



## Significant High Grade Gold Results from Leonora Projects

24 December 2013

### HIGHLIGHTS

#### Board of Directors

##### Terry Grammer

Chairman

##### Trevor Dixon

Managing Director

##### Fritz Fitton

Technical Director

##### Joe Graziano

Non-Executive Director &  
Company Secretary

- **Anomalous gold results have been identified on several prospects.**
- **A gold assay of 115.98g/t Au from selective channel sampling at Mt Flora.**
- **Gold assays at Iron King of 25.73 g/t Au from the mullock dump at the Reeds United workings and 14.97g/t Au from a nearby shallow prospecting pit.**

Kin Mining NL (ASX: KIN) ("KIN" or the "Company") advise that its recent reconnaissance rock chip sampling programme returned numerous anomalous gold results. A total of sixty nine (69) rock chip samples were collected across all six project areas. Eleven samples (11) returned gold grades >2g/t of which three samples (3) returned gold grades in excess of 10g/t. Twenty one samples returned anomalous gold values (>0.5g/t Au). Follow up geological mapping and geochemical sampling is scheduled to define the source of the gold mineralisation with a view to drill test.

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#### Shares on Issue:

38,653,003 (KIN)

#### ASX: KIN



**Figure 1: Tenement Location Plan for Kin Mining NL**

## **REDCASTLE**

Eleven rock chip samples (KIN00018-00028) were collected from the Redcastle project (P39/4528, P39/5105, P39/5267, P39/4834 and P39/4930). The project area covers a sequence of Archaean tholeiitic mafic volcanics, dolerites and gabbros with porphyritic intrusions. The two most significant results, 4.64g/t Au and 2.69g/t Au, were returned from vein quartz at the Bellbird workings (P37/5105). The interpreted NW trending dolerite extends from Bellbird on P39/5105 on into P39/5267, where the next highest gold value, 2.02g/t Au, was returned from the “white shaft”. Both old workings are associated with the dolerite/tholeiitic volcanic contact on the eastern limb of the north plunging Redcastle Anticline.

## **DESDEMONA**

Twenty three rock chip samples (KIN00005-00017, 00064-00073) were collected from the Desdemona project (ELA37/1156, E37/283 and E37/323). The project area covers a typical sequence of Archaean greenstone lithologies intruded by numerous sill like mafic and ultramafic bodies. The most significant result returned 0.94g/t Au from the Paradise prospect on E40/283.

## **IRON KING**

Fifteen rock chip samples (KIN00004, 00029-00042) were collected from the NW trending Archaean greenstone sequence at Iron King (P37/7176, P37/7198, P37/7197 and P37/7196). The two most significant assays, 25.73g/t Au and 14.97g/t Au, were returned from the Reeds United workings (P37/7196) located along a mafic intrusive/tholeiitic basalt contact. The structure within the project is extremely complex due to faulting, shearing, tight folding and granitic intrusives. Several historic workings including the Blue Spec, Victory (excised) and the Iron King open pit are positioned within the project area.

## **MURRIN MURRIN**

Two rock chip samples (KIN00043, 00044) were collected from P39/4980. The tenements at Murrin Murrin cover a NNE trending suite of tholeiitic mafic volcanics, dolerites and minor sedimentary units including BIF and chert. The most significant result, 2.33g/t Au, was returned from iron stained quartz mullock from workings at the Kismet Mining Centre.

## **MOUNT FLORA**

Sixteen rock chip samples (KIN00045, 00047-00061) were collected from the Mt Flora project area (P39/4960, P39/5183, P39/4617, PLA39/4619 and P39/4521). The geology of the project area comprises a sequence of tholeiitic mafic volcanics, high magnesian basalts, BIF, ultramafic rocks and mafic intrusives. A significant high grade gold result, 115.98g/t Au, was returned from a channel sample across the galena rich ore zone of an old historic pit, the working is along strike from the high grade (>1oz/t Au) Spion Kop



