

# Quarterly Activities Report

March 2020

This announcement has been authorised to be lodged with the ASX by the Board of Directors of PNX Metals Limited.



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## ASX: PNX

Issued Capital as at 30/04/20:  
2,542,621,476

## Board & Management:

Non Exec Chairman: Graham Ascough  
Non Exec Director: Paul J Dowd  
Non Exec Director: Peter J Watson  
Non Exec Director: David Hillier  
Non-Exec Director: Hans-Jörg Schmidt  
MD/CEO: James Fox  
CFO/Co Secretary: Angelo Gaudio

## Top Shareholders as at 30/04/20:

Delphi Unternehmensberatung 41.8%  
Sochrastem SA 6.7%  
Marilei International Limited 6.2%

## Share Registry:

Computershare  
Investor Services Pty Ltd  
Level 5 115 Grenfell Street  
Adelaide South Australia 5000  
Phone:  
1300 305 232 (within Australia)  
+61 3 9415 4657 (outside Australia)

## Quarterly Highlights:

### Northern Territory Project Development

- PNX prioritising near-term gold production at Fountain Head with technical studies and development plans progressing on schedule
- Drilling completed during the quarter has provided support to the Mineral Resource Estimate and increased confidence in the geological model and Project economics. Significantly, a number of holes intersected gold outside the proposed pit-shell and/or the current resource boundary highlighting new target zones and potential upside for the project.
- High-grade gold mineralisation was intersected near surface in the area between the Fountain Head and Tally Ho mineral lodes over a strike extent of approximately 100m. Significant assays included:
  - 14m at 9.22 g/t Au from 17m in FHRC156, including
    - 2m at 48.58 g/t Au from 19m,
  - 2m at 12.69 g/t Au from 12m in FHRC155,
  - 2m at 24.03 g/t Au from 66m in FHRC154,
  - 10m at 2.55 g/t Au from 70m in FHRC152, and
    - 4m at 7.87 g/t Au from 89m, and 6m at 3.35 g/t Au from 128m
- Multiple occurrences of visible gold mineralisation intersected in diamond drill hole FHDD181 between 145m and 180m down hole, the interpreted down-dip extension of the Tally Ho Lode. Access to site is being re-established with completion of logging and analysis of core a priority
- Technical information and studies required for the Project Environmental Statement are being finalised and submission of the EIS is expected during June

### Corporate

- \$3.0 million cash on hand at 31 March 2020
- A total of \$1.6 million raised during the quarter via exercise of options and placement of shares, both at a significant premium to the Company's share price

## COVID-19 Update

The safety of PNX employees and contractors is paramount; and appropriate measures regarding COVID-19 have been taken in line with government advice, particularly in relation to interstate travel. As a result, field-based activities have been suspended pending Government advice that access to site can be permanently re-established.

With assistance from Kirkland Lake Gold, PNX has engaged Northern Territory based geological contractors to finalise core logging and preparation for sampling and analysis of the visible gold in FHDD181.

**PNX Metals Limited (ASX: PNX) (“PNX”, “the Company”) is pleased to present its quarterly activities report for the period ended 31 March 2020.**

## Fountain Head Gold Project

Heap leaching is currently being assessed as a low-cost, low-risk and scalable option for rapidly monetising, and generating early cashflow from, existing gold resources at Fountain Head. This strategy may also provide an opportunity to enhance overall Hayes Creek Project economics and extend the project mine life with the mined-out Fountain Head pit available for use as tailings storage for subsequent sulphide flotation of ore from the Mt Bonnie and Iron Blow zinc-gold-silver deposits at Hayes Creek.

Near-term development of gold resources also capitalises on a supportive current and forecast gold price environment and preserves the in-ground value of the Hayes Creek Project in a low zinc price environment.

Fountain Head hosts a Mineral Resource estimate of **2.58Mt at 1.7g/t Au for 138,000 oz Au** reported in accordance with the JORC Code and is owned 100% by PNX, (see ASX release 11 July 2019 for full details including JORC tables). Drilling completed during the quarter highlighted new target zones and potential upside for the project.

