Technical Report
Mineral Resource Estimation for the Wonarah Phosphate Project Northern Territory, Australia

Jonathon Abbott, BASc Appl. Geol, MAIG

Prepared for

Minemakers Ltd by

MPR Geological Consultants Pty Ltd

15th October 2012

MPR Geological Consultants Pty Ltd
19/123a Colin St
West Perth WA 6005
ABN 98 152 948 957
info@mprgeological.com.au

Table of Contents

List of Figures

List of Tables

1. Summary

Minemakers Wonarah project lies around 250 kilometres to the east of Tennant Creek in the Northern Territory. The project includes two deposits designated as Arruwurra and Main Zone.

This Technical Report has been prepared for Minemakers to describe Mineral Resources estimated for Wonarah. Minemakers specified that this report only describes the Mineral Resource estimates and associated exploration, drilling, sampling and analyses with no description of the project's Mineral Reserves, or associated analyses such as metallurgical test work.

Wonarah is one of several phosphate deposits hosted by late Proterozoic to early Palaeozoic sedimentary rocks of the Georgina Basin in the Northern Territory and western Queensland. The phosphate mineralization is hosted by gently undulating mudstone phosphorite and chert breccia phosphorite units of the Upper Gum Ridge Formation.

The majority of Arruwurra mineralization lies within a layer of mudstone phosphorite which averages around six metres thick with a variably developed high grade indurated basal zone averaging approximately 1.6 metres thick. Arruwurra resources cover an area around 6 kilometres by 2.5 kilometres.

Main Zone mineralization is hosted within a sequence of mudstone phosphorite and chert breccia phosphorite and undifferentiated transitional sediments with an average combined thickness of around ten metres. The majority of Main Zone Mineral Resources lie within the mudstone phosphorite and chert breccia. The undifferentiated transitional sediments contain generally low phosphate grades and represent only a small proportion of estimated Mineral Resources. The Main Zone estimates extend over an area approximately 10 kilometres by 14 kilometres.

Exploration and resource drilling undertaken by Minemakers and previous holders of the Wonarah tenements totals 2,111 rotary percussion (RAB), aircore, reverse circulation (RC) and diamond cored holes for 100,238 metres of drilling. Mining to date is limited to a 2009 bulk sampling exercise.

The current estimates are primarily based on results from Minemakers RC and diamond sampling. Data from a small number of holes drilled by previous tenement holders were included to provide information in areas of limited Minemakers sampling.

Information available to demonstrate the reliability of the sampling and assaying for Minemakers drilling includes recovered sample weights, field duplicates, reference standards and inter-laboratory repeats. Additional confirmation of the reliability of RC sampling is provided by comparison of results from nearby RC and diamond holes.

The author considers that quality control measures undertaken by Minemakers have established that the RC sampling is representative and free of any biases or other factors that may materially impact the reliability of the sampling, and analytical results. The sample preparation, security and analytical procedures adopted by Minemakers provide an adequate basis for the current Mineral Resource estimates.

Wonarah Mineral Resources were estimated by Ordinary Kriging of one metre down-hole composited assay grades within mineralized domains interpreted for Arruwurra and Main Zone. The estimates reflect Minemakers current conceptual development plans for the project which comprise a large scale operation feeding a beneficiation plant with mineralization defined at comparatively low P_2O_5 cut off grades.

The estimates include bulk densities of 1.7 to 2.0 t/bcm derived from 520 immersion density measurements performed on core samples from Minemakers diamond drilling.

The Mineral Resources are classified as Measured, Indicated and Inferred on the basis of estimation search passes and plan view polygons defining areas of relatively consistent drill spacing. The classification scheme varies between mineralized domains and cut off grades reflecting the differences in grade continuity between different zones, and the decreasing continuity of the mineralization with increasing P_2O_5 cut off grades.

The estimated Mineral Resources lie within Exploration Licences EL26451 and EL26452 and Mineral Lease ML27244 which are held by Minemakers and have a combined area of 115,386 hectares. The project lies on Northern Territory Freehold Land owned by the Arruwurra Aboriginal Corporation.

Table 1 summarizes the combined Wonarah Mineral Resource estimates. The figures in this table are rounded to reflect the precision of the estimates and include rounding errors.

Table 1: Wonarah Mineral Resource estimates

Cut off	Measured		Indicated		Measured + Indicated		Inferred	
P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %
5	82.2	20.2	391	13.2	473	14.4	933	13
10	78.3	20.8	222	17.5	300	18.3	542	18
15	64.9	22.4	133	21.1	198	21.5	352	21
20	35.5	25.8	75	24.0	111	24.5	171	24

Minemakers evaluations of the Wonarah project to date have concentrated on a potential operation targeting high grade direct ship ore (DSO). Assessment of the lower grade mineralization is at an early stage of evaluation. Minemakers has not established the economic viability of the Mineral Resources. Mineral Resources that are not Mineral Reserves do not have demonstrated economic validity. The extents to which mining, metallurgical, marketing, infrastructure, permitting, marketing and other financial factors may affect the Mineral Resource Estimates are not well defined.

Minemakers proposed future resource development programs for Wonarah focus on improving confidence in estimated resources with the target of increasing the proportion of estimates classified as Measured.

Minemakers proposed future work programs include 31,200 metres of infill RC and diamond drilling targeting resources currently classified as Inferred and Indicated followed by data interpretation and resource estimation. The goal of these proposed programs is the upgrading of confidence in estimates for selected areas to the Measured category. Estimated cost of the combined work programs is approximately $AUD 3.5 million.

Although it is uncertain that further drilling will be successful, the author believes that the work programs provided by Minemakers are appropriate for improving confidence in estimated resources.

2. Introduction

This Technical Report has been prepared for Minemakers to describe Mineral Resource estimates for the Wonarah Project. The estimates are reported at comparatively low P_2O_5 cut off grades reflecting Minemakers current conceptual development plans for the project which comprise a large scale mining operation feeding a beneficiation plant.

Minemakers specified that this Technical Report includes only a description of the Mineral Resource estimates and associated exploration, drilling, sampling and analyses with no description of the project's Mineral Reserves, or associated analyses such as metallurgical test work.

This report is based on the references listed in Section 27, and information provided by Minemakers including discussions with Mr Russell Fulton (Minemakers Geological Manager). This report relies on other experts for the description of project tenure, regional geology and environmental considerations.

The work reported herein was undertaken by Jonathon Abbott, MAIG, who is a full-time employee of MPR Geological Consultants Pty Ltd. Mr Abbott has more than five years experience in the field of mineral resource estimation and is a Qualified Person in terms of NI43-101 standards for resource estimation.

Mr Abbott visited Wonarah on the 12th and 13th of March 2009 and is responsible for all sections of this Technical Report.

3. Reliance on Other Experts

This report is based on the references listed in Section 27, and information provided by Minemakers including discussions with Mr Russell Fulton (Minemakers Geological Manager).

This report relies on other experts for the description of project tenure, regional geology and environmental considerations.

The report author is not qualified to comment on any environmental or legal considerations relating to the status of the Wonarah tenements, or for any marketing considerations related to the economic viability of the Wonarah mineralization.

4. Property Description and Location

The Wonarah project lies in the Northern Territory around 250 kilometres to the east of Tennant Creek and around 320 kilometres to the west of Mount Isa in Queensland (Figure 1).

As stipulated by Minemakers this report describes of the current Mineral Resource estimates and associated geological controls, exploration, drilling and analyses. Descriptions of any royalties, mining permits and environmental liabilities are beyond the scope of this report. The author is not qualified to comment on any environmental or legal considerations relating to the status of the Wonarah tenements.

The following description of the Wonarah tenements is based on information supplied by Minemakers and McColl, 2012.

Minemakers holds a Mineral Lease and several Exploration Licences in the Wonarah area. The estimated Mineral Resources lie within Exploration Licences EL26451 and EL26452 and Mineral Lease ML27244 which is entirely within EL26451. The combined area of the tenements is 115,386 hectares (Table 2). The tenements hosting the current resources are wholly owned by Minemakers.

The Wonarah project lies on Northern Territory Freehold Land owned by the Arruwurra Aboriginal Corporation.

Figure 2 shows the extents of mineralization included in the current estimates relative to the tenement boundaries. The coordinate system used in Figure 2 and throughout this report is Map Grid of Australia 1994 (MGA94) Zone 53. In this coordinate system, the centroid of the project is approximately 650,000 mE, 7,785,000 mN.

Table 2: Tenement areas

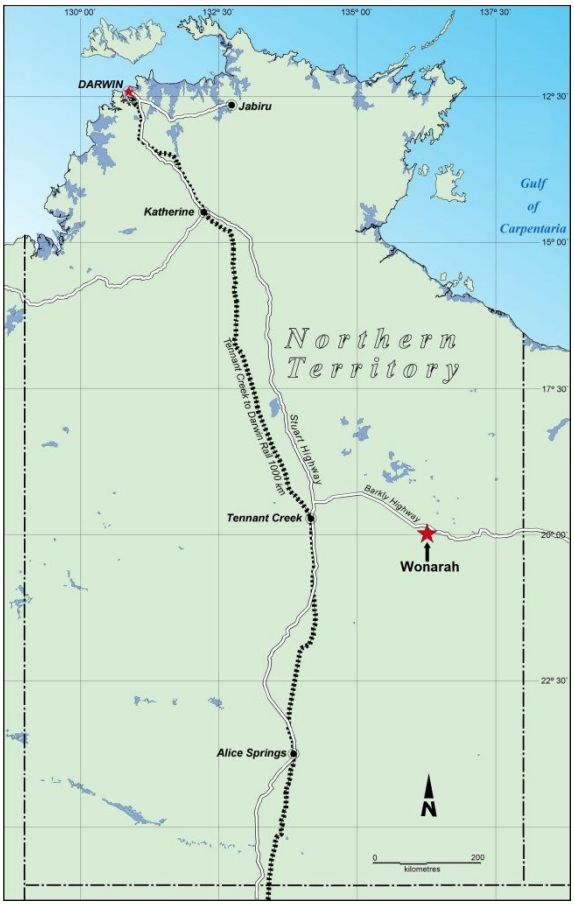
Tenement	Area (Hectares)
EL26451	21,590
Includes ML27244	10,800
EL26452	93,796
Total	**115,386**

Exploration Licence EL26451 was granted to Minemakers on the 31st of March 2008 for a period of four years. The licence was renewed in 2012 and has an expiry date of the 30th March 2014.

Exploration Licence EL26452 was granted to Minemakers on the 9th of January 2008 for a period of four years. The licence was renewed in 2012 and expires on the 8th of January 2014.

Mineral Lease ML27244 was granted to Minemakers on the 18th of February 2010 for a period of 25 years. The Mineral Lease covers most of the Arruwurra and Main Zone resource areas and includes a 100 metre wide corridor linking the deposits.

Chesher & Abbott, 2012 report that Minemakers has applied for and is currently in the process of obtaining or has obtained, a number of approvals required to commence mining and that additional approvals will be required by Minemakers throughout the life of the project. Chesher, 2010 reports that the project is not subject to any outstanding environmental liabilities.



(Figure courtesy Minemakers)

Figure 1: Location diagram

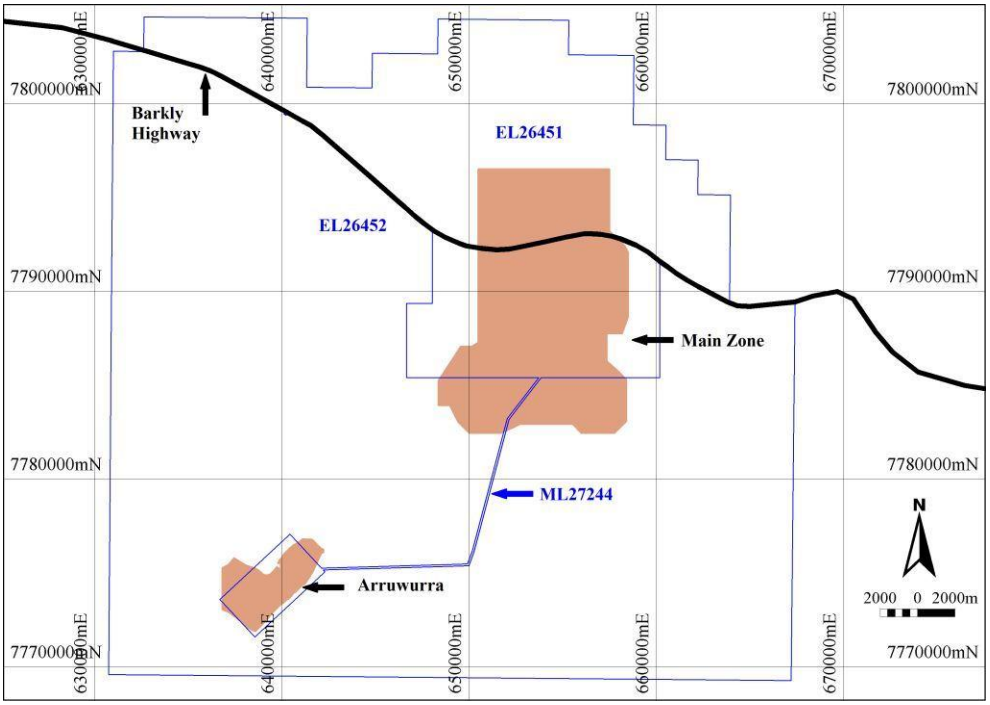


Figure 2: Resource areas and tenement boundaries

5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Wonarah resource project straddles the Barkly Highway, and can be accessed by road from Tennant Creek which is around 250 kilometres to the west or Mount Isa which is around 320 kilometres to the east in Queensland (Figure 1). The nearest airstrip to the project is at the Barkly Roadhouse around 75 kilometres to the west.

The Wonarah area is characterized by flat lying to gently undulating sand plains and open woodlands with rare rocky rises and generally short, scrubby vegetation and few large trees. Chesher, 2010 describes the area's vegetation as Acacia, Grevillea and Hakea over Aristida and Triodia in the sand plains, Acacia, Eucalyptus, Hakea and Melaleuca over Triodia in the open woodlands and Acacia, Eucalyptus over Triodia in the rocky rises.

Climate of the Wonarah region includes distinct wet and dry seasons with most of the average rainfall of 361 millimetres falling between November and March. Average maximum temperatures range from around 38^{o}C between November and January to approximately 25^{o}C in June and July (Chesher, 2010).

Minemakers have generally undertaken field exploration during the cooler and drier winter months. However exploration activities can be undertaken throughout the year with commonly only short interruptions during the wet season.

