18 November 2014

ASX / TSX ANNOUNCEMENT

Tincalayu Historical Estimate Upgraded to JORC Compliant Resource

Highlights

- **Tinclayu resource estimate is much larger than expected.**
- **Indicated and Inferred Resource of 6.5 million tonnes at 13.9% B_2O_3 is estimated at the marginal cut-off of 5.6% B_2O_3 appropriate to the current production capacity of 30,000tpa borax decahydrate.**
- **At a marginal cut-off of 2.8% B_2O_3, appropriate for a possible expanded production rate of 100,000tpa borax decahydrate there is an Indicated and Inferred Resource of 17.8 million tonnes at 11% B_2O_3.**
- **Whittle 4D modelling indicates that for both scenarios there is a potential mining life in excess of 30 years based on optimum discounted cashflow criterion. Technical studies have been initiated to investigate expansion options.**
- **Properties have considerable exploration potential.**

Orocobre Limited (ORE:ASX, ORL:TSX) ("Orocobre" or "the Company") is pleased to announce the upgrade of a historical estimate to an Indicated and Inferred Resource for the Tincalayu borate mine in Salta Province, Argentina. This mine is located on the Tincalayu Peninsula, adjacent to the Hombre Muerto salar, within 17 mining leases owned by the 100% Orocobre subsidiary Borax Argentina.

Independent, Qualified/Competent Person, Murray Brooker has estimated an Indicated and Inferred resource of **6.5 million tonnes at 13.9% B_2O_3 at the a marginal cut-off of 5.6% B_2O_3**, which increases to **17.8 million tons of 11.0% B_2O_3, at a marginal cut-off grade of 2.8% B_2O_3**. Details are given below:

Table 1: Summary of resource estimate figures and cut-offs used

	Current production 30 Ktpa			Expanded Production 100 Ktpa		
	Cut-off	Tonnes (Mt)	Soluble B2O3 (%)	Cut-off	Tonnes (Mt)	Soluble B2O3 (%)
Global Resource (not limited to a pit shell) - with Marginal Cut-off						
Indicated	5.6	6.9	13.9	2.8	6.9	13.8
Inferred	5.6	9.9	10.2	2.8	13.8	8.5
Indicated + Inferred	5.6	16.8	11.7	2.8	20.7	10.3
Maximum DCF In-pit Resource - with Marginal Cut-off						
Indicated	5.6	5.1	14.7	2.8	6.8	13.8
Inferred	5.6	1.4	11.0	2.8	11.0	9.3
Indicated + Inferred	**5.6**	**6.5**	**13.9**	**2.8**	**17.8**	**11.0**

These cut-offs have been generated by undertaking Whittle pit modelling and reflect the breakeven grade for a tonne of ore at the point of exit from the open pit assuming no throughput limitations in ore processing. Further studies are likely to result in a higher cut-off being applied in an optimised mining operation and in a reserves estimate.

This compares to a superseded historical estimate of 1.85 million tonnes at 17.2% B_2O_3 estimated at a 12% B_2O_3 cut-off and adjusted for mining depletion to 2011.The superseded historical estimate was originally reported on the 21st of August 2012, at the time of the announcement of the Company's purchase of Borax Argentina. The majority of the mineral tincal (also referred to as borax) is hosted within a sand matrix, from which is separated in the processing plant to produce the Borax Decahydrate mineral product.

The company is in the process of upgrading the historical estimates (refer to Appendix 1 below) of the different Borax Argentina mining properties to JORC/NI43-101 compliant mineral resources. The first of these, the Porvenir resource estimate, was announced on the 29th April, 2014 in accordance with the requirements of JORC 2012. Geological interpretation is currently underway for the Sijes mine, where Borax Argentina has extensive properties that contain a number of different borate minerals. The historical estimate (now superseded) of the Tincalayu deposit was at the time of purchase only a small part of the overall quantity of borates. However with the lower cut-off grade applied in this resource estimate the Tincalayu resource is considerably larger and the strategic importance has therefore increased for the Company.

Background

Borax Argentina SA, including the Tincalayu mine, was acquired by Orocobre from Rio Tinto Minerals in August 2012. Borax Argentina has been in operation for over 50 years and operates open pit mines in Tincalayu, Sijes, and Porvenir. There are concentration plants in Tincalayu, Sijes and Porvenir (not currently used) and refinery facilities in Tincalayu and Campo Quijano. Additionally, the ulexite deposit at Diablillos is essentially undeveloped.

There are presently three product streams. Firstly, at the Tincalayu mine the mineral tincal is mined and concentrated and then processed onsite to produce the Borax Decahydrate and Pentahydrate products. Secondly, ulexite is mined, mainly at Porvenir, and transported to Campo Quijano to produce Boric Acid. The third product stream, hydroboracite and colemanite are mined at Sijes and concentrated to produce mineral concentrates for direct sale.

At Tincalayu, following the relocation of the borax decahydrate plant from Campo Quijano, ore is currently being mined at a 17% B_2O_3 headgrade during the ramp up period but this will be reduced to 15% B_2O_3 once the operation is in a steady state condition based on a 10% B_2O_3 cut-off. Material between the marginal cut-off of 5.6% B_2O_3 and the 10% B_2O_3 mining cut-off will be stockpiled as low grade ore for potential later processing. Ore is transported to the processing plant and then processed into borax decahydrate (36.5% B_2O_3). This material is currently dispatched from site in 1 tonne bulk bags for packaging and sale from Campo Quijano which is 300kms to the south-east of Tincalayu, or for conversion into Pentahydrate (47.8% B_2O_3) and anhydrous borax.

The production capacity at Tincalayu is currently a nominal 30,000tpa of borax decahydrate and the Company is evaluating expansion options based on the much larger resource base than expected. Based on preliminary work, a possible expansion to 100,000tpa borax decahydrate equivalent would seem sensible from a resource utilisation perspective and this has been used to report a resource at the related lower cut-off.

Location and Properties

Tincalayu is located near the southern end of the Tincalayu Peninsula (Figure 1) in Salta province, immediately north of the boundary with the province of Catamarca. The project is in the Puna geographical region, at an altitude of ~4000m above sea level, 175km west-southwest of the province capital, Salta.

Tincalayu lies approximately 200km south of the paved highway (Figure 1) that passes through the international border with Chile, approximately 80 kilometres by road to the west (Jama Pass). That road continues on to the major mining centre of Calama and the port of Mejillones in northern Chile, a major port for the export of mineral commodities and import of mining equipment.

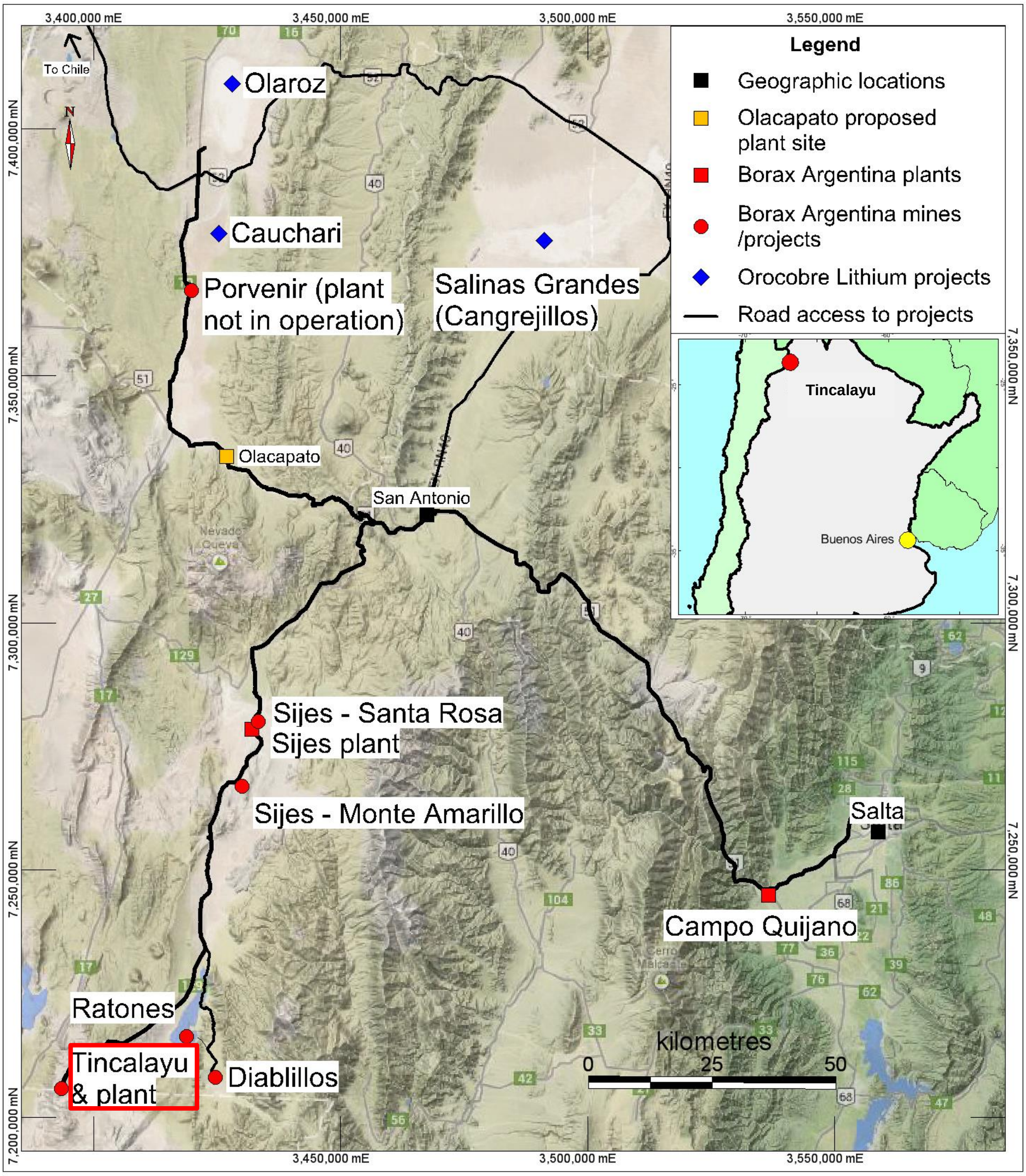
Orocobre, through its 100% owned subsidiary Borax Argentina, owns seventeen mining properties on the Tincalayu Peninsula that include and surround the Tincalayu mine (Figure 2). Borax Argentina also owns properties covering the majority of the Diablillos salar, 33km east of Tincalayu, where there is a large historically defined ulexite resource (refer to Orocobre announcement 21 August, 2012). Twenty seven kilometres east-northeast of Tincalayu, Borax Argentina also owns properties in the Ratones salar which host ulexite mineralisation.

