



ASX Release
31 October 2016

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(Non Exec. Director)

Senior Management

Mr. Ian Moody
(Exploration Manager)

Mr. Mourice Garbutt
(Company Secretary)

Mr. Paul Chare
(Project Manager)

ASX Symbol: HAW

Hawthorn Resources Limited

September 2016 Quarterly Report

EXPLORATION AND DEVELOPMENT

Eastern Goldfields, Western Australia

- **RC drilling** programs resume at
 - **Box Well West – Yundamindera Project results include:**
 - 20 metres @ 2.43 g/t Au, and
 - 11 metres @ 2.43 g/t Au
 - **Coffey Bore - Yundamindera Project results include:**
 - 9 metres @ 1.79 g/t Au
 - **Central Zone – Deep South Project results pending**
- **Diamond Core Holes** designed to obtain samples for metallurgical and geological testwork in order to carry out initial gold resource estimates completed at **Box Well West, Coffey Bore** and **Deep South**
- **AngloSaxon Gold Mining Project**
 - Sterilisation drilling carried out on proposed Haul road route
 - Environmental surveys including Second Pass Fauna, Noise and Dust surveys completed. Geotechnical mapping of existing pit completed.
- **Mt Bevan Iron Ore / Base Metals** project – Magnetic survey interpretation completed with high priority nickel-copper targets identified of a similar style to those noted in the St George Mining Limited (ASX: SGQ) Cathedrals – Investigator belt immediately north of the joint venture tenement. Moving Loop EM survey to refine drill targets to be completed in the upcoming quarter.

Gold Exploration – Western Australia incorporating:

Yundamindera Project

Hawthorn Resources 100% and Edjudina-Pinjin JV Tenements (Hawthorn Resources 80%, MetalsX 20%);

Trouser Legs Project

Hawthorn Resources 70%, Gel Resources 30%; and

Deep South Project

Hawthorn Resources 80%, MetalsX 20%;

Hawthorn Resources' Western Australian gold exploration programs are primarily focussed in four major project areas where Hawthorn Resources holds in its own right or has earned equity from joint venture partners in over 50 granted exploration, mining, prospecting licences and applications. The Company believes that the major project areas, in close proximity to milling and transport infrastructure, hold both exploration upside and near term potential for development.

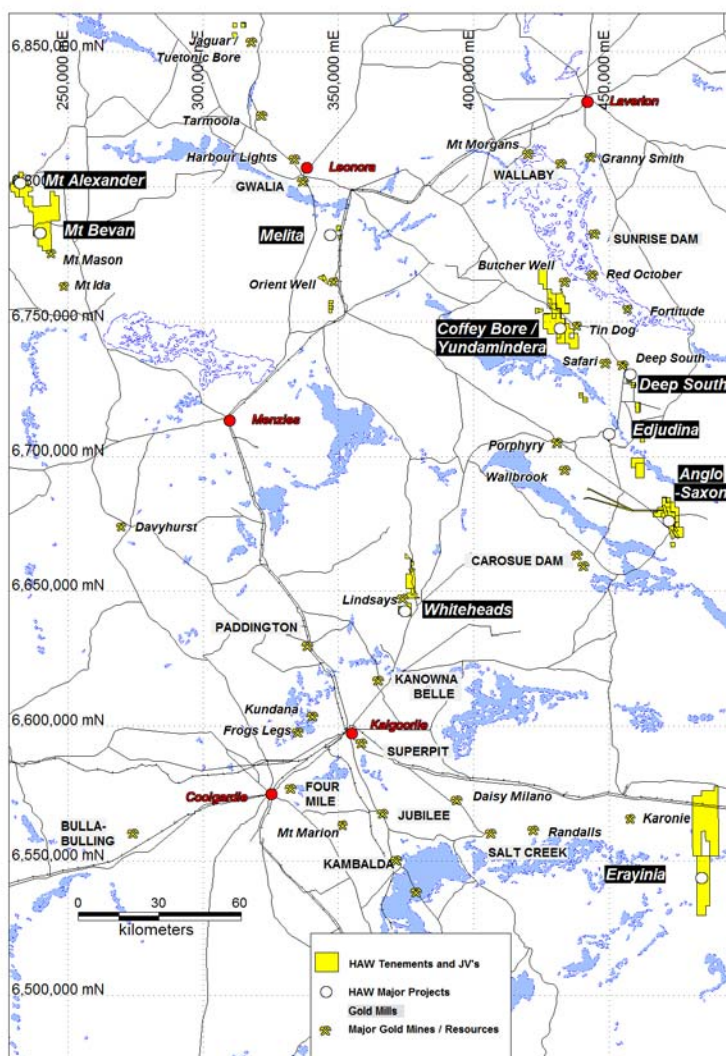


Figure 1. Eastern Goldfields, Western Australia – Project Locations

The major project areas are situated in a distinct and highly prospective geological and mineralogical domain, extending from Lake Carey to the historic Pinjin Mining Centre – a strike length of approximately 125 kilometres. Hawthorn's tenement package is surrounded by major gold mines, deposits and advanced resources including **Sunrise Dam, Wallaby, Red October, Mt Morgans Carosue Dam, Safari Bore, Deep South, Porphyry** and **Butchers Well Mines**. The gold endowment of these mines and resources currently exceeds 22 Million ounces.

Yundamindera Project

(Hawthorn 100% and Hawthorn Resources 80%, Metals X 20%).

In the **Yundamindera Project** area, located approximately 175 kilometres to the north east of Kalgoorlie, Western Australia exploration has focused on the discovery of gold associated with mineralised syenitic porphyry dykes, BIF's and shears. Significant gold mineralisation has continued to be discovered within the project area both in outcrop and more importantly, beneath extensive and pervasive, transported cover sequences.

Exploration in the **Yundamindera Project** area has been focused towards the discovery of shear and porphyry associated gold mineralisation – the host of major gold resources in the North East Goldfields of Western Australia at the **Wallaby (>7 Moz Au)**, **Jupiter – Heffernans (1.4 Moz Au)** and **Butcher Well (0.3 Moz)** mining centres.

