ASX ANNOUNCEMENT

2 September 2014

Significant Pilbara Iron Ore Results

highlights

- *Significant New High Grade BID drill intersections*
- *Intersections outside of current Resource and pit designs*
- *Mineralisation is open and adjacent to existing high grade targets*
- *Further drilling planned for the rest of calendar year 2014*

Pilbara Iron Ore Project (PIOP)

Tenement M47/1451 (Blacksmith)

Flinders Mines Limited (FMS) 100%

Flinders Mines Limited (ASX:FMS) is pleased to announce new significant high grade and near surface bedded iron (BID) mineralisation has been intersected in new drilling at the Company's wholly-owned Pilbara Iron Ore Project ("PIOP") in the Pilbara region of Western Australia.

Blackjack Deposit

Infill and near resource extensional drilling has now been completed at the PIOP's Blackjack deposit (*Figure 1*). Assays have been received for a further 80 holes (*Figure 2*) highlighting significant intersections of high grade BID mineralisation with considerably low levels of silica and alumina.

A list of the more significant intersections from surface is shown below with a complete list of intersections for all new holes in Table 1.

- Hole HPRC1579 – 24m of 57.3% Fe, 4.0% SiO_2, 3.7% Al_2O_3, 0.10% P and 9.7% LOI
- Hole HPRC1580 – 18m of 58.4% Fe, 4.2% SiO_2, 3.6% Al_2O_3, 0.07% P and 7.9% LOI
- Hole HPRC1598 – 40m of 60.0% Fe, 2.5% SiO_2, 1.7% Al_2O_3, 0.11% P and 9.3% LOI
- Hole HPRC1602 – 16m of 58.4% Fe, 2.8% SiO_2, 1.7% Al_2O_3, 0.10% P and 11.2% LOI
- Hole HPRC1604 – 30m of 58.9% Fe, 2.3% SiO_2, 2.3% Al_2O_3, 0.15% P and 10.4% LOI
- Hole HPRC1605 – 16m of 55.2% Fe, 5.3% SiO_2, 4.3% Al_2O_3, 0.09% P and 10.6% LOI
- Hole HPRC1610 – 30m of 58.8% Fe, 2.9% SiO_2, 2.9% Al_2O_3, 0.11% P and 9.3% LOI

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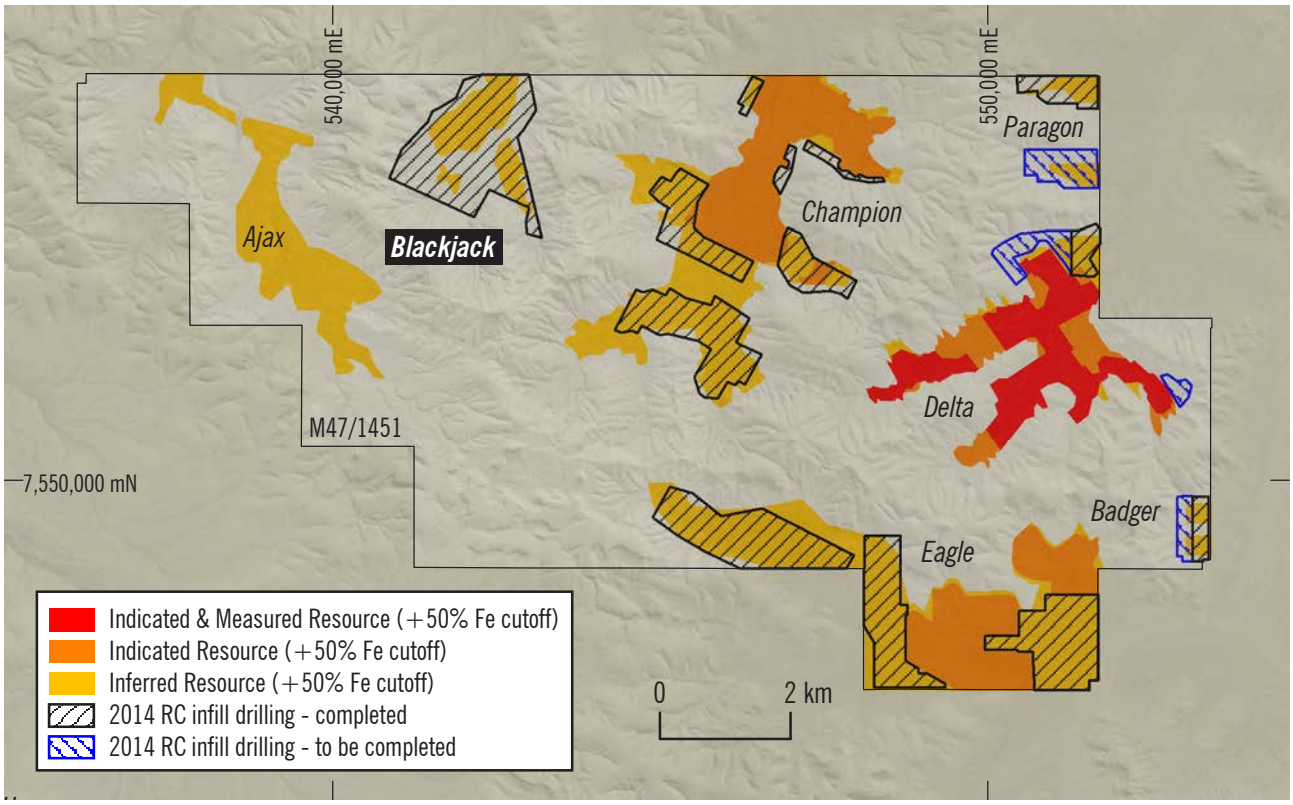