6. History

6.1. Project ownership

The following summary of the ownership history of the Wonarah project area is derived from Barrie (1968), Perrino (1969, 1970), Hackett (1978) and Abbott (2010, 2011).

- 1967: IMC Development (IMC) was granted a Prospecting Licence covering the Wonarah Region. The Prospecting Licence was converted to a Prospecting Authority in 1968 and subsequently relinquished by IMC.

- 1976: ICI Australia Ltd and Australian Fertilizers Ltd (AFL) were granted two Exploration Licences in the Wonarah area including and EL1083 which covered portions of the current resource area.

- 1983: CRA Exploration Pty Ltd was granted an Exploration Licence in the south of the Wonarah area. CRA relinquished the Exploration Licence in 1984.

- 1997: Rare Earths and Minerals Pty Ltd (REM) and Pilbara Chemical Corporation NL (PCC) were granted several Exploration Licenses covering the project area.

- 1998: Australian Kimberley Diamonds NL (AKD) acquired REM's and PCC's tenements. Between 1999 and 2000 Rio Tinto Exploration Pty Limited (Rio Tinto) explored the tenement in joint venture with AKD.

- 2006: AKD was renamed to Indo Mines NL (Indo Mines).Minemakers acquired 90% equity in Indo Mine's Wonarah tenements in October 2006, and in June 2008 Minemakers acquired Indo Mine's remaining share of the tenements.

6.2. Exploration and production activities

Significant phosphate exploration activities undertaken by previous tenement holders between 1967 and 2001 are described by Barrie (1968), Perrino, (1969, 1970) Hackett, (1978), Cotton, (2000) and Lowien & Virisheff (2009) and summarized below:

- 1967-1971: IMC's exploration of the Wonarah area included aerial photo interpretation, soil mapping and drilling of 87 RAB holes1976-1979: ICI and AFL drilled 10 RAB holes in the eastern part of the Main Zone area.

- 2000-2001: Rio Tinto's exploration activities concentrated on aircore, RC and diamond drilling. This drilling targeted areas with little previous exploration and totalled 138 holes for 7,182 metres of drilling.

Exploration activities undertaken by Minemakers since 2008 are described in Sections 10 and 11 of this report.

Production to date for Wonarah is limited to a bulk sampling exercise undertaken by Minemakers at Arruwurra during 2009.

6.3. Historic resource estimates

Table 3 lists significant previous resource estimates for the Wonarah project as described by Lowien & Virisheff (2009) and Abbott (2010, 2011). To provide a consistent comparison this table shows the estimates for the closest available cut off grade to 15% P_2O_5.

The historic estimates in Table 3 are not reported in accordance with NI43-101 standards. These estimates are not considered reliable and are included for background information only. A qualified person has not done sufficient work to classify the historic estimates as mineral resources and the historic estimates are not considered as current mineral resources.

Since 2009 Minemakers have commissioned several resource estimates for the Wonarah area including estimates by Coffey Mining and Hellman & Schofield Pty Ltd. These estimates were reported in accordance with NI43-101 guidelines in Lowien & Virisheff (2009) and Abbott (2010, 2011).

IMC's 1970 polygonal estimates represent the earliest resource estimate completed for Wonarah. These estimates were extrapolated to a maximum of 610 metres beyond drill holes.

Rio Tinto's 1999 estimate was based on data collected by previous explorers. Rio Tinto describes this estimate as a "global resource estimate" and states that the estimates are too poorly defined for classification under the JORC Code. Subsequent resource estimates by Rio Tinto in 2001 were completed after they commenced exploration activities and these estimates were classified as Inferred in accordance with the JORC Code.

Table 3: Historic resource estimates

Description	**Cut off P_2O_5**	**Category**	**Area**	**Resource (Mt @ P_2O_5 grade)**
1970 IMC Polygonal	14%	-	-	483 Mt @ 16.7 %
1999 Rio Tinto	10%	-	-	1,955 Mt @ 14.4 %
2001 Rio Tinto prior drilling completion	15%	JORC Inferred	-	115 Mt @ 22%
2001 Rio Tinto after drilling completion	15%	JORC Inferred	-	72 Mt @ 23%
2009 Coffey Mining Pty Ltd	15%	Inferred	Arruwurra Main Zone Total	131 Mt @18.7% 330 Mt @18.9% 461 Mt @ 18.8%
2010 Hellman & Schofield Pty Ltd	15%	Indicated	Arruwurra Main Zone Total	37 Mt @ 20.4 160 Mt @ 20.8% 197 Mt @ 21.6%
		Inferred	Arruwurra Main Zone Total	60 Mt @ 17% 147 Mt @ 21% 207 Mt @ 20%
2011 Hellman & Schofield Pty Ltd	15%	Indicated	Arruwurra Main Zone Total	37 Mt @ 20.4% 162 Mt @ 21.7% 199 Mt @ 21.5%
		Inferred	Arruwurra Main Zone Total	60 Mt @ 17% 267 Mt @ 22% 328 Mt @ 21%

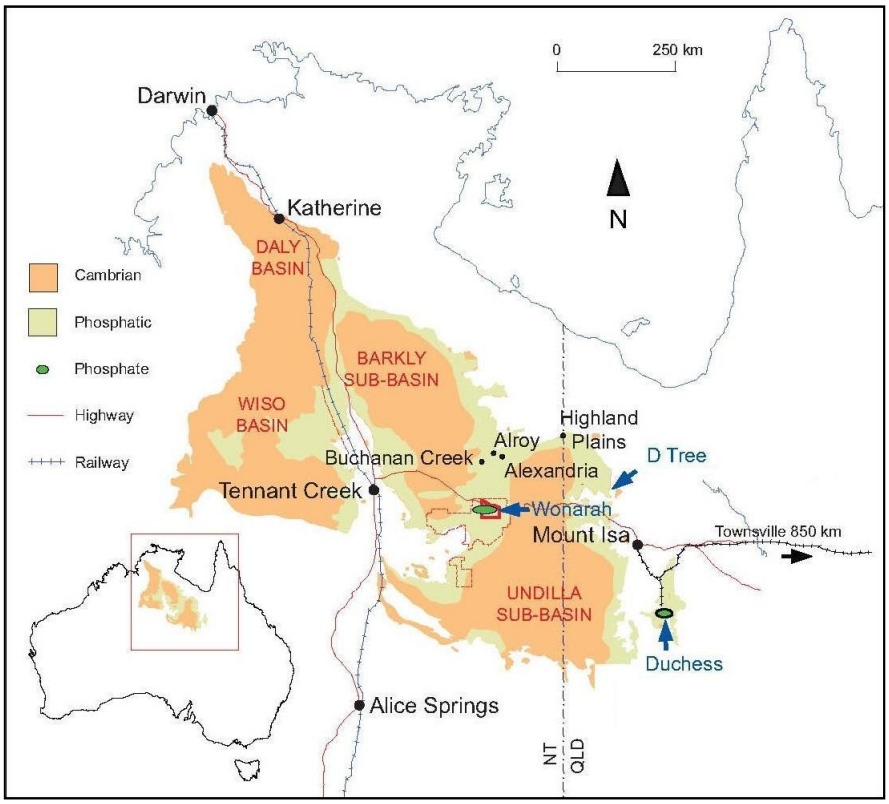
7. Geological Setting and Mineralization

The following descriptions of the Wonarah geological setting and mineralization are sourced from Abbott (2010), Lilley & Andrews (2001) and discussions with Minemakers geologists.

7.1. Regional geological setting

Wonarah mineralization lies within late Proterozoic to early Palaeozoic sedimentary rocks of the Georgina Basin which hosts several phosphate deposits in eastern Northern Territory and western Queensland (Figure 3). Wonarah is located in the area of a basement high between the Barkly and Undilla Sub-basins.

Basement rock types in the Wonarah region include a range of sedimentary rocks that are overlain by basalts and dolomites. These basement rocks are uncomformably overlain by sedimentary units of the Georgina Basin including dolostone, mudstone, and phosphorite of the lower Middle Cambrian Upper Gum Ridge Formation, and mudstone, siltstone, and dolostone of the Middle Cambrian Wonarah Beds.



(Figure courtesy Minemakers)

Figure 3: Regional geological setting and phosphate deposits

7.2. Local geological setting

Un-mineralized basement in the Wonarah area comprises the Peaker Piker Volcanics which generally appear in drilling intersections as highly weathered saprolitic basalt overlain by ferruginous duricrust, and the dolomitic Thorntonia Limestone (DOL) which laterally onlaps the Peaker Piker volcanics.

The basal Georgina Basin sedimentary unit is represented by the Upper Gum Ridge Formation which unconformably overlays the basement volcanics and dolomites. This unit consists of mudstone and siltstones variably overlain by brecciated chert and mudstone phosphorite which hosts the phosphorite mineralization included in the current estimates.

The Upper Gum Ridge Formation is overlain by the Wonarah Beds which are devoid of significant phosphate mineralization comprise mudstone and siltstone with minor nodular chert.

Several metres of aeolian sands and variably developed, locally outcropping silcrete, ferricrete and calcrete overlays most of the Wonarah area. The phosphorite bearing units of the Upper Gum Ridge Formation do not outcrop within the project area.

Minemakers subdivide the Upper Gum Ridge Formation into four units which are listed in stratigraphic (top down) order in Table 4. For some units, Minemakers use different logging codes at Arruwurra and Main Zone. This approach reflects variations in the rock types between the projects and simplifies summaries of mineralization. For these units, the code used for Main Zone is shown after the Arruwurra code in Table 4.

Table 4: General stratigraphic sequence

Code	Unit	Description
CMU/HMU	Convolute Mudstone	Convolute Mudstone
APH/MPH	Mudstone Phosphorite	mudstone phosphorite with traces of chert
CBX	Chert Breccia Phosphorite	brecciated phosphatic chert fragments within a mudstone phosphorite matrix
TUN	Undifferentiated transitional sediments	weathered mudstone and siltstone

The TUN unit shows generally only low phosphate grades. Higher grade portions include rare generally discontinuous beds of high grade porcellaneous mudstone phosphorite designated as transitional phosphorite (TUP).

The chert fragments within the CBX unit are interpreted to represent silicified phosphatic dolostone bands, replaced by silica during diagenesis, and brecciated through post depositional collapse processes.

The Mudstone Phosphorite (MPH) unit is commonly friable with typically medium to high phosphate grades. At Arruwurra this unit is designated as APH and locally includes a visually distinct indurated, high grade phosphorite basal unit designated as the Basal Phosphorite (BPH).

The Convolute Mudstone (CMU) overlies the main mineralized zones and generally contains only low grade phosphorus values interpreted to be of supergene origin with rare, discontinuous high grade mudstone phosphorite interbeds.

7.3. Mineralization distribution

The mineralized domains used for resource estimation reflect the rock units described above and were interpreted on the basis of Minemakers geological logging and one metre down-hole composited assay grades. These domains are gently undulating, with an overall gentle dip of less than one degree towards the south and west.

Figure 4 shows the plan-view extents of the combined mineralized domains interpreted for each deposit relative to drill hole collars and block model extents. Figure 5 presents example cross sections of the domain interpretation for each deposit relative to drill hole traces annotated by one metre down-hole composited P_2O_5 grades.

Table 5 summarizes the thicknesses of each resource domain. This table is based on mineralized domain wire-frame vertical thicknesses measured at 50 by 50 metre spaced discretisation points.

The distribution of the mineralized domains interpreted for Arruwurra and Main Zone is summarised below.

Arruwurra

At Arruwurra, the CBX unit is less well developed than at Main Zone. The majority of Arruwurra phosphate mineralization is hosted by the APH unit which averages around six metres thick. The high grade basal BPH zone is developed in central portions of the deposit with an average interpreted thickness of approximately 1.6 metres over an area around 0.9 by 2.2 kilometres.

The Arruwurra domains cover an area around 6 kilometres by 2.5 kilometres. Figure 6 shows the extents of the APH and BPH domains relative to drill hole collars.

Main Zone

The Main Zone mineralized domains are interpreted to cover an area around 10 kilometres east-west by 14 kilometres north-south. Figure 7 shows the extents of the MPH and CBX domains relative to drill hole collars. These domains dominate the Main Zone resources and contain around 96% of combined Measured and Indicated Mineral Resources estimated for this deposit at a cut off grade of 10% P_2O_5 (Table 20).

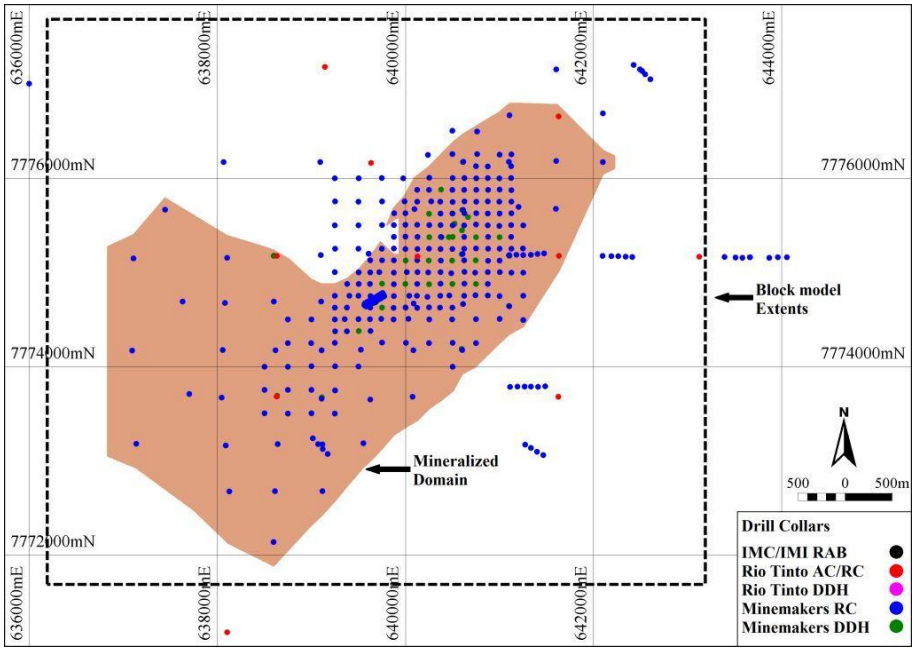
The MPH domain averages approximately four metres thick. This domain is not continuous over the full extents of the resource area, and as shown in Figure 7 is not interpreted in the central west of the deposit, and is interpreted as relatively discontinuous zones in the central and southern parts of the deposit.