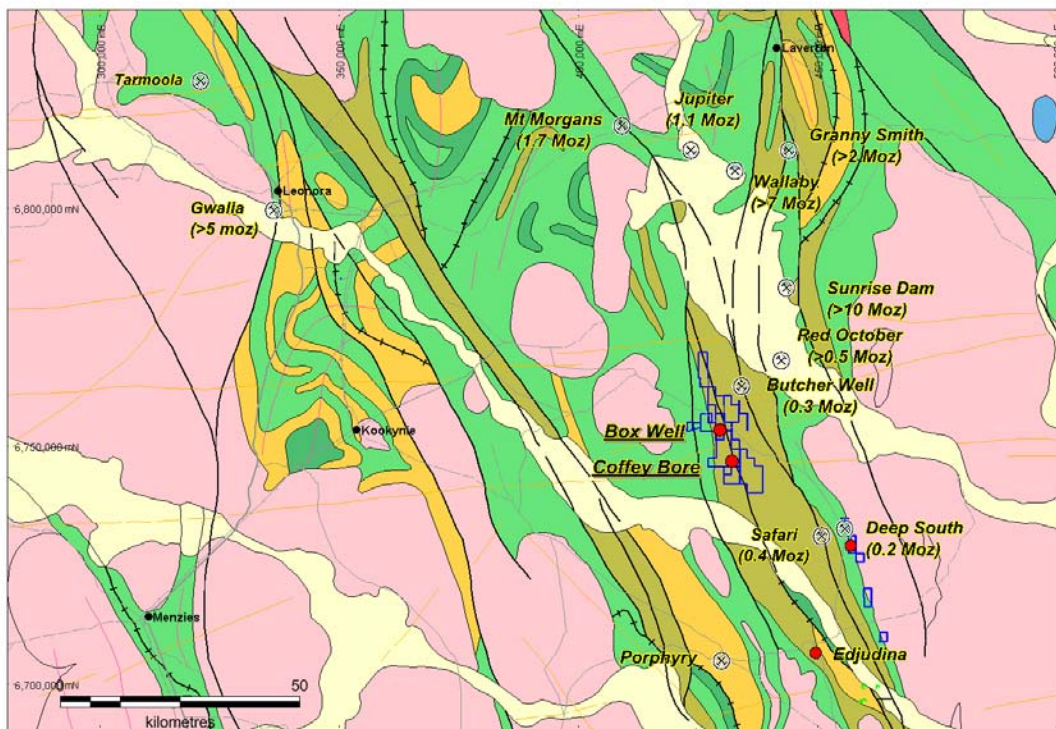


Figure 2. Box Well and Coffey Bore Prospects – Geology of North East Goldfields of Western Australia

At the **Box Well West Prospect** a strongly gold mineralised, silicified shear zone has been discovered within a broader, gold mineralised, altered stockwork quartz veined package of felsic volcanics and volcanoclastic sediments.

Despite an extensive history of modern exploration in the prospect area this newly identified mineralised unit had not previously been identified or drilled, prior to Hawthorn's exploration discovery.

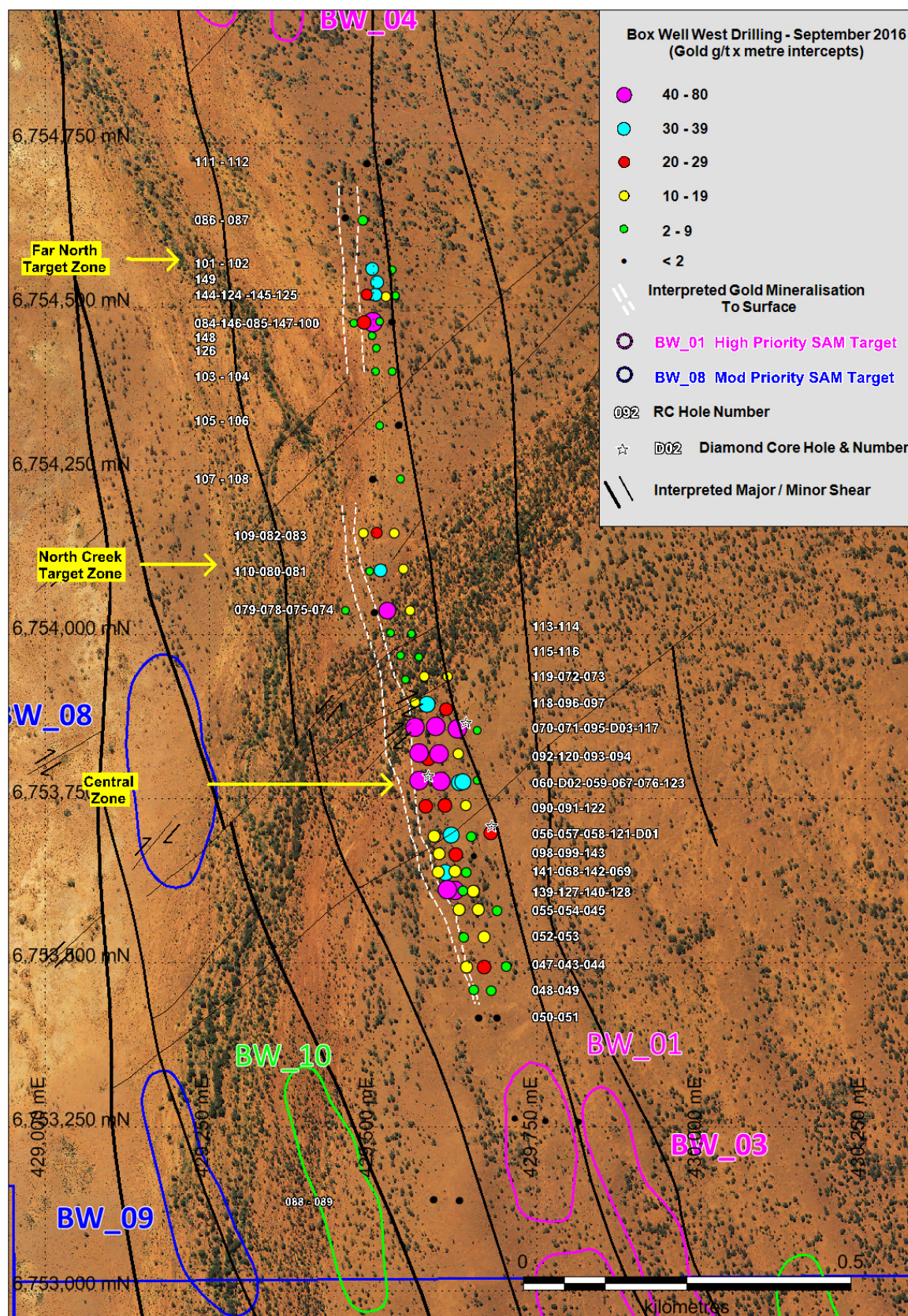


Figure 4. Box Well West Prospect – RC and Diamond Drilling – September 2016 Quarter

Drilling resumed during the quarter with both RC and Diamond core drilling programs carried out. RC drilling infilled areas along strike, and within known mineralised zones. Initial testing of SAM targets BW_01 and 02 was generally unsuccessful in locating new gold mineralisation.

