Flinders MINES | ASX ANNOUNCEMENT

1 October 2014

Significant Increase in the Champion Deposit Mineral Resource

highlights

- *PIOP Champion Deposit Mineral Resource increased to 202.1 Mt @ 55.7% Fe*
- *Majority of the Champion Mineral Resource is Indicated*
- *Significant increase in higher quality DID and BID material*
- *New Global resource estimate for PIOP to be released in coming months*

Pilbara Iron Ore Project (PIOP)

Tenement M47/1451 (Blacksmith)

Flinders Mines Limited (FMS) 100%

Flinders Mines Limited (ASX: FMS) is pleased to announce an update to the Mineral Resource at the Champion deposit at the Company's wholly-owned Pilbara Iron Ore Project (PIOP) in the Pilbara region of Western Australia.

Champion Deposit

The extensive infill drilling program undertaken at the PIOP this year (*Figure 1*) has included a significant amount of new drilling at the Champion deposit (*Figure 2*).

Based on the results of this drilling, the updated Mineral Resource for the Champion deposit is 202.1 Mt @ 55.7% Fe, using a +50% iron cut-off. A significant proportion of this Mineral Resource is now Indicated - 199.5 Mt @ 55.7% Fe, (*Table 1 and Figure 2*). Further detailed information relating to the generation of the resource estimate is shown in the JORC 2012 - Table 1 on page 9.

Champion Deposit Mineral Resource for + 50% Fe (September 2014)						
JORC Classification	Tonnage Mt	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
Total Inferred	2.6	55.8	11.3	4.1	0.07	3.7
Total Indicated	199.5	55.7	9.4	4.8	0.07	5.1
TOTAL	202.1	55.7	9.5	4.7	0.07	5.1

Table 1 *Champion Deposit Indicated and Inferred Mineral Resource.*

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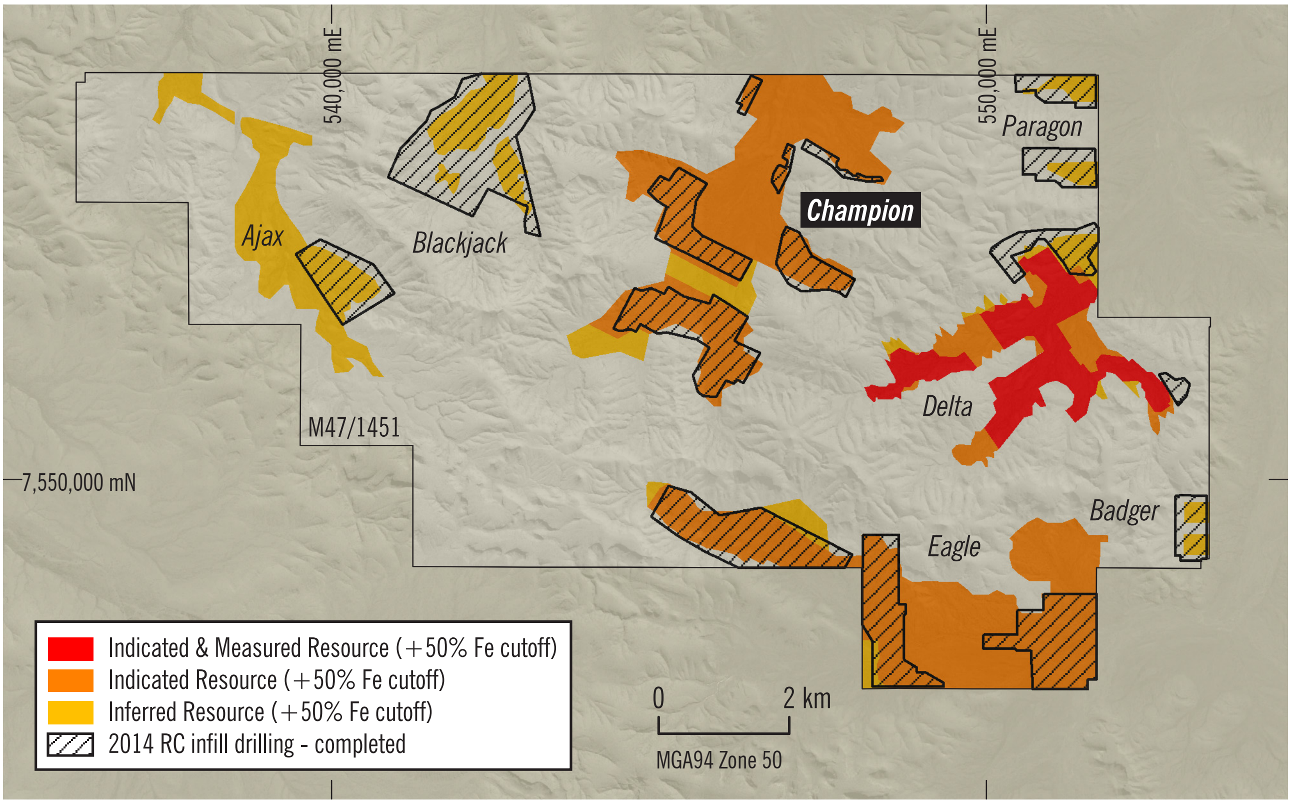

Figure 1 *Location of the Champion deposit within the broader Pilbara Iron Ore Project (PIOP).*

The Mineral Resource is comprised of 48.4 Mt of Bedded Iron Deposit (BID) at 55.9% Fe, 133.7 Mt of Detrital Iron Deposit (DID) at 55.8% Fe and 20.0 Mt of Channel Iron Deposit (CID) at 54.9% Fe (*Table 2*). Examples of the relationship between different geological units are shown in the cross sections in Figure 3, 4 and 5.

