Change to IOC Mineral Resources

2 March 2017

Included in Rio Tinto's annual Mineral Resources and Ore Reserves tables, released to the market today as part of its 2016 Annual report, is a decrease in Mineral Resources at Rio Tinto's 59 per cent-owned Iron Ore Company of Canada (IOC) mine in Labrador City, Labrador and Newfoundland, Canada.

The updated Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (JORC Code) and the ASX Listing Rules. As such, the reported decrease relating to the IOC operations requires the additional supporting information set out in this release and its appendix. Mineral Resources are quoted on 100% basis.

Rio Tinto's Ore Reserves and Mineral Resources are set out in full in its 2016 Annual report.

During 2016, IOC Mineral Resources have decreased by 674Mt from 2,762 Mt to 2,088Mt, a 24 per cent decrease.

This change follows both technical and financial reassessment of the Mineral Resources and does not impact IOC's Ore Reserves. The current life of mine plan anticipates a production life extending to 2042, based on the reported Ore Reserves only.

Resources at IOC are reported additional to reserves.

The updated Mineral Resource estimate comprises:

- Measured Resource: 172mt @ 40.2% Fe
- Indicated Resource: 844Mt @ 38.3% Fe
- Inferred Resource: 1,072Mt @ 37.9% Fe
- Total Mineral Resource: 2,088Mt @ 38.3% Fe

2016 Annual report Mineral Resources table, showing line items relating to the IOC changes

	Likely mining method (a)	Resources at end 2016						Total resources 2016 compared with 2015				
		Measured		Indicated		Inferred		**2016**		2015		
IRON ORE (b)		Millions of tonnes	Fe %	Millions of tonnes	Fe %	Millions of tonnes	Fe %	**Millions of tonnes**	Fe %	Millions of tonnes	Fe %	Rio Tinto interest %
Iron Ore Company of Canada (Canada) (c)	O/P	172	40.2	844	38.3	1072	37.9	2088	2762	38.3	37.6	58.7

Notes

(a) Likely mining method: O/P = open pit; O/C = open cut; U/G = underground; D/O = dredging operation.
(b) Iron ore Resources tonnes are reported on a dry weight basis.
(c) Resources at Iron Ore Company of Canada decreased following updated economic studies in addition to a revised geological model and Resource classification. A JORC table 1 in support of these changes will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/JORC. Resources at Iron Ore Company of Canada are reported on an in-situ dry basis and are estimated to produce marketable product (59 per cent pellets and 41 per cent concentrate for sale) at a natural moisture content of two per cent of 69 million tonnes at 65 per cent iron (Measured), 329 million tonnes at 65 per cent iron (Indicated) and 412 million tonnes at 65 per cent iron (Inferred) using process recovery factors derived from current IOC concentrating and pellet operations.

Summary of information to support the Mineral Resources estimates

Decreases in the Mineral Resource estimate for IOC are supported by the information set out in the appendix to this release and located at riotinto.com/JORC in accordance with the Table 1 checklist (Sections 1 to 3) in the JORC Code.

The 24% Mineral Resource reduction results from:

- A reduction in projected long-term iron ore prices (17 per cent);
- Adjusted resource classifications (two per cent)
- Updated geological interpretation (five per cent)

The following summary of information for Mineral Resource estimates is provided in accordance with rule 5.8 of the ASX Listing Rules.

Geology and geological interpretation

IOC's Mineral Resources are located near the southern end of the Labrador Geosyncline in eastern Canada, within the lithotectonic Gagnon Terrane, in the Grenville Province of Western Labrador. IOC's Mineral Resources lie within the Lower Proterozoic (c.a. 2.0 Ga) Sokoman iron formation of the Knob Lake Group. The Middle Iron Formation (MIF) of the Sokoman formation contains the economically viable iron ore.

The Knob Lake Group was deformed and subjected to metamorphism ranging from greenschist to upper amphibolite facies within a northwesterly-verging ductile fold and thrust belt, during the Grenville Orogeny.

The Middle Iron Formation comprises a sequence of quartz-magnetite, and/or quartz-specularite-magnetite, and/or quartz-specularite-magnetite-carbonate, and/or quartz-specularite-magnetite-anthophyllite gneiss and schist units. A vertical zonation is typically present with finer grained quartz magnetite dominated iron formation forming the basal section. The upper portion of the Middle Iron Formation horizon is predominantly comprised of coarser grained quartz hematite iron formation.

Drilling techniques

All of IOC's Mineral Resources are defined using diamond core drilling only. Approximately 500,000 m have been drilled on the Mineral Resource deposits, with 60 per cent of this drilling having taken place since 2004. All of the recent resource definition drilling has used NQ sized core. Geotechnical drilling uses HQ sized core. Historically, BQ sized core was also used for resource definition.