RC drilling in the southern portion of the **Central Zone** and the **Far North** continued to intercept a 5-12 metre wide north-northwest striking and east dipping (60-65°), gold bearing quartz-pyrite±haematite shear zone and a broad, flat lying (25-30° dip) east dipping, mineralised shear zone. The intersection of these shears continued to return significant results including

- **20 metres @ 2.43 g/t Au from 6 metres in YMC139**
(incl. 10 metres @ 4.00 g/t Au from 6m),
- **8 metres @ 2.21 g/t Au from 31 metres in YMC142,**
- **15 metres @ 1.65 g/t Au from 24 metres in YMC144**
(incl. 5 metres @ 4.13 g/t Au from 24m),
- **23 metres @ 1.44 g/t Au from 35 metres in YMC149**
(incl. 11 metres @ 2.43 g/t Au from 35 m)

Six RC holes were drilled at the Coffey Bore prospect with four of these holes testing a potential sheared BIF unit. Two holes were drilled along strike of the existing known mineralised sheared and brecciated unit previously drilled with a best result of

- **9 metres @ 1.79 g/t Au from 25 metres in YMC154**

Table 1. September Quarter 2016 – Box Well West – Coffey Bore Significant RC Drill Assays

Hole No.	Prospect	Azimuth	Dip	Type	From (m)	To (m)	Width (m)	Au g/t
YMC139	Box Well West	270	-55	RC	6	26	20	2.43
incl.					6	16	10	4.00
YMC140	Box Well West	270	-55	RC	29	37	8	1.10
YMC141	Box Well West	270	-55	RC	7	14	7	1.99
and					20	21	1	2.90
YMC142	Box Well West	270	-55	RC	31	39	8	2.21
YMC143	Box Well West	269	-55	RC	57	58	1	1.74
YMC144	Box Well West	270	-55	RC	12	18	6	0.81
and					24	39	15	1.65
incl.					24	29	5	4.13
YMC145	Box Well West	269	-55	RC	40	50	10	1.33
YMC146	Box Well West	270	-55	RC	8	14	6	1.01
and					17	19	2	1.04
and					22	26	3	1.00
and					30	41 EOH	11	1.31
YMC147	Box Well West	269	-55	RC	41	48	7	0.75
YMC148	Box Well West	271	-55	RC	17	30	13	0.69
YMC149	Box Well West	271	-55	RC	35	58	23	1.44
incl.					35	46	11	2.43
YMC154	Coffey Bore	268	-55	RC	25	36	9	1.79
YMC155	Coffey Bore	270	-55	RC	25	26	1	1.37

All RC samples collected as 1 metre splits through rotating splitter.

RC Holes initially assayed as 4 metre spear composites if significant composite results >0.10 g/t Au over 4metres – 1 metre sample bags are submitted for assay. All RC Assays Bureau Veritas Laboratories, Kalgoorlie. 0.30 g/t Au lower cut - < consecutive 3.0m of internal waste for each intercept.

= EOH. * = 4 metre composite sampling only

Diamond Core Drilling commenced with 3 holes drilled in the Box Well area and a single hole at Coffey Bore. Two holes drilled, **YMD001** and **003** were designed to twin existing RC holes **YMC121** (7 metres @ 2.60 g/t Au from 121 metres) and **YMC095** (19 metres @ 2.13 g/t Au from 101 metres) respectively, whereas **YMD002** was drilled to test near surface mineralisation in the vicinity of **YMC060** (21 metres @ 1.95 g/t Au from 11 metres).

Logging and sampling of this core is ongoing however ore zones are generally hosted in quartz veined breccia zones with massive silica \pm haematite with minor pyrite.



Figure 5 - Mineralised Zone in YMD001 125.10 – 128.50 Metres Downhole (zone continues to 131.80 metres)

Similar widths and styles of mineralisation are observed in drill hole **YMD004** drilled at the Coffey Bore drilled between drillholes **YMC004** (23 metres @ 0.93 g/t Au from 48 metres) and **YMC008** (30 metres @ 2.07 g/t Au from 46 metres).

Core from this completed program has been submitted for metallurgical assessment that should enable an initial resource estimate for **Box Well West** to be reported to shareholders in the upcoming quarter. Further RC drilling is expected in the project area in the upcoming quarter.

Trouser Legs – Anglo Saxon Project

(Hawthorn Resources 70%, Gel Resources 30%).

The **Trouser Legs Project** area is located 140 km north east of Kalgoorlie and is centred on the historic **Anglo Saxon Mine**. The **Trouser Legs - Anglo Saxon** project area is situated 35 kilometres to the east of the Carosue Dam Mill of Saracen Mineral Holdings Limited.

Hawthorn has announced a Mineral Resource Estimate at the Anglo Saxon Deposit of

- **Indicated Mineral Resource – 599,000t at 3.3 g/t gold for 63,700 oz of gold (Oxide and Transition Zones), and**
- **Inferred Mineral Resource – 1,687,000t at 4.1 g/t gold for 221,800 oz of gold (Oxide, Transition and Primary)**

Hawthorn Resources confirms that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in the announcement, **Anglo Saxon – Indicated Mineral Resource Upgrade**; ASX Announcement: 30/10/2013, continue to apply and have not materially changed, and that the form and context in which the Competent Persons findings are presented have not been materially altered.

During the quarter operations commenced in the Project area with a sterilisation drilling program carried out along the proposed haul road route. 39 Holes were drilled in 12 fences during with results from this program pending.

As required under the terms of the Mining Approval a second round of Fauna surveys were successfully completed with no rare or endangered species located, while baseline Noise and Dust monitoring surveys were also completed. The existing small openpit pit was extensively geotechnical mapped to better assess potential steepening of new pit walls from the current conservative angles.

A further announcement regarding the project status is expected in the next quarter.

Deep South Project

(Hawthorn Resources 80%, Metals X 20%).

The **Deep South Project** is approximately 180 kilometres north east of Kalgoorlie with the project area situated along strike of known economic gold mineralisation hosted in the **Deep South-Mexico** gold orebodies owned by Saracen Mineral Holdings Limited (“Saracen”). Saracen has commenced commercial production from the underground mine on a Probable Reserve base of 125,000 ounces of gold in a Mining Inventory of 174,000 ounces of gold.

Hawthorn has identified a gold mineralised horizon analogous to the adjacent **Deep South** gold orebodies within its tenement package.