The distribution of the Inferred and Indicated Mineral Resources for the Champion deposit is shown in Figure 2. The previous Mineral Resource for the Champion deposit was 173.5 Mt @ 55.3% Fe. The new resource represents a significant increase of 28.6 Mt. This increase is due to the discovery of predominantly high quality DID and BID mineralisation via infill drilling undertaken in the central part of the deposit (*Figure 4 – Line 26*).

The infill drilling undertaken this year (*refer to Table 3*) was designed to increase the confidence of the resource to the Indicated category rather than to increase the overall size of the resource. However, this increase together with the recent positive drilling results from the Blackjack and Paragon deposits highlight the importance of an ongoing exploration effort and the potential for further mineralisation to be identified.

This Mineral Resource update, when combined with those of the other deposits across the PIOP in coming months, will culminate in an update to the PIOP global resource and will be integrated into the Bankable Feasibility Study, currently due for completion by the end of June 2015.

IAN GORDON
MANAGING DIRECTOR

1 October 2014

Deposit Type	Inferred Resource (Mt)	Indicated Resource (Mt)
Bedded Iron Deposit (BID)	0.4	48.0
Detrital Iron Deposit (DID)	2.2	131.5
Channel Iron Deposit (CID)	-	20.0
TOTAL	2.6	199.5

Table 2 *Champion Deposit Mineral Resource summary of mineralisation types.*

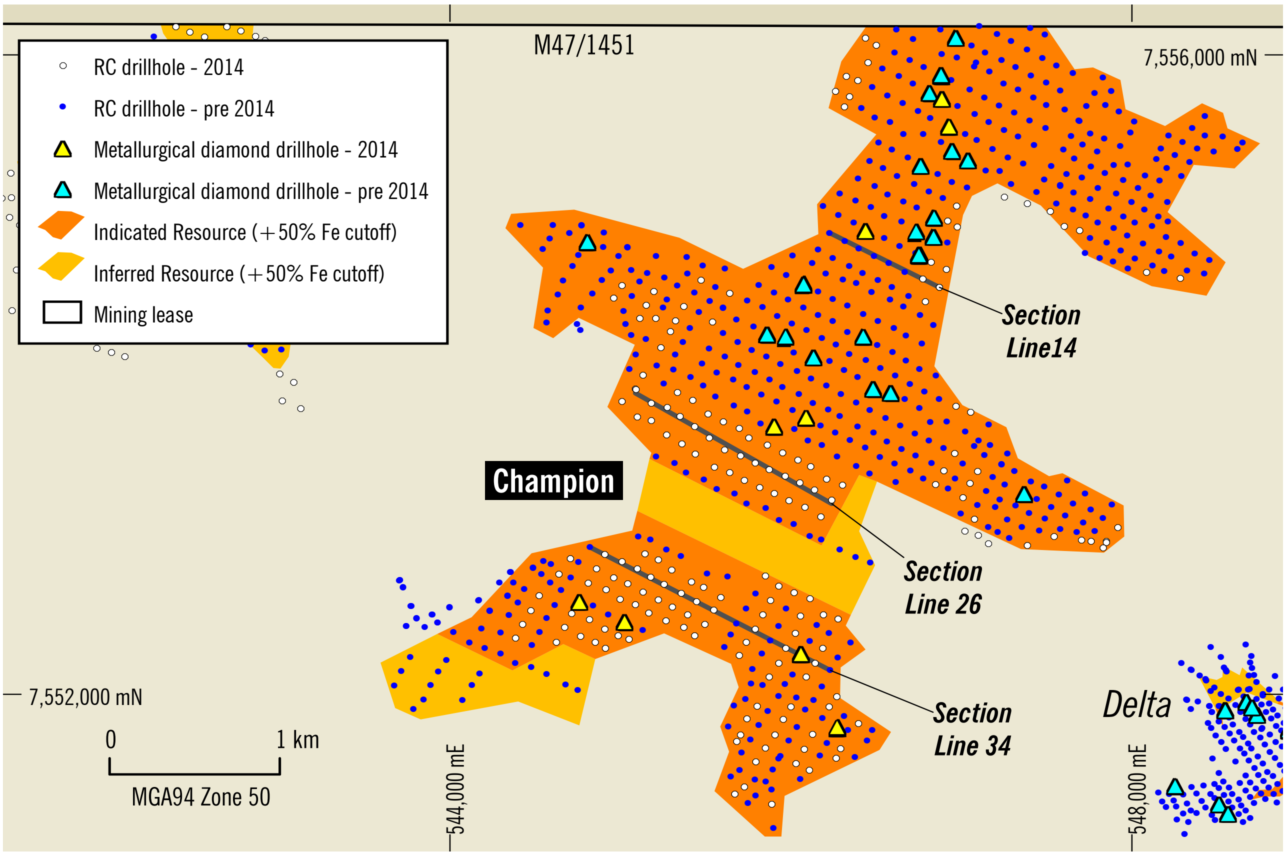

Figure 2 *Champion deposit drill hole plan.*

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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.

Competent Persons

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Dr Graeme McDonald who is a Member of The Australasian Institute of Mining and Metallurgy. The information that relates to the Mineral Resource Estimate has been compiled by Mr Paul Blackney of Optiro Pty Ltd. who is a Member of the Australasian Institute of Mining and Metallurgy. Both Dr McDonald and Mr Blackney have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr McDonald and Mr Blackney consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

