

## **ASX Announcement**

18 October 2018

# **Nicolsons Regional Exploration Yields Encouraging Results**

Pantoro Limited (**ASX:PNR**) (**Pantoro**) is pleased to provide an update on its regional exploration activities at its 100% owned Nicolson's Project, approximately 45 km southwest of Halls Creek in Western Australia.

Follow-up drilling was undertaken at the Edison and Paddock Well deposits, where encouraging results were generated.

#### **Edison**

Edison is characterised by a coincident magnetic and gold in soil anomaly approximately 400 metres long, striking north east. Drilling has returned significant gold, platinum group element (**PGE**) and nickel values in the basal portion of the Lamboo igneous complex. The Kimberley Region is known to host economically significant nickel (Savannah Nickel Mine) and PGE (Panton Sill) projects. Better results from early testing of the prospect include:

#### **Au Results**

2 m @ 2.41 g/t Au from 13.3 m.

1 m@ 11 g/t Au from 22 m.

2 m @ 3.0 g/t from 1 m.

1 m@ 7.9g/t Au from 13 m.

2 m @ 3.7 g/t Au from 4 m.

2 m @ 3.28 g/t Au from 63 m.

### Pt+Pd+Au and Ni Results

17 m @ 2.13 g/t Pt+Pd+Au and 0.65% Ni.

21.4 m @ 1.93 g/t Pt+Pd+Au and 0.55% Ni.

17 m @ 1.58 g/t Pt+Pd+Au.

### **Paddock Well**

Following initial success at Paddock Well in 2017, Pantoro has continued to test potential extensions to known mineralisation. Additional encouraging results have been returned including:

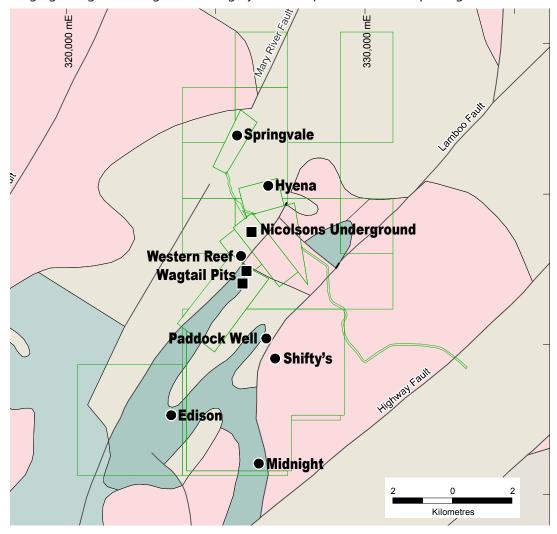
- 4.35 m @ 5.42 g/t Au and 83.0 g/t Ag and 4.59 % Pb+Zn from 103.15 inc. 2 m @ 8.63 g/t Au from 105.5 m.
- 1.64 m @ 5.25 g/t Au and 39.1 g/t Ag and 2.88% Pb+Zn from 102.06 m.
- 2.2 m @3.37 g/t Au and 19.41 g/t Ag from 91.5m inc. 0.7 m @ 8.72 g/t Au.
- 0.25 m @ 14.96 g/t Au from 70.5 m.

### **Other Drill Targets**

A short program was also completed at Hyena. The first pass RC drilling returned an number of anomalous gold values including 0.5m @ 4.47 g/t in a quartz vein from a diamond drill hole. The continued success supports the potential for additional gold mineralisation across the entire Nicolsons tenement area, particularly along strike of the active Nicolsons and Wagtail mines.

#### **Exploration Results**

Pantoro has continued to advance its known exploration prospects with additional drilling completed at Edison, Paddock Well and Hyena Prospects. All prospects tested have returned encouraging gold grades, demonstrating the occurrence of high grade gold throughout the highly under-explored tenement package.



#### **Edison**

The Edison prospect is characterised by a 400 metre long gold in soil anomaly identified by Thundelarra Exploration in 2006, coincident with a structurally controlled magnetic anomaly interpreted from a close spaced aeromagnetic survey by Pantoro in 2017. Thundelarra was focussed on the discovery of Ni-Cu and PGE mineralisation in the Lamboo Igneous complex and drilling in 2006 returned significant widths of platinum+palladium+gold (Pt+Pd+Au) mineralisation including:

- 46 m @ 1.87 g/t Pt+Pd+Au from surface;
- 33 m @ 2.77 g/t Pt+Pd+Au from surface; and
- 37 m @ 2.07 g/t Pt+Pd+Au from 16 metres.