### *Drilling Activities at Fountain Head*

Between December 2019 and February 2020, the Company drilled 59 Reverse Circulation (RC) holes primarily to support the geological model that relates to the first two years of proposed mining at the Fountain Head project. All assays have been received and reported for drilling up to the end of January 2020 (see ASX releases 25 February and 16 March 2020). Assays for drill holes completed in February are being finalised and expected shortly.

Exceptional gold grades were intersected throughout the drill program with numerous zones of mineralisation within and outside the resource envelope returning grades above the anticipated 0.5 g/t Au mining cut-off grade. Assay results confirm geological continuity and mineralised extensions along modelled cross cutting and bedding parallel structures increasing the Company's confidence in the Mineral Resource model. Importantly a number of holes intersected mineralisation outside of the proposed pit shell, including **3m at 8.54 g/t Au from 34m in FHRC0145** positioned approximately 100m north of the current Mineral Resource boundary.

New zones of high-grade gold mineralisation were also intersected near surface in the area between the Fountain Head and Tally Ho mineral lodes over a strike extent of approximately 100m. In this area, historically known as 'Ladder-Vein west', material previously classified as waste or low-grade ore is being assessed as hosting grades that will potentially support early mining. Recent intercepts include:

- **14m at 9.22 g/t Au from 17m in FHRC156, including**
  - **2m at 48.58 g/t Au from 19m,**
- **2m at 12.69 g/t Au from 12m in FHRC155,**
- **2m at 24.03 g/t Au from 66m in FHRC154,**
- **10m at 2.55 g/t Au from 70m in FHRC152, and**
  - **4m at 7.87 g/t Au from 89m, and 6m at 3.35 g/t Au from 128m**

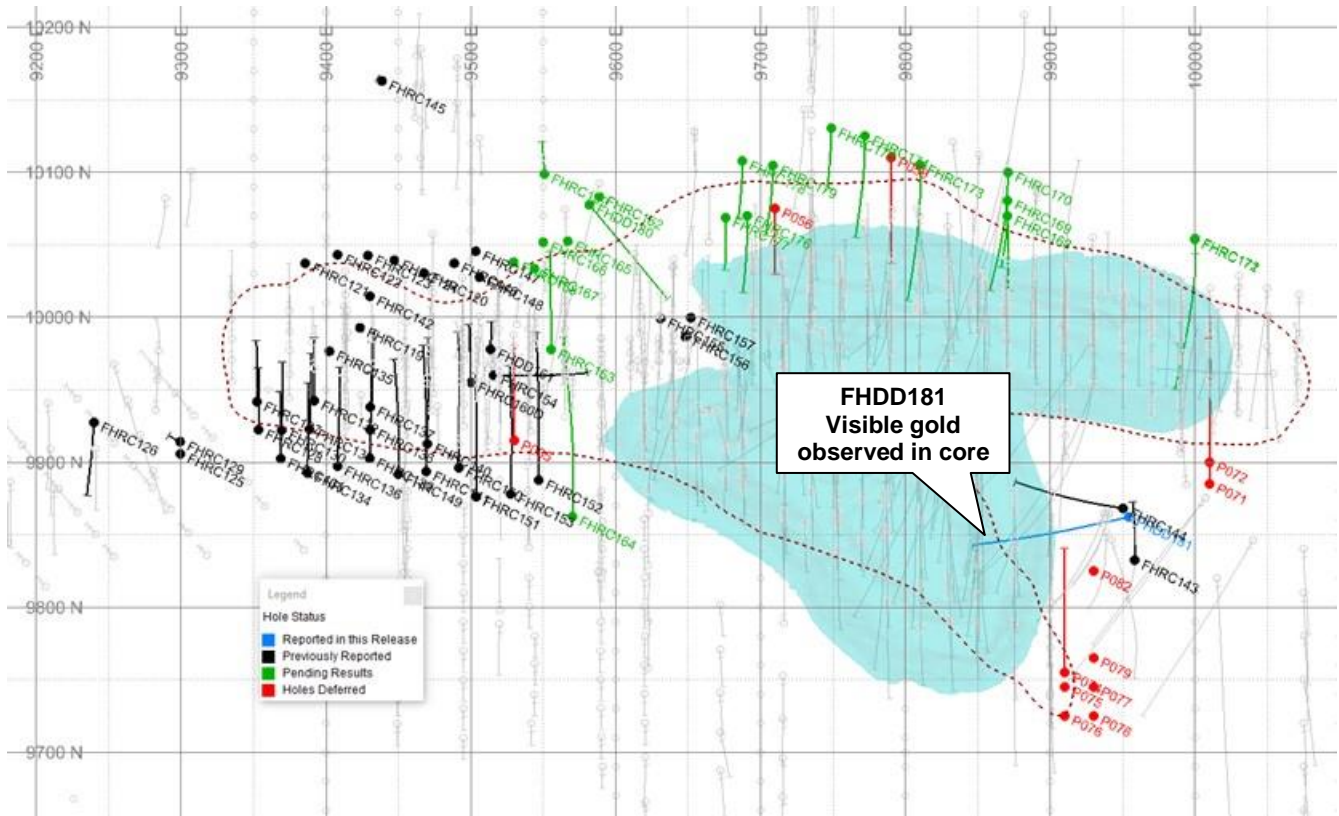
Two diamond drill holes were completed in March 2020 to provide geotechnical information for the proposed open-pit mining operation and to capture new geological data from the south-eastern end of the Tally Ho lode.

