

ASX: NCZ 22 February 2018

# NEW CENTURY SELECTS PREFERRED HYDRAULIC MINING CONTRACTORS FOR CENTURY TAILINGS OPERATIONS

- National Pump & Energy Ltd, partnered with Paragon Tailings Pty Ltd, selected as preferred contractors to undertake Century Tailings Deposit operations:
  - National Pump & Energy is one of Australia's leading pump and energy providers
  - o Paragon Tailings is an international specialist hydraulic mining company
- Detailed design & procurement for Century hydraulic mining operations underway
- Preferred contractor award follows a competitive tender processing involving three specialist international hydraulic mining companies
- Completion of the tender follows extensive due diligence by New Century management, including site visits to multiple leading hydraulic mining operations

New Century Resources Limited (Company or New Century) (ASX:NCZ) is pleased to announce the completion of a comprehensive tender process to select the preferred contractors for hydraulic mining service works for the Century Tailings Deposit.



Figure 1: Paragon undertaking hydraulic mining operations at Randgold's Morlia Mine, Mali (15Mtpa)

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Hydraulic mining has been determined as the optimal method for extraction of the Century Tailings Deposit, allowing efficient recovery of the ore and transport via existing site slurry piping infrastructure to the Century Processing Plant.



Figure 2: The Century Tailings Deposit

National Pump & Energy Ltd (NPE), one of Australia's leading pump and energy providers, and Paragon Tailings Pty Ltd (Paragon), an experienced hydraulic mining contractor with multiple operations around the world, have been selected as joint bidder preferred contractors for the supply, operation and maintenance of Century's hydraulic mining operations.

The Paragon team have a strong track record in hydraulic mining both internationally and within Australia, with management team having over 30 years' of operational experience through Fraser Alexander Ltd prior to the formation of Paragon in 2016.

NPE and Paragon have proposed a two duty, two standby cannon arrangement to achieve the initial planned 8Mtpa operation at Century, prior to the addition of a further two duty cannons to achieve ramp up to the scheduled 15Mtpa.



Figure 3: NPE remote controlled track mounted hydraulic mining cannons to be used at Century

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NPE and Paragon will also employ the current best in class hydraulic mining technology, through the use of track mounted, remote controlled water cannons. This equipment provides the required operational efficiency whilst achieving best practice safety processes.

Importantly, the commercial terms established with NPE and Paragon for hydraulic mining services at Century are in line with costs outlined in the recently completed Restart Feasibility Study (see ASX announcement 28 November 2017).

Commenting on the hydraulic mining due diligence process and subsequent contractor selection, New Century Chief Operating Officer Mr Barry Harris said:

"The selection of NPE and Paragon as the Company's hydraulic mining preferred contractors represents another key step in the restart of operations at Century. We look forward to working with our new partners to ensure the safe, efficient and timely progression to production at the Mine later this year.

The hydraulic mining due diligence process and operational site visits also provided in depth exposure to a number of large scale hydraulic mining operations around the world, allowing the Company to have full confidence in NPE and Paragon's operational proposal for the Century Tailings Deposit.

Cost-effective hydraulic mining is an integral part of the Company's projected lowest cost quartile operations at the Century Tailings Deposit, which in turns maximises potential for high margins, and strong shareholders returns."

Owner	Operation	Commodity	Rate (Mtpa)	
Amerigo Resources	Minera Valle Central	Copper, Molybdenum	67 <sup>1</sup>	
DRD Gold	Ergo	Gold	25 <sup>2</sup>	
Randgold Resources	Morila	Gold	15 <sup>3</sup>	
New Century Resources	Century	Zinc, Silver	15	
Gold Fields	South Deep	Gold	2.0	
Pan African Resources BTRP		Gold	1.2	

Table 1: Overview of identified operating large scale global tailings reprocessing operations

Hydraulic mining has been employed for many decades around the world as a simple, low cost mechanism for the transport of tailings from historic storage facilities for reprocessing.

