

ACN 092 471 513

**QUARTERLY REPORT FOR THE PERIOD ENDING  
31 DECEMBER 2017**

**HIGHLIGHTS**

**PENNY'S FIND GOLD MINE  
KALGOORLIE (WA)**

- **84,367 tonnes of ore processed at an average head grade of 3.09g/t Au**
- **7,837 ounces recovered**
- **Grade increasing with depth**
- **Grade control confirms high grade gold ore in the bottom 25m of the pit**
- **Diamond drilling confirms high grade gold beneath the open pit**
- **New underground resource estimation - 248,000 tonnes @ 7.04g/t Au for 56,000oz**
- **Underground mine feasibility commenced**

**Post Quarter**

- **25,000 tonnes of high grade ore are stockpiled at the Lakewood Mill in preparation for the next treatment campaign scheduled to commence early in February 2018.**

For personal use only

# REVIEW OF OPERATIONS

## **Penny's Find (WA): gold mine** (60% interest)

Empire Resources Ltd ('Empire', 'Company', ASX code: ERL) holds a 60% interest in and acts as Manager for the Penny's Find Joint Venture ("PFJV") that owns and operates the Penny's Find gold mine, located 50km northeast of Kalgoorlie in Western Australia. The remaining 40% interest is held by unlisted Brimstone Resources Ltd.

Open pit mining commenced at Penny's Find in the June quarter 2017. First gold production commenced this quarter.

### **Open Pit Mining**

During the December quarter, 84,367 tonnes of ore were mined and processed from the Penny's Find open pit which has reached a depth of 55 metres.

A photograph of the open pit operation taken at the end of the quarter is shown below in Figure 1. From a geotechnical sense, the pit has performed well with only a few small wall failures.



**Figure 1 : Penny's Find Open Pit looking south. Free dig, deeply weathered footwall sediments are to the right, fresh competent hanging wall basalts requiring drill and blast are to the left. The proposed underground portal would be located just below the excavator in the photograph.**

Funding for the Penny's Find open pit mining operation has been provided by the mining contractor, Blue Cap Mining Pty Ltd, as per the ASX announcement on 21 March 2017.

Two medical treatment injuries were reported during the quarter. Both personnel have recovered and returned to normal duties.

## Gold Treatment

Three toll treatment campaigns were completed during the quarter, two at the Lakewood Mill situated on the southern outskirts of Kalgoorlie and one at the Burbanks Mill near the town of Coolgardie.

The three campaigns together treated a total of **84,367** dry tonnes of ore at an average calculated head grade of **3.09g/t Au**.

Details of the quarter's production are:

- Total gold recovered was **7,837oz**. This includes both gold poured, and gold retained on carbon the value of which is paid by the mill to the PFJV partners.
- Average total gold recovery was 93.5%, with 35% recovered by gravity
- Total gold sales amounted to A\$10.3M.
- The All-In Sustaining Cost (AISC) was A\$1,692 per ounce – reflecting the expense moving significant volumes of waste in the upper levels of the pit. With grades increasing and strip ratio falling as the pit goes deeper, the AISC is expected to significantly improve.
- Gold grades increased with depth as shown in Figure 2.