Reported under JORC 2004 by Thundelarra Exploration Limited (ASX:THX) in an ASX announcement dated 17 August 2006, "Platinum Significant new discovery in the East Kimberley".

Drilling by Pantoro has focussed on the gold mineralisation however PGE mineralisation with associated nickel was confirmed within a sheared ultramafic unit during the recent drill program. Pantoro completed an eight hole scout drilling program during 2017 (Refer ASX announcement, 5 February 2018, "High Grade exploration results from Western Reef"), and has now completed a follow-up program consisting of 17 RC and one diamond drill hole.

As Pantoro remains primarily focussed on gold exploration and production, only three holes have been assayed for PGE and base metals elements to confirm the presence of PGE's within the prospect. Additional assays will be undertaken from the remaining holes drilled in the recent program. Results returned from the recent program include:

#### **Au Results**

2 m @ 2.41 g/t Au from 13.3 m.

1 m@ 11 g/t Au from 22 m.

2 m @ 3.0 g/t from 1 m.

1 m@ 7.9g/t Au from 13 m.

2 m @ 3.7 g/t Au from 4 m.

2 m @ 3.28 g/t Au from 63 m.

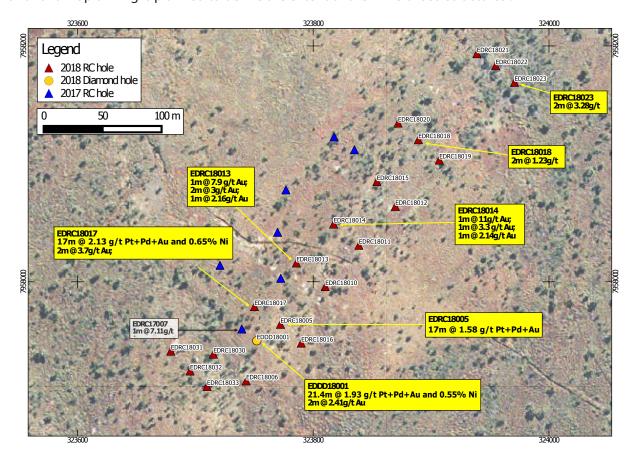
#### Pt+Pd+Au and Ni Results

17 m @ 2.13 g/t Pt+Pd+Au and 0.65% Ni.

21.4 m @ 1.93 g/t Pt+Pd+Au and 0.55% Ni.

17 m @1.58 g/t Pt+Pd+Au.

This drilling has now defined gold mineralisation at shallow depths over 300 metres of strike, it remains open to the north and follow up drilling is planned to define the extent of the mineralised structures.



The presence of shallow gold mineralisation is highly encouraging, and the confirmation of the PGE mineralisation provides potential for the discovery of economic PGE and/or nickel deposits within the tenement holding.

#### **Paddock Well**

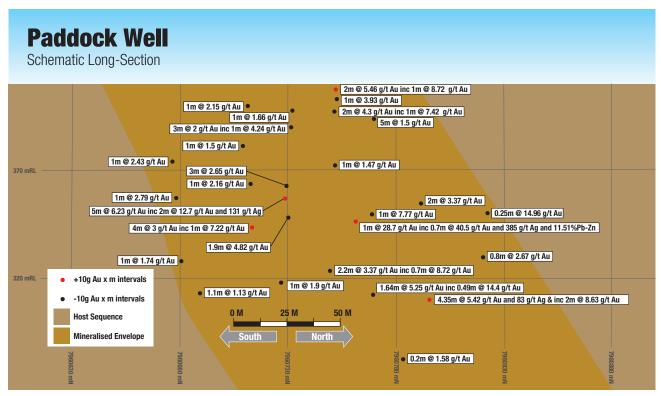
Paddock Well is located 1.5 km east of the Nicolsons processing plant. Paddock well is a quartz sulphide Au-Ag-Pb-Zn lode system similar in nature to mineralisation seen in some lodes mined underground at Nicolsons. Pantoro drilled the prospect during 2016-17 following up on historical shallow drilling of the quartz outcrop at the top of the prospect. Drilling has previously returned high grade results which included:

- 0.7 m @ 40.5 g/t Au and 385 g/t Ag, 7.44% Pb and 4.07% Zn from 72.6 m\*
- 2 m @ 12.67 g/t Au and 131 g/t Ag, ,2.54% Pb and 2.87% Zn from 58 m\*
- including 1 m @ 214 g/t Ag, 4.49% Pb and 5.03% Zn from 58 m\*
- \* assays previously reported Refer ASX announcement, 31 July 2017, "Nicolsons Project Exploration Update".