CBX mineralization is significantly more continuous than the MPH zone. It is interpreted over most of the Main Zone area with an average thickness of around four metres.

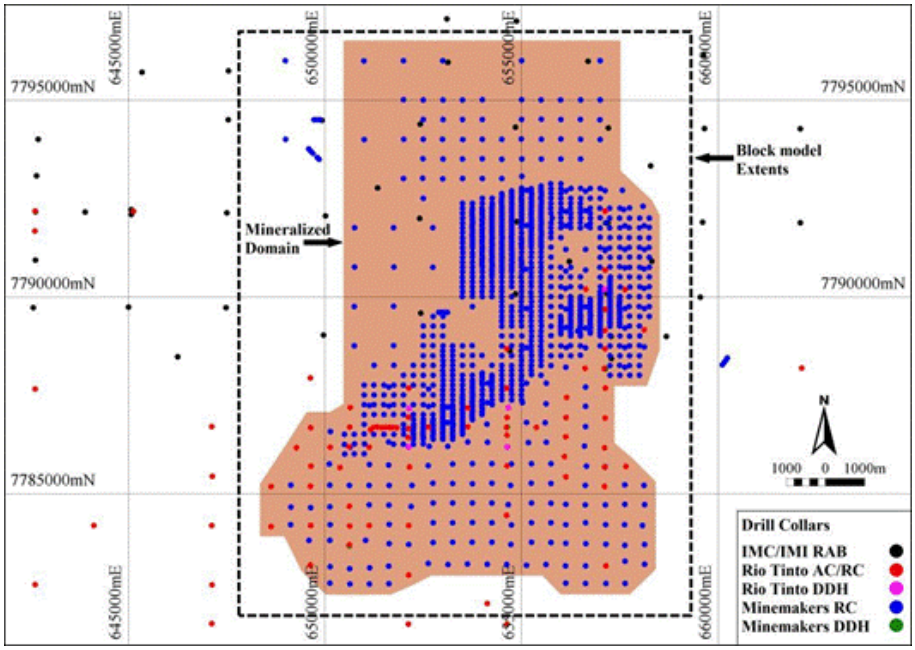
The TUP and CMU mineralized domains represent comparatively small, discontinuous zones that are generally intersected by only a small number of drill holes.

Table 5: Mineralized domain thicknesses

Deposit	Domain	Domain thickness (metres)		
		Minimum	**Average**	**Maximum**
Arruwurra	APH	0.1	5.7	13.1
	BPH	0.1	1.6	4.5
	Combined mineralization	**0.1**	**5.9**	**18.5**
Main Zone	MPH	0.1	4.3	17.2
	CBX	0.1	4.2	13.2
	TUN	0.1	3.5	11.1
	TUP	0.1	1.2	5.2
	Combined main domains	**2.0**	**10.1**	**26.8**
	CMU	0.2	1.4	3.0

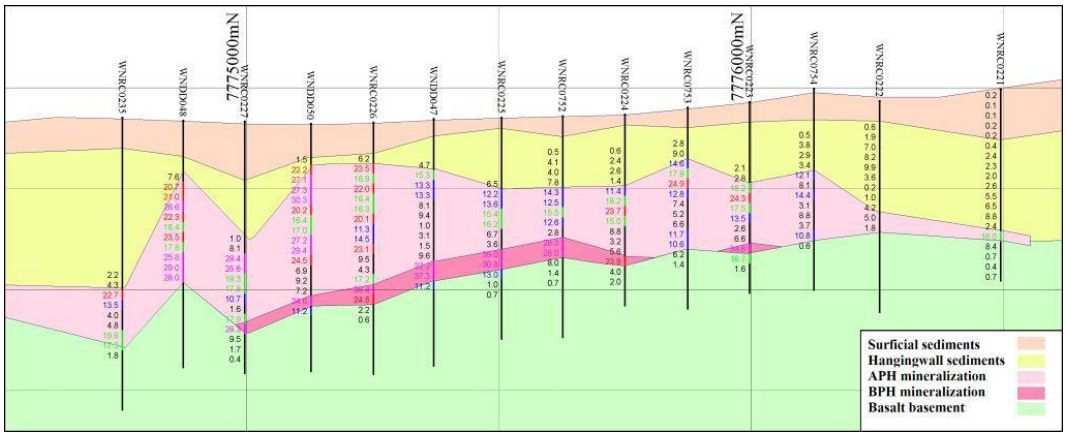


Arruwurra

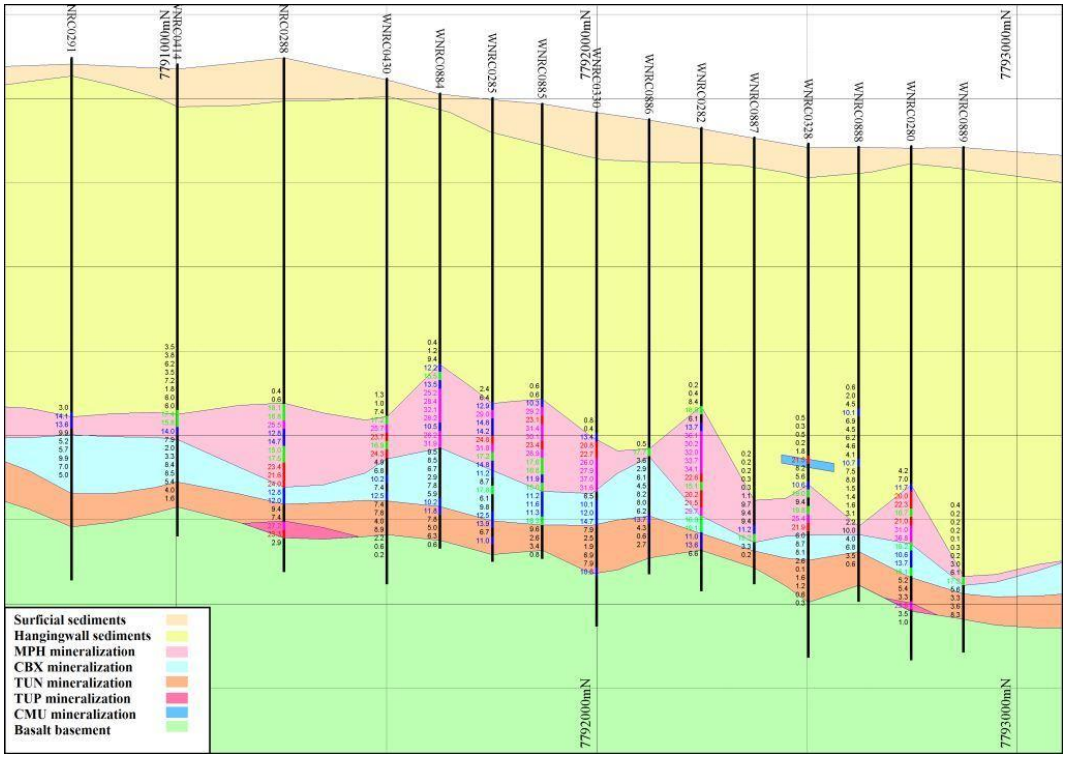


Main Zone

Figure 4: Combined mineralized domains, drill hole collars and model limits



Arruwurra: 640,750 mE 20:1 vertical exaggeration



Main Zone: 655,750 mE 20:1 vertical exaggeration

Figure 5: Example cross sections of mineralized domains

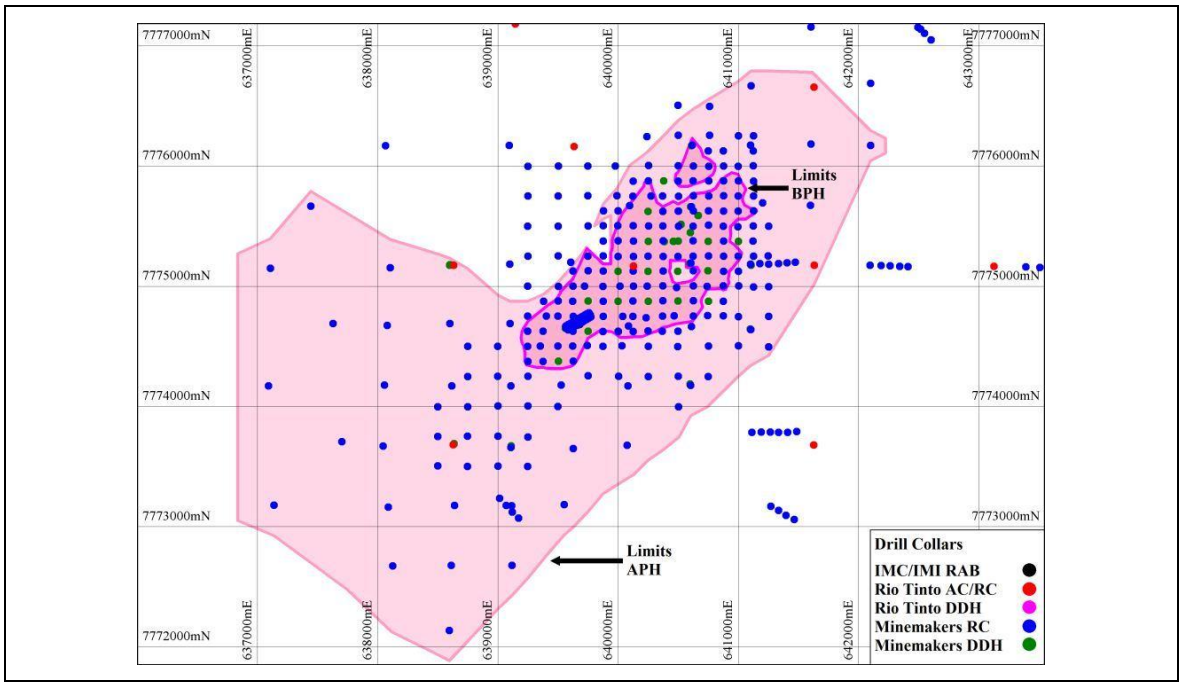
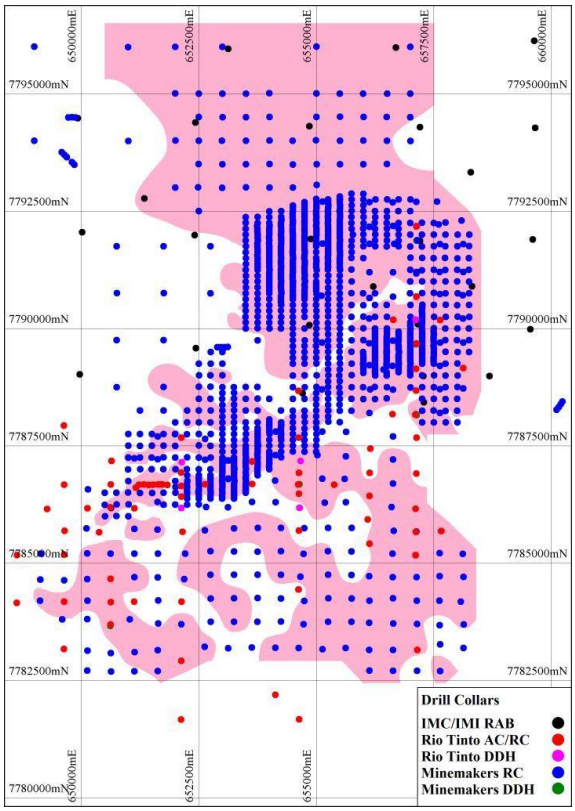
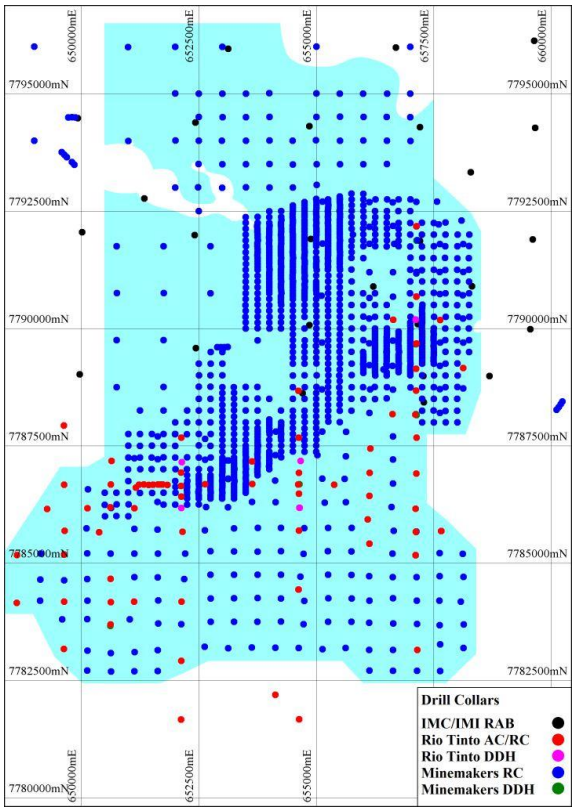


Figure 6: Arruwurra mineralized domains relative to drill hole collars



MPH



CBX

Figure 7: Main Zone major mineralized domains relative to drill hole collars

8. Deposit Types

Wonarah phosphate mineralization is hosted by flat lying to gently undulating sedimentary rocks of the Upper Gum Ridge Formation. These rocks comprise mudstones, siltstones and variably developed phosphorite units including chert breccia phosphorite, mudstone phosphorite and convolute mudstones.

The Upper Gum Ridge Formation units unconformably overlay the un-mineralized basaltic and dolomitic basement, and are overlain by the barren sediments of the Wonarah beds and several metres of aeolian sands.

Minemakers exploration activities have generally comprised initial broad spaced RC drilling aimed at outlining the extents of the main mineralized zones followed by successively tighter infill drilling designed to improve definition of the distribution of phosphate mineralization within the broader zones. The infill drilling has been focused on higher grade portions of the mineralization with drill hole spacings selected on the basis of interpreted local mineralization trends.

Higher grade portions of the mineralization which have been the focus of Minemakers closer spaced infill drilling include the basal BPH zone at Arruwurra and higher grade, generally northeast trending zones within the MPH at Main Zone.

9. Exploration

Exploration activities by Minemakers and previous holders of the Wonarah tenements have been dominated by RAB, RC and diamond drilling.

Additional exploration activities have included comparatively minor amounts of surface sampling geological mapping. These activities are of little relevance to the current resource estimates and are not discussed in this report.

10. Drilling

10.1. Available drilling

Since phosphate exploration of the Wonarah project began in 1967, a number of RAB, RC and diamond drilling programs have been completed in the project area. Table 6 summarizes the Wonarah sampling database by drilling type and phase including a summary of drilling within the area covered by the current block models.