About Borate Mineralisation

Borates are the group of minerals which consist of boron bonded with oxygen and cations such as Ca, Mg and Na. Economic borate mineralisation largely consists of minerals such as ulexite ($NaCaB_5O_9 \cdot 8(H_2O)$) and tincal ($Na_2B_4O_7 \cdot 10(H_2O)$) which were deposited in salar (salt lake) and playa-lake environments. Tincal is also often referred to as borax. The most significant borate deposits are located in Turkey, the USA and Argentina. These natural minerals and refined industrial chemicals produced from them have a wide range of uses. These include use in insulation fibre glass, fertilisers, ceramics, wood preservatives, glass additives, fluxes as well as many other minor uses.

At Tincalayu the sodium borate tincal (borax) is the most important borate mineral. Tincal is used to produce Borax Decahydrate ($Na_2B_4O_7 \cdot 10(H_2O)$) from the plant that was relocated to Tincalayu from Campo Quijano during the first part of 2014. Conversion to Borax Pentahydrate ($Na_2B_4O_7 \cdot 5(H_2O)$) and anhydrous borax ($Na_2B_4O_7$) continues at this time at Campo Quijano.

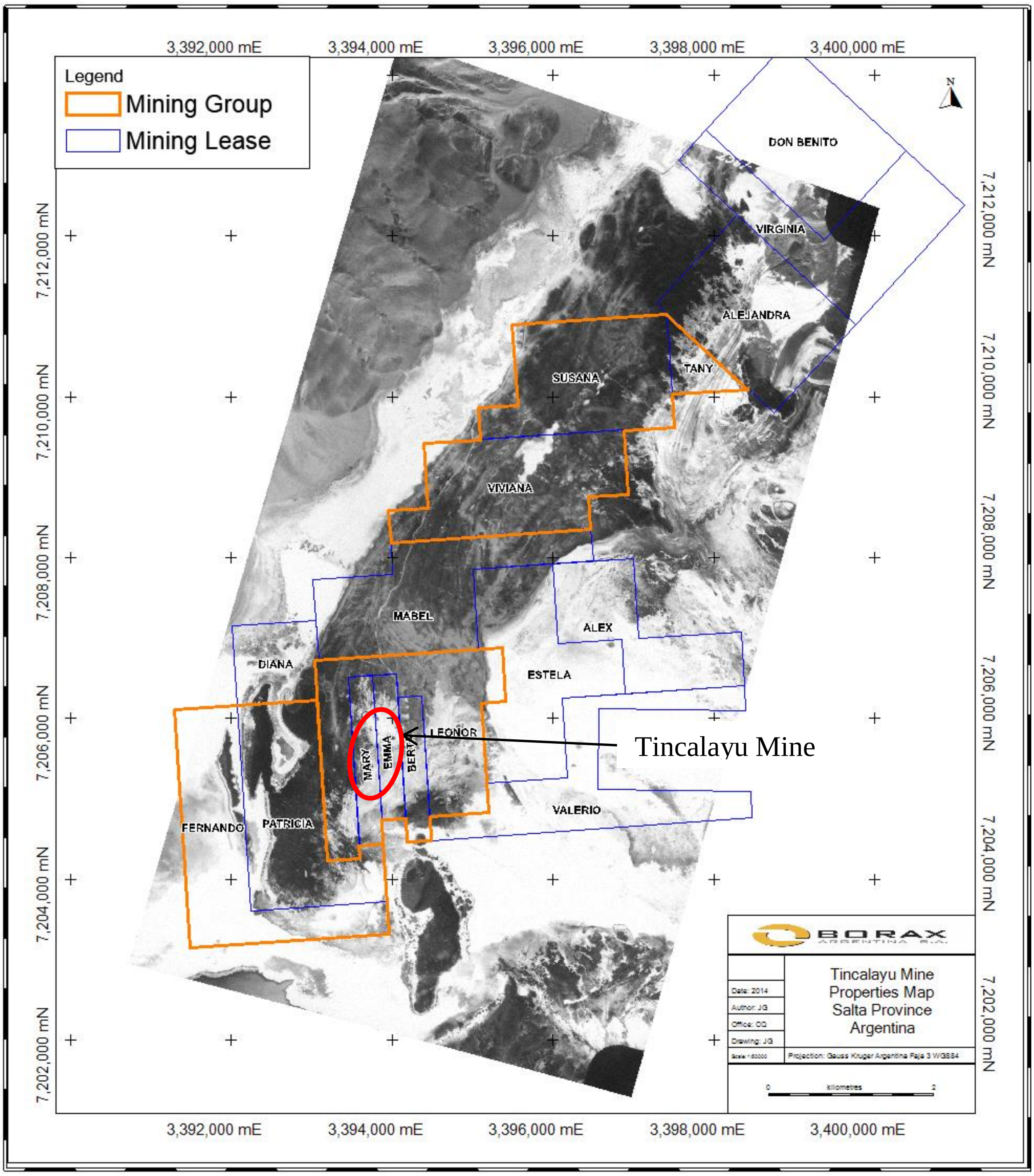
Figure 1: The location of the Tincalayu project in northern Argentina



Deposit Geology

The Tincalayu mine (Figure 3) is hosted in the Miocene age Sijes Formation, which consists of thick sequences of continental evaporites and alluvial clastic rocks, with lesser tuffaceous deposits.

Figure 2: The distribution of the Tincalayu properties



Sijes Formation Borates

The Sijes Formation (deposited approximately 6 million years ago) has **three** members. These are believed to have been deposited in a string of shallow lakes within a semiarid continental environment of playas and alluvial plains, with periods of regional explosive volcanism and ash deposition.

In this environment the borate mineralizing solutions were channeled along fracture zones and permeable sediments, on the sides of, or in the interior of the salt-lake basin where the Sijes Formation was deposited. Discharging into the lakes these solutions deposited borate and gypsum mineralisation from supersaturation and chemical precipitation. The lakes expanded and contracted over time, their beds building up through continued sedimentation, deposition of evaporates (halite and gypsum) and periodic volcanic ash falls. The simplified geology of Tincalayu is shown in Figure 4.

Halite Member (deepest)

The stratigraphic sequence consists of a lower unit of halite (>145m thick, actual thickness unknown as drilling does not reach the base) hosting some layers of tincal. This tincal mixed with halite is currently not exploited in the Tincalayu deposit and has not been included in this reported resource. However, there is the possibility such material could be exploited in the future.

