AEFS
Australian Exploration Field Services

Lottah Mining Pty Ltd
Rogetta North
Resource Assessment
March 2015

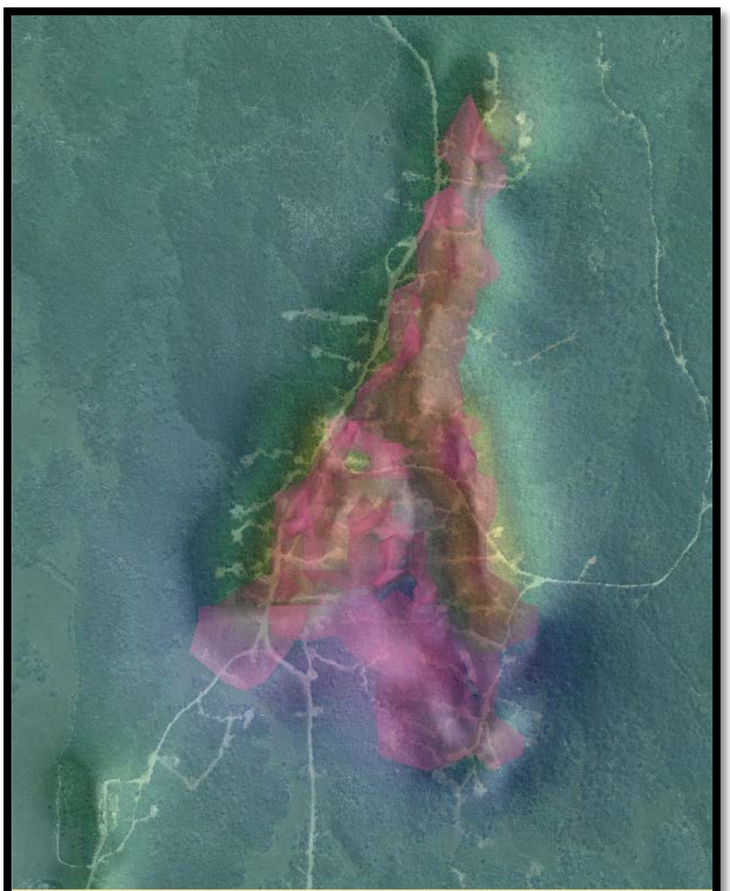

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Image source: A Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

1 Executive Summary

The Kara district near Hampshire in North West Tasmania has a number of magnetite tin tungsten deposits hosted in calcareous sediments of the Ordovician Gordon Group. The deposits have been formed by metasomatic replacement of the hosting sediments as the result of the intrusion of the Devonian aged Housetop granite. The Kara No 1 deposit has been mined for over 40 years by Tasmines Ltd. The Rogetta North deposit, formerly known as the Kara No 2 North deposit, occurs approximately 4Km to the East of the Kara No 1 deposit. Rogetta North has been the focus of extensive recent work by Lottah Mining Pty Ltd. Drilling carried out by Lottah in conjunction with previous drilling by Iron Mountain Mining Ltd (IRM), Red River Resources Ltd (RVR) and Forward Mining Ltd (FML) has defined the limits of the mineralised zone and is of a sufficient density to allow the grade and tonnage of a mineral resource to be calculated.

The resource, summarised in Table 1 below, has been calculated and classified under the JORC 2012 guidelines using a 15% Fe cutoff as :

Tonnes	Fe%	Cutoff	Category
316,000	32.25	15%	Inferred
13,921,000	30.25	15%	Indicated
11,649,000	31.98	15%	Measured
25,931,000	**31.06**	**15%**	**Total**

Table 1 : Rogetta North : Resource Summary 2015

Front Picture : The Rogetta North mineralisation wireframe over Ortho-imagery draped on the surface DEM

The grade tonnage curve for the deposit is shown in Figure 1 below :

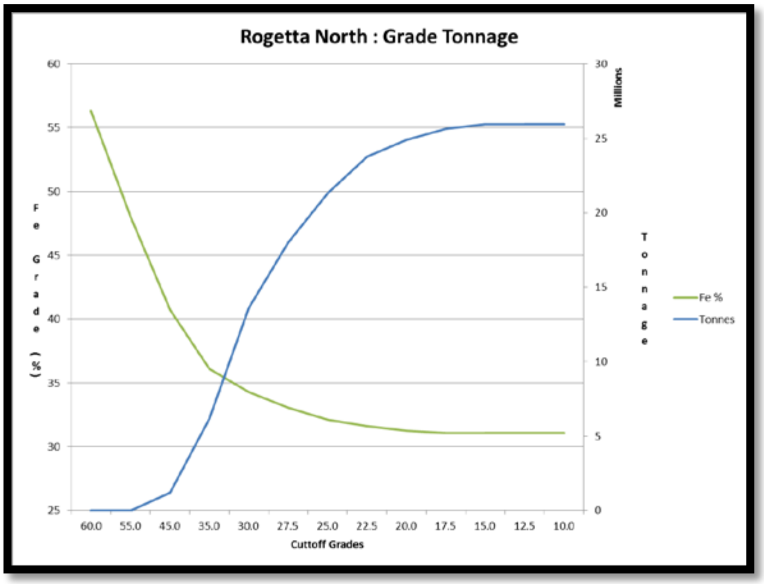

Fig 1 : Rogetta North : Resource Grade Tonnage curve 2015

Full details of the work completed and the calculation of the grade and tonnage estimates are outlined in this report. The resource is considered suitable for exploitation via a shallow open pit.

Recommendations for future work, as part of any mine development or mine feasibility study are :

The Bulk Density (SG) analysis method used has proven to produce useful and generally reliable data. It would however be useful to record the rock type for each SG sample and to compare the results for each sample against the expected SG for that rock type to help avoid errors and reduce the statistical outliers associated with this dataset.

Geostatistical analysis has been limited to Omni Directional Semivariograms and this has produced sound results. For further modelling work, especially grade control work if the deposit is mined further close spaced sampling, possibly via trenching and or drilling, would provide information across and along the deposit for use in the calculation of full directional semi variograms. Understanding the spatial variability at short ranges in all directions through the deposit will allow further improvements in the modelling of the deposit with the aim of more accurately predicting the grade of Fe and other anolytes of interest.

Davis Tube Recoveries (DTR) are an important part of establishing the recoveries of Fe expected from process of ore. To date DTR analyses have been completed only on data from the 5 RC twin holes associated with the PQ Metallurgical Holes drilled in 2014. Further RC drilling to provide source material for DTR work to enable detailed modelling of DTR's and hence plant recovery as an aid to optimising the scheduling of mining and blending of material for the mine plant. The extent of drilling required will be able to be assessed when current DTR work recently received form ALS in Perth has been fully assessed.

As discussed under Section 12.1.3, Comparison With Previous Work, there were issues with Sulphur values in the Historic Database. This problem was only discovered during the modelling process and the current model has used 2014 Sulphur values only. Further work should be carried out to resolve the issues with the Pre 2014 dataset for Sulphur. The Tin data set used for modelling was restricted to Pre 2014 data only, a statistical comparison between the 2014 data for Tin and the pre 2014 data suggests that the data sets are compatible. Further work should be carried out to confirm this with the aim of using the full Tin data set in future modelling work.

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5 Introduction

Lottah Mining Pty Ltd (Lottah) manages a number of tenements near Burnie in Tasmania which are considered to be highly prospective for the production of Iron Ore. The company plans to develop a number of mines on the tenements it holds and to export the iron produced from the Port of Burnie in North Western Tasmania, Australia. Lottah have the aim of producing 1 MT tonnes of high grade magnetite per annum for 20 years from the Rogetta area. Should assessment of this and adjacent areas warrant, further tonnages will be produced.

This document outlines the Mineral Resource at Rogetta North. The Rogetta North deposit (formally known as Kara No2 North) is one of a number of pods of iron mineralisation which occur in a 2.5 x 1.5 Km area around the Junction of Rogetta and Blythe Roads near Hampshire in North West Tasmania. The Rogetta North Resource lies towards the eastern boundary of the current EL 18/2006 which is held in the name of Blythe River Iron Pty Ltd. Other pods in the cluster (Rogetta East and Rogetta South cross the boundary into EL 53/2007 also held by Blythe River Iron Pty Ltd.

The Rogetta North Pod has been known of for nearly 100 years and was first investigated in the 1950's and 1960's by the MRT (Company Report - Onshore 02_4717 which in turn references Reid 1924, Hughes 1952 & 1958, Jack 1964 & 1965). Modern exploration of the pod started in 2007 when Iron Mountain Mining Ltd (IRM) and drilled a series of RC holes into the deposit. There was subsequent drilling, both RC and Diamond, over the next few years by both IRM and Red River Resources Ltd (RVR), IRM's joint venture partner. During this time management of the tenement moved from Iron Mountain Mining Ltd to Forward Mining Ltd. In 2011 an Inferred resource estimate was completed by Tim Callaghan – Resource and Exploration Geology for Forward Mining Ltd. This estimate was of 16.62 Mt at 37.4 % Fe with a 20% cutoff.

Forward drilled an additional 4 diamond holes during 2013. In early 2014 the project was transferred to Lottah Mining Pty Ltd. Under Lottah's management further, extensive, drilling was conducted to confirm the existing resource, upgrade the resource to Indicated and / or Measured and define the limits of the mineralisation.

Under the current JORC code (2012 edition), which defines the standard for reporting of Mineral Resources and Reserves, an Indicated or Measured Resource is needed to define Mineral Reserves. The Mineral Reserve Estimate tests the Resource against stated economic criteria to help determine the viability of a mining project.

The modelling of the Rogetta North deposit conducted to support this report will be utilised in the design of potential pit shells and mine designs which, with the economic parameters developed as part of the mine design process will define the Reserve at Rogetta North. The general location of the Rogetta North Mineralisation is shown in Figure 2.

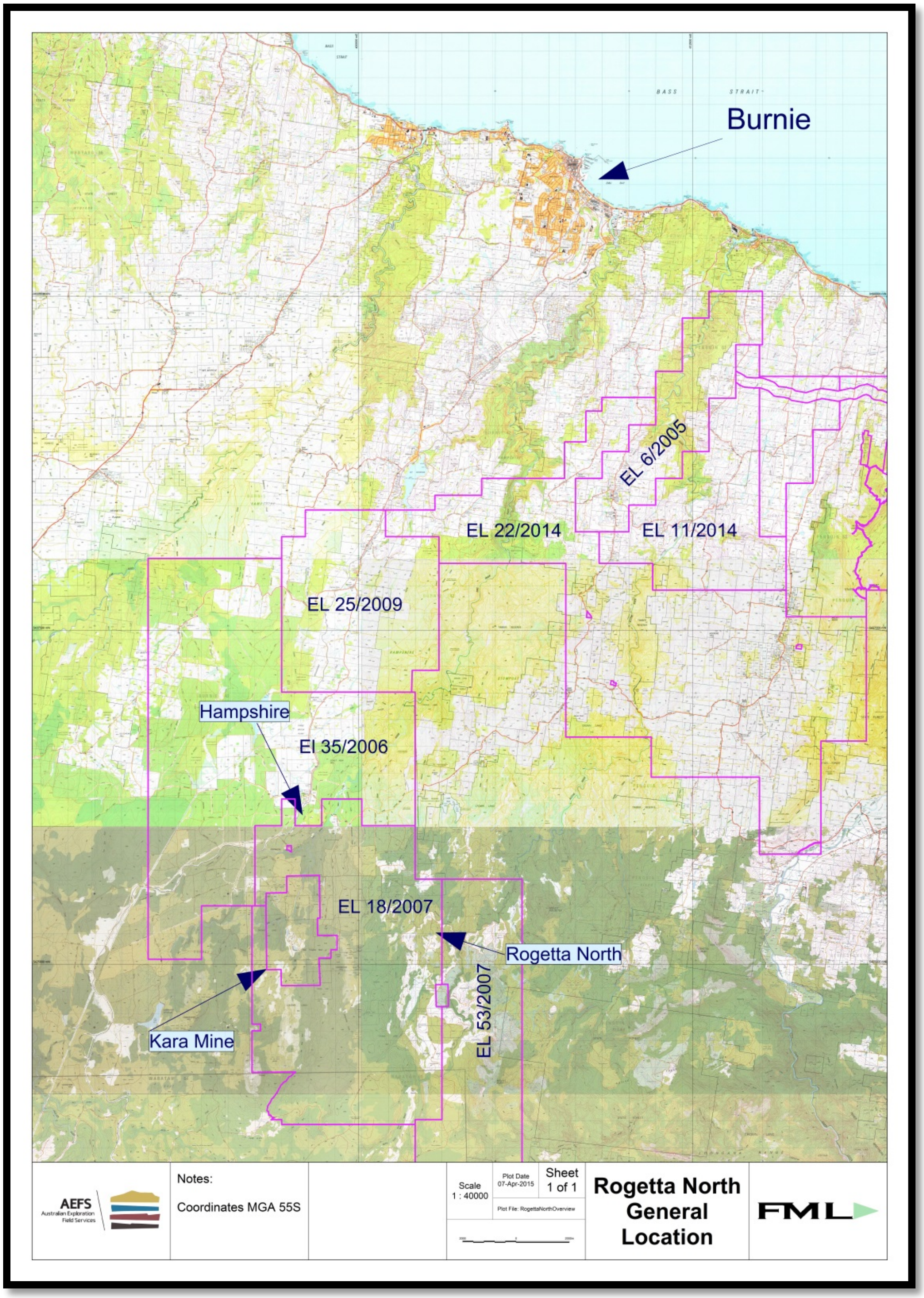


Figure 2 : Rogetta North, Location

The report has been compiled by Mr Keith Whitehouse, a Consultant and Director of Australian Exploration Field Services Pty Ltd (AEFS). AEFS provides independent geological and management services to the Mineral Exploration and Mining Industry. Mr Whitehouse is a geologist of over 35 years' experience in the development of mineral resources and is a Member of the AusIMM and a

Chartered Professional (Geology). He has sufficient experience and expertise to be considered as a Competent Person for the reporting of Mineral Resources under the JORC 2012 Code of Practice. The Competent Person is responsible for the quality of data used in mineral resource estimates, which applies to all resource estimates included in this report. Mr Whitehouse has worked with Lottah Mining from April 2014 on the assessment of the geological potential of the tenements Lottah manage. Mr Whitehouse has also had previous involvement in the exploration for Iron Ore in this area through his role as Managing Director of Iron Mountain Ltd from late 2006 to late 2008.

6 Conventions

Unless explicitly stated :

All Easting and Northing values are in terms of the MGA94 Projection, Zone 55, of the GDA 94 Datum.

RL's and Elevations are in terms of the Australian Height Datum 1971 (MSL 1966 - 1968).

All angles are relative to true north, the declination between true north and magnetic north is 13.195 degrees.

Cross sections are drawn looking North or East as appropriate

7 Report Purpose

Since taking over management of the tenements controlled by Forward Mining Ltd (FML) in early 2014 Lottah Mining has concentrated on upgrading the present resource estimate at Rogetta North (Callaghan 2011) from an Inferred Resource to an Indicated or Measured resource. An Indicated or Measured resource is normally required as part of a mining licence application. In parallel with that work the company has been conducting Flora and Fauna studies, Hydrological studies and modelling, Geotechnical assessment and scoping studies to meet the requirements of a DPEMP agreed between FML and the governments of the State of Tasmania and the Commonwealth of Australia.

Additionally to be considered for development Lottah Iron and their partners have declared that the project should be able to sustain an annual production rate of at least 1,000,000 tonnes of product per annum for a period of at least 20 years.

This report demonstrates that the Rogetta North target can be classified as an Indicated and Measured Resource under the JORC 2012 guidelines. In order to meet the stated requirement of 1 Mt per annum of product for a period of twenty years the Rogetta North Resource will need to be supplemented with additional material from other sources. These other sources of material are not considered as a part of this report.

7.1 Scope of Work

Since being engaged by Lottah Mining in April 2014 AEFS have

- Developed a drill plan to confirm the existing resource, upgrade the resource to Indicated and / or Measured, define the limits of the mineralisation and provide material for Metallurgical Testing of the material at Rogetta North.
- Incorporated Geotechnical and Hydrological holes requested by GHD Consulting into the drill plan to enable appropriate studies of Geotechnical and Hydrological characteristics to be undertaken as a preliminary step to mine design and to provide information for the DPENP report.
- Defined the data to be collected as part of the drilling program and, in conjunction with Lottah staff and contractors, overseen the collection of all geological data and its entry into a comprehensive geological database used to support resource estimation.
- Advised on the collection of LIDAR and associate Ortho imagery to provide detailed surface mapping of the area
- Advised, in conjunction with geophysical staff from GHD, on the collection of detailed aero-magnetic data to define the limits of the mineralisation at Rogetta North and other areas of interest to Lottah.
- Reviewed, updated and amended the drill plan as drilling progressed to take actual drill results into account.
- Provided updated geological interpretations of the deposit
- Generated 3D wireframes of the geological elements of the deposit relevant to the resource model
- Generated a Digital Terrain Model of the area from Lidar data
- Used the Lidar, Magnetic and Ortho imagery to provide an interpretation of the major structural elements in the area. This information has been used to construct the geological/ resource model and the hydrogeological and geotechnical models of the area.
- Undertaken statistical and geostatistical investigation of the data
- Used the statistical and geostatistical data to prepare and validate a block model of the deposit
- Reported the modelled data in accordance with the JORC code (2012) to define the mineral resource covered by this report.

8 Project History

The potential for economic deposits of Iron in the Northern part of Tasmania has been recognised for many years. The area to the south of Penguin hosted several small mines in the later 1800's. The Cuprona area along the Blythe River was considered as a possible source of iron for an Iron Ore Smelter in New South Wales (Twelvetrees 1901). Both areas are now covered by tenements managed by Lottah Mining. In the Hampshire area (30Km to the South of Burnie) a number of magnetite deposits were located, one of these is now the Kara Mine operated by Tasmania Mines Ltd. The remainder of these are on tenements controlled by Lottah.

In the area controlled by Lottah Mining there has been various exploration programs conducted since the late 1950's by a number of exploration companies mainly looking for Tin, Tungsten and Base Metals. The companies working in the area have included, Shell, Billiton, CRA, Calminco, and Macintyre Mines. This historical work is documented via numerous reports held by Mineral Resources Tasmania and accessible via the various online databases managed by the department. The Iron mineralisation in the Rogetta North deposit was investigated on a number of occasions (See MRT report TR8_51_55, and Company Report - Onshore 02_4717: Exploration and Relinquishment - EL23/1998 –Hampshire) but was assessed as being too small with likely resources in the order of 0.5 Mt at 50% Fe. Work up until May 2002 is summarised (from Company Report – Onshore 02_4717 as :

Jack visited Pearson.s prospect, carried out a ground magnetic survey, and prepared a geological map in 1963 (Jack, 1964). In 1964, the Tasmania Department of Mines drilled six diamond drill holes to test the magnetic anomalies identified the previous year (Jack, 1965). Tasminex completed 37 diamond drill holes in the 1970s (McKeown, 1993). Tasmania Mines carried out a ground magnetic survey and pushed two shallow trenches with a bulldozer in the 1980s and drilled 21 percussion holes (Whitehead, 1991). Five of the six drillholes reported by Jack (1965) intersected magnetite bearing skarn with total iron content generally in the range of 30% to 60%. Tasminex drilled 37 diamond drill holes at Pearson's but the records of these drillholes are incomplete (McKeown, 1993) and no better conclusion than that of Jack (1964 and 1965) can be made using these records. TML drilled 21 percussion holes across the central part of Pearson's in 1990 and Whitehead concluded that the magnetite content of the deposit is lower and the zone is more weathered than anticipated. (Whitehead, 1991).