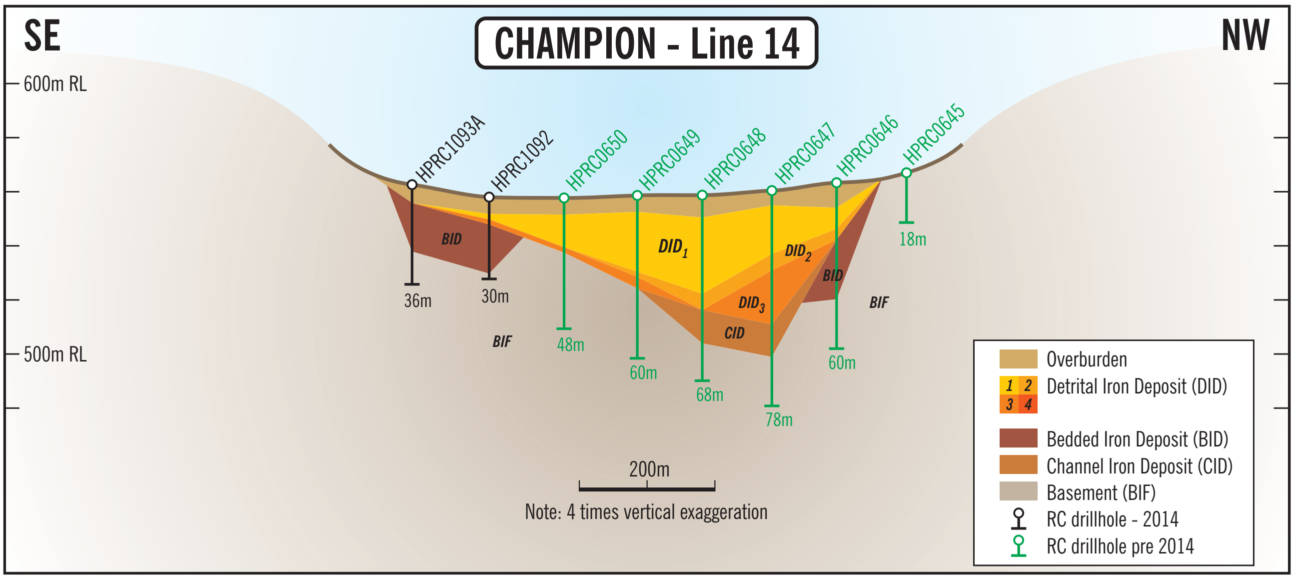

Figure 3 *Line 14 cross-section through Champion deposit.*

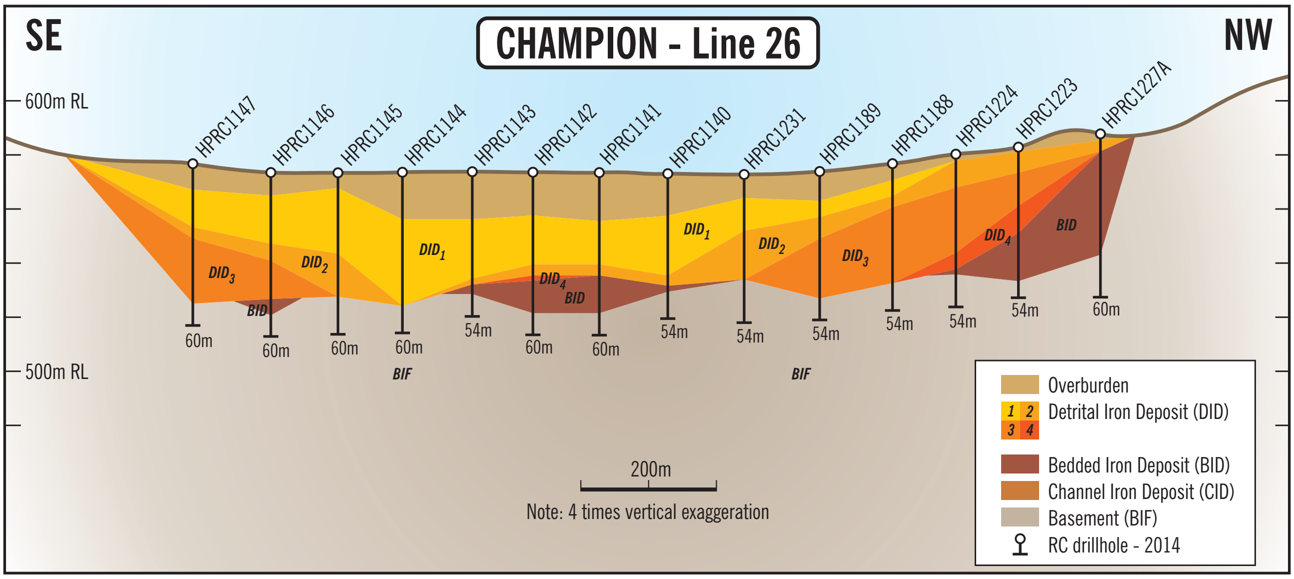

Figure 4 *Line 26 cross-section through Champion deposit.*

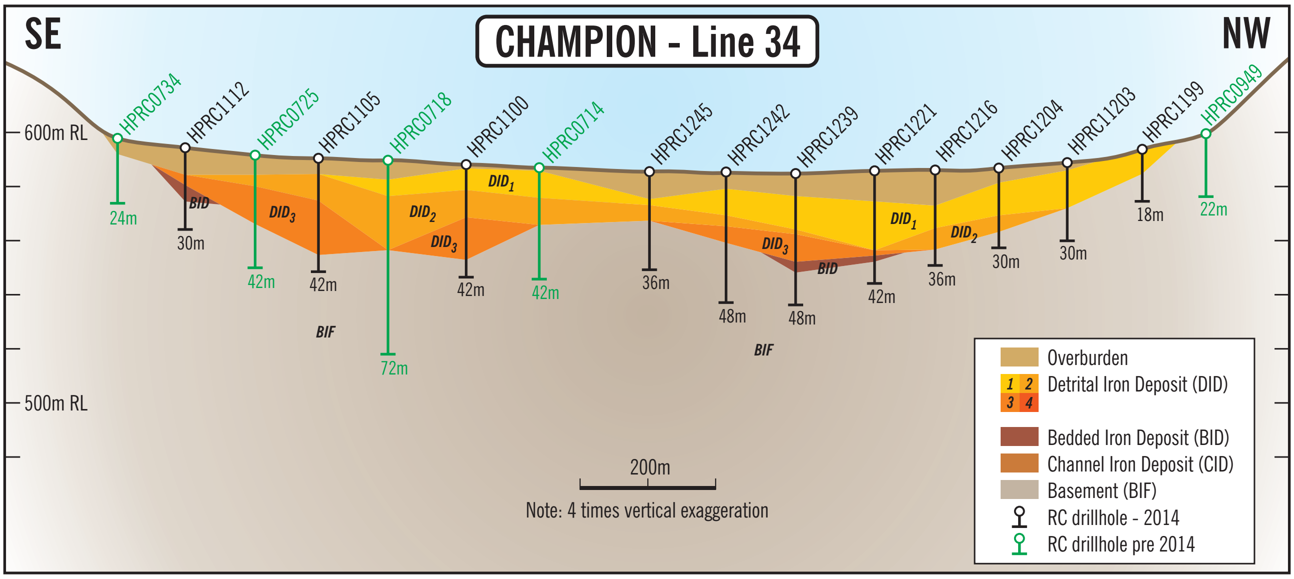

Figure 5 *Line 34 cross-section through Champion deposit.*

Table 3 : *Intersections summary for new Champion RC drillholes.* *NSI - No significant intersection*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1083	7554900.3	547691.9	569.3	*NSI*							
HPRC1084	7554928.1	547600.4	571.2	*NSI*							
HPRC1085	7554601.9	548284.0	578.0	*NSI*							
HPRC1086	7554639.7	548084.7	575.9	10	14	4	58.0	3.1	2.8	0.11	9.4
HPRC1087	7555054.8	546970.6	552.5	*NSI*							
HPRC1088	7554923.8	546974.3	560.8	*NSI*							
HPRC1089	7554962.9	546919.6	553.7	*NSI*							
HPRC1090	7554704.4	546822.6	556.8	*NSI*							
HPRC1091	7554658.9	546909.8	560.4	*NSI*							
HPRC1092	7554600.8	546772.5	557.5	12	28	16	55.9	3.8	3.7	0.12	11.3
HPRC1093	7554546.1	546871.1	561.6	8	24	16	53.0	6.8	5.1	0.12	11.1
HPRC1093A	7554546.2	546871.1	561.6	*NSI*							
HPRC1094	7554459.0	546788.2	562.4	*NSI*							
HPRC1095	7552740.0	545847.7	584.0	*NSI*							
HPRC1096	7552678.9	545927.0	585.2	*NSI*							
HPRC1097	7552636.6	546016.3	586.2	*NSI*							
HPRC1098	7552589.9	545879.9	586.6	*NSI*							
HPRC1099	7552496.6	545835.1	587.2	*NSI*							
HPRC1100	7552409.3	545787.5	588.6	20	26	6	56.9	8.8	6.5	0.03	2.1
and				28	34	6	60.1	7.1	4.5	0.04	1.5
HPRC1101	7552327.6	545736.8	589.8	16	22	6	60.0	5.9	4.3	0.05	3.0
HPRC1102	7552245.2	545694.5	594.5	*NSI*							