Hole dip surveys have been routinely carried out on all holes. Gyro surveys of longer holes (>150m) have only been carried out since 2015. All hole collars are surveyed after drilling.

Drill holes spacings vary by deposit. Deposits are generally drilled initially at wide spacings (typically 244m x 244m) before being progressively infilled to 122m x 122m (inferred resource) and finally 61m x 61m (measured resource).

Sampling, sub-sampling method and sample analysis method

Drill core is logged, photographed and then split, with half core being sent to the IOC laboratory for analysis. Some core has historically been sent to external laboratories for analysis, but most has been analysed by the IOC laboratory. Some of the earlier core was drilled at smaller diameter (BQ) with whole core being sent for analysis.

The current sample length is four metres, although five-metre samples were used from 2004 to 2008. Samples are limited to a single lithological unit, with shorter samples being taken when contacts are encountered. All mineralised lithologies are sampled and waste units are sampled adjacent to contacts. Narrow waste units are generally completely sampled, whereas thicker waste units have samples taken adjacent to contacts and at intervals within the unit. Large waste units (eg the upper and lower units of the Sokoman formation) are generally only sampled at the contact with the MIF. Intervals with logged fibrous amphiboles are not sampled.

Core samples are coarse crushed, then riffle split during several crushing stages to a 20g sample which is pulverised to produce a sample for assaying. Iron grade is assayed by titration, magnetite by Satmagan (calibrated), carbonate and combined water are assayed by absorption method in a Leco furnace and all other assays are carried out by XRF techniques on fused beads.

QA/QC checks were implemented in 2004 and consist of duplicate analysis of half core, coarse rejects, and pulp rejects, at a frequency of 1:50. Monitor standards have been created from various ore types from IOC deposits, these are submitted on the basis of 1 per lab batch (approximately 1:12). The monitor ore type that is submitted is type that best represents the sample batch being submitted eg. a high magnetite monitor submitted for a sample batch containing high magnetite mineralogy. Blank samples, consisting of >95 per cent pure quartzite, have been inserted at a rate of 1:49 samples since 2012.

Density analysis is performed at a rate of one in every four drill core samples during drilling projects using a water immersion method. Vuggy and friable samples have been sent to an external lab for wax coated density analysis since 2015.

The coarse rejects are composited into nominally 16m composites (ie equivalent to four assay intervals for iron recovery testing (on a shaking table) by an external testing laboratory. Half core samples are also collected from the same 16m intervals for grind energy testing (SPI testing) by a second external testing laboratory.

Criteria used for classification

Resource classifications are determined on a section by section basis utilizing drill spacing and geological complexity as the main criteria. Areas of limonite or poor core recovery are lowered in classification due to potential uncertainty. Sectional polygons are evaluated for continuity along strike and then joined to form a continuous triangulated solid. Resource classification takes subjective account of geological and mineralisation continuity, drill density, core recovery and confidence in assay results (based on presence or absence of QA/QC programs).

In general, areas having a 61x61m drill spacing are considered Measured Resources. Areas with 120x61m are classified as Indicated Resources and areas with greater than 120x120m drill spacing are considered to be Inferred Resources. Areas with drill spacings greater than 244m along strike or 122m across strike are not considered to meet Mineral Resource reporting standard. Any Measured areas with poor core recovery or strong limonitic alternation are lowered to an Indicated classification to reflect these as areas of geological or metallurgical uncertainty.

In 2015, two of the Mineral Resource deposits still used an older, script-based classification methodology. This older methodology was replaced with the above sectional resource category methodology in all models for 2016 reporting, which has resulted in a two per cent reduction in Mineral Resources.

Estimation methodology

Geological models of the folded deposits are generated from logged drill hole geological contacts, with surface outcrop mapping and pit face mapping also used where available. Updated interpretations have resulted in a five per cent reduction in the Mineral Resource estimate.

Mineral Resource models use a sub-blocking methodology, with a minimum block size of 5m x 5m x 3.425m.

Samples are composited to 12m lengths for assays and 16m lengths for metallurgical data (grind energy and iron recovery). Geological units are divided into structural domains for interpolation, based on the fold geometry. Grades are interpolated within each domain using inverse distance techniques. Four estimation passes are used with progressively increasing search radii, with the final pass using a 600m search radius. Any blocks which are not populated after four interpolation passes are assigned the average grade for that lithological unit. No cutting or capping is applied to any sample or composite data.
Reconciliations between reported concentrator feed and Ore Reserve models are used to provide an indication of the accuracy of Mineral Resource estimates. These reconciliations indicate that Proved Ore Reserves (the equivalent of Measured Mineral Resources) reconcile very well with actual production.