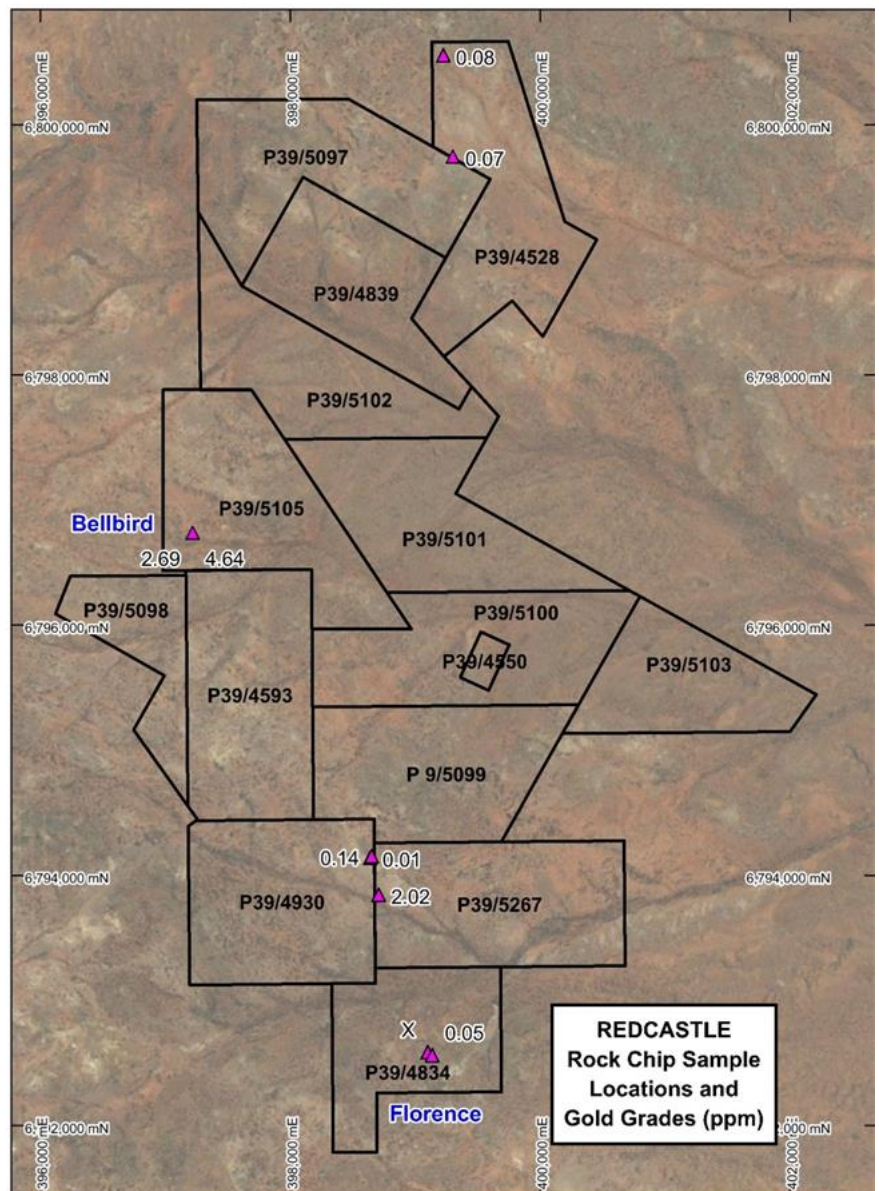
mine on PLA39/4619, which is associated with a swarm of NNE trending quartz veins interpreted to relate to the nearby Federation Fault on the eastern limb of the Mt Flora Syncline. Other significant results include 2.73g/t Au (mullock dump quartz) and 3.93g/t Au from (iron stained quartz veining) that could also be associated with the Federation Fault shear regime.

## RANDWICK

Two rock chip samples (KIN00062-63) were collected from old mullock dumps on P37/8000. Assays returned 4.16g/t and 0.89g/t Au. The tenement overlies a sheared anticline axis within a sequence of intermediate volcanics and layered mafic to ultramafic rocks. Pervasive carbonate and sericitic alteration is associated with the shear zone, gold mineralisation occurs in structurally controlled quartz veining associated with the more strongly altered zones.

## ANALYSIS

Samples were dispatched to Intertek Laboratory Services in Maddington. Analysis of all rock chip samples was conducted via Aqua Regia digest (25g charge) using their ARU25/OE method (ppm detection) ICP-OES finish. Any result >0.5g/t Au was assayed again via fire assay using their FA25/AA method (25g lead collection fire assay) AAS finish. In addition a standard lab suite of 30 elements was also assayed using the original Aqua Regia liquor, ICP-OES finish. The suite analysed included (Ag, Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W & Zn).