The report contains extensive references to earlier work on the area and these references are listed under the References section of this report below.

ore recently Red River Resources and Iron Mountain Mining acquired a number of tenements which now form the core of the group of tenements managed by Lottah Mining. Work by Iron Mountain Mining between 2007 and 2010 saw the Hampshire Iron occurrence drilled followed by the Rogetta North and Rogetta East deposits. (The Rogetta deposits were formally known as Kara 2 North and Kara 2 East respectively). While drill results were encouraging the management at Iron Mountain Mining did not see development of the Iron deposits in Tasmania as a priority and control passed to Forward Mining Ltd. Forward Mining conducted drilling on the Rogetta North and East deposits and followed that work with a mineral resource report that established an Inferred Resource of 16.6 Mt at 37.4% Fe with a 20% cutoff for Rogetta North (Callaghan 2011). This work was reviewed as part of an IGR document prepared for Forward Mining by Hellman & Schofield Pty Ltd (Tear S 2011).

In early 2014 control of the tenements passed to Lottah Mining Pty Ltd. Since then Lottah Mining have been conducting a vigorous resource definition program over the Rogetta North area together with exploration and assessment of all the known Iron deposits in the area it has under tenement. As part of the exploration work a number of new tenements have been acquired to follow up on exploration targets developed from reworked airborne magnetic survey work. This work is indicating that there are a number of unexplored targets for Iron in the area and has also started to quantify the potential of a number of the known iron deposits.

9 GEOLOGY

9.1 Regional Geology

The Lottah Iron Ore Project is located on the western margin of the Dial Trough and is underlain by Late Proterozoic Oonah Formation, Owen Group siliciclastics, Gordon Group limestone, Devonian granites and Tertiary basalt (See Figure 3). The Dial Trough is thought to include a northern extension of the Hellyer Fault, with significant basin-bounding faults on its eastern and western margins. The Devonian Housetop Granite terrain occupies much of the country to the south and east of the project area and is thought to underlie much of the southern Dial Trough. Stratigraphic correlations are, however, uncertain for many Dial Trough units as the geology is poorly known due to a Tertiary Basalt cover.

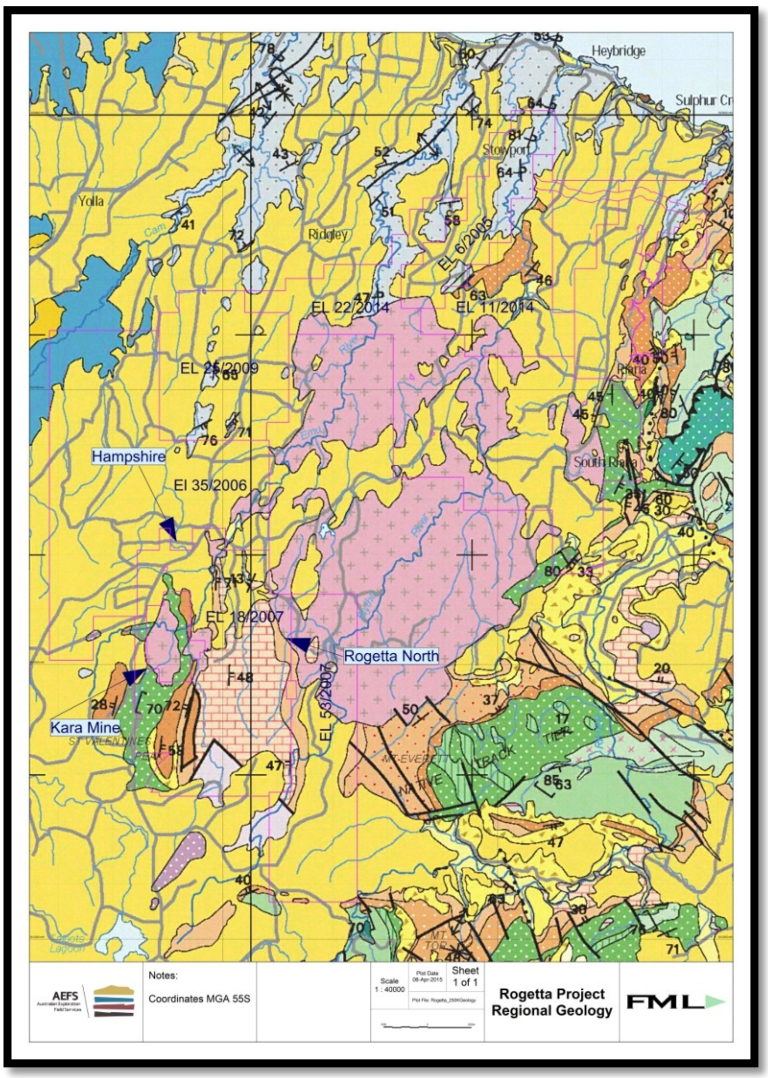


Figure 3 : Rogetta Project area, MRT 250 K Geology2
A full map legend is located in Appendix G; Miscellaneous Plans

9.1.1 Oonah Formation

The Proterozoic Oonah Formation comprises the oldest rocks in the area (this formation is locally known as the Burnie Formation). The formation consists of polydeformed quartzwacke, siltstone and pelite with minor dolerite intrusives. These lithologies are overlain by a sequence of pelite-carbonate with minor mafic volcanic and conglomerate. This association is host to replacement mineralisation at Mt Bischoff and near Zeehan. It thus has potential to host similar styles of skarn style mineralisation. To the south of Penguin the formation contains a number of haematitic ironstone bodies which mark the contact with overlying Cambrian rocks.

9.1.2 Mt. Read Volcanics

The Mt. Read Volcanic sequence is host to a number of major mineral deposits in Western and Northern Tasmania including Rosebery, Hellyer and Mt Lyell. The sequence has been correlated with the felsic volcaniclastics of the Western Volcano-sedimentary sequence and the Tyndall Group quartz-feldspar pyritic volcaniclastics. The eastern boundary of the tenements managed by Lottah contains a northerly spur of the Hellyer fault and there is some evidence to suggest that Mt Reid Volcanics occur in the Loyetea area.

9.1.3 Owen Group

The Late Cambrian to Ordovician Owen Group overlies the Mt. Read Volcanics and is mainly comprised of siliciclastic conglomerate and sandstone. Locally there are volcanically derived conglomerates associated with basal members. The Moina Sandstone is the uppermost siliciclastic unit of the Owen Group. It is a coarse to fine siliciclastic sandstone with minor intercalated conglomerate. It has a gradational contact with the overlying Gordon Group. In the Natone area of Lottah's tenements a siliceous ferruginous siltstone within the Owen Group rocks hosts a number of haematite lenses, typically near the top of the formation often with a carapace of breccia containing clasts of haematite and quartzite.

9.1.4 Gordon Group Limestone

Gordon Group limestone and dolomite conformably overlies the Owen Group. Its stratigraphic thickness regionally varies between 50 and 100m. The Gordon Group hosts the Kara District magnetite skarns.

9.1.5 Housetop Granite

Housetop Granite outcrops extensively over much of the Lottah Iron Project and is believed to extend below much of it. Previous workers concluded that Housetop Granite is anomalously dense and very magnetic which may account for the abundance of iron metasomatism in the district, including the massive Magnetite-Sn-WO_2 mineralisation in the Kara area. Field measurements of magnetic susceptibility and density of House Top Granite by Lottah Mining do not support this, nevertheless there remains the well documented association of Tasmanian Devonian granites with Magnetite-Sn-WO_2, Pb-Zn-Ag and Au mineralisation.

9.1.6 Permian

Permian glacio-marine sediments occur in the north west of the area.

9.1.7 Tertiary Basalt

Basalt flows are widespread throughout the Blythe River Iron Project area, flooding Tertiary palaeo-topographic lows. The basalts vary widely in thickness and frequently exhibit high magnetic susceptibility which, although an order of magnitude less than that measured from Magnetite mineralisation, causes difficulties with magnetite exploration below this Tertiary cover. Recent resource and exploration drilling at Kara Mine has shown that magnetite skarn extends below basalt cover and Lottah Mining have seen evidence of this at both Rogetta East and Cuprona.

9.1.8 Quaternary

A final phase of localised Quaternary alluvium has been deposited in current alluvial plains and on the floors of river valley

9.2 LOCAL GEOLOGY

The Rogetta and other skarns in the area are hosted in folded roof pendants of Gordon Limestone and Moina Sandstone inliers within the Housetop Granite batholith. Magnetite skarns obviously have a very high magnetic susceptibility and form prominent magnetic highs so in theory should be simple to identify. Unfortunately much of the area has been flooded with Tertiary Basalt, which has a relatively high magnetic susceptibility. Even though the magnetic susceptibility of the basalt is an order of magnitude less than that magnetite and magnetite skarn it would appear from drill results that a number of magnetic highs may be basalt related.

Skarn mineralogy is complex; however Zaw 2000 has identified a minimum of 4 stages of skarn formation at the Kara No1 deposit. The geology and morphology of the Rogetta and other skarns in the area are essentially identical in mineralogy and morphology to those at the Kara Mine operated by Tasmania Mines Ltd, Callaghan 2011 and Tasmania Department of Mines 1989.

Several major skarn facies have been highlighted in drill core and rock chips from drilling at Rogetta including:

Diopside skarn (SKPX)

Garnet skarn (SKGT)

Magnetite-diopside skarn (SKMG)

Magnetite-amphibole-epidote skarn (SKMG)

Calc-silicate skarn (calcite-epidote-chlorite and amphibole) (SKCS)

Marble (LMST)

The magnetite-diopside and magnetite-amphibole-epidote skarn assemblages form the basis of this resource estimate. Magnetite generally occurs as coarse disseminated euhedral crystals, veins and massive aggregates within a diopside or amphibole rich matrix. Mineralogical boundaries of skarn facies vary from sharp to more commonly gradational. While the dominant lithologies included in the resource are Magnetite Diopside Skarn and Magnetite-amphibole-epidote skarn some magnetite mineralisation does extend into the Garnet Skarn, the Calc Silicate Skarn and even the granite, typically as small veinlets of magnetite rich material suggesting that the magnetite mineralisation is a later stage alteration.

Figure 4 : Rogetta North, Local Geology after Macintyre Mines and MRT

Granite is represented by + symbol, calc - silicates as blocks and magnetite zones are shaded dark grey, other sediments in grey

Magnetite content is variable but where present generally occurs as coarse crystals of magnetite. Locally magnetite may become the dominant mineral with drill core showing several metre thick zones where magnetite is the dominant mineral.

Traditionally the magnetite skarns of the Kara / Rogetta area have been explored for Tin and Tungsten mineralisation. Zaw K. 2000 suggests $W0_3$ and $Sn0_2$ mineralisation is most commonly associated with the more hydrous magnetite-amphibole-epidote skarn phase. While there are historical references to scheelite and tin in the Rogetta area these minerals have not been evident in data collected during the most recent drilling campaign at Rogetta and are reported as minor in Tasmania Department of Mines 1989.

The Rogetta Skarns are located in relatively flat terrain dominated by low re-growth eucalypt forest on crown land managed by Forestry Tasmania. Access roads are well formed unsealed forestry roads.

The best drilled and largest deposit of the Rogetta Skarns is the Rogetta North Skarn. This is the only deposit of the Rogetta Skarns currently drilled to a sufficiently density across the complete mineralised zone to allow estimation of a mineral resource classified as Indicated or Measured. The local Geology is shown in Figure 4.

The Rogetta North deposit consists of a north-south striking, gently south plunging asymmetric syncline of Ordovician Gordon Group limestone and much lesser Moina Sandstone lying directly on top of the Housetop granite. The western limb is vertical to sub vertical and the eastern limb is gently shelving (Figure 5).

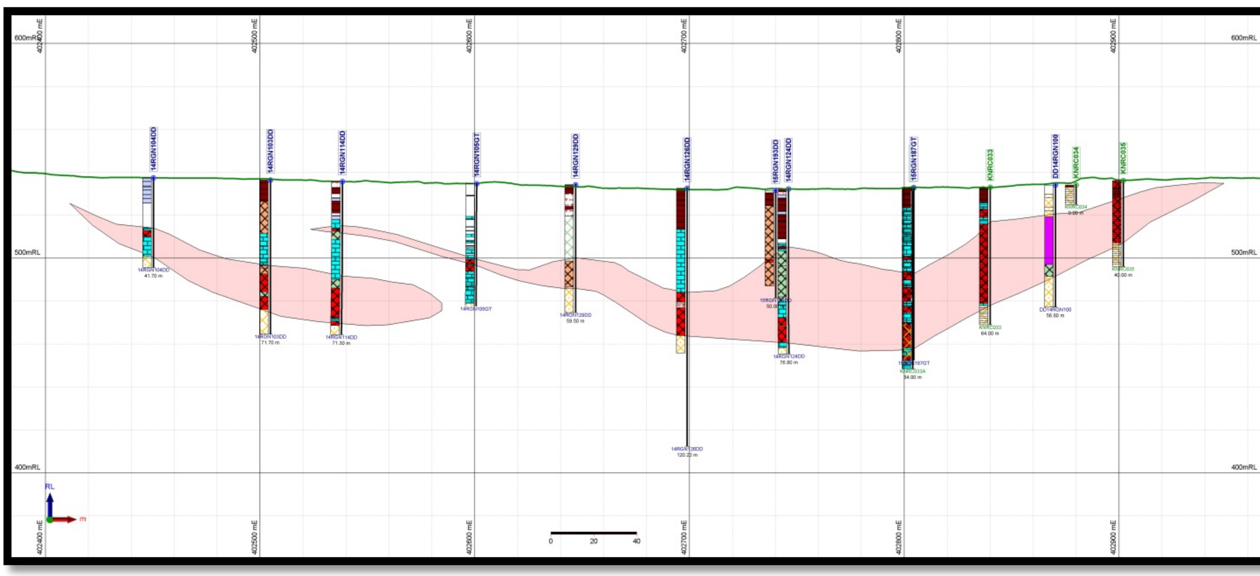


Figure 5 : Section 5425400N looking North, Magnetite zone and drillholes

For legend see Sections in Appendix G

The deposit occurs over a strike length of almost 1000m and is approximately 100m wide at the shallow northern end, grading to in excess of 500m width as it plunges south. Mineralisation outcrops in the northern end and on the syncline limbs and extends to over 150m depth at the south end. The previous model (Callaghan 2011) shows the deposit as being largely closed off at the southern end, 5,425,400N. The recent drilling program as been able to extend the southern boundary 150m south to 5,425,200 N.

The 2011 Resource estimate (Callaghan 2011), observed that thick (10-60m) magnetite skarn mineralisation has been intersected in many drill holes, with a relatively consistent lens of mineralisation occurring directly over the granite, forming a shallow south plunging synform. Other less continuous lenses of magnetite skarn mineralisation are also present.

Current work suggests that the picture is more complex. Magnetically, as indicated by results of the high resolution aeromagnetic survey conducted in December 2014, the deposit is in two parts, Figure 6. Structure, Figure 7, as represented by lineaments digitized over Ortho photography and a DTM based on LIDAR data flown in Mid 2014 fits with the magnetic imagery and suggests that structural control has influenced the development of the magnetite alteration at Rogetta North. Internally while there is indeed an asymmetric synform shape to the granite pendant hosting the mineralisation, interaction with cross cutting structure and the magnetite alteration results in a very variable form to the mineralised body more reminiscent of a zone of hydrothermal alteration. Sections through to mineralised zone are presented in Appendix G : Plans and Cross Sections.

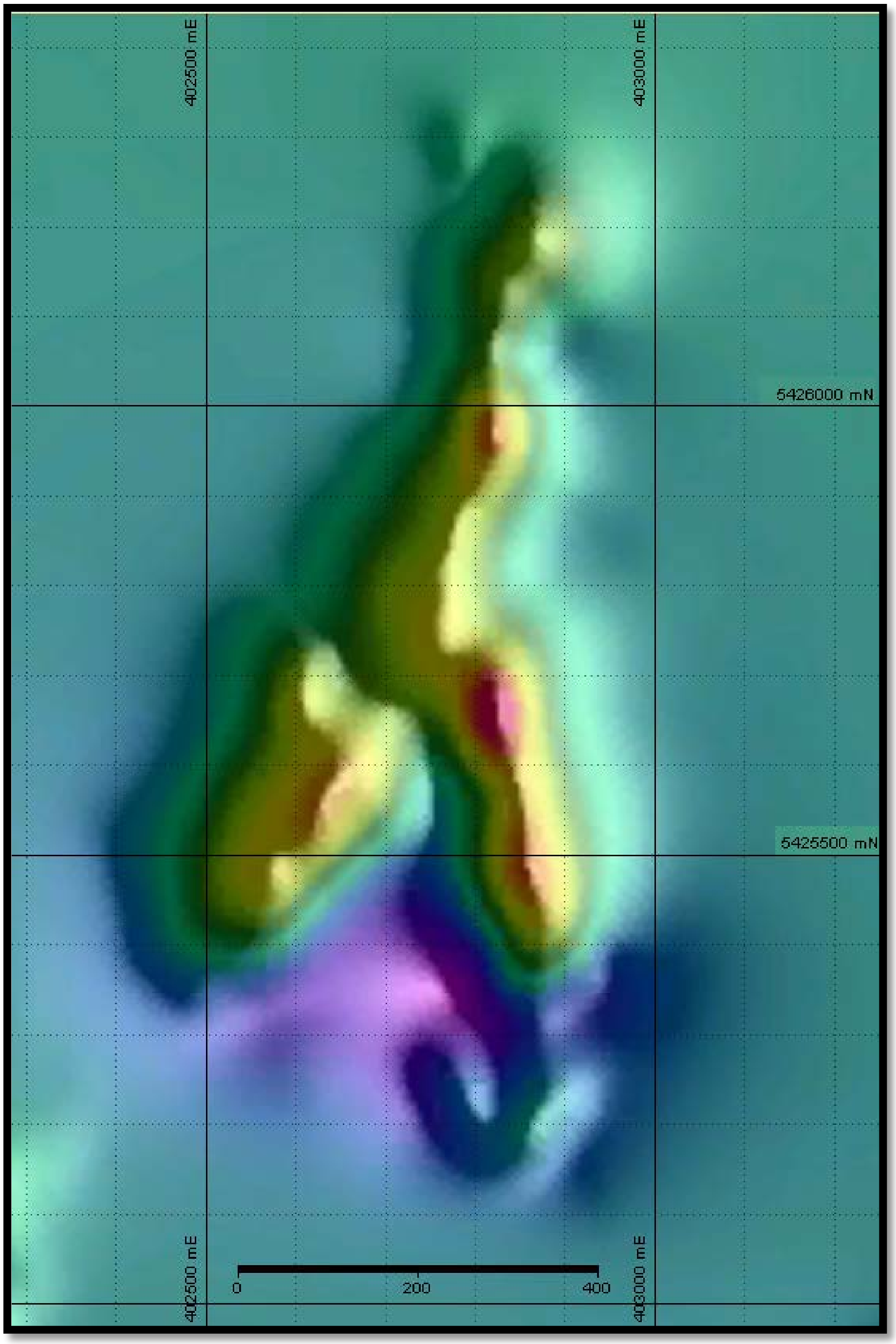


Figure 6: Rogetta North; Total Magnetic Intensity, Reduced to the Pole
Low magnetic intensity is in purple and blue, higher intensity is yellow and red