HPRC1103	7552490.8	546054.8	588.8	*NSI*							
HPRC1104	7552383.5	546025.9	589.5	22	26	4	60.5	8.0	2.9	0.05	1.5
HPRC1105	7552289.3	545969.5	590.6	16	30	14	59.7	7.3	4.8	0.04	1.6
HPRC1106	7552197.2	545927.3	592.3	16	24	8	57.1	9.1	6.2	0.03	2.0
HPRC1107	7552109.3	545872.4	593.7	12	20	8	57.8	6.9	4.9	0.06	4.7
HPRC1108	7551928.1	545799.0	598.1	8	22	14	62.0	4.9	4.0	0.06	1.9
HPRC1109	7551846.4	545740.9	601.8	8	12	4	56.8	6.3	2.6	0.09	9.0
HPRC1110	7551746.7	545702.6	603.8	*NSI*							
HPRC1111	7552289.2	546186.6	596.6	*NSI*							
HPRC1112	7552194.9	546141.5	594.1	10	20	10	57.3	6.6	3.5	0.07	7.1
HPRC1113	7552110.1	546089.5	595.0	*NSI*							
HPRC1114	7551921.1	545999.9	595.8	8	14	6	59.6	7.1	5.2	0.04	1.7
HPRC1115	7551846.1	545953.5	597.8	6	14	8	57.6	8.7	6.0	0.03	1.9
HPRC1116	7551747.7	545903.9	599.7	*NSI*							
HPRC1117	7551663.0	545850.2	601.9	10	14	4	57.1	8.6	6.0	0.04	2.5
HPRC1118	7551577.1	545792.3	604.5	8	12	4	59.9	7.6	4.1	0.05	1.2
HPRC1119	7551422.9	545724.2	609.0	0	14	14	63.1	2.2	2.4	0.08	4.1
HPRC1120	7551922.8	546223.0	599.9	*NSI*							
HPRC1121	7551749.8	546127.3	600.2	8	20	12	59.4	6.4	5.2	0.03	1.9
HPRC1122	7551656.4	546075.8	602.4	*NSI*							
HPRC1123	7551569.0	546027.5	605.6	*NSI*							
HPRC1124	7551312.1	545887.8	608.8	0	10	10	57.5	5.0	3.3	0.08	8.8
HPRC1125	7551528.2	546107.0	605.5	*NSI*							
HPRC1126	7551819.1	546395.2	604.8	*NSI*							
HPRC1127	7551659.9	546288.5	606.8	8	16	8	62.6	4.6	3.4	0.04	1.6
HPRC1128	7551602.2	546264.4	609.7	4	10	6	56.9	7.2	4.0	0.07	6.3
HPRC1129	7552470.5	546276.3	607.0	2	6	4	59.3	5.3	2.9	0.06	5.7