**Figure 2: Redcastle Sample Location Plan**



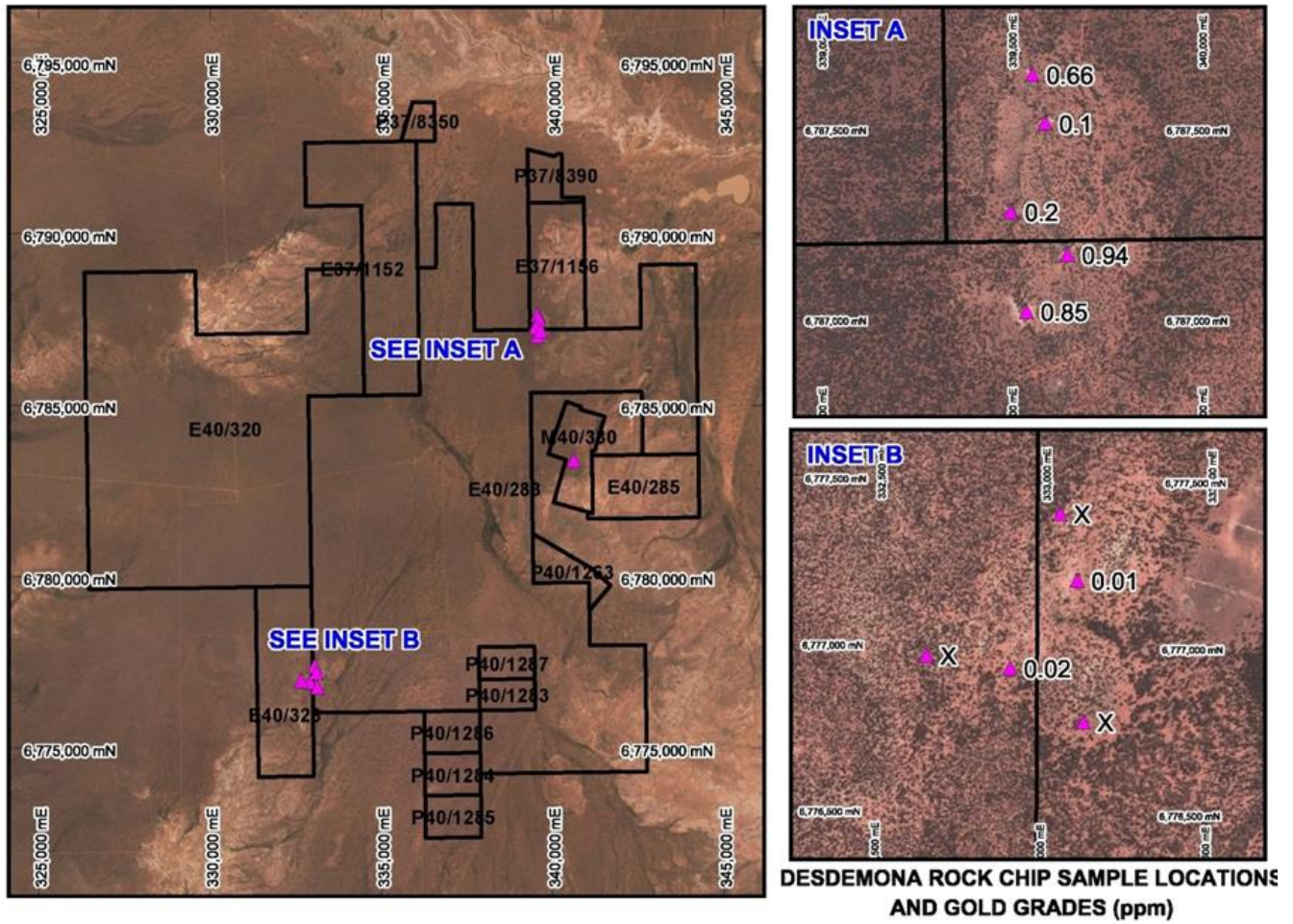


Figure 3: Desdemona Sample Location Plan