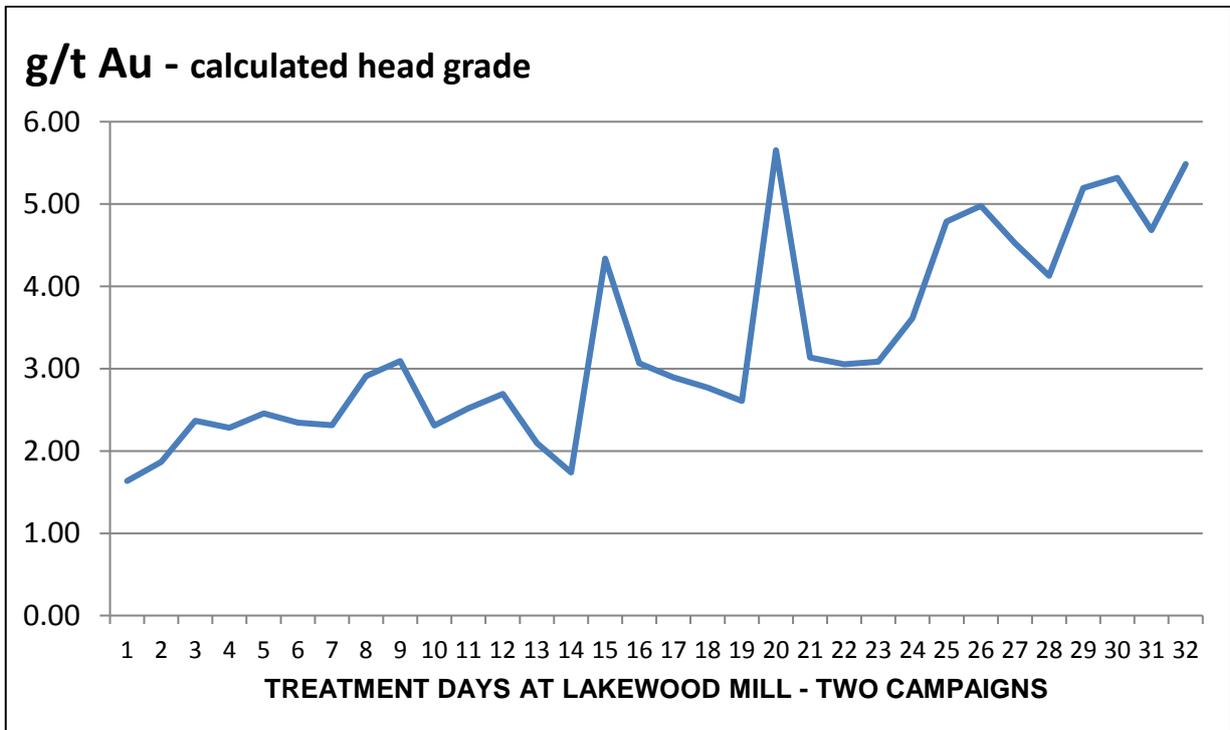


Figure 2 : Gold grades increasing with time as ore is sourced from deeper within the open pit

A summary of gold production per campaign is as follows:

<b>Month</b>	<b>Treatment Plant</b>	<b>Tonnes</b>	<b>Grade</b>	<b>Ounces</b>
October	Lakewood	21,710	2.39 g/t Au	1,579 ozs
Oct - Dec	Burbanks	28,310	2.50 g/t Au	2,120 ozs
Nov- Dec	Lakewood	34,347	4.02 g/t Au	4,138 ozs

The lower grades in October relate to leached, shallow ore which is a common feature of gold orebodies in the Eastern Goldfields.

### **Lakewood**

Two treatment campaigns were carried out at the Lakewood Mill owned by Golden Mile Milling Pty Ltd ("GMM"). The Lakewood Mill is designed to treat 1,500 tonnes of ore per day.

The first campaign in October recovered 1,579 ounces from 21,710 tonnes over a period of 14 days treating on average 1,550 tonnes per day. The calculated head grade was 2.39g/t Au.

The second campaign in November-December recovered 4,138 ounces from 34,347 tonnes over 18 days treating on average 1,900 tonnes per day. The calculated head grade was 4.02g/t Au.

Average total recovery over both campaigns was 93.6%, with 41.4% of the gold recovered by gravity. Reagent consumption was within expectations and no major problems were encountered during either campaign.

### **Burbanks**

The third treatment campaign commenced in October and comprised 28,310 tonnes of Penny's Find ore being processed through the Burbanks Mill at Coolgardie. This mill is operated by Eastern Goldfields Milling Services Pty Ltd ("EGMS") and rated to treat 500 tonnes of ore per day.

A total of 2,120 ounces of gold were recovered from this campaign with 93% recovery. The calculated head grade was 2.50g/t Au.

The Toll Treatment Agreement with EGMS was signed on 7 July 2017 in the belief the mill was ready to start processing. However treatment of ore did not commence fully until 7 October 2017, 3 months later. This delay was principally related to EGMS having to rectify various items on the mill to the satisfaction of the statutory regulators.

When treatment did commence continuing problems with the mill resulted in slower than expected gold production:

- Carbon introduced into the mill's leach tanks contained very little gold which meant it took some time for gold on carbon to reach suitable levels to allow efficient extraction of the gold. Consequently, there was a serious delay until 9 November before the first gold was poured from the leach circuit. Regular gold pours were achieved from then on.