Table 3 : *Intersections summary for new Champion RC drillholes (cont).* *NSI - No significant intersection*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1130	7552498.4	546187.6	599.0	*NSI*							
HPRC1131	7552599.7	546110.9	596.6	*NSI*							
HPRC1132	7553664.1	545694.8	572.5	30	52	22	58.7	2.3	3.2	0.14	9.9
HPRC1133	7553603.3	545750.4	572.7	34	50	16	58.1	3.2	3.2	0.17	9.3
HPRC1134	7553561.8	545860.6	572.3	38	54	16	56.2	5.3	3.9	0.13	8.8
HPRC1135	7553512.7	545949.5	573.0	*NSI*							
HPRC1136	7553466.9	546037.9	572.4	*NSI*							
HPRC1137	7553426.4	546112.9	572.0	*NSI*							
HPRC1138	7553346.3	546208.6	573.8	*NSI*							
HPRC1139	7553308.2	546300.2	574.6	*NSI*							
HPRC1140	7553531.9	545609.0	573.6	*NSI*							
HPRC1141	7553490.8	545702.8	573.5	38	50	12	58.1	3.2	2.8	0.15	10.0
HPRC1142	7553447.5	545790.0	573.7	38	48	10	57.8	4.6	3.4	0.12	8.4
HPRC1143	7553406.7	545869.7	574.4	42	46	4	55.7	5.1	4.5	0.14	9.8
HPRC1144	7553364.2	545963.3	574.4	*NSI*							
HPRC1145	7553323.6	546048.9	573.8	46	52	6	55.8	7.6	2.4	0.13	9.1
HPRC1146	7553279.7	546138.5	573.2	32	48	16	58.6	8.0	4.0	0.04	3.3
HPRC1147	7553217.3	546235.8	577.3	28	52	24	61.8	5.3	3.2	0.04	2.2
HPRC1148	7553421.0	545549.7	575.4	*NSI*							
HPRC1149	7553386.5	545638.3	574.9	38	44	6	57.1	3.3	3.5	0.18	10.6
HPRC1150	7553339.3	545727.0	575.1	*NSI*							
HPRC1151	7553293.1	545815.5	576.3	*NSI*							
HPRC1152	7553255.6	545901.7	576.1	*NSI*							
HPRC1153	7553213.1	545986.6	576.2	*NSI*							
HPRC1154	7553173.1	546079.1	577.5	*NSI*							
HPRC1155	7553112.8	546172.6	579.4	28	32	4	56.7	8.6	4.9	0.08	4.2
HPRC1156	7554428.8	545372.3	577.9	22	38	16	56.2	4.0	4.0	0.14	10.9
HPRC1157	7554591.2	545470.3	580.9	*NSI*							
HPRC1158	7554351.2	545207.7	579.2	12	20	8	55.8	6.6	3.1	0.09	10.0
HPRC1159	7554354.2	545112.1	580.8	6	20	14	55.7	6.5	3.1	0.11	10.3
HPRC1160	7554435.8	545150.7	581.2	22	28	6	54.8	3.4	5.1	0.14	12.4
HPRC1161	7554519.3	545192.9	581.4	14	24	10	57.0	3.9	3.2	0.12	10.6
HPRC1162	7554479.3	544959.2	586.3	*NSI*							
HPRC1163	7554557.7	545006.6	585.4	*NSI*							
HPRC1164	7554329.5	545540.0	574.2	24	34	10	56.2	5.7	3.6	0.09	9.3
HPRC1165	7554510.0	545640.7	574.9	*NSI*							
HPRC1166	7553802.2	546967.9	575.5	*NSI*							
HPRC1167	7553506.1	546958.1	576.2	28	40	12	58.8	8.0	5.1	0.04	1.7
HPRC1168	7553400.5	546895.4	578.5	*NSI*							
HPRC1169	7553312.5	546846.1	585.2	*NSI*							
HPRC1170	7553232.7	547007.1	587.1	*NSI*							
HPRC1171	7553321.5	547049.8	582.8	28	34	6	57.7	9.7	4.8	0.04	1.8
HPRC1172	7553395.4	547091.8	579.2	28	32	4	58.0	9.2	4.7	0.05	1.8
and				36	44	8	61.9	5.7	2.5	0.07	1.7
HPRC1173	7552915.8	547830.5	611.7	*NSI*							
HPRC1174	7552956.8	547848.5	605.4	0	12	12	57.3	2.9	2.8	0.10	11.6
HPRC1174A	7552952.0	547847.0	605.8	0	12	12	56.9	2.9	3.1	0.10	11.8
and				14	18	4	56.2	4.7	3.0	0.09	11.1
HPRC1175	7553043.0	547916.6	599.3	*NSI*							