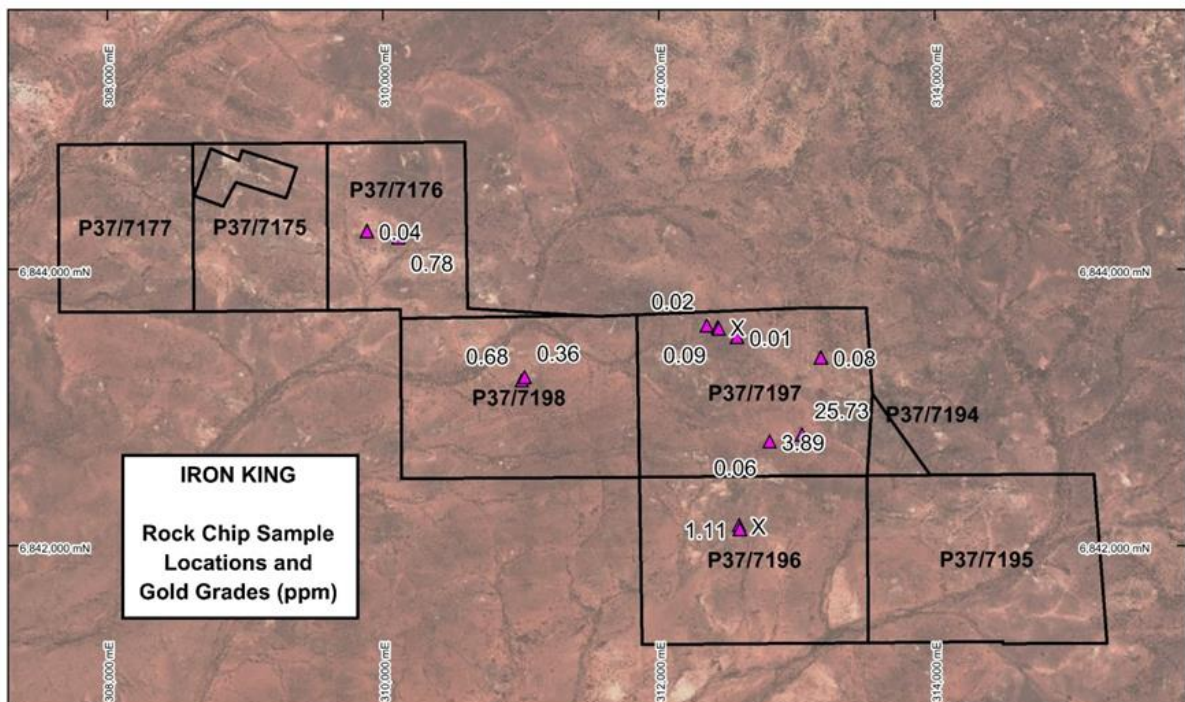


Figure 4: Iron King Sample Location Plan



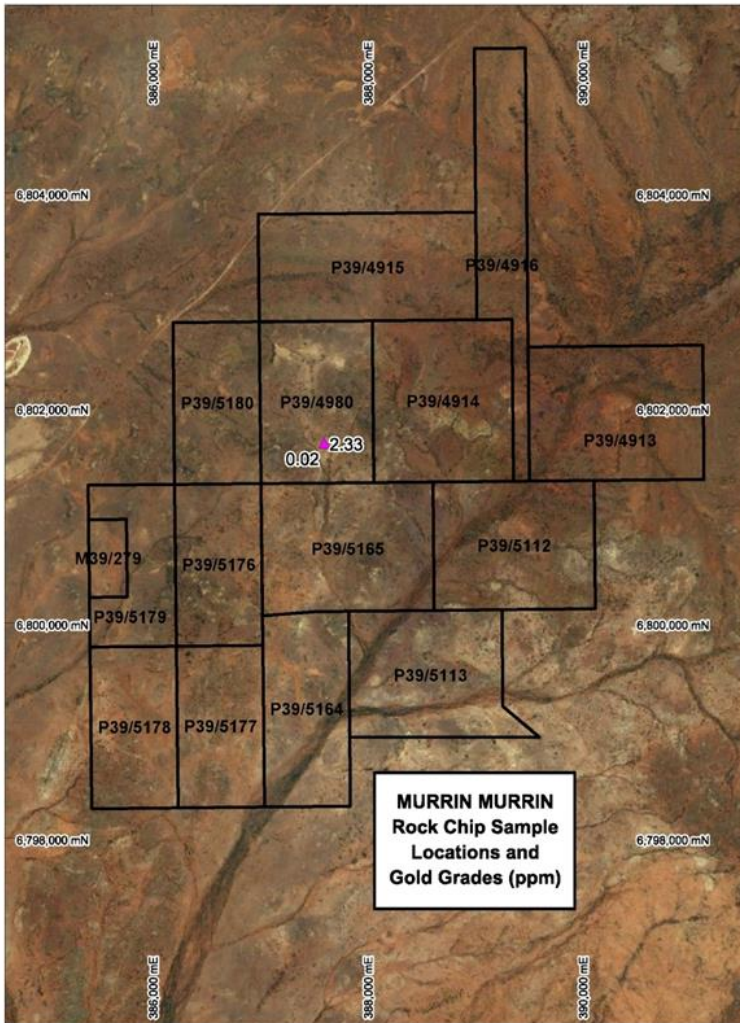