Figure 1 *Location of the Blackjack deposit within the broader Pilbara Iron Ore Project (PIOP).*

All of the intersections listed on page 1 are outside of the current Inferred Resource boundary and outside existing pit designs as defined during the project Pre-Feasibility Study (*Figure 2*). This mineralisation remains open to the south-east and west and is adjacent to targets previously identified for BID mineralisation in the hills surrounding the Blackjack deposit, providing support for the Company's exploration targets to the south of the Blackjack resource (*Figure 2 and refer to announcement 23/5/2013*). The exploration targets have not been updated to comply with the 2012 JORC Code on the basis that the information has not materially changed since it was last reported. The potential quantity and grade is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Once infill drilling across the project has been completed a specialised track mounted RC drill rig will be utilised to undertake drilling in the hills over the next two months to test for further high grade mineralisation adjoining the Blackjack Resource and other targets within the PIOP.

Significant results from drilling targeting new mineralisation will be reported as they are received.

Further updates of progress on the remaining infill drilling program at the PIOP will be provided in the 2014 September quarterly report.

Flinders is planning to release updated resource estimates for each of the individual deposits within the Pilbara Iron Ore Project over the next two months.

IAN GORDON
MANAGING DIRECTOR

2 September 2014

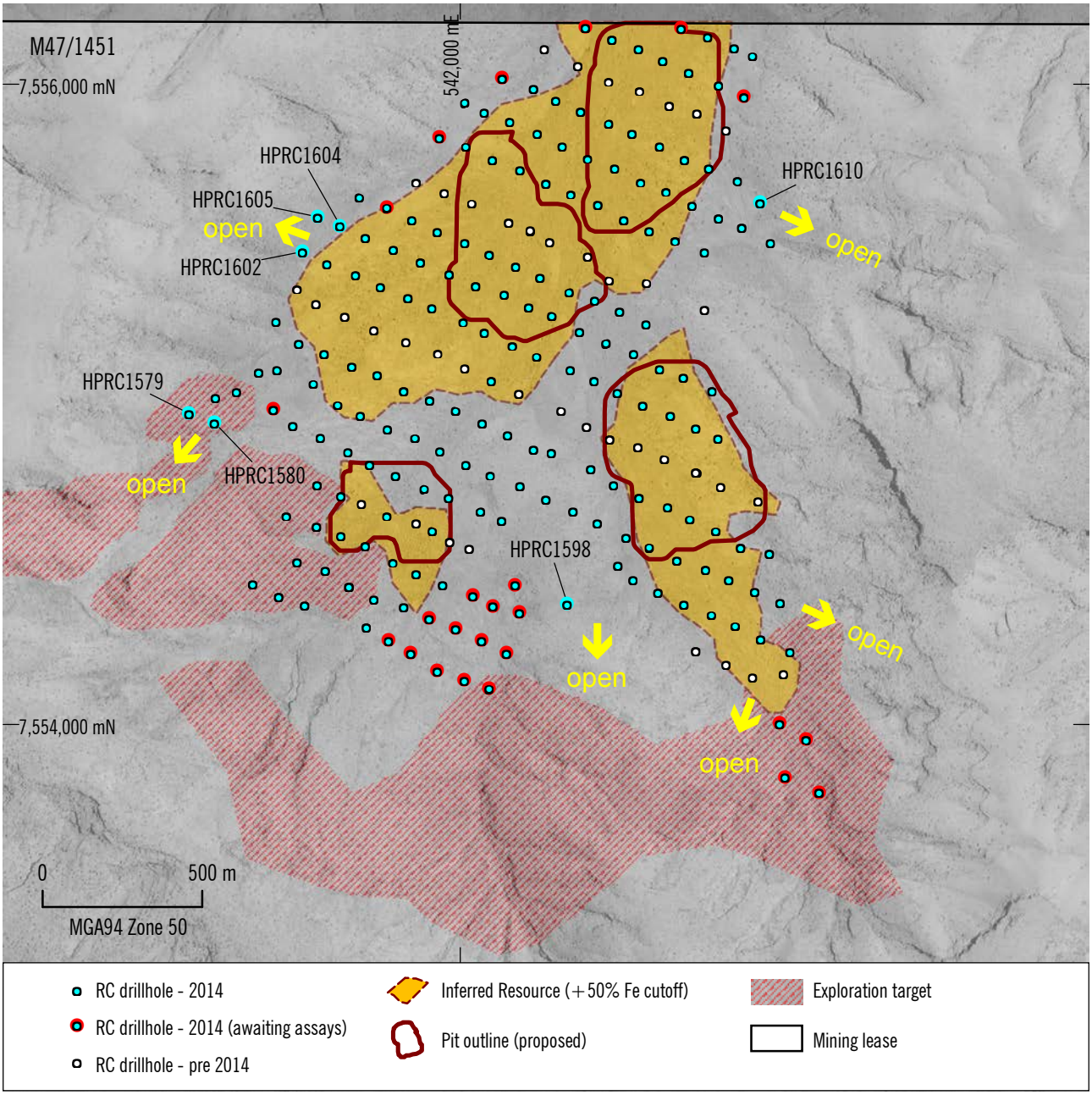

Figure 2 *Blackjack deposit drill hole plan showing exploration targets and current RC drilling status.*