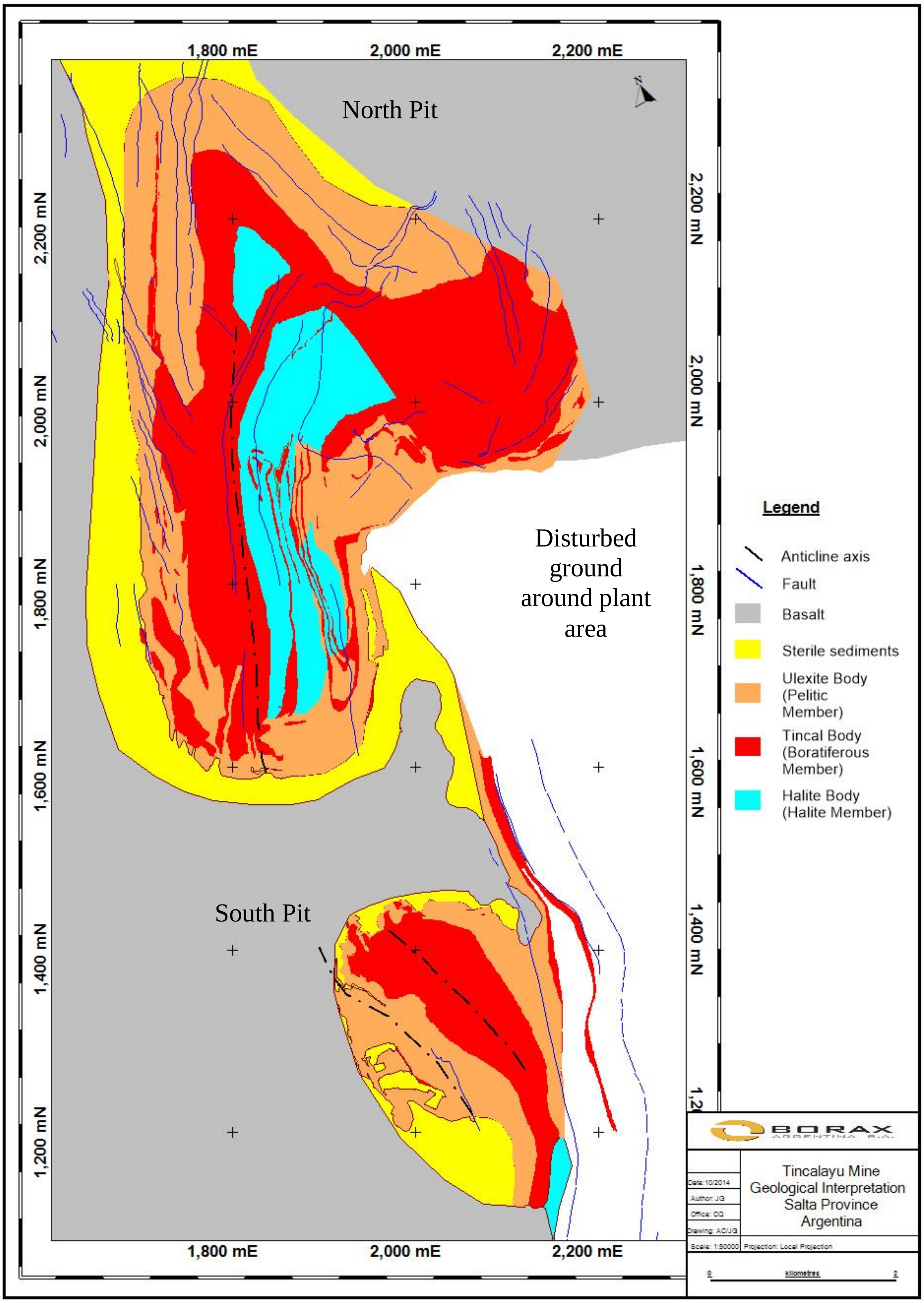
Figure 3: Tincalayu north pit, the south pit begins 100 metres from the south wall

Boratiferous Member (middle)

This is the middle member of the Sijes Formation and the primary tincal (borax) producing horizon in the Tincalayu mine. Tincal is interpreted to have been deposited in a muddy matrix, which were later converted to massive beds during burial and folding. Lenses and disseminations of tincal are also common within the mineralized unit. Within the Member there are separate borate horizons up to 4m thick. Sediments include fine sandstones and tuffs and clay beds. This unit is restricted to the southern part of the peninsula and has an irregular shape, due to asymmetric folding and some faulting. However, it extends over 1200m north-south by 600m east-west. The thickness is very variable and can reach 60m, with an average of 30m.

Mineralisation is dominantly strataform in nature, in generally subhorizontal layers subject to asymmetric folding, which has led to some thickening of the borate mineralisation in fold hinges. The principal mineralisation in the Boratiferous Member is tincal (Borax), with minor kernite, ulexite, inyoite and ginorite. Ulexite is present in the overlying clastic member as clots ("papas").

Figure 4: Geological map interpreted from pit mapping



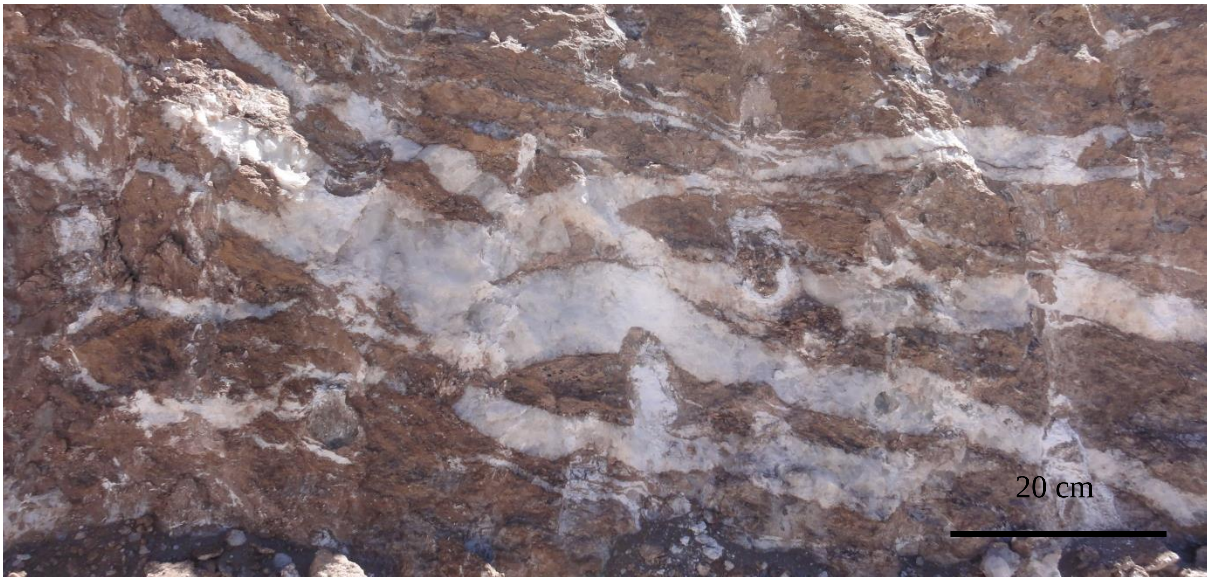
Pelitic Member (upper)

The transition from the Boratiferous Member to the upper Pelitic (clastic) Member sediments is marked by a change in colour from green to dark brown compact clay beds that contain abundant primary ulexite (a sodium calcium borate) as thin beds or as papas (pods/clots) – or as veins. This is suggested to represent the change from a lake (Boratiferous Member) to as playa (clastic member).

Post-Mineralisation Sediments/volcanics

In the centre and east of the Tincalayu Peninsula red fanglomerates with basalt clasts and interbedded basalt, travertine and pyroclastic intervals overlie the Sijes Formation. This unit is approximately 30m thick. The overlying Incahuasi Formation consists of welded volcanic breccias and conglomeratic sandstone, overlain by andesitic basalt units. This basalt forms a cap on the higher parts of peninsula south of the Tincalayu mine.

Figure 5: Tincal mineralisation in lenses and veins



Folding and Faulting

The Tincalayu Peninsula has been affected by faulting and folding, with approximately 017º trending folds developed along the peninsula and observed in the Tincalayu mine as asymmetric folds. Massive recrystallized tincal is present in the axes of folds.

The western margin of the Tincalayu Peninsula is interpreted to be a reverse fault (Figure 2), with a dextral movement sense, with the east side of the fault (the peninsula) displaced upward. A zone of faulting is noted in the western wall of the north pit trending ~N-S.

<u>Exploration Data and Interpretation</u>

Exploration on the Tincalayu leases has been undertaken by diamond drilling over a long period of time, beginning in the 1960’s. Drilling was undertaken on a local grid which was established over the deposit with a rotation of 17 degrees east of north. This local grid is aligned along the trend of the major folds affecting the sediments hosting the tincal mineralisation. Drilling is relatively shallow, with the average hole depth 76 metres.

A total of 462 diamond drill holes (Figure 6) have been drilled into the Tincalayu tincal deposit and the surrounding area for a total of 34,945 metres. The majority of drill holes were vertical, with only 34 holes drilled at an angle. The average spacing of the drill holes is ~ 25 metre, with the grid consisting of 25m spaced lines in the grid north-south and east-west directions. Drilling was double tube diamond drilling and overall core recovery has been poor, with an average of 65%. Drilling prior to 2001 used small diameter AQ and BQ drilling equipment, which resulted in small volume samples.

Additionally sampling of drill core was selective, with only mineralised intervals sampled from the core. Lower grade mineralisation (<10% B_2O_3 %) was not always sampled. The predominant sample length was 1.5m, corresponding to the drilling interval.

The geology of the drill holes was recorded in the field and compiled in standard field sheets with observations and analytical results. This information was reviewed when evaluating the historical data from sampling and before loading it to the project database. Pit mapping has historically been limited and on a campaign basis. Rock chip sampling has previously been undertaken in limited areas of the pits. Borax Argentina undertook a program of channel sampling (1028 in total) within the pits in late 2013 (Figure 6) to evaluate the grades of both tincal and ulexite (which has not been historically sampled). These samples have not been used for the resource estimate within the Boratiferous Member.

The thickest tincal zone has laterally thick zones of ulexite, although the ulexite generally occurs at a higher position in the stratigraphy (in the Pelitic Member).

A limited amount of trenching has been carried out to the south of the southern pit, with both tincal and ulexite intersected in trenches. Further exploration is required for this area in the future to evaluate the potential to add resources here.