Figure 5: Murrin Murrin Sample Location Plan

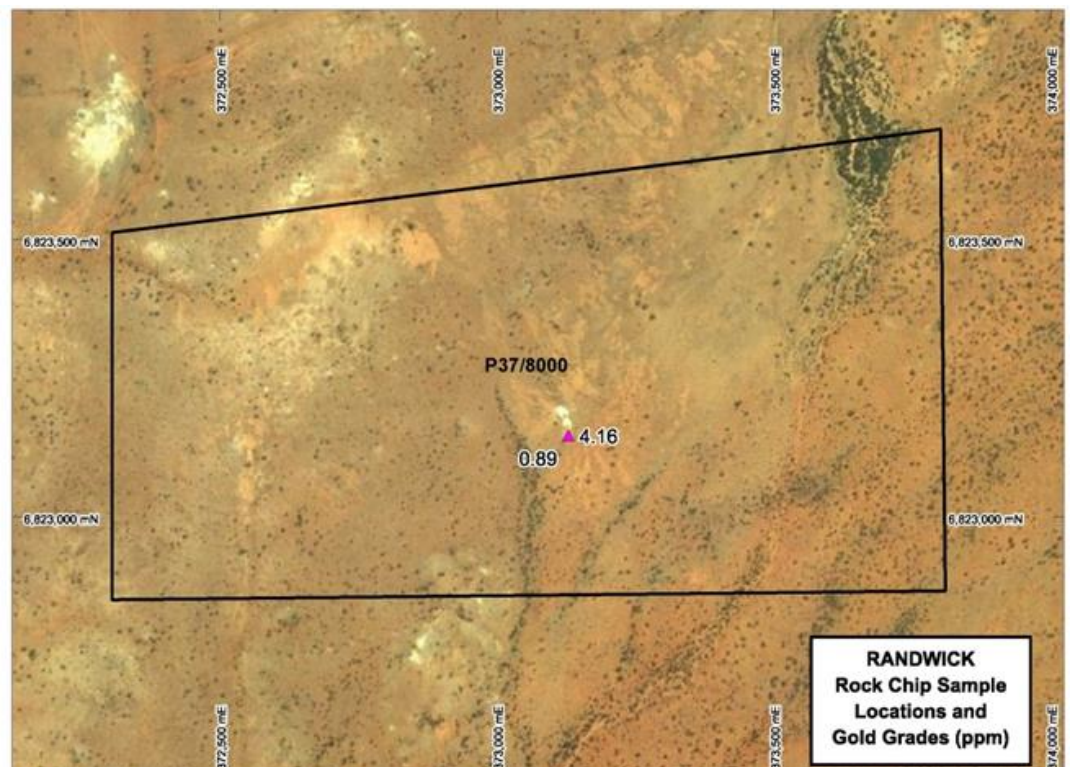
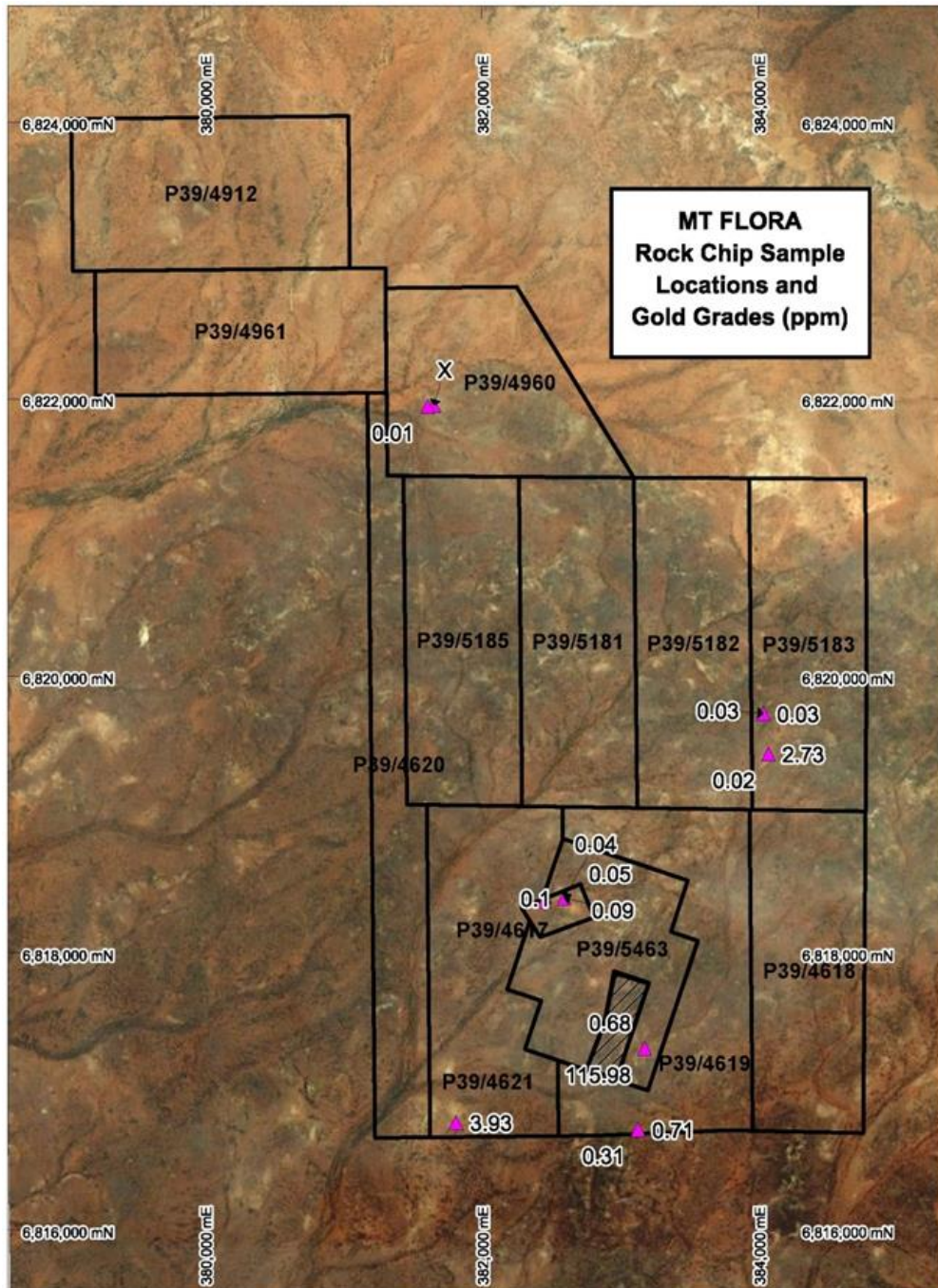