Cut-off grades

Modelling indicates that 99 per cent of oxide mineralised material in the middle iron formation has a weight yield greater than 30 per cent. At projected long term prices and costs, the breakeven cut-off grade is less than 30 per cent, so the entire middle iron formation is effectively above cut-off. Consequently, mineral resource definition is based on lithology (ie all oxide mineralised middle iron formation), rather than cut-off.

Mining and Metallurgical Methods and Parameters

IOC uses regularisation of Mineral Resource block models to estimate dilution and ore loss in the mining process. Reconciliations between regularised block models and actual production indicate that this approach provides acceptable estimates. Iron recovery in the concentrator is estimated using recoveries measured on a laboratory shaking table, adjusted with a correction factor derived from reconciliations between the modelled iron recovery and actual iron recovery. Grind energy consumption is interpolated in the Resource model based on metallurgical testing. Reconciliations between the modelled grind energy and actual grind energy indicate that this approach is acceptable.

Reasonable prospects for eventual economic extraction

IOC's Mineral Resources are constrained using pit shells generated by the Whittle pit optimisation software. IOC uses the same economic and production parameters to constrain Mineral Resources and Ore Reserves. The reduced prices used for the end 2016 Mineral Resource have resulted in a 17 per cent reduction in the resource estimate. The use of the lower price was based on a reassessment of the long term market outlook.

Competent Persons Statement

The material in this report that relates to Mineral Resources is based on information prepared by Tim Leriche, Ramsey Way and Bronwen Wallace, who are Competent Persons and Members of Professional Engineers and Geoscientists Newfoundland and Labrador. All are full-time employees of Rio Tinto.

Mr Leriche, Mr Way and Ms Wallace have 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 Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Each of Mr Leriche, Mr Way and Ms Wallace consents to the inclusion in the report of the material based on the information that he or she has prepared in the form and context in which it appears.

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Iron Ore Company of Canada - Table 1

The following table provides a summary of important assessment and reporting criteria used at IOC Carol Project for the reporting of mineral resources and ore reserves in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition). Criteria in each section apply to all preceding and succeeding sections.

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	• Samples used for mineral resource and ore reserve estimation are taken from diamond drill core. Drilling is currently almost exclusively NQ sized, although BQ sized core has been collected in the past. The core is split using a hydraulic powered splitter (ie it isn't sawn). When BQ core was collected, the whole core was assayed (ie it wasn't split). • Drill holes are oriented to be perpendicular to bedding, or as close to perpendicular as possible. • Oxide iron mineralisation is determined by visual inspection of drill core, supplemented by the use of the use of magnets and magnetite assays (to assist in identifying magnetite) and the use of carbonate assays (to assist in the identification of carbonate iron species). • Half core samples are coarse crushed, then riffle split during several crushing stages to a 20g sample which is pulverised to produce a sample for assaying. Iron grade is assayed by titration, magnetite by Satmagan (calibrated), carbonate and combined water are assayed by absorption method in a Leco furnace and all other assays are carried out by XRF techniques on fused beads. Half core samples are selected over 16m intervals for SPI (grind energy) testing and assay coarse rejects are composited to 16m intervals for iron recovery testing (by shaking table). • The core sample length is currently 4m, although sample lengths ranging from 3 to 5m have been used in the past.
Drilling techniques	• All samples are obtained by diamond drilling, usually at NQ size, with core recovered in a standard tube. Core is not normally oriented.
Drill sample recovery	• Core recovery is measured as the length of recovered core divided by the drilled length for each recovered core barrel. Recovery is very good in most lithologies, but poor in limonitically altered material. • Core recovery is generally very good, so no special measures are taken to improve core recovery in most lithological units. In limonitically altered units, however, core recovery is generally poor, so HQ size drilling and 1.5m core barrels are used where practical, generally without significantly improved recovery. • No relationship has been determined between core recovery and sample grade or material density. Sample bias due to core recovery is likely in the limonitic material.
Logging	• Core samples have been geologically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Selected holes have been geotechnically logged to a level of detail to support appropriate pit slope design studies. • Core logging is primarily qualitative in nature and follows a Standard Operating Procedure (SOP). All core is photographed before splitting. • The total length of all drill core is inspected and logged, with specific detail applied to intersections of mineralisation as per the SOP.
Sub-sampling techniques and sample preparation	• Core is split using a hydraulically powered split (not sawn). Half of the core is taken for assaying, density determinations and iron recovery testing. Selected samples from the other half of the core are taken for grind energy testing. • Coarse crushed half core is riffle split. Half core samples are dried before crushing and riffle splitting. • Core samples are prepared using hydraulic splitters, jaw crushing, and pulverisers. The sample preparation practices are appropriate for iron ore sampling. • Sample representivity is verified through half core, coarse sample reject, and pulp duplicate QA/QC testing. • Half core, coarse rejects and pulp duplicates are inserted after every 50th sample. • Sample sizes are mainly determined by sample lengths and weights appropriate for mining representivity and sample handling limitations.
Quality of assay data and laboratory tests	• Assaying is performed by XRF technique for the majority of elements, total iron by titration, CO_2 and H_2O++ by absorption technique, and magnetite by SATMAGAN. • A handheld mag sus meter is used for qualitative magnetite assessment at the core logging stage. The SATMAGAN determination for magnetite has calibration procedures and standards developed. • Half core, coarse rejects and pulp duplicates are inserted after every 50th sample. Quartzite blanks are also submitted after every 49th sample. Matrix matched assay control standards are

