ASX Announcement **12 April 2016**

Mount Hutton Central JORC 2012 Resource

Highlights

- Mount Hutton Central Mineral Resource upgraded to JORC 2012 standard in preparation for development of the Leigh Creek Magnesite Project.
- No material change in Mineral Resource estimates – reflects the quality and uniformity of the magnesite deposit and the work done by Archer and SAMAG.
- Leigh Creek Magnesite Project rapidly moving toward production.

Archer Exploration Limited (ASX: "AXE") is pleased to announce that it has updated the Mineral Resource for its Mount Hutton Central Deposit in accordance with JORC 2012 code. The Mount Hutton Central Deposit, sits within the 100% owned Mount Hutton Magnesite Project which itself is part of the much larger Leigh Creek Magnesite Project, located approximately 20 kilometres northwest of Leigh Creek Township, South Australia (Figure 1).

The Mount Hutton Central Mineral Resource previously reported under the JORC 2004 code has undergone a comprehensive review by Archer for reporting under the JORC 2012 requirements. Archer has elected to upgrade its reporting for Mount Hutton Central to the new standard in preparation for the next phase of the continuing development of the Leigh Creek Magnesite Project. The JORC 2012 Mineral Resource at Mount Hutton Central is reported below as:

	JORC 2012 Mineral Resource		
Classification	**Tonnes (kt)**	**Mg (%)**	**MgO (%)**
Measured	12,059	24.2	40.1
Indicated	5,460	24.3	40.3
Total	**17,523**	**24.2**	**40.2**

Table 1: Mount Hutton Central Mineral Resource

The underlying assumptions and method used to upgrade the Mount Hutton Central Mineral Resource to 2012 JORC standard are contained in Table 1 and Attachment A annexed to this announcement.

A key result of the review is that there has been no material change to the Mineral Resource Estimate reported by SAMAG Limited on (3/09/1999 (ASX: PAL).

Project Overview

The Leigh Creek Magnesite Project comprises the Mount Hutton South, Mount Hutton Central, Mt Playfair, Pug Hill, Termination and Witchelina deposits. The Mineral Resources for each deposit are shown below. It is expected that the Mount Hutton Central deposit will first be the first area developed, as such the remaining deposits have not yet been upgraded to 2012 JORC code requirements on the basis that the supporting information available regarding these deposits has not materially changed since they were last reported.

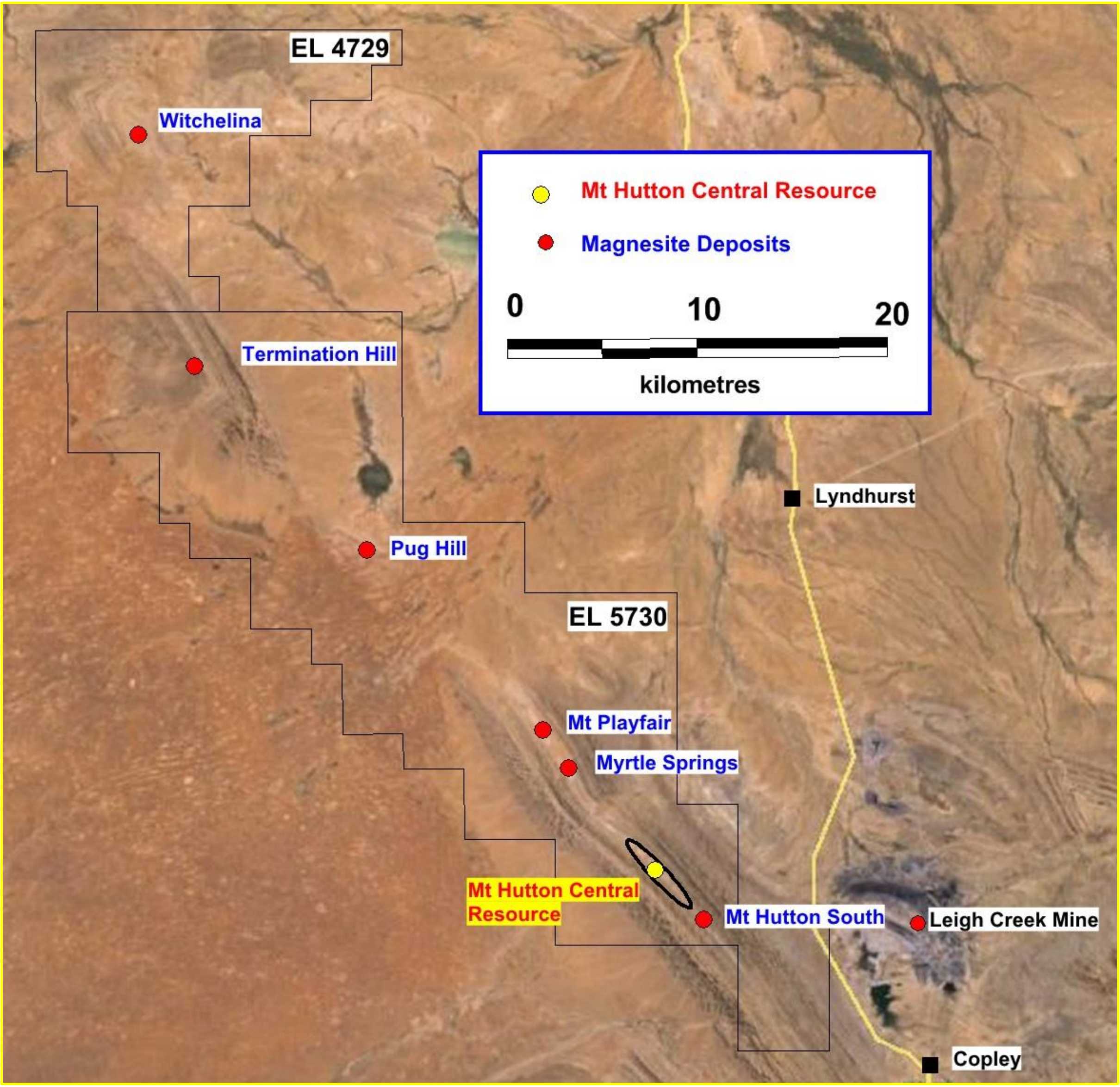

Figure 1. Location of the Mt Hutton Central Resource and nearby magnesite deposits

The Mt Hutton Central Project represents only part of the total Leigh Creek Magnesite Project which has a Mineral Resource of 434Mt @ 41.4% MgO (refer to table 2 below).

Therefore, potential exists to greatly increase the life and scale of the Leigh Creek Magnesite Project.

Deposit	Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)	MgO (%)
JORC 2012 Mineral Resources					
Mount Hutton Central	12.0	5.5	0.0	17.5	40.1
JORC 2004 Mineral Resources					
Mount Hutton South		72.0	53.0	125	42.9
Mount Playfair	0.0	21.0	23.0	44.0	42.5
Pug Hill	0.0	10.0	10.0	20.0	42.7
Termination Hill	4.0	5.0	20.0	29.0	42.8
Witchelina	23.7	94.0	99.0	216.7	40.0
Total	**27.7**	**202**	**205**	**434.7**	**41.4**

Table 2: Leigh Creek Magnesite Project Mineral Resources

For further information please contact:

Mr Greg English
Chairman
Archer Exploration Limited
Tel: (08) 8272 3288

Mr Gerard Anderson
Managing Director
Archer Exploration Limited
Tel: (08) 8272 3288

The information in this report that relates to the Mt Hutton Central JORC 2012 Mineral Resource estimation has been prepared by Mr W. Bollenhagen who is a Member of the AusIMM. Mr Bollenhagen is a full time employee of Archer Exploration Ltd., and has more than five years' experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking 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". Mr Bollenhagen has consented in writing to the inclusion in this announcement of the Mineral Resource estimation information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2012.

Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than twenty years' experience in the field of activity being reported. Mr Bollenhagen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" relating to the reporting of Exploration Results.

This document also contains Mineral Resources which were reported under the 2004 JORC code as there has been no Material Change or Re-estimation of those Mineral Resources since the introduction of the 2012 JORC Code. Future estimations will be prepared in accordance with 2012 JORC Code.

ATTACHMENT A – MATERIAL INFORMATION SUMMARY

The Mount Hutton Central Project is deemed a material mining project and the Company provides the following information in accordance with ASX Listing Rule 5.8, which is material to understanding the reported Mount Hutton Central Project Mineral Resource.