Figure 6: Randwick Sample Location Plan





**Figure 7: Mt Flora Sample Location Plan**

## Competent Persons Statement

The information in this report relates to Exploration Results based on information compiled by Paul Maher who is a member of the AusIMM and an employee of the company and fairly represents this information. Mr Maher has sufficient experience of relevance to the styles of mineralisation and the types of deposit under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Australian code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Maher consents to the inclusion in the report of the matters based on information in the form and context in which it appears. Exploration results are based on standard industry practices including sampling, assay methods and appropriate quality assurance quality control measures.

**Table 1. Rock Chip Sample Location and Gold Assay Results**

Sample	Easting	Northing	Prospect	Tenement	Au (ppm)	Au-Rp1 (ppm)
Number	GDA 94 zone 51				Aqua Regia	Fire Assay
KIN00004	313175	6843363	Iron King	P37/7197	0.08	
KIN00005	332904	6776930	Desdemona	E40/323	0.02	
KIN00006	340607	6783393	Desdemona	M40/330	0.03	
KIN00007	340607	6783393	Desdemona	M40/330	X	
KIN00008	340607	6783393	Desdemona	E40/283	X	
KIN00009	333047	6777395	Desdemona	E40/283	X	
KIN00010	333103	6777196	Desdemona	E40/283	0.01	
KIN00011	333129	6776771	Desdemona	E40/283	X	
KIN00012	333129	6776771	Desdemona	E40/283	X	
KIN00013	333129	6776771	Desdemona	E40/283	0.02	
KIN00014	333129	6776771	Desdemona	E40/283	X	
KIN00015	333129	6776771	Desdemona	E40/283	0.01	
KIN00016	332651	6776965	Desdemona	E40/323	X	
KIN00017	332651	6776965	Desdemona	E40/323	0.02	
KIN00018	399038	6792642	Redcastle	P39/4834	X	
KIN00019	399097	6792588	Redcastle	P39/4834	X	
KIN00020	399133	6792562	Redcastle	P39/4834	0.05	
KIN00021	399133	6792562	Redcastle	P39/4834	0.08	
KIN00022	398705	6793844	Redcastle	P39/5267	2.02	2.14
KIN00023	398635	6794140	Redcastle	P39/4930	0.01	
KIN00024	398649	6794154	Redcastle	P39/4930	0.14	
KIN00025	397217	6796739	Redcastle	P39/5105	4.64	5.29
KIN00026	397217	6796739	Redcastle	P39/5105	2.69	2.62
KIN00027	399298	6799746	Redcastle	P39/4528	0.07	
KIN00028	399221	6800556	Redcastle	P39/4528	0.08	
KIN00029	312581	6842149	Iron King	P37/7196	X	
KIN00030	312587	6842120	Iron King	P37/7196	1.11	1.09
KIN00031	312802	6842755	Iron King	P37/7197	3.89	3.78
KIN00032	312802	6842755	Iron King	P37/7197	0.06	
KIN00033	312802	6842755	Iron King	P37/7197	14.97	13.41
KIN00034	313037	6842804	Iron King	P37/7197	25.73	27.42
KIN00035	312567	6843511	Iron King	P37/7197	0.01	
KIN00036	312435	6843570	Iron King	P37/7197	0.09	
KIN00037	312428	6843582	Iron King	P37/7197	X	
KIN00038	312348	6843594	Iron King	P37/7197	0.02	
KIN00039	309883	6844278	Iron King	P37/7176	0.04	
KIN00040	310112	6844232	Iron King	P37/7176	0.78	0.67
KIN00041	311005	6843197	Iron King	P37/7198	0.68	0.62
KIN00042	311026	6843219	Iron King	P37/7198	0.36	