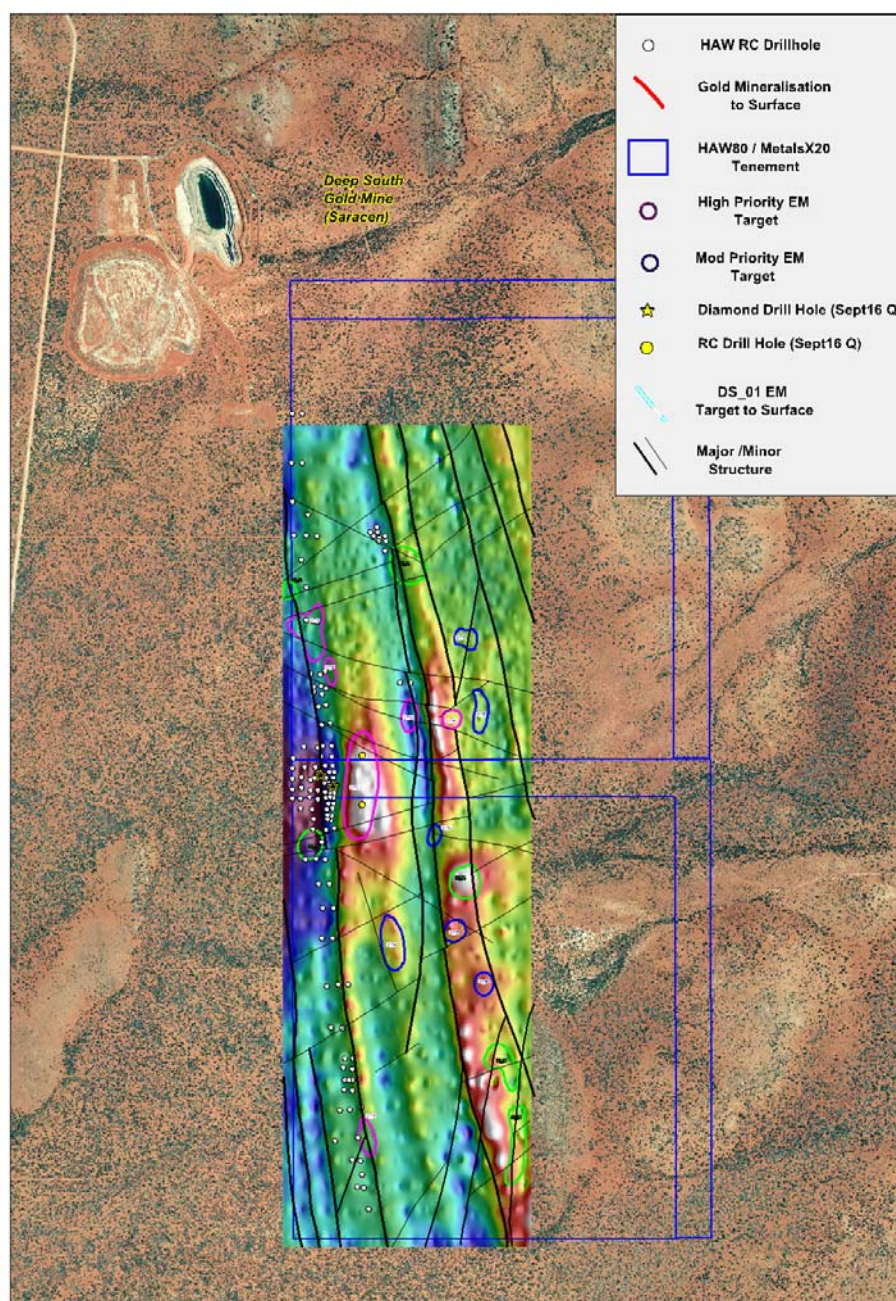


Figure 6 – Deep South Drilling – September 2016 Quarter on 1VD of EM image

During the quarter Diamond Core Drilling commenced with 2 holes drilled in the **Central Mineralised Zone** area. The holes,

- **DSD001** – drilled between drillholes **DSC073** (17 metres @ 2.34 g/t Au from 2 metres) and **DSC074** (12 metres @ 2.47 g/t Au from 37 metres) and
- **DSD002** – drilled between drillholes **DSC028** (9 metres @ 2.78 g/t Au from 35 metres) and **DSC072** (4 metres @ 6.23 g/t Au from 80 metres).

The mineralised zone in each hole drilled exhibited strong zones of quartz–carbonate–sulphide veining in the target areas.



Figure 7 –Mineralised Zone in DSD002 Quartz-carbonate-sulphide veining

Core from these holes is being logged and will be despatched for metallurgical testwork and assay that will enable Hawthorn to carry out a resource estimation for this prospect in the upcoming quarter.

Two RC holes were drilled to test of the substantial EM anomaly (**DS_01**) however the capacity of the rig was insufficient to test the zone at the proposed target depth. A higher capacity rig will test this anomaly in the upcoming quarter.

Infill RC drilling will take place in the upcoming quarter within the Central Mineralised zone to augment the upcoming resource estimation.

Joint Ventures – Western Australia

Mount Bevan Iron Ore / Base Metals Project

(Hawthorn 40%, Legacy 60%)

The **Mount Bevan Project**, comprising Exploration Licence 29/510, is located approximately 100 km west of Leonora in the central Yilgarn region of Western Australia.

The Project area is held in Joint Venture with Legacy Iron Ore (“Legacy”), with technical programs approved by a Technical Committee comprising representatives of each company and managed by Legacy.

Iron Ore

Several substantial BIF horizons have been identified within the tenement, the westernmost of these horizons hosts the **Mt Bevan Indicated Magnetite Resource** of **322Mt @ 34.7% Fe** within a larger **Inferred Magnetite Resource** of **1,117 Mt @ 34.9% Fe**.

In addition the northern extension of the Jupiter Mines Limited (“Jupiter”) **Mt Mason Resource DSO Haematite Resource (9.4Mt @ 57.6% Fe)** extends into the Joint Venture tenement.

Base Metals

During the quarter the Joint Venture partners completed interpretation of the magnetic survey carried out in the previous quarter to determine whether repetitions of the encouraging nickel and copper results reported to within 700 metres north of joint venture tenements by St George Mining Limited (ASX: SGQ) occur within the Joint Venture tenement.

The interpretation by specialist geophysical company Southern Geoscience has encouraged the Joint Venture to carry out a Moving Loop EM survey over and surrounding the strong magnetic anomalies detected. This survey is to be carried out in the upcoming quarter – with drill testing of targets identified to occur either late in the quarter or in the March 2017 quarter.