The Leigh Creek magnesite deposits were formerly owned by a succession of related companies including SAMAG, Pima Mining and Magnesium Development Limited and Magnesium International Limited. For simplicity all reference to historic information will be attributed to SAMAG. The JORC 2012 Resource estimate comprises a new interpolation of the high quality drilling, chemical and metallurgical data from work in 1999-2001 (SAMAG) that led to the estimation of a JORC 1999 global Mineral Resource for the Leigh Creek magnesite deposits of 453 million tonnes grading 41.4% MgO and new information generated by Archer in the period 2011-2016 (AXE).

Mount Hutton Central Geology and Interpretation

Mapping, completed in 1999, over a strike length of 4.7 km was undertaken to define the stratigraphy, geological structures and associated deformational features within the Mount Hutton deposit (**Deposit**). The mapping was carried out by ground traversing the Deposit and recording geological structures onto a series of 1:5,000 scale maps. Structures were recorded relative to previously surveyed marker beds, creeks and topographic landmarks. Significant structures were located using DGPS.

Creeks that traverse the Deposit provide good outcrop exposure. Quartzitic dolomite marker beds are exposed on the flats in between creeks more dominantly than magnesite beds. Offsets are well defined by breaks in marker beds and individual marker beds are distinguishable over tens of kilometres.

SAMAG commissioned a detailed (1:10,000 scale) aerial photography and photogrammetric survey of the Deposit in August 1999. The accurately located digital photographs and contours were combined with geological DGPS mapping to form a comprehensive Geographical Information Systems (**GIS**) dataset.

Marker beds HU1, HU2, 7MK, 14MK, HMU, HML (described below) were identified in outcrop and distinguished in core over the length of the Deposit. They were used during geological logging for identifying individual beds and stratigraphic position within the sequence.

- ***Hutton Upper 1 (HU1)***
  Thin (30 cm), carbonaceous, dolomite quartz sand, interbedded between a sequence of dolomite silts and muds, between Bed 2 and 3A.
- ***Hutton Upper 2 (HU2)***
  60 cm wide, sequence of finely laminated dolomite silts, with interbedded fine dolomite mud laminations, bounding carbonaceous dolomite quartz sand. A Dolomite/Magnesite gravel conglomerate is occasionally found at the base.

- ***Bed 7 Marker (7M)***
  A strongly carbonaceous, 1.70 m wide laminated dolomite mud, with occasionally laminated dolomite silts or muds at the base forms a distinctive unit between Beds 6 and 7.
- ***Bed 14 Marker (14M)***
  A strongly carbonaceous, thinly (55 cm), laminated dolomite mud, with rare laminated dolomite silt at base forms a distinctive unit between Beds 14 and 14A.
- ***Hutton Middle Upper (HMU)***
  A strongly carbonaceous, thinly (38 cm) laminated dolomite mud, with rare laminated dolomite mud at the base, a distinctive unit between Bed 15 and HML and Bed 16.
- ***Hutton Middle Lower (HML)***
  Thin (38 cm), carbonaceous, dolomite quartz sand, occasionally with thin laminated dolomite silt layer at the base forms a distinctive unit between HMU and Bed 16.

Figures 1 to 3 below show the stratigraphic column between Beds1 and 17 and the marker beds.