<sup>2</sup> Hydraulic mined tailings historically reporting from 10+ geographically disperse dumps

<sup>&</sup>lt;sup>1</sup> Combined processing capacity of hydraulic mining (~23Mtpa) and fresh tailings (~44mtpa) feed

<sup>&</sup>lt;sup>3</sup> Hydraulic mining operations consist of ~8.7Mtpa historical tailings de-capping and ~6.3Mtpa tailings recovery **Melbourne Office** Suite 4, Level 9, 350 Collins Street, Melbourne VIC 3000

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As part of the tender process, New Century management completed due diligence site visits to hydraulic mining operations managed by the shortlisted companies. This included visits to five identified large scale tailings reprocessing operations around the world, namely:

- Amerigo Resources Ltd's Minera Valle Central (MVC) Mine, Chile (67Mtpa);
- DRD Gold Limited's Ergo Mine, South Africa (25Mtpa);
- Randgold Resources Ltd's Morila Mine, Mali (15Mtpa);
- Gold Fields Limited's South Deep Mine, South Africa (2.0Mtpa); and
- Pan African Resources' Barberton Tails Retreatment Project (BTRP), South Africa (1.2Mtpa).

An overview of each of these operations is provided below.

Key learnings taken from interactions with both the mine owner's representatives and hydraulic mining contractors operating these sites have been incorporated into the design of the Century operations to ensure safe and efficient delivery of tailings slurry to the Century Processing Plant.

# Amerigo Resources Ltd - Minera Valle Central (MVC) Mine



Figure 4: MVC hydraulic mining operations and fresh tailings transportation infrastructure (67Mtpa)

The MVC Mine, located near Santiago, Chile, has been in operation since 1992 and has a current capacity of 67Mtpa. The tailings resource being progressively reclaimed still contains substantial mineralisation consisting of 1.2Bt at 0.16% copper and 0.01% molybdenum and the mine is estimated to continue tailings reprocessing operations through to a scheduled end of mine life in 2037.

MVC reprocesses tailings recovered from both the Cauquenes Tailings Deposit, via hydraulic mining, and directly from the operations at Codelco's El Teniente Mine (located 40km from the MVC tailings processing facility). Hydraulically mined tailings are pumped to the MVC plant via slurry pipelines (6km) and the El Teniente fresh tailings via overland concrete channels (40km under gravity only).

MVC utilises modern mining techniques including autonomous mining, where operators are physically removed from the mining face, operating hydraulic mining cannons via remote control.

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### DRD Gold Limited - Ergo Mine

Located near Johannesburg, South Africa, Ergo's hydraulic mining operations are part of a wider reprocessing project, which combines tailings from over ten historic tailings dams over an area approximately 62km from east to west and 25km from north to south.

Slurry from each tailings dam is transported via a series of interconnecting slurry pipelines to a central processing plant for extraction of the contained gold.

Ergo was established in 2007 with the aim to treat approximately 186Mt of surface tailings contained in the Elsburg Tailings Complex. These tailings are estimated to contain a total of approximately 1.7Moz of recoverable gold.



Figure 5: Ergo Mine hydraulic mining operations at one of the numerous tailings extraction locations (25Mtpa)

#### Randgold Resources Limited - Morila Gold Mine

The Morila Gold Mine is situated some 280km southeast of Bamako, the capital of Mali and 900km to the north of the port of Abidjan in Côte d'Ivoire. Morila is owned by Société des Mines de Morila SA (Morila) which is a joint venture company owned by Randgold (40%), AngloGold Ashanti (40%) and the State of Mali (20%). The mine is operated by Randgold.

Since Morila's inception in 2000, it has produced more than 6Moz from primary ore open pit operations. In 2009, Morila was converted to a tailings and stockpile treatment operation. The 15Mtpa tailings hydraulic mining operation at Morila has been operating since 2009 and is currently producing approximately 60,000oz gold per annum from reclaimed low grade tailings.





Figure 6: Morlia Gold Mine hydraulic mining operations (15Mtpa)

Completion of tailings reprocessing and mine closure is planned for 2020.

In connection with the closure activities at the Mine, Morila is developing suitable agribusiness partnerships to establish sustainable business enterprise at the site on completion of the tailings operations.

Established pilot projects underway include fish farms within the tailings dam areas and poultry houses with capacity for 40,000 chicks on rehabilitated sections the mining lease.

Gold Fields Limited - South Deep Mine



Figure 7: Morlia Gold Mine tailings reprocessing operations

# <image>

Figure 8: New Century Management inspecting and trialing operations at South Deep (2.0Mtpa)

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South Deeps tailings reprocessing has been in operation since 2015 at a rate of approximately 2Mtpa from a single stage cannon operation.