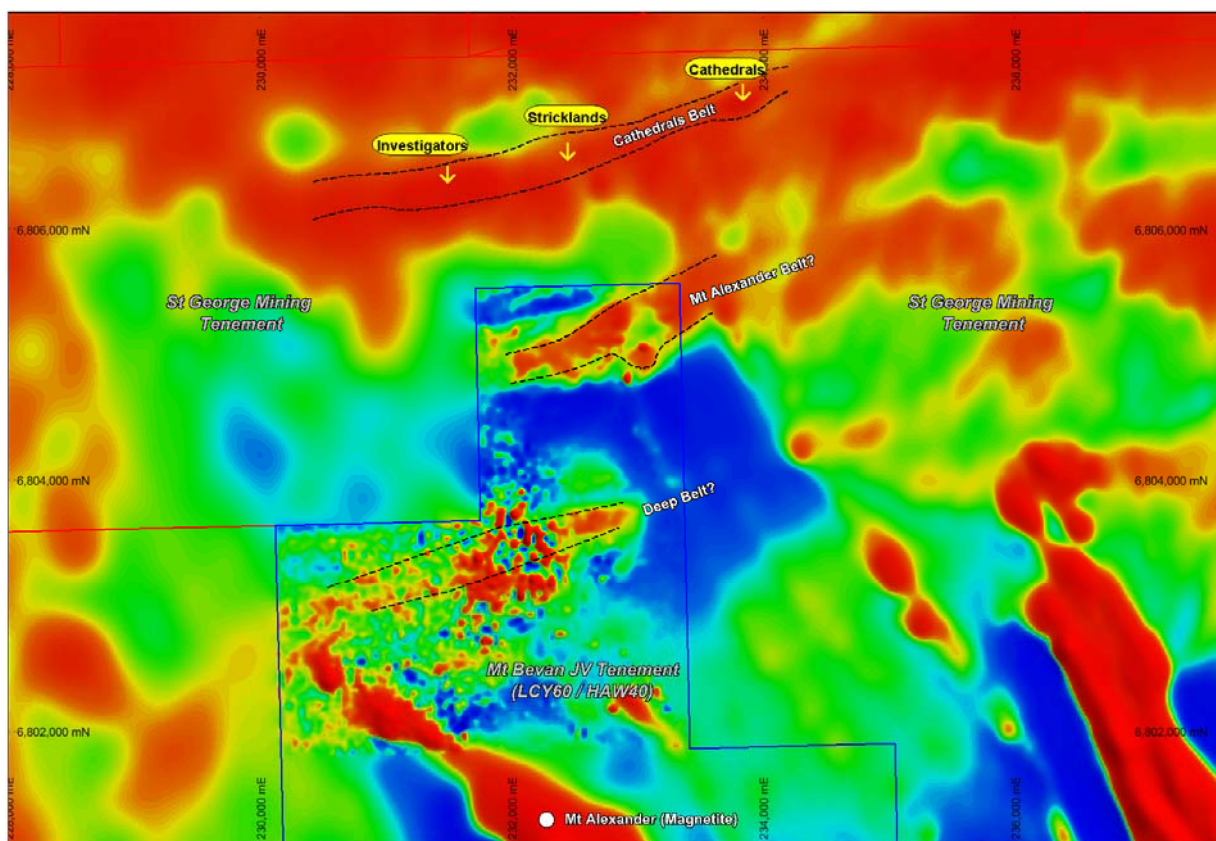


Figure 9. Mt Bevan JV – North End of JV Tenement – Detailed Ground Magnetism merged with Regional TMI Data. St George Mining Limited “Cathedrals Belt Prospects” and Hawthorn / Legacy Target Areas

CORPORATE

Board of Directors

Membership – no changes during the September 2016 quarter.

Funding/Cash Balance

As at 30 September 2016 the Company held “clear” funds-on-hand of A\$3.670 million (June 2016: A\$4.289 million) representing a cash backing of A\$0.021 a share (June 2016: A\$0.025).

Of these funds A\$3.05 million (June 2016: A\$4.05 million) was invested in term deposits at an average annual rate of interest of 2.75 per cent (June 2016: 2.8 per cent).

Issued Securities

During the quarter ended 30 September 2016 there were no changes in the number or the Company’s securities on issue. Such securities being the 171,263,644 ordinary fully paid shares quoted on the official lists of the Australian Stock Exchange (ASX Limited) under the securities code of “HAW”.

Mining Tenements

During the quarter ended 30 September 2016 the total number of the Company’s Mining Tenement interests fell by six tenements which expired:

Balance of Tenement interests held 30 June 2016	55
Add Tenement interests acquired or increased	—
Less Tenements interests relinquished, reduced or lapsed	(6)
Balance of Tenement interests held 30 September 2016	49

For full details of the movements in Mining Tenement interests during the period and held as at 30 September 2016 refer to the schedules attached to the Appendix 5B Report accompanying this Activities Report.



Mourice R Garbutt
Company Secretary

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Ian Moody, who is a member of the Australasian Institute of Mining and Metallurgy and a full time consultant geologist with First Principle Mineral Exploration Company Pty Ltd. Mr Moody has sufficient experience as a geologist which is relevant to the style of mineralization and the 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 Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Moody consents to the inclusion in this report of the matters based on his information in the form and context in which it appears

Hawthorn Resources Limited – September 2016 Activities Report

Appendix 1
September 2016 Quarter
Drillhole Collars

<u>Hole No.</u>	<u>Project</u>	<u>Prospect</u>	<u>MGD94N</u>	<u>MDA94E</u>	<u>Type</u>	<u>EOH (m)</u>	<u>Dip</u>	<u>Azimuth</u>
YMC136	Yundamindera	Box Well South 1	6753265	429716	RC	98	-55	269
YMC137	Yundamindera	Box Well South 1	6753261	429764	RC	95	-55	270
YMC138	Yundamindera	Box Well South 1	6753260	429814	RC	95	-55	269
YMC139	Yundamindera	Box Well West	6753613	429614	RC	41	-55	270
YMC140	Yundamindera	Box Well West	6753612	429636.6	RC	59	-55	270
YMC141	Yundamindera	Box Well West	6753640	429599.5	RC	41	-55	270
YMC142	Yundamindera	Box Well West	6753641	429623.5	RC	55	-55	270
YMC143	Yundamindera	Box Well West	6753665	429654	RC	110	-55	269
YMC144	Yundamindera	BW North	6754521	429491	RC	47	-55	270
YMC145	Yundamindera	BW North	6754518	429519	RC	83	-55	269
YMC146	Yundamindera	BW North	6754478	429486.2	RC	41	-55	270
YMC147	Yundamindera	BW North	6754480	429511	RC	77	-55	269
YMC148	Yundamindera	BW North	6754459	429499	RC	71	-55	271
YMC149	Yundamindera	BW North	6754540	429507	RC	65	-55	271
YMC150	Yundamindera	Coffey Sth	6746292	432741	RC	65	-55	273
YMC151	Yundamindera	Coffey Sth	6746290	432773	RC	74	-55	270
YMC152	Yundamindera	Coffey Sth	6746208	432759	RC	74	-55	270
YMC153	Yundamindera	Coffey Sth	6746209	432802	RC	56	-55	270
YMC154	Yundamindera	Coffey	6746516	432658	RC	47	-55	268
YMC155	Yundamindera	Coffey	6746555	432643	RC	44	-55	270
YMD001	Yundamindera	Box Well West	6753701.4	429683.5	DDH	135.2	-55	269
YMD002	Yundamindera	Box Well West	6753781.4	429577	DDH	68.5	-55	265
YMD003	Yundamindera	Box Well West	6753861.5	429671.5	DDH	128.4	-55	269
YMD004	Yundamindera	Coffey	6746422	432733	DDH	75.4	-60	271.5
DSC128	Deep South	DS_01 Target	6729127	456824	RC	140	-55	271
DSC129	Deep South	DS_01 Target	6729299	456874	RC	140	-57	270
DSD001	Deep South	Central	6729170	456706	DDH	51.4	-60	94
DSD002	Deep South	Central	6729197	456689	DDH	75	-60	92