Section 11 describes sampling and assaying for the main resource drilling types including a description of sampling quality.

Figure 6 shows the location of drill hole collars in the Arruwurra and Main Zone deposit areas relative to the extents of the mineralized domains included in the current estimates. Figure 8 shows drill hole collars for the full database relative to the combined mineralized domains and block model limits.

Figure 5 presents example cross sections of drill hole traces annotated by one metre down-hole composited P_2O_5 grades relative to the interpreted resource domains for Arruwurra and Main Zone.

Table 6 demonstrates that the resource area drilling is dominated by Minemakers RC holes which represent 88% of the drilling within the block model limits. Minemakers diamond holes represent 5% of the drilling and drilling by previous explorers contributes a combined 7% of the drilling.

Minemakers diamond holes were primarily drilled to provide samples for metallurgical test work, density measurement and comparison with the results of RC sampling.

The Minemakers RAB drilling shown in Table 6 represents blast holes drilled during the 2009 Arruwurra bulk sampling exercise.

All of the holes drilled at Wonarah to date are vertical with the exception of 48 inclined Minemakers holes comprising four diamond holes and 44 RC holes primarily drilled for ground-water investigations. For the majority of drilling down-hole sample lengths generally closely reflect true thicknesses of the gently undulating domains.

Within the current model areas, drill hole depths range from rarely around 1.4 to 162 metres and average approximately 46 metres. For the routine Minemakers RC resource drilling, which dominates the resource dataset most holes (98%) are between 20 and 70 metres depth.

As shown in Figure 4, drill hole spacing at Main Zone varies from more than one by one kilometre in peripheral portions of the deposit to around 250 by 62.5 metres in several comparatively small areas. Central and northern portions of the deposit have been drilled at generally 250 by 125 metre or closer spacing with several areas of higher grade MPH mineralization tested by nominally 250 by 62.5 metre spaced drilling.

In comparison with Main Zone, the Arruwurra drilling is generally more consistently gridded with less variation in drill hole spacing. For peripheral zones, drill spacing ranges from around 500 by 500 metres to one by one kilometre in the far west of the deposit. Central portions have been sampled by generally 250 by 250 metres spaced drilling with an area including virtually the entire BPH zone infilled to 125 by 125 metre spacing.

Table 6: Summary of Wonarah drilling

Full database for Wonarah Project						
		IMC 1967-69	**ICI 1978**	**Rio Tinto 2000-01**	**Minemakers 2008-11**	**Total**
RAB	Holes	87	10	-	209	306
	Metres	3,677	514	-	514	4,705
Aircore	Holes	-	-	4	-	4
	Metres	-	-	238	-	238
RC	Holes	-	-	122	1,568	1,690
	Metres	-	-	6,280	84,514	90,794
Diamond	Holes	-	-	12	99	111
	Metres	-	-	664	3,838	4,502
Total	**Holes**	**87**	**10**	**138**	**1,876**	**2,111**
	Metres	**3,677**	**514**	**7,182**	**88,866**	**100,238**
Database subset to current model areas						
		IMC 1967-69	**ICI 1978**	**Rio Tinto 2000-01**	**Minemakers 2008-11**	**Total**
RAB	Holes	17	7	-	209	233
	Metres	794	343	-	514	1,651
Aircore	Holes	-	-	4	-	4
	Metres	-	-	238	-	238
RC	Holes	-	-	79	1,431	1,510
	Metres	-	-	4,030	75,363	79,393
Diamond	Holes	-	-	12	99	111
	Metres	-	-	664	3,838	4,502
Total	**Holes**	**17**	**7**	**95**	**1,739**	**1,858**
	Metres	**794**	**343**	**4,932**	**79,715**	**85,784**

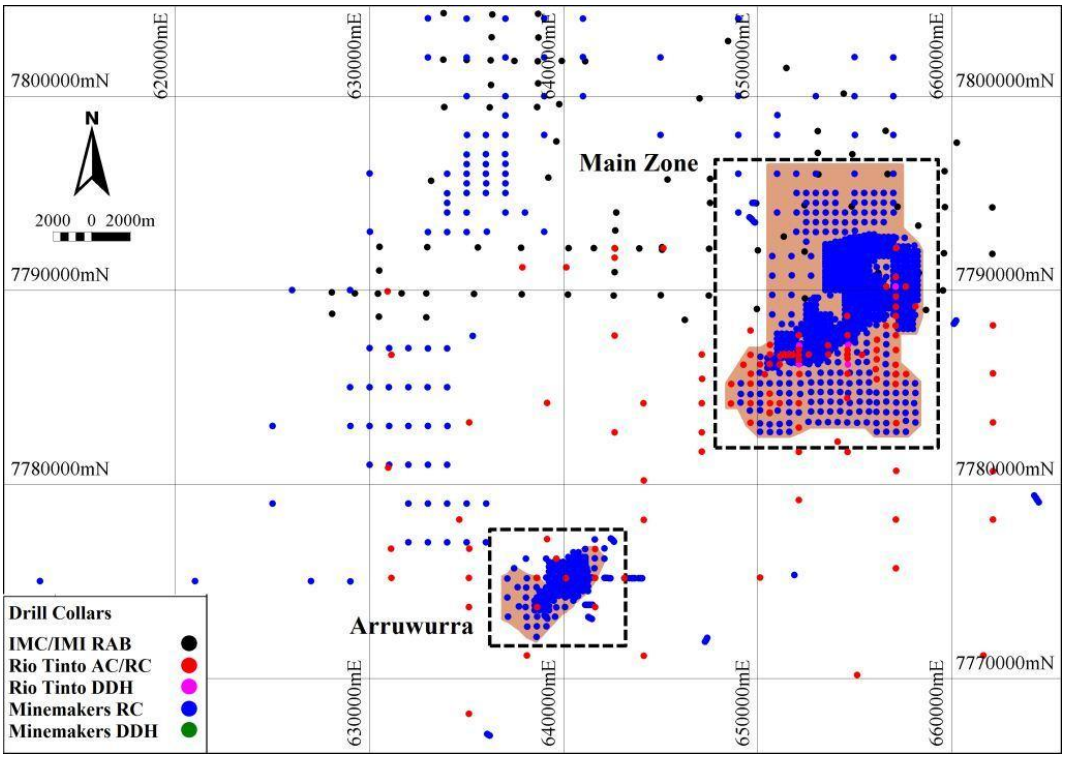


Figure 8: Model extents and drill hole collars

10.2. Resource datasets by sampling phase

The selection criteria used for the resource composite dataset is outlined below:

- Only RC, diamond and minor aircore drilling was included in the dataset. RAB and trial pit blast hole sampling were excluded.
- Data from Rio Tinto holes were selected only to infill areas with very broadly spaced Minemakers drilling.
- A set of inclined Minemakers RC holes which were drilled for ground water investigations and have incomplete assay coverage were excluded.
- For both Arruwurra and Main Zone a number of locations have been tested by up to three closely spaced holes including twinned diamond and RC holes. To reduce the impact of clustered sampling on resource estimates, a single hole was selected for each of these locations with Minemakers RC drilling prioritised over Rio Tinto holes or Minemakers diamond holes.
- Minemakers RC holes were selected in preference to twinned Minemakers diamond drilling due to the commonly incomplete assay coverage for the diamond drilling and for consistency with the RC dominated dataset. This approach is justified by the consistent grades shown by RC and diamond drilling described in Section 11.
- Arruwurra drilling includes three traverses of twenty metre spaced holes in the vicinity of the bulk sample open pit. These clustered holes were excluded from the resource dataset.

Figure 9 shows the contribution of each sampling group to composite datasets used for resource estimation. This figure provides an indication of the relative contribution of each sampling phase to estimated resources and demonstrates that the estimates are primarily based on data from Minemakers RC sampling which represents 95% of the combined composite dataset.

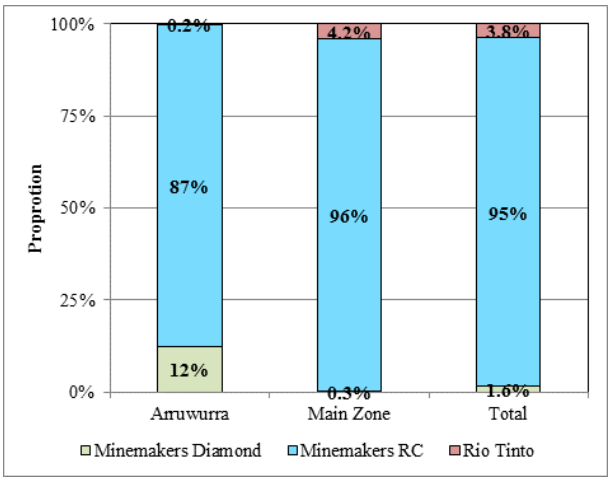


Figure 9: Resource composite datasets by sampling group

11. Sample Preparation, Analyses and Security

11.1. Introduction and summary

As described in Section 10, the resource dataset is dominated by Minemakers RC and diamond drilling which represent a combined 96% of the resource composites. This section describes only Minemakers sampling and assaying. Reliability of the Rio Tinto sampling which contributes around 4% of the resource dataset has little impact on the reliability of the estimates.

For each of Minemakers drilling programs field sampling was undertaken by drilling contractors and Minemakers field staff and supervised by Minemakers geologists. Subsequent sample preparation and analyses were undertaken by commercial assay laboratories.

Wonarah is in an isolated area with limited access to the general public. Sub-samples selected for routine assaying were collected in heavy-duty polywoven plastic bags that were immediately sealed. The bagged samples were then delivered directly to the analytical laboratories in Mount Isa by Minemakers employees or contractors, or less commonly by a local freight carrier.

Routine quality-assurance quality-control measures undertaken by Minemakers to demonstrate the reliability of the sampling and assaying include weighing recovered samples, collection of field duplicates, submission of reference standards, and inter-laboratory repeat assaying. Additional confirmation of the reliability of RC sampling is provided by comparison of results from nearby RC and diamond holes.

The author considers that quality control measures undertaken by Minemakers have established that the RC sampling is representative and free of any biases or other factors that may materially impact the reliability of the sampling, and analytical results.

The author considers that the sample preparation, security and analytical procedures adopted by Minemakers provide an adequate basis for the current Mineral Resource estimates.

11.2. Field sampling procedures

Drilling and sampling procedures for Minemakers RC drilling programs were supervised by Minemakers geologists. The RC holes were sampled over one metre intervals with bulk samples collected from the base of rig mounted cyclones and stored at the drill site. For the samples selected for assaying, Minemakers field staff sub-sampled the bulk samples using a three tier riffle splitter.

For each interval a sample of the chips was collected in chip tray for geological logging, and phosphorus and calcium grades were measured with a hand-held XRF unit. In conjunction with geological logging, the hand-held XRF measurements were used to aid selection of intervals for assaying. These measurements were not used for resource estimation.

For the 2008 to 2010 drilling programs, Minemakers routinely measured the radioactivity of bulk one metre RC samples with a hand-held Radeye Personal Radiometric Detector which measures gamma radiation, in conjunction with incomplete uranium assaying, these measurements provide some indication of the uranium grade of the samples.

Minemakers routine quality assurance monitoring included weighing of bulk samples, and submission of generally one field duplicate, one standard and for later drilling one blank per drill hole. The field duplicates, standards and blanks were submitted to the assay laboratory in the same batch as the primary samples.

11.3. Sample preparation and assaying

Minemakers samples selected for assaying were submitted to one of three commercial laboratories. As summarized in Table 7, the majority of assaying was completed by Amdel. For Amdel assaying up to November 2008, the samples were prepared at Amdel's Mount Isa laboratory and sent to Amdel's laboratory in Cardiff, New South Wales, for analysis. For later Amdel assaying, sample preparation and analysis were undertaken at Amdel's Mount Isa laboratory.

Amdel's sample preparation comprised oven drying at 110^{o}C followed by crushing of the entire sample to -2mm in a Boyd crusher. A 100 gram sub-sample of the crushed material was collected by rotary splitter and pulverised to -106 microns. A 0.1 gram sub-sample of the pulverised material was fused with lithium metaborate and analysed by XRF for P_2O_5, Al_2O_3, CaO, Fe_2O_3, K_2O, MgO, MnO, Na_2O, SiO_2 and TiO_2. In addition to the routine assaying, around 750 samples were analysed for uranium by XRF.

A small proportion of samples were assayed by ALS when Amdel were unable to keep pace with sampling, and some diamond core assaying was undertaken by Ammtec as part of metallurgical test work. The author understands that ALS and Ammtec used similar procedures to those described for Amdel.

Amdel's quality control systems are based on ISO9001. The National Association of Testing Authorities (NATA) has accredited Amdel's Cardiff laboratory in accordance with ISO/IEC 17025, which includes the management requirements of ISO9001:2000. NATA's accreditation number for Cardiff is 626.

Table 7: Minemakers resource composites by assay laboratory

	Number of composites			Proportion		
	Arruwurra	**Main Zone**	**Total**	**Arruwurra**	**Main Zone**	**Total**
Amdel	1,429	12,120	13,549	88%	92%	92%
ALS	-	985	985	-	8%	7%
Ammtec	194	-	194	12%	-	1%
Total	**1,623**	**13,105**	**14,728**	**100%**	**100%**	**100%**

11.4. Sampling and assay quality

Key aspects of the information available to demonstrate the reliability of sampling and assaying for Minemakers RC drilling are outlined below. The author considers that these data demonstrate that Minemakers RC data is representative and free of any biases or other factors that may materially impact the reliability of the current estimates.

Recovered sample weights

Recovered sample weights are available for most of the Minemakers RC drilling. Sample recoveries were calculated for each weighed interval using bit diameters specified by Minemakers and the bulk densities applied to the resource estimates.

The recovered weights show generally reasonably consistent sample recoveries averaging 84% for the mineralized domain samples (Table 8). In the author's experience this average recovery is consistent with good quality RC drilling.

Table 8: Recovery estimates for Minemakers mineralized domain RC samples

	Arruwurra	Main Zone	Total
Number	1,651	12,509	14,160
Average recovery	88%	83%	84%

Twinned hole comparisons

Table 9 compares the lengths and assayed P_2O_5 grades of mineralized intercepts from paired Minemakers RC and diamond holes separated by less than ten metres. This table includes only pairs with reasonably comparable assay coverage, and excludes pairs without reasonably complete assaying for the diamond holes. For the Main Zone pairs, the mineralized intervals include only the combined MPH and CBX mineralization as diamond core assaying generally does not extend into the underlying TUN and TUP zones.