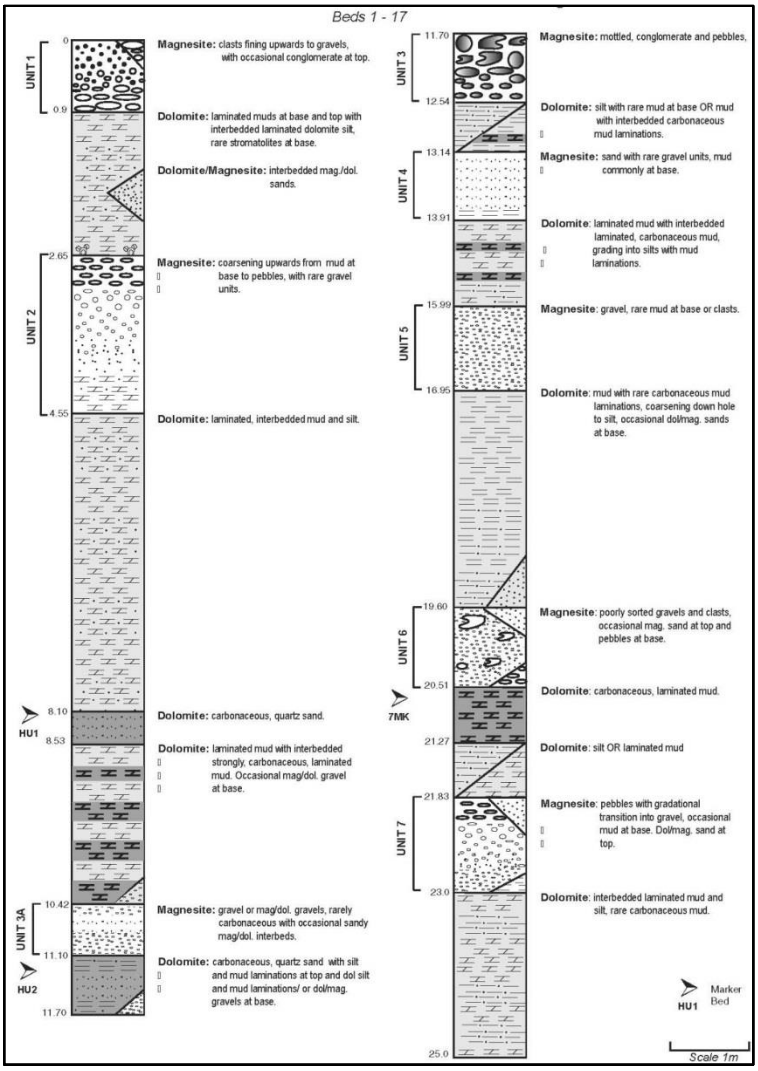

Figure 1: **Stratigraphic column Bed 1 (unit 1) to Bed 7 (unit 7)**

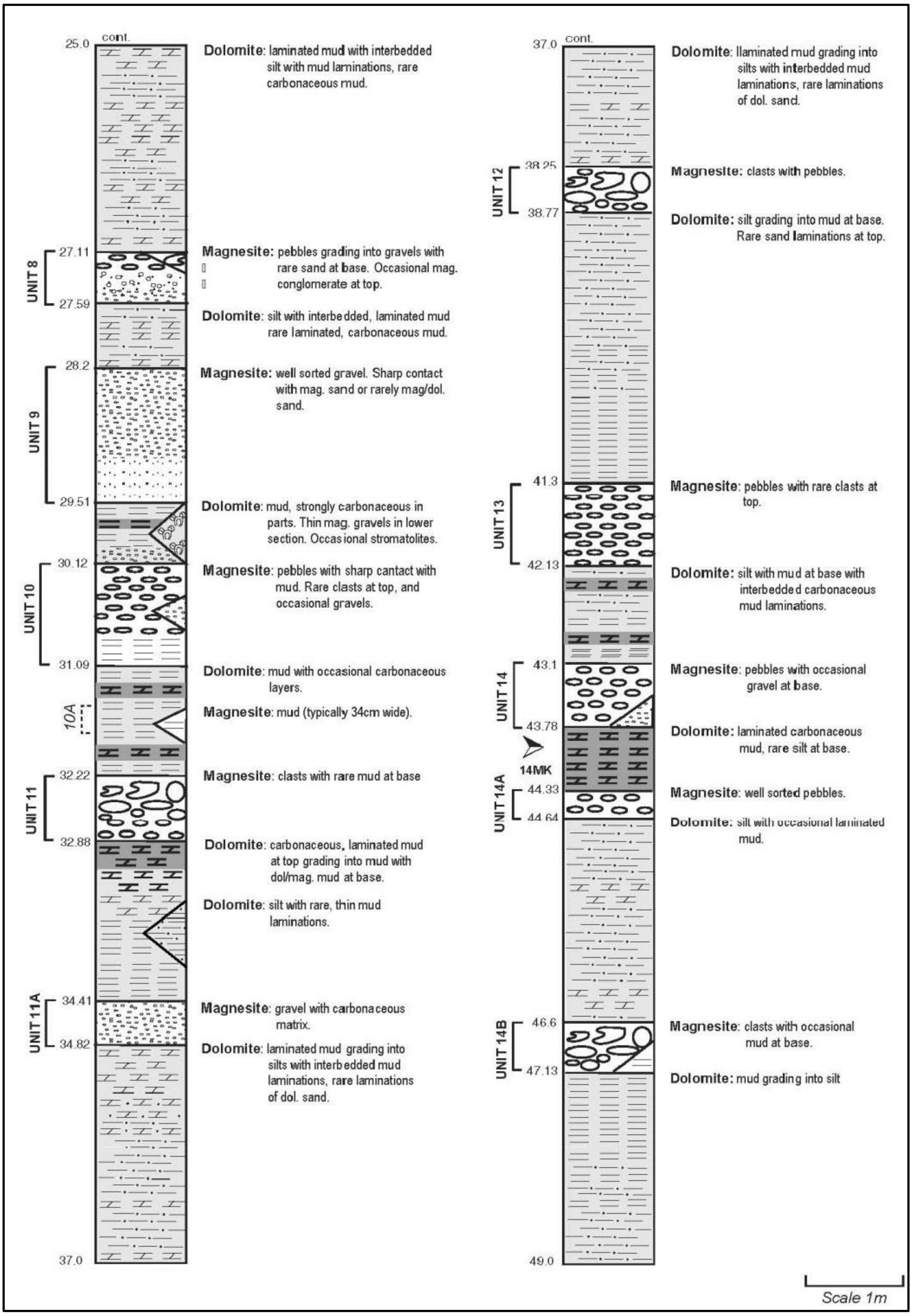

Figure 2: **Stratigraphic column Bed 8 (unit 8) to Bed 14B (unit 14B)**

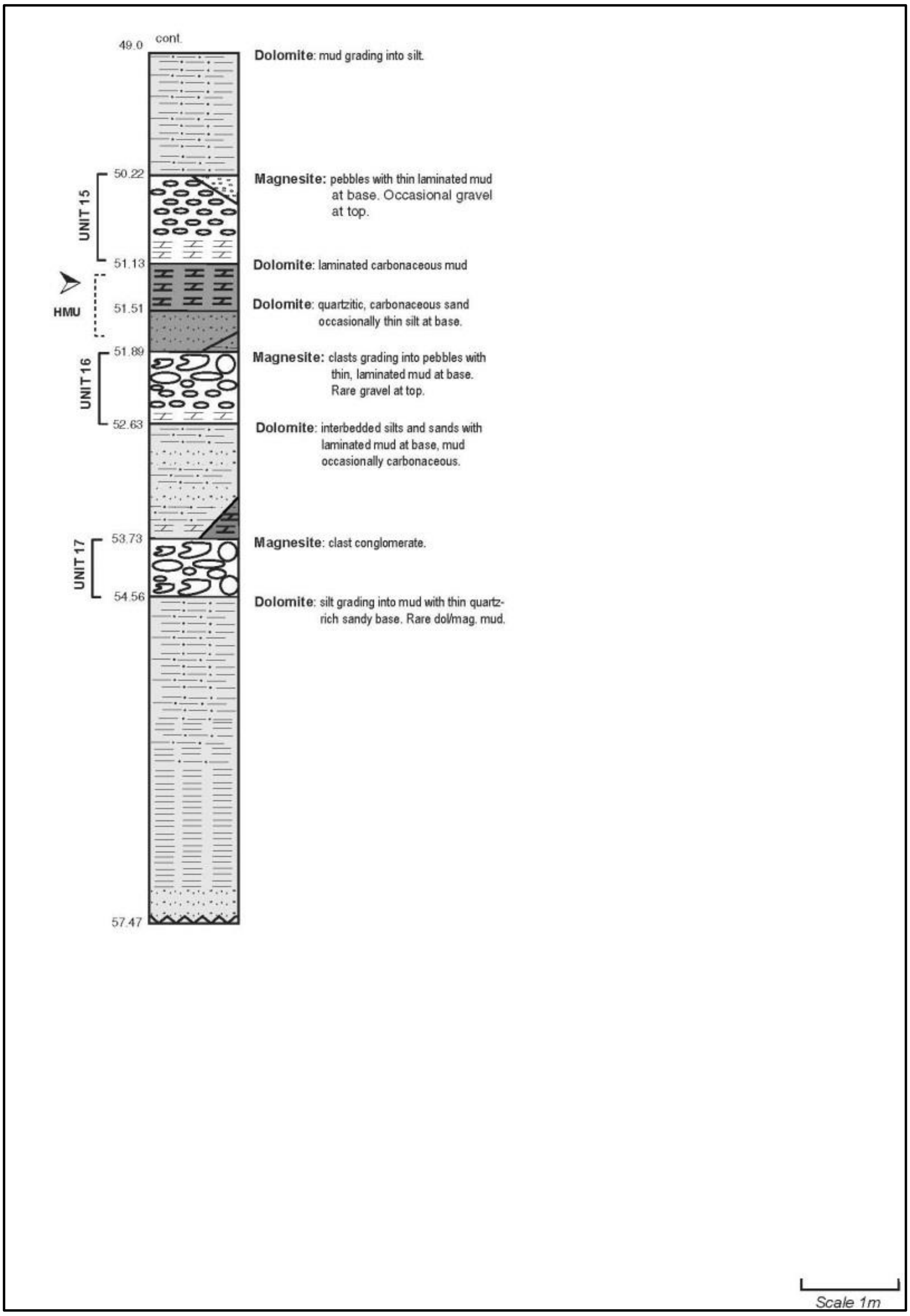

Figure 3: **Stratigraphic column Bed 15 (unit 15) to Bed 17 (unit 17)**

Deposit Geology

The youngest stratigraphic magnesite bed intersected was Upper 7 (U7) and the 'lowest' bed, Lower 5 (L5). Between these beds, up to 86 interbedded magnesite and dolomite units form the Mount Hutton magnesite sequence. Magnesite Beds 1-17, were targeted for resource definition and are positioned in the middle of the sequence. The unique textural characteristics within each individual magnesite bed render the beds identifiable along strike in drill holes and from outcrop to outcrop (Figure 4).