Appendix 2 –Yundamindera – Box Well West and Deep South – September 2016 RC and Diamond Core Drilling

THE 2012 AUSTRALASIAN CODE FOR REPORTING EXPLORATION RESULTS, MINERAL RESOURCES AND ORE RESERVES (THE JORC CODE)

Table 1 Checklist of Assessment and Reporting Criteria

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i> <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i> 	<ul style="list-style-type: none"> Sampling technique discussed over page in sub sampling technique section.
Drilling techniques	<ul style="list-style-type: none"> <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i> 	<ul style="list-style-type: none"> RC Drilling – 4.75 inch hole Diamond Core Drilling – HQ and NQ core standard tube

Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i> 	<p>RC Drilling</p> <ul style="list-style-type: none"> • Samples are generally dry with some damp samples at depth however compressor size maintains sample recovery. Recovery good from all holes returning expected volume of sample except in collar area 0-4m. Some lesser returns from the few holes at >100 metres downhole, but never less than 50% recovery. All recoveries < 75% recorded on logs • Metre sample volumes and moisture content is estimated and recorded by the geologist on site <p>Diamond Core Drilling</p> <ul style="list-style-type: none"> • Core Loss, if any, is measured on site and reconfirmed during logging procedure • Sampling is not complete – core is split in half by a core saw line several degrees rotated from a marked core axis line determined by orientation tools. • The same side of the halved core is sampled where possible
<i>Logging</i>	<ul style="list-style-type: none"> • <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<p>RC Drilling.</p> <ul style="list-style-type: none"> • Chip samples have been geologically logged for all relevant geological and some structural data. Logging for this program has been digitally captured, and would be capable of being included in a Mineral Resource Estimation. Chips are retained in chip trays • Every metre is individually logged. <p>Diamond Core Drilling</p> <ul style="list-style-type: none"> • The drill Core is logged in entirety with lithological, alteration and structural features (alpha & beta angles of features, RQD joint orientation etc). • Data capture is appropriate for Mineral Resource estimation • Core is photographed in trays wet & dry

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<p>RC Drilling.</p> <ul style="list-style-type: none"> • Reverse circulation samples were split on site using a standard 3 stage riffle splitter. Approximately 98.5% of samples are dry. • Samples are collected in appropriate sized plastic bags • Initial “spear” samples to the corner of each bag was carried out with samples composited over 4 metres and sent for fire assay. • Composite Samples returning > 0.10 g/t Au over 4 metres, have had individual 1 metre split samples submitted for assay, or where geologic zones of interest are identified by the site geologist • Individual metre samples weigh approximately 25 kg with individual 1 metre splits of 2.5-3.5 kg obtained and stored on site. • CRM standards, blanks and duplicates submitted with assays. <p>Diamond Core Drilling</p> <ul style="list-style-type: none"> • The drill Core is logged in entirety with lithological, alteration and structural features (alpha & beta angles of features, RQD joint orientation etc). • Sampling is incomplete – core is split in half by a core saw line several degrees rotated from a marked core axis line determined by orientation tools. • The same side of the halved core is sampled where possible • Intervals sampled vary from 1-2 metres in non-mineralised material, however most samples are 1.0 metres maximum • Smaller discrete intervals of 0.3 – 1.0 metres are also sampled to better define source of mineralisation where required
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<p>RC Drilling</p> <ul style="list-style-type: none"> • Samples are assayed by Fire Assay, 30 g charge at Bureau Veritas , Kalgoorlie • A range of five different gold grade CRM standards have been submitted at a rate of 6 / 100 samples. • The number of each individual standard sample submitted is moderate in each assay job - however at least one standard is submitted in each run of 1 metre reassays. • CRM standards submitted in 4 m composite sampling at the same rate • Analysis on individual standards is ongoing with each standard inserted performing reasonably well with no major variance observed.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Re-assay / umpire sampling program is underway Blanks (2 / 100) submitted these have performed reasonably with results less than 0.01 g/t gold No distinct or systemic bias has been detected <p>Diamond Core Sampling</p> <ul style="list-style-type: none"> Same standard insertion regime as for RC drilling
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<p>RC Drilling</p> <ul style="list-style-type: none"> No twinned holes have been drilled Onsite geologist data verified by Exploration Manager Laboratory data is supplied electronically to site and head office Project data is currently stored at the head office of the company and in onsite laptops, with a weekly offsite backup of all data. Geological logging is entered by technical staff and reviewed for correctness. Samples for assay are collected from drillsite upon collection and transported to a camp until a batch is despatched for assay by Hawthorn staff to the laboratory. <p>Diamond Core Drilling</p> <ul style="list-style-type: none"> As described in the text of the report drillholes YMD001 & 003 are twin holes of existing RC holes YMC121 & 095 Drillholes YMD002 & 004 are sited between existing identified RC holes Drillholes DSD001 & 002 are sited between existing identified RC holes
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<p>RC Drilling and Diamond Core Drilling</p> <ul style="list-style-type: none"> The grid used is GDA 94 Zone 51. Collars collected on at least 3 cycling handheld GPS points.. Surface land form in each prospect area drilled is gently sloping and is currently assumed equivalent for each hole drilled. DGPS collection of collar data is underway AHD survey to be carried out in addition to the DGPS survey of collars