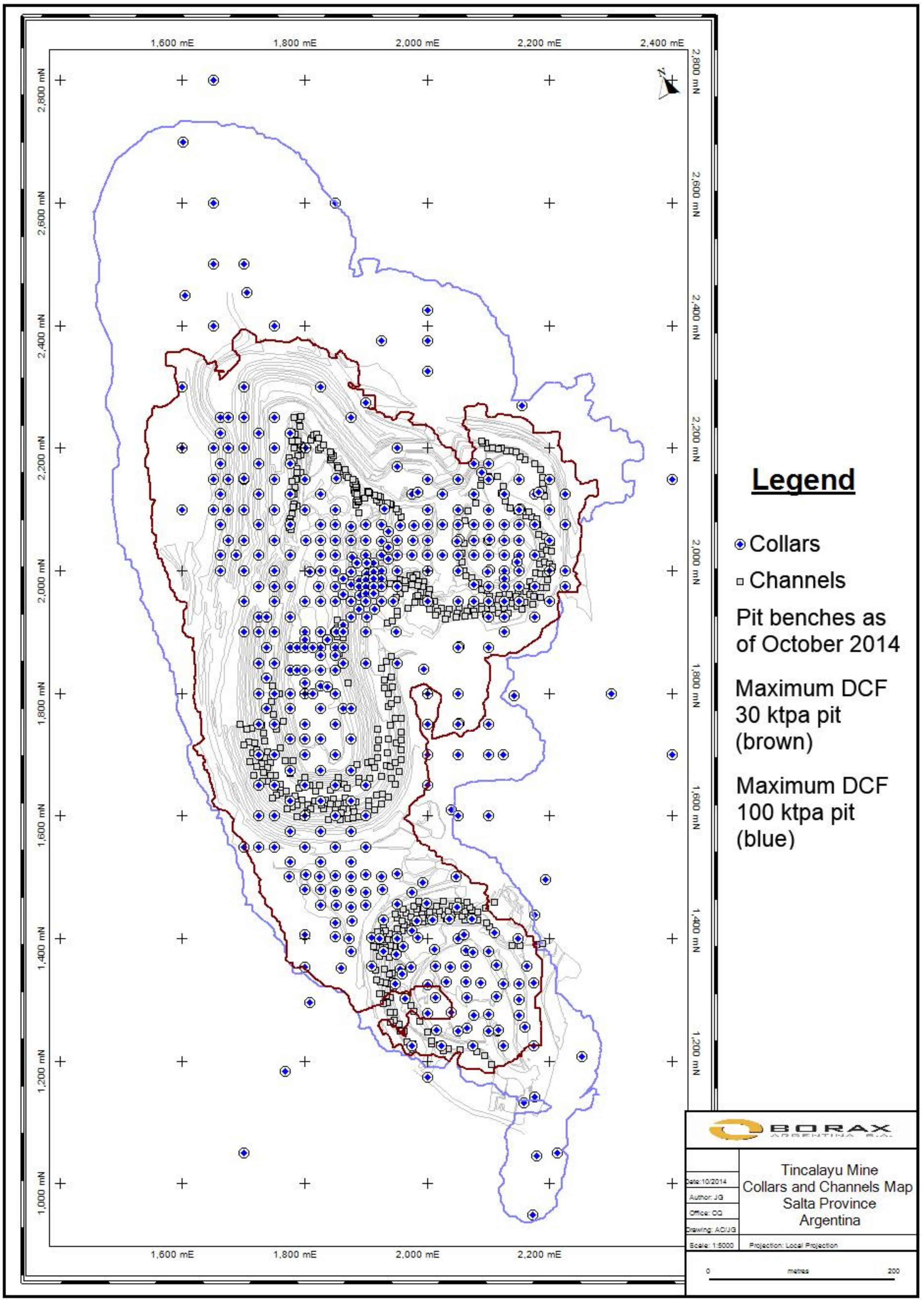
Interpretation of geological and assay data from historical drill holes and channel samples suggests the three units of the Sijes Formation have different styles of folding, and vary from open to tightly folded, with units only locally overturned in asymmetric fold limbs. In general the sediments have gentle to open folding and show some variation in thickness laterally.

A 3D geological model was constructed in Micromine based on 2D sections and a 3D interpretation carried out in Mapinfo software. This model defined the upper post mineralisation sterile sequences, the Pelitic Member containing ulexite, the Boratiferous Member with borax mineralisation and the underlying Halite Member.

Data Validation, QA/QC Results

The original analyses of diamond core from Tincalayu were undertaken at the Borax Argentina company laboratory in Campo Quijano and these analyses did not include Quality Assurance or Quality Control (QA/QC) samples. Consequently, a program of re-assaying sample pulps from these original drill samples was undertaken prior to this resource estimate. Analysis of borates is a relatively specialized procedure and for reasons of time and experience the Borax Argentina laboratory was selected to carry out the analyses, as the laboratory has extensive experience analysing borax and ulexite samples.

Figure 6: Location of Tincalayu drill holes and channel samples



A total of 140 pulps were selected from seven drill holes through different parts of the Tincalayu deposit (concentrating on the boratiferous member and drill holes in areas where mining has not yet begun around the margins of the north and south pits). These were re-assayed along with standards, duplicates and blanks (each 9% of the total number of samples), with samples sent to the University of Salta as an external laboratory for QA/QC purposes.

The comparison between original and re-assay results from the seven holes shows variability. Tincal generally dehydrates when exposed to the dry climatic conditions at 4000m and it was expected the historical samples would have fully dehydrated (losing the water molecules from the structure) in this environment. However, reassays suggest only partial dehydration of tincal has occurred over the period samples have been stored, making direct comparison of the original sample results and the re-assays difficult.

Overall, the standards of quality control and data validation, although consistent with general industry practice during the 1960's to 1980's, are of a lower level than would be used today. Consequently, although the assay data on a whole-of-mine basis (which has supported mining over a long period) is considered sufficiently robust for use in resource estimation, the individual historical assays are considered to be of lower confidence, Taking account of the overall data quality, the resource estimate has been limited to indicated and inferred, and no measured category has been estimated.

The two standard samples of natural borax material at different B_2O_3 grades, a blank sample and duplicates show that re-assay results are comparable between the primary and external check laboratory and sufficiently repeatable.

Neither the Borax Argentina nor the UNSA laboratories are certified as commercial laboratories, however the Borax Argentina laboratory has operated under the ISO 9001 certification of the Borax Argentina quality system since 1996.

Statistical analysis of the B_2O_3 and chloride analyses shows that differences in the mean and standard deviation are not statistically significant between the UNSA and Borax Argentina laboratories supporting the overall assessment.

The Resource Estimation Process

The area containing the resource is defined on the basis of drilling undertaken in the open pits and surrounding area (Figure 6), identifying the geometry and thickness of the Boratiferous Member. This includes 433 of the diamond holes drilled by Rio Tinto Minerals and their predecessors at Tincalayu.

Historical resource classification has reflected grade and rock quality information, with high grade (averaging >17%), low grade (averaging < 14%), soft waste (free digging) and hard waste.

The 2014 resource is classified by the author as indicated and inferred under JORC and CIMM definitions, based on the passes used to estimate the blocks and taking into account the quality/ repeatability of the historical analyses. The author notes that the CIMM definition of an 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The inferred estimate is based on limited information and sampling (selective and restricted to the most visually mineralised material) gathered through appropriate techniques from drill holes, with results used from the blast holes and channels to compare with drill results.

Lithological domains

Five wire frames were constructed for the resource estimate, with the most important encompassing the tincal unit. Contact analysis of the boundaries between different units suggests it is appropriate to use the limits of the tincal unit as a hard boundary for resource estimation. The basalt near the top of the Tincalayu pit was separated from other units of waste material as it significantly harder and will have different associated mining costs.

Density data and estimation

A total of 24 density samples were taken from different lithologies and mineralized materials within the North and South Tincalayu pits and the capping basalt unit. These included units of tuff, sandstone, halite, and clay. A relationship was derived between density and B_2O_3 content, as tincal has a slightly lower density than typical host sediments. It was decided to apply standard density values for the lithologies for <1% B_2O_3. At 1% B_2O_3 and above density values were calculated with the regression relationship. Collection of additional density data will be undertaken during future mining activities.

Statistical analysis and grade capping

No grade capping was carried out for tincal grades (as B_2O_3%) in the resource. As this is a sedimentary mineral deposit there are not extreme high grades, relative to the overall grade of the deposit.

Hole spacing, data density

Holes were drilled on a 25m spaced grid in the centre of the deposit, with minor infill drilling at 12.5m spacing in some of the higher grade parts of the deposit. Overall drill holes spacing within the deposit is ~25m between holes.

Holes were only sampled through the interval mineralised with tincal, so only a portion of the total drilling has been sampled. It appears the visual grade used for selective sampling was around 10-12% for Tincal.

Resource estimation methodology

The estimation was conducted using Ordinary Kriging to interpolate soluble B_2O_3 grades, using nominal one and a half metre composited samples in Micromine. The estimation of mineralised layers was constrained using five wireframe surfaces created based on wireframes provided by Orocobre that delimit mineralogical or lithological boundaries. Due to the irregular undulation of the mineralogical and lithological domains a dynamic search and variography approach was used whereby the search ellipsoid and variogram model axis were rotated parallel to the orientation of the closest triangle of the mineralogical and lithological domain model. A variogram was constructed using the geostatistical software GS3.