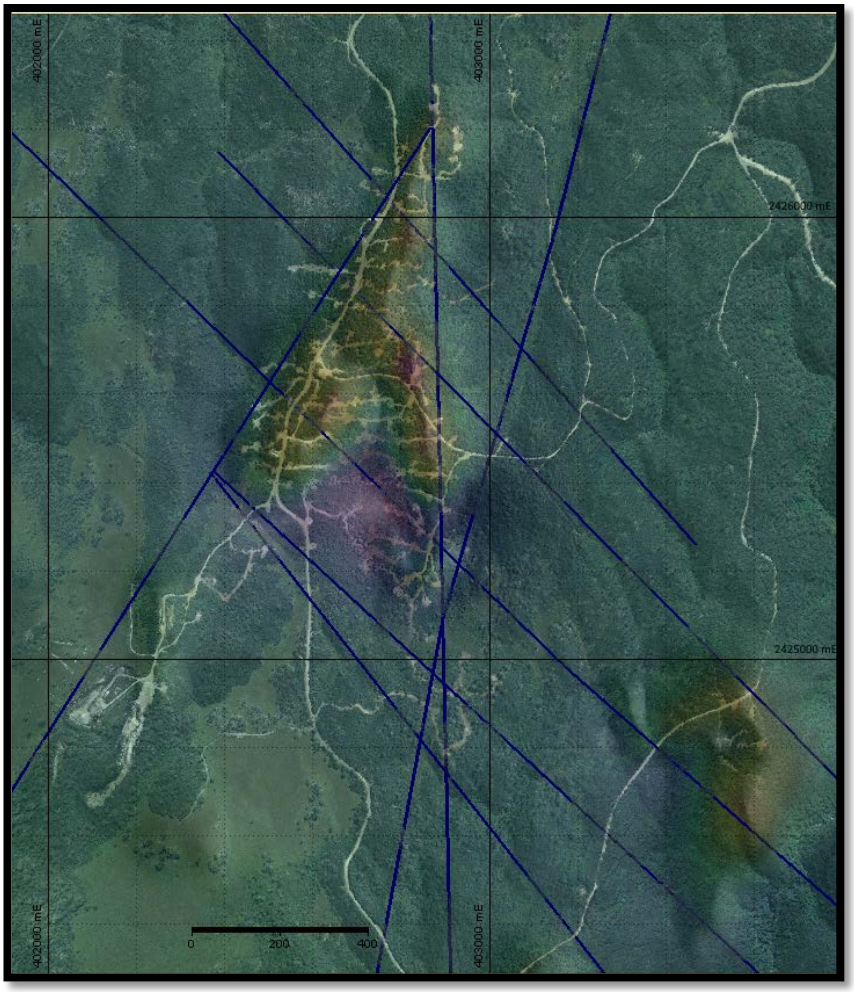


Figure 7 : Rogetta North, ortho-imagery, over Lidar DTM and Magnetics. Interpreted structural lineaments Magnetic intensity colours are the same as those shown in Figure 6

10 Recent Work

After the project came under the control of Lottah Mining a decision was made to complete as fast as possible the work required to obtain a mining licence and to confirm the resource so that mining options could be investigated.

10.1 Drilling

Drilling work involved the planning and execution of resource drillholes to :

Confirm via a number of twin holes previous drilling results

Infill drilling to bring the existing drill pattern down from 50m holes on 100 m sections to 50 x 50 m holes.

New holes were to be staggered to produce a diamond pattern and actual hole coverage for the majority of the known deposit would be around 35m spacing, see Plan A in Appendix G, Miscellaneous Plans.

Further lines of drillholes would be drilled to test for extensions of the mineralisation on strike to both the north and south.

The East – West limits of the mineralisation would be confirmed and where possible extended.

At the same time that the resource confirmation and extension drilling was taking place additional holes would be drilled to provide material for Metallurgical test work. These holes formed a set of 5 pairs of and RC hole with a PQ sized diamond hole.

Hydrological and geotechnical holes were also scheduled

The work carried out as a part of this drill program resulted in the drilling of 137 holes as summarised in Table 2 below.

During the drilling campaign a number of changes were made to planned hole locations. This added some additional holes into the program but also resulted in two holes which were planned not being drilled. Changes generally affected the resource drill out and were made on the basis of information from adjacent holes. Maps showing the planned hole locations together with plans showing the actual location of all holes used for resource modelling work are located in Appendix G, Drillhole Plans, A- E with the drillhole cross sections.

For the resource drill program the original plan called for a mixture of RC and Diamond holes. This was modified so that all Resource holes were drilled by diamond rig as the diamond rigs used were smaller and more manoeuvrable, and whole core allowed structural, density and geotechnical logging. Diamond holes also provided high quality samples for assay work even if there were significant water inflows which affected parts of the area. The small size of these rigs allowed smaller access routes and pads which helped reduce the amount of clearing work required. As the drill program was conducted during winter and spring the light weight and manoeuvrability of the rigs minimised the problems with rigs getting bogged.

All Resource and Geotechnical holes were collared with HQ triple tube. Holes were only reduced to NQ (triple tube) if required as the result of bad ground. Similarly the 5 PQ holes drilled as part of the Metallurgical testing program were collared with PQ and only changed to HQ when ground conditions necessitated. The associated RC holes (5) were drilled with a 5.5 inch hole with a face sampling hammer. Hydrological holes were generally drilled as 7 inch open hole (i.e. RAB) this allowed a change to standard RC when water inflows and ground conditions required.

Hole Type	Location	Number of Holes
HQ and NQ sized diamond holes for resource definition	Rogetta North	91
PQ sized for Metallurgical testing, twinned with the RC holes below	Rogetta North	5
RC holes for Metallurgical testing, twinned with the PQ holes above	Rogetta North	5
RC holes for sterilisation work over the site of the proposed mill	Rogetta Mill Site	4
Hydrological test holes	Rogetta North	10
Hydrological holes at the proposed Rogetta Tailings Storage Facility	Rogetta Tailings Storage Site	4
Geotechnical holes.	Rogetta North	14
Geotechnical holes.	Rogetta Tailings Storage Site	4

Table 2 : Holes drilled at Rogetta North in 2014 and early 2015

10.2 Mapping and Imaging

Geological mapping of the area is sparse with the best map available being a 1 : 10,000 map completed by Macintyre Mines in 1982 (Whitehead, 1982), see figure 4, supported by 1 : 25,000 mapping by Mineral Resources Tasmania. A 200m line spaced aeromagnetic regional survey conducted by Southern Geoscience was completed in 2001, this data had been supplemented by a number of small ground based magnetic surveys.

To supplement this data a LIDAR survey was completed in September 2014 over all of the area held under tenement by Blythe River Iron Pty Ltd (BRI). BRI is a 100% owned subsidiary of Forward Mining Ltd. The survey was conducted by Photomapping Services of 133 Abbotsford St, North Melbourne and was supervised by GHD Consultants.

This survey provided a detailed data set used to construct Digital Terrain models and to provide structural information on the Rogetta North Area. Ortho-Photo imagery associated with this survey was not completed until December 2014 due to difficulties scheduling aircraft on days when there was no cloud. This imagery provides colour photography on a 1Km x 1 Km tile basis for all of the area covered by the tenements held by BRI at a resolution of less than 1m.

In December 2014 a 25m line spaced aeromagnetic and radiometric survey was flown over the Rogetta area. The survey was flown by Thompson Aviation, Hanger 14, Griffith Airport, Griffith, NSW, 2680. Data from the survey was processed by GHD Consultants and made available as a set of JPG and TIFF images, showing Total Magnetic Intensity, 0.5VD and 1VD magnetic intensity. All data was reduced to the pole. This data helped define the limits of the mineralisation and was also particularly useful together with LIDAR and Ortho imagery for determining the location of the major structural controls on the mineralisation.

11 Previous Resource Estimates

11.1 Historic Resource Estimates

The Kara No 2 North deposit as Rogetta North was formally known has been subject to various historical exploration programs which have assessed its suitability for mining. The estimations of mineralisation tonnage and grade made as a result of this work do not meet with the requirements for Resource Classification at a level of more than an Exploration Target under the JORC (2012) code. A brief summary is nevertheless quoted for completeness as Table 3.

Reid (1924)		Hughes 1952			Jack 1965	Gardiner 1976
average of 5 samples						
Fe_2O_3	78.76	56.1	52	67.8	45	
FeO	15.93	18.8	12.2	21.9		
SiO_2	1.62					
Al_2O_3	2.4					
CaO	0.11					
MgO	0.32					
SiO_2	Tr					
P_2O_5	Tr					
TiO_2	Tr					
MnO	0.96					
Insol		10.8	17.3	4.7		
DTR						50%
Tonnage					500,000	500,000

Table 3 : Historic records of grade and tonnage Rogetta North

11.2 Kara No 2 North 2011

The Rogetta North deposit was the subject of a JORC (2004) compliant Resource Estimate by Tim Callaghan in 2011 (Callaghan 2011). The report noted that "the deposit forms a gently south plunging synclinal structure in the roof of the Housetop Granite with a steep western margin and gently shelving eastern margin. Oxidation of the calc-silicate skarn extends to approximately 20-30m depth. Magnetic susceptibility measurements on drill holes suggest magnetite is present in the oxidised magnetite skarn as well as limonite and goethite. Just over 10 % of the deposit is oxidized.

The deposit remains open to the south for a limited strike extent and possibly at depth in the south plunging syncline.

The shallow plunging Kara No 2 North (Rogetta North) skarn morphology is amenable to conventional open cut mining."

The resource was summarised as an Inferred Resource as detailed below in Table 4.

Kara No 2 North (Rogetta North) Inferred Resources							
	M Tonnes	Fe %	SnO_2 %	WO_3 %	CaO %	P_2O_5 %	SO_3 %
Oxidised	2.15	42.1	0.10	0.10	11.0	0.04	0.08
Fresh	14.47	36.7	0.08	0.08	16.1	0.03	0.28
Total	**16.62**	**37.4**	**0.08**	**0.08**	**15.4**	**0.03**	**0.25**

Table 4 : Rogetta North, 2011 Estimate

Recommendations for future work included:

- Infill drilling to 50m spaced sections.
- Geotechnical logging of future drilling campaigns
- Further bulk density measurements on diamond drill core.
- Davis Tube Recoveries and metallurgical test work on drill core samples
- Initiation of a QA/QC regime in future drilling programs
- Estimation of Measured and Indicated Mineral Resource
- Pit optimization studies and reserve definition.
- Resource extension and exploration drilling.

12 Current Resource Estimate

12.1 Data Used

12.1.1 Previous Drilling

Drill logs for all drilling carried out by IRM, RVR and FML prior to the start of 2014 in an Access database supplied by Tim Callaghan of Resource and Exploration Geology. It contained all the drillhole data used in the 2011 Resource Estimate together with information for a number of holes which were drilled by Forward Mining in 2012 and 2013.

The 2011 Resource Report noted that no documentation of QAQC or data validation was provided or cited for the IRM – RVR drilling. The author was involved in some of this work during his tenure as Managing Director for IRM from listing to later 2008 this has enabled some of this information to be disclosed in the JORC Table 1 (Appendix A). Similarly this work was carried out by EDrill the drilling company used for the 2014 drilling campaign and they were able to provide copies of drillers daily PLOD sheets from their archives.

The data from the Access database supplied by Resource and Exploration Geology was read into the Resource Modelling software, Micromine and checked for data consistency (see note below under 11.1.2.). During the course of the development of this report some issues with this data, particularly Sulphur values were discovered and are discussed under Section 12.1.3 Comparison With Previous Work, below.

All drillhole collar positions and intersections etc used as a part of the data set which validate up this report are listed in Appendix C.

12.1.2 2014 Drilling

A dump of the current Lottah Mining drillhole database from Expedio Pty Ltd, the current database managers, dated 6 February 2015 formed the basis of most data from the 2014 drilling campaign used in the report. Data from the 2014 drilling campaign was entered into Expedio's OCRIS data collection database and then consolidated by Expedio into a SQL Server 2012 database running the Expedio Data Model additional data such as Assay results and downhole survey results which were recorded outside of OCRIS were also merged into the database by Expedio. The OCRIS data manager tool provides consistent coding of data and field validation of data. The Expedio SQL Database ran further validation checks in order to ensure that data was consistent and that all required data had been collected prior to export to a set of files in CSV and or Micromine format which were used by the mine planning and Resource Estimation software, Micromine. Within Micromine further checks on data consistency, which paralleled the checks in the Expedio database, were run to ensure :

- All drill collars had coordinates
- All drillholes had downhole surveys
- Downhole files were consistent and downhole surveys were in sequence
- No downhole data exceeded the total depth as recorded in the collar file
- Downhole files had no overlaps
- Key downhole data, Lithology and Sampling had no gaps

A number of difficulties with data consistency were highlighted in validation reports from Expedio. These occurred largely because different parts of drillholes were logged on different copies of the OCRIS system which made it difficult for field staff to rigorously checking the data when large volumes of drill core were coming through the core yard. As these issues were identified appropriate procedures were put in place to overcome the identified problems.

At the time the resource model was built there were a number of issues with the data identified by Expedio which were unresolved in the database. Updated data was supplied to Expedio and was also imported directly into Micromine to allow preparation of the resource model to proceed prior to receiving data back from Expedio.

12.2 Collar survey

All holes were initially located using a handheld GPS. At the end of the drill program a Differential GPS was used and all collars for all the holes drilled in the 2014 drilling campaign were located and surveyed with an accuracy of less than +/- 1m. Final DGPS coordinates were used to update the drillhole database and have been used for the resource modelling work. It had been hoped to also locate collars for the holes drilled prior to 2014, however while a number of the old pegs remained it proved difficult to physically locate any of the collars. All holes drilled prior to 2014 are therefore only known from historic GPS coordinates and the accuracy of a standard GPS in this area is +/ - 6m.

It should be noted that the location of all holes could be superimposed over the detailed Ortho imagery flown in December 2014. The resolution of this imagery showed that the locations of historic holes matched drilling locations that could be discerned from the photos.

The Rogetta North deposit is highly magnetic and this of courses poses problems when setting up angled drillholes. The nominal magnetic declination for the Rogetta North area is 13.21 degrees East however it was shown that compass readings were not consistent over the Rogetta north area. In order to correctly align the holes a Gyromax (PO Box 636, Kalamunda WA 6926, Australia) collar survey tool was used to check the alignment of angled holes. Angled holes drilled prior to 2014 had collar surveys were recorded by compass only. The potential error on these, due to local magnetic effects is considered to be in the order of +/- 10 degrees.

12.3 Downhole Survey

Most holes in the 2014 drilling campaign were drilled as vertical holes, however a limited number of Resource holes were angled, particularly late in the drill program when a number of angled holes were drilled to help define the boundary of the mineralised zone and its relationship with the surrounding granite. Just over half of the geotechnical holes were angled. The original plan was for all holes greater than 50 m depth to be downhole surveyed using Devico (Devico AS, Drammensveien 55, Postbox 2067224 Melhus Norway) Deveflex tool, procedural difficulties meant that downhole surveys were only provided for 21 of the holes. These covered all the angled geotechnical holes and a mixture of vertical and angled resource holes. No hole showed any significant deflection from its planned trajectory. Maximum deflections were under 3 degrees and usually less than 2 degrees in azimuth and/or dip.

Holes drilled prior to 2014 were generally vertical with the exception of 6 of the 7 diamond holes drilled prior to 2014. No downhole surveys are recorded for these holes in the Access database which was used as a data source, the drilling company that did this work is of the opinion that the holes were downhole surveyed but no data has been sighted that records the methods used to obtain downhole surveys.

12.4 Logging

Prior to the start of the 2014 drilling campaign time was spent reviewing the lithology logged for a number of holes drilled prior to 2014 in order to ensure that there would be consistency in the logging codes. Chip trays for all RC holes drilled by IRM and RVR were located and reviewed. A number of the holes drilled by Forward Mining had not been geotechnically logged or photographed; where this core was available (some was in the MRT core store), this logging was completed.

Holes from the 2014 drilling campaign were logged in accordance with the Lottah Mining Logging protocol. The Logging protocol specifies what parameters should be logged and where appropriate how. A copy of the logging protocols are attached as Appendix B. In summary the protocols state that all holes are logged for lithology over their full length, core recovery is recorded together with the number of fracture and RQD. All core are photographed both wet and dry and examined for fluorescence. Magnetic susceptibility readings are made every 20 cm through all material except in granite where they are made at 1m intervals. Where oriented core was recovered (angled holes) core was marked with an orientation line and orientation quality information. SG measurements were made for every lithology in every core tray, SG results are further discussed below (see Section 11.7, Bulk Density Measurement). The geologist defined the portions of holes to be sent for assay, this core was cut, in an automatic core cutter, in half. One half of the core, on average of 1m length, was sent for assay. Sample tickets were allocated to the whole hole so that that non sampled intervals were positively recorded and the sampled intervals could be tracked. The sampling system also allowed for the allocation of standards and blanks and for the preparation of duplicate samples.

12.5 Lithology Coding

All drillhole data was logged over the full length of the drillhole for lithology and other attributes such as mineralisation, alteration etc. Drilling by IRM used a set of lithology codes based on those used by Oxiana Ltd as their field geologists guide was available and covered a wide range of different deposit types. Drilling carried out by Forward Mining used contract geologists that were familiar with the logging codes and system used by Tasmines at the Kara Mine. Work by Lottah largely maintained the coding used by Tasmines. This meant that there were some minor issues with lithology codes used in the early phase drilling and the current drilling. The differences were however small. To handle this issue and to simplify the mass of lithology codes which are typically observed during the course of drilling into a small number of codes that describe the key lithologies a code map was developed, see Appendix D, and all lithological data recoded into a new field in the dataset, Rock Unit, see Appendix D, which was used as be basis for geological interpretation and ore resource calculation.

The nature of the mineralisation at Rogetta North is such that the lithology generally reflects the mineralisation which has in the richest portions of the deposit totally obliterated any pre existing lithology. The richest units are obviously Magnetite, followed by a magnetite skarn. Other lithologies may also contain small veins and zones of magnetite alteration and these may occasionally be several metres thick. Magnetic susceptibility readings (carried out every 0.2 m over most lithological units particularly if there was evidence of mineralisation) differentiate these zones.

In the drilling by IRM using RC drilling during 2007 – 2009 both GRAN (Granite) and GRAD (Granodiorite) were recognised. The 2014 diamond drilling did not show any granodiorite, there was however quite a degree of colour variation that appeared to be alteration related in the granite. It has been assumed that darker sections of granite were coded as Granodiorite.

A general sequence through the lithologies is sediments, grading into Calcsilicate skarn which in turn grades through Chlorite / Epidote Skarn to Magnetite Skarn and Magnetite. The Magnetite may be underlain by a Garnet Skarn above the contact with the Granite.