	submitted after every 12th sample. Metallurgical tests (grind energy and iron recovery) in external laboratories insert duplicate samples after every 50th sample. Iron recovery testing also uses a control standard on a daily basis and blind duplicates annually. Assay results demonstrate good repeatability, but metallurgical test results are more variable. • Pre 2009 iron recovery data has been excluded from the dataset due to lack of QA/QC.
Verification of sampling and assaying	• Intersections of mineralisation are determined by core logging Geologists, and periodic verification is conducted by senior company personnel throughout drilling campaigns. • Twinned holes are only used to check data from old drilling programs (>20 years old), and on an ad hoc basis. • Sampling and data management procedures are documented in internal SOPs. • No adjustments are made to primary assay data. Any reconciliation adjustments are made to copies of the primary data or to modelled data. Reconciliation adjustments are made to magnetite grades (to correct for differential oxidation of plant and core samples during sample prep) and to iron recovery (to reflect the operational efficiency differences between laboratory shaking tables and plant spirals).
Location of data points	• Drill collars are surveyed to centimetre accuracy using theodolites/total stations (historical data) or high precision GPSs (recent data). Downhole dip surveys are taken in all holes at approximately 100m downhole intervals. Lateral deviations are not routinely taken (due to magnetic lithologies). Downhole gyroscope surveys have been routinely carried out for all holes deeper than 150m since 2015. • All reserve and resource models are developed on a local, planar grid system • Topographic control is performed using aerial surveys and production of DTM's, this is locally supplemented by some lidar surveys. High precision GPS surveying is used in mine operating areas to create as mined topography.
Data spacing and distribution	• Exploration Results are not reported. • Historical data spacing and distribution has been sufficient to support grade continuity, however more recently local geological complexity has required tighter spacing for support and revision to resource classifications where appropriate. • Chemistry is determined from the original sample length (currently 4m of drill core) but metallurgical testing is carried out on composites of up to 16m length (ie 4 raw samples). Composites are only prepared within a single lithological unit, which can restrict the composite length.
Orientation of data in relation to geological structure	• Older drilling was generally vertical, but since 2006 all drilling has aimed to intersect bedding as close to 90 degrees as is possible (holes can be drilled up to 45 degrees off vertical). • Orientation of drilling is generally consistent with large scale geological structures therefore any resulting sample bias is not considered a significant issue.
Sample security	• Measures used to ensure sample security are considered appropriate. All samples are identified, bar coded and handled by Technical staff. Delivery of samples is performed by Technicians and lab handling by laboratory analysts. Quartzite blanks provide a QC check for sample swaps.
Audits or reviews	• Internal and external audits, and peer reviews are conducted, action plans developed and implemented concerning sampling techniques and data.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land tenure status	• IOC's mineral rights, for reported mineral resources and ore reserves, are sub-leased from the Labrador Iron Ore Royalties Corporation (LIORC), which holds those rights under the Labrador Mining and Exploration Act (1938) as amended. The mineral resource and ore reserve rights are held on mining leases 10 (block 22-1), 13 (block 22-3), 14 (block 22-4), 15 (block 22-5), 17 (block 22-7) and 18 (block 22-8). LIORC receives a 7% royalty on revenue (FOB Sept-Îles) and a 10c/t fee on shipped product. Five groups have asserted aboriginal rights over the area of IOC's ore reserves and mineral resources. IOC is owned by Rio Tinto (59%), Mitsubishi (26% and LIORC (15%). • IOC's mineral rights over ore reserves and mineral resources are held under the Labrador Mining and Exploration Act (1938) as amended (the LM&E Act). The LM&E Act mining leases are in their second 30 year term, which will expire in 2020 (lease 10) and 2022 (leases 13, 14, 15, 17 and 18). IOC is entitled one further 30 year extension to the leases. After the expiry of this last extension under the LM&E Act, IOC will be able to convert the leases to mining leases under the Minerals Act (1990). Under the Minerals Act, leases can be granted for up to 25 years with unlimited renewals of up to 10 years. Lease renewals under the Minerals Act are conditional on having met all lease conditions and can be subject to any conditions the Minister chooses to impose.