Many of the Main Zone diamond holes were assayed over shorter intervals than their RC pair. Excluding all Main Zone pairs without comprehensive diamond assay coverage gives too few pairs for reliable comparison. The pairs selected for Main Zone include several diamond holes with incomplete assay coverage, giving slightly shorter average lengths than shown for RC drilling.

Table 9 shows that for both Arruwurra and Main Zone the combined set of twinned intervals show similar mean P_2O_5 grades for RC and diamond drilling. The grades for secondary attributes show similar trends. The consistency of mean grades from RC and diamond sampling provides confidence in the reliability of the RC sampling.

Table 9: Twinned Minemakers RC and diamond holes

	No.	Average Lengths (m)			Average grade (P_2O_5 %))		
	Pairs	RC	DDH	Difference	RC	DDH	Difference
Arruwurra	19	7.4	7.1	-4%	7.4	7.1	-4%
Main Zone	11	10.5	9.6	-9%	25.3	24.3	-4%
Total	**30**	**8.6**	**8.0**	**-6%**	**14.0**	**13.4**	**-4%**

Field duplicates

Minemakers collected field duplicates at an average frequency of one duplicate per 21 primary samples with a total of 1,071 duplicate results available. Duplicate assays generally correlate well with original results demonstrating the adequacy of field sub-sampling procedures. The scatter plot in Figure 10 compares original and field duplicate P_2O_5 results. The other assayed attributes show similarly good correlation.

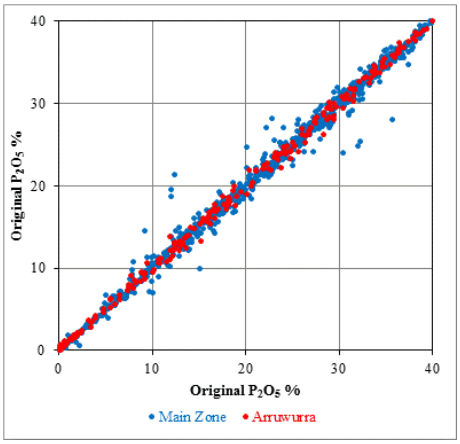


Figure 10: Scatter plot for field duplicate results

Coarse blanks

For drilling after March 2009 Minemakers routinely included samples of coarse blank material in assay batches. Minemakers produced the coarse blanks by compositing remnant RC sample material from continuous intervals of hanging-wall mudstone with uniformly low initial P_2O_5 assay results.

In addition to checking for laboratory contamination, the coarse blanks test for sample misallocation.

With the exception of five samples with anomalous results, the 268 assay results available for coarse blanks show generally low phosphate grades with no evidence of significant contamination. The magnitude of grades reported for the anomalous samples suggest that they reflect sample misallocation rather than laboratory contamination.

Reference standards

The reference standards used by Minemakers comprise eight standards purchased from commercial suppliers and four standards prepared from samples of Wonarah mineralization by Ore Research & Exploration Pty Ltd (Ore Research). The Ore Research standards have expected grades derived from the average of assay results from ten laboratories.

Assay results are available for 910 standards representing an average frequency of around one standard per 25 primary samples.

For each standard the average assay results reported by Amdel closely match expected values (Figure 11) with exception of Na_2O grades for three of the Ore Research standards. For these standards Amdel reports grades considerably higher than expected values. Rather than a bias in Amdel's assaying, this difference appears to reflect uncertainty over the certification Na_2O assaying which shows considerable variation between the ten laboratories.

The Na_2O grades of Wonarah mineralization are generally very low. The author understands that any uncertainty over the estimated grades for this attribute associates with the standards results does not affect marketing considerations for potential exploitation of the resource or overall confidence in the estimates.

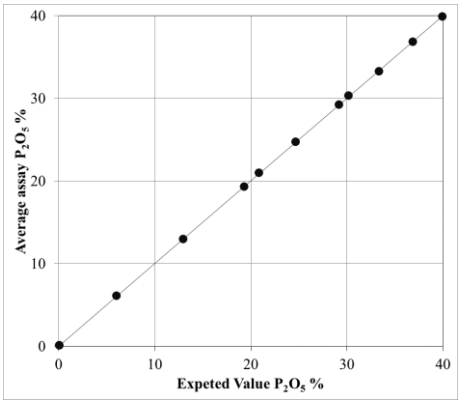


Figure 11: Reference standards P_2O_5 assays versus expected values

Inter-laboratory repeats

Inter-laboratory repeats available for Minemakers resource assaying comprise 138 samples with XRF assays by both Amdel and ALS for splits of the same assay pulp. The ALS and Amdel assay results are generally closely correlated confirming the reliability of the primary Amdel assaying.

11.5. Bulk density measurements

Analytical data available for Wonarah includes 520 immersion density measurements performed by Ammtec on oven dried core samples from Minemakers diamond drilling.

Table 10 summarizes the available density measurements by mineralized domain. For the MPH zone, the density measurements show a general trend of increasing density with increasing P_2O_5 grade. Samples from this domain with assayed P_2O_5 grades of greater than 30% show significantly higher average densities than lower grade samples.

Table 10: Minemakers immersion density measurements for mineralized domains

		Number of measurements	Average t/bcm
Arruwurra	APH	279	1.94
	BPH	55	2.26
Main Zone	MPH <30% P_2O_5	79	1.69
	MPH >30% P_2O_5	53	2.04
	CBX	46	1.86
	TUN	7	1.81
	TUP	1	1.92

12. Data Verification

Verification checks undertaken by the author to confirm the validity of the databases supplied by Minemakers include:

- Routine comparison of assay values with geological logging.
- Comparison of assay values between nearby holes.
- Checking for internal consistency between, and within tables in the supplied database.
- Comparisons between assay results from different sampling phases.
- For most assays from Minemakers drilling the results from laboratory source files supplied by Minemakers were compared with database assay entries.

These checks showed no significant discrepancies in the databases used for resource estimation.

No original source data is available for checking of database entries for Rio Tinto drilling results. However these data represent only a small proportion of the resource dataset (3.8%), and any uncertainty associated with their validity does not significantly affect confidence in the resource estimates.

The report author considers that the resource data has been sufficiently verified to form the basis of the current Mineral Resource estimates, and that the database is adequate for the current estimates.

13. Mineral Processing and Metallurgical Testing

This section is not applicable to the current report.

14. Mineral Resource Estimates

14.1. Introduction

Arruwurra and Main Zone, Mineral Resources were estimated by Ordinary Kriging of one metre down-hole composited assay grades within wireframes representing the mineralized domains.

The current models provide estimates at comparatively low cut off grades of around 10% P_2O_5 as envisaged by Minemakers for a potential mining operation feeding a beneficiation plant.

Estimation methodologies and parameters adopted for Arruwurra and Main Zone include several differences reflecting the differences in mineralization styles, and sample coverage for the two deposits.

Prior to variogram modelling and resource estimation for Arruwurra, the mineralized domain composites were un-folded to remove the gentle undulations from the mineralized domains. The Kriged estimates were un-folded to their correct positions in the compiled block model.

Minemakers evaluations to date have primarily focussed on potential DSO operations and assessment of the lower grade mineralization is at an early stage. The extent to which mining, metallurgical, marketing, infrastructure, permitting, marketing and other financial factors may affect the Mineral Resource Estimates has not yet been established. Mineral Resources that are not Mineral Reserves do not have demonstrated economic validity.

14.2. Composite dataset

Section 10.2 describes the selection criteria used to select the resource composite dataset. Statistics for the one-metre down-hole composited assays used for the Arruwurra and Main Zone resource estimates are presented in Table 11.

The highest grade composites lie within the MPH domain. The maximum P_2O_5 and CaO grades of 41.0% and 54.8% for this domain are close to typical composition of fluorapatite of 42.2% P_2O_5 and 55.6% CaO indicating that high grade portions of the mineralization are composed of mainly fluorapatite.

Table 11: Statistics for resource composites

	P_2O_5 %	Al_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
APH: 1445 composites										
Mean	15.9	5.77	22.7	1.43	0.59	0.56	0.08	0.11	46.8	0.27
Variance	54.2	10.4	105	6.4	0.20	0.24	0.09	0.003	207	0.03
Coef. Var.	0.46	0.56	0.45	1.76	0.76	0.86	3.80	0.52	0.31	0.63
Minimum	0.51	0.44	0.35	0.14	0.03	0.02	0.01	0.01	7.98	0.01
Median	15.3	5.06	22.3	0.65	0.43	0.43	0.02	0.11	47.5	0.21
Maximum	36.8	23.3	49.8	29.1	2.38	5.70	7.00	0.40	92.9	0.93
BPH: 181 composites										
Mean	30.0	3.35	40.8	0.91	0.20	0.22	0.05	0.08	20.0	0.15
Variance	30.3	3.77	59.1	0.87	0.04	0.02	0.003	0.001	120	0.01
Coef. Var.	0.18	0.58	0.19	1.03	0.97	0.61	1.16	0.38	0.55	0.67
Minimum	15.0	0.32	20.6	0.14	0.02	0.03	0.01	0.01	1.87	0.02
Median	29.8	3.02	40.2	0.57	0.16	0.17	0.03	0.08	20.6	0.13
Maximum	39.4	10.8	54.4	5.70	2.13	0.73	0.43	0.16	52.2	0.56
CMU: 49 composites										
Mean	21.3	6.3	27.2	0.96	0.59	0.18	0.02	0.13	38.3	0.27
Variance	58.0	10.0	123	2.43	0.09	0.01	0.00	0.00	241	0.03
Coef. Var.	0.36	0.50	0.41	1.63	0.50	0.44	2.10	0.26	0.41	0.61
Minimum	10.6	1.67	5.24	0.19	0.13	0.04	0.01	0.07	9.60	0.08
Median	19.7	5.6	25.9	0.66	0.54	0.17	0.01	0.12	40.8	0.26
Maximum	36.5	18.9	49.0	11.3	1.44	0.37	0.36	0.24	64.5	1.05
MPH: 5,270 composites										
Mean	21.1	5.0	27.8	1.45	0.47	0.15	0.03	0.09	39.7	0.22
Variance	72.8	9.2	139	7.24	0.10	0.01	0.01	0.00	340	0.02
Coef. Var.	0.41	0.61	0.42	1.86	0.69	0.66	3.35	0.61	0.47	0.59
Minimum	0.54	0.17	0.29	0.12	0.01	0.00	0.01	0.01	0.55	0.01
Median	20.4	4.5	27.1	0.72	0.40	0.13	0.02	0.08	40.9	0.20
Maximum	41.0	29.9	54.8	43.4	2.56	1.21	5.90	1.02	94.7	1.33
CBX: 4,108 composites										
Mean	9.0	4.4	11.8	1.31	0.41	0.14	0.03	0.07	69.0	0.20
Variance	33.4	6.0	63.2	6.18	0.07	0.02	0.02	0.00	185	0.01
Coef. Var.	0.64	0.55	0.68	1.90	0.65	0.90	4.71	0.58	0.20	0.57
Minimum	0.05	0.47	0.04	0.13	0.04	0.00	0.01	0.01	11.3	0.02
Median	8.04	3.7	10.6	0.70	0.33	0.10	0.01	0.07	71.0	0.17
Maximum	34.0	20.3	46.6	42.5	2.20	1.20	5.60	0.89	96.2	0.92
TUN: 3,858 composites										
Mean	5.5	8.8	7.33	3.52	0.98	0.51	0.21	0.08	67.2	0.50
Variance	23.9	9.8	42.9	39.5	0.23	0.25	0.85	0.00	110	0.04
Coef. Var.	0.88	0.35	0.89	1.79	0.49	0.97	4.46	0.47	0.16	0.40
Minimum	0.01	0.04	0.01	0.14	0.06	0.01	0.01	0.01	0.05	0.04
Median	4.76	9.3	6.30	1.73	1.00	0.49	0.03	0.08	68.4	0.51
Maximum	34.3	27.7	46.3	62.1	4.70	8.78	24.10	0.52	93.1	1.96
TUP: 396 composites										
Mean	26.4	3.2	35.3	1.34	0.23	0.11	0.11	0.06	29.3	0.19
Variance	41.7	3.4	76.4	1.65	0.03	0.01	0.06	0.00	174	0.01
Coef. Var.	0.24	0.58	0.25	0.96	0.74	0.95	2.15	0.67	0.45	0.62
Minimum	10.0	0.11	13.2	0.13	0.00	0.01	0.01	0.01	0.89	0.00
Median	25.6	3.0	34.3	0.87	0.19	0.08	0.04	0.06	30.8	0.17
Maximum	40.6	10.6	55.2	13.5	1.30	1.33	2.58	0.59	63.3	0.78

14.3. Estimation parameters

Table 12 shows the extents, and block sizes of the Arruwurra and Main Zone block models. Figure 4 shows the model extents relative to the mineralized domains and drill hole collars for each deposit. For both deposits grades were Kriged into parent blocks that were sub-blocked at domain boundaries for accurate representation of the wireframe volumes.

Table 12: Block model extents and block sizes

	Minimum	Maximum	Extents	Parent block	Sub-block
Arruwurra					
Easting	636,187.5 mE	643,187.5 mE	7,000 m	125 m	12.5 m
Northing	7,771,687.5 mN	7,777,687.5 mN	6,000 m	125 m	12.5 m
Elevation	200 mRL	300 mRL	100 m	1.0 m	0.25 m
Main Zone					
Easting	647,812.5 mE	659,312.5 mE	11,500 m	125 m	25 m
Northing	7,781,895 mN	7,796,745 mN	14,850 m	30 m	15 m
Elevation	190 mRL	310 mRL	120 m	1 m	0.25 m

Table 13 presents the search criteria used for the Arruwurra and Main Zone models. These criteria were selected to provide estimates for the all but the most broadly drilled portions of the interpreted domains while ensuring that blocks were estimated by nearby data where possible. For each deposit, the long axis of the search ellipsoid was aligned with the interpreted strike direction as shown in Table 13.

For the Arruwurra estimates, all domain boundaries were treated as hard. For each of the Main Zone domains, the estimates included six search passes with domain boundaries treated as hard. For the MPH, CBX, TUN and TUP a second set of searches with soft boundaries were used to inform blocks that were not informed by the initial hard-boundary searches.

Main Zone blocks estimated by search pass 6 and each of the soft-boundary searches are poorly related to nearby data. These blocks are not included in the estimates of Mineral Resources and are used only for estimation of Exploration Potential.