Table 1 : *Intersections summary for new Blackjack RC drillholes.*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1532	7555044	542788	595	*NSI*							
HPRC1533	7555110	542344	588	32	38	6	55.9	6.6	3.7	0.09	8.9
HPRC1534	7555151	542240	576	20	28	8	59.0	8.6	4.5	0.05	1.6
HPRC1535	7555185	542164	576	30	34	4	57.4	8.1	5.9	0.03	3.0
HPRC1536	7555227	542076	574	20	34	14	58.8	8.3	4.9	0.04	1.7
HPRC1537	7555259	542010	579	20	36	16	59.1	7.7	5.1	0.04	1.8
HPRC1538	7555076	542098	583	30	36	6	58.0	8.2	5.9	0.03	2.0
HPRC1539	7554942	542068	585	*NSI*							
HPRC1540	7554982	541986	585	*NSI*							
HPRC1541	7555016	541905	585	20	34	14	58.9	7.9	4.2	0.06	2.8
HPRC1542	7555045	541824	592	*NSI*							
HPRC1543	7555094	541740	597	*NSI*							
HPRC1544	7555120	541660	587	*NSI*							
HPRC1545	7555159	541575	594	*NSI*							
HPRC1546	7555192	541494	599	*NSI*							
HPRC1547	7555260	541423	604	0	6	6	56.5	5.5	2.0	0.13	10.1
HPRC1548	7554857	541937	590	*NSI*							
HPRC1549	7554897	541859	595	18	24	6	60.0	6.8	4.7	0.05	1.8
				26	30	4	55.1	6.2	3.3	0.14	11.3
HPRC1550	7554924	541773	594	16	22	6	58.8	8.3	4.4	0.04	2.6
HPRC1551	7554967	541687	600	*NSI*							
HPRC1552	7555000	541617	597	*NSI*							
HPRC1553	7554711	541963	591	*NSI*							
HPRC1554	7554738	541888	590	*NSI*							
HPRC1555	7554779	541798	591	14	22	8	59.5	7.3	4.7	0.05	1.7
HPRC1556	7554814	541717	595	10	28	18	60.3	7.2	3.8	0.05	1.8
HPRC1557	7554853	541648	601	*NSI*							
HPRC1558	7554897	541562	602	*NSI*							
HPRC1559	7554936	541476	606	*NSI*							
HPRC1560	7554606	541913	581	*NSI*							
HPRC1561	7554653	541771	596	6	20	14	61.1	5.6	4.6	0.04	1.6
HPRC1562	7554716	541626	596	0	8	8	59.5	8.6	3.7	0.04	1.8
HPRC1563	7554750	541553	615	2	10	8	60.0	8.7	3.3	0.04	1.6
HPRC1564	7554508	541789	598	4	22	18	61.6	5.2	4.2	0.05	1.6
HPRC1565	7554472	541862	598	12	28	16	60.9	5.8	4.2	0.05	2.0
HPRC1566	7554438	541945	588	12	22	10	58.5	9.3	4.2	0.05	1.8
HPRC1567	7554368	541823	599	10	16	6	60.9	6.6	3.3	0.07	2.0
HPRC1568	7554440	541351	644	*NSI*							
HPRC1569	7554401	541432	632	*NSI*							
HPRC1570	7554374	541514	624	0	6	6	58.2	5.6	3.5	0.08	6.9
HPRC1571	7554431	541652	600	*NSI*							
HPRC1571A	7554433	541652	618	0	4	4	58.5	9.1	4.4	0.04	2.2
				6	10	4	61.2	5.5	4.4	0.05	2.0
HPRC1572	7554392	541730	599	*NSI*							
HPRC1573	7554307	541707	603	*NSI*							
HPRC1574	7554638	542130	606	*NSI*							
HPRC1575	7554667	542064	604	*NSI*							
HPRC1576	7554813	542018	594	*NSI*							