The current estimates have been classified as Indicated and Inferred based on the results of the search strategy, multiple passes and consideration of the quality of historical assays, for which there is limited documentation

The resource estimation involved:

- Resource consultants H&S Consulting reviewed the Orocobre database.
- Under the supervision of the external Competent/Qualified Person resource consultants H&S reviewed the Orocobre digitised solids, encompassing the different mineralogical units based on east-west strings on 25m spaced sections, and constructed a new set of solids based on these, consisting of five wireframes.
- The five wireframe surfaces were used to flag 6 separate domains in the block model and assay file.
- The wire frames were treated as hard boundaries for the interpolation of the soluble B_2O_3 (tincal domain).
- A model with blocks 10 x 10m (in the ~east-west and north-south directions - note the Tincalayu local grid is rotated 17^o east of north) and 5m high was used.
- The composited length of 1.5m was chosen, based on this being the most common sample length.
- The density of blocks estimated with over 1% B_2O_3 were assigned density values based on the regression from the estimated B_2O_3 % grade. The density of blocks with less than 1% B_2O_3 were assigned values based on the lithology.
- Because sampling carried out historically has been selective, with only the higher grade tincal mineralisation sampled, a default low grade value of 5% B_2O_3 has been applied to material described as mineralised but which was not sampled
- Variogram models were developed using 1.5m composite data from the tincal domain (which contains most of the data).
- The block model consists of 99 x 195 by 60 blocks in an east-west, north-south and vertical orientation respectively. Wireframes were used to assign each block to the appropriate domain.
- The search ellipsoid and variogram were assigned to each block using the methodology of Finch and Pridmore (Finch and Pridmore, 2014) in which the dip, dip direction and centroid coordinates in the mineralogical and lithological domain model, were written to a single file.
- A nearest neighbour search was then employed to assign the dip and dip direction of the closest triangle to each block in the block model. In order to reduce processing time the dips and dip directions were then both grouped in ten degree increments and the block assigned the dip and dip direction of the middle of that group.
- The search criteria to estimate blocks consisted of two progressively relaxed search passes which were used to differential the classification of blocks. Data declustering was carried out by using search sectors.

Whittle Pit Optimisation

Whittle pit optimisation is the process to develop an optimum pit geometry and the preliminary assessment of what may be economically extracted by mining. This is often an intermediate step between resources and the estimation of reserves.

In the modelling, geological and technical parameters are assigned to a 4D model, together with cost information. The process used mining parameters and a sale cost of US$530/tonne (FOB) for sale of the Borax Decahydrate product. Two different scenarios were considered, consisting of a 30ktpa case, approximating the current production situation, and an upgraded case of 100ktpa. The modelling was undertaken by Australian Mine Design & Development Pty Ltd of Brisbane.

Both these scenarios were used to generate a number of pit shells, to balance resource extraction and revenue. For each case a staged pit shell was selected as the preferred case based on the maximum discounted cashflow (7.5% discount rate) considering forecast operating costs and revenues. The 100,000tpa production scenario resulted in a significantly larger discounted cash flow for the project than the 30,000tpa. The project life at 30,000tpa was calculated as 52 years based on maximum DCF and 35 years at 100,000tpa.

Marginal cut-offs have also been generated by undertaking the Whittle modelling and reflect the breakeven grade for a tonne of ore at the point of exit from the mine assuming no throughput limitations in ore processing. These are 5.6% and 2.8% B_2O_3 respectively. Further mining studies are likely to result in a higher cut-off being applied in an optimised mining operation and in a reserves estimate.

Areas of mineralisation outside the Boratiferous Member were also evaluated to assess potential tonnages and grades. These included the ulexite in the upper Pelitic Member, where the lack of sampling in drill holes has precluded definition of a resource. The potential tonnage and grade of the borax mineralisation in the halite unit was also evaluated, although the result of this is only an exploration target that is not reported here.

Both ulexite in the Pelitic Member and borax in the Halite Member could potentially be extracted economically. The ulexite is mined as part of the stripping process and could be used to provide a viable economic product at little extra cost, as Borax Argentina is already a producer of ulexite. The borax in halite at the base of the pit is potentially economically extractable, depending on the strip ratio and processing costs/plant constraints, with similar mineralisation close to surface south of the southern pit.

Cut Off Grade and Resource

Evaluation of the resource tonnage and grade curve and the comparison of the 30 and 100ktpa cases has led to the definition of separate marginal cut-offs for each of these cases. For the 30ktpa case, as previously discussed, a marginal cut-off of 5.6% B_2O_3 has been defined, with a cut-off of 2.6% B_2O_3 for the 100ktpa case. The resources are presented both as a global number and within the DCF optimised whittle pit shells for the 30 and 100ktpa cases (Table 1 and Figure 8). Further mining studies are likely to result in a higher cut-off being applied in an optimised mining operation and in a reserves estimate (moving the cut-off to the right on the graphs, reducing tonnage and increasing the grade).

Figure 7: Pit Shell for maximum DCF case for 100,000tpa Bx_{10} production. The existing pits are also shown within the shell.