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> • <i>Whether sample compositing has been applied.</i> 	<p>RC Drilling and Diamond Core Drilling</p> <ul style="list-style-type: none"> • Data collected in this program is follow-up or infill and hence the spacing is sufficient to both establish geological and grade continuity for a Mineral Resource Estimation. • Current drill spaces are on 20m or 30m sections, with between 15 and 30 m between holes along section. • Drilling is of sufficient spacing to compile an initial Mineral Resource estimation at Deep South, Box Well and Coffey Bore • 1 m intervals sampled downhole. • Samples were composited for initial assay. Composite Samples returning > 0.10 g/t Au over 4 metres, had individual 1 metre samples submitted for assay.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<p>RC Drilling and Diamond Core Drilling</p> <ul style="list-style-type: none"> • The drilling at Box Well West is at -55 ° drilled towards 265 - 270°. Orientations are at or within 10 degrees to the interpreted right angle of the strike of mineralisation. Dip of mineralisation is believed to be at 60-70° to the E or ENE, with a second set of mineralised features dipping at 30° to the E or ENE. • The drilling at Coffey Bore is at -60° drilled towards 265 - 270. Orientations are at or within 10 degrees to the interpreted right angle of the strike of mineralisation. Dip of mineralisation is believed to be at 45-55° to the E or ENE. • The drilling at Deep South is at -60° drilled towards 085- 090. Orientations are at or within 10 degrees to the interpreted right angle of the strike of mineralisation. Dip of mineralisation is believed to be at 72-80° to the W. • Drillhole surveys indicate holes deviate and surveys are undertaken at approximately 30m or 60m intervals downhole. A stainless steel head rod is used for each hole • It is unknown if there is a bias introduced by the drilling direction.

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> All RC samples submitted to the laboratory are collected directly from the splitter with the sample bag tied. During sample collection for all holes a staff member is always present. Samples are delivered to the laboratory by company staff. 1M Sample bags are kept on drill site until results of 4 m composite assays are completed. Assay pulps are recovered from laboratory and stored in locked storage sheds
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> There have been no audits or reviews of sampling techniques and data.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i> 	<p>RC and Diamond Drilling.</p> <ul style="list-style-type: none"> Drilling is on a tenement solely held by Hawthorn Resource at Box Well West Drilling is on a tenement held by Hawthorn Resource –MetalsX JV (80:20) at Coffey Bore Drilling is on a tenement held by Hawthorn Resource –MetalsX JV (80:20) at Deep South There are no known issues and the tenements are in good standing
Exploration done by other parties	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<p>Box Well and Coffey Bore RC and Diamond Core Drilling.</p> <ul style="list-style-type: none"> The Box Well West tenements were soil sampled by AngloGold Australia, WMC and Delta Gold between 1986 – 2000. No further work was carried out on the tenements until Hawthorn obtained the tenement. At the Coffey Bore prospect Gutnick Resources carried out initial RAB, Aircore and RC between 2003 and 2006, with several anomalous results reported in the Coffey Bore prospect area. At the Deep South tenements Gutnick Resources carried out initial

Criteria	JORC Code explanation	Commentary
		<p>RAB drilling between 2003 and 2006 on very broad line and station spacing. A single anomalous result was reported that is not related to the target drill tested in the current program</p> <ul style="list-style-type: none"> • Targets at Box Well were RAB drilled by Hawthorn in late 2014. Follow-up RC programs were drilled in April, July and November 2015. • Targets at Coffey Bore were RC drilled by Hawthorn in late 2010. Follow-up RC programs were drilled in August 2014.
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<p>Yundamindera – Box Well and Coffey Bore Drilling</p> <p>Locally the geology consists of intermediate schists and igneous intrusives adjacent to sediments. Basaltic andesite, felsic volcanics and volcanoclastics trend in a north west- south east direction. The northern tenements are dominated by interbedded undifferentiated sediments and andesite. Differentiated doleritic sills intrude into conglomeritic and polymictic sands stones towards the east of the tenements. Interbedded ultramafic, peridotite-bearing intrusives and dolerite form a distinctive north-west trend in along the west of the tenements. These lithologies can be overlain by Cenozoic ferruginous clay, colluvium and silts. Several significant drainage systems in the licence are associated with alluvium, clay, silt and sand</p> <p>A key feature of several deposits in the area is the close association of gold mineralisation on the margins of – if not outright hosted by – syenitic porphyries, which has been demonstrated in the Coffey Bore area of Hawthorn’s tenement E39/1295. At Box Well West thin syenite porphyries are known, however the mineralisation appears to within a N-S striking shear zone that has brecciated felsic volcanic lithologies , with latter silicification prominent.</p> <p>Deep South Drilling</p> <p>The Deep South Project tenements are interpreted to consist of a west to east sequence of shales, cherty felsic meta-sediments, mafic and</p>

Criteria	JORC Code explanation	Commentary
		<p>ultramafic rocks, and diorite to granodiorite dykes that abut against a strongly foliated monzogranite. The contact between the highly foliated silicified quartzo-feldspathic sediments and the fine grained basalt is strongly deformed and interpreted to be associated with the Safari Fault system. Rare pegmatoid dyke are observed in the Paradise Well area of the Project Area</p> <p>The project area is located and stretches between 0.5-20.0 kms to the south-south- east of the Deep South open pit which has produced approximately 63,000 ounces of gold and has a reported remnant resource of approximately 237,000 ounces of gold, of which an underground probable reserve of 120,000 ounce of gold has been reported. This reserve is currently being developed by Saracen Mineral Holdings Limited.</p> <p>The primary structure controlling this mineralisation is interpreted to have a north-west to south-east trend and extends into and through the project area, while other parallel structure are believed likely.</p> <p>Gold mineralisation at Deep South and within the project area is hosted by steep west-dipping, quartz-carbonate-pyrrhotite-magnetite veins within quartz rich metasediments and adjacent to lenticular ultramafic units. The entire mineralised package is spatially associated with a series of dolerite dykes that are generally slightly oblique to the mineralised horizon</p>
Drill hole Information	<ul style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> ○ easting and northing of the drill hole collar ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> • All RC and Diamond Core drillholes have been reported in Appendix 1.

Criteria	JORC Code explanation	Commentary
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i> <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> Intervals reported are general greater than 2.00 gram x metres – unless geologically significant Intervals lowercut 0.30 g/t Au and with <3.0 metres of internal waste <0.30 g/t Au.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i> 	<ul style="list-style-type: none"> Down hole lengths reported – true widths are estimated at approximately 80-90% of downhole reported width.
<i>Diagrams</i>	<ul style="list-style-type: none"> <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> Refer to Figures 3-7 in the body of the report
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> Not applicable as all significant grade intervals are reported
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<ul style="list-style-type: none"> Not Applicable
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<p>Box Well and Coffey Bore RC and Diamond Core Drilling</p> <ul style="list-style-type: none"> Further RC drilling and some Diamond drilling is likely to occur in the upcoming quarter at Box Well West as infill drilling to enhance any resource estimation will be carried out Exploration programs including SAM surveys, RAB and RC drilling between the Box Well West and Coffey Bore prospects will continue. The position of the proposed hole collars is likely to be commercially sensitive.