The first diamond hole drilled into the Tally Ho lode (FHDD181) intersected multiple occurrences of visible gold mineralisation up to 0.5mm in size, and geologically logged as occurring in late stage fractured quartz veining between 145m and 180m down hole (Figures 1 and 2), which is interpreted as the extension and thickening of the Tally Ho mineralisation down-dip.

Drill hole FHDD181, and the occurrence of visible gold in the core is significant as it suggests not only that the highly prospective Tally Ho lode remains open along strike and at depth to the south-east, but that the majority of quartz veins at Tally Ho, in addition to those that have been identified as containing visible gold, have the potential to host significant coarse and nuggetty gold mineralisation.



**Figure 1:** Visible gold in the Tally Ho lode at Fountain Head in FHDD181 at 145.25m



**Figure 2:** Fountain Head drill plan showing hole traces and collar locations as previously reported assays (black), diamond drill hole with visible gold (blue), holes pending results (green) and deferred holes (red). Blue shadow shows existing pit outline with red hashed outline showing approximate boundary of current 0.7g/t Au resource cut-off projected to surface

**Process design and metallurgical test work**

Feasibility level accuracy design and costings for the Fountain Head gold plant and crushing circuit are being reviewed in detail and will inform Project feasibility level studies.

Design criteria for crushing, heap leaching and gold recovery have been established based on preliminary data available. Options for gold stripping are being assessed to establish the most economic route.

Metallurgical test work to date has indicated excellent cyanide soluble (CN) gold recoveries from 88.9% to 97% were achieved on samples with grades ranging from 0.24g/t Au up to 24.05g/t Au. The recoveries of gold and silver, along with low cyanide and lime consumption rates compare favourably with other global gold heap leach projects. These results are consistent with historical data from 1996, which also reported high CN soluble gold recoveries predominantly in excess of 90%.

Column and leaching test work is continuing on the bulk sample material and diamond drill core. This work has been slower than planned due to changes in work procedures to meet COVID19 social distancing requirements within the metallurgical laboratory.

Gold department and size by size analysis of three bulk samples taken from the western edge of the pit has been completed and a report provided. Bottle Roll test work was also completed on the three bulk samples across sizes of -50mm, -25mm, -12.5mm, -6.3mm with final residue assays results pending. Further bottle roll testing has also been completed on the diamond drill core with final assays due in May 2020.

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Preliminary results to date are consistent with previous historical test work and indicate:

- Majority of gold is present as free sodium cyanide (CN) soluble Au (>90%) biased to the coarser rock fractions
- Typical unoptimized reagent consumptions are low at less than 0.5 kg/t CN and < 4 kg/t lime
- Gold recovery is crush size dependent with >75% recovery expected in columns using -6.3mm crush size

Agglomeration and permeability testing was completed with final cement agglomeration testing indicating that 10kg/t of cement addition during agglomeration provides sufficient percolation and clarity of pregnant leach solution. Optimal agglomeration has now been established and columns are now operational.