Exploration done by other parties	• No exploration has been carried out by other parties on the reserve and resource deposits.
Geology	• Lake Superior type iron formation, deposition of the iron bearing minerals occurred in a shallow ocean basin and the formation was subsequently tectonically folded and faulted resulting in a highly metamorphosed hematite and magnetite mineralisation. Locally the formation was altered by leaching along structural horizons which resulted in the development of limonite.
Drill hole Information	Humphrey Main Deposit

Humphrey Main Deposit

Year	# Holes	metres
1971-83	502	80,808
1993	5	1,129
2003	29	1,293
2004	19	983
2006	23	2,043
2008	42	4,423
2009	43	4,960
2010	44	3,845
2012	84	18,670
2013	16	2,445
2014	27	6,217
Total	**834**	**126,816**

Humphrey South Deposit

Year	# Holes	metres
Pre-2006	204	40,771
2008	42	4,804
2009	11	659
2010	34	7,114
2011	32	8,682
2012	27	5,051
2013	55	6,111
2014	22	2,706
2015	7	954
2016	6	998
Total	**440**	**77,850**

Luce Deposit

Year	# Holes	metres
1960	4	371
1973	20	3,262
1974	20	5,292
1975	28	6,542
1995	12	3,189
1996	26	4,911
1997	58	9,408
1999	18	2,318
2000	11	1,858
2001	30	2,959
2002	27	3,547
2004	132	6,140

2005	107	8,822
2006	2	422
2007	81	10,308
2009	70	5,826
2010	171	15,660
2011	72	18,140
2013	125	14,991
2014	67	8,542
2015	14	1,815
2016	86	17,290
Total	**1,181**	**151,613**

Spooks Deposit

1960	5	376
1974	8	1,721
1980	10	1,917
1981	2	175
1982	3	136
1989	12	1,614
1994	6	608
1995	5	850
1996	14	639
1998	15	1,214
2010	5	1,292
2011	14	1,177
Total	**99**	**11,719**

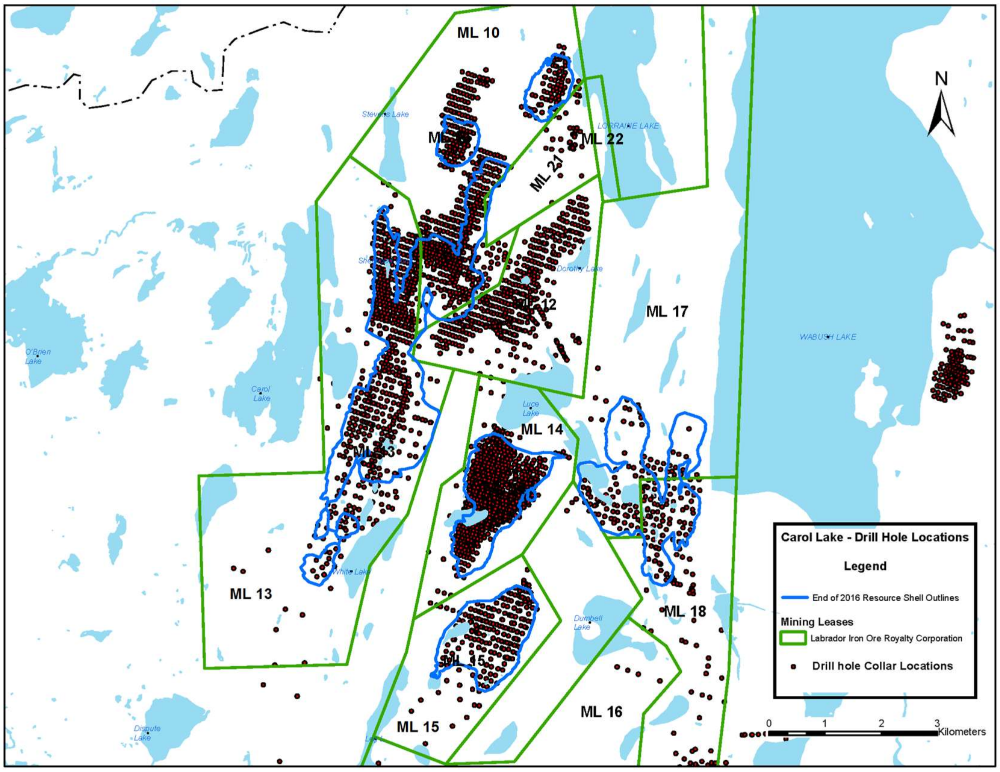
Lorraine South Deposit

Year	# Holes	metres
1959	33	3,480
1970	22	3,500
1971	6	1,317
1973	2	436
1980	3	561
1982	2	233
2010	4	655
2011	8	937
2016	2	366
Total	**82**	**11,485**