- Gold production from the gravity circuit was less than expected with the first gold pour not achieved till 26 October 2017. Only 19.5% of the gold was recovered by gravity.
- Over the 76 days of the campaign, the mill only processed an average of less than 400 tonnes per day.

The late start up, slower gravity gold production and delay in recovering leach gold meant cashflow was significantly delayed during the Burbanks Mill campaign.

Another disadvantageous outcome of using the Burbanks Mill was the haulage expense. Being restricted to double road trains and having to pay for Coolgardie Shire permits only added to the overall haulage costs which were 89% higher than to Lakewood.

As a consequence of the high haulage costs and the failure of the Burbanks Mill to meet the PFJV partner's expectations, the decision was made to cease using this processing facility. Consequently, as announced to the ASX on 7 December 2017, Empire gave Notice of Termination of the Burbanks Mill tolling agreement. Subsequently, a Deed of Amendment and Settlement was signed so that treatment ended on 21 December 2017.

As of the date of this report the final Settlement of Gold in Circuit (GIC) and other matters is not yet finalised at Burbanks.

### **Future Campaigns**

25,000 tonnes of high grade ore are stockpiled at the Lakewood Mill in preparation for the next treatment campaign scheduled to commence early in February 2018.

### **Grade Control Drilling**

On 27 December 2017, results from the third and final round of RC grade control drilling were reported to the ASX, confirming high grade gold mineralisation in the deepest part of the orebody within the open pit.

Better results\* included:

- **7m @ 6.22g/t Au from 30m depth in hole PGC147**
- **7m @ 12.14g/t Au from 30m depth in hole PGC148**
- **4m @ 7.90g/t Au from 24m depth in hole PGC154**
- **6m @ 9.60g/t Au from 16m depth in hole PGC157**
- **7m @ 12.50g/t Au from 20m depth in hole PGC158**
- **6m @ 8.78g/t Au from 24m depth in hole PGC159**
- **9m @ 20.60g/t Au from 12m depth in hole PGC160**

*\*uncut assays*

## Diamond Drilling - Underground

On 6 November 2017 the Company announced to the ASX, assay results from a six hole diamond drilling program targeting mineralisation beneath the open pit. The aim of this drilling was to increase confidence in this mineralisation, convert some Inferred resources to Indicated and to yield important additional geotechnical data for underground mining studies. Better results included:

- **1.63m @ 15.60 g/t Au from 168.37m in hole PFD17-02**
- **3.52m @ 6.32 g/t Au from 172.50m in hole PFD17-02 including 1.22m @ 12.34 g/t Au from 174.80m**
- **5.00m @ 8.83 g/t Au from 148.00m in hole PFD17-04 including 2.22m @ 12.52 g/t Au from 150.78m**
- **1.94m @ 10.57 g/t Au from 162.36m in hole PFD17-05**

Completion of this drilling was a precursor to the commencement of a final underground feasibility study.

The new drill data has also increased Empire's confidence in the integrity of drilling results# previously obtained from below the current open pit e.g. **5m @ 20.88g/t Au, 3m @ 14.42g/t Au, 14m @ 5.34g/t Au, 6m @ 6.77g/t Au, 7m @ 5.27g/t Au and 3m @ 8.89g/t Au.**