Table 13: Search criteria

	Search Pass	Radius (x,y,z)	Minimum Data	Minimum Octants	Maximum Data
Arruwurra Strike: 045	1	300,150,1.50	8	2	32
	2	390,195,2.25	8	2	32
	3	390,195,2.25	4	1	32
	4	800,800,3.00	4	1	32
Main Zone Strike: 060	1	400,90,1.50	8	2	32
	2	533,120,2.00	8	2	32
	3	533,120,2.00	4	1	32
	4	600,200,3.00	4	1	32
	5	900,300,4.50	4	1	32
	6	900,300,4.50	2	1	32

14.4. Bulk densities

Bulk densities assigned to the current estimates as listed in Table 14 were derived from the density measurements described in Section 11.

The Main Zone CMU and TUP domains have too few density measurements to provide reliable density estimates. These domains were assigned densities from the comparable APH and BPH domains at Arruwurra. All Mineral Resources estimated for the CMU and TUP domains are classified as Inferred, and the lack of confidence in density measurements for these domains does not affect general confidence in the estimates.

Table 14: Bulk densities assigned to estimates

Deposit	Domain	Assigned density (t/bcm)
Arruwurra	APH	1.8
	BPH	2.0
Main Zone	CMU	1.8
	MPH <30% P_2O_5	1.8
	MPH >30% P_2O_5	2.0
	CBX	1.7
	TUN	1.7
	TUP	2.0

14.5. Resource classification

The current estimates are classified as Measured, Indicated and Inferred on the basis of estimation search passes and plan view polygons defining areas of relatively consistent drill spacing. The classification scheme varies between mineralized domains and cut off grades reflecting differences in grade continuity between different zones, and the decreasing continuity of the mineralization with increasing P_2O_5 cut off grades.

The resource classifications applied to the current estimates are intended only for cut off grades of up to 20% P_2O_5. At higher cut off grades the mineralization is less continuous and revisions to the classifications would be required for reporting estimates at higher cut offs.

Figure 12 shows the classification polygons used for Arruwurra and Main Zone and Table 15 and Table 16 summarise the classification criteria for Arruwurra and Main Zone respectively. The resource classification methodology applied to each deposit is discussed below.

Arruwurra

The Arruwurra classification polygons subdivide the mineralized domains into three zones representing mineralization tested at nominal drill spacings of 125 by 125 metres, 250 by 250 metres and broader drilling.

BPH mineralization has been generally tested by 125 by 125 metre spaced drilling. Only a small proportion of this domain has 250 by 250 metre sampling, and none lies outside the area tested by 250 by 250 metre spaced sampling.

The 125 by 125 metre spaced drilling does not reliably define the continuity of APH mineralization at high P_2O_5 cut off grades. For cut off grades of greater than 18%, none of the estimates for this domain are classified as Measured with search pass one and two blocks assigned to the Indicated category.

Table 15: General Arruwurra resource classification scheme

Domain	Search Pass	Nominal spacing < 125 by 125 m	Nominal spacing < 250 by 250 m	Nominal spacing > 250 by 250 m
APH	1&2	Measured	Indicated	Inferred
	3	Indicated	Indicated	Inferred
	4	Indicated	Inferred	Inferred
BPH	1&2	Measured	Indicated	Inferred
	3&4	Indicated	Indicated	Inferred

Main Zone

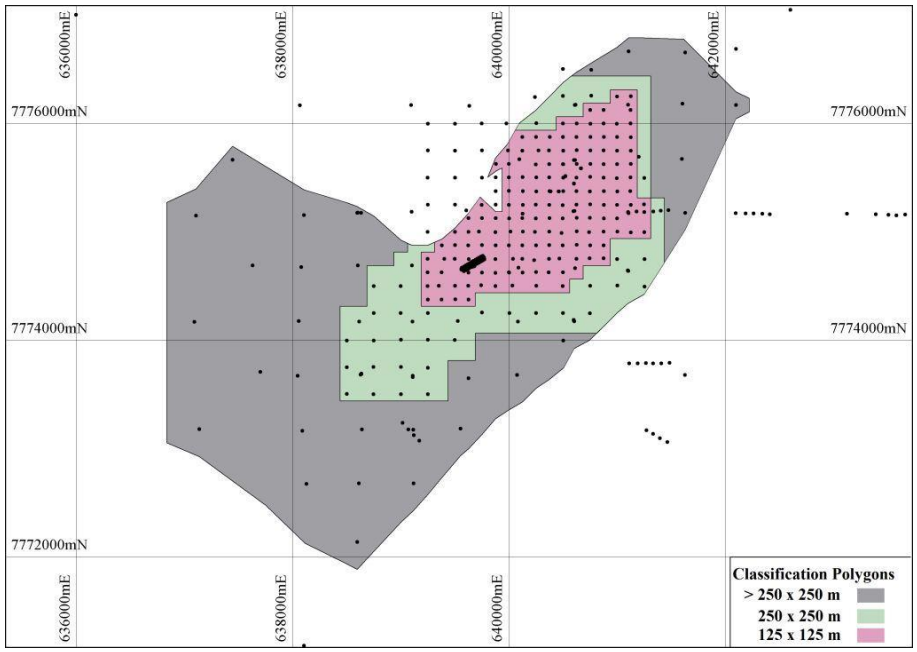
The Main Zone classification polygons subdivide the main resource domains into four areas representing nominal drilling grids of 125 by 62.5 metres, 250 by 250 metres, 500 by 500 metres and broader sampling.

The CBX and TUN domains are generally comparatively low grade with mineralization within these domains above cut-offs showing notably less continuity than for other domains including the APH and MPH zones. For the CBX and TUN domains, Indicated resources are restricted to the more closely sampled areas.

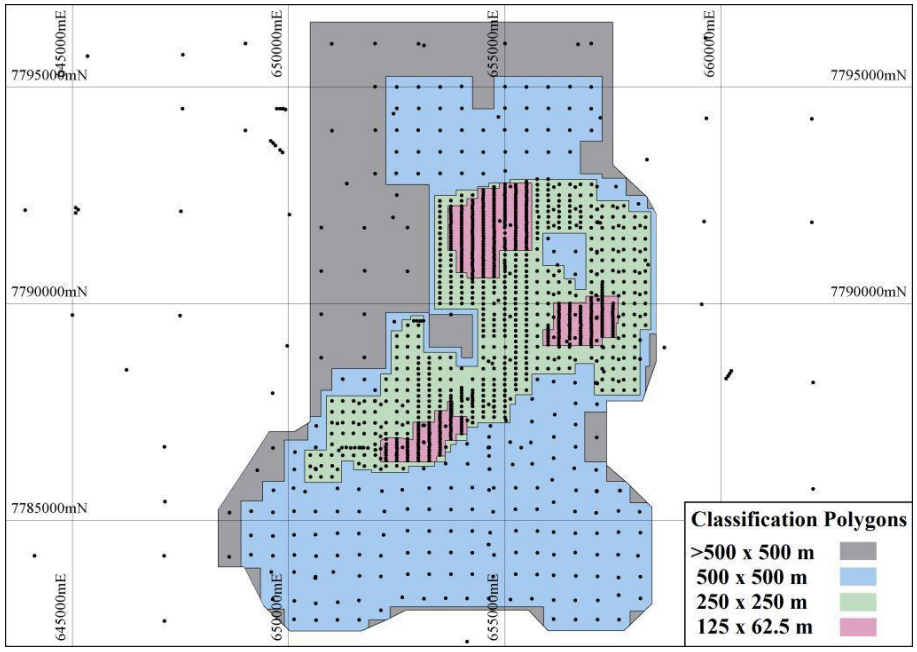
The CMU and TUP domains comprise small zones that are generally intersected by few drill holes. The estimates for these zones are of low confidence and all estimated resources for these domains are assigned to the Inferred category.

Table 16: General Main Zone resource classification scheme

	Search Pass	Nominal spacing < 125 by 62.5 m	Nominal spacing < 250 by 250 m	Nominal spacing < 500 by 500 m	Nominal spacing >500 by 500m
MPH	1-3	Measured	Indicated	Inferred	Inferred
	4	Indicated	Inferred	Inferred	Inferred
	5	Inferred	Inferred	Inferred	Exp. Potent.
	6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.
	Soft 1-6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.
CBX and TUN	1-3	Indicated	Indicated	Inferred	Inferred
	4	Inferred	Inferred	Inferred	Inferred
	5	Inferred	Inferred	Inferred	Exp. Potent.
	6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.
	Soft 1-6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.
TUP and CMU	1-5	Inferred	Inferred	Inferred	Inferred
	6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.
	Soft 1-6	Exp. Potent.	Exp. Potent.	Exp. Potent.	Exp. Potent.



Arruwurra



Main Zone

Figure 12: Resource classification polygons

14.6. Resource estimates

Table 17 summarizes estimated Mineral Resources for Wonarah for the P_2O_5 cut off grades specified by Minemakers and Table 18 to Table 22 detail the estimates including all secondary attributes. As stipulated by Minemakers, these tables include the model estimates reported at zero cut off which represent the entire estimated volumes of the mineralized domains.

The figures in Table 17 to Table 22 are rounded to reflect the precision of estimates and include rounding errors.

Table 17: Wonarah Mineral Resource estimates

Cut off	Deposit and Domain	Measured		Indicated		Measured and Indicated		Inferred	
		Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %
	Arruwurra								
	APH	25.6	15.3	28.2	17.1	53.8	16.2	82	16
	BPH	3.9	30.3	0.7	29.8	4.6	30.2	-	-
	Subtotal	**29.5**	**17.3**	**28.9**	**17.4**	**58.4**	**17.3**	**82**	**16**
	Main Zone								
0% P_2O_5	MPH	52.9	21.7	117	20.8	170	21.1	266	20
	CBX	-	-	185	9.1	185	9.1	416	9
	TUN	-	-	146	5.5	146	5.5	375	6
	TUP	-	-	-	-	-	-	35	27
	CMU	-	-	-	-	-	-	1	20
	Subtotal	**52.9**	**21.7**	**448**	**11.0**	**501**	**12.1**	**1,093**	**11**
	Total	**82.4**	**20.1**	**477**	**11.4**	**559**	**12.7**	**1,175**	**12**
	Arruwurra								
	APH	25.4	15.4	28.2	17.1	53.6	16.3	82	16
	BPH	3.9	30.3	0.7	29.8	4.6	30.2	-	-
	Subtotal	**29.3**	**17.4**	**28.9**	**17.4**	**58.2**	**17.4**	**82**	**16**
	Main Zone								
5% P_2O_5	MPH	52.9	21.7	117	20.8	170	21.1	266	20
	CBX	-	-	165	9.8	165	9.8	336	10
	TUN	-	-	80	7.6	80	7.6	213	7
	TUP	-	-	-	-	-	-	35	27
	CMU	-	-	-	-	-	-	1	20
	Subtotal	**52.9**	**21.7**	**362**	**12.9**	**415**	**14.0**	**851**	**13**
	Total	**82.2**	**20.2**	**391**	**13.2**	**473**	**14.4**	**933**	**13**
	Arruwurra								
	APH	21.8	16.6	27.0	17.5	48.8	17.1	82	16
	BPH	3.9	30.3	0.7	29.8	4.6	30.2	-	-
	Subtotal	**25.7**	**18.7**	**27.7**	**17.8**	**53.4**	**18.2**	**82**	**16**
	Main Zone								
10% P_2O_5	MPH	52.6	21.8	115	20.9	168	21.2	264	20
	CBX	-	-	69	12.4	69	12.4	135	13
	TUN	-	-	10	11.7	10	11.7	25	12
	TUP	-	-	-	-	-	-	35	27
	CMU	-	-	-	-	-	-	1	20
	Subtotal	**52.6**	**21.8**	**194**	**17.4**	**247**	**18.3**	**460**	**18**
	Total	**78.3**	**20.8**	**222**	**17.5**	**300**	**18.3**	**542**	**18**
	Arruwurra								
	APH	13.3	19.1	20.6	18.8	33.9	18.9	58	17
	BPH	3.9	30.3	0.7	29.8	4.6	30.2	-	-
	Subtotal	**17.2**	**21.6**	**21.3**	**19.2**	**38.5**	**20.3**	**58**	**17**
	Main Zone								
15% P_2O_5	MPH	47.7	22.7	104	21.8	152	22.1	229	21
	CBX	-	-	8	16.7	8	16.7	28	17
	TUN	-	-	0.4	16.5	0.4	16.5	1	16
	TUP	-	-	-	-	-	-	35	27
	CMU	-	-	-	-	-	-	1	21
	Subtotal	**47.7**	**22.7**	**112**	**21.4**	**160**	**21.8**	**294**	**21**
	Total	**64.9**	**22.4**	**133**	**21.1**	**198**	**21.5**	**352**	**21**

Table 17: Wonarah Mineral Resource estimates continued

Cut off	Deposit and Domain	Measured		Indicated		Measured and Indicated		Inferred	
		Mt	**P_2O_5 %**	**Mt**	**P_2O_5 %**	**Mt**	**P_2O_5 %**	**Mt**	**P_2O_5 %**
	Arruwurra								
	APH	-	-	10.8	22.2	10.8	22.2	6	22
	BPH	3.9	30.3	0.7	29.8	4.6	30.2	-	-
	Subtotal	**3.9**	**30.3**	**11.5**	**22.7**	**15.4**	**24.6**	**6**	**22**
	Main Zone								
20%	MPH	31.6	25.2	64	24.2	96	24.5	126	24
P_2O_5	CBX	-	-	0.4	21.8	0.4	21.8	3	21
	TUN	-	-	-	-	-	-	-	-
	TUP	-	-	-	-	-	-	35	27
	CMU	-	-	-	-	-	-	1	22
	Subtotal	**31.6**	**25.2**	**64**	**24.2**	**96**	**24.5**	**165**	**25**
	Total	**35.5**	**25.8**	**75**	**24.0**	**111**	**24.5**	**171**	**24**