12.6 Sampling

Downhole samples from all phases of drilling at Rogetta North have been targeted at the “ore” zone, ie those sections of the hole showing anomalous Magnetite. The 2007 – 2008 drilling by IRM utilised a Niton handheld XRF analyser to obtain readings of the mineral content of the individual RC sample bags. Those samples showing higher than 20% Fe were then split and a sample sent to the lab for assay, additional samples each side of an intersection were also taken. For diamond core the portions of holes to be sampled were determined by visual checks and the presence of magnetic minerals.

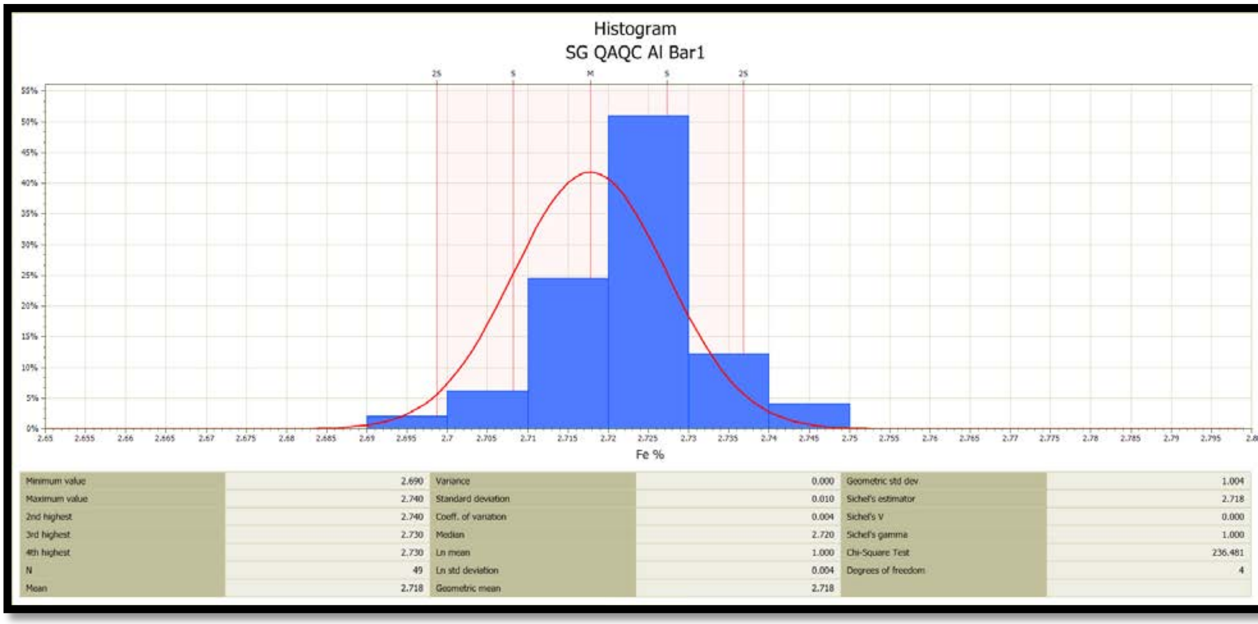
For the 2014 drilling campaign portions of holes sent for analysis were based on visual assessment, magnetic minerals and magnetic susceptibility. The sampling protocol required a metre of material either side of the sampled interval to be included in the sample stream. Samples were generally close to 1m in length. Samples are therefore biased to the mineralised portions of the hole. The lack of samples from outside the ore zone, or rather samples from some distance outside the ore zone means that it is not possible to model grades any distance into this area.

12.7 Bulk Density measurement

Bulk density is an important factor both in helping differentiate lithologies but more importantly in the conversion of block volumes to tonnages. The 2011 Resource report (Callaghan 2011) used a total of 90 bulk densities taken from 3 diamond holes KND002, KND003 and KND004. This work gave Bulk Densities of 2.6 for Granite, 3.2 for Calcsilicate Skarn and 4.0 for Magnetite Skarn. These values were compared to the Bulk Density used by Tasmines at Kara Mine of 4.1. The recommendation was made that further bulk Density Measurements be made as a part of further diamond drilling.

As a part of the 2014 drilling program bulk density measurements were incorporated as a regular part of the logging. Included as a part of the logging procedure were QAQC samples utilising 2 standard samples, one an aluminium bar and the other a stainless-steel bar. Measures of the standard samples were made at the start and end of each sampling run. Bulk Density samples were collected and measured at the rate of 1 per lithology per core tray. Measurements were made in the more competent section of material in the core tray. This will have biased the results and skewed the results toward higher bulk density however this bias is thought to be small as approximately 75% of the material recovered is considered to be competent enough to be used for SG measurement. The full Bulk Density measurement procedure is described in Appendix B

A check was made on the QAQC results from the standard Aluminium and Stainless steel bars used as references. Both sets of results shown in Figure 8, show a very tight cluster of results and a mean value that matches the published values for the density for both Aluminium and Stainless Steel. Summary statistics are shown in Table 5.



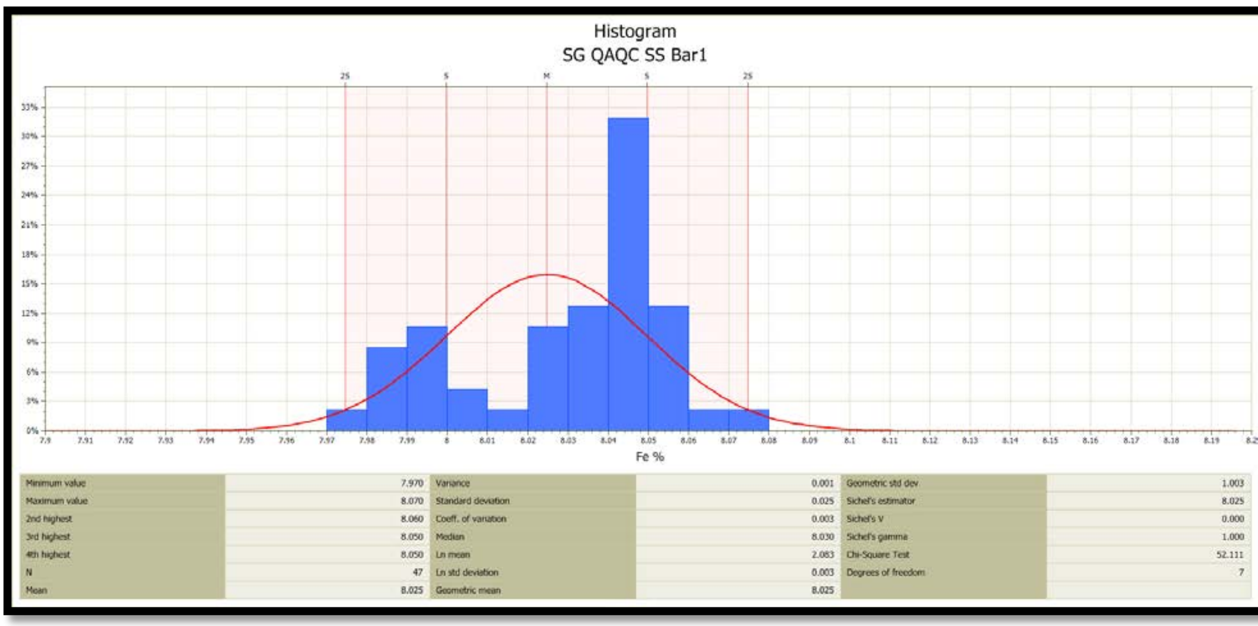


Figure 8 : Observed Bulk densities of standard Aluminium and Stainless Steel Bars

Bulk Density								
Rock Unit	No Points	Min	Max	Mean	SD	RSD	Median	Sichel
Al Bar	49	2.69	2.74	2.718	0.010	0.004	2.720	2.718
SS Bar	47	7.97	8.07	8.025	0.025	0.003	8.030	8.025

Table 5 : Observed values for Standard Bulk Density Samples

Results of the bulk density work conducted during the 2014 drilling campaign are summarised in Table 6 and Figure 9. The Bulk Density measures generally give good figures for the rock type that they represent with the statistics as shown in the table and figure showing generally tight groupings of readings for each rock type. The box and whisker charts in Figure 9 show a number of Outliers associated with a number of the Rock Unit types. The very low outlier values associated with Granite and Skarn and the very high outlier value associated with CS Skarn look to be errors made when taking the actual Bulk Density reading.

There are a number of other low outliers and it may well be that these values have been incorrectly coded for Rock Unit. Further investigation is needed to fully understand other outlier values. A number of the high outlier values associated with Calcsilicate skarn (CS Skarn) may be due to miscoding and it may well be that these represent Magnetite skarn values. In the figure readings for both Sediment and Clay have been omitted, they are associated with less than 10 readings each and there are not sufficient data points to give a proper estimate of the mean, the estimates for Dyke with only 18 readings should also be used with caution.

The Box and Whisker chart, Figure 9, also shows the 95% confidence interval for the estimate of the mean and from this it would appear that the mean Bulk Density values reported in Table6 are a good estimate of the true Bulk Density values for each rock unit.

Bulk Density								
Rock Unit	No Points	Min	Max	Mean	SD	RSD	Median	Sichel
GRAN	252	2.02	3.23	2.591	0.083	0.032	2.590	2.591
SED	7	1.99	3.33	2.719	0.405	0.149	2.810	2.720
IDK	18	2.78	3.54	3.095	0.231	0.074	3.075	3.095
SKRN	22	1.88	3.75	3.101	0.427	0.138	3.110	3.103
CLAY	3	2.72	3.76	3.367	0.564	0.168	3.620	3.368
SKGT	39	2.10	4.03	3.391	0.358	0.105	3.490	3.393
SKCS	197	2.35	5.10	3.395	0.433	0.127	3.420	3.396
SKCE	54	2.48	4.47	3.397	0.381	0.112	3.410	3.398
SKMG	125	2.37	4.93	3.851	0.485	0.126	3.820	3.851
MMAG	65	2.94	4.86	3.932	0.494	0.126	3.930	3.932

Table 6 : Summary Statistics for 2014 Bulk Density Measurements by Rock Unit at Rogetta North

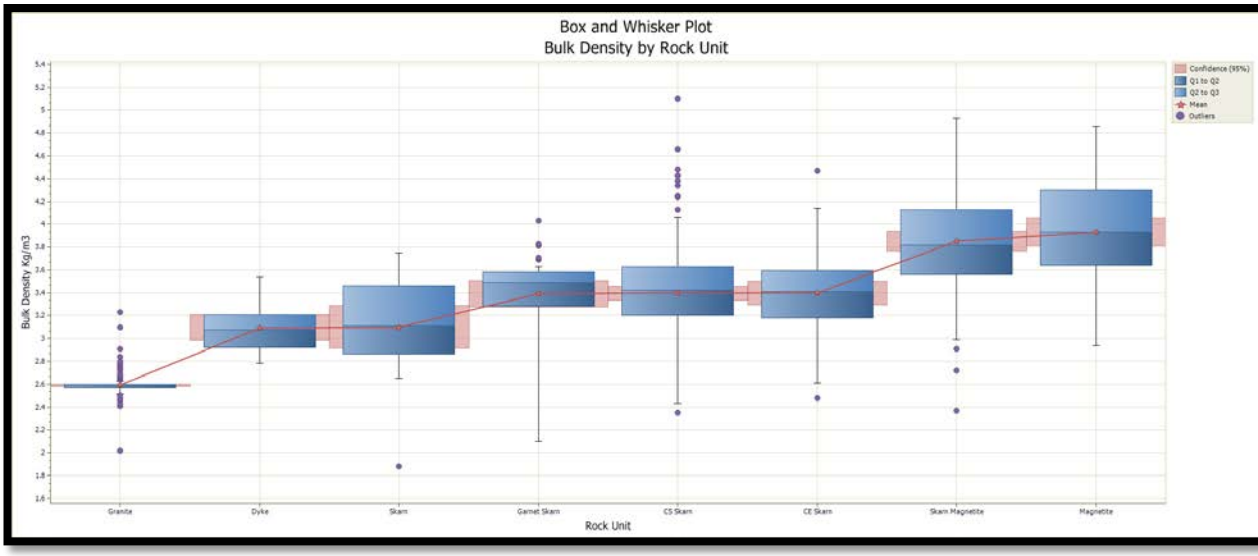


Figure 9 : Box and Whisker Plots for 2014 Bulk Density Measurements by Rock Unit at Rogetta North

The values observed from the 2014 drilling were compared with those reported in the 2011 Resource estimate.

The estimate of 2.6 (2.591) Kg/m^3 for Granite is the same as that referenced in the 2011 resource report.

The estimate of 3.4 (3.395) for Calcsilicate skarn is a little higher than that referenced in the 2011 Resource Report.

The estimates of Bulk Density for both Magnetite Skarn and Magnetite are 3.9 (3.851 and 3.932 respectively) this compares to the value of 4.0 used in the 2011 Resource Report and 4.1 reportedly used by Tasmines at Kara.

The estimate of Bulk Density for the Magnetite Skarn used in the 2011 resource report was compared with that obtained from the 2014 drilling campaign using a QQ plot as shown in Figure 10 below. All the Bulk Density Samples used in the 2011 report came from intervals coded as Magnetite Skarn. On a QQ plot a perfect match would plot along the red line, the data suggests that while the fit is not perfect it is nevertheless very close. The correlation coefficient (-1.344) and the rank correlation coefficient (1.0) between the two data sets indicates a very close match. Similarly the mean values are both (3.85 for the 2014 data and 3.8 for the 2011 data) very close. The close comparison between the 2014 readings and the 2011 readings suggests that if there is bias in the SG measurements caused by sampling more competent material it is not apparent here. The Bulk Density used at Kara mine of 4.1 is also above the estimates made at Rogetta suggesting that there may be some small potential for tonnage upgrade due to higher than expected Bulk Density.

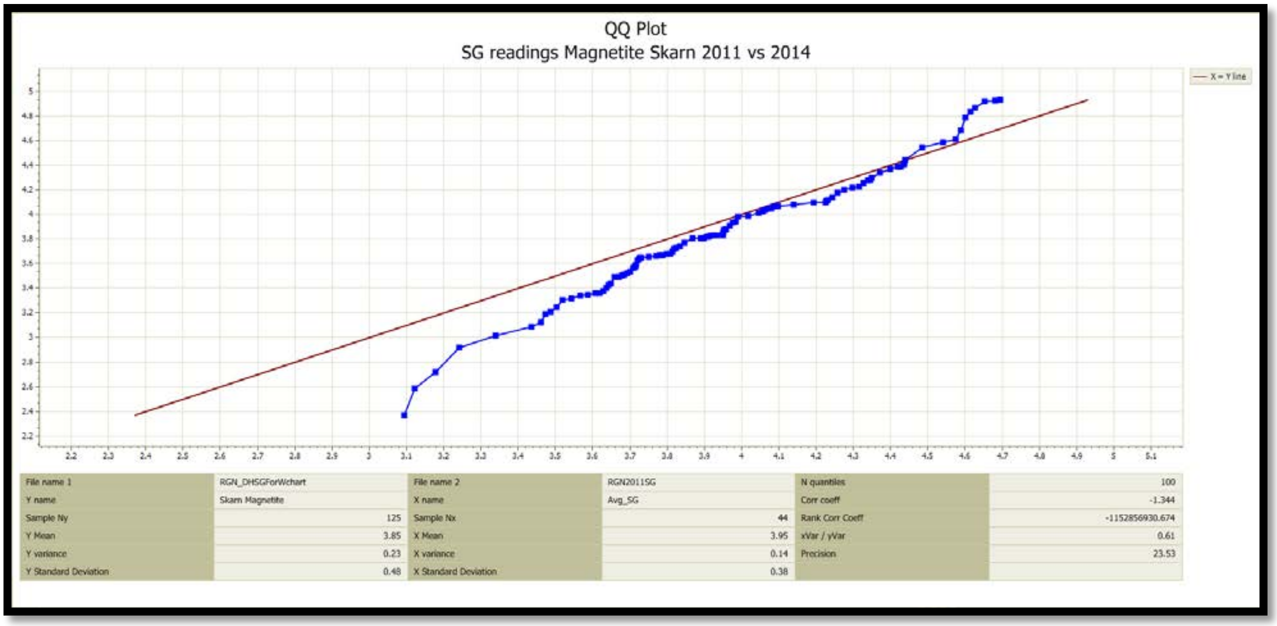


Fig 10 : QQ Plot comparing Bulk Density measurements from 2011 Resource Report and 2014 Drilling Campaign.

13 Geological Interpretation and Modelling

At the start of the 2014 drilling campaign it was felt that there was a reasonable understanding of the Rogetta North Mineralisation, with an inferred resource having been completed in 2011. The aim of the 2014 drill program was to confirm the existing model and to where possible extend the limits of the mineralised zone. The drilling has, as often happens, shown that the initial picture was somewhat more complicated than envisaged. Never the less the 2011 model generally proved a good guide as to where mineralisation would be encountered. Interpretation of the latest drill results was based drill hole cross sections, see Appendix G, with two key boundaries being interpreted at 50 M section spacing. The sectional interpretation was then used to build wireframe solids representing the contact with the granite and the mineralised zone.

13.1 Wireframing

As summarised above two wireframe solids (closed surfaces) were developed to represent the granite contact and the mineralised zone. This information together with a digital terrain model of the topographic surface was then used to constrain and sub block a 3D block model. Samples within the mineralisation wireframe were then used to interpolate values into blocks in the model. A further surface representing the base of oxidation was also generated and the 3D block model was then flagged to indicate whether a block contained oxidised material or not.

The granite solid was relatively easy to develop it was based on the granite intersections encountered in the drill holes. Some drillholes have several granite intersections, there were generally towards the edges of the mineralisation and they were generally interpreted as overhangs and rafts of granitic material into the material left in the granite roof pendent which hosts the mineralisation.

Definition of the mineralised zone was more difficult. The mineralisation is a metasomatic replacement of pre-existing calcareous lithologies and to some extent is self-defining as Magnetite Skarn or Magnetite. There were however areas where there was development of magnetite mineralisation in other rocks, typically Chlorite Epidote Skarn and Calc Silicate Skarn. Less commonly there was magnetite mineralisation in Garnet Skarn and occasionally the Granite.

It is also necessary to make sure that a false boundary is not placed on mineralisation as this may limit the grades of blocks available to the optimisers to use when Ore Reserves are calculated and this could result in an artificially high cutoff grade and a model that is not really optimal. This was catered for by generating a set of grade composites to guide the interpretation process. These were used together with lithology and where composites were not available (typically due to outstanding assays) magnetic susceptibility was used. The grade composites were defined as intervals where the Fe grade of more than 10% was maintained for at least 3m. The composited intervals did not contain more than 6m of waste (material below 10% Fe) wether consecutive or not and there were no more than 3m of non-sampled interval contained in the composited interval. All composites had a minimum grade of 10% Fe. The actual minimum grade observed for the composites was 14% Fe. The composites defined the mineralised zone well and it was a straight forward task to complete the sectional interpretations.

The Digital Terrain Model used to define the ground surface was developed from the data produced when the Forward Mining tenements were flown with LIDAR. From the set of data produced the points coded as ground strike were extracted and used as input to the Micromine DTM function

The final wireframe generated was a base of oxidation surface. While it was quick to create it is possibly the most problematic of the surfaces as there were areas where there was a large difference in the logged base of oxidation (base of extreme and strong weathering) between adjacent holes, possibly due to structural effects. It is also not apparent that weathering of the magnetite limits its use as ore, possibly with a reduced recovery. This will become clearer as DTR results become available. The base of oxidation is shown on sections through the orebody model in Appendix G.