Table 3 : *Intersections summary for new Champion RC drillholes (cont).* *NSI - No significant intersection*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1176	7552958.6	547758.4	600.0	*NSI*							
HPRC1177	7552966.7	547703.1	594.5	*NSI*							
HPRC1178	7552987.9	547541.4	597.0	*4*	14	10	57.6	6.8	2.2	0.08	8.1
HPRC1179	7552931.3	547385.2	616.0	*NSI*							
HPRC1180	7552942.1	547156.0	612.5	*NSI*							
HPRC1181	7552997.3	547098.9	596.8	*NSI*							
HPRC1182	7553095.5	547076.3	588.9	*NSI*							
HPRC1183	7553021.6	547020.6	604.8	*NSI*							
HPRC1184	7553764.4	547051.2	581.0	*NSI*							
HPRC1185	7553998.3	545132.9	583.0	*NSI*							
HPRC1186	7553753.6	545513.9	571.4	20	34	14	58.6	6.4	6.3	0.04	2.0
HPRC1187	7553705.1	545602.0	571.4	30	34	4	55.4	7.1	6.7	0.08	6.1
HPRC1188	7553739.5	545346.1	576.6	16	38	22	60.7	5.2	4.9	0.04	1.9
HPRC1189	7553674.0	545433.0	573.0	24	40	16	58.9	7.0	5.5	0.04	2.0
HPRC1190	7552327.2	544622.7	597.2	*NSI*							
HPRC1191	7552351.8	544385.2	600.7	*NSI*							
HPRC1192	7552439.0	544426.0	598.7	4	12	8	59.6	6.9	4.8	0.04	2.1
HPRC1193	7552526.4	544473.4	602.2	10	16	6	55.0	8.1	2.7	0.10	9.2
HPRC1194	7552616.4	544521.6	603.7	*NSI*							
HPRC1195	7552849.0	544704.2	600.1	*NSI*							
HPRC1196	7552751.3	544636.3	600.0	2	28	26	58.3	4.3	2.5	0.11	9.1
HPRC1197	7552696.0	544810.1	595.0	14	24	10	61.6	4.4	4.8	0.04	1.9
HPRC1198	7552786.9	544859.5	593.9	*NSI*							
HPRC1199	7552876.8	544906.9	592.3	*NSI*							
HPRC1200	7552467.0	544817.7	592.9	*NSI*							
HPRC1201	7552654.3	544914.7	591.1	18	30	12	60.1	5.9	5.4	0.04	1.6
HPRC1202	7552731.7	544958.5	590.6	20	26	6	60.3	6.7	4.7	0.04	1.4
HPRC1203	7552832.8	545009.4	589.6	*NSI*							
HPRC1204	7552787.1	545098.5	587.0	*NSI*							
HPRC1205	7552879.7	545142.7	585.5	*NSI*							
HPRC1206	7552693.4	545041.4	588.3	*NSI*							
HPRC1207	7552595.8	544996.8	589.4	*NSI*							
HPRC1208	7552418.3	544671.2	595.1	*NSI*							
HPRC1209	7552505.9	544711.8	595.6	14	28	14	61.0	5.7	4.1	0.05	2.1
HPRC1210	7552365.2	544765.7	594.2	16	20	4	57.5	8.0	5.9	0.04	3.0
HPRC1211	7552328.2	544851.2	593.1	*NSI*							
HPRC1212	7552368.8	544984.2	591.8	4	16	12	57.4	4.4	2.5	0.07	10.2
HPRC1213	7552410.3	544907.6	592.1	16	22	6	56.2	5.9	4.9	0.07	7.9
HPRC1214	7552560.3	545086.0	589.2	22	32	10	57.3	8.1	6.7	0.04	2.1
HPRC1215	7552641.6	545129.4	588.0	*NSI*							
HPRC1216	7552732.9	545176.6	586.6	*NSI*							
HPRC1217	7552842.6	545220.1	585.1	*NSI*							
HPRC1218	7552461.8	545264.6	588.0	6	16	10	58.8	4.5	3.0	0.07	7.9
HPRC1219	7552508.4	545163.9	588.7	14	26	12	58.2	7.0	4.9	0.05	4.1
HPRC1220	7552593.5	545220.7	587.2	24	32	8	58.6	7.0	5.4	0.06	3.0
HPRC1221	7552690.1	545254.0	586.1	30	34	4	57.9	7.4	1.9	0.14	7.3
HPRC1222	7552780.2	545299.1	584.8	*NSI*							
HPRC1223	7553822.8	545180.6	581.2	8	48	40	60.5	3.5	2.7	0.10	6.2
HPRC1224	7553796.9	545272.0	577.8	10	40	30	62.2	4.6	3.9	0.05	1.8

Table 3 : *Intersections summary for new Champion RC drillholes (cont).* *NSI - No significant intersection*

Hole	MGA N	MGA E	RL	From (m)	To (m)	Interval (m)	Fe%	SiO_2%	Al_2O_3%	P%	LOI%
HPRC1225	7553889.5	545334.2	577.4	12	44	22	59.7	5.1	5.2	0.05	3.4
HPRC1226	7553838.5	545423.7	573.2	14	38	24	60.2	5.5	5.4	0.04	2.0
HPRC1227	7553909.8	545087.0	585.4	4	42	38	56.6	3.7	4.2	0.12	10.4
HPRC1227A	7553909.0	545090.0	587.4	4	30	26	57.7	3.6	3.7	0.13	9.5
and				32	44	12	55.6	4.2	5.6	0.11	9.9
HPRC1228	7554168.9	545235.1	579.0	*NSI*							
HPRC1229	7554268.8	545290.3	577.7	*NSI*							
HPRC1230	7554337.2	545320.1	576.6	8	12	4	55.1	5.7	4.7	0.07	10.3
HPRC1231	7553603.0	545520.0	572.0	28	32	4	56.3	9.2	6.5	0.04	2.5
HPRC1232	7553505.0	545437.0	574.5	*NSI*							
HPRC1233	7553569.0	545361.0	576.0	*NSI*							
HPRC1234	7553625.0	545269.0	579.0	*NSI*							
HPRC1235	7553714.0	545181.0	585.0	*NSI*							
HPRC1236	7553735.0	545098.0	590.0	*NSI*							
HPRC1237	7553831.0	545008.0	591.0	8	12	4	54.1	7.1	3.0	0.09	11.7
HPRC1238	7552703.0	545416.0	583.0	38	42	4	56.2	8.4	2.5	0.23	7.7
HPRC1239	7552632.0	545355.0	584.0	22	30	8	57.9	7.2	6.7	0.04	2.3
HPRC1240	7552547.0	545304.0	586.0	18	24	6	60.0	4.8	5.4	0.05	3.2
HPRC1241	7552672.0	545487.0	583.5	28	32	4	55.5	9.1	7.2	0.04	3.0
HPRC1242	7552581.0	545444.0	585.0	20	26	6	60.6	4.7	5.6	0.05	2.1
HPRC1243	7552498.0	545394.0	588.0	*NSI*							
HPRC1244	7552438.0	545494.0	589.0	*NSI*							
HPRC1245	7552530.0	545545.0	585.0	22	28	6	54.4	5.9	3.9	0.10	11.7
HPRC1246	7552605.0	545586.0	583.0	22	26	4	55.6	8.9	7.7	0.03	2.7
HPRC1247	7552368.0	545433.0	597.5	0	10	10	60.3	2.5	1.6	0.09	8.4
HPRC1248	7552420.0	545369.0	592.0	0	6	6	57.7	5.2	2.9	0.08	8.5
HPRC1249	7552345.0	545049.0	596.0	*NSI*							
HPRC1250	7552289.0	544912.0	596.0	*NSI*							
HPRC1251	7551705.0	545682.0	605.5	*NSI*							
HPRC1252	7551376.0	545670.0	618.0	0	6	6	54.8	7.7	2.8	0.09	10.7
HPRC1253	7551988.0	546266.0	603.0	*NSI*							
HPRC1254	7555111.0	547251.0	563.0	*NSI*							
HPRC1255	7555072.0	547384.0	571.0	*NSI*							
HPRC1256	7555022.0	547519.0	573.0	*NSI*							
HPRC1257	7555774.0	546261.0	565.0	*NSI*							
HPRC1258	7555740.0	546344.0	562.0	*NSI*							
HPRC1259	7555677.0	546314.0	567.0	*NSI*							
HPRC1260	7555841.0	546390.0	558.0	*NSI*							
HPRC1261	7555867.0	546324.0	562.0	*NSI*							
HPRC1262	7555954.0	546450.0	555.5	*NSI*							
HPRC1263	7556062.0	546498.0	552.0	4	8	4	53.2	8.7	3.6	0.07	10.9
HPRC1264	7556107.0	546436.0	553.5	*NSI*							