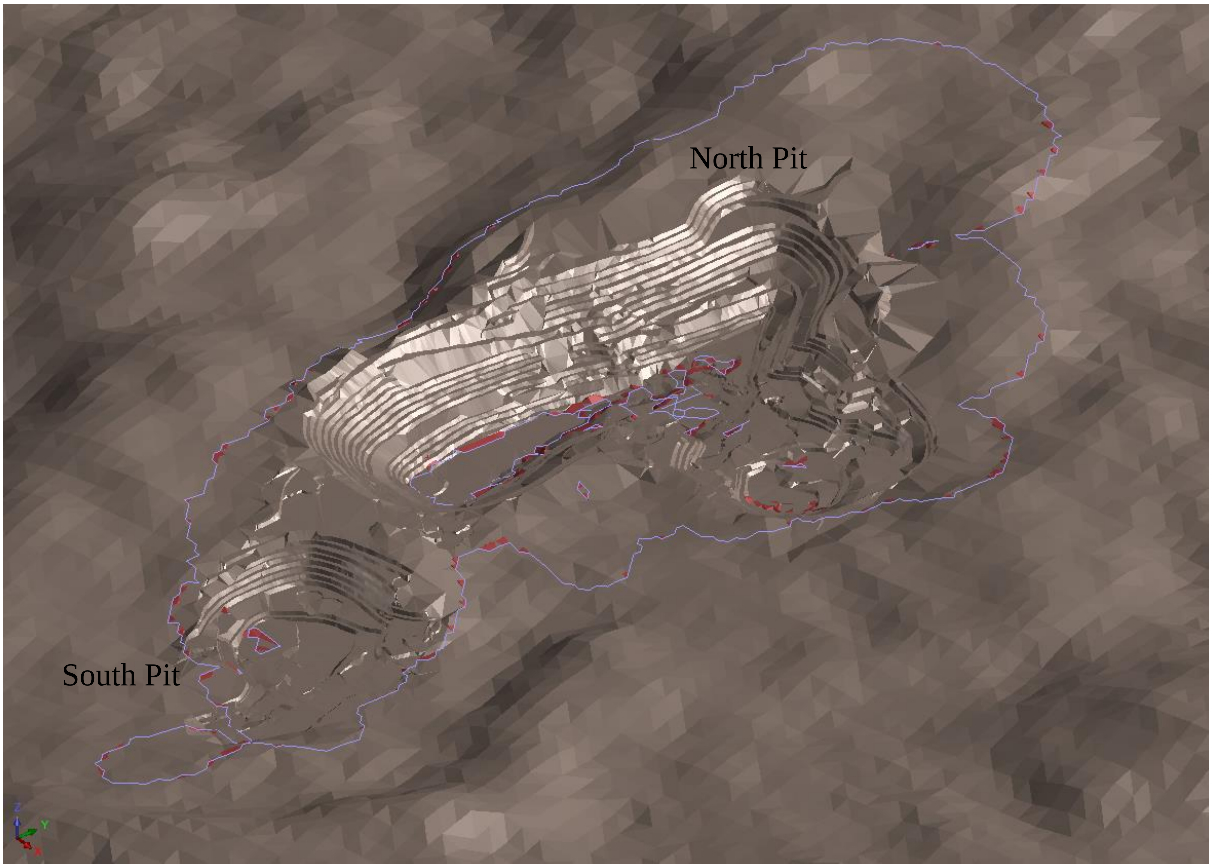
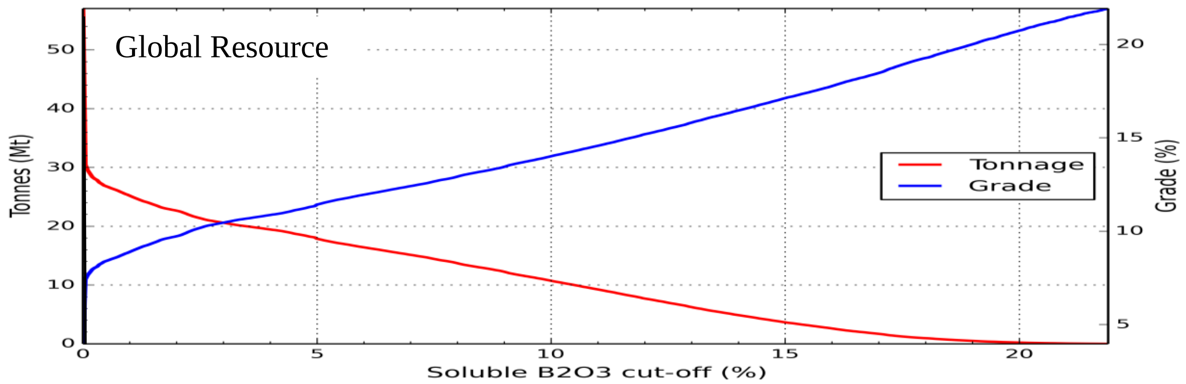
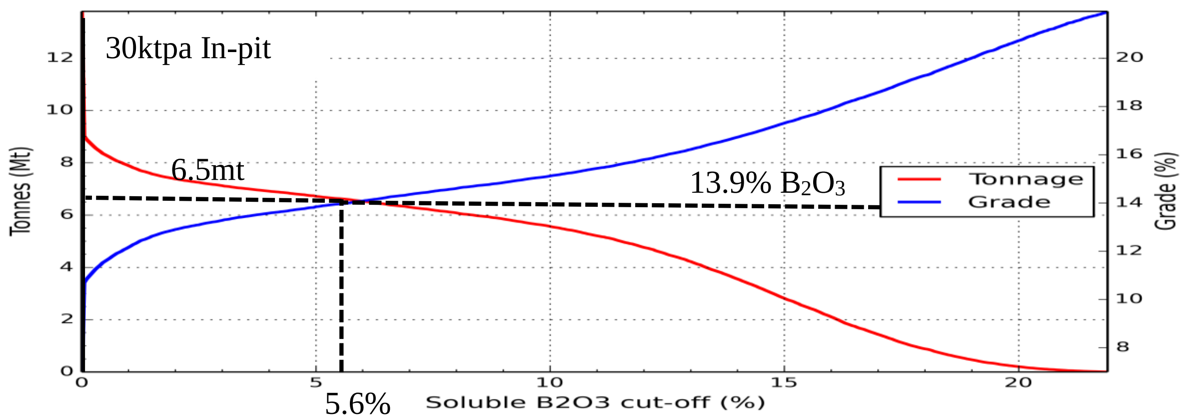
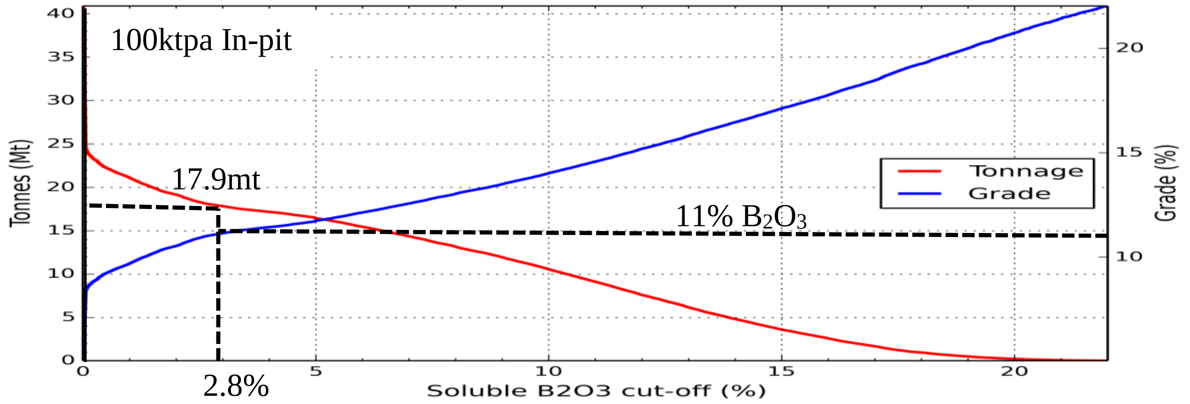


Figure 8: Grade tonnage curves for the global resource and for the in-pit DCF optimised pit shells, with the marginal cut-off details shown







Exploration Potential

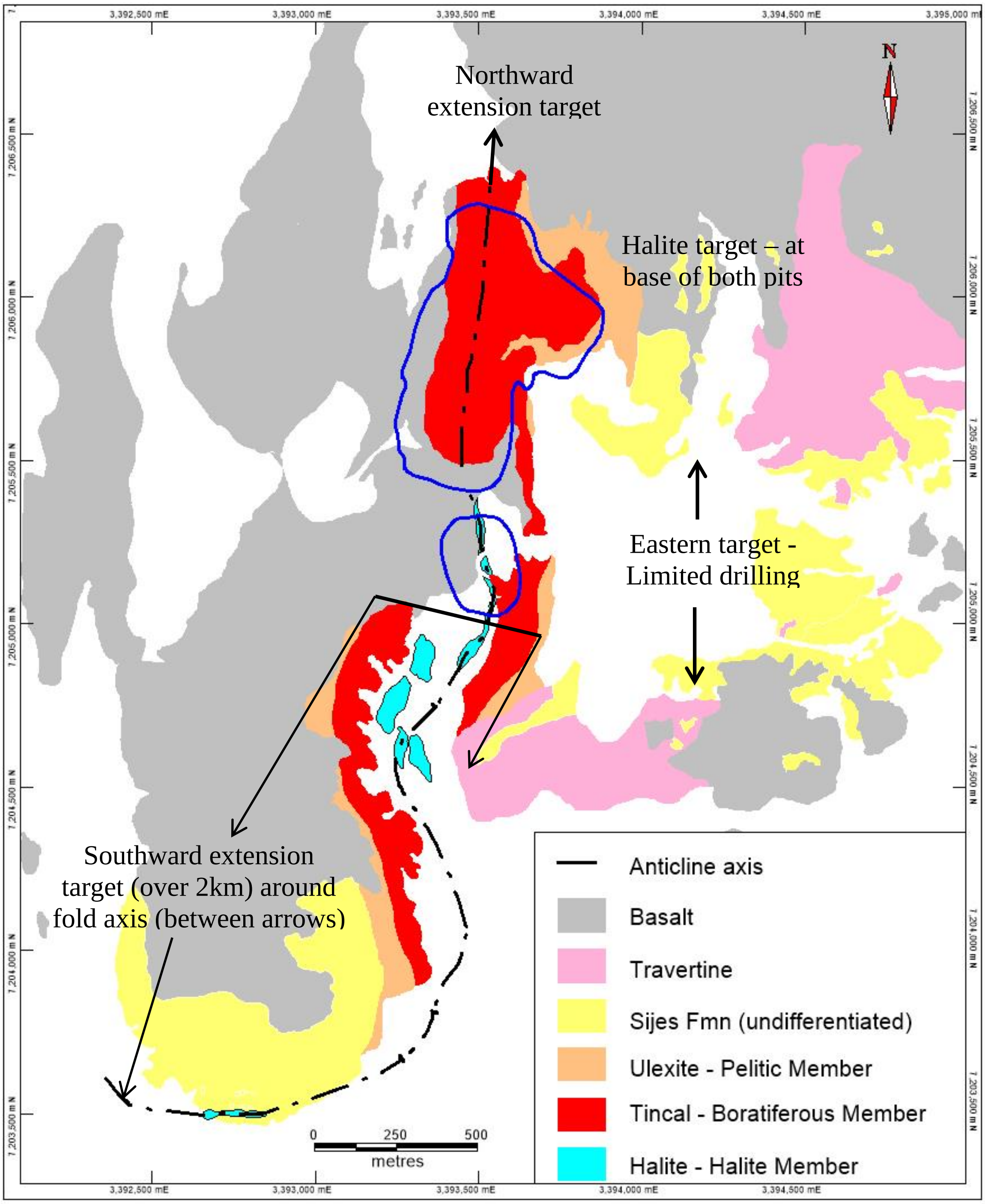
The resource presented above is based on drilling conducted over the period from the 1960's until 2002. In addition to these resources there is the potential to add to the resource base through future exploration for tincal, and other minerals which could be mined for borate products.

Areas with potential for additional resources include:

- Northward extension of tincal (and ulexite) mineralisation from the North Pit
- Southward extension of tincal mineralisation from the south pit (for 2km), close to surface within the Boratiferous and Halite Members
- Tincal within the Halite Member at or below the base of the North and South Pits
- Ulexite and possibly tincal mineralisation east of the existing pits, where there is very little drilling

These areas of exploration potential are presented in Figure 9. Exploitation of tincal from within the halite unit would require confirmation this material can be processed profitably at some time in the future.

Figure 9: Areas with exploration potential in the vicinity of Tincalayu



Management Commentary

Orocobre's Managing Director, Richard Seville, stated: "Completion of the Tincalayu resource estimate marks the next step in bringing all the historical Borax Argentina estimates up to JORC 2012 status. Over the coming year, we will complete the resource estimates on the important Sijes hydroboracite mineralisation.