The slurried tailings are transported via piping approximately 3km to the adjacent processing plant at the South Deep Mine.

In addition to gold, the tailings operations are assessing the potential for recovery of uranium.



Figure 9: Site layout of the South Deep tailings reclaim process

Pan African Resources - Barberton Tailings Retreatment Project



Figure 10: BTRP hydraulic mining of mechanically stacked dry tailings and waste dumps (1.2Mtpa)

The BTRP hydraulic mining operation is located in the Mpumalanga province of South Africa. It utilises a combination of truck and shovel, and hydraulic mining techniques to reprocess gold tailings and mineralised waste dumps.

The operation produces 25koz to 30koz of gold per annum over a planned life of 14 years.

For further information please contact:

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### About New Century Resources Limited

New Century Resources Limited (ASX:NCZ) is an ASX listed base metal development company targeting the recommencement of operations from the Century Zinc Mine in Queensland, Australia.

The Company has recently completed a Feasibility Study over the existing Ore Reserves (77.3Mt at 3.1% ZnEq<sup>1</sup>) of the Century Zinc Mine, outlining a robust operation which is scheduled to become one of the top 10 zinc producers in the world and also in the lowest cost quartile globally.

The Company has all permits in place and is fully funded (subject to finalisation of the Sprott facility, see ASX announcement dated 11 October 2017), with >A\$100M in equity and debt available for operational restart in Q3 2018.

The proposed operations at Century will utilise the existing world class infrastructure at the mine, including a large scale multi train flotation plant, 700 person camp, private airport and sealed run way, mining fleet, grid power connection, 304km slurry pipeline and its own concentrate shipping port and transhipment vessel in Karumba.

In addition, Century boasts substantial Mineral Resources (9.3Mt at 10.8% Zn + Pb) which provide a significant opportunity for mine life extension and metal production increases from the scheduled operations.

Mineral Resources	Tonnes (Mt)	Zn (%)	Pb (%)	Ag (g/t)	Zn (t)	Pb (t)	Ag (Oz)
South Block (Indicated)	6.1	5.3	1.5	43	322,000	90,000	8,550,000
Silver King (Inferred)	2.7	6.9	12.5	120	186,000	337,500	10,500,000
East Fault Block (Inferred)	0.5	11.6	1.1	48	60,000	5,500	800,000
TOTAL	9.3	6.1	4.7	66	568,000	433,000	19,850,000
Ore Reserves	Tonnes (Mt)	<b>ZnEq</b> <sup>3</sup> (%)	Zn (%)	Ag (g/t)	Zn (t)	Pb (t)	Ag (Oz)
Century Tails (Proved)	77.3	3.1	3.0	12	2,287,662	-	29,734,819

# Statement of JORC 2012 Compliant Resources & Reserves

<sup>&</sup>lt;sup>3</sup> The ZnEq calculation is located below the Statement of JORC 2012 Compliant Resources & Reserves. **Melbourne Office** Suite 4, Level 9, 350 Collins Street, Melbourne VIC 3000

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# Zinc Equivalent Calculation

ZnEq was calculated for each block of the Century Tailings Deposit from the estimated block grades. The ZnEq calculation takes into account, recoveries, payability (including transport and refining charges) and metal prices in generating a zinc equivalent value for each block grade for Ag and Zn. ZnEq = Zn%+ + Ag troy oz/t\*0.002573. Metal prices used in the calculation are: Zn US\$3,000/t, and Ag US\$17.50/troy oz.

# **Competent Persons Statement**

# Mineral Resources

The information in this announcement that relates to Inferred Mineral Resources on the Silver King Deposit and the East Fault Block Deposit was first reported by the Company in its prospectus released to ASX on 20 June 2017, and the South Block Deposit was first reported by the Company to the ASX on 15 January 2018. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

#### Ore Reserves

The information in this announcement that relates to the Ore Reserve at the Century Tailings Deposit was first reported by the Company in its ASX announcement titled "New Century Reports Outstanding Feasibility Results that Confirm a Highly Profitable, Large Scale Production and Low Cost Operation for the Century Mine Restart" dated 28 November 2017. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement, and in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.