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	• Reverse Circulation (RC) drilling was used to collect 2m downhole samples for assaying. • Typically, a 4 to 5kg sample was collected using a cone splitter. This sample was sent for major and trace element analysis via XRF of fused discs. All RC samples were submitted for analysis. • Grade standards (Certified Reference Materials – CRM's) and field duplicate samples were used to monitor analytical accuracy and sampling precision. • Diamond drilling methods were used to twin a number of the RC drillholes to test sample representivity and to collect samples for metallurgical test work. • All diamond drillholes employed triple tubed coring methods with half core samples used for QAQC purposes and whole core used for metallurgical test work.
Drilling techniques	• The vast majority of the downhole samples were collected from 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 the core was oriented.
Drill sample recovery	• Sample quality and recovery of both RC and DD drilling were continuously monitored during drilling to ensure that samples were representative and recoveries maximised. • RC sample recovery was recorded as good (G) or poor (P) based on visual appraisal of sample size. The majority of all samples were logged as good. • Diamond core recoveries are routinely recorded in the database as a measure of length of core recovered versus the depth drilled. • Results of previous RC-DD twin holes indicate that there is no significant bias in the RC assays related to the presence of water, the sample particle size or the material types comprising the sample.
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 utilised for both Mineral Resource estimation and future mining and processing studies. • All diamond core was digitally photographed. • Logging data is collected via ruggedised laptops using Ocris logging software which applies inbuilt validation checks as data is entered. The data is subsequently downloaded into a dedicated Geobank database for storage.
Sub-sampling techniques and sample preparation	• RC drilling samples were collected in pre-labelled bags via a cone splitter mounted directly below the cyclone. • Wet and dry samples were 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. • Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation. The pulverised sample was reduced further and combined with various reagents prior to oven fusion to create a fused disc.

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). Ultra Trace completed both the sample preparation and analytical assaying. • All samples were analysed via X-Ray Fluorescence (XRF) of a 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 celsius via thermo-gravimetric analysis. • Field duplicates were collected and inserted anonymously into the sample stream at a rate of 4 per 100 samples. • Pulp standards (CRM's) were inserted into the sample stream as blind samples by field geologists at a rate of 5 per 100 samples. • No significant issues or concerns were apparent with the analysis of the field duplicates or standards. • 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. • Approximately 5% of all samples have been sent to an umpire laboratory as an independent check. No significant issues were identified and an excellent correlation exists between the laboratories.
Verification of sampling and assaying	• Significant intersections have been independently verified by company geologists using geological logging and observation of the mineral assemblage. • Twin hole (RC v DD) analysis demonstrates a high degree of intersection and grade compatibility between the dominant RC samples and the twinned core with no evidence of any significant grade bias due to drilling method. • Twins formed by RC drillhole pairs also show good correlation between the original and twin hole. • Assay data is loaded directly into the Geobank database which is managed by Flinders staff. Visual comparisons are undertaken between the recorded database assays and hard copy records at a rate of 5% of all loaded data. No errors have been identified. • Several unannounced audits of the assay laboratory were conducted while Flinders' samples were being processed. No issues or concerns were apparent.
Location of data points	• Drillhole collar locations have been surveyed using a Differential GPS with an accuracy of <5cm for easting, northing and elevation coordinates. • Collar surveys are validated against planned coordinates and the topographic surface. • Downhole surveys have not been carried out as the vast majority of the drillholes are vertical and relatively shallow meaning that any minor departures from the planned drilling direction will have minimal to no impact. • The primary grid used is Map Grid of Australia 94, Zone 50 (GDA94). Vertical datum is the Australian Height Datum (AHD). • Topographic surface uses Lidar 50cm contours captured in 2009.
Data spacing and distribution	• The drill grid spacing varies between deposits. • For the majority of deposits, including Champion, a nominal spacing of approximately 100m by 125m is achieved. The Delta deposit is drilled at a spacing of approximately 50m by 50m over much of its area while Ajax is approximately 100m by 500m.
Orientation of data in relation to geological structure	• As the mineralisation comprises predominantly flat lying valley infill deposits, the vertically orientated drilling represents an ideal sampling orientation. The underlying bedded deposits are hosted by sub-horizontal Banded Iron Formation meaning that the sampling is also near ideal.