We are extremely pleased with our progress on Tincalayu. The resource is much larger than we anticipated based on due diligence during the purchase process and it is expected to be able to support a much larger operation in the future than we currently operate. This will result in significantly lower unit costs. The forecast mine life is 52 years at current production rates and 35 years at an expansion to 100,000tpa. We see Tincalayu as our number one priority at Borax Argentina and have commenced studies to investigate the options for an expansion of production to realise the true value of the project for the company."

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About Orocobre Limited

Orocobre Limited is listed on the Australian Securities Exchange and Toronto Stock Exchange (ASX:ORE, TSX:ORL), and is building a substantial Argentinian-based industrial minerals company through the construction and operation of its portfolio of lithium, potash and boron projects and facilities in the Puna region of northern Argentina. The Company is building in partnership with Toyota Tsusho Corporation the first large–scale, "greenfield" brine based lithium project in 20 years at its flagship Salar de Olaroz resource, with projected production of 17,500 tonnes per annum of low-cost battery grade lithium carbonate scheduled to commence in November 2014. The Company also wholly-owns Borax Argentina, an important regional borate producer. Orocobre is included in the S&P/ASX 300 Index and was named 2012 Mining Company of the Year by Argentine mining magazine Panorama Minero and the Fundacion para el Desarrollo de la Mineria Argentina ("Fundamin" or Foundation for Development of Argentina Mining). For further information, please visit www.orocobre.com.

Technical Information, Competent Persons' and Qualified Persons Statements

The information in this report that relates to mineralisation at Borax Argentina sites has been prepared by Mr Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience 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. He is also a "Qualified Person" as defined in NI 43-101. Mr Murray Brooker consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the references above and that all material assumptions and technical parameters underpinning the resource estimates continue to apply and have not materially changed. The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified. A previous announcement was made on the 21/08/12 regarding the superseded historical resource at Tincalayu, which is the subject of re-estimation in this announcement.

Additional information relating to the Company's projects is available on the Company's website.

Caution Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable securities legislation. Forward-looking information contained in this release may include, but is not limited to, the expected ore grade, mine life and operating costs at the Tincalayu mine, the projected operating costs of the Tincalayu processing plant, the estimated production costs, and projected production and resource extraction rates associated with the Tincalayu processing plant and the market price of borax decahydrate whether stated or implied.

Such forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from those expressed or implied by such forward-looking information, including but not limited to the risk of further changes in government regulations, policies or legislation; the possibility that required concessions may not be obtained, or may be obtained only on terms and conditions that are materially worse than anticipated; that further funding may be required, but unavailable, for the ongoing development of the Company's projects; fluctuations or decreases in commodity prices; uncertainty in the estimation, economic viability, recoverability and processing of mineral resources; risks associated with weather patterns and impact on production rate; unexpected capital or operating cost increases; as well as those factors disclosed in the Company's Annual Report for the year ended June 30, 2014 filed at www.sedar.com.

The Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable. Assumptions have been made regarding, among other things: the timely receipt of required approvals and completion of agreements on reasonable terms and conditions; the ability of the Company to obtain financing as and when required and on reasonable terms and conditions; the market prices of boron products; and the ability of the Company to operate in a safe, efficient and effective manner. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

Appendix 1 – Remaining Historical Estimates (announced 21st August, 2012)

Mine/Project	Material	Historical Estimate	Tonnes	Grade% B2O3	Tonnes B2O3
Current Soft Rock mines					
Sijes - Hydroboracite	Hidroboracite	Measured	**3,099,998**	**22.8**	**706,800**
Sijes – Colemanite	Colemanite	Inferred	**200,000**	**20.0**	**40,000**
Total & average			**3,299,998**	**22.6**	**746,800**
Undeveloped Ulexite Deposits in Salt Lake Sediments					
Ratones	Ulexite	Indicated	**364,663**	**18.0**	**65,639**

The historical estimate at Diablillos is not being re-stated as the raised phreatic surface caused by 3rd party drilling may affect the ability to mine some of this mineralisation.

Footnotes: The historical estimates are in equivalent categories to those used by the JORC and CIM reporting codes. However, these estimates did not satisfy either current JORC or CIM/NI 43-101 requirements for the reporting of resources and were considered to be historical resources (see Orocobre ASX/TSX announcement August, 2012). **A qualified person did not do sufficient work to classify the historical estimates as current mineral resources or mineral reserves, and the Company did not treat the historical estimates as current mineral resources or mineral reserves. It is uncertain whether following evaluation and/or further exploration any of the historical estimates will ever be able to be reported as current estimates in accordance with the JORC code or NI 43-101**. There is no new information that impacts on these historical estimates. Note that material mined in 2012-2014 is not accounted for as depletion in the figures above, with approximately 35,000 tonnes at Sijes the estimated annual production of mineralised material at the time this information was originally released in 2012. Relevant reports from which the above summary of historical estimates is drawn include the following:

Sijes:

- July 1998; Borax Argentina S.A.; Environmental and Operational Studies, Phase 1, Initial Geotechnical Appraisal; Knight Piesold Limited, England. Includes a Historical estimates Chapter;
- July 1998; Borax Argentina S.A.; Environmental and operational Studies, Phase 2; Geotechnical Appraisal; Knight Piesold Limited, England;
- May 1999; Borax Argentina S.A.; Hidroboracite Project, Raul Gutierrez Solis; August 1999, Borax Argentina S.A.; Sijes, Monte Amarillo 2 Mine. Historical Estimation, Mine Design & Planning Report. Knight Piesold Limited, England.

Ratones:
The project was acquired by Borax Argentina circa 1987. The previous owners had conducted an estimate of contained mineralised material. This has not been validated by Borax Argentina, who consider the status of this material to be of the indicated category.

Appendix 2 – JORC Table 1 Checklist of Assessment and Reporting Criteria

Criteria	Commentary
Sampling Techniques and Data	
Drilling technique	• All diamond drilling, with double tube drilling ranging from NQ to HQ diameters in the 2001-2002 drilling campaign. • Drilling prior to this was using Longyear 34 and 38 rigs to recover AQ and BQ small diameter core.
Drill sample recovery	• Average core recovery has varied between drilling programs. In the last significant drilling program in 2001-2002 the core recovery was over 93%. • Drill recovery was poorer in historical narrow diameter zones of crystalline Tincal, which breaks readily and can fall out of the core barrel during drilling. • Overall 48.3% of all core drilled had >80% recovery, with an average recovery of 65% across all drilling data.
Logging	• Drill core was geologically logged on site in the form of paper logs. Original logs were not available for the 2001-2002 program. • Geological data was loaded to a new project database as part of this re-evaluation of the deposit. This database has been validated by Borax Argentina to the extent possible, given the long time period over which information was collected. • In the 2001-2002 drilling program core was photographed prior to geological logging and splitting of core. No photographs are available for older core. • Historical geological logs have been recoded geologically, to be consistent across the database
Sampling techniques	• 2001-2002 drill core was cut in half and one half of the core was crushed and pulverized to pass a 40 mesh, with homogenization and riffle splitting of the pulverizing material, • The sample length of core varies between 1 and 3m for drilling, while historic trench and pit samples and the pit channel sampling conducted recently by BA varies between 1 and 5 m • Core drilled prior to 2001 was split with a hammer and chisel, although only visually mineralised sections of the core were analysed. • 2013 in-pit channel samples collected approximately 5 kg of sample, which was subsequently crushed, pulverized and split to produce the sample/s for analysis • In-pit sample sizes were much larger than even the rare large crystals of Tincal, which can reach approximately 10 cm across

Sub-sampling techniques and sample preparation	• Samples were dried at <30ºC in the 2001-2002 and recent in-pit sampling programs and, crushed and pulverised for > 90% to pass a #40 mesh. • It is believed that historically samples were also dried at <30ºC • For 2001-2002 sampling a split of 100 grams was obtained with a riffle splitter and this was then pulverized to have 95% passing a 150 mesh • For 2013 in-pit channel sampling the samples were riffle split, to obtain 4 separate bags of approximately 200 grams. Two of these bags were used as the primary and the duplicate samples, with the other two bags preserved in the event reassaying is required at any stage. • Preparation of samples prior to the 2001-2002 program is not fully documented • Because this is an industrial minerals deposit, with a relatively high concentration of mineralisation (generally 10-24% B203) the grade distribution is not as large as often observed in metalliferous deposits, such as gold. Geostatistics show the nugget is relatively low at 0.15. • A total of 22 density samples were taken by BA throughout the deposit in the three members of the Sijes Formation. These samples were made by immersion of wax coated samples with sample lengths a nominal 10 cm long.
Quality of assay data and laboratory tests	• Boron assays were undertaken at the Borax Argentina Campo Quijano laboratory, with duplicate samples, standards and blanks also sent to an external laboratory. • Uncertified standards, blanks and duplicates were inserted in the sample batches at a frequency of 1 in 20 samples, in addition to lab internal QA/QC controls • The laboratory techniques used for analysis (wet chemical titration) are believed to be the same as those utilized during the 2001-2002 assaying program and in programs preceding that.
Verification of sampling and assaying	• Verification assaying was carried out on the pulps from past drilling within and surrounding the deposit. A total of 141 pulps were re-assayed from below the current pit level. • No drilling or twinning of historical holes was carried out in this program but is required for future resource/reserve upgrades, along with closer spaced drilling in areas for improved resource/reserve definition. • Channel sample data was collected in note books, transcribed to Excel spreadsheets and plotted in Mapinfo to verify sample locations against field maps. • The independent QP reviewed the re-analysis of the drill pulps and the B_2O_3 values.
Location of data points	• Historical drill holes were located with a combination of theodolite/total station and GPS • Drill collars have not been resurveyed, as most of the drill holes now fall within the current open pits, or drill collars did not have monuments which enabled resurveying. Holes drilled in