Criteria	JORC Code explanation	Commentary
		<p>Deep South RC and Diamond Core Drilling</p> <ul style="list-style-type: none"> • Further RC drilling and some Diamond drilling is likely to occur in the upcoming quarter at Deep South as infill drilling to enhance any resource estimation will be carried out • The position of the proposed hole collars is likely to be commercially sensitive.

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity

HAWTHORN RESOURCES LIMITED	
ABN	Quarter ended ("current quarter")
44 009 157 439	30 September 2016

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(394)	(394)
(b) development	-	-
(c) production	-	-
(d) staff costs	(100)	(100)
(e) administration and corporate costs	(254)	(254)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	31	31
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other GST Refundable)	98	98
1.9 Net cash from / (used in) operating activities	(619)	(619)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	-
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	-

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	4,289	4,289
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(619)	(619)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	3,670	3,670

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	619	238
5.2 Call deposits	3,051	4,051
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,670	4,289

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter \$A'000
170
-

Directors fees & salary \$87,665 (Previous Quarter \$115,172)
Fully Serviced Office facility rental \$66,000 (Previous Quarter \$86,625)
Company requested Consulting Fees \$16,500 (Previous Quarter \$8,250)

7. Payments to related entities of the entity and their associates

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter \$A'000
-
-

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Mining exploration entity and oil and gas exploration entity quarterly report

8. Financing facilities available

Add notes as necessary for an understanding of the position

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
-	-

8.1 Loan facilities

8.2 Credit standby arrangements

8.3 Other (please specify)

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

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9. Estimated cash outflows for next quarter**\$A'000**

9.1 Exploration and evaluation

580

9.2 Development

-

9.3 Production

-

9.4 Staff costs

100

9.5 Administration and corporate costs

280

9.6 Other (provide details if material)

-

9.7 Total estimated cash outflows

960

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced		See attached		
10.2	Interests in mining tenements and petroleum tenements acquired or increased		See attached		

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.



Sign here:
(Company secretary)

Date: 31/10/2016.

Print name: MOURICE GARBUTT

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

HAWTHORN RESOURCES LIMITED

ACN 009 157 439

CHANGES IN INTERESTS IN MINING TENEMENTS

**10.1 Interests in Mining
Tenements relinquished,
reduced or lapsed**

Tenement Reference	Nature of Interest [note (4)]	Interest at beginning of quarter	Interest at end of quarter
E39/1300	Surrendered	80%	0%
E39/1302	Surrendered	80%	0%
P39/4700	Surrendered	100%	0%
P39/4706	Surrendered	80%	0%
P39/4707	Surrendered	80%	0%
P39/4709	Surrendered	80%	0%

**10.2 Interests in Mining
Tenements acquired
Or increased**

Tenement Reference	Nature of Interest [note (4)]	Interest at beginning of quarter	Interest at end of quarter

Interests in Mining Tenements

Disclosure in accordance with ASX Listing Rule 5.3.3.

Project / Tenement	Location	Interest at beginning of quarter	Interest at end of quarter	Joint Venture Partner / Farm-In Partner / Farm Out Partner
Pinjin East	West Australia			
E 31/760		100%	100%	
E 31/781		100%	100%	
E 31/782		100%	100%	
E 31/783		100%	100%	
E 31/882		100%	100%	
E 31/1049		100%	100%	
E 31/1050		100%	100%	
Triumph	West Australia			
M 31/481		100%	100%	
Whiteheads	West Australia			
E 27/175		100%	100%	
Yundamindera	West Australia			
E 39/1292		100%	100%	
E 39/1297		100%	100%	
E 39/1351		100%	100%	
E 39/1673		100%	100%	
E 39/1674		100%	100%	
E 39/1791		100%	100%	
E 39/1804		100%	100%	
E 39/1810		100%	100%	
E 39/1881		100%	100%	
P 39/4697		100%	100%	
P 39/4701		100%	100%	
P 39/4713		100%	100%	
P 39/4714		100%	100%	
P 39/4875		100%	100%	
P 39/4876		100%	100%	
Mt Bevan Iron Ore Joint Venture	West Australia			
E 29/510 -I		40%	40%	Legacy Iron Ore Limited
Deep South Edjudina - Pinjin Joint Venture	West Australia			
E 39/1298		80%	80%	Avoca Resources Ltd / Metals X Ltd
E 39/1299		80%	80%	Avoca Resources Ltd / Metals X Ltd
E 39/1301		80%	80%	Avoca Resources Ltd / Metals X Ltd
P 39/4703		80%	80%	Avoca Resources Ltd / Metals X Ltd
P 39/4704		80%	80%	Avoca Resources Ltd / Metals X Ltd
Pinjin – Trouser Legs Joint Venture	West Australia			
G 31/4		70%	70%	GEL Resources
L 31/32		70%	70%	GEL Resources
L 31/65		70%	70%	GEL Resources
L 31/66		70%	70%	GEL Resources
L 31/68		70%	70%	GEL Resources
M 31/78		70%	70%	GEL Resources
M 31/79		70%	70%	GEL Resources
M 31/88		70%	70%	GEL Resources
M 31/113		70%	70%	GEL Resources
M 31/284		70%	70%	GEL Resources

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Edjudina - Pinjin Joint Venture	West Australia			
E 31/789		80%	80%	Avoca Resources Ltd / Metals X Ltd
Yundamindera Edjudina - Pinjin Joint Venture	West Australia			
E 39/1294		80%	80%	Avoca Resources Ltd / Metals X Ltd
E 39/1295		80%	80%	Avoca Resources Ltd / Metals X Ltd
P 39/4695		80%	80%	Avoca Resources Ltd / Metals X Ltd
P 39/4698		80%	80%	Avoca Resources Ltd / Metals X Ltd
P 39/4699		80%	80%	Avoca Resources Ltd / Metals X Ltd
Yindana - Erayinia Joint Venture	West Australia			
E 28/1228		30%	30%	Black Raven Mining
Teutonic Bore Royalty *	West Australia			
E 37/902		0%	0%	Jabiru Metals
P 37/7351		0%	0%	Jabiru Metals
	* Royalty up to a maximum of \$1m subject to conditions			