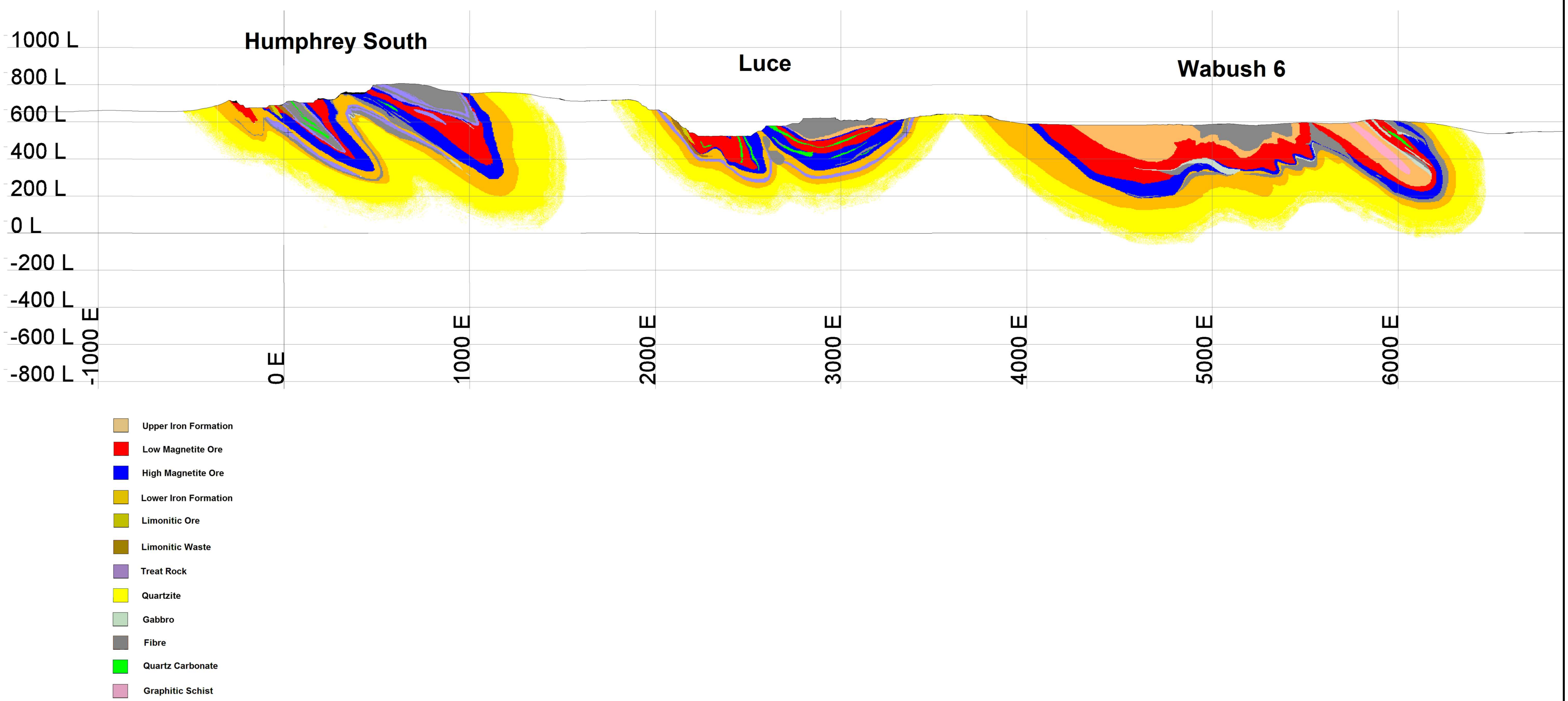
Wabush 3 Deposit

Year	# Holes	metres
1950-70	70	8,004
2006	19	3,583
2007	2	740
2010	12	2,562
2011	71	14,663
2012	66	13,742
2013	9	1,147