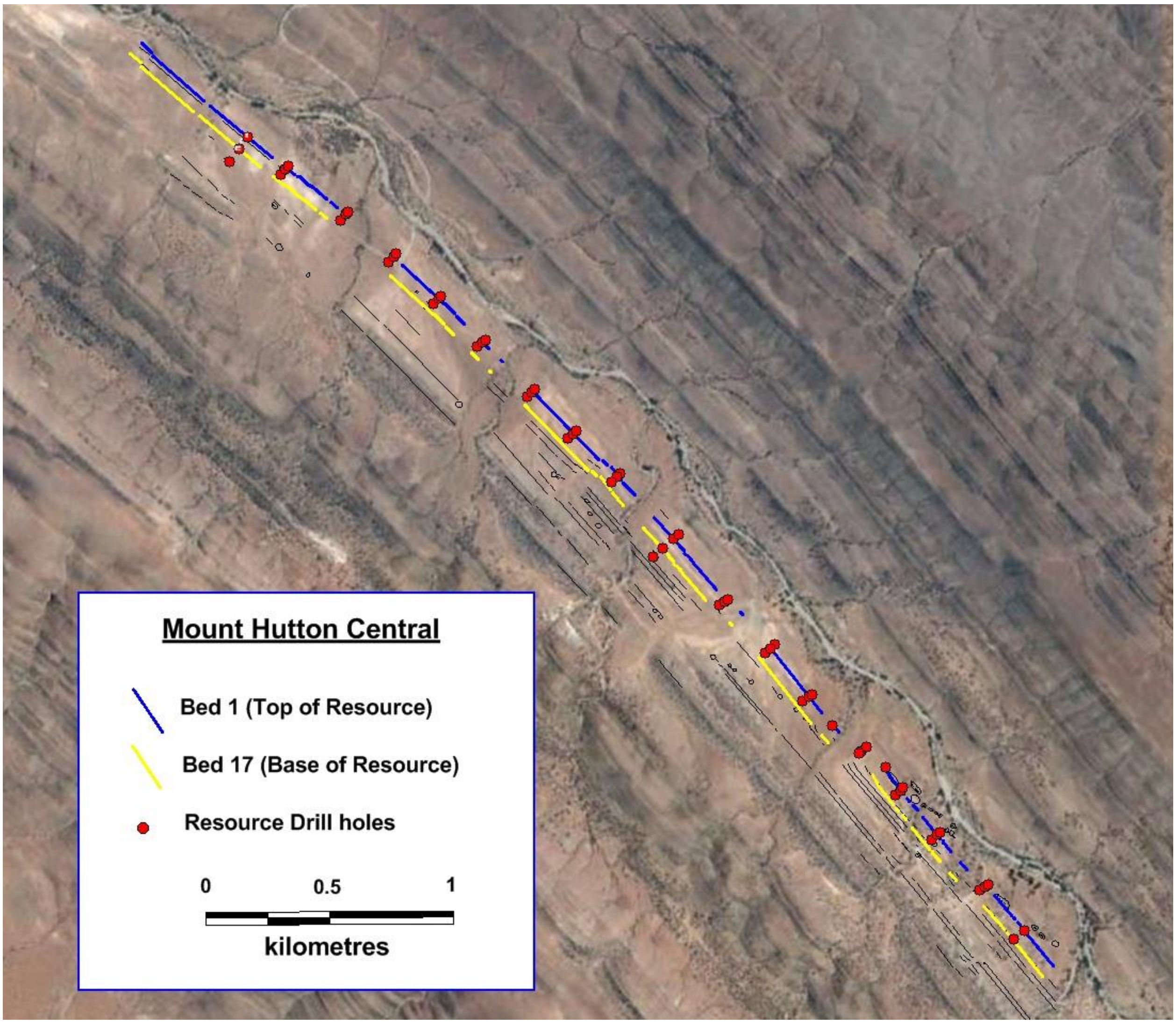

Figure 4: Location of the Upper and lower beds with resource drill holes

Drilling Techniques

In total, 56 NQ2 diamond drill holes were drilled at Mount Hutton during 1998 and 1999 for an aggregate of 3,539.69 m.

Based on the low variance of grade data measured in the initial drill program, a traverse spacing of 250 m was selected for the infill-drilling program. The beds with the lowest stripping ratio and lowest calcium content were selected for resource drilling, namely Beds 1-17. Beds stratigraphically above Bed 1 are thin and high in calcium. Beds, immediately below Bed 17, occur in a thick dolomite sequence with few high-grade magnesite interbeds. Holes were drilled on the 250m spaced sections on a nominal drill hole spacing of 20 metres.

Sampling, Sub-Sampling techniques & Analyses

Only material identified as magnesite ($MgCO_3$) was selected for analyses, the dolomite interbeds were not assayed. Geological logging was completed for all holes on site. The lithology, colour, weathering, alteration and structural characteristics of core were logged. Logging was both qualitative and quantitative depending on field being logged. From the detailed geological logging each magnesite bed was allocated a number so that beds could be matched between drill holes at the interpretation stage. All diamond core was logged and photographed. All core material was logged by the geologist on site.

Quarter core was recovered using a diamond saw. The geologist nominated the intervals for analyses and the core placed in a pre-numbered calico bag and recorded on a submission. Sample preparation at the Amdel laboratory involved the sample being weighed on receipt then dried at 120° C for up to 12 hours. The sample was then crushed through to nominal -5mm in a two stage crushing process. The entire sample was pulverized to 90% passing 75 micron in an LM5 bowl, with the same grinding time and equipment used for all samples. A sub sample of 200-300g was taken for analyses. Two duplicate samples were prepared, on a 1 in 20 basis, from the pulverized material at the same time as the removal of the assay sample.

Whole Rock Analysis

Initial drill hole samples from all the magnesite deposits were analysed for their whole rock components. Resource grade estimates were estimated using whole rock values.

Major rock forming components (Mg, Ca, Si, Fe, Al, K, Na, Mn, P, Ti) and minor elements (Mo, Ba, Cr) and loss on ignition (LOI) were measured by Inductively Coupled Plasma (ICP), and total carbon and sulphur by Leco furnace and infra-red cell.

High precision measurements of boron and of trace metals (Cu, Ni, Se, and Zn) were taken by digesting samples with aqua regia and presenting the solution to an ICP unit for quantification.

Major rock forming components were presented as oxides and total carbon as carbonate.

Partial Digest Leach Analysis

Partial leach analyses were used for resource definition at Mount Hutton. MIL (formerly Pima Mining NL (SAMAG)), in conjunction with a consultant at Amdel, developed a method specifically for the preparation and partial digestion of magnesite samples. Samples were analysed by ICP and the acid insoluble residue gravimetrically determined. This process was designed as a repeatable representation of the leach conditions associated with the preparation of magnesium chloride brine, thus measuring the suitability of a magnesite sample as feedstock for magnesium metal production.

The Partial Leach process required the entire sample (~750 g) to be crushed (nominal 5mm) and ground (90%<75 micron) and a sub-sample (250gm) taken for analysis. This sub-sample was then leached in hot hydrochloric acid (32% w/v). The liquor was filtered from the residue and then the digested solution read by ICPAES. The remaining insoluble residue was washed, dried and weighed. Residues were composited and assayed.

Duplicates

A duplicate pulverised sample of 1 in 20 samples was prepared and supplied to the secondary laboratory (Assaycorp Pty. Ltd, Pine Creek, Northern Territory) for verification. Amdel coordinated duplicate preparation with the routine assay of a second split of the sample pulp.

Repeats

The assay of two randomly selected samples in each run of 50 samples was routinely repeated.

Reference Samples

Reference samples were supplied to Amdel (labelled EPL in assay data). The composition of these reference samples had been established by titration (Mg only) by another reputable laboratory.

Blanks

Two blank samples were included in each run of fifty samples to monitor sample preparation hygiene and to establish the level of background laboratory hygiene.

Micromine reviewed the blank samples submitted and concluded from geostatistical analysis that each commodity registered a modest grade increase but well within the limits for the laboratory. The author was confident that there was no undue sample preparation or laboratory contamination.

Independent Analysis

Duplicate pulps from 1 in 20 samples were collected by Amdel and delivered to Assaycorp. Assaycorp carried out its analysis using a similar partial leach procedure to that used by Amdel. Table 1 below presents the collar data for the diamond drill holes used in the estimation.

Density

A total of 328 individual density readings were made on the deposit, with 228 in ore and 100 in the dolomite waste. Each bed had an average density assigned to it based on an average of at least 7 density measurements per bed. The method used was the Archimedes method. Density was assigned to domains (beds) rather than estimated.

DH_NAME	GDA Easting	GDA Northing	zone	RL	DEPTH	DATE
MHDDH01	236640.626	6628411.41	54	194.21	100	1/02/1999
MHDDH02	236605.091	6628364.076	54	196.23	95	1/02/1999
MHDDH03	238393.172	6626845.468	54	220.38	100	1/02/1999
MHDDH04	238349.9568	6626805.672	54	222.98	95	1/02/1999
MHDDH05	239845.5293	6625311.162	54	241.68	108	1/02/1999
MHDDH06	239800.9013	6625275.092	54	244.36	95	1/02/1999
MHDDH07	238412.3455	6626863.504	54	219.27	50	1/02/1999
MHDDH15	236776.3001	6628265.905	54	198.13	45	1/02/1999
MHDDH16	236794.396	6628289.23	54	198.33	69	1/02/1999
MHDDH17	236805.0882	6628302.781	54	197.97	53.4	1/02/1999
MHDDH18A	237023.0551	6628090.109	54	202.67	50	1/02/1999
MHDDH19	237039.8462	6628112.417	54	202.46	66	1/02/1999
MHDDH20	237049.1472	6628124.699	54	202.11	50	1/02/1999
MHDDH21	237219.0791	6627926.61	54	204.42	44.9	1/03/1999
MHDDH22	237238.7522	6627948.11	54	202.98	70	1/03/1999
MHDDH23	237249.7642	6627960.381	54	202.78	51	1/03/1999
MHDDH24	237404.2371	6627763.014	54	206.24	45	1/03/1999
MHDDH25	237423.5131	6627783.582	54	205.68	71	1/03/1999
MHDDH26	237434.0202	6627795.374	54	205.41	51	1/03/1999
MHDDH27	237584.7411	6627595.058	54	211.32	45	1/03/1999
MHDDH28	237604.5841	6627613.567	54	210.92	70.09	1/03/1999
MHDDH29	237616.0691	6627624.511	54	210.57	51	1/03/1999
MHDDH30	237789.191	6627398.764	54	213.08	44	1/03/1999
MHDDH31	237809.3461	6627418.768	54	212.33	70	1/03/1999
MHDDH32	237820.9081	6627430.278	54	211.86	50	1/03/1999
MHDDH33	237958.347	6627237.14	54	214.24	45	1/03/1999
MHDDH34	237978.683	6627256.441	54	213.25	72	1/03/1999
MHDDH35	237990.097	6627267.45	54	212.72	51	1/03/1999
MHDDH36	238137.7019	6627068.712	54	218.03	45	1/04/1999
MHDDH37	238160.11	6627089.418	54	217.93	70	1/04/1999
MHDDH38	238170.864	6627100.19	54	218.14	50	1/04/1999
MHDDH39	238583.8838	6626583.147	54	226.54	48	1/04/1999
MHDDH40	238605.9418	6626599.84	54	225.83	70	1/04/1999
MHDDH41	238618.1678	6626609.056	54	225.2	51	1/04/1999
MHDDH42	238774.5067	6626398.801	54	223.27	48.2	1/04/1999
MHDDH43	238795.9338	6626416.224	54	222.75	65	1/04/1999
MHDDH44	238813.4078	6626430.537	54	223.14	56	1/04/1999