Pantoro has completed an additional drilling program during 2018 comprising 12 diamond holes and 2 RC holes during 2018. Drilling was completed below and along strike of the 2016-17 drilling. Significant results included:

- 2.2 m @3.37 g/t Au and 19.41 g/t Ag from 91.5 m inc. 0.7 m @ 8.72 g/t Au.
- 1.64 m @ 5.25 g/t Au and 39.1 g/t Ag and 2.88% Pb-Zn from 102.06 m.
- 4.35 m @ 5.42 g/t Au and 83.0 g/t Ag and 4.59 % Pb+Zn from 103.15 m inc 2 m @ 8.63 g/t Au from 105.5 m.
- 0.25 m @ 14.96 g/t Au from 70.5 m.

Following the recent program, mineralisation is now defined over 200 metres of strike to a depth of approximately 100 metres below surface.



Pantoro is reviewing additional geophysical survey and drilling opportunities for Paddock Well ahead of a maiden Mineral Resource estimate for the deposit.

#### **Hyena Prospect**

The Hyena prospect is located 1.5 km north on the Nicolsons trend on the granted mining lease M80/355. Hyena has been the subject of historic exploration work including a small amount of drilling of N-S and NW-SE striking vein sets of similar orientation to those seen at the Nicolsons mine. The existing drilling is by RC methods only, and was restricted to shallow depths of 40 metres.

In 2017 work on the surface by Pantoro resulted in visible gold being panned to a concentrate from a 1 kilogram pulverised sample taken from a 30 cm wide northwest trending gossanous quartz vein which returned a rock chip sample of 89.6 g/t Au. (Refer ASX announcement, 5 February 2018, "High Grade Exploration Results from Western Reef")

A short nine hole drilling program was recently completed with a number of anomalous results returned including 0.5 m @ 4.47 g/t from a diamond drill hole. Further work will be planned once data is reviewed in conjunction with other results from the Nicolsons project targets.

#### **About Pantoro and the Halls Creek Project**

Pantoro is an Australian gold producer with its 100% owned Halls Creek Gold Project in the Kimberley Region of Western Australia being the key operational focus. The project provides the company with a platform for growth through the operation of its first producing gold asset, which includes underground and open pit mines, and a modern CIP processing facility.

Pantoro commenced construction and refurbishment works at Nicolsons during February 2015 and commenced production in Q3 2015. The Mineral Resource and Ore Reserves have been significantly upgraded since operations commenced, with both higher grades, and additional Ore Lodes identified during mining.

The company is currently producing gold at levels exceeding its feasibility study targets and has expanded to a production rate of 50-55,000 ounces per annum.

Pantoro is focused on continued growth of production and mine life through:

- Ongoing production from the high grade Nicolsons underground mine. The majority of gold produced from the project since commencement of production in September 2015 has been from Nicolsons.
- Commencement of ore development from the Wagtail underground mine during the December 2018 quarter. Pantoro successfully mined high grade open pits at Wagtail between November 2016 and December 2018 and commenced underground decline development in July 2018.
- Exploration within the Nicolsons tenements focused on ongoing near mine growth.
- Exploration within regional projects including the 100% owned Grants Creek and Mary River prospects focused on Mineral Resource definition and near term production potential. Pantoro holds the only commercial scale gold processing plant in the Kimberley Region of Western Australia, providing the company with a unique strategic advantage in the tier 1 jurisdiction.

### **Enquiries**

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#### **Exploration Targets, Exploration Results**

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Scott Huffadine (B.Sc. (Hons)), a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Huffadine is a Director and full time employee of the company. Mr Huffadine is eligible to participate in short and long term incentive plans of and holds shares, options and performance rights in the Company as has been previously disclosed. Mr Huffadine has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 Huffadine consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Edison – Thundelarra Exploration Limited Drilling Results**

The information is extracted from the report entitled "Platinum Significant new discovery in the East Kimberley" by Thundelarra Exploration Limited (ASX:THX) created on 17 August 2006 and is available to view on the ASX (www. asx.com.au). 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.

#### Edison, Hyena - Previously Reported Drilling Results

The information is extracted from the report entitled "High Grade Exploration Results from Western Reef" created on 5 February 2018 and is available to view on Pantoro's website (www.pantoro.com.au) and the ASX (www.asx.com. au). 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.