NSI - No significant intersection

Table 1 : *Intersections summary for new Blackjack RC drillholes (cont).*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1577	7555067	541540	594	*NSI*							
HPRC1578	7555023	541234	619	0	24	24	63.3	2.1	1.6	0.09	5.0
HPRC1579	7554971	541151	644	0	24	24	57.3	4.0	3.6	0.10	9.7
HPRC1580	7554942	541231	626	0	18	18	58.4	4.1	3.5	0.07	7.9
HPRC1581	7555041	541300	622	0	8	8	60.4	3.8	3.0	0.10	5.6
HPRC1582	7555102	541369	605	0	8	8	61.0	5.5	2.6	0.09	3.3
HPRC1583	7555109	541427	611	0	4	4	58.3	8.0	4.4	0.07	2.8
HPRC1584	7554509	541489	609	*NSI*							
HPRC1585	7554654	541456	614	0	8	8	56.9	4.2	4.2	0.11	9.3
HPRC1586	7554619	541550	594	*NSI*							
HPRC1587	7554560	541703	589	4	18	14	59.9	7.0	4.5	0.05	1.9
HPRC1588	7554590	541627	588	10	18	8	60.8	5.5	3.8	0.08	2.7
HPRC1589	7554483	541578	596	2	6	4	52.2	7.7	5.3	0.11	10.9
HPRC1590	7554906	542149	590	*NSI*							
HPRC1591	7554852	542285	593	*NSI*							
HPRC1592	7554862	542230	598	*NSI*							
HPRC1593	7554780	542094	602	*NSI*							
HPRC1594	7554746	542187	610	*NSI*							
HPRC1595	7554706	542269	612	*NSI*							
HPRC1596	7554668	542353	606	*NSI*							
HPRC1597	7554631	542429	594	*NSI*							
HPRC1598	7554378	542335	628	0	40	40	60.0	2.5	1.7	0.11	9.3
HPRC1599	7555369	541751	581	24	30	6	61.2	6.5	2.9	0.07	2.2
HPRC1600	7555407	541672	584	18	22	4	60.1	7.7	3.1	0.07	2.2
HPRC1601	7555440	541583	588	10	16	6	60.8	6.3	1.8	0.08	3.6
HPRC1602	7555477	541507	596	0	16	16	58.4	2.8	1.7	0.10	11.2
HPRC1603	7555524	541703	583	12	32	18	57.7	3.9	2.0	0.13	10.7
HPRC1604	7555559	541624	586	0	30	30	58.9	2.3	2.3	0.15	10.4
				32	36	4	54.8	6.3	3.4	0.10	11.3
HPRC1605	7555585	541554	602	0	16	16	55.2	5.3	4.3	0.09	10.6
				20	32	12	56.2	4.2	4.1	0.11	10.4
HPRC1606	7555649	541684	583	*NSI*							
HPRC1607	7555477	542764	574	*NSI*							
HPRC1608	7555555	542881	576	10	18	8	56.5	5.3	2.3	0.13	10.7
HPRC1609	7555507	542970	580	8	12	4	55.8	7.1	2.9	0.09	9.4
HPRC1610	7555632	542938	584	0	30	30	58.8	2.9	2.9	0.11	9.3
HPRC1611	7556177	542691	566	*Assays pending*							
HPRC1612	7555964	542888	585	*Assays pending*							
HPRC1613	7556178	542392	567	*Assays pending*							
HPRC1614	7556020	542131	584	*Assays pending*							
HPRC1615	7555835	541935	579	*Assays pending*							
HPRC1616	7555617	541770	592	*Assays pending*							
HPRC1617	7554985	541416	608	*Assays pending*							
HPRC1618	7554437	542172	603	*Assays pending*							
HPRC1619	7554350	542185	598	*Assays pending*							
HPRC1620	7554371	542103	599	*Assays pending*							
HPRC1621	7554403	542040	592	*Assays pending*							
HPRC1622	7554331	541903	594	*Assays pending*							

NSI - No significant intersection

Table 1 : *Intersections summary for new Blackjack RC drillholes (cont).*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1623	7554223	542145	604	*Assays pending*							
HPRC1624	7554262	542067	605	*Assays pending*							
HPRC1625	7554299	541986	598	*Assays pending*							
HPRC1626	7554263	541776	600	*Assays pending*							
HPRC1627	7554223	541846	599	*Assays pending*							
HPRC1628	7554167	541928	601	*Assays pending*							
HPRC1629	7554138	542012	611	*Assays pending*							
HPRC1630	7554113	542091	608	*Assays pending*							
HPRC1631	7553835	543016	624	*Assays pending*							
HPRC1632	7553789	543123	617	*Assays pending*							
HPRC1633	7553954	543082	609	*Assays pending*							
HPRC1634	7554004	542999	619	*Assays pending*							

QUALIFYING STATEMENTS

Forward-looking statements

This release may include forward-looking statements. These forward-looking statements are based on management's expectations and beliefs concerning future events as of the time of the release of this document. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, some of which are outside the control of Flinders Mines Limited, that could cause actual results to differ materially from such statements. Flinders Mines Limited makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.

Exploration Targets

Exploration Targets are reported according to Clause 18 of the 2004 JORC Code. This means that the potential quantity and grade is conceptual in nature and that considerable further exploration, particularly drilling, is necessary before any Identified Mineral Resource can be reported. It is uncertain if further exploration will lead to a larger, smaller or any Mineral Resource.