13.1.1 Data Compositing

Sampling used in the Rogetta North Model had a nominal sample length of 1m. In practice there was some variation in sample length. Downhole compositing recalculates sample lengths to be consistent. When modelling all data points (composites) should be of equal length to ensure that the input data set is not biased. Pre and Post composite sample lengths are summarised in Table 7.

	Min Length	Max Length	Points	Mean	Median	Sichel's T	Std Deviation	COV
Raw Samples	0.3	13	3601	1.14	1.0	1.12	0.71	0.622
Composited Samples	0.4	1	3943	1.00	1.00	1.00	0.01	0.014

Table 7 : Sample Length statistics pre and post compositing

13.1.2 Basic Statistics

With the exception of SG and RQD attributes, most of the attributes modelled were largely restricted to values within the mineralisation wireframe. Tables 8, 9 and 10 below provide the basic statistics for the primary attributes modelled. Statistical summaries of all data are at Appendix E together with Histogram plots etc.

All Assays before Compositing									
Field	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
Fe %	0.5	67.66	3601	30.13	28.46	33.59	14.531	0.482	0
Al_2O_3 %	0.81	22.2	3138	5.03	4.39	5.02	2.802	0.557	240
CaO %	0.01	43	3138	16.23	16.20	21.93	9.321	0.574	0
P %	0.001	0.549	2821	0.02	0.02	0.03	0.031	1.280	181

Table 8 : Summary Statistics for Key Assay variables prior to compositing

All Composites									
Field	Minimum	Maximum	Points	Mean	Median	Sichel's T	Std Dev	COV	Outliers
SG	1.88	5.1	5289	3.18	3.21	3.17	0.612	0.193	0
Fe %	0.5	67.66	3621	30.53	28.80	33.59	14.294	0.468	0
Al_2O_3 %	0.81	22.2	3426	5.04	4.39	5.03	2.823	0.561	264
CaO %	0.01	43	3426	16.04	16.15	22.03	9.344	0.583	0
P %	0.001	0.549	3327	0.02	0.01	0.03	0.029	1.332	181

Table 9 : Summary Statistics for Key Assay variables after compositing to 1m

All Composites in Ore Zone									
Field Name	Minimum	Maximum	Points	Mean	Median	Sichel's T	Std Dev	COV	Outliers
SG	1.99	5.1	1847	3.62	3.64	3.62	0.556	0.154	125
Fe %	0.61	67.66	3329	32.08	30.10	32.44	13.219	0.412	0
Al_2O_3 %	0.81	22.2	3151	4.70	4.28	4.71	2.443	0.519	151
CaO %	0.01	43	3151	16.59	16.70	21.50	8.985	0.542	0
P %	0.001	0.55	3066	0.02	0.01	0.03	0.029	1.297	173

Table 10 : Summary Statistics for Key Assay variables after compositing within the mineralised zone

13.1.3 Comparison With Previous Work

A check was made at an early stage between the assay results for the key modelled data Fe, Al Ca and P to ensure that there was a reasonable degree of correlation between the results obtained from drilling pre 2014 and 2014 drilling. There were no large discrepancies as shown in Figures 11 to 14 below. The key statistics are summarised in Table 11 below. Given the close fit between the data sets, with differences, particularly in the case of P (Phosphorous) being related to detection limits it was concluded that the data sets could be merged for modelling purposes.

Variable	Data	Mean	SD	CC	xVar/Yvar
Fe	Pre 2014	29.33	14.62	0.996	1.1
	2014	32.08	13.95		
Al	Pre 2014	5.23	2.99	0.997	2.25
	2014	4.37	2		
Ca	Pre 2014	16.46	9.79	0.987	1.74
	2014	14.58	7.42		
P	Pre 2014	0.01	0.02	0.996	0.2
	2014	0.04	0.03		

Table 11 : Key statistics comparing Pre 2014 and 2014 drill results for key variables

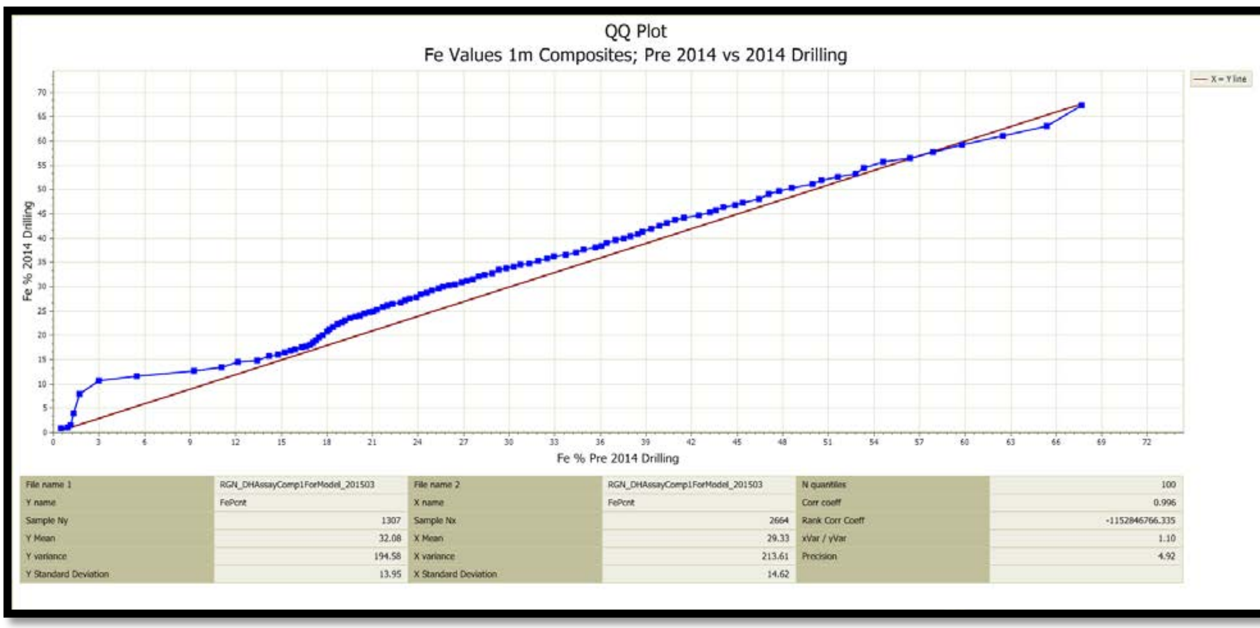
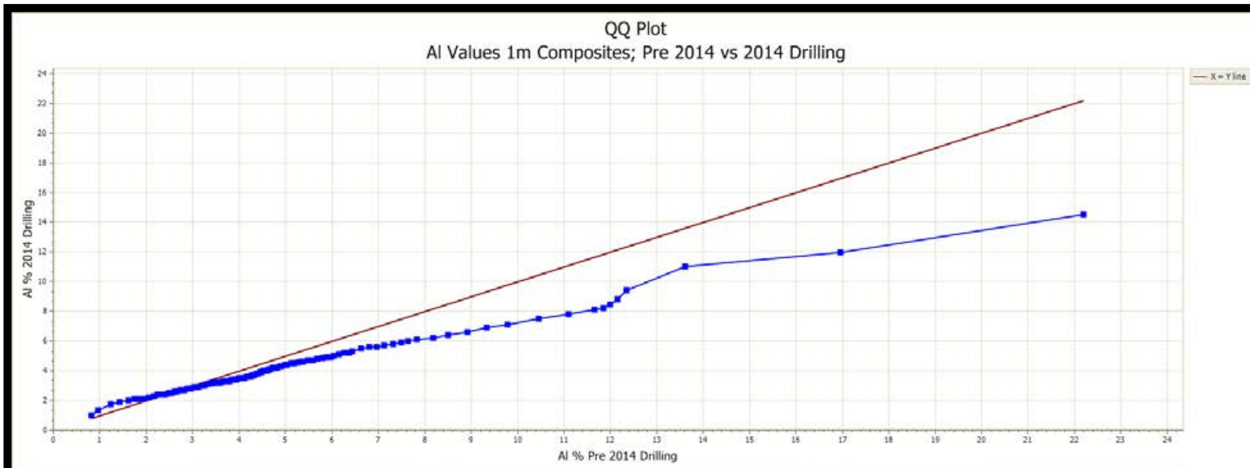
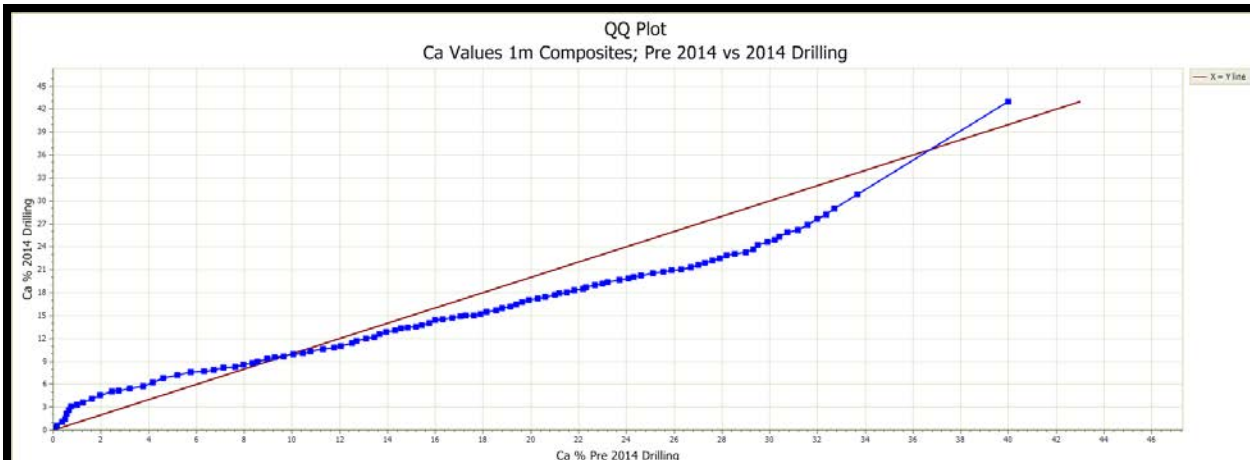


Figure 11 : Fe values for 1m Composites from Per 2014 and 2014 drilling



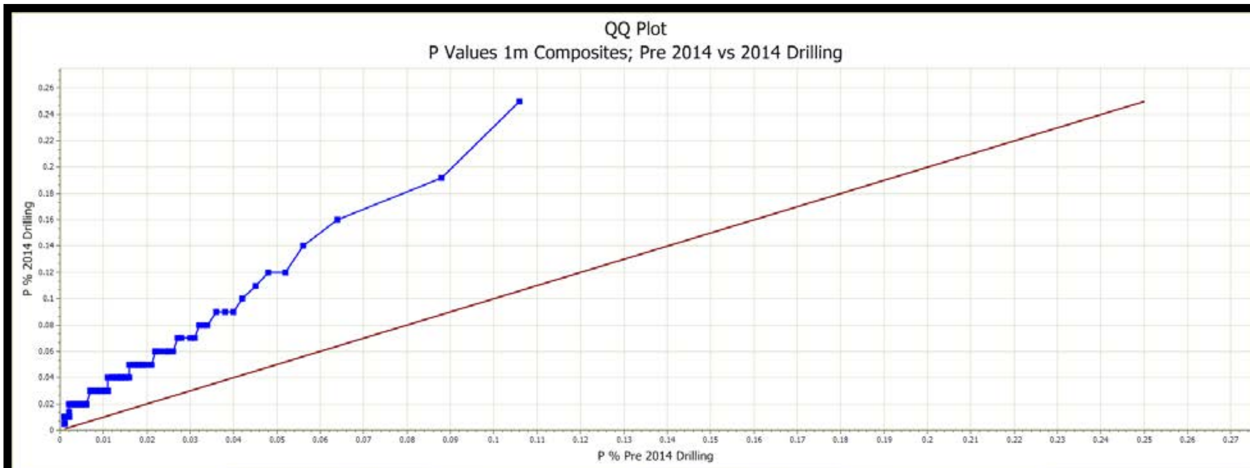
File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	Al2O3Pcnt	X name	Al2O3Pcnt	Corr coeff	0.997
Sample Ny	769	Sample Nx	2657	Rank Corr Coeff	-1152846766.338
Y Mean	4.37	X Mean	5.23	xVar / yVar	2.25
Y variance	3.98	X variance	8.96	Precision	19.39
Y Standard Deviation	2.00	X Standard Deviation	2.99		

Figure 12 : Al values for 1m Composites from Per 2014 and 2014 drilling



File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	CaOPcnt	X name	CaOPcnt	Corr coeff	0.987
Sample Ny	769	Sample Nx	2657	Rank Corr Coeff	-1152846766.338
Y Mean	14.58	X Mean	16.46	xVar / yVar	1.74
Y variance	55.06	X variance	95.89	Precision	16.73
Y Standard Deviation	7.42	X Standard Deviation	9.79		

Figure 13 : Ca values for 1m Composites from Per 2014 and 2014 drilling



File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	PPcnt	X name	PPcnt	Corr coeff	0.996
Sample Ny	769	Sample Nx	2542	Rank Corr Coeff	0.943
Y Mean	0.04	X Mean	0.01	xVar / yVar	0.20
Y variance	0.00	X variance	0.00	Precision	132.00
Y Standard Deviation	0.03	X Standard Deviation	0.02		

Figure 14 : P values for 1m Composites from Per 2014 and 2014 drilling

During the modelling process a comparison between the 2014 drilling and Pre 2014 drilling showed significant variation in the basic statistics for S (Sulphur) and W (Tungsten), see Table 12. There also appeared to be some much smaller differences associated with the Sn (Tin) data sets.

Since neither W or Sn were considered to be key elements in the deposit for the purposes of this report, the decision was made to replace the full set of Tin and Tungsten with the set used for the 2011 model, this resulted in a change in the units in which the elements were reported from ppm to percent. With the exception of the values shown in Table 11 all values reported for these elements are from the 2011 dataset. Note that the vast majority of the data points for Tungsten were from the Pre 2014 data set.

2014 Drilling	Minimum	Maximum	Points	Mean	Median	Sichel's T	Std Dev	COV	Outliers
SPPM	10	31900	1944	489.05	80.00	355.82	1902.781	3.891	225
SnPPM	0.004	15000	2807	607.13	420.00	2062.08	685.788	1.130	70
WPPM	1.2	358	517	21.05	7.40	15.83	47.991	2.280	67
Pre 2014 Drilling	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
SPPM	10	4900000	1172	56395.88	7500.00	93705.74	262850.326	4.661	185
SnPPM	10	9600	2059	746.19	500.00	809.02	726.463	0.974	84
WPPM	100	700000	1242	48208.78	700.00	15529.98	131950.329	2.737	161

Table 12 : Comparison of 2014 and P2014 Descriptive statistics for S, Sn & W

Similarly when the data was initially set up for modelling the differences between the Pre 2014 and 2014 data sets for Sulphur were noted and a decision made to use only the Pre 2014 Sulphur values for the model. It was later determined that there were however issues with the Pre 2014 data set for Sulphur and only Sulphur.

It was expected that the modelled values for those elements using Pre 2014 data only would compare well with the values reported in the 2011 Resource Report, and this was the case with Tin and Tungsten. The modelled values for Sulphur were somewhat different from the values reported in the 2011 model. While the modelled data for Sulphur compared well with the input data used it became apparent that the input data for Sulphur taken from the Access database base of historical data did not match the Sulphur values reported in the 2011 Resource Report, Appendix 1. The decision was therefore made to use the 2014 data only for Sulphur.

The issue is illustrated by comparing the Pre 2014 values (from the Access database) with the Sulphur values obtained from the 2014 drilling. The Pre 2014 values appear to be very different to the 2014 values, this is shown in the QQ Plot at Figure 15, if the two data sets were from the same data distribution they would plot along the red line. There is, however, a high (97.5) correlation coefficient between the two data sets which indicates some relationship. The mean of the Pre 2014 data set is however 3670 compared to the 2014 data set mean of 350.14. It would seem that it is likely that the pre 2014 values have been scaled by a factor of 10 at some time. Until such time as original assays results can be obtained there is no way to confirm this.

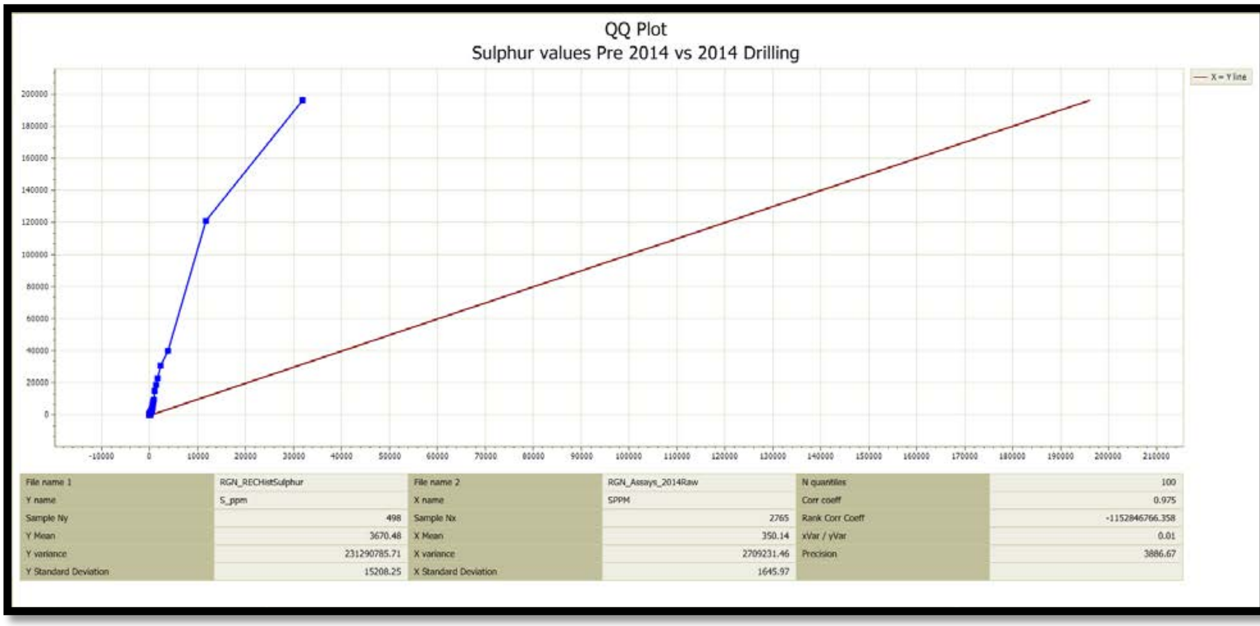


Figure 15 : Comparison between Pre 2014 and 2014 Sulphur values

As a result it was decided to use the 2014 values only for further Sulphur work. The Statistical data shown in Appendix E reflects this decision.

13.2 Geostatistical investigation

Geostatistics (kriging) provides a well defined statistical way of handling spatial data to produce modelling results which can be statistically verified. Other modelling methods which do not have a statistical basis, such as Inverse Distance modelling often produce very good results but the only method of verifying the quality of the modelling process is to visually check results and to compare statistics of before and after results. Geostatistics overcomes these limitations, provided appropriate statistical models (semi variograms) can be made. Results need to be checked in the same way as for empirical models but there is also the ability to generate a statistical measure of the validity of the modelling.