## **Paddock Well - Previously Reported Drilling Results**

The information is extracted from the report entitled "Nicolsons Project Exploration Update" created on 31 July 2017 and is available to view on Pantoro's website (www.pantoro.com.au) and the ASX (www.asx.com.au). 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.

#### **Forward Looking Statements**

Certain statements in this report relate to the future, including forward looking statements relating to Pantoro's financial position and strategy. These forward looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual results, performance or achievements of Pantoro to be materially different from future results, performance or achievements expressed or implied by such statements. Actual events or results may differ materially from the events or results expressed or implied in any forward looking statement and deviations are both normal and to be expected. Other than required by law, neither Pantoro, their officers nor any other person gives any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward looking statements will actually occur. You are cautioned not to place undue reliance on those statements.

# **Appendix 1 – Table of Drill Results**

# **EDISON SURFACE DRILLING**

Hole ID	Easting	Northing	RL	Dip (degrees)	Azimuth (degrees)	End of Hole Depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Est True Width (m)	Au gpt (uncut)	Pt g/t (uncut)	Pd g/t (uncut)	Ni % (uncut)
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	1.3	2.3	1	0.85	0.74	-	-	-
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	13.3	15.3	2	1.70	2.41	-	-	-
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	28.1	29.1	1	0.85	1.13	-	-	-
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	41.8	42.3	0.5	0.43	1.26	-	-	-
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	46	46.7	0.7	0.60	1.1	-	-	-
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	63.2	63.5	0.3	0.25	1.45	-	-	-
EDRC18014	323817.394	7958048.968	398.74	-58.661	315.92	60	2	3	1	0.85	0.78	-	-	-
EDRC18014	323817.394	7958048.968	398.74	-58.661	315.92	60	13	14	1	0.85	1.53	-	-	-
EDRC18014	323817.394	7958048.968	398.74	-58.661	315.92	60	22	23	1	0.85	11	-	-	-
EDRC18014	323817.394	7958048.968	398.74	-58.661	315.92	60	29	30	1	0.85	3.3	-	-	-
EDRC18014	323817.394	7958048.968	398.74	-58.661	315.92	60	36	37	1	0.85	2.14	-	-	-
EDRC18013	323785.813	7958015.927	399.656	-58.326	318.96	65	1	3	2	1.70	3	-	-	-
EDRC18013	323785.813	7958015.927	399.656	-58.326	318.96	65	13	14	1	0.85	7.9	-	-	-
EDRC18013	323785.813	7958015.927	399.656	-58.326	318.96	65	28	29	1	0.85	1.14	-	-	-
EDRC18013	323785.813	7958015.927	399.656	-58.326	318.96	65	28	29	1	0.85	2.16	-	-	-
EDRC18016	323789.936	7957948.218	401.171	-59.119	319.17	90	84	85	1	0.85	1.12	-	-	-
EDRC18017	323750.174	7957979.068	400.581	-59.127	317.01	60	4	6	2	1.70	3.7	-	-	-
EDRC18017	323750.174	7957979.068	400.581	-59.127	317.01	60	34	35	1	0.85	0.94	-	-	-
EDRC18033	323706.696	7957903.251	401.799	-60.913	307.95	66	26	27	1	0.85	1.02	-	-	-
EDRC18018	323888.707	7958117.331	397.269	-60.662	309.94	65	27	29	2	1.70	1.23	-	-	-
EDRC18018	323,888.7	7,958,117.3	397.3	-60.662	309.94	65	35	36	1	0.85	1.06	-	-	-
EDRC18023	323,972.9	7,958,170.0	395.9	-61.083	309.48	80	63	65	2	1.70	3.28	-	-	-
EDRC18017	323750.174	7957979.068	400.581	-60.009	318.12	60	1	18	17	14.45	0.54	0.66	0.93	0.65
EDRC18017	323750.174	7957979.068	400.581	-60.009	318.12	60	26	29	3	2.55	0.19	0.53	1.08	0.48
EDRC18017	323750.174	7957979.068	400.581	-60.009	318.12	60	34	37	3	2.55	0.62	0.66	0.61	0.64
EDDD18001	323752.197	7957949.704	401.179	-61.079	308.26	88	12.7	34.1	21.4	18.19	0.39	0.54	1.01	0.55
EDRC18005	323,772.3	7,957,963.8	401.1	-59.513	317.29	70	17	34	17	14.45	0.2	0.49	0.89	-

Note: Assays for Pt, Pd and Ni were only taken in drill holes with results indicated.