DH_NAME	GDA Easting	GDA Northing	zone	RL	DEPTH	DATE
MHDDH45	238928.2386	6626208.41	54	228.47	45	1/04/1999
MHDDH46	238953.7357	6626226.296	54	227.47	72	1/04/1999
MHDDH47	239169.4936	6626011.385	54	231.39	41.3	1/04/1999
MHDDH47A	238965.5627	6626235.128	54	226.96	51	1/04/1999
MHDDH48	239191.3137	6626028.701	54	230.62	89	1/04/1999
MHDDH51	239311.2295	6625840.649	54	236.22	45	1/05/1999
MHDDH52	239331.6056	6625859.348	54	235.51	71.9	1/05/1999
MHDDH53	239342.9886	6625869.919	54	235.08	51	1/05/1999
MHDDH54	239460.6675	6625665.397	54	238.06	51	1/05/1999
MHDDH55	239481.5475	6625684.973	54	236.82	70	1/05/1999
MHDDH56	239494.6655	6625696.824	54	236.75	62.3	1/05/1999
MHDDH57	239662.7054	6625467.811	54	236.44	45	1/05/1999
MHDDH58	239682.5514	6625483.764	54	236.27	72	1/05/1999
MHDDH59	239695.3215	6625492.216	54	236.67	51	1/05/1999
MHDDH60	239053.4646	6626114.326	54	231.14	73.6	1/05/1999
MHDDH61	239270.1336	6625951.762	54	232.41	72	1/05/1999
MHDDH62	236567.423	6628311.268	54	196.98	105	19/07/1999
MHDDH63	238313.6888	6626772.214	54	224.54	101	19/07/1999
MHDDH64	239159.8136	6626004.017	54	231.97	60	1/05/1999

Table 1: Drill hole co-ordinates in MGA Zone 54

Modifying Factors

Crushing and Screening Lump Ore

A series of crushing, grinding and screening tests were conducted on lump magnesite ore to determine size distribution and analyses by size distribution.

Crush sizes ranged from 53 mm to 1.7 mm. Grind sizes ranged from 1.18 mm to 0.15 mm. Little grade change was measured between size fractions except for a slightly higher concentration of silica in the fines.

ROM Ore

During a mining campaign at Myrtle Springs quarry, in July 2001, SAMAG undertook a preliminary screening exercise using a 40 mm grizzly screen. A significant increase in talc (Si), and to a lesser degree dolomite (Ca), was noted in the fines (Table 2). The Bed 5 material used during this test was not sampled representatively but is indicative of possible magnesite mining material.

Based on this significant grade differential "SAMAG" conducted a study designed to measure the size distribution of ore components at 300 mm, 75 mm and 5 mm sizes.

Units	Mg (%)	Ca (%)	Fe (ppm)	B (ppm)	Insoluble (%)
+40mm bed 5	24.3	1.64	600	100	11.50
-40mm bed 5	18.9	2.52	1,200	70	29.60

Table 2: Summary of Partial Leach Analyses of screened Bed 5 magnesite

Assay by size distribution tests were carried out using representative portions of the uncrushed Mount Hutton Bulk Sample. The individual samples were screened using √2 series sieves with apertures ranging from 200 mm to 4.75 mm for the minus 300 mm sample, 76 mm to 0.85 mm for the minus 75 mm sample and 4.75 mm to 0.038 for the minus 5 mm sample. For each sample a representative portion of each size fraction was analysed. Insoluble material (talc) and trace metals (including nickel) were significantly concentrated in the lower grade fines. However, the lump ore was not significantly upgraded with respect to magnesium and calcium.

Table 3 shows the difference in grade on uncrushed material (with a 300 mm top size) using 4.75 mm separation size.

Unit	Wt (%)	Mg (%)	Ca (%)	Fe (ppm)	Si (ppm)	B (ppm)	Insoluble (%)
+4.75 mm fraction	85.5	24.4	2.0	2,154	1,891	107	9.9
-4.75 mm fraction	14.5	20.6	2.6	2,800	4,896	85	20.9
Calc head	100.0	23.9	2.1	2,248	2,328	104	11.5

Table 3: Uncrushed magnesite at -4.75mm screen cut off Partial Leach Analyses

These tests demonstrated the value of screening out the primary fines formed at the work face during the mining operation. Screening could be done over a grizzly at a sensible, practical size (about 40mm).

Trial Mine Bulk Sample

SAMAG extracted a 100 tonne sample of magnesite from beds 1 to 17 in a trial pit at the Deposit in 2000 (Figure 5).

The material mined formed a bulk sample for test work at Amdel in Adelaide, with residual material left at the site.

Figure 5: Trial Mine at Northern end of Mt Hutton Central

Metallurgical Extraction

Combined beds of magnesite from Mt Hutton Central have been successfully calcined to at various temperatures to produce both monolithic dead burned magnesia (DBM) and caustic calcined magnesia (CCM).

Estimation Methodology

Ordinary Kriging was the method of estimating the magnesium into the cells. A search ellipse of 300 (Y) by 100 (X) by 40 (Z) was used for estimation. A single pass was used in the estimation. Other elements (Ca, B, Si, B, S, Al, Fe and Insolubles) were estimated using ID2 methodology with a search distance of 300m.

Classification

The Mount Hutton Central resource is reported as both Measured and Indicated. The tonnes and grade are reported above the 150RL, being consistent with reasonable prospects of eventual extraction.

No cells from the block model below the 150RL are reported.

All cells South of 6,626,000N (MGA Zone 54) are reported as Indicated due to the presence of cross faults and slight offsets in the stratigraphy. North of 6,626,000N the cells are classified as Measured due to the extreme consistency of the magnesite beds being estimated and the low variance in the raw population data of those beds.

The material being classified can be mined by traditional open cut methodologies (Figure 6) and the ore selectively extracted to produce calcined products. This is currently being done at the Myrtle Springs mine located 4.5km to the North of the resource.