Difficulties can be encountered if data is highly variable and data comes from multiple geological domains, but provided the data set to be modelled is adequately domained it provides a very good modelling method. Geostatistics were applied to a number of the variables to be modelled. The modelling process involved constructing downhole experimental semi variograms to determine the nugget effect associated with the attribute. The nugget effect is the inherent random noisiness in the system, or the variation in results is the same point in space is repeatedly sampled. Omni-directional experimental semi variograms were then constructed and suitable models fitted to the data to provide the weighting factors to be used in the modelling process. If the data density is high enough it is useful to build experimental 3D semi variograms to allow the weighting factors to be determined for the along strike / plunge direction, the down dip and across dip directions of the dataset being modelled. The current drill spacing however does not provide enough, critical, close spaced sample observations to allow the construction of sensible 3D experimental semi variograms.

The experimental downhole and omni-directional semi variograms constructed for Sg (Bulk Density), Fe (Iron), Al (aluminium), Ca (Calcium), P (Phosphorous), W, (Tungsten) and Sn (Tin) are shown in Appendix F. Experimental semi variograms for Sulphur are also shown. Those for Fe are also shown below in Figure 16 and 17. The nature of the experimental semi variograms generated suggest that the data meets the key requirement that it be from one geological domain, in this case the mineralised zone.

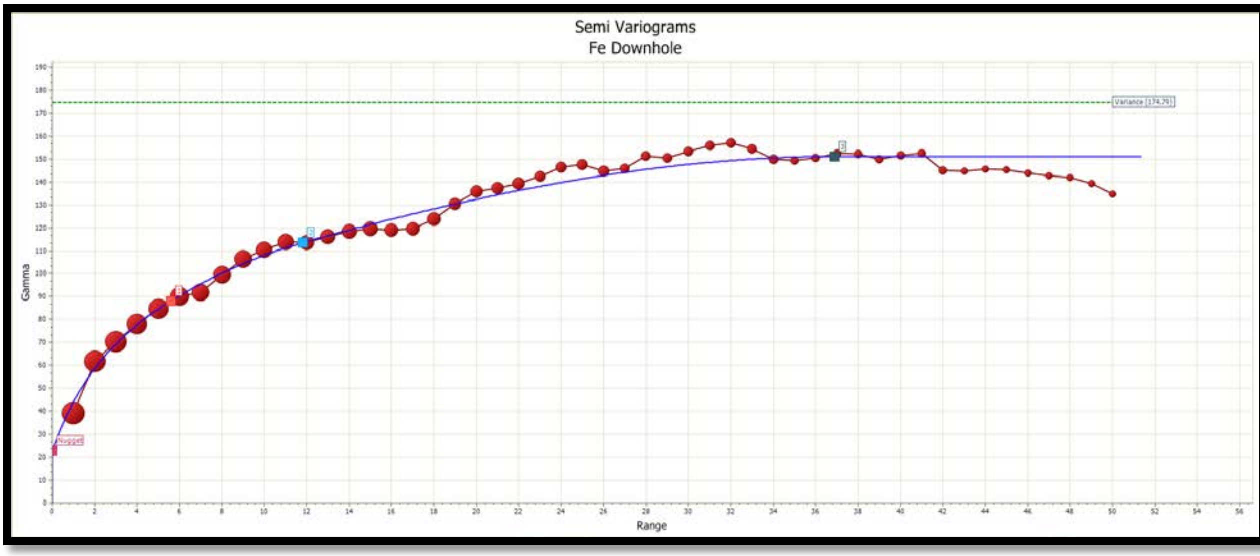


Figure 16 : Downhole experimental Semi Variogram for Fe with model fitted

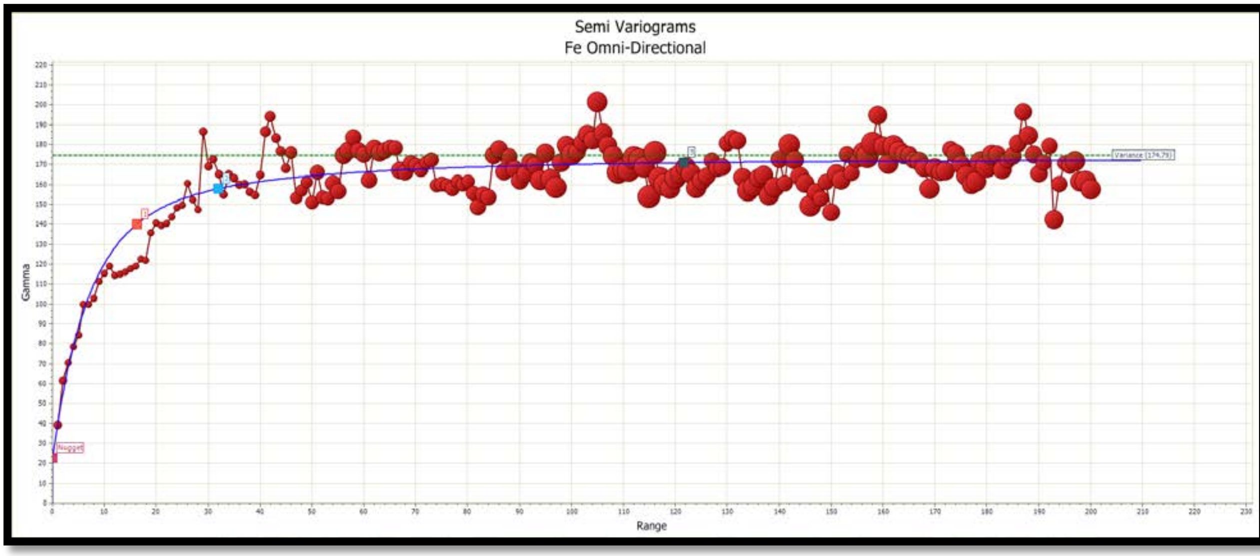


Figure 17 : Omni-Directional experimental Semi Variogram for Fe with model fitted

The Model values extracted from the experimental semi variograms are listed in Tables 13 & 14

Downhole Semi Variogram Model Parameters					
Variable	**Nugget**	**Range**	**Sill**	**Type**	**Component**
SG (ore)	0	6.79	0.1007	Spherical	1
		31.67	0.1426	Spherical	2
SG (Non ore)	0	1.91	0.0000	Spherical	1
		52.68	0.1513	Spherical	2
Fe %	22.9	5.59	38.0000	Exponential	1
		11.81	20.3000	Spherical	2
		36.90	69.9000	Spherical	3
Al2O3 %	0.936	13.00	2.3320	Exponential	1
		28.80	2.4100	Spherical	2
Ca O %	7.2	4.75	16.1000	Spherical	1
		42.31	60.7000	Spherical	2
P %	0.00019	15.21	0.0007	Exponential	1
SnO2 %	0.00037	4.30	0.0020	Spherical	1
		6.99	0.0007	Spherical	2
		41.33	0.0023	Spherical	3
WO3 %	0.00347	7.37	0.0004	Exponential	1
		35.35	0.0014	Spherical	2
Ln S ppm	0.35	12.17	1.6260	Exponential	1
		31.37	0.3870	Exponential	2

Table 13 : Model values from Downhole Experimental Semi Variograms

Omni-Directional Semi Variogram Model Parameters					
Variable	**Nugget**	**Range**	**Sill**	**Type**	**Component**
SG (ore)	0	27.70	0.3140	Exponential	1
SG (Non ore)	0	37.60	0.0699	Exponential	1
		120.90	0.2007	Spherical	2
Fe %	22.9	16.30	70.7000	Exponential	1
		32.00	53.4000	Exponential	2
		121.60	25.2000	Exponential	3
Al2O3 %	0.936	11.50	3.2200	Exponential	1
		64.30	1.8200	Spherical	2
Ca O %	7.2	6.70	24.2000	Spherical	1
		84.40	49.5000	Spherical	2
P %	0.00019	14.64	0.0007	Exponential	1
SnO2 %	0.00037	4.10	0.0020	Spherical	1
		22.80	0.0030	Spherical	2

Omni-Directional Semi Variogram Model Parameters					
Variable	Nugget	Range	Sill	Type	Component
		82.30	0.0007	Spherical	3
WO3 %	0.00347	7.79	0.0004	Exponential	1
		35.25	0.0014	Spherical	2
Ln S ppm	0.35	12.57	1.6320	Exponential	1
		24.26	0.3690	Exponential	2

Table 14 : Model values from Omni-Directional Experimental Semi Variograms

13.3 Modelling Parameters

13.4 Model Setup

Block Modelling consisted of several phases. An initial empty block model was constructed to cover the limits of the deposit plus a boundary in order to allow later Open Pit Optimisation. The mode details are set out in Table 15.

Dimension	Minimum Centre	Maximum Centre	Block Size
East	402005	403245	10
North	5425055	5426345	10
RL	303	597	6

Table 15 : Block Model dimensions

Note that Micromine defines models based on block centres, the model origin, bottom left, is therefore 402,000 East, 5,425,050 North and 300 RL.

The block size of 10 x 10 x 3 was chosen to fit with a potential pit consisting of 3m benches. The east and north dimensions provide a reasonable amount of resolution without being too small relative to the drillhole spacing.

The empty model was then intersected by a Digital Terrain Model (DTM) of the topographic surface (Rogetta_LidarDEMOBMTRIM_201410). The topographic surface was constructed from the ground strike points generated by a LIDAR survey of the tenements, managed by Lottah, in September 2014. When flagging blocks, in the model that were above or below the topographic surface, blocks which intersected the DTM were sub-blocked to a maximum of 3 sub-blocks in East, 3 sub-blocks in North and 2 sub-blocks in RL. This resulted in a minimum block size of 3.33 x 3.33 x 3 m after the topographic surface was assigned. Blocks and sub-blocks below the surface were labelled as Rock, those above were labelled Air in a field in the model called TopoCode.

The model was then intersected with the mineralisation wireframe (RGNMagZone1_201503) and again blocks which intersected the boundary were sub-blocked to a maximum of 3 sub-blocks in East, 3 sub-blocks in North and 2 sub-blocks in RL. The blocks inside the Mineralisation wireframe were labelled as MMAG in a field in the model called WFCode. The minimum block size of 3.33 x 3.33 x 3 m was maintained after the mineralisation wireframe was assigned.

The granite wireframe was then assigned to flag blocks which were below granite intersection, no sub-blocks were created. The WFCode field was labelled GRAN if blocks were blow the granite contact.

13.5 Attribute Interpolation

Once the coded block model was produced grade and other attributes such as SG and RQD) were interpolated into the block model. The interpolation was carried out in a number of stages using both Universal Kriging and Inverse Distance, the attributes modelled in each run are listed in Table 16.

Run	Attributes	Method
1	SG	Universal Kriging
2	Fe	Universal Kriging
3	Al, Ca & P	Universal Kriging
4	Sn, W & S	Universal Kriging
5	K, LOI, Mn, Na, Si, Sr, Ti & Zn	Inverse Distance
6	As, Ba, Cl, Co, Cr, Cu, Mg, Ni, Pb, V & Zr	Inverse Distance
7	Bi, Cd	Inverse Distance
8	RQD	Inverse Distance

Table 16 : Attributes modelled in each modelling run

Attributes were grouped for modelling runs based on the number of data points in the input dataset used in the modelling. If an uneven number of data points are used when interpolating a group of elements the modelling algorithms will only take data points which exist for all elements in the group. In this situation observations may not be used which can seriously bias the interpolation result. Grouping attributes to be modelled into groups with near equal numbers of input points avoids this issue. Many of the attributes have been modelled with an Inverse Distance algorithm, this is an empirical modelling method that produces good results where there is a good data coverage. Universal Kriging is suited to modelling data for which a good semi variograms (or semi variograms in the case of 3D Kriging) and allows the validity of the result to be tested. Creating experimental semi variograms and modelling them is a time consuming task, especially if the data distribution differs greatly from a normal or Log Normal distribution, and is not considered to be warranted in this case for minor elements. The individual modelling runs are discussed below.

13.5.1.1 Discretisation

When modelling a block it is common to use a set of discretisation points, values for which are averaged to estimate the block value, rather than just a single estimate representing the centre of the block. In all modelling runs the discretisation parameters were set to 3 in East, 3 in North and 2 in RL. This means that each block is the average of 18 interpolations each of which estimate the value at a different point in the block being estimated.

13.5.2 Interpolation, SG

The first attribute to be interpolated was SG, this allowed an estimate of the tonnage contained by the mineralisation wireframe to be made using a value for Bulk Density which reflected the contents of the wireframe. The SG value was interpolated in two passes, one for those points inside the mineralisation wireframe, and the other for those outside the mineralisation wireframe. Both interpolation runs used Ordinary kriging based on an omnidirectional semivariogram model for SG, see Section 12.2, the search ellipse and other modelling controls used had the parameters summarised in Table 17 and illustrated in Figure 18. The Radius parameter applies to the axis with the factor of 1, other axis are relatively longer or more commonly shorter depending on the factor applied, so a factor of 0.5 with a search radius of 100m would be 50m. The azimuth defines the orientation of the longest axis (a Z axis rotation), plunge pitches the long axis up or down as appropriate (an X axis rotation) while rotation tilts the second axis (a Y axis rotation) with a positive rotation rotating up and a negative rotation rotating down.

The sectors parameter divides the search ellipse into a number of zones, 16 in the case of the SG ellipsoid, while Maximum Points Per Sector limits the number of data points in a sector which are used for interpolation. The Minimum Points parameter defines the minimum number of points used to interpolate a value in a block. The Minimum Number of Data Sources, typically drillholes, contribute to the interpolation. Minimum and Maximum Data Points per Source define the number of points from each data source used by the interpolation.

Ellipse	Radius	Sectors	Factor	Azimuth	Plunge	Rotation
SG	200m	16	1	25°	0°	
			0.5			0°
			0.3			
	Maximum Points per sector	10	Minimum Points	1		
	Minimum Number of Sources	1	Minimum points per source	1	Maximum Points per Source	10

Table 17 : Search ellipsoid and other parameters used for interpolating SG

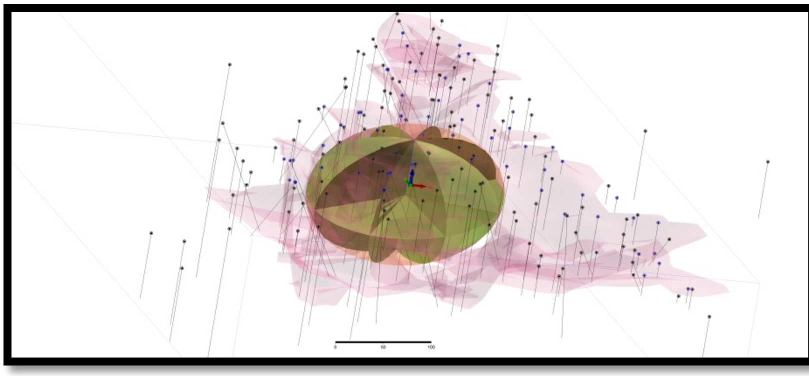


Figure 18 : The SG ellipsoid striking at 25 degrees east of north. It is oriented flat (no pitch or rotation)

The first modelling run for SG, used those source composites (1847) inside the mineralisation wireframe to interpolate blocks in the block model which were flagged as being below the ground surface (Rock) and inside mineralisation (MAG).

The second modelling run for SG, used those source composites (3442) outside the mineralisation wireframe to interpolate blocks in the block model which were flagged as being below the ground surface (Rock) and outside mineralisation (MAG).

13.5.3 Interpolation, Fe

Interpolation of Fe (Iron) grades used a Universal Kriging estimator based on an omnidirectional semivariogram. The input points were limited to those points which were inside the wireframe, interpolating those blocks in the model which were flagged as being in the mineralisation wireframe and below the topographic surface. Three passes were used to populate the model, each modelling run used variations in the search ellipse and other associated parameters to both interpolate blocks and to classify the blocks as nominally Measured, Indicated or Inferred. Classification of the model is further discussed below under section 12.5.10 Classification. The key modelling parameters are set out in Table 18. A total of 3329 composites were inside the mineralisation wireframe and used to model the Fe values.

Ellipse	Radius	Sectors	Factor	Azimuth	Plunge	Rotation
Fe, Measured	75m	16	1	25°	0°	
			0.5			0°
			0.3			
	Maximum Points per sector	10	Minimum Points	4		
	Minimum Number	4	Minimum points per	1	Maximum Points per	20

Ellipse	Radius	Sectors	Factor	Azimuth	Plunge	Rotation
	of Sources		source		Source	
Fe, Indicated	100m	16	1	25°	0°	
			0.5			0°
			0.3			
	Maximum Points per sector	10	Minimum Points	4		
	Minimum Number of Sources	2	Minimum points per source	1	Maximum Points per Source	20
Fe, Inferred	150m	16	1	25°	0°	
			0.5			0°
			0.3			
	Maximum Points per sector	10	Minimum Points	1		
	Minimum Number of Sources	1	Minimum points per source	1	Maximum Points per Source	20

Table 18 : Search ellipsoids and other parameters used for interpolating Fe

13.5.4 Interpolation, Al, Ca & P

Al (Aluminium), Ca (Calcium) and P (Phosphorous) all had a total of 3151 composites inside the mineralisation wireframe. Interpolation used a Universal Kriging estimator based on omnidirectional semivariograms (See Appendix F). The input points were limited to those points which were inside the wireframe, interpolating those blocks in the model which were flagged as being in the mineralisation wireframe and below the topographic surface. Three passes were used to populate the model, each modelling run used variations in the search ellipse and other associated parameters to both interpolate blocks and to classify the blocks as nominally Measured, Indicated or Inferred. The search ellipsoids and associated parameters were the same as for Fe see Table 18.

13.5.5 Interpolation, Sn, W

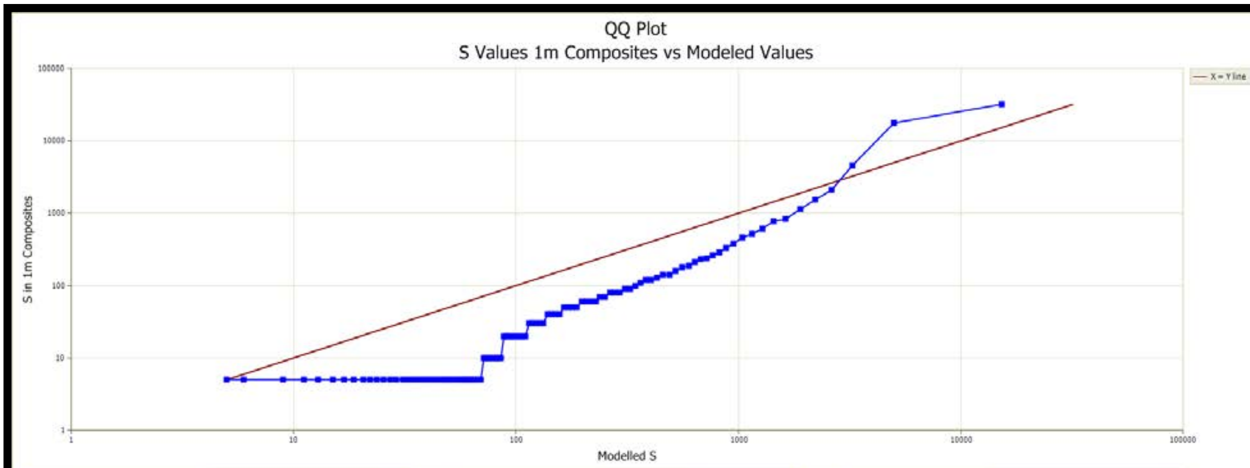
As discussed under Section 12.1.3 Comparison With Previous Work, above, a decision was made to replace the full set of Sn and W with the set used for the 2011 model and to use updated variography, this resulted in a change in the units in which the elements were reported from ppm to percent.