# PADDOCK WELL SURFACE DRILLING

Hole Number	Easting	Northing	RL	Dip (degrees)	Azimuth (degrees)	End of Hole Depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Au gpt (uncut)	Est True Width (m)	Ag gpt (uncut)	Pb % (uncut)	Zn % (uncut)
PWDD18001	327,303.1	7,960,747.1	409.2	-63.00	270.6	126.1	92.5	94.7	2.2	3.37	1.59	19.41	-	-
PWDD18001	327,303.1	7,960,747.1	409.2	-63.00	270.6	126.1	98.9	99.1	0.2	0.67	0.14	-	-	-
PWDD18002	327,297.0	7,960,752.8	409.2	-70.40	294.0	132.27	102.06	103.7	1.64	5.25	1.01	39.1	0.81	2.07
PWDD18003	327,303.5	7,960,723.8	408.4	-60.70	268.8	125.9	101.8	102.8	1	1.94	0.74	-	-	-
PWDD18003	327,303.5	7,960,723.8	408.4	-60.70	268.8	125.9	100.25	100.5	0.25	0.81	0.19	-	-	-
PWDD18004	327,231.9	7,960,795.9	408.7	-66.78	89.3	130.2	103.15	107.5	4.35	5.42	3.48	83	1.66	2.93
PWDD18004	inc 2m @ 8.63 g	/t Au from 105.5												
PWDD18005	327,252.1	7,960,813.0	410.0	-56.82	74.6	96.2	70.5	70.75	0.25	14.96	0.18	-	-	-
PWDD18006	327,252.1	7,960,813.1	410.1	-64.29	74.7	120.2	72.1	72.6	0.5	1.24	0.32	-	-	-
PWDD18006	327,252.1	7,960,813.1	410.1	-64.29	74.7	120.2	87	87.8	0.8	2.67	0.52	-	-	-
PWDD18007	327,264.3	7,960,875.8	407.6	-50.16	116.9	120.1	85.87	86.4	0.53	0.78	0.63	-	-	-
PWDD18008	327,303.7	7,960,721.4	408.4	-73.78	266.2	150.2	0	1	1	1.26	0.57	-	-	-
PWDD18009	327,370.7	7,960,774.6	410.5	-57	260	207	29	30	1	0.58	0.75	-	-	-
PWDD18010	327,367.5	7,960,779.1	410.7	-55.00	272.0	192.18	20	21	1	0.58	0.81	-	-	-
PWDD18010	327,367.5	7,960,779.1	410.7	-55.00	272.0	192.18	140.4	140.8	0.4	1.9	0.32	-	-	-
PWDD18010	327,367.5	7,960,779.1	410.7	-55.00	272.0	192.18	157.6	157.8	0.2	1.58	0.16	-	-	-
PWDD18011	327,303.8	7,960,744.8	409.2	-74.00	272.0	177.2	108	108.2	0.2	1.26	0.12	-	-	-
PWDD18011	327,303.8	7,960,744.8	409.2	-74.00	272.0	177.2	167.2	167.9	0.7	0.73	0.41	-	-	-
PWDD18012	327,268.2	7,960,689.1	408.6	-75.00	272.0	117.3	0	1	1	1.41	0.57	-	-	-
PWDD18012	327,268.2	7,960,689.1	408.6	-75.00	272.0	117.3	97	98.1	1.1	1.13	0.62	-	-	-
PWDD18012	327,268.2	7,960,689.1	408.6	-75.00	272.0	117.3	100.1	100.6	0.5	1.51	0.28	-	-	-
PWRC18002	327,246.3	7,960,691.4	408.0	-75.00	274.0	75	41	42	1	0.74	0.57	-	-	-
PWRC18002	327,246.3	7,960,691.4	408.0	-75.00	274.0	75	48	49	1	0.82	0.57	-	-	-

# **HYENA SURFACE DRILLING**

Hole Number	Easting	Northing	RL	Dip (degrees)	Azimuth (degrees)	End of Hole Depth (m)	Downhole From (m)	Downhole To (m)	Downhole Intersection (m)	Au gpt (uncut)	Est True Width (m)
HYDD18002	326849.07	7965258.592	397.064	-60	68	71.95	19.6	20.1	0.5	4.47	0.37
HYRC18007	326906.985	7965328.5	395.208	-60	270	60	50	51	1	1.11	0.75
HYRC18015	326,850.2	7,965,256.8	397.1	-60	77	70.0	51	52	1	1.61	0.76

