CLA 100%, base metal rights on E80/5027)

Celsius has an Exploration Licence Application pending (E80/5117) over an area located in the Kimberley region of Western Australia, approximately 300 km east of Derby. The application area is considered prospective for copper and cobalt mineralisation, hosted in the Mt Carson Volcanics geological unit. During the Quarter, an agreement was negotiated with Jindalee Resources Limited (ASX:JRL) regarding their adjacent granted Exploration Licence (E80/5027), whereby the diamond rights on CLA's licence application area have been exchanged for the base metal rights on E80/5027. The Company plans to provide further information on this Project as the application process progresses.

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## **Corporate**

During the Quarter, Celsius conducted a capital raising of approximately \$3.9 million, at an issue price of 5.5 cents per share. The Placement was heavily oversubscribed and attracted strong interest from a large number of domestic and international institutional and professional investors. Project vendor and substantial shareholder, Gecko Namibia, elected to participate in the capital raising, increasing their percentage ownership in the Company as a result.

At the end of the Quarter, the Company held approximately \$4.3 million in cash reserves.

- ENDS -

#### **Celsius Resources Contact Information**

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#### **Competent Persons Statement**

Information in this report relating to Exploration Results is based on information reviewed by Mr. Brendan Borg, who is a Member of the Australasian Institute of Mining and Metallurgy and Managing Director of Celsius Resources. Mr. Borg 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 by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Borg consents to the inclusion of the data in the form and context in which it appears. The Exploration Results are based on standard industry practices for drilling, logging, sampling and assay methods, including quality assurance and quality control measures, as reported in various ASX announcements during April to September, 2017.