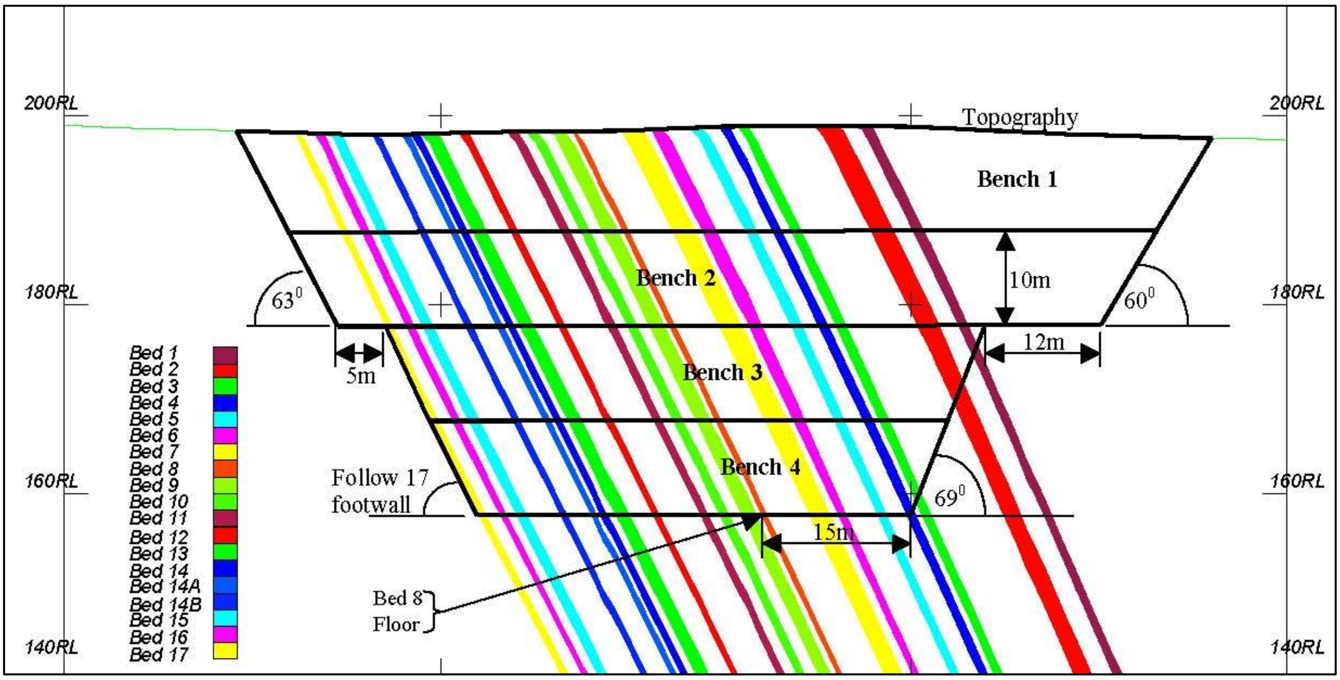

Figure 6: **Cross section of conceptual pit design.**

Previous Reporting of Mount Hutton Central

In 1999 tonnes and grade were first reported to JORC guidelines. Subsequently in 2000 and 2001 tonnes and grade were reported again to update and maintain compliancy for the time. No material changes have occurred to the data since the last estimation in 2001. Table 4 (below) presents the tonnes and grades reported for those years for the Mount Hutton Central Resource.

Year	Tonnes (kt)	Mg%	Ca%	B ppm	Si ppm	Insolubles %
1999	19,050	23.9	2.13	101	4128	11.2
2000	18,975	23.9	1.99	108	3924	10.54
2001	16,532	23.7	2.09	103		10.99

Table 4: **Previous reported tonnes and grade for the Mt Hutton Central Deposit.**

Exploration Potential

Surface mapping and regional drilling shows there are significant additional resources at depth and along strike, both to the north and to the south of the Mt Hutton Central Resource area.

Archer has confidence that given the remarkable geologic consistency of the magnesite beds over many tens of kilometres, the previously reported SAMAG JORC 1999 Resource estimate of 434 million tonnes grading 41.4% MgO for the greater Leigh Creek magnesite deposits owned by Archer will in time be translated into a similar sized JORC 2012 Resource estimate.

JORC Code, 2012 Edition – Mount Hutton Central Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Diamond Drilling was performed by the company SAMAG (Pima Mining-PAL) in 1999 and documented in accordance with the JORC guidelines at the time. Generally, HQ3 was drilled in the first 3 metres of oxidized material, followed by NQ2 sized core to the EOH. • Sampling was guided by SAMAG protocols and QAQC procedures as per industry standards, these procedures are documented in accordance with JORC 2012 guidelines • DD core was cut in half using a core saw and with ¼ core submitted for assay. • All samples were sent Amdel laboratory in Adelaide for preparation and analyses. • All field samples were crushed to -5mm and pulverised via LM5 to nominal 90% passing -75pm.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• The Mt Hutton Central deposit was sampled by 56 double tubed diamond drill (DD-NQ2) holes (3,539m). • DD holes were drilled in an orientation so as to intersect the mineralisation at right angles. Down hole surveys were taken at the collar (6m) and at 15m to 30m increments to the EOH using an Eastman single shot camera. • Core orientation was performed by spear for structural purposes, detailed structural readings were generated from this procedure and reported.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Core recovery was routinely measured and recorded on structural Log Sheets. In 100 magnesite intervals recovery was below 90% and in 32 of those it was below 80%. • Site geologists were present at all times to ensure the procedures were followed.

Criteria	JORC Code explanation	Commentary
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No bias is perceived to exist due to the nature of the material being sampled (magnesite) which is a homogeneous material with little variance in the element being reported (Mg).
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geological logging was completed for all holes on site with coding. • The lithology, colour, weathering, alteration, and structural characteristics of core were logged. • All structural data was logged separately from the geology. • Logging is both qualitative and quantitative depending on field being logged. • From the detailed geological logging each magnesite bed was allocated a number so that beds could be effectively matched between drill holes at the interpretation stage. • All diamond core was logged and photographed. The photos are retained. • All core material was logged by the geologist on site. • All core is stored with Department of State Development (DSD) in South Australia.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• Quarter core was recovered using a diamond saw. • The geologist nominated the interval for analyses, this was sampled and placed in a pre-numbered calico bag and recorded on a submission. • Sample preparation at the Amdel laboratory involved the original sample being dried at 120° for up to 12 hours and weighed on submission to laboratory. Sample is then crushed through to nominal -5mm in a two stage crushing process. The entire sample was pulverized to 90% passing 75 micron in an LM5 bowl, with the same grinding time and equipment used for all samples. A sub sample of 200-300g was taken for analyses

Criteria	JORC Code explanation	Commentary
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Two duplicate samples were prepared, on a 1 in 20 basis, from the pulverized material at the same time as the removal of the assay sample. • Sample sizes are representative of the grain sizes being assayed for.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Initial drill holes MHDD01 to 007 were analysed using whole rock chemistry. • Major rock forming elements (Mg, Ca, Si, Fe, Al, K, Na, Mn, P & Ti), minor elements (Mo, Ba & Cr) were analysed by ICP. Total Carbon and sulphur by LECO furnace. Loss on Ignition (LOI) was recorded separately. • A partial leach was used for the remaining holes MHDD13 to 61, this was repeated for the sampled intervals in holes 001 to 007. On average Mg grade reported 3% lower in the partial leach than the whole rock analyses. • This method was developed by AMDEL specifically for the preparation of magnesite samples. Samples are analysed by ICPAES and the acid insoluble residue gravimetrically determined. This process was designed as a rigorous representation of the leach conditions associated with the preparation of magnesium chloride brine. Thus, measuring the suitability of a magnesite sample as feedstock for magnesium metal production. • The Partial Leach process required the entire sample (~750 g) to be crushed (nominal 5mm) and ground (90%<75 micron) and a sub-sample (250gm) taken for analysis. This sub-sample was then leached in hot hydrochloric acid (32% w/v). The liquor was filtered from the residue and then the digested solution read by ICPAES. The remaining insoluble residue was washed, dried and weighed. • Internal certified laboratory QA/QC is undertaken by Amdel. • It is felt that the partial leach of a carbonate mineral that has been ground to 75 micron, when added to hot HCl will have its carbonate dissolved freeing up the bound element, in this case Mg. Mg not associated with carbonate reports to the insoluble, i.e. talc

Criteria	JORC Code explanation	Commentary
		• Duplicates (1 in 20) were prepared and supplied to a secondary laboratory for verification (AssayCorp). Blank samples were submitted by SAMAG as a routine (1 in 25 samples). • Mass balance was used to make an empirical verification of the assay values. Where the major rock components were converted into mineral species, which then had their molecular weights added to the insoluble portion of the rock. % Mass Balance = (Mg x 3.467) + (Ca x 2.497) + (Fe/10000 x 2.074) + (Mn/10000 x 2.092) + (Al/10000 x 1.889) + (Si/10000 x 2.1391) + (S/10000 x 2.996) + % Acid Insoluble. This assumes that all Mg, Ca, Fe & Mn are present as carbonates, Al as Albite, remaining Si as Talc and S as Sulphate. Mass balances for each batch of samples had to meet the following QC criteria: 95% of the mass balance results were between 98% and 102%, and all results were between 96% and 104%. Samples that did not meet these criteria were re-assayed. • QAQC data analysis has been completed for all drill hole data and demonstrates sufficient accuracy and precision for use in Mineral Resource Estimation.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections have been verified by alternative company personnel. • No drill hole twins exist. • Primary data are captured on paper in the field and then re-entered into spread sheet format by the supervising geologist, to then be loaded into the company's database. • No adjustments are made to any assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• MGA94 Zone 54 grid coordinate system is used. • All holes comprising the resource (MH prefixed) have had their surface locations surveyed for Northing, Easting and RL. Easting and Northing were determined using a differential GPS (±. 30cm). A co-ordinate transformation was applied to the data from the old AMG to MGA zone. . • Down hole surveys collected by single shot camera.