# **Appendix 2 – JORC Code 2012 Edition – Table 1**

# **SECTION 1: SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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</li> </ul>	This information in this release relates to an Exploration update and results from surface Reverse Circulation (RC) and Diamond exploration drill sampling of the of the Edison, Paddock Well and Hyena prospects at the Nicolsons gold project.
	instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	• RC – Rig-mounted static splitter used, with sample falling though a riffle splitter, splitting the sample in 87.5/12.5 ratio sampled every 1m
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	RC samples 2-5kg samples are dispatched to an external accredited laboratory (BVA Perth) where they are crushed and pulverized to a pulp (P90 75 micron) for
	Aspects of the determination of mineralisation that are Material to the Public	fire assay (40g charge).
	<ul> <li>Report.</li> <li>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</li> </ul>	• Diamond samples 2-5kg samples are dispatched to an external accredited laboratory (BVA Perth) where they are crushed and pulverized to a pulp (P90 75 micron) for fire assay (40g charge).
	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.	All core is logged and sampled according to geology, with only selected samples assayed. Core is halved, with RHS of cutting line assayed, and the other half retained in core trays on site for further analysis. Samples are a maximum of 1.2m, with shorter intervals utilised according to geology to a minimum interval of 15m where clearly defined mineralisation is evident.
		Core is aligned, measured and marked up in metre intervals referenced back to downhole core blocks .
		Visible gold is encountered at the project and where observed during logging, Screen Fire Assays are conducted
		<ul> <li>Historical holes - RC drilling was used to obtain 1 m samples from which 2 - 3 kg was crushed and sub-split to yield 250 for pulverisation and then a 40 g aliquot for fire assay. Review of drilling programmes indicate all intervals were assayed.</li> </ul>
Drilling techniques	<ul> <li>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</li> </ul>	RC – Reverse circulation drilling was carried out using a face sampling hammer and a 130mm diameter bit
	of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Surface DD – NQ2 diamond tail completed on RC precollars, all core has orientations completed

Criteria	JORC Code explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	<ul> <li>All holes were logged at site by an experienced geologist. Recovery and sample quality were visually observed and weights recorded at the laboratory</li> </ul>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>RC- recoveries are monitored by visual inspection of split reject and lab weight samples are recorded and reviewed.</li> </ul>
	Whether a relationship exists between sample recovery and grade and whether	$\bullet  \  \   RCdrillingbypreviousoperatorsisconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustrystandardatthetimeconsideredbetoindustryconsideredbetoindustryconsideredbeconsideredconsideredbeconsidered$
	sample bias may have occurred due to preferential loss/gain of fine/coarse material.	<ul> <li>DD – No significant core loss has been noted in fresh material. Good core recovery has generally been achieved in all sample types in the current drilling program.</li> </ul>
Logging	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.	<ul> <li>Geological logging is completed by a qualified geologist and logging parameters include: depth from, depth to, condition, weathering, oxidation, lithology, texture colour, alteration style, alteration intensity, alteration mineralogy, sulphide content and composition, quartz content, veining, and general comments.</li> </ul>
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	<ul> <li>100% of the holes are logged</li> </ul>
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	All RC holes are sampled on 1m intervals, Paddock Well diamond hole pre-collars
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	are sampled on 2m composites with 1m splits retained for further assays as required
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<ul> <li>RC samples are taken off the rig splitter, no significant water is encountered and are typically dry</li> </ul>
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<ul> <li>Core samples were sawn in half utilising an Almonte core-saw, with RHS of cutting line sent for assaying and the other half retained in core trays on site for future analysis.</li> </ul>
	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.	<ul> <li>For core samples, core was separated into sample intervals and separately bagged for analysis at the certified laboratory.</li> </ul>
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>Core was cut under the supervision of an experienced geologist, it was routinely cut on the orientation line.</li> </ul>
		<ul> <li>All mineralised zones are sampled as well as material considered barren either side of the mineralised interval</li> </ul>
		• Field duplicates i.e. other half of core or $\frac{1}{4}$ core has not been routinely sampled
		Half core is considered appropriate for diamond drill samples.
		<ul> <li>Sample sizes are considered appropriate for the material being sampled and weights are recorded and monitored by project geologists.</li> </ul>
		<ul> <li>RC drilling by previous operators is considered to be to industry standard at that time</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	determined using fire assay with 40g charge. Where other elements are assayed
	• 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.	using either AAS base metal suite or acid digest with ICP-MS finish. The methods used approach total mineral consumption and are typical of industry standard practice.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of	The Pt, Pd samples were analysed via lead collection fire assay with a 40 g charge. and grade was determined by ICP-MS with a detection limit of 1 ppb.
	bias) and precision have been established.	No geophysical logging of drilling was performed.
		Lab standards, certified reference material, blanks and repeats are included as part of the QAQC system. In addition the laboratory has its own internal QAQC comprising standards, blanks and duplicates. Sample preparation checks of pulverising at the laboratory include tests to check that the standards of 90% passing 75 micron is being achieved. Follow-up re-assaying is performed by the laboratory upon company request following review of assay data. Acceptable bias and precision is noted in results given the nature of the deposit and the level of classification.
		Lab standards were used for Pt and Pd assays
		RC drill samples from previous owners was fire assay with AAS finish. Review of historic records of received assays confirms this.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections are noted in logging and checked with assay re-sults by company personnel both on site and in Perth.
	The use of twinned holes.	There are no twinned holes drilled as part of these results
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	SQL database. Data is visually checked for errors before being sent to an database
	Discuss any adjustment to assay data.	administrator for further validation and uploaded into an offsite database. Hard copies of original drill logs are kept in onsite office.
		Visual checks of the data re completed in Surpac mining software
		No adjustments have been made to assay data unless in instances where standard toleranc-es are not met and reassay is ordered.