*#As reported in various ASX announcements and quarterlies in 2007 and 2012*

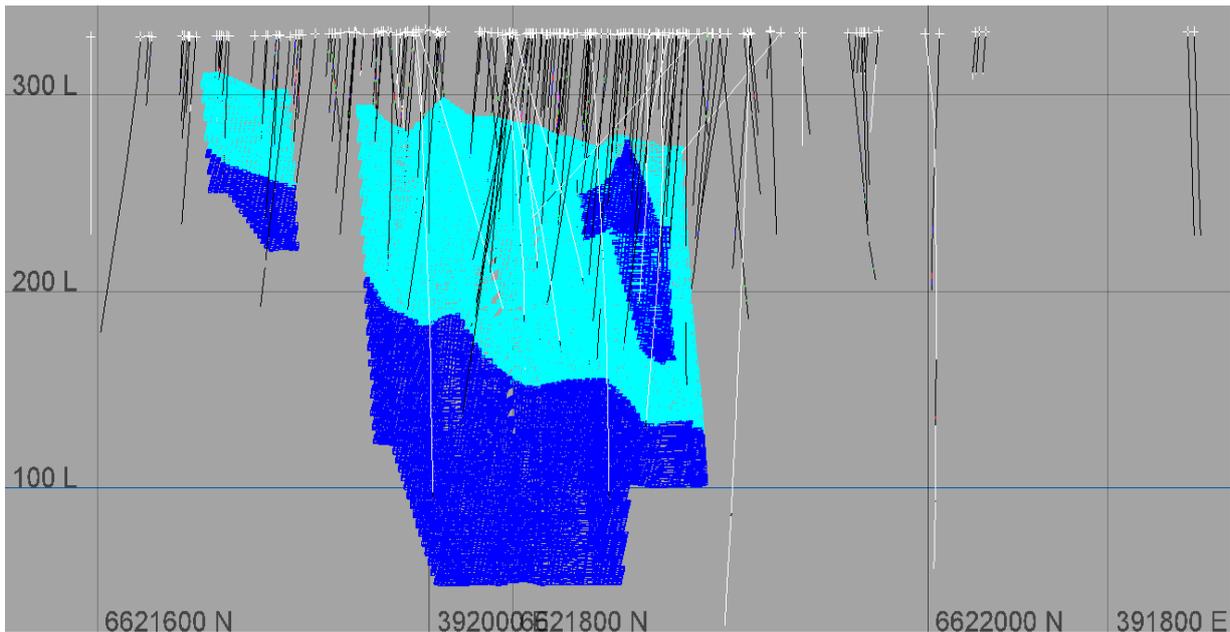
## New Underground Resource

Following completion of the above diamond drilling, an updated underground resource estimation was completed.

On 13 December 2017 the Company reported to the ASX the updated Penny's Find underground resource now stood at **248,000 tonnes @ 7.04g/t Au for 56,000oz** (Table 1).

This new underground reportable mineral resource extends from the planned base of the current open pit operation (max. 85m depth) to at least 250m below surface and remains open at depth (Figure 3).

<b>Table 1 : Penny's Find Gold Mine</b>			
<b>Reportable in situ Mineral Resource below ultimate pit design</b>			
<b>Fresh mineralisation only</b>			
<b>Class</b>	<b>Tonnes</b>	<b>Au g/t</b>	<b>Ounces</b>
<b>Indicated</b>	<b>147,000</b>	<b>8.06</b>	<b>38,000</b>
<b>Inferred</b>	<b>101,000</b>	<b>5.57</b>	<b>18,000</b>
<b>TOTAL</b>	<b>248,000</b>	<b>7.04</b>	<b>56,000</b>



**Figure 3: Long Section (looking west) shows all blocks by classification.  
Light Blue – Indicated, Dark Blue – Inferred**

## Potential Future Underground Operations

Following completion of the deep diamond drilling and updated underground resource, a final underground feasibility study has commenced.

The Penny's Find Joint Venture partners expect the study to be completed by end of first quarter, calendar 2018.

## Yuinmery (WA): Copper - Gold Project (100% interest and earning 91% interest in adjoining tenements)

The Yuinmery project is a volcanogenic massive sulphide (VMS) copper - gold project located 80km southwest of Sandstone, WA. The Company has already outlined a copper-gold deposit at the **Just Desserts** prospect as reported in previous quarterly reports.

Previous exploration has also intersected significant copper-gold mineralisation at the A Zone prospect situated just 1.3km along strike from the Just Desserts deposit.

No field work was undertaken during the quarter.

# CORPORATE

## **FYI Resources Limited** (Empire 8.98% interest)

ASX-listed FYI Resources Ltd (ASX Code “FYI”) is focused on potash exploration in South East Asia where potential exists for the discovery of first tier potash deposits.

FYI Resources is currently in joint venture negotiations with a Chinese group regarding resource development and potential production in Laos. It also has applications pending for potash tenements covering two separate project areas in Thailand.

Whilst the potash strategy is continuing, FYI has pursued a high purity alumina (HPA) development opportunity in Western Australia through the purchase of 100% of the shares of Kokardine Kaolin Pty Ltd, as announced to the ASX on the 8 May 2017.