Table 18: Wonarah resource estimates at 0% P_2O_5 cut off

Deposit	Domain	Category	Mt	P_2O_5 %	AL_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
Arruwurra	APH	Measured	25.6	15.3	6.27	22.0	1.00	0.61	0.61	0.05	0.12	47.8	0.29
		Indicated	28.2	17.1	4.89	24.3	1.74	0.53	0.55	0.10	0.11	44.9	0.23
		Meas.+ Ind.	**53.8**	**16.2**	**5.55**	**23.2**	**1.39**	**0.57**	**0.58**	**0.08**	**0.11**	**46.3**	**0.26**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.2	0.05	46	0.2
	BPH	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	0.7	29.8	3.28	40.4	1.10	0.20	0.23	0.05	0.08	20.3	0.15
		Meas.+ Ind.	**4.6**	**30.2**	**3.32**	**41.0**	**0.88**	**0.19**	**0.20**	**0.05**	**0.08**	**19.6**	**0.15**
	Subtotal	Measured	29.5	17.3	5.88	24.5	0.98	0.55	0.56	0.05	0.11	44.1	0.27
		Indicated	28.9	17.4	4.85	24.7	1.72	0.52	0.54	0.10	0.11	44.3	0.23
		Meas.+ Ind.	**58.4**	**17.3**	**5.37**	**24.6**	**1.35**	**0.54**	**0.55**	**0.07**	**0.11**	**44.2**	**0.25**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.2	0.05	46	0.2
Main Zone	MPH	Measured	52.9	21.7	4.62	28.7	1.22	0.40	0.12	0.03	0.09	39.0	0.20
		Indicated	117	20.8	5.09	27.4	1.57	0.51	0.16	0.03	0.09	40.2	0.24
		Meas.+ Ind.	**170**	**21.1**	**4.94**	**27.8**	**1.46**	**0.48**	**0.15**	**0.03**	**0.09**	**39.8**	**0.23**
		Inferred	266	20	5.0	27	2.1	0.5	0.2	0.07	0.06	41	0.2
	CBX	Indicated	185	9.1	4.38	11.8	1.15	0.40	0.13	0.03	0.07	69.0	0.19
		Inferred	416	9	5.1	11	2.0	0.5	0.2	0.04	0.05	68	0.2
	TUN	Indicated	146	5.5	8.84	7.3	3.45	0.98	0.51	0.22	0.08	67.4	0.50
		Inferred	375	6	9.0	7.4	4.2	1.0	0.5	0.3	0.05	66	0.5
	TUP	Inferred	35	27	3.3	36	1.2	0.2	0.1	0.1	0.04	29	0.2
	CMU	Inferred	1	20	6.0	27	0.9	0.6	0.2	0.02	0.13	40	0.3
	Subtotal	Measured	52.9	21.7	4.62	28.7	1.22	0.40	0.12	0.03	0.09	39.0	0.20
		Indicated	448	11.0	6.02	14.4	2.01	0.62	0.26	0.09	0.08	61.0	0.30
		Meas.+ Ind.	**501**	**12.1**	**5.87**	**15.9**	**1.93**	**0.59**	**0.25**	**0.09**	**0.08**	**58.6**	**0.29**
		Inferred	1,093	11	6.4	14	2.8	0.7	0.3	0.1	0.05	59	0.3
Total		Measured	82.4	20.1	5.07	27.2	1.13	0.46	0.28	0.04	0.10	40.8	0.23
		Indicated	477	11.4	5.95	15.0	1.99	0.61	0.28	0.09	0.08	59.9	0.30
		Meas.+ Ind.	**559**	**12.7**	**5.82**	**16.8**	**1.87**	**0.59**	**0.28**	**0.08**	**0.08**	**57.1**	**0.29**
		Inferred	1,175	12	6.3	15	2.8	0.7	0.3	0.1	0.05	59	0.3

Table 19: Wonarah resource estimates at 5% P_2O_5 cut off

Deposit	Domain	Category	Mt	P_2O_5 %	AL_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
Arruwurra	APH	Measured	25.4	15.4	6.25	22.0	1.00	0.61	0.61	0.05	0.12	47.7	0.29
		Indicated	28.2	17.1	4.89	24.3	1.74	0.53	0.55	0.10	0.11	44.9	0.23
		Meas.+ Ind.	**53.6**	**16.3**	**5.53**	**23.2**	**1.39**	**0.57**	**0.58**	**0.08**	**0.11**	**46.2**	**0.26**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.19	0.05	46	0.2
	BPH	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	0.7	29.8	3.28	40.4	1.10	0.20	0.23	0.05	0.08	20.3	0.15
		Meas.+ Ind.	**4.6**	**30.2**	**3.32**	**41.0**	**0.88**	**0.19**	**0.20**	**0.05**	**0.08**	**19.6**	**0.15**
	Subtotal	Measured	29.3	17.4	5.86	24.5	0.98	0.55	0.56	0.05	0.11	43.9	0.27
		Indicated	28.9	17.4	4.85	24.7	1.72	0.52	0.54	0.10	0.11	44.3	0.23
		Meas.+ Ind.	**58.2**	**17.4**	**5.36**	**24.6**	**1.35**	**0.54**	**0.55**	**0.07**	**0.11**	**44.1**	**0.25**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.2	0.05	46	0.2
Main Zone	MPH	Measured	52.9	21.7	4.62	28.7	1.22	0.40	0.12	0.03	0.09	39.0	0.20
		Indicated	117	20.8	5.09	27.4	1.57	0.51	0.16	0.03	0.09	40.1	0.24
		Meas.+ Ind.	**170**	**21.1**	**4.94**	**27.8**	**1.46**	**0.5**	**0.15**	**0.03**	**0.09**	**39.8**	**0.23**
		Inferred	266	20	5.0	27	2.1	0.5	0.2	0.07	0.06	41	0.2
	CBX	Indicated	165	9.8	4.19	12.8	1.18	0.39	0.13	0.03	0.07	67.7	0.19
		Inferred	336	10	4.7	13	1.9	0.5	0.2	0.05	0.04	66	0.2
	TUN	Indicated	80	7.6	8.18	10.0	2.60	0.91	0.43	0.13	0.08	64.8	0.45
		Inferred	213	7	8.4	10.0	3.1	0.9	0.4	0.16	0.05	64	0.5
	TUP	Inferred	35	27	3.3	36	1.2	0.2	0.1	0.08	0.04	29	0.2
	CMU	Inferred	1	20	6.0	27	0.9	0.6	0.2	0.02	0.13	40	0.3
	Subtotal	Measured	52.9	21.7	4.62	28.7	1.22	0.40	0.12	0.03	0.09	39.0	0.20
		Indicated	362	12.9	5.36	16.9	1.62	0.54	0.21	0.05	0.08	58.1	0.26
		Meas.+ Ind.	**415**	**14.0**	**5.27**	**18.4**	**1.57**	**0.53**	**0.20**	**0.05**	**0.08**	**55.7**	**0.26**
		Inferred	851	13	5.7	18	2.2	0.6	0.25	0.08	0.05	56	0.3
Total		Measured	82.2	20.2	5.06	27.2	1.13	0.45	0.28	0.04	0.10	40.8	0.23
		Indicated	391	13.2	5.32	17.5	1.63	0.54	0.23	0.06	0.08	57.1	0.26
		Meas.+ Ind.	**473**	**14.4**	**5.28**	**19.2**	**1.54**	**0.53**	**0.24**	**0.05**	**0.08**	**54.3**	**0.25**
		Inferred	933	13	5.6	18	2.3	0.6	0.3	0.09	0.05	55	0.3

Table 20: Wonarah resource estimates at 10% P_2O_5 cut off

Deposit	Domain	Category	Mt	P_2O_5 %	AL_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
Arruwurra	APH	Measured	21.8	16.6	5.69	23.9	0.91	0.53	0.57	0.05	0.12	45.4	0.25
		Indicated	27.0	17.5	4.79	24.8	1.66	0.51	0.51	0.10	0.12	44.4	0.22
		Meas.+ Ind.	**48.8**	**17.1**	**5.19**	**24.4**	**1.32**	**0.52**	**0.54**	**0.08**	**0.12**	**44.8**	**0.23**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.2	0.05	46	0.2
	BPH	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	0.7	29.8	3.28	40.4	1.10	0.20	0.23	0.05	0.08	20.3	0.15
		Meas.+ Ind.	**4.6**	**30.2**	**3.32**	**41.0**	**0.88**	**0.19**	**0.20**	**0.05**	**0.08**	**19.6**	**0.15**
	Subtotal	Measured	25.7	18.7	5.33	26.5	0.90	0.48	0.51	0.05	0.11	41.5	0.23
		Indicated	27.7	17.8	4.75	25.2	1.65	0.50	0.50	0.10	0.12	43.8	0.22
		Meas.+ Ind.	**53.4**	**18.2**	**5.03**	**25.8**	**1.29**	**0.49**	**0.51**	**0.08**	**0.12**	**42.7**	**0.23**
		Inferred	82	16	4.9	23	3.5	0.6	0.3	0.2	0.05	46	0.2
Main Zone	MPH	Measured	52.6	21.8	4.62	28.8	1.22	0.40	0.12	0.03	0.09	38.9	0.20
		Indicated	115	20.9	5.07	27.6	1.57	0.50	0.16	0.03	0.09	39.9	0.24
		Meas.+ Ind.	**168**	**21.2**	**4.93**	**28.0**	**1.46**	**0.47**	**0.15**	**0.03**	**0.09**	**39.6**	**0.23**
		Inferred	264	20	5.0	27	2.1	0.5	0.2	0.07	0.06	41	0.2
	CBX	Indicated	69	12.4	3.87	16.2	1.25	0.38	0.13	0.03	0.07	62.5	0.18
		Inferred	135	13	4.2	17	1.7	0.4	0.2	0.05	0.04	59	0.2
	TUN	Indicated	10	11.7	7.07	14.9	1.89	0.76	0.34	0.09	0.08	59.0	0.38
		Inferred	25	12	7.4	15	2.0	0.7	0.3	0.05	0.05	58	0.4
	TUP	Inferred	35	27	3.3	36	1.2	0.2	0.1	0.1	0.04	29	0.2
	CMU	Inferred	1	20	6.0	27	0.9	0.6	0.2	0.02	0.08	40	0.3
	Subtotal	Measured	52.6	21.8	4.62	28.8	1.22	0.40	0.12	0.03	0.09	38.9	0.20
		Indicated	194	17.4	4.75	22.9	1.47	0.47	0.16	0.03	0.08	48.9	0.23
		Meas.+ Ind.	**247**	**18.3**	**4.72**	**24.2**	**1.42**	**0.46**	**0.15**	**0.03**	**0.08**	**46.8**	**0.22**
		Inferred	460	18	4.8	24	1.9	0.5	0.2	0.06	0.05	46	0.2
Total		Measured	78.3	20.8	4.85	28.0	1.11	0.43	0.25	0.04	0.10	39.7	0.21
		Indicated	222	17.5	4.75	23.2	1.49	0.47	0.20	0.04	0.09	48.3	0.22
		Meas.+ Ind.	**300**	**18.3**	**4.77**	**24.4**	**1.40**	**0.46**	**0.21**	**0.04**	**0.09**	**46.1**	**0.22**
		Inferred	542	18	4.8	24	2.1	0.5	0.2	0.08	0.05	46	0.2

Table 21: Wonarah resource estimates at 15% P_2O_5 cut off

Deposit	Domain	Category	Mt	P_2O_5 %	AL_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
Arruwurra	APH	Measured	13.3	19.1	4.72	27.5	0.73	0.39	0.44	0.06	0.13	40.9	0.19
		Indicated	20.6	18.8	4.42	26.5	1.57	0.47	0.47	0.10	0.12	42.1	0.20
		Meas.+ Ind.	**33.9**	**18.9**	**4.54**	**26.9**	**1.24**	**0.44**	**0.46**	**0.08**	**0.12**	**41.6**	**0.20**
		Inferred	58	17	4.7	24	3.4	0.6	0.3	0.2	0.05	44	0.2
	BPH	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	0.7	29.8	3.28	40.4	1.10	0.20	0.23	0.05	0.08	20.3	0.15
		Meas.+ Ind.	**4.6**	**30.2**	**3.32**	**41.0**	**0.88**	**0.19**	**0.20**	**0.05**	**0.08**	**19.6**	**0.15**
	Subtotal	Measured	17.2	21.6	4.40	30.6	0.75	0.34	0.39	0.06	0.12	36.0	0.18
		Indicated	21.3	19.2	4.38	27.0	1.55	0.46	0.46	0.10	0.12	41.4	0.20
		Meas.+ Ind.	**38.5**	**20.3**	**4.39**	**28.6**	**1.20**	**0.41**	**0.43**	**0.08**	**0.12**	**39.0**	**0.19**
		Inferred	58	17	4.7	24	3.4	0.6	0.3	0.2	0.05	44	0.2
Main Zone	MPH	Measured	47.7	22.7	4.49	29.8	1.22	0.38	0.12	0.03	0.08	37.4	0.19
		Indicated	104	21.8	4.94	28.7	1.55	0.48	0.16	0.03	0.09	38.2	0.23
		Meas.+ Ind.	**152**	**22.1**	**4.80**	**29.0**	**1.45**	**0.45**	**0.15**	**0.03**	**0.09**	**37.9**	**0.22**
		Inferred	229	21	4.9	28	2.0	0.5	0.2	0.08	0.06	38	0.2
	CBX	Indicated	8	16.7	3.52	21.6	1.13	0.37	0.14	0.04	0.07	54.3	0.17
		Inferred	28	17	3.5	23	1.0	0.4	0.1	0.04	0.05	51	0.2
	TUN	Indicated	0.4	16.5	5.35	20.7	2.16	0.55	0.22	0.10	0.08	51.3	0.26
		Inferred	1	16	5.7	21	1.5	0.5	0.2	0.05	0.07	51	0.3
	TUP	Inferred	35	27	3.3	36	1.2	0.2	0.1	0.08	0.04	29	0.2
	CMU	Inferred	1	21	6.0	27	0.9	0.6	0.2	0.02	0.13	39	0.3
	Subtotal	Measured	47.7	22.7	4.49	29.8	1.22	0.38	0.12	0.03	0.08	37.4	0.19
		Indicated	112	21.4	4.84	28.2	1.52	0.47	0.16	0.03	0.09	39.4	0.23
		Meas.+ Ind.	**160**	**21.8**	**4.73**	**28.7**	**1.43**	**0.44**	**0.15**	**0.03**	**0.09**	**38.8**	**0.22**
		Inferred	294	21	4.6	28	1.8	0.5	0.2	0.08	0.06	38	0.2
Total		Measured	64.9	22.4	4.47	30.0	1.10	0.37	0.19	0.04	0.09	37.0	0.19
		Indicated	133	21.1	4.77	28.0	1.53	0.47	0.21	0.04	0.09	39.7	0.22
		Meas.+ Ind.	**198**	**21.5**	**4.67**	**28.7**	**1.39**	**0.44**	**0.20**	**0.04**	**0.09**	**38.8**	**0.21**
		Inferred	352	21	4.6	28	2.1	0.5	0.2	0.10	0.06	39	0.2