Competent Persons

The information in this report that relates to Exploration Targets, Exploration Results, or Mineral Resources is based on information compiled by Dr Graeme McDonald who is a member of the Australian Institute of Mining and Metallurgy and a full-time employee of Flinders Mines Limited. Dr McDonald has sufficient experience that is relevant to the styles of mineralisation and types of deposits 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 for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr McDonald consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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JORC 2012 - Table 1

Pilbara Iron Ore Project, September 2014

Section 1 - Sampling Techniques and Data

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

Criteria	Commentary
Sampling techniques	• Exploration results are based on 2m composite samples from Reverse Circulation (RC) drilling. • An average sample size of 4-5 kg was collected and sent for major and trace element analysis via XRF fusion techniques. All samples were submitted for analysis. • Field standards (Certified Reference Materials – CRM's) and duplicates were used to ensure sample representivity and quality of results. • All Diamond drill holes were triple tubed with half core used for QAQC purposes and whole core used for metallurgical test work.
Drilling techniques	• The majority of drilling was Reverse Circulation (RC) drill holes of approximately 140mm diameter utilising a face sampling hammer button bit. • PQ sized Diamond (DD) holes were drilled for metallurgical work and HQ sized holes for geotechnical and QAQC purposes. All geotechnical holes were angled and oriented.
Drill sample recovery	• Sample quality and recovery of both RC and Diamond drilling was continuously monitored during drilling to ensure that samples were representative and recoveries maximized. • RC sample recovery was recorded as good (G) or poor (P). 93% of all samples were logged as good. • Diamond core recoveries are routinely logged and recorded in the database as a measure of length of core recovered versus the depth drilled. • Results of previous RC-Diamond twin holes indicate that there is no significant bias in the RC assays due to water or grain size.
Logging	• Detailed geological logging of all RC and DD holes captured various qualitative and quantitative parameters such as mineralogy, colour, texture and sample quality. • RC holes were logged at 2m intervals. • The logging data is relevant for both mineral resource estimation and future mining and processing studies. • All Diamond core has been photographed.
Sub-sampling techniques and sample preparation	• RC drilling samples are collected in pre-labelled bags via a cone splitter mounted directly below the cyclone. • Wet and dry sample are collected via the same technique. • Samples were stored on site prior to being transported to the laboratory. Wet samples were allowed to dry before being processed. • At the laboratory the samples are sorted, dried and weighed. They are crushed and split via a riffle splitter to obtain a sub-fraction. This fraction is pulverized and used for analysis. • Field duplicates were taken at a rate of 4 per 100 samples. • Field standards (CRM's) were inserted at a rate of 5 per 100 samples. • Laboratory duplicates and standards were also used as quality control measures at different sub-sampling stages. No significant issues have been identified. • No formal analysis of sample size versus grain size has been undertaken, however, the sampling techniques employed are industry best practice.