Table 1. (cont)

Sample	Easting	Northing	Prospect	Tenement	Au (ppm)	Au-Rp1 (ppm)
Number	GDA 94 zone 51				Aqua Regia	Fire Assay
KIN00043	387606	6801672	Murrin Murrin	P39/4980	2.33	2.38
KIN00044	387606	6801672	Murrin Murrin	P39/4980	0.02	
KIN00045	381819	6816774	Mt Flora	P39/4621	3.93	3.60
KIN00046			No sample			
KIN00047	383182	6817309	Mt Flora	P39/5463	0.68	0.66
KIN00048	383182	6817309	Mt Flora	P39/5463	115.98	115.91
KIN00049	383134	6816724	Mt Flora	P39/4619	0.71	0.65
KIN00050	383134	6816724	Mt Flora	P39/4619	0.31	
KIN00051	382601	6818396	Mt Flora	P39/4617	0.04	
KIN00052	382601	6818396	Mt Flora	P39/4617	0.10	
KIN00053	382601	6818396	Mt Flora	P39/4617	0.09	
KIN00054	382456	6818376	Mt Flora	P39/4617	0.05	
KIN00055	384075	6819437	Mt Flora	P39/5183	2.73	2.63
KIN00056	384075	6819437	Mt Flora	P39/5183	0.02	
KIN00057	384038	6819728	Mt Flora	P39/5183	0.03	
KIN00058	384038	6819728	Mt Flora	P39/5183	0.03	
KIN00059	381659	6821954	Mt Flora	P39/4960	X	
KIN00060	381659	6821954	Mt Flora	P39/4960	X	
KIN00061	381612	6821945	Mt Flora	P39/4960	0.01	
KIN00062	373129	6823147	Randwick	P37/8000	4.16	4.06
KIN00063	373129	6823147	Randwick	P37/8000	0.89	1.07
KIN00064	339556	6787640	Desdemona	E37/1156	0.66	1.15
KIN00065	339590	6787512	Desdemona	E37/1156	0.10	
KIN00066	339590	6787512	Desdemona	E37/1156	0.67	0.75
KIN00067	339499	6787280	Desdemona	E37/1156	0.20	
KIN00068	339499	6787280	Desdemona	E37/1156	0.06	
KIN00069	339649	6787167	Desdemona	E40/283	0.94	0.91
KIN00070	339541	6787018	Desdemona	E40/283	0.85	0.95
KIN00071	339541	6787018	Desdemona	E40/283	0.07	
KIN00072	339499	6787280	Desdemona	E37/1156	0.05	
KIN00073	339649	6787167	Desdemona	E40/283	0.27	



## Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<p><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></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report. 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></p>	<p>Sixty eight rock chips were collected. Rock chip samples are collected from mullock dumps, old workings and selected outcropping/subcropping rocks and veins. No effort has been made to ensure representative sampling of the collected rock. The samples varied in size ranging from approximately 1-2kg.</p> <p>No duplicate samples were collected and no standards were incorporated in the sample batch. A hand held GPS was used to record sample locations (+/- 5m accuracy)</p> <p>Rock chip samples are collected from selected veins, old mullock dumps and outcropping or subcropping rocks. They are collected in the field and stored in calico bags. In each case approximately 1-2kg of rock material was collected. All samples were assayed by Intertek Laboratory Services. Analysis of all samples was conducted via aqua regia digest (25g charge) using their ARU25/OE method ICP-OES finish. Any result &gt;0.5ppm was assayed again via fire assay using their FA25/AA method (25g lead collection fire assay) AAS finish. Additionally a standard suite of 30 elements was assayed using the original aqua regia liquor ICP-OES finish. The suite included (Ag, Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W, &amp; Zn). No free gold was observed in any of the samples. When rock chip sampling there is a tendency to be selective and collected material is often the most "interesting" pieces of rock.</p>

Criteria	JORC Code Explanation	Commentary
Drilling techniques	<p><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></p>	Not applicable, no drilling was conducted.

Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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>	Not applicable, all rock chip sampling was conducted on the surface
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Criteria	JORC Code Explanation	Commentary
Logging	<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>	Field notes regarding rock type and location were recorded in a sample book. This information is of insufficient detail to support any Mineral Resource Estimation.
Sub-sampling techniques and sample preparation	<i>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 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.</i>	The entire collected sample is submitted for analysis. No duplicate samples are submitted. No measures are taken to ensure sampling is statistically representative of the in situ sampled material. The collection methodology is considered appropriate for rock chip sampling and is in line with standard industry practice.
Quality of assay data and laboratory tests	<i>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 (standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	The laboratory analysis technique utilises the entire sample. The laboratory assay procedure is considered appropriate for samples of this type. No additional quality control measured beyond the standard laboratory "checks and balances" implemented by the lab as part of their normal assaying procedure were conducted. Any assay >0.5ppm was assayed again using fire assay (FA25/AA- 25g lead collection fire assay AAS finish). Fire assay is considered to be a total technique, aqua regia is considered to be a partial technique. No on site analysis was conducted.
Verification of sampling and assaying	<i>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.</i>	Any sample returning a aqua regia digest result of >0.5ppm Au was re-assayed using a different, fire assay, technique. The two results, fire assay and aqua regia digest, are considered to be acceptable. The Company conducts internal data verification, data entry and storage protocols which are followed and adhered to. None of the received assays have been adjusted in any way.
Location of data points	<i>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.</i>	Rock chip samples are located using a hand held GPS (+/- 5m accuracy). The grid system is GDA 94 (zone 51). No topographic data (ie RL) was recorded.



Criteria	JORC Code Explanation	Commentary
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied.</i>	The sampling methodology is considered unbiased. The relationship to geological structures and orientation is unknown apart from local geological information that was recorded at the sample point. The nature of the results do not support Mineral Resource and Ore Reserve estimate procedures. No sample compositing applies.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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>	Samples were collected over a small area (ie 2m x 2m), the orientation in relation to geological structures is unknown. No orientation based sampling bias has been identified in the data to date.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were collected in the field and stored in a secure lockable location until dispatched to the laboratory via courier where the laboratory controls custody of the samples
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been conducted at this stage.

Section 2 Reporting of Exploration Results		
Criteria	JORC Code Explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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. 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>	The tenements covers six project areas, all tenements are located within the Mt Margaret and North Coolgardie Mineral Fields. Tenement status and ownership is varied - see the Company announcement 20th September 2013 (Completion of Option Agreements) which details ownership and current tenement status of all tenements. All tenements are within a 55km radius of the towns of either Leonora or Laverton
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	The Leonora district has been explored by numerous companies in past years, considering the extent of the tenement package, see the company prospectus dated 15 August 2012 (Independent Geologists Report) for a summary of past exploration activities
<i>Geology</i>	<i>Deposit type, geological setting and style mineralisation.</i>	The geological setting is a typical Achaean greenstone assemblage composed of ancient volcanic rocks and sediments that have subsequently been deformed and metamorphosed. The projects are prospective for gold, nickel and base metals. Deposit types and mineralisation styles are unknown at this stage.

Criteria	JORC Code Explanation	Commentary
<b>Drill hole</b>	<p>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:</p> <p>Easting and northing of the drill hole collar.</p> <p>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.</p> <p>Dip and azimuth of the hole.</p> <p>Down hole length and interception depth.</p> <p>Hole length.</p> <p>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.</p>	Individual GPS controlled data points, no drilling was conducted.

Criteria	JORC Code Explanation	Commentary
<b>Data aggregation methods</b>	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) cut-off grades are usually Material and should be stated. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	Not applicable, single point rock chip sampling.

<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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').</p>	Not applicable, single point rock chip sampling.
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<b>Diagrams</b>	<p>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.</p>	See various maps and figures within the body of the report.
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<b>Balanced reporting</b>	<p>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.</p>	All assay results regarding gold analysis are reported in Table 1
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Criteria	JORC Code Explanation	Commentary
<i>Other substantive exploration data</i>	<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>	Not applicable, single point rock chip sampling .
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is commercially sensitive.</i>	The data gathered and reported represents the results from a first pass rock chip sampling programme, follow up exploration techniques may include geological mapping, additional rock chip sampling and/or geochemical soil sampling. Exploration is regarded as very early stage.