Table 22: Wonarah resource estimates at 20% P_2O_5 cut off

Deposit	Domain	Category	Mt	P_2O_5 %	AL_2O_3 %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	SiO_2 %	TiO_2 %
Arruwurra	APH	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	10.8	22.2	3.70	31.6	1.00	0.33	0.42	0.07	0.13	34.9	0.16
		Meas.+ Ind.	**10.8**	**22.2**	**3.70**	**31.6**	**1.00**	**0.33**	**0.42**	**0.07**	**0.13**	**34.9**	**0.16**
		Inferred	6	22	3.9	30	2.4	0.4	0.3	0.1	0.08	37	0.2
	BPH	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	0.7	29.8	3.28	40.4	1.10	0.20	0.23	0.05	0.08	20.3	0.15
		Meas.+ Ind.	**4.6**	**30.2**	**3.32**	**41.0**	**0.88**	**0.19**	**0.20**	**0.05**	**0.08**	**19.6**	**0.15**
	Subtotal	Measured	3.9	30.3	3.33	41.1	0.84	0.19	0.20	0.05	0.08	19.5	0.15
		Indicated	11.5	22.7	3.68	32.2	1.01	0.32	0.40	0.07	0.13	34.0	0.16
		Meas.+ Ind.	**15.4**	**24.6**	**3.59**	**34.4**	**0.96**	**0.29**	**0.35**	**0.07**	**0.12**	**30.4**	**0.15**
		Inferred	6	22	3.9	30	2.4	0.4	0.3	0.10	0.08	37	0.2
Main Zone	MPH	Measured	31.6	25.2	4.21	32.8	1.22	0.35	0.11	0.03	0.08	33.1	0.18
		Indicated	64	24.2	4.58	31.8	1.58	0.43	0.14	0.03	0.09	33.5	0.21
		Meas.+ Ind.	**96**	**24.5**	**4.46**	**32.1**	**1.46**	**0.40**	**0.13**	**0.03**	**0.09**	**33.4**	**0.20**
		Inferred	126	24	4.5	32	1.6	0.4	0.1	0.06	0.06	32	0.2
	CBX	Indicated	0.4	21.8	3.03	27.6	1.11	0.32	0.12	0.04	0.06	46.1	0.14
		Inferred	3	21	3.3	28	0.9	0.3	0.1	0.04	0.03	43	0.1
	TUN	Indicated	-	-	-	-	-	-	-	-	-	-	-
		Inferred	-	-	-	-	-	-	-	-	-	-	-
	TUP	Inferred	35	27	3.2	36	1.2	0.2	0.1	0.08	0.04	28	0.2
	CMU	Inferred	1	22	5.5	29	0.7	0.6	0.2	0.02	0.1	37	0.2
	Subtotal	Measured	31.6	25.2	4.21	32.8	1.22	0.35	0.11	0.03	0.08	33.1	0.18
		Indicated	64	24.2	4.57	31.8	1.58	0.43	0.14	0.03	0.09	33.6	0.21
		Meas.+ Ind.	**96**	**24.5**	**4.45**	**32.1**	**1.46**	**0.40**	**0.13**	**0.03**	**0.09**	**33.4**	**0.20**
		Inferred	165	25	4.2	33	1.5	0.4	0.1	0.06	0.06	31	0.2
Total		Measured	35.5	25.8	4.11	33.7	1.18	0.33	0.12	0.03	0.08	31.6	0.18
		Indicated	75	24.0	4.44	31.8	1.49	0.41	0.18	0.04	0.10	33.6	0.20
		Meas.+ Ind.	**111**	**24.5**	**4.33**	**32.4**	**1.39**	**0.39**	**0.16**	**0.04**	**0.09**	**33.0**	**0.19**
		Inferred	171	24	4.2	33	1.5	0.4	0.1	0.06	0.06	32	0.2

14.7. Exploration potential

Peripheral portions of the Main Zone deposit include areas with only very broad spaced drilling. Mineralization in these areas is too poorly defined for estimation of Mineral Resources.

The broadly spaced drill holes at Main Zone suggest the presence of mineralization with exploration potential of approximately 50 to 150 million tonnes at an average P_2O_5 grade of approximately 15 to 20%. This potential mineralization is based on broadly spaced drilling and has had insufficient exploration to define a Mineral Resource, and the estimates of tonnage are conceptual in nature. It is uncertain that further drilling will convert any of the exploration potential to a Mineral Resource.

Estimates of Main Zone exploration potential are based on the blocks estimated by search pass six, and the soft boundary Kriging runs reported above a cut off grade of 10% P_2O_5. To provide a range of tonnages and grades, these tonnages estimates were multiplied by factors of 0.5 and 1.5, and the P_2O_5 grades were multiplied by factors of 0.8 and 1.25. These factors are based on the perceived potential of the estimates to overstate or understate potential resources in broadly sampled areas.

15. Mineral Reserve Estimates

This section is not applicable to the current report.

16. Mining Methods

This section is not applicable to the current report.

17. Recovery Methods

This section is not applicable to the current report.

18. Project Infrastructure

This section is not applicable to the current report.

19. Market Studies and Contracts

This section is not applicable to the current report.

20. Environmental Studies, Permitting and Social or Community Impact

This section is not applicable to the current report.

21. Capital and Operating Costs

This section is not applicable to the current report.

22. Economic Analysis

This section is not applicable to the current report.

23. Adjacent Properties

This section is not applicable to the current report.

24. Other Relevant Data and Information

This section is not applicable to the current report.

25. Interpretation and Conclusions

Wonarah Mineral Resources (Table 23) were estimated by Ordinary Kriging of one metre down-hole composited assay grades within interpreted mineralized domains. The estimates reflect Minemakers current conceptual development plans for the project which comprise a large scale, comparatively low grade operation feeding a beneficiation plant with mineralization defined at comparatively low P_2O_5 cut off grades.

The estimates are primarily based on data from RC and proportionally minor amounts of diamond drilling completed by Minemakers since 2008.

Information available to demonstrate the reliability of the sampling and assaying for Minemakers drilling includes recovered sample weights and assay results for field duplicates, reference standards, and inter-laboratory repeats. Additional confirmation of the reliability of RC sampling is provided by comparison of results from nearby RC and diamond holes.

The author considers that quality control measures undertaken by Minemakers have established that the RC sampling is representative and free of any biases or other factors that may materially impact the reliability of the sampling, and analytical results.

The author considers that the sample preparation, security and analytical procedures adopted by Minemakers provide an adequate basis for the current Mineral Resource estimates.

The estimates include bulk densities ranging from 1.7 to 2.0 t/bcm estimated from 520 immersion density measurements of core samples from Minemakers diamond drilling.

The Mineral Resources are classified as Measured, Indicated and Inferred on the basis of estimation search passes and plan view polygons defining areas of relatively consistent drill spacing. The classification scheme varies between mineralized domains and cut off grades reflecting the differences in grade continuity between different zones, and reflects the decreasing continuity of the mineralization with increasing P_2O_5 cut off grades.

The resource classifications applied to the current estimates are intended only for cut off grades of up to 20% P_2O_5. At higher cut off grades the mineralization is less continuous and revisions to the classifications would be required for reporting estimates at higher cut offs.

Table 23: Summary of Wonarah Mineral Resource estimates

Cut off P_2O_5 %	Measured		Indicated		Measured + Indicated		Inferred	
	Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %	Mt	P_2O_5 %
5	82.2	20.2	391	13.2	473	14.4	933	13
10	78.3	20.8	222	17.5	300	18.3	542	18
15	64.9	22.4	133	21.1	198	21.5	352	21
20	35.5	25.8	75	24.0	111	24.5	171	24

26. Recommendations

The following summary of recommended future work programs is based on Minemakers description of their objectives for development of the project. These objectives have changed since preparation of previous Technical Reports (Abbott 2010, 2011) and rather than estimation of additional resources are designed to improve confidence in estimated resources with the target of increasing the proportion of estimated Mineral Resources classified as Measured.

The summary of proposed future work programs shown in Table 24 is based on information provided by Minemakers. Unit costs shown in this table are derived from Minemakers experience at Wonarah and include allowance for quality control-quality assurance monitoring comparable to Minemakers procedures for drilling to date.

Although dominated by RC drilling the drilling programs outlined in Table 24 are planned to include some diamond drilling to provide additional density measurements and comparisons with RC results.

The proposed work programs comprise:

a) Infill RC drilling of areas of currently Indicated resources at Arruwurra to nominally 125 by 125 metre spacing with the target of upgrading the estimates in these areas to the Measured category.

b) Infill RC drilling of currently Inferred resources at Arruwurra to a nominal pattern of 250 by 250 metres with the target of upgrading the estimates in these areas to Indicated.

c) Diamond drilling within the area of 125 by 125 metre infill RC drilling described in point a. This drilling is intended for geological and geotechnical investigations and to provide data for comparison with results from the RC drilling.

d) Interim data interpretation and resource estimation for Arruwurra.

e) Additional RC infill drilling of selected portions of any additional Indicated estimates outlined by the drilling described in point b to nominally 125 by 125 metre spacing with the goal of upgrading the estimates in these areas to the Measured category. This drilling is expected to be planned after completion of the drilling and interpretation described above and is contingent on success of the previous programs.

f) Data interpretation and resource estimation for Arruwurra.

g) Infill RC drilling of areas of currently Indicated resources at Main Zone to a nominal pattern of 125 by 125 metres with the goal of upgrading the estimates for these areas from Indicated to Measured. Although this drilling is primarily targeted at MPH mineralisation, the holes will be extended through the full mineralized sequence.

h) Diamond drilling within the area of 125 by125 metre infill RC drilling described in point g. This drilling is intended for geological and geotechnical investigations and to provide data for comparison with results from the RC drilling.

i) Data interpretation and resource estimation for Main Zone.

Although it is uncertain that further drilling will be successful, the author believes that the work programs provided by Minemakers are appropriate for improving confidence in estimated resources.

Table 24: Estimated costs of proposed infill drilling and resource updates

Item	Amount	Unit cost $AUD	Cost $AUD (1000)
Arruwurra (2013)			
a. Infilling drilling of current Indicated resources	3,800 m	$100/m	$380
b. Infilling drilling of current Inferred resources	3,800 m	$100/m	$380
c. Diamond drilling	500 m	$350/m	$175
d. Interpretation and resource estimation			$30
e. Infilling drilling of updated Indicated resources	7,600 m	$100/m	$760
f. Interpretation and resource estimation			$30
Subtotal			**$1,755**
Main Zone (2014)			
g. Infilling drilling of current Indicated resources	15,000 m	$100/m	$1,500
h. Diamond drilling	500 m	$350/m	$175
i. Interpretation and resource estimation			$30
Subtotal			**$1,705**
Total			**$3,460**

27. References

Abbott, J 2010, Technical Report Mineral Resource Estimation for the Wonarah Phosphate Project Northern Territory, Australia, Report by Hellman & Schofield Pty Ltd for Minemakers Ltd

Abbott, J 2011, Technical Report Mineral Resource Estimation for the Wonarah Phosphate Project Northern Territory, Australia, Report by Hellman & Schofield Pty Ltd for Minemakers Ltd

Barrie, J 1968, Progress report on prospecting authorities 1766, 1788, 1801, 1802, and 1897 in the Alexandria Region. IMC Development Corporation, NTGS Open File Report CR1968-0030

Chesher, M & Abbott, J 2012, Technical Report Preliminary Economic Assessment for Wonarah Phosphate Project Northern Territory Australia, Report by AMC Consultants for Minemakers Pty Ltd

Chesher, M 2010, Technical Report Wonarah Phosphate Feasibility Study, Report by AMC Consultants for Minemakers Pty Ltd

Cotton, B 2000, EL9976 Wonarah. Annual Report for the Year ending 5th February 2000. Alroy SE5315, Ranken SE5316, Frew River SE5303 Northern Territory. Exploration Report No. 24505, Rio Tinto Exploration Pty. Limited. NTGS Open File Report CR2000-0071

Hackett, D 1978, Exploration Licence 1084. Annual report for 1977. ICI Australia Limited – Australian Fertilizers Limited. NTGS Open File Report CR1978-0059

Lilley, G & Andrews, S 2001, Combined Annual Report for the period ending 2/9/01 EL9976, EL22167 and EL22168 Wonarah Northern Territory, Rio Tinto Exploration Pty Ltd.

Lowien, T & Virisheff, A 2009, Wonarah Phosphate Project - Resource Estimate, Report by Coffey Mining Pty Ltd for Minemakers Ltd

McColl, R 2012, Report on Exploration Licences 26451 and 26452 and Mineral Lease 27244, Report by McColl Exploration & Mining Title Services Pty Ltd for Minemakers Pty Ltd

Perrino, F 1969, Report No. 30. Progress report on prospecting authorities 1766, 1897, 2159, 2160, 2161 in the Alexandria Region, IMC Development Corporation, NTGS Open File Report CR1969-0022

Perrino, F 1970, Report No. 35. Progress report on prospecting authorities 1766, 1897, 2159, 2160, 2161 and 2199 in the Alexandria Region, IMC Development Corporation, NTGS Open File Report CR1970-0038

Date and Signature Page

CERTIFICATE of AUTHOR

I, Jonathon Abbott, BASc, MAIG, do hereby certify that:

a. I am a Consulting Geologist with
MPR Geological Consultants Pty Ltd
19/123A Colin Street
West Perth, Western Australia
AUSTRALIA

b. This Certificate applies to the technical report titled "Technical Report Mineral Resource Estimation for the Wonarah Phosphate Project Northern Territory, Australia" prepared for Minemakers Ltd dated 15th October 2012 (the "Technical Report") relating to the Wonarah property.

c. I graduated with a Bachelor of Applied Science in Applied Geology from the University of South Australia in 1990. I am a member of the Australian Institute of Geoscientists. I have worked as a geologist for a total of 22 years since my graduation from university. My experience includes mine geology and resource estimation for a range of commodities and mineralization styles. I have been involved in preparation and reporting of resource estimates in accordance with JORC guidelines for 17 years, and NI43-101 guidelines for approximately 9 years. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.

d. I have been involved with the Wonarah Project since March 2009 , and visited the project site from the 12th to 13th of March 2009.

e. I am responsible for sections 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23, 24, 25, 26 and 27 of the Technical Report.

f. I am independent of the issuer as defined in Section 1.4 of the Instrument.

g. I have not had prior involvement with the property that is the subject of the Technical Report.

h. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

i. As of the date of this Certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 15th day of October, 2012.

Jonathon Abbott, BASc Appl. Geol MAIG