Criteria	JORC Code explanation	Commentary
		• Topographic control is considered to be high (within 0.05m).
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Hole locations are at a nominal 250m (Y) by 20m (X) pattern. • Data spacing and distribution are sufficient to establish the high degree of geological and grade continuity. • The material being estimated does outcrop and has been mapped over the 5km within and outside of the resource area. The material being estimated is currently being mined 4.5km North of the drilled area (Myrtle Springs) and has been mined for over 30 years at a low production figure. • No sample compositing has been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• All holes have been orientated towards an azimuth so as to be able intersect the magnesite beds as close to perpendicular as possible. • All DD holes were drilled at a dip of -55° to define the depth extent of the magnesite beds.
Sample security	• *The measures taken to ensure sample security.*	• All samples were under company supervision from the rig to the Adelaide Amdel laboratory. • All residual sample material was stored securely in sealed bags.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Audits were performed at the time of the drilling (1999) in line with due diligence studies for magnesium metal production and reporting compliance (AusIMM guidelines). Some questions were raised concerning a number of issues and these were all addressed by SAMAG. The issues raised are listed below; • **Alternative Resource Estimation** - The auditors used alternative methods to previous resource estimators to derive volume, by extrapolating sectional interpretations and secondly, using average bed widths and estimating volumes on a bench by bench basis. It is the Competent Persons belief that wireframes are the most appropriate form of volume constraint.

Criteria	JORC Code explanation	Commentary
		• **Geological Model** - The auditors raised concerns about geological continuity in the southern part of the estimated area (south of 6,626,000N) due to the presence of cross faulting and that any estimation south of here should be of a lower classification to that of the North. • **Resource Classification** - South of 6,626,000N the classification should be lower due to the presence of the cross faulting which has resulted in the displacement of the continuous beds. The drill holes north of this location are unaffected. The Competent Person agrees with this.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• All work being reported is from EL 5730 (owned by Leigh Creek Magnesite Pty Ltd – a wholly owned subsidiary of Archer Exploration Limited). • The tenement is in good standing with no known impositions.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The tenement has had significant historical exploration and mine development work completed on it. The South Australian Government and private companies have worked on magnesite ($MgCO_3$) – magnesia (MgO) – magnesium (Mg) potential of the exposed beds since 1996. • This report is based upon the extensive work performed by one company Pima Mining (SAMAG historical ASX code PAL) over the magnesite beds that outcrop and sub crop throughout the strike of the tenement. • In 1996, a proposal was initiated between the South Australian Government (PIRSA) and Hatch Associates Consultants Inc. for a pre-feasibility study on magnesium metal production from magnesite

Criteria	JORC Code explanation	Commentary
		in areas north-west of Leigh Creek. Hatch delivered the Pre-Feasibility study in early 1998. • PIRSA also commissioned Kinhill to produce a pre-feasibility report on mining 200,000t per/annum of magnesite from deposits near Leigh Creek. As a part of this project CSIRO carried out mineralogical and chemical study of the magnesite ore. Conclusions were that a high grade resource could be mined and transported to Port Augusta for magnesium metal production. • In 1997, PIRSA began a mapping program of the magnesite deposits in the Wilouran and Northern Flinders Ranges. Three areas were mapped using a DGPS, these were Mt Hutton, Termination Hill and Screechowl Creek. • Additional mapping was undertaken by Pima Mining in 1999 when they commenced drilling at Mt Hutton. • The initial pass of drilling was 2.5 km covering the entirety of the Mt Hutton area (which has the excised Myrtle Spring Mine within it). Subsequently, the Mt Hutton Central area was drilled at line spacing of 250m with holes drilled at approximately 20 m spacing to cover the first 17 beds of the 86 magnesite beds identified from mapping. • A resource estimate was announced to the ASX on the 30th September 1999 for the Mt Hutton Deposit by PAL. • In 2000 a test pit was dug in the northern end of the resource and 100 tonnes of material representing beds 1 to 17 were removed for test work. The average grade of the bulk sample reported Mg 0.2% higher than the expected grade of the time (23.7% Mg). It was reported that the grade estimates of the day were considered reliable for this type of deposit. • A 25 tonne sub sample was crushed to -2mm and sampled to confirm grades, 10 samples • Geotechnical studies were completed for pit designs which supported a feasibility study into magnesium metal production from magnesite sourced at Mt Hutton Central.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The magnesite deposit comprises a steeply dipping sequence of magnesite and dolomite interbeds which outcrop continuously throughout the tenement. These beds strike northwest-southeast and dip between 60˚ and 70˚ to the northeast. A total of eighty-six individual beds have been identified extending over a strike length of 24.5 km. The deposit represents the south western limb of a regional syncline, which includes the Camel Flat, Mount Hutton, Myrtle Springs, and Mount Playfair magnesite deposits. • The youngest stratigraphic magnesite bed intercepted was Upper 7 (U7) and the 'lowest' bed, Lower 5 (L5). Between these beds, up to 86 interbedded magnesite and dolomite units form the Mount Hutton magnesite sequence. Magnesite Beds 1-17, these beds were targeted during resource definition and are positioned in the middle of the sequence[4.7]. The unique textural characteristics within each individual magnesite bed render the beds identifiable along strike and from outcrop to outcrop. • The beds 1 to 17 with the lowest stripping ratio and lowest calcium content were selected for resource drilling. Beds stratigraphically above Bed 1 are thin, high calcium beds and, immediately below Bed 17, there is a sequence of thick dolomite beds with few high-grade magnesite interbeds. • Marker beds HU1, HU2, 7MK, 14MK, HMU, HML were identified in outcrop and distinguished in core over the length of the deposit. They were used during geological logging for identifying individual beds and stratigraphic position within the sequence. • The Mount Hutton Deposit is structurally simple. Burra Group sediments in the study area strike northwest southeast and dip between 60˚ and 70˚ to the northeast. Virtually no folding disturbs the bedding and the dip is only subject to minor variation. Dip direction changes by 25˚ over 4.7 km and the total thickness varies by less than 10%.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No exploration results to report. • All drill hole data are publicly available through the South Australian Government, the custodians of exploration data of the State. • All data and reports have been publicly available since the surrender of the ground by the previous licence holder.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No exploration results are being reported. • No metal equivalents are being reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No exploration drill holes are being reported.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being*	• See current release.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</td><td></td></tr>
<tr><td>Balanced reporting</td><td>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</td><td>No exploration results are being reported.</td></tr>
<tr><td>Other substantive exploration data</td><td>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</td><td>Considerable and exhaustive work has been completed by previous operators into studies of mining the magnesite for the purpose of creating a commercial product as currently being performed to the North of the Resource.
Resource estimation were completed by 3 different consultants in 1999, 2000 and 2001, with each estimation based on the exact same data set. The outcomes of this previous work are tabulated below.
<table>
<tr><th>Year</th><th>tonnes (kt)</th><th>Mg (%)</th><th>Ca (%)</th><th>B (ppm)</th><th>Si (ppm)</th><th>Insolubles (%)</th></tr>
<tr><td>1999</td><td>19,050</td><td>23.86</td><td>2.13</td><td>101</td><td>4128</td><td>11.2</td></tr>
<tr><td>2000</td><td>18,975</td><td>23.9</td><td>1.99</td><td>108</td><td>3924</td><td>10.54</td></tr>
<tr><td>2001</td><td>16,532</td><td>23.7</td><td>2.09</td><td>103</td><td></td><td>10.99</td></tr>
</table>
Trial mining and processing of 100t of material from the North end of Mt Hutton in 2000.
A full feasibility study was completed in 2000 for the production of magnesium metal. With escalating power costs, the proposal was modified over time, including transporting the raw material to Egypt to access cheap power. Ultimately no project advanced.</td></tr>
<tr><td>Further work</td><td>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).
Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</td><td>Additional trial mining to research products that can be created from the raw magnesite.
Additional metallurgical evaluation of caustic calcined magnesia and monolithic deadburn magnesia are ongoing. See maps in the document highlighting possible extensions.</td></tr>
</table>