Interpolation for Sn and W used a Universal Kriging estimator based on an omnidirectional semivariogram. The input points were limited to those points which were inside the wireframe, interpolating those blocks in the model which were flagged as being in the mineralisation wireframe and below the topographic surface. Three passes were used to populate the model, each modelling run used variations in the search ellipse and other associated parameters to both interpolate blocks and to classify the blocks as nominally Measured, Indicated or Inferred. The search ellipsoids and associated parameters were the same as for Fe see Table 18

Given that this set of attributes was modelled with a restricted data set it will be appropriate to carry out some further work to resolve the results from the 2014 drilling with the Pre 2014 drilling

13.5.6 Interpolation, Sulphur

As noted under Section 12.1.3, Comparison With Previous Work, above, a decision was made to replace the full set of Sulphur values with just the set derived from 2014 drilling. Sulphur values were modelled using several different interpolators. The dataset of 2014 data points (2014) clearly shown a log normal character and good experimental semi variograms were fitted (see Section 12.2 and Appendix F) the result of the data interpolation using Log Normal kriging however gave an estimate that indicated the mean values for Sulphur were significantly below those in the input data set. This seems to happen with Log Normal Kriging if the data values being modelled are low (i.e. 0 - 1 %). After looking at the results of several different interpolation methods the decision was made to use Inverse Distance as the interpolator. This gave a good estimate of the mean of the input dataset and also generally preserved the shape of the input data set distribution as shown on the QQ plot shown at Figure 19.



File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503ABVb	N quantiles	100
Y name	SPPM	X name	SPPM	Corr coeff	0.957
Sample Ny	2244	Sample Nx	24467	Rank Corr Coeff	-62.216
Y Mean	3.50	X Mean	4.94	xVar / yVar	0.58
Y variance	3.47	X variance	2.00	Precision	13.26
Y Standard Deviation	1.86	X Standard Deviation	1.41		

Figure 19 : Sulphur in 1m Composites vs Modelled Sulphur values

The input points were limited to those points which were inside the wireframe, interpolating those blocks in the model which were flagged as being in the mineralisation wireframe and below the topographic surface. Three passes were used to populate the model, each modelling run used variations in the search ellipse and other associated parameters to interpolate blocks. The search ellipsoids and associated parameters were the same as for Fe see Table 18

Given that this set of attributes was modelled with a restricted data set it will be appropriate to carry out some further work to resolve the results from the 2014 drilling with the Pre 2014 drilling, especially as Sulphur is important in relation to Acid Mine Drainage (AMD). Independent sampling (of 2014 drilling data) and analysis for AMD potential has indicated that while most parts of the mineralisation are unlikely to pose a problem there are areas which appear to be associated with some clay zones which have the potential to cause issues. This work has been carried out by GHD Consultants and is the subject of a separate report. A better understanding of the nature of Sulphur variability in the mineralisation will therefore be important to mine planning and scheduling.

13.5.7 Interpolation, Other assay fields

Other assay attributes, were modelled by an Inverse Distance interpolator, this was carried out in 3 runs to group attributes with common numbers of composites together.

Attributes modelled in ID Run 1 were K (Potassium), LOI (Loss on Ignition), Mn (Manganese), Na (Sodium), Si (silicon), Sr (Strontium), Ti (Titanium) & Zn (Zinc) all with 3151 (or very near) points.

Attributes modelled in ID Run 2 were As (Arsenic), Ba (Barium), Cl (chlorine), Co (cobalt), Cr (Chromium) , Cu (Copper), Mg (Magnesium), Ni (Nickel), Pb (Lead), V (Vanadium) & Zr (Zirconium) all with approximately 2300 points.

Attributes modelled in ID Run 3 were Bi (Bismuth) & Cd (Cadmium) both with approximately 1000 points.

All Inverse Distance modelling used the same search parameters etc. the. The key controls, after search ellipse etc, on the inverse distance interpolator is the weighting power and the weighting shape. A lower inverse power produces a more relaxed model with the influence of points spreading further than if a higher power is used. Common values used range between 1.5 and 3 for the inverse power and 2 is most commonly used and was used for this work. An inverse power of 2 will mean that a point which is twice as far from the location being estimated as a second point will have ¼ of the influence on the estimate compared to the second point. The shape of the weighting can be varied from circular/ spherical (isotropic), which was used for the modelling runs to elliptical (Anisotropic). An anisotropic ellipse is appropriate where the mineralisation being modelled shows strong trend. The input points were limited to those points which were inside the wireframe, interpolating those blocks in the model which were flagged as being in the mineralisation wireframe and below the topographic surface. Three passes were used to populate the model, each modelling run used variations in the search ellipse and other associated parameters to both interpolate blocks and to classify the blocks as nominally Measured, Indicated or Inferred. The search ellipsoids and associated parameters were the same as for Fe see Table 18

13.5.8 Interpolation, RQD

Interpolation of RQD (Rock Quality Index) used the Inverse Distance Interpolator. Because RQD was calculated on all core there was considerable number of composite points outside of the mineralised zone which could be used in the model. RQD was therefore interpolated in two Runs, one which used the data points inside the mineralisation wireframe and the other which used points outside the mineralisation wireframe. In all other respects the interpolation was the same as for other attributes modelled by the inverse distance interpolator.

13.5.9 Validation

Primary validation of the model was by comparison of the input data values shown on section with the modelled values and by QQ plots to compare the mean and variance and shape of the distribution of the input and modelled datasets. The variables that were kriged as part of the modelling process were also tested to ensure that the modelled values were a close match to the input values by a process of cross validation or jack knifing. This process takes the input data set and after removing each point in sequence estimates values at those locations using the chosen semi variogram model. The differences between the actual values and the estimated values are recorded and used to calculate an error statistic; a semi variogram model is considered appropriate it the error statistic has a mean which is close to zero with a standard deviation close to one. The observed and estimated values were also checked via scatter plots of residuals vs estimated values to see if there was evidence of conditional bias. A kriging operator is said to be unbiased if the error statistic, has a mean of 0 and a standard deviation of 1. Conditional bias occurs where a subset (grade range) of the data being modelled has a mean and standard deviation for the error statistic that varies greatly from 0 and 1 respectively (see Isaaks & Srivastava 1989). Typically this may result in over estimates of low grades and under estimates of high grades. The plots which appear in Appendix E of Residual vs estimate suggest that Conditional bias is not an issue.

The error statistics for the kriged variables are shown together with the cross validation results for the kriged variables in Tables 19 and 20. QQ plots and tables showing the fit of the modelled data to the input data and histograms showing the form of the modelled distribution for the kriged variables are included in Appendix E : Statistics. Sections showing the modelled values are shown in Appendix G : Plans and Sections.

Cross Validation Results			
Variable	**Item**	**Mean**	**SD**
SG	Raw Data	3.620	0.5560
1847	Estimate	3.624	0.5257
points	Standard Error	0.189550	0.017933
	Error Statistic	-0.006292	0.735820
Fe	Raw Data	32.079	13.2210
3329	Estimate	32.192	11.1930
Points	Standard Error	7.117700	0.324990
	Error Statistic	-0.006741	1.000900
Al	Raw Data	4.704	2.4432
3151	Estimate	4.677	1.9618
points	Standard Error	1.474300	0.061428
	Error Statistic	0.008553	0.924880
Ca	Raw Data	16.587	8.9864
3151	Estimate	16.584	7.9615
points	Standard Error	4.097300	0.215500
	Error Statistic	0.000704	1.027100
P	Raw Data	0.023	0.0292
3066	Estimate	0.023	0.0222
points	Standard Error	0.019926	0.000771
	Error Statistic	-0.000167	1.004900

S	Raw Data	0.094	0.0789
1220	Estimate	0.094	0.0613
points	Standard Error	0.027721	0.000854
	Error Statistic	0.003219	1.657900
W	Raw Data	0.072	0.5541
883	Estimate	0.072	0.0470
points	Standard Error	0.027007	0.007000
	Error Statistic	-0.003543	1.043300

Table 19 : Kriging error statistics for kriged variables

QQ Plot Results			
Variable	**Item**	**Raw Data**	**Model**
SG	Points	1827	24389
	Mean	3.63	3.54
	Variance	0.28	0.04
	SD	0.53	0.90
	Correlation Coefficient		
	Rank Correlation	1.000	
	xVar/yVar	0.130	
	Precision		
Fe	Points	3329	24467
	Mean	32.08	30.99
	Variance	174.40	52.33
	SD	13.22	7.23
	Correlation Coefficient	1.020	
	Rank Correlation		
	xVar/yVar	0.300	
	Precision	18.230	

Al	Points	3151	24467
	Mean	4.70	4.71
	Variance	5.97	1.27
	SD	2.44	1.13
	Correlation Coefficient	1.003	
	Rank Correlation		
	xVar/yVar	0.210	
	Precision	27.800	
Ca	Points	3151	24467
	Mean	16.59	16.84
	Variance	80.73	35.20
	SD	8.98	5.92
	Correlation Coefficient	0.996	
	Rank Correlation	1.000	
	xVar/yVar	0.440	
	Precision	18.500	
P	Points	3059	24467
	Mean	0.02	0.02
	Variance	0.00	0.00
	SD	0.02	0.01
	Correlation Coefficient	0.952	
	Rank Correlation	1.000	
	xVar/yVar	0.240	
	Precision	61.990	
Sn	Points	1220	23127
	Mean	0.09	0.09
	Variance	0.01	0.01
	SD	0.08	0.05
	Correlation Coefficient	0.955	
	Rank Correlation	0.999	
	xVar/yVar	0.350	
	Precision	40.120	

W	Points	883	21950
	Mean	0.07	0.07
	Variance	0.00	0.00
	SD	0.06	0.04
	Correlation Coefficient	0.979	
	Rank Correlation		
	xVar/yVar	0.049	
	Precision	26.630	

Table 20 : QQ Plot correlation Statistics for kriged variables

After initial model runs a cross check was made between the modelled data and the results reported in the 2011 Resource Report for Fe, Sn, W, Ca, P. There was good agreement between the statistics for all variables.

13.5.10 Classification

The resource has been classified as Measured, Indicated and Inferred. In the 2011 report (Callaghan 2011) the resource was classified as Inferred on the basis that drilling was on 100m spacing and that this was insufficient to account for the variability in this deposit type. There was No QAQC data available from the drilling programs, there were limited bulk densities and no Davis Tube recoveries.

The current drill program has been designed to address those issues, with an extensive QAQC program, twining of previous holes to confirm results, 50 m spaced drilling and the collection of an extensive bulk density data set. Davis tube test work has been conducted together with extensive metallurgical test work.

Modelling of the data set was designed to ensure that blocks located close to multiple boreholes (4) were assigned a higher classification than blocks which were estimated by data from 2 holes or 1 hole. Inspection, in section and plan of the location of blocks flagged as Measured, Indicated and Inferred blocks confirms that this approach has classified blocks in an appropriate way.

13.5.11 Results

Interrogation of the block model has yielded the grades and tonnages shown in Table 21 and the grade tonnage curves shown in Figure 20. A full breakdown of grades and tonnages is given in Appendix H.

Rogetta North : Mineral Resources By Cutoff Grade and Resource Category

All Material by Resource Category

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	SiO2%
60.0	Total	Inferred	0	0	3.38	49.47	4.16	4.14	0.032	0.078	1.50	0.062	0.073	540.094	0.000	0.00
55.0	Total	Inferred	18,000	59,000	3.34	44.22	3.97	7.38	0.028	0.066	4.34	0.071	0.055	469.236	0.451	0.58
45.0	Total	Inferred	34,000	112,000	3.37	40.19	3.82	9.83	0.023	0.062	5.02	0.060	0.040	368.602	0.548	0.36
35.0	Total	Inferred	51,000	170,000	3.37	39.40	3.84	10.37	0.022	0.060	5.02	0.059	0.038	353.326	0.635	0.28
30.0	Total	Inferred	54,000	184,000	3.39	38.84	3.90	10.68	0.022	0.062	4.92	0.057	0.037	349.748	0.640	0.26
27.5	Total	Inferred	57,000	192,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.647	0.26
25.0	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
22.5	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
20.0	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
17.5	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
15.0	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
12.5	Total	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.25
10.0	Total	Inferred	60,000	203,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.656	0.25
0.0	Total	Inferred	0	0	4.41	61.38	2.37	1.49	0.015	0.015	-0.11	0.062	0.067	43.178	0.000	0.00
60.0	Total	Indicated	2,000	7,000	3.57	48.00	4.52	5.93	0.030	0.093	1.93	0.069	0.103	884.282	1.042	0.14
55.0	Total	Indicated	183,000	655,000	3.57	42.27	4.80	8.98	0.026	0.079	2.96	0.075	0.100	644.814	1.053	0.30
45.0	Total	Indicated	582,000	2,075,000	3.56	38.25	5.05	11.25	0.026	0.079	3.17	0.081	0.092	471.589	1.035	0.23
35.0	Total	Indicated	981,000	3,489,000	3.54	36.73	5.03	12.33	0.025	0.077	3.27	0.081	0.086	426.038	1.040	0.25
30.0	Total	Indicated	1,173,000	4,157,000	3.54	35.80	5.03	13.11	0.025	0.076	3.27	0.081	0.083	400.092	1.056	0.25
27.5	Total	Indicated	1,291,000	4,567,000	3.53	35.15	5.04	13.64	0.024	0.076	3.28	0.081	0.081	384.878	1.068	0.25
25.0	Total	Indicated	1,368,000	4,834,000	3.53	34.91	5.05	13.82	0.024	0.077	3.29	0.082	0.080	381.778	1.069	0.24
22.5	Total	Indicated	1,393,000	4,923,000	3.53	34.87	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.776	1.068	0.24
20.0	Total	Indicated	1,397,000	4,936,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.24
17.5	Total	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.24
15.0	Total	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.24
12.5	Total	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.24
10.0	Total	Indicated	1,397,000	4,937,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	1.066	0.24
0.0	Total	Indicated	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.00

60.0	Total	Measured	1,000	5,000	3.72	47.96	3.90	6.21	0.023	0.124	1.34	0.069	0.092	840.062	1.117	0.11
55.0	Total	Measured	97,000	361,000	3.68	40.71	4.68	10.45	0.026	0.099	2.06	0.085	0.104	743.278	0.826	0.29
45.0	Total	Measured	511,000	1,882,000	3.67	37.33	4.93	12.45	0.028	0.103	2.08	0.084	0.098	532.802	0.830	0.32
35.0	Total	Measured	870,000	3,191,000	3.66	35.97	5.03	13.17	0.028	0.103	2.17	0.084	0.096	481.314	0.906	0.36
30.0	Total	Measured	1,039,000	3,803,000	3.65	35.24	5.08	13.61	0.028	0.103	2.24	0.084	0.096	452.371	0.942	0.36
27.5	Total	Measured	1,125,000	4,112,000	3.65	34.65	5.07	14.04	0.027	0.101	2.30	0.084	0.094	434.804	0.962	0.35
25.0	Total	Measured	1,188,000	4,336,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.230	0.969	0.34
22.5	Total	Measured	1,197,000	4,366,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.34
20.0	Total	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.34
17.5	Total	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.34
15.0	Total	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.34
12.5	Total	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.34
10.0	Total	Measured	1,197,000	4,367,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.969	0.34
0.0	Total	Measured	0	0	4.41	61.38	2.37	1.49	0.015	0.015	-0.11	0.062	0.067	43.178	0.000	0.00

All Material

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	SiO2%
60.0	Total	Total	0	0	3.83	56.32	3.07	3.37	0.025	0.028	0.6	0.068	0.071	195.587	1.667	0.30
55.0	Total	Total	3000	12000	3.62	47.98	4.22	6.08	0.027	0.108	1.57	0.066	0.098	785.074	1.072	0.30
45.0	Total	Total	328000	1187000	3.64	40.72	4.43	10.66	0.025	0.106	2.03	0.073	0.098	556.398	0.943	0.30
35.0	Total	Total	1696000	6173000	3.61	36.09	4.54	13.68	0.025	0.103	1.96	0.077	0.083	464.343	0.984	0.29
30.0	Total	Total	3768000	13596000	3.59	34.3	4.58	14.89	0.024	0.1	2.01	0.08	0.078	438.088	1.058	0.28
27.5	Total	Total	5006000	17984000	3.58	33.05	4.63	15.73	0.024	0.103	2.07	0.083	0.075	424.767	1.073	0.29
25.0	Total	Total	5945000	21305000	3.58	32.1	4.66	16.37	0.023	0.105	2.15	0.087	0.072	410.17	1.064	0.29
22.5	Total	Total	6644000	23770000	3.58	31.61	4.67	16.73	0.023	0.106	2.18	0.089	0.071	402.894	1.046	0.29
20.0	Total	Total	6966000	24904000	3.57	31.25	4.67	17.01	0.022	0.105	2.2	0.089	0.07	395.228	1.035	0.29
17.5	Total	Total	7175000	25630000	3.57	31.08	4.67	17.15	0.022	0.105	2.19	0.089	0.069	391.906	1.027	0.29
15.0	Total	Total	7261000	25931000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.00
12.5	Total	Total	7270000	25962000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.00
10.0	Total	Total	7270000	25962000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.00
0.0	Total	Total	7270000	25962000	0	0	0	0	0	0	0	0	0	0	1.025	0.00

Table 21 : Summary values for the Rogetta North Resource

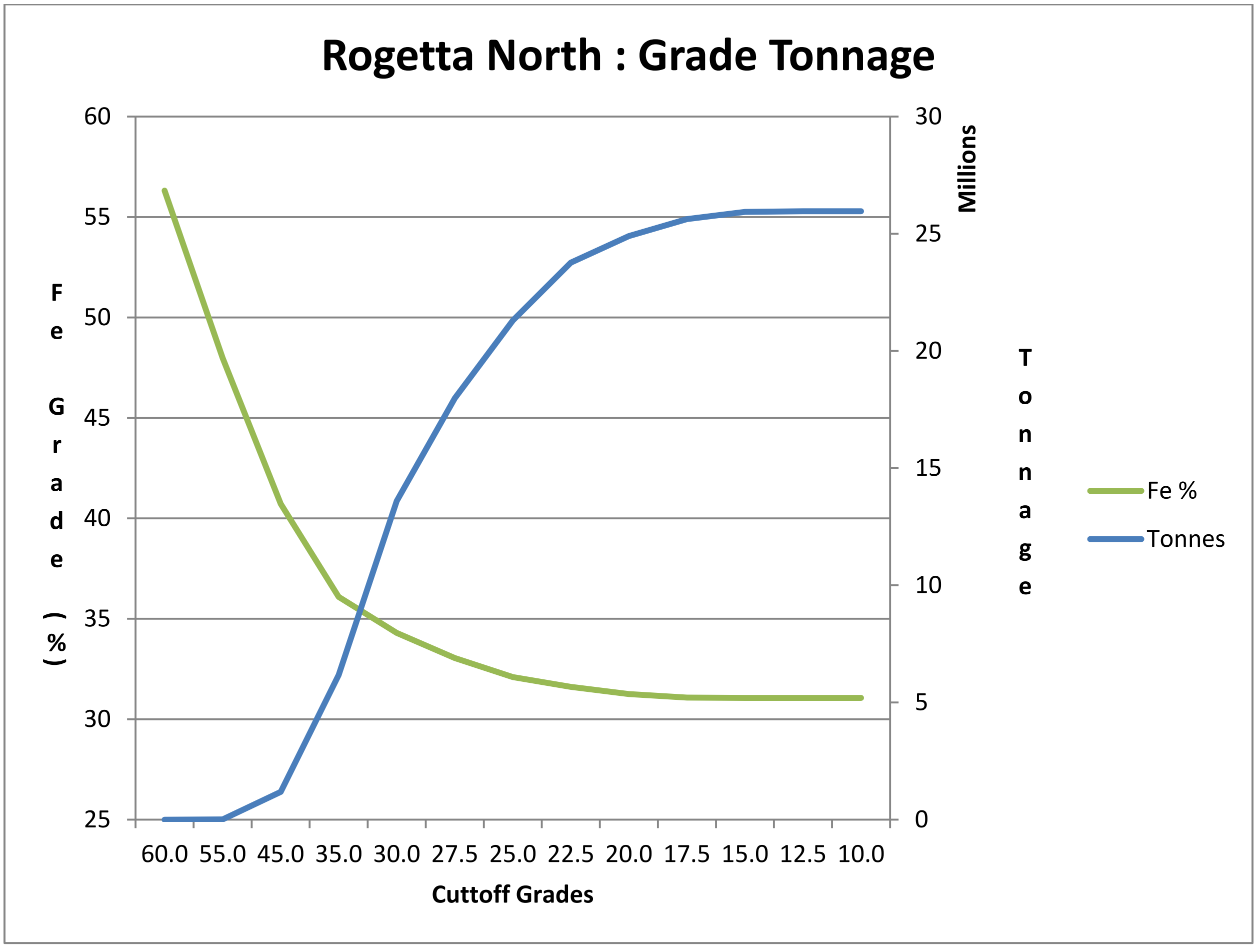


Figure 20 : Rogetta North, 2015 Resource Estimate, Grade Tonnage curve for Fe

A cutoff of 15% Fe has been used for the Resource figure. This is consistent with extracting all the material in the wireframe and provides a better basis for Pit optimisation work.