### **Permitting and Approvals**

The Project Notice of Intent (NOI) was submitted to the Northern Territory Environmental Protection Authority (NT EPA) in December 2019 and as expected, the Company received a Statement of Reasons determining that the Fountain Head Project requires an Environmental Impact Statement (EIS) on 16 March 2020.

Draft Terms of Reference were advertised for public comment on 15 April for a period of 10 business days. The Terms of Reference will be finalised 14 days after the period of public comment ends.

The technical information and studies required for the Project Environmental Statement are being finalised and submission of the EIS is expected during June. There have been unforeseen delays in transport of samples and with laboratories operating in line with COVID-19 travel restrictions and social distancing requirements.

Mine Management Plans for pit dewatering are also progressing and are expected to be submitted for approval during May 2020

Many Government departments are operating with skeleton staff due to Government advice and restrictions relating to COVID-19. It is unknown at this stage how or if the Project approvals timeline will be affected.

### **Hayes Creek Zinc and Precious Metals Project**

The Hayes Creek Project is comprised of the Iron Blow and Mt Bonnie zinc-gold-silver deposits located less than 3km apart on wholly owned Mineral Leases within the Pine Creek region of the Northern Territory, 170km south of Darwin (Figure 1).

Funds have been re-allocated from the Hayes Creek Definitive Feasibility Study (DFS) to accelerate activities at Fountain Head. As such, the majority of DFS activities have been deferred until the completion of the Fountain Head studies (see ASX release 12 December 2019).

### **Cookies Corner prospect (Burnside project) and Moline Project**

No significant activity took place on the Burnside and Moline projects during the December quarter, with all resources directed to Fountain Head.

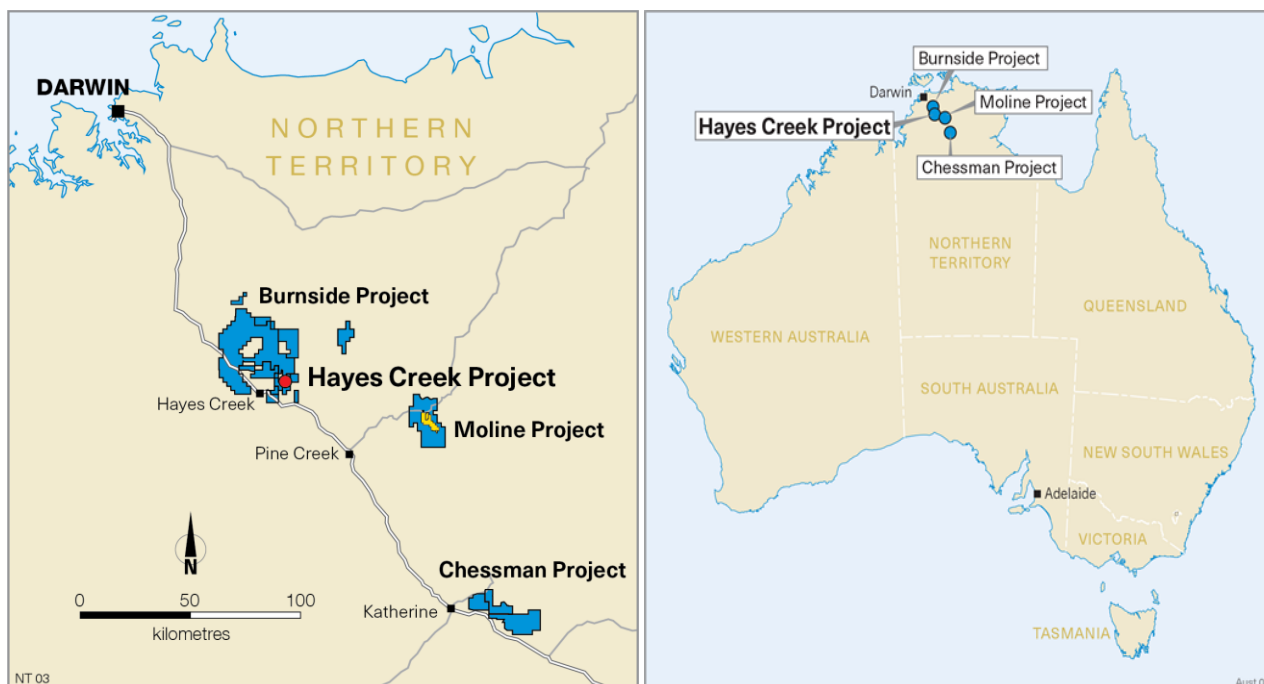


Figure 2: NT Project locations

## South Australia Exploration

### Yorke Peninsula & Adelaide Geosyncline Projects

No on-ground exploration activities were undertaken by PNX on the Company's Yorke Peninsula or Adelaide Geosyncline exploration tenements during the quarter.