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>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.</li> </ul>	<ul> <li>RC/DD drilling is downhole surveyed utilizing surveyed electronic single shot survey tool at collar, 10 metres then 30m thereafter. No Gyro DH surveys were undertaken on this program.</li> </ul>
	<ul><li>Specification of the grid system used.</li><li>Quality and adequacy of topographic control.</li></ul>	<ul> <li>Surface RC and Diamond drilling is marked out using GPS and final pickups using DGPS collar pickups.</li> </ul>
	Quanty and dacquacy of topographic control.	<ul> <li>The project lies in MGA 94, zone 52. Local coordinates are derived by conversion: GDA94_EAST =NIC_EAST * 0.9983364 + NIC_NORTH * 0.05607807 + 315269.176 GDA94_NORTH = NIC_EAST * (-0.05607807) + NIC_NORTH * 0.9983364 + 7944798.421 GDA94_RL =NIC-RL + 2101.799</li> </ul>
		<ul> <li>Topographic control uses DGPS collar pickups and external survey RTK data and is considered adequate for use.</li> </ul>
		<ul> <li>Pre Pantoro survey accuracy and quality assumed to industry standard</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of</li> </ul>	• Surface diamond drilling in this initial phase bas been on an nominal 50 m vertical and x 50m along strike spacing, closding to 40m isections.
	geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	<ul> <li>No compositing is applied to diamond drilling or RC sampling with the exception of the Wagtail diamond precollars where 2 m composites are taken.</li> </ul>
	Whether sample compositing has been applied.	<ul> <li>Core samples are both sampled to geology of between 0.15 and 1.2m intervals.</li> <li>All RC samples are at 1m intervals</li> </ul>
Orientation of data in	Whether the orientation of sampling achieves unbiased sampling of possible	No bias of sampling is believed to exist through the drilling orientation
relation to geological structure	<ul> <li>structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Surface drilling is designed perpendicular to the interpreted orientation of the mineralisation.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The chain of custody is managed by Pantoro employees and contractors. Samples are stored on site and delivered in sealed boxes and bags to the lab in Perth</li> </ul>
		Samples are tracked during shipping.
		Pre Pantoro operator sample security assumed to be consistent and adequate
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>No audit or reviews of sampling techniques have been undertaken however the data is managed by an offsite database consultant who has internal checks/ protocols in place.</li> </ul>