Criteria	Commentary
Quality of assay data and laboratory tests	• All RC samples were submitted to Ultra Trace laboratory in Perth, an accredited laboratory with the National Association of Testing Authorities (NATA). • All samples were analysed via X-Ray Fluorescence (XRF) fused disc for a standard suite of elements including : Fe, SiO_2, Al_2O_3, TiO_2, MnO, CaO, P, S, MgO, K_2O, Zn, Pb, Cu, BaO, V_2O_5, Cr, Ni, Co, Na_2O. • Multi-point Loss On Ignition (LOI) was determined at 425, 650 and 1000 degrees celcius via thermo gravimetric analysis. • Field duplicates were taken at a rate of 4 per 100 samples as an original split at the time of primary sample collection. • Field standards (CRM's) were inserted at a rate of 5 per 100 samples. • No significant issues or concerns were apparent with the analysis of the field duplicates or standards. • Approximately 5% of all samples have been sent to an umpire laboratory as an independent check. No significant issues were identified with an excellent correlation between laboratories.
Verification of sampling and assaying	• Significant intersections have been independently verified by company geologists. • A twin hole (RC v DD) analysis demonstrated a high degree of compatibility between the two sample types with no evidence of any significant grade bias due to drilling method. • Twin RC v RC holes have shown good correlation between the original and twin hole. • Logging data is collected directly via Ocris logging software with inbuilt validations check and loaded into a Geobank database. Assay data is loaded directly into the database. This database is currently managed by Flinders staff. A physical check of assays within the database versus hard copies is done at a rate of 5%. No errors have been identified. • Several unannounced audits of laboratories were conducted while Flinders samples were being processed. No issues or concerns were apparent.
Location of data points	• Drill hole collar locations have been surveyed using a Differential GPS with an accuracy of <5cm for Easting, Northing and elevation. • Collar surveys are validated against planned coordinates and the topographic surface. • Downhole surveys have not been carried out. • The primary grid used is Map Grid Australia 94, Zone 50 (GDA94). Vertical datum is the Australian Height Datum (AHD). • Topographic surface uses 2009 Lidar 50cm contours.
Data spacing and distribution	• The drill grid spacing varies between deposits. • For the majority of deposits a nominal spacing of approximately 100m x 125m is achieved. The Delta deposit is drilled at a spacing of approximately 50m x 50m over much of its area while Ajax is approximately 100m x 500m. • This level of drill spacing is sufficient for this style of mineralisation to establish the degree of geological and grade continuity required for Inferred through to Measured Mineral Resources.
Orientation of data in relation to geological structure	• The majority of drill holes are vertical and less than 120m deep. • Given the drill hole spacing and the predominantly flat lying ore body, any deviation of these vertical holes would have minimal to no impact on the geological interpretation. • No apparent material relationship is present between sampling bias and geological orientation.

Criteria	Commentary
Sample security	• Sample chain of custody is managed by Flinders. • Samples in calico bags are packed into polyweave bags and then placed into heavy duty bulk bags for transport to Tom Price. They are then transported via commercial freight directly to the laboratory. • Consignment notes for each submission are tracked and monitored.
Audits or reviews	• No formal audits or reviews have been undertaken. Optiro has reviewed QAQC and twin hole analysis reports prepared by Flinders and undertaken independent validation of the database. No significant issues were identified.

Section 2 - Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	• The Pilbara Iron Ore Project (PIOP) comprises two 100% owned tenements, M47/1451 and E47/1560, located approximately 70km NW of Tom Price. • The tenements lie within the Eastern Guruma Native Title Determination. Flinders has a current Native Title Agreement in place.
Exploration done by other parties	• Very little previous exploration has been undertaken by other parties. Robe River Mining undertook regional scale Fe exploration while a number of other parties have undertaken diamond exploration.
Geology	• Local bedrock geology is dominated by the Dales Gorge, Whaleback Shale and Joffre Members of the Brockman Iron Formation. Incised into this bedrock are channel systems which contain buried Channel Iron Deposits (CID) and Detrital Iron Deposits (DID). Some areas of the bedrock are also mineralised forming Bedded Iron Deposits (BID).
Drill hole Information	• A summary of drill hole information material to the understanding of the Blackjack deposit exploration results is included in the accompanying release (*Table 1*). • A diagram showing the location of drill hole collars is included in the accompanying release (*Figure 2*).
Data aggregation methods	• All intersections are determined using a minimum 50% Fe cut, maximum 10% SiO_2 and a maximum of 2m internal dilution. • As all samples are the same length, assays are averaged over the total intersection.
Relationship between mineralisation widths and intercept lengths	• The majority of drill holes are vertical and the ore body is predominantly horizontal thus any intersection quoted represents an approximation of the true width of the mineralisation.
Diagrams	• Appropriate diagrams are included as part of the accompanying release, including a plan of drill hole collar locations and defined resource areas.
Balanced reporting	• Intercepts for new drill holes from the Blackjack deposit since last reported on 11 August 2014 are shown in Table 1 of the release. Assays are pending for some holes.
Other substantive exploration data	• Nothing to report.
Further work	• Infill drilling across the deposits is ongoing as previously reported as is metallurgical testwork. Mineralisation remains open in a number of places and there are no plans to attempt to close this off at this stage. Targets adjacent to the Blackjack resource will be drilled in the next month.