Ausmex Mining Group Limited (ASX: AMG) is farming-in to, and can earn up to a 90% interest in, PNX's eight exploration licences (Tenements) in the Burra area. The second stage of the earn-in was completed in April 2020 with PNX now electing to take a 2% net smelter return royalty over all minerals produced from the Tenements instead of a 10% contributing interest. (See Ausmex Mining Group ASX releases for further information on work completed during the quarter).

All South Australian tenements remain in good standing.

### Financial & Corporate

Cash on hand at 31 March 2020 was \$3.0 million.

Subsequent to the end of the Quarter the Company received \$50,000 on 29 April 2020, being for Phase 1 of the "boosting Cash Flow for Employers" support measure. It is projected that, based on current staffing levels, that a further \$50,000 will be paid for Phase 2, being the maximum \$100,000 available under this support measure. This Phase 2 component should be received in four monthly payments of \$12,500 during the months of June, July, August and September.

PNX continues to assess its eligibility for other Government Stimulus measures such as the "JobKeeper" payment.

As at 30 March 2019 the Company had 2,542,621,476 fully paid ordinary shares on issue, and;

- 359,125,000 unquoted options with a 1.50 cent exercise price expiring 30 September 2021;
- 20,000,000 unquoted options with a 1.47 cent exercise price expiring 30 October 2020; and
- 10,800,000 performance rights

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## Planned Activities March 2020 Quarter:

### ***Fountain Head Gold development***

- Reporting balance of RC assays from Fountain Head drilling
- Completion of logging and analysis of diamond core where visible gold was identified during logging
- Completion of updated Mineral Resource Estimate for Fountain Head which will be used for final pit optimisation and scheduling
- Ongoing metallurgical test work and analysis, including completion of column leach tests to confirm gold recoveries, reagent consumption and other heap leach design criteria
- Submission of an Environmental Impact Statement to the NT EPA
- Mine Management Plan submission for dewatering of the Fountain Head pit

### **James Fox**

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### **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Bradley Ermel, a Competent Person who is a Member of the Australian Institute of geoscientists (AIG). Mr Ermel has sufficient experience relevant to the style of mineralisation and the type of deposits 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". Mr Ermel is a full-time employee of PNX Metals Ltd and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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### **Fountain Head Resource Estimate**

Independent mining consultant CSA Global Pty Ltd (“CSA Global”) has estimated the Mineral Resource in accordance with the JORC Code<sup>1</sup>, which is summarised in Table 1.

**Table 1:** Fountain Head and Tally Ho Mineral Resources by JORC Classification as at 11 July 2019 estimated utilising a cut-off grade of >0.7 g/t Au which is consistent with the assumed open cut mining method (see PNX ASX release 11 July 2019).

JORC Classification	Tonnage (Mt)	Au (g/t)	Ounces (Koz)
<b>Tally Ho</b>			
Indicated	0.94	2.0	59
Inferred	–	–	–
<b>Total</b>	<b>0.94</b>	<b>2.0</b>	<b>59</b>
<b>Fountain Head</b>			
Indicated	<b>0.50</b>	<b>1.5</b>	<b>23</b>
Inferred	<b>1.15</b>	<b>1.5</b>	<b>55</b>
<b>Total</b>	<b>1.64</b>	<b>1.5</b>	<b>79</b>
<b>Total Fountain Head + Tally Ho*</b>			
Indicated	<b>1.43</b>	<b>1.8</b>	<b>83</b>
Inferred	<b>1.15</b>	<b>1.5</b>	<b>55</b>
<b>Total</b>	<b>2.58</b>	<b>1.7</b>	<b>138</b>

\* Due to the effects of rounding, the total may not represent the sum of all components

<sup>1</sup> Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).