	2001-2002, where outside disturbed areas, have collars which enable resurveying, but which did not have hole numbers recorded on the collars. • Project data is used in a local coordinate system, using a grid that was established at the beginning of the mine life and which is rotated 17^o east of north. Project data corresponds to UTM Gauss Kruger Zone 3, with the Argentine POSGAR datum. • Holes drilled prior to and in the 2001-2002 program were not surveyed down hole, as almost all holes were drilled vertically. In total 34 holes in the resource and surrounding area were angle holes drilled at between 60 and 80 degrees. Overall the down hole survey control is poor but holes are dominantly vertical. • Checking the few holes where collars can be located suggests they are accurate to within ~5m, approximately the error associated with the handheld GPS
Data spacing and distribution	• Holes are predominantly vertical. Those that are not were drilled in a variety of orientations, with the dominant azimuths 270, 090, 315 and 135 degrees and dips between -60 and -90 degrees • Holes have an average spacing of 25m within the resource domains
Orientation of data in relation to geological structure	• Drill holes are predominantly vertical or steeply to the East and West. However, because of the folding and refolding of the sediments, with ~017^o trending major folds axes, drill holes are not necessarily perpendicular to the interpreted stratigraphy and the strataform mineralisation. • The intersection angle of drill holes and mineralisation is variable between mineralised zones • Potential bias was evaluated as part of the resource process and addressed with the declustering of data and use of the search sectors in the search strategy
Sample security	• 2013 channel samples were prepared by BA staff and kept in a locked store room at the Sijes project during sample drying and processing. Samples were transported from the Tincalayu and Sijes mine sites to the BA Campo Quijano laboratory by BA staff, where the samples were processed in the laboratory, where only authorized BA personnel are permitted entry. • Security of historical drill samples in uncertain. They were transported by company personnel for analysis in the company's Campo Quijano laboratory
Review (and Audit)	• Conducted by the author, No audit was conducted.
• Mineral tenement and land tenure status	
Mineral tenement and land tenure status	• BA owns mining tenements covering the Tincalayu peninsula in the name of a number of companies fully owned by Borax Argentina • Royalties of 3% are payable to the provincial government • The tenements are believed to be in good standing, with required statutory payments made to relevant government

	departments
Exploration by other parties	• As BA tenements cover all of the Tincalayu peninsula the nearest exploration undertaken by other parties for borates is in the current Hombre Muerto salar, where borate mineralisation consisting of the mineral ulexite has been found on the margins of the Hombre Muerto salar • The company Galaxy Resources has an tenements over the Hombre Muerto Salar west of Tincalayu exploring for lithium and has an usufruct agreement with Borax Argentina for the extraction of brine within the Tincalayu properties where they cove the Hombre Muerto Salar
Geology	• Tincalayu is a paleo salar deposit, ~6Ma old, in which Tincal and ulexite mineralisation is present in folded and lithified salt lake beds consisting of clays, sands and halite evaporites.
Drill hole data	• Drill hole data is available for 462 diamond drill holes within the Tincalayu deposit and in the surrounding area on the Tincalayu peninsula. • Data consists of collar locations, survey, down hole lithology and borate mineral type, with selective assaying of material containing borate minerals
Data aggregation	• As this industrial mineral deposit lacks local “nugget” high grade zones and has a low nugget factor of 0.15 no cutting or capping of borate grades has been applied • The current cut off grade for the Tincalayu deposit is 15% • Sample compositing has been conducted to the most common sample length of 1.5 m
Relationship between mineralisation widths and intercept lengths	• Drill intersections are not true thicknesses (although they are often of similar thickness) and an understanding of the location of individual drill holes within the deposit is necessary to understand how close to representing true widths individual intersections are
Domaining strategy	• The borate mineralised unit was assigned hard boundaries for the estimation of mineralisation associated with this unit. No individual high or low grade domains were defined.
• Estimation and Reporting of Mineral Resources	
Database integrity	• The project data is stored in an Access database • Data was entered manually into and loaded to the database, • BA geologists have conducted validation checks on the data in the database, evaluating this against the primary information, where this is possible and correcting and or incorporating additional information. • Prior to database validation overlapping sample intervals were found to be a common feature of the existing database. • The author has evaluated the database for potential errors
Site visits	• The QP/CP has visited the Tincalayu mine site several times, most recently from the 19th to 31st of August 2014
Geological interpretation	• Mineralisation is developed in a sequence of Miocene terrestrial sediments

	• The sedimentary sequence has been folded and there has been some remobilization and thickening of mineralisation in fold hinges • The Boratiferous Member is overlain by a poorly mineralised clastic unit (containing ulexite) and underlain by a halite unit, which contains some tincal, but which is currently not mined • Basaltic flows and basalt derived clastic materials overlie the mineralised sequence and are present in the west wall of the northern pit • The refolding of the sedimentary sequence makes correlation of units between drill holes more difficult, when fold amplitude is a similar separation to drill holes • Geological interpretation has used both drill hole and pit and trench sampling data • As this is a stratabound deposit geology has been very important in guiding and controlling the Mineral Resource estimation. • Folding and faulting, together with the original lensoid geometry of borate mineralisation affects continuity both of borate grade and geology.
Dimensions	• The mineralization occurs over an area of 1200m by 600m encompassing the northern and southern pits and is interpreted to extend for an additional 2000m to the south, outside the resource area. • To the north of the north pit the borate mineralisation is deeper and the extension of mineralisation is uncertain beyond 300m north of the current pit
Estimation and modelling techniques	• The mineralisation was modelled as a folded stratigraphic unit with hard boundaries following the controls outlined in the description of the geological model. • The resource estimate has been carried out with ordinary kriging into a block model of with block dimensions of 10mx10mx5m • Statistical de-clustering was carried out as part of the search strategy, using search sector criteria. • No high grade cuts or restrictions were applied to the composites generated to inform the model. • Cut-off grades: The current mining cut-off grade is 15% B_2O_3. A marginal cut-off of 2.8 % B_2O_3 is anticipated for an expanded production case of 100ktpa. • Capping strategy – not considered necessary, based on the geostatistics, grade distribution and strataform nature of the mineralisation • A dynamic search ellipse orientation was used to follow the shape of the limits of the mineralised unit, to best accommodate the folding observed. • The density data assigned to blocks was based on a regression relationship between B_2O_3% content and density derived from field samples. The same relationship was used for all

	litholgies, with default values applied for material with <1% B_2O_3 content.
Moisture	• The tonnage is estimated on a dry in-situ basis as the densities applied were dry densities and the haulage distance to the plant is < 1 km. Moisture content averages ~ • Due to the extremely dry conditions and high evaporation in the Puna region once material is crushed it rapidly dries out
Cut-off parameters	• The cut-off chosen is based on observations of the best staged pit configuration, together with geology and grade distribution • The cut-off for current mining is 15% for a plant head grade of 17% • A reduction in the head grade to 15% corresponds to a cut-off of 10% for the current production rate of 100 tpd • A marginal cut off of 2.8 % B_2O_3 was applied for an expansion scenario to 100ktpa
Mining factors and assumptions	• The open pit used various assumptions including a 10m x 10m x 5m blocks, overall 33.5o pit slope, and a US$ 530/t borate price
Metallurgical factors and assumptions	• The soluble B_2O_3 content of the tincal mineralisation affects the dissolution of this mineral in hot water for boric acid production. Other borate minerals such as ulexite are soluble in acid. • Current operating conditions in the plant suggest an extraction of 71% of the soluble borate from the mined material to the final product • No recent test work has been completed as the metallurgical and processing characteristics of the run of mine ore are well understood, given the long historical life of the mine • Chloride content affects the plant efficiency of extraction
Environment al factors or assumptions	• The mine is a long-running (50 years) and fully permitted operation. Historically tailings were disposed of wet onto the margin of the Hombre Muerto salar. The waste material was added to one of the 4 waste dumps that exist in the project. • The borate-bearing material does not contain sulphides and consequently does not generate and acid rock drainage risk
Bulk density	• Bulk density was evaluated, with a total of 24 representative samples taken within the deposit and overlying waste. A relationship was developed relating bulk density and tincal grade and this was assigned to blocks within the model • Bulk density samples were collected and covered in wax, to prevent moisture loss in the extremely dry Puna environment. The samples were then transported to Salta and measured in an independent laboratory
Classification	• Material was classified as Indicated and Inferred Resources based on the results of two search passes completed in the estimation process • Areas with the highest drilling density were not classified as measured due to some uncertainties with the quality of the historical analyses

Review and audit	• Conducted by the author. No external audit was conducted.
Discussion of relative accuracy/confidence	• Sensitivities include the density applied to blocks, the cut-off grade used, the