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 (independent Mineral Resource Consultant) 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% FMS 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 iron 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 Mineralisation.
Drill hole Information	• Infill drilling on a 100 by 125m grid this year has added 185 RC holes for 5,938m to the Champion deposit dataset. A summary of this new drill hole information is included in the accompanying release (Table 3). The current Champion dataset now comprises 770 RC drillholes for 34,040m. This report relates to Mineral Resources based on this drillhole dataset. • A diagram showing the location of drillhole collars is included in the accompanying release (Figure 2).
Data aggregation methods	• Data has been aggregated for Mineral Resource estimation based on physical features of the collected samples and their associated assay results to defined regions of similar geological and grade characteristics as discussed further in Section 3.
Relationship between mineralisation widths and intercept lengths	• The majority of drillholes 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 Mineral Resource areas as well as representative cross sections.
Balanced reporting	• See the reporting of the Mineral Resource estimate associated with this release.
Other substantive exploration data	• See comments below in Section 3 regarding new bulk density estimates.
Further work	• Infill drilling across the deposits is ongoing. Metallurgical testwork based on core samples is also ongoing. Mineralisation remains open in a number of places and there are no plans to attempt to close this off at this stage.

Section 3 – Estimation and Reporting of Mineral Resources

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

Criteria	Commentary
Database integrity	• Logging data is collected via ruggedised laptops using Ocris logging software which applies inbuilt validation checks as data is entered. The data is subsequently digitally downloaded into a dedicated Geobank database for storage. Assay data is loaded directly into the same database. Visual validations of the assay and geological data are ongoing during the modelling and estimation process. The database is currently managed by qualified Flinders' staff with access restricted commensurate to the tasks they undertake. A physical check of assays within the database versus hard copies is done at a rate of 5%. No errors have been identified.
Site visits	• The Competent Person for Flinders Mines is a full time employee of Flinders Mines Ltd who has made multiple site visits when drilling operations are in progress to observe drilling progress, sample collection geological logging, and general sample handling and logistics. Personnel from Flinders Mineral Resource consultant, Optiro, have also visited and reviewed the project site, deposit geology, drilling progress, sampling methods and sample handling.
Geological interpretation	• Confidence in the geological interpretation of the deposit is high. The geological interpretation has been built up over multiple drilling campaigns and is based on geological logging and geochemistry of RC and DD samples. • Geological domains representing various types of Detrital Iron and Channel Iron Deposits (DID and CID) are defined using chemical and physical characteristics. Surfaces representing the base of each of these domains are compiled from sectional interpretations. These surfaces are used to constrain the estimation process. Each drillhole sample is assigned to one of these domains. • The stratigraphy of the deposits is well understood and any alternative geological interpretation is not likely to have a material effect on the overall resource estimate. The confidence in the stratigraphic interpretation and continuity of the BID mineralisation underlying the DIDs and CIDs would be improved with further closer spaced drilling.
Dimensions	• Mineralisation at the Champion deposit extends in an north east - southwest direction for up to 5.6km and has a maximum width in a north west - south east direction of 4.1km. Mineralisation occurs from surface in some parts of the deposit and down to a maximum depth of 90m below surface.
Estimation and modelling techniques	• Grade values where estimated into the above domains using 100mE by 100mN by 6m RL panels and ordinary kriging. Domain boundaries are all treated as 'hard' boundaries for grade estimation and these boundaries are volumetrically represented by sub-blocks no smaller than 10mE by 10mN by 2mRL.
Moisture	• All tonnages are estimated on a dry basis. Moisture content measurements are being done as part of the current phase of metallurgical testwork.
Cut-off parameters	• The tabulated Mineral Resource is reported above a cut-off grade of 50% Fe.
Mining factors or assumptions	• It has been assumed that the traditional open cut mining method of drill, blast, load and haul will be used. This is consistent with current practice at similar deposits within the Pilbara.
Metallurgical factors or assumptions	• Multiple phases of metallurgical testwork have been undertaken. Results indicate that a saleable product can be achieved via a simple crush, screen and/or deslime process.
Environmental factors or assumptions	• All key Commonwealth and WA government on-tenement environmental approvals for the development of the project have been obtained. More detailed studies regarding possible waste and process residue disposal options are ongoing.

Criteria	Commentary
Bulk Density	• Bulk density has been calculated from physical PQ diamond core measurements via the water immersion method. In total over 700 samples across the range of geological units and deposits have been measured. Average density factors of between 2.62 t/m^3 and 3.24 t/m^3 have been applied to individual geological units across the project. Sample numbers for RC and DID1 domains are low and an assumed density factor of 2.7 t/m^3 is used. This is not considered to be material as these domains are normally below the 50% Fe reporting cut-off. • The densities used are similar to known densities for like deposits across the Pilbara.
Classification	• The Champion Mineral Resource is classified as Indicated and Inferred. Factors taken into account include drill spacing, geological and mineralisation continuity and estimation quality. • The Mineral Resource classification reflects the views of the Competent Persons.
Audits or reviews	• Optiro (Flinders Mineral Resource consultant) has conducted a number of basic data and geological interpretation reviews during the compilation of the Mineral Resource estimate. Optiro personnel have been to the deposit site to observe the local geology, drilling methods, sampling methods and logging methods that result in the data that supports the geological interpretation and Mineral Resource estimation process. All practices and methods observed are considered by Optiro to be consistent with the classification applied to the Champion deposit. • No independent third party audits of the Mineral Resource estimate have been completed at this time.
Discussion of relative accuracy/confidence	• No direct testing of the relative accuracy and confidence of the Mineral Resource estimate has been undertaken. A significant amount of infill drilling data has been added to the drillhole database supporting this Mineral Resource estimate since it was previously reported in 2011. This additional data has resulted in some global tonnage and grade reporting differences, with an overall tonnage increase of approximately 16%. This degree of global change is not unexpected in a deposit of this type and size when going from an Inferred to Indicated Mineral Resource and the relative accuracies of each.