	2014 78 18,321 2015 69 13,540 **Total 396 76,302** **Wabush 6 Deposit** **Year # Holes metres** 1950-70 6 529 2001 2 328 2002 2 555 2005 10 2,419 2006 7 1,814 2007 18 4,846 2008 93 16,453 2010 23 4,640 2011 9 1,941 2012 23 5,890 **Total 193 39,415**
Data aggregation methods	• Assays are composited to 12m lengths for resource model estimation • Metallurgical test results (including iron recovery and specific grind energy) and density are composited to 16m lengths for resource model estimation. • No assay cutting is used
Relationship between mineralisation widths and intercept lengths	• Recent drilling programs have been designed to intersect dipping mineralised sequences as close as practically possible to perpendicular, to minimise the difference between intercept widths and mineralisation widths. Appreciable differences still occur in areas of steeply dipping mineralisation. • Geotechnical holes are often aligned sub-parallel to bedding, to allow the mapping of joint sets oriented perpendicular to bedding. Consequently, intercept lengths in these holes are often very different from mineralisation widths. • Older holes were all drilled vertically, so significant and variable differences occurred between intercept lengths and mineralisation widths. • Three dimensional modelling of the deposit geology corrects for any discrepancies between intercept lengths and mineralisation widths in the resource estimation process. • Exploration Results, including intercept lengths, are not reported to the market.
Diagrams	• Site Tenure and Collar Plot



- Typical Cross Section


Humphrey South
Luce
Wabush 6
1000 L
800 L
600 L
400 L
200 L
0 L
-200 L
-400 L
-600 L
-800 L
-1000 E
0 E
1000 E
2000 E
3000 E
4000 E
5000 E
6000 E
Upper Iron Formation
Low Magnetite Ore
High Magnetite Ore
Lower Iron Formation
Limonitic Ore
Limonitic Waste
Treat Rock
Quartzite
Gabbro
Fibre
Quartz Carbonate
Graphitic Schist

Balanced reporting	• Exploration Results are not reported by IOC.
Other substantive exploration data	• Aerial magnetic surveys and surface gravity surveys have been carried out, as well as face mapping in active pits.
Further work	• Progressive in-fill drilling will be carried out as required to allow conversion of resources to reserves. It is intended to ultimately achieve a drilling density of 60m x 60m.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary
Database integrity	• Pull down menus used as much as possible within the acquire database for core logging • XRF Chemlab data is transferred through network system to acquire database (no manual entry) • Iron titration, Satmagan (magnetite), H_2O/CO_2 (Leco furnace) and Density analysis are entered manually by chem lab analysts into laboratory LIM system. • QAQC process in place which includes Monitor standards, blanks, duplicates, and whole rock analysis to ensure good chemlab data • IOC IT department has regular process of data backups in place
Site visits	• All competent persons work full time on site. As a consequence they are well aware of site issues.
Geological interpretation	• Data is predominantly NQ diamond drill core with a small percentage of BQ and HQ • Drill hole data is a mixture of historic (1960's) and current. • Overall geological structure is generally well understood in the mine site • Occasionally there are short term 'surprises' within the active mining areas which can affect ore production • Estimations are completed using major ore types (HMO/LMO) as domains. • Estimations also controlled through the use of structural domains which vary by deposit. • Grades are assumed to be continuous both along strike and down dip. • Grade estimations are restricted to ore and waste types (ie HMO samples only used within HMO blocks) • No alternative interpretations exist for the deposits • Changes were made to the geological interpretations of the Luce, Humphrey South and Wabush 3 deposits, due to additional drilling data. Changes were also made to the geological interpretation of the Wabush6 deposit, due to the inclusion of some historic drill which was not available when the previous modelling was done. Resources reduced by 5% due to geological interpretation changes.
Dimensions	• Deposits vary in size from as small as 0.6x0.4km to 2.5x1.5km • Depth varies from 200 to 400m
Estimation and modelling techniques	• Vulcan software used for all grade estimations • Inverse Distance grade estimation used. Reconciles reasonable well on a monthly basis with plant data • The model is domained by geology (HMO,LMO, LIF, etc) and by structure (fold limbs) • Multiple search passes used for estimation with a maximum distance of 600m. • Blocks are flagged (ESTFLAG) with each estimation pass • After 4 estimation passes any unestimated blocks have an average grade assigned to them by geology type. • Updates to Mineral Resource estimates are always reconciled against previous estimates. Ore Reserves for operating pits are reconciled against plant performance, which also gives an indication of Mineral Resource accuracy. • There is no recovery of by-products. • All elements in the database are estimated with Inverse Distance methodology. • Sub block methodology used for Resource reporting: parent blocks sizes are 20x40x13.7m with sub-blocking down to 5x5x3.425m • Block sizes were originally a function of drill hole spacing of 61x122m. the drill hole spacing has since been tightened to 61x61m in active mining areas. • Multiple (4) search passes are utilized at increasingly larger search radii. Earlier block estimates are not over-written by later passes. • The selective mining unit is assumed to be 10m x 10m x 13.7m (where the bench height is 13.7m).