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• No SQL data base was used for the electronic data. All data received from the laboratory (ALS) was copied and pasted into Excel fields, hence removing any transcription errors during the duplication. • Similarly, survey data received for collars and down hole surveys were copied and pasted into relevant fields, i.e. Northing Easting, RL, Depth, Dip and Azimuth. • Standard validation practices are used to confirm that overlapping intervals do not occur, collars are surveyed and not missing, and standards perform within expectations.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visits were regular to ensure that procedures for drill data collection were being performed. Geologists oversaw the collection of the drilling and the data. • The Competent Person has visited the site, has seen the magnesite beds and the marker units defining the magnesite beds.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geological model is simple, at the time of logging the magnesite units intersected were numbered depending on their position, this numbering is from 1 to 17 (with a 2A, 14A & 14B units included to differentiate facies changes within the individual magnesite beds). These bed numbers are used to create individual bed wireframes over the length of the drilled area. The confidence of the positioning of the beds correlates with the transformed mapping of the surface exposures of the beds. This gives good support that the beds are in the correct positions and have true widths expressed appropriately in the wireframe model. • The drill density is sufficient that a geological interpretation for the purpose of creating estimation domains can occur. Bed 11A was excluded from the estimation as it was deemed that there was insufficient data for confident interpolation. The remaining individual bed domains are satisfactory for mineral resource estimation. • The variance of the estimated element (Mg) is very low owing to the depositional nature of the magnesite beds.

Criteria	JORC Code explanation	Commentary
		• Internal dilution is constrained within the domains, units of thin dolomite (waste) intercalated with the basal section of some magnesite beds (beds 3a, 10 & 13) are included into the population used for estimating the magnesite. They were not excluded from the estimation.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Mt Hutton Central Resource measures some 4,800m in length along strike, comprising 17 identifiable magnesite beds. • The ore is mapped at the surface over the strike of the modelled area, the resource is reported to the 150 RL some 55 to 70m in depth from the surface. The surface RL in the North is close to 205m AHD and is around 220m AHD in the South. The magnesite beds are modelled to the 120 RL (depending on depth of drill holes).
Estimation and modeling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.*	• The estimation domains are geological representations of the individual magnesite beds identified from surface mapping and drill hole logging. • A total of 17 domains were estimated, • MineMap was used for the interpretation, block modelling and grade estimation. • Ordinary Kriging was used for the estimation of magnesium. ID2 was used for the estimation of other elements (Ca, B, S, Si, Al, Fe, Mn, Sr and Insolubles) • Previous Inverse Distance Squared (ID2) estimations (1999, 2000 & 2001) provide adequate checks for the estimation being reported. • Considerable metallurgical work has been performed to determine recoverable products, only Magnesium is being reported. • Other elements such as Ca, Al, Fe, Mn, B, Sr, S, Si & Insolubles have been estimated, but not reported. From multi-element data collected to date from drilling, no deleterious levels of elements can be reported in the magnesite material. • Drill hole line spacing is 250m apart over the strike of the orebody, holes are spaced roughly 25 to 30m apart. Block model cell

Criteria	JORC Code explanation	Commentary
	• *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	dimensions are 0.5m (z), 0.5m (x) and 10m (y). • SMU are 2.5m³ which translates to approximately 7.5t. • No assumption of correlation between variables has been made, i.e. grade (Mg%) vs. SG. • Samples reporting above 20% Insoluble were deemed unsatisfactory for estimation purposes as the high Insoluble value indicated that the assay is unreliable. Eleven percent of the data was not used, leaving 962 samples used in the estimation. • Geological wireframes were used as the constraining domain for data extraction for statistical parameters and estimation of each individual magnesite bed. • No grade cuts were used to manipulate the data prior to estimation. The data points that could be considered as extreme (<20%Mg) were left in the estimation. Ultimately due to the search distances any influence of these points would be smoothed out. • The block model was viewed in section and plan, with drill hole data.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are based on wet tonnes. • Tonnage estimation was derived from SG (Specific Gravity) data collected over the diamond drill holes. Diamond core was weighed in air and then weighed in water (Archimedes method)
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The resource is reported with no cut-offs applied, as test work indicates that blending (Mg) can create a commercial magnesium product.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It is assumed that mining of the material will be by open cut, dilution from the HW and FW will be minimal due to the physical appearance of the ore body, i.e., colour. The same ore body is currently being mined (Myrtle Springs Mine) in a selective manner to the North of the resource being reported. It has been mined in this manner since the 1980's, demonstrating that selective mining is economical. • No water was encountered whilst drilling.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Test work by Archer is being constantly updated to the market, as the product definition process is refined during a scaling up process from bench scale test work to larger volume samples. • Calcined Magnesia products can be made from the various beds estimated at Mt Hutton Central. • Marketing of these products will occur after a planned toll treating program using a third party shaft kiln to determine a product value for reserve purposes.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• It is assumed that material considered as waste (dolomite) is a chemically benign nature, this is assumed from multi-element chemistry reported from drilling. This same dolomite material is used extensively as road base by another operator to the North of the resource. • The area surrounding the resource has subtle topography and does not reflect recent erosion associated with heavy rainfall. • Extensive environmental studies were completed on the immediate area around the resource to support the plan to mine 200kt per annum of magnesite. This work was completed by various consulting firms for SAMAG in the year 2000. • Environmental studies may need minor updating to allow for formal mining submissions to the State Government (DSD).
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• On average there are 7 density measurements per bed, a total of 328 individual readings were made on the deposit, with 228 in ore and 100 in the dolomite waste. Each bed has an average density assigned to it from the raw data. • The method used was the Archimedes method. • Density was assigned to domains (beds) rather than estimated, the assigned densities are as below:

Criteria	JORC Code explanation	Commentary

Bed Number	Density	Bed Number	Density
Bed 1	3.03	Bed 11	2.94
Bed 2	2.94	Bed 11a	
Bed 3	2.94	Bed 12	2.95
Bed 3a	2.93	Bed 13	2.95
Bed 4	2.93	Bed 14	2.96
Bed 5	2.98	Bed 14a	2.94
Bed 6	2.96	Bed 14b	2.97
Bed 7	3.02	Bed 15	2.96
Bed 8	2.94	Bed 16	2.95
Bed 9	3.01	Bed 17	2.90
Bed 10	2.95	Dolomite	2.86

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The mineral resource for Mount Hutton Central has been classified into Indicated and Measured categories. These categories were based upon the following criteria, strong geological and grade continuity (strata bound and strata form chemical precipitate beds within the Skillogalee Dolomite), the quality of the data and the confidence of the estimation. Cells south of 6626000N are classified as Indicated in line with previous Audit recommendations due to the presence of faulting. Cells to the north of 6626,000N and above the 150RL are classified as Measured. Cells below the 150 RL of the block model are omitted from the Resource Classification. • Appropriate account has been taken of all the relevant criteria including data integrity, data quality, geological continuity, data continuity, and magnesia product creation.. • The Mineral Resource estimate appropriately reflects the view of the magnesite deposit at Mount Hutton Central by the Competent Person.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• This estimation has not been audited. it is the fourth estimation for the Mount Hutton Central Area. No changes have occurred to the data set since the first estimation in 1999. The purpose of this report it to bring the resource into compliance with JORC 2012. The quality of the work and reporting at the time is compliant with JORC 2012 and can be reported as such.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Mineral Resource accuracy is communicated through the classification assigned to this Mineral Resource. • The Mineral Resource estimate has been classified in accordance with the JORC Code 2012 Edition using a qualitative approach. All factors that have been considered have been adequately communicated in Section1 and Section 3 of this Table. • The statement relates to global estimate of tonnes and grade of Magnesium. Grade estimates have been made for each cell of the block model. • A 100 tonne trial mining sample showed close correlation to grades predicted from drill hole data. No additional production data is available for Mount Hutton Central. • Kiln trials are scheduled to confirm refractory potential.

Wireframes used for Mount Hutton Central