At a cutoff of 15% Fe the total Rogetta North Resource is 25.9 Million tonnes at a grade of 31 % Fe, 4.6% Al, 17.2% Ca and 0.02% P. The Resource is categorised as Measured, Indicated and Inferred as set out in Table 22 below :

Tonnes	Fe%	Cutoff	Category
316,000	32.25	15%	Inferred
13,921,000	30.25	15%	Indicated
11,649,000	31.98	15%	Measured
25,931,000	**31.06**	**15%**	**Total**

Table 22 : The Rogetta North Resource, 2015.

13.6 Recommendations for Further Work

Development of this report has suggested a number of areas where further work should be carried out in the future. These are outlined below.

The Bulk Density (SG) analysis method used has proven to produce useful and generally reliable data. It would however be useful to record the rock type for each SG sample and to compare the results for each sample against the expected SG for that rock type to help avoid errors and reduce the statistical outliers associated with this dataset.

Geostatistical analysis has been limited to Omni Directional Semivariograms and this has produced sound results. For further modelling work, especially grade control work if the deposit is mined further close spaced sampling, possibly via trenching and or drilling, would provide information across and along the deposit for use in the calculation of full directional semi variograms. Understanding the spatial variability at short ranges in all directions through the deposit will allow further improvements in the modelling of the deposit with the aim of more accurately predicting the grade of Fe and other anolytes of interest.

Davis Tube Recoveries are an important part of establishing the recoveries of Fe expected from processing of the ore. To date DTR analyses have been completed only on data from the 5 RC twin holes associated with the PQ Metallurgical Holes drilled in 2014. Further RC drilling to provide source material for Davis Tube Recovery (DTR) work to enable detailed modelling of DTR's and hence plant recovery as an aid to optimising the scheduling of mining and blending of material for the mine plant. The extent of drilling required will be able to be assessed when current DTR work recently received form ALS, in Perth but not considered as a part of this report, has been fully assessed.

As discussed under Section 12.1.3, Comparison With Previous Work, there were issues with Sulphur values in the Historic Database. This problem was only discovered during the modelling process and the current model has used 2014 Sulphur values only. Further work should be carried out to resolve the issues with the Pre 2014 dataset for Sulphur. The Tin data set used for modelling was restricted to Pre 2014 data only, a statistical comparison between the 2014 data for Tin and the pre 2014 data suggests that the data sets are compatible. Further work should be carried out to confirm this with the aim of using the full Tin data set in future modelling work.

14 Additional Notes

14.1 Capability Limitations and Consents

Australian Exploration Field Services Pty Ltd (AEFS) prepared this resource report at the request of Lottah Mining Pty Ltd. Mr Keith Whitehouse a Director and Consulting Geologist with AEFS who is the author of this report, graduated with a Bachelor of Science in Geology and Geography from Victoria University of New Zealand in the New Zealand in 1975. He has been a member in good standing of the Australasian Institute of Mining and Metallurgy since 1987 (number 107612)*, and was accepted as a Charted Professional (Geology) by the AusIMM in 2007. He has worked as a geologist within the resource industry for over 34 years, 10 of which as an independent geology consultant. He has provided mineral resource assessments under JORC and NI 43-101 to companies both in Australia and overseas, clients have included Ivanhoe Australia, Matrix Gold, Republic Gold, Belridge Enterprises, Amarillo Gold Corporation, Auralia Mining Consultants, Troy Resources, Forward Mining Ltd and TECA

* Total period of membership is 24 years from 1987 – 1992 and from 1997 to date

He specifically notes that he was Managing Director of Iron Mountain Mining Ltd (IRM) during the period 2006 – 2008. IRM in association with Red River Resources Ltd pegged the tenement EL 18/2006 on which the Rogetta North Mineralisation is located. IRM conducted the initial drilling programs which established the initial (2011) Mineral Resource at Rogetta North.

He is not aware of any material fact or material change with respect to that work that is not reflected in the report nor is he aware of any omission in relation to that work which makes the report misleading.

Similarly starting in April 2014 as a consultant to Lottah Mining Pty Ltd, Mr Whitehouse was responsible for the setup of the 2014 drill program and the results derived from it. He is not aware of any material fact or material change with respect to that work that is not reflected in the report nor is he aware of any omission in relation to that work which makes the report misleading.

14.2 Consent

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

I Gregory Keith Whitehouse confirm that I am the competent Person for the report titled "Lottah Mining Pty Ltd, Rogetta North, Resource Assessment, March 2015 and

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of Australian Exploration Field Services Pty. Ltd. and have been engaged by Lottah Mining Pty Ltd to prepare the documentation for the Rogetta North Mineralisation on which this Report.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Exploration Targets, and Mineral Resources.

I consent to the release of the Report and this Consent Statement by the directors of Lottah Mining Pty Ltd

Dated this15 Day of April 2015.

CHARTERED PROFESSIONAL
AusIMM
AUSTRALASIAN INSTITUTE OF MINING & METALLURGY
• GEOLOGY •
G KEITH WHITEHOUSE

G K Whitehouse

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Appendix A

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation
Sampling techniques	Nature and quality of sampling (eg 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. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.
Commentary	Drill sampling using a mixture of RC (2007 – 2008) and NQ sized Diamond Drilling (2009 – 2013). 2014 Drilling used Diamond Core drilling HQ and NQ triple tube. A limited amount of RC drilling twinned with Diamond PQ for metallurgical work was used and sample results included in resource estimation. RC drilling was also used for sterilization holes. RC samples from 2007 – 2008 drilling were checked for Iron content using a Niton XRF and samples with grade in excess of 20% were spear sampled and sent for assay. Samples were also taken either side of the intervals identified by the Niton Analyser. Diamond core was logged, mineralized portions were split and 50 % of core sent for assay. 2007 – 2013 samples were reportedly sent to ALS Orange and AMTEC Burnie but this has not been confirmed and original Assay Certificates have not been located for samples thought to have been sent to ALS Orange. 2014 samples were prepped by ALS Burnie and assayed by ALS Iron Ore centre in Perth RC holes drilled during 2007 – 2008 used a basic QAQC program of blanks and an in-house standard; a number of duplicates were also taken. (QAQC results are however not currently available). Sampling of diamond holes prior to 2014 did not include QAQC samples, 2014 sampling included a comprehensive QAQC program of coarse blanks, pulp blanks, standards, an in house standard, and duplicates Assay method used for the 2007 – 2008 RC program, XRF suite, details currently

Criteria	JORC Code explanation
	unknown Assay method used for diamond work 2009 – 2013 to be confirmed Lab Prep for 2014 drill out, CRU31, PUL31b, WEI21, WSH22. Assay method used for 2014 drill out ALS MEXRF-21n. Additionally a split from 5 RC Met Twins was analysed using Au-ICP21 and ME-MS61r.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).
Commentary	2007 – 2008 RC 2008 – 2013 Diamond NQ 2014 Diamond triple tube HQ with NQ tail 2014 Hydro holes were by RC with face sampling hammer 2014 Geotech holes, oriented triple tube HQ and NQ 2014 Metallurgical holes, RC with face sampling hammer, twinned by standard tube diamond PQ
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. 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.
Commentary	2008 – 2009 RC samples visually assessed, metre by metre for volume consistency. Water ingress in some holes affected sample quality Diamond core was reconstructed and logged for recovery following industry standard practice. There is no known relationship between sample grade and sample recovery. Note that no assessment of this was made prior to 2014. 2014 samples were assessed by correlation plots comparing grade and sample length Mineralisation is generally coarse but comparison between sample grades from RC and Diamond sampling show no bias and very high correlation between the underlying data distributions. Comparison of results from 2007 – 2008 drilling and 2014 drilling using QQ plots show very good correlation of grades.
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.

Criteria	JORC Code explanation
	The total length and percentage of the relevant intersections logged.
Commentary	All RC holes were logged for lithology, mineralisation and alteration on a metre by metre basis. All diamond core was laid out, cleaned and logged for lithology, mineralisation and alteration. Representative chips were kept for all RC holes All 2014 core was photographed both wet and dry 2007 – 2008 RC drilling : Total drilling 2210 m 2009 – 2013 HQ and NQ drilling 780m 2014 Total drilling, 10, 116m, 138 holes; Hydro : 1,365m, 14 holes; GT :4,860m 19 holes; Resource, diamond : 5,711m, 87 Holes; Met (diamond): 485m, 5 Holes, Met / Resource RC : 480m, 5 holes, Sterilisation (RC) : 270m, 5 holes
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. Whether sample sizes are appropriate to the grain size of the material being sampled.
Commentary	All drill core was sawn to produce, generally, half core which was despatched for assay. In some cases particularly when preparing samples for AMD testing of potential ore / waste ¼ core was used as ½ core had been dispatched for chemistry. ¼ core was retained for reference purposes. In the case of PQ sized metallurgical holes, whole core was despatched for testing. These holes were twinned with RC and a sample split was retained for reference purposes. For RC samples where possible a rotary splitter was used. The majority of RC samples were spear sampled particularly where samples were wet. There were no indications even in wet samples of size differentiation in bags and spear sampling was considered to be unbiased. Where possible riffle splitting was used to obtain subsamples of RC chips from the metallurgical holes. There were problems with wet samples that meant that spear sampling had to be used for some samples. 2007 – 2008 RC drilling is recorded in the 2011 JORC report by Tim Callaghan as not being subject to QAQC. This drilling did use a blank and a standard prepared in house. The field standard was prepared by blending material but the results of this work have not been located. Duplicate samples are also known to have been taken but again the results of those are not currently available. 2009 – 2013 diamond core drilling, no known QAQC samples

Criteria	JORC Code explanation
	2014 diamond and RC drilling included comprehensive QAQC samples. In general holes were started with a Coarse Blank, Standard, Coarse blank sequence. With coarse blanks and standards alternated every 25 m down the hole. Prep crush duplicates were made every 15 metres (In RC holes a rig split was used for duplicates). Part way through the program a Field Blank (low level standard) and a Field Standard were prepared. The blank blended material was from several Hydro holes drilled by RC. The Field Standard blended a split of the RC chips from mineralised portions of the RC holes drilled to twin the PQ diamond holes drilled for met testing. From the RC twins a field split (spear sampled) was sent for chemistry, the bags were then collected and taken to the core shed where two further splits, (reference and metallurgical) were prepared by riffle splitting or, if wet, spear sampling, from mineralised intervals (based on logging of the PQ diamond twin). The balance of this material was blended to produce the Field standard. Material for both the blank and the Field Standard was loaded into a commercial $3M^3$ concrete mixer and mixed for 10 mins (a standard concrete batch is mixed for 5 mins) and then bagged in plastic bags and left to air dry as all material blended was damp, each bag was then spear sampled to produce a set of 50 samples for the blank and 100 samples for the Field Standard. These were despatched for assay and the resulting values used to estimate the true grade of the samples. Data was analysed for spread etc and long term repeat assay then used to refine the true value. NB the blank material was blended prior to blending the material used for the field standard. Sample duplicates were taken every 15m Blanks and Standards were inserted every 25m, with blanks and standards being alternated. A Blank Standard Blank combination was placed at the start and end of every hole in accordance with the Lottah Mining Sampling Protocol. (See Geological Protocols in Appendix B (DrillSampling_V1_20140708.docx) Sample size relative to grain size was large relative to the general grain size of the material being sampled. Some of the magnetite occurs as very coarse blobs but even so sample size was such that there was unlikely to have been any bias due to grain size.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.
Commentary	2007 – 2008 drilling. Assay was by XRF, samples for assay were determined based on a NITON analysis with samples with more than 20% Fe being chosen for assay. Samples were also taken each side of mineralised intervals. 2009 – 2013 sampling was based on logging of diamond core, magnetic sections of the core were split, cut and despatched for sampling 2014 drilling, sampling was based on logging of diamond core, magnetic and other interesting sections of the core were split, cut and despatched for sampling

Criteria	JORC Code explanation
	2007- 2008 drilling, QAQC data not available, but distribution of results (QQ plot) compares very well with 2014 results. A number of the holes were twinned by 2014 holes to verify results 2009 – 2013 drilling no QAQC samples collected. Results were compared with 2014 drilling via QAQC plots and show very good correlation. 2014 drilling, QAQC samples, pulp blanks, Coarse Blanks, Standards, Secondary Standards and Duplicate samples taken and analysed as part of normal sampling practice. Results were satisfactory.
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.
Commentary	As data was gathered, sectional plans were updated allowing new data to be compared with the expected results as defined by the 2011 Ore resource model. This model was generally confirmed. 2007 – 2008 data logged electronically into OCRIS on Laptop computers. OCRIS data exported into a GBIS database maintained by IRM. While the OCRIS DB is still available the GBIS database is not currently available. All Drilling data prior to 2014 has been sourced from an Access Database supplied by Tim Callaghan of Resource and Exploration Geology, A dump of the Database into Micromine (MM) format was used for modelling work and display of drill results. 2009 – 2013 data imported into and managed in Surpac. The Surpac Drilling database Access) is available and is the source of all historic data. Data from 2007 – 2008 contained in the database has been compared with historical sets of Micromine data which were also located, no discrepancies were noted other than for Sulphur values which are discussed in the body of the report to which this (JORC) Table 1 relates. 2014 drilling, all data was logged into OCRIS following the Lottah Mining PL logging, sampling etc protocols See Appendix B. From OCRIS data was exported into a drillhole database on SQL Server 2012 managed by Expedio in Perth database results were dumped into Micromine format for modelling. Extensive checking of results was carried out using drillhole plans and sections. Data in the database as at 06/02/2015 was supplemented by a number of updates and corrections which, while supplied to Expedio in Perth, were not in the Database. All drilling data used for modelling was verified in Micromine using industry standard drillhole verification methods. Numerous checks to original core and chip samples were made during the course of the drilling and subsequent modelling program to verify results. Other than industry standard compositing during the modelling process no adjustments were made to assay results at any stage of the data collection and modelling process.

Criteria	JORC Code explanation
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.
Commentary	Drillhole locations prior to 2014 were surveyed using a standard navigational GPS, this implies a location accuracy of +/- 6m. Hole locations were marked with stakes and tags, hole locations have been matched against the images of old drill lines and pads on recent 1m + resolution Ortho photos and the reported locations match well. All hole collars from the 2014 drilling campaign have been located with a DGPS and have an accuracy of +/- 1m All data has been referenced to the MGA grid, Zone 55, all azimuth measurements are referenced to True North while all dip measurements are referenced to horizontal with inclinations below the horizontal being recorded a – ve values Topographic control over the area is excellent with all elevation data derived from a LIDAR survey flown in September 2014. 1m Ortho Photos were flown in December 2014 as a part of the LIDAR survey.
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.
Commentary	Prior to 2014 the Rogetta North deposit was defined by drilling on a 50 x 100m grid. This spacing had been considered to be suitable for the reporting of an Inferred Resource under the JORC code in 2011 by Tim Callaghan of Exploration and Resource Geology. Drilling during 2014 provided coverage across the majority of the deposit on a diamond pattern 50 x 50 pattern to provide an effective 30m drill spacing and has been assessed, as a part of the report to which this (JORC) Table 1 applies to be adequate for the estimation of a resource classified as Measured and Indicated with minor Inferred portions at the extremities of the resource.
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.
Commentary	Prior to 2014 there had been no attempt at locating and defining structural controls on the Rogetta North mineralisation. There was evidence for a number of faults in the deposit as the result of previous drilling and the western margin was considered likely to be faulted. Once the LIDAR survey was obtained in September 2014, followed by high resolution aerial magnetic imagery a number of structures became apparent. Geotechnical holes

Criteria	JORC Code explanation
	drilled with oriented core during the 2014 campaign were also useful in clarifying the structural elements of the deposit. Sampling of the deposit is considered to be un biased with respect to structures. Given the nature of the deposit, metasomatic skarnification of a calcareous host, while structure is likely to have provided pathways of the mineralising fluids there is no evidence that the mineralisation is particularly structurally controlled.
Sample security	The measures taken to ensure sample security.
Commentary	Sample handling was in accordance with standard industry practice. RC samples were collected and bagged in the field and a split of intervals assessed as being of interest sent to the laboratory. Core samples were placed in core trays and were then transported to the company's core shed for logging and sampling. RC sample bags were left at the drill site and subsequently transported to a bag farm adjacent to the area under investigation. Efforts were made to ensure that no bagged samples and no core were left at site overnight although there were occasions when this did happen. Once back in the company's core shed core was stored in the core shed until logged and sampled subsequently it was loaded on to pallets, covered and strapped for long term storage in a covered core farm. All samples for analysis were kept in locked storage sheds until taken to the laboratory for analysis. Samples for geochemical analysis from the 2014 drilling, were delivered to the laboratory by company personal. RC samples from IRM drilling in 2007 – 2008 were placed into 44 gallon drums and transported to the laboratory by commercial transport contractors. Arrangements for handing diamond drill core samples from