Kokardine has been evaluating a vertically integrated HPA production strategy through the mining of kaolin from its wholly owned kaolin resource at Cadoux, 180 kilometres northeast of Perth in WA’s Wheatbelt region. High purity alumina is used in many high tech markets such as batteries, glass facias for mobile phone and television screens, and LED lights.

## **POST QUARTER END**

As announced to the ASX on 30 January 2018, unforeseen delays, such as inclement weather and issues with one toll treater used last year (see ASX Announcement on 7 December 2017), resulted in lost opportunities for the PFJV to mill more ore and as a consequence lower than expected cash inflows.

The Company applied for a halt in its shares trading on the ASX whilst it entered into an agreement with Blue Cap to reschedule the timing of the remaining debt repayment. The agreement facilitated the payment to Blue Cap of \$600,000 as part of its repayment of outstanding debts on 29 January 2018, and there being a standstill on further calls on the joint venture to pay current invoiced amounts until proceeds of the next treatment campaign were received. Documentation of this agreement is currently being finalised.

**DAVID SARGEANT**  
**MANAGING DIRECTOR**  
**31 January 2018**

For further information on the Company,  
David Sargeant – Managing Director Phone: +61 8 9361 3100  
Visit: [www.resourcesempire.com.au](http://www.resourcesempire.com.au)

## Competent Persons

The information in this release concerning the Mineral Resources for the Penny's Find Deposit have been estimated by Mr Peter Ball B.Sc who is a director of DataGeo Geological Consultants and is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Ball has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and qualifies as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Ball consents to the inclusion in this public release of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results has been compiled by Mr David Ross B.Sc(Hons), M.Sc, who is an employee of the Company. He is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. He has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity to which he is undertaking 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". David Ross consents to the inclusion in the public release of the matters based on his information in the form and context in which it appears

<b>Tenement Holdings at 31 December 2017</b>				
<b>PROJECT</b>	<b>TENEMENT NUMBER</b>	<b>PERCENTAGE INTEREST HELD</b>	<b>PERCENTAGE INTEREST HELD</b>	<b>COMMENTS/ CHANGES SINCE LAST QUARTER</b>
		<b>30 September 2017</b>	<b>31 December 2017</b>	
<b>PENNY'S FIND</b>	<b>E27/410</b>	<b>60</b>	<b>60</b>	
	<b>E27/420</b>	<b>60</b>	<b>60</b>	
	<b>E27/553</b>	<b>60</b>	<b>60</b>	
	<b>E27/591</b>	<b>60</b>	<b>60</b>	
	<b>E27/592</b>	<b>60</b>	<b>60</b>	
	<b>E27/593</b>	<b>60</b>	<b>60</b>	<b>GRANTED</b>
	<b>G27/1</b>	<b>60</b>	<b>60</b>	
	<b>L27/90</b>	<b>60</b>	<b>60</b>	
	<b>L27/91</b>	<b>60</b>	<b>60</b>	
	<b>L27/92</b>	<b>60</b>	<b>60</b>	
	<b>L27/93</b>	<b>60</b>	<b>60</b>	
	<b>M27/156</b>	<b>60</b>	<b>60</b>	
	<b>P27/2007</b>	<b>60</b>	<b>60</b>	
	<b>P27/2008</b>	<b>60</b>	<b>60</b>	
	<b>P27/2245</b>	<b>60</b>	<b>60</b>	
<b>P27/2262</b>	<b>60</b>	<b>60</b>		
<b>YUINMERY</b>	<b>M57/265</b>	<b>100</b>	<b>100</b>	
	<b>M57/636</b>	<b>100</b>	<b>100</b>	<b>APPLICATION covers P57/1214 - 1217</b>
	<b>P57/1214</b>	<b>100</b>	<b>100</b>	
	<b>P57/1215</b>	<b>100</b>	<b>100</b>	
	<b>P57/1216</b>	<b>100</b>	<b>100</b>	
	<b>P57/1217</b>	<b>100</b>	<b>100</b>	
	<b>E57/1037</b>	<b>100</b>	<b>100</b>	
<b>EVOLUTION OPTION</b>	<b>E57/681</b>	<b>0</b>	<b>0</b>	<b>OPTION TO ACQUIRE 91% INTEREST</b>
	<b>E57/1027</b>	<b>0</b>	<b>0</b>	