# **SECTION 2: REPORTING OF EXPLORATION RESULTS**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding	Tenement related to this drilling are 100% held by Pantoro subsidiary company Halls Creek Mining Pty Ltd. These are: E80/5054, E80/2601 and M80/355.
	royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Tenement transfers to HCM are yet to occur as stamp duty assessments have not been completed by the office of state revenue. The tenements lie on a pastoral
	• 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.	lease with access and mining agreements .
- I I I		The tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• Previous exploration in the Nicolsons areas includes work completed by various companies The deposits were discovered by prospectors in the early 1990s. After an 8,500 m RC program, Precious Metals Australia mined 23 koz at an estimated 7.7g/t Au from Nicolson's Pit in 1995/96 before ceasing the operation. Rewah mined the Wagtail and Rowdy pits (5 koz at 2.7g/t Au) in 2002/3 before Terra Gold Mines (TGM) acquired the project, carried out 12,000 m of RC drilling and produced a 100 koz resource estimate. GBS Gold acquired TGM and drilled 4,000 m before being placed in administration. Bulletin Resources Ltd acquired the project from administrators and conducted exploration work focused on Nicolsons and the Wagtail Deposits and completed regional exploration drilling and evaluation and completed a Mining Study in 2012 prior to entering into a JV with PNR in 2014.
		Thundelarra was focussed on the discovery of Ni-Cu and PGE mineralisation in the Lamboo Igneous complex and drilling in 2006 returned significant widths of platinum+palladium+gold (Pt+Pd+Au) mineralisation
Geology	Deposit type, geological setting and style of mineralisation.	Gold mineralisation in the Nicolson's Find area is structurally controlled within the 400 m wide NNE trending dextral strike slip Nicolson's Find Shear Zone (NFSZ) and is hosted within folded and metamorphosed turbiditic greywackes, felsic volcaniclastics, mafic volcanics and laminated siltstones and mudstones. This zone forms part of a regional NE-trending strike slip fault system developed across the Halls Creek Orogen (HCO).
		The NFSZ comprises a NNE-trending anastomosing system of brittle-ductile shears, characterised by a predominantly dextral sense of movement. The principal shear structures trend NNE to N-S and are linked by NW, and to a lesser extent, by NE shears. Individual shears extend up to 500m along strike and overprint the earlier folding and penetrative cleavage of the HCO.
		<ul> <li>The overall geometry of the system is characterized by right step-overs and bends/jogs in the shear traces, reflecting refraction of the shears about the granite contact. Within this system, the NW-striking shears are interpreted as compressional structures and the NE-striking shears formed within extensional windows.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Mineralisation is primarily focussed along NNE trending anastomosing systems of NNE-SSW, NW-SE and NE-SW oriented shears and splays. The NNE shears dip moderately to the east, while the NW set dips moderately to steeply to the NE. Both sets display variations in dip, with flattening and steepening which result in a complex pattern of shear intersections.</li> </ul>
		<ul> <li>Mineralisation is strongly correlated with discontinuous quartz veining and with Fe-Si-K alteration halos developed in the wall rocks to the veins. The NE shears are associated with broad zones of silicification and thicker quartz veining (typically white, massive quartz with less fracturing and brecciation); however, these are typically poorly mineralized. The NW-trending shears are mineralized, with the lodes most likely related to high fluid pressures with over-pressuring and failure leading to vein formation. Although the NE structures formed within the same shear system, the quartz veining is of a different generation to the mineralized veins.</li> </ul>
		<ul> <li>Individual shears within the system display an increase in strain towards their centres and comprise an anastomosing shear fabric reminiscent of the pattern on a larger scale.</li> </ul>
Drill hole Information	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:	A table of drill hole data pertaining to this release is attached.
	» 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.	

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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.</li> </ul>	<ul> <li>Reported drill results are uncut</li> <li>All relevant intervals to the reported mineralised intercept are length weighted to determine the average grade for the reported intercept.</li> </ul>
	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.	<ul> <li>All significant intersections are reported with a lower cut off of 1 g/t Au and Pt+Pd including a maximum of 2m of internal dilution. Individual intervals below this cut off are reported where they are considered to be required in the context of the presentation of results</li> </ul>
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are reported.
Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	<ul> <li>Surface DD/RC drilling is perpendicular to the interpreted strike of the mineralisation.</li> </ul>
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	<ul> <li>Downhole lengths are reported and true widths are calculated in both the section and plan view utilising a formulae in excel</li> </ul>
	• 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').	• Estimated true widths are calculated and reported for drill intersections which intersect the lodes obliquely.
Diagrams	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.	Appropriate diagrams are included in the report.
Balanced reporting	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.	<ul> <li>All holes available since the last report are included in the tables</li> <li>Diagrams show the location and tenor of both high and low grade samples.</li> </ul>
Other substantive exploration data	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.	No other meaningful data to report.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	<ul> <li>The drilling results are part of an ongoing program to define additional Mineral Resource at the Nicolsons gold project with results to be evaluated for planning of follow up drilling.</li> </ul>
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	<ul> <li>Only 3 holes were assayed for Pt and Pd with base metals to confirm the Thundelarra Exploration work. Additional assays will be undertaken from the pulps of the remaining holes following review of the logging to determine the extent of the mineralization within the area currently covered by drilling at Edison.</li> </ul>