	• There are no assumptions made about correlations between variables. All variables are estimated separately. • Resource estimates are completed by only using matching samples and geology types. Ie HMO samples are only used to estimate HMO blocks. • No cutting or capping applied to any data. Data subject to thorough QAQC validation process therefore all data deemed to be valid. • Drill holes data, composite data, and block estimate data are compared with the use of average grades by material types. Tables are produced and included in Model reports. • Regularized models are validated through monthly reconciliations of the geological models to mine production and plant actuals.
Moisture	• Reserves are reported on a saleable product basis at natural moisture content. Historical average moisture contents are used. Resources are reported on a dry basis.
Cut-off parameters	• Modelling indicates that 99% of oxide mineralised material in the middle iron formation has a weight yield greater than 30%. At projected long term prices and costs, the breakeven cut-off grade is approx. 30%, so the entire middle iron formation is effectively above cut-off. Consequently, mineral resource definition is based on lithology (ie all oxide mineralised middle iron formation), rather than cut-off.
Mining factors or assumptions	• Current mining methods are assumed to be used for the exploitation of all ore reserves and mineral resources. • Resources are constrained by pit optimisation shells derived using projected long term prices and costs. The reduction in forecast long term iron prices has resulted in a significant (17 per cent) reduction in resources.
Metallurgical factors or assumptions	• It is assumed that all ore reserves and mineral resources will be processed through the existing concentrator. Metallurgical performance is, therefore, based on current metallurgical test parameters for estimation of specific grind energy and gravity iron recovery.
Environmental factors or assumptions	• The existing tailing disposal license has sufficient capacity to accommodate all tailings from the ore reserves. It is intended to use exhausted mine pits (initially the Luce pit) to hold the remaining tailings (ie that generated from mineral resources). A high level assessment of waste disposal has identified sufficient disposal capacity (from both external waste dumps and pit backfill) to accommodate all waste associated with ore reserves and mineral resources, but further work is required to refine designs and ensure they match longer term production schedules.
Bulk density	• Bulk density determinations are made from drill core at 16m intervals. A single sample is taken for each determination. The bulk density is estimated by a water immersion method without wax coating. • The rock units generally have low porosity, so the waxless method is considered appropriate. • Limonitically altered zones are poorly sampled, due to poor core recovery, but limonitically altered material is not included in ore reserve, due to uncertainty regarding metallurgical response. Consequently, the poor density determinations in the altered zones does not impact on ore reserves, but will impact on mineral resource estimates. • Porous intervals are identified and sent for wax coating density analysis at an external lab, this process has recently commenced. • Density is spatially modelled for all deposits using inverse distance squared. • Density is not determined from iron grade.
Classification	• Resource classification is done using a triangulation flagging method • Categories are determined on a section by section basis utilizing drill spacing and geological complexity as the main criteria. Areas of limonite or poor core recovery are lowered in classification due to potential uncertainty. • Sectional polygons are evaluated for continuity along strike and then joined to form a continuous triangulated solid • Drill spacing is predominantly: up to 61mx61m Measured; from 61mx61m to 122mx122m Indicated; from 122mx122m to 244mx244m Inferred • Resource classification takes subjective account of geological and mineralisation continuity, drill density, core recovery and confidence in assay results (based on presence or absence of QA/QC programs) • Changes were made to the resource classification methodology for the Humphrey Main and Wabush 6 deposits, to align the procedure across all deposits. This resulted in resource reductions of 2%.
Audits or reviews	• OK and LMP Standard – 2008 and 2012 • AMEC (Harry Parker) - 2010 • Rio Tinto Audit (Coffey Mining) – 2010 Satisfactory result

	• Internal Audits 2010 (QIT) and 2012 (AMEC) • Rio Tinto Peer Review – 2014 • Rio Tinto Audit (Xstract Mining Consultants) – 2015 Satisfactory result
Discussion of relative accuracy/ confidence	• Overall the CP's are comfortable with the Mineral Resource estimated since they are being reported as in-situ ore tonnages. However there are factors which can impact the confidence in the estimates: • Resource estimates are based on sub block models which are, in turn, based on geological interpretations which utilise diamond drilling. Drilling tends to be tighter spaced higher up in the deposits therefore leading to a more reliable interpretation. Much deeper in the deposits there is sometimes less drilling which can impact the interpretation. The lack of drilling lowers the confidence in the mineralization at depth. • Ore tonnages are calculated based on measured densities on the drill core. Historical drill holes do not have density determinations. Any area of the deposits being supported by older drilling has a potential to have tonnage issues. • Only a small percentage of drill holes in each deposit has a down hole gyro survey completed on it. While a dip measurement was likely completed the true azimuth of the hole is an assumed value for most drill holes. This could result in inaccurate geological contacts. • The tonnage and key quality parameters of the Regularized models (which are extensions of the sub-block models) generally tend to reconcile well (+\- 10% or better) with plant tonnages as measured on a monthly basis.