TENEMENTS

Northern Territory

Tenement	Name	Holder	Area Hectare
ML30512	Mt Bonnie	PNX Metals Ltd 100%	6.4
ML30589	Mt Bonnie		31.6
MLN1033	Mt Bonnie		4.8
MLN1039	Mt Bonnie		1.2
MLN214	Iron Blow		6.3
MLN341	Iron Blow		14.9
MLN342	Mt Bonnie		13.7
MLN343	Iron Blow		14.9
MLN346	Mt Bonnie		16.0
MLN349	Iron Blow		15.0
MLN405	Mt Bonnie		12.0
MLN459	Mt Bonnie		15.0
MLN811	Mt Bonnie		8.1
MLN816	Mt Bonnie		8.1
<b>Total Hayes Creek</b>			<b>168.0</b>
MLN794	Fishers-1	PNX Metals Ltd 100%	8.1
MLN795	Fishers-2		8.1
ML30936	Good Shepherd		106.0
<b>Total Other</b>			<b>122.2</b>
ML31124	Fountain Head	PNX Metals Ltd 100%	33.5
MLN1020	Fountain Head		12.0
MLN4	Fountain Head		529.9
MLN1034	Fountain Head		304.2
<b>Total Fountain Head</b>			<b>879.6</b>
<b>Moline</b>			
ML24173	Moline	PNX Metals Ltd 100%	3126.0
MLN1059	Moline		418.7
MLN41	Mt Evelyn		8.9
<b>Total Moline</b>			<b>3,553.6</b>
<b>Total Mineral Leases</b>			<b>4,723.4</b>
EL28616	Moline	PNX Metals Ltd 100%	262.5 km <sup>2</sup>
EL31099	Bridge Creek	PNX Metals Ltd 100%	60.2km <sup>2</sup>
EL31893	Ringwood Station	PNX Metals Ltd 100%	23.4km <sup>2</sup>
<b>Total Exploration Licences</b>			<b>346.1km<sup>2</sup></b>

### Northern Territory – Farm-in Tenements

Tenement	Name	Holder	(Area sq km)
<b>Burnside Project *</b>			
EL10012	Mt Ringwood	PNX Metals Ltd 90%, Newmarket 10%	14.9
EL10347	Golden Dyke		10.0
EL23431	Thunderball		13.4
EL23536	Brocks Creek		70.4
EL23540	Jenkins		16.7
EL23541	Cosmo North		3.3
EL24018	Hayes Creek		23.4
EL24051	Margaret River		86.9
EL24058	Yam Creek		3.3
EL24351	McCallum Creek		13.4
EL24405	Yam Creek		4.1
EL24409	Brocks Creek South		22.1
EL24715	Mt Masson		56.8
EL25295	Margaret Diggings		10.0
EL25748	Burnside		584.5
EL9608	Mt Bonnie		10.0
<b>Chessman Project *</b>			
<b>Tenement</b>	<b>Name</b>		
EL25054	Maud	PNX Metals Ltd 90%, Newmarket 10%	64.0
EL28902	Maud		104.5
ML30293	Chessman		1.1
<b>Total Exploration Licences</b>			<b>1,112.8</b>

\*PNX Metals Ltd earned a 90% interest under a farm-in agreement with Newmarket Gold NT Holdings Pty Ltd (Newmarket)

## South Australia

Exploration Licences	Name	Holder	(Area sq. km)
<b>Adelaide Geosyncline **</b>			
EL6326	Burra Central	PNX Metals Ltd 100%	84
EL5874	Burra West		69
EL6150	Burra North		300
EL6327	Mongolata		60
EL5918	Princess Royal		314
EL6386	Bagot Well		71
EL5910	Spalding		157
EL6430	Washpool		135
<b>Yorke Peninsula</b>			
EL6399	Coonarie	PNX Metals Ltd 100%	254
			<b>254</b>
<b>Total Exploration Licences</b>			<b>1,444</b>

*\*\* Ausmex Mining Group Ltd is now entitled to 100% ownership of these tenements with PNX retaining a 2% net smelter return royalty in respect of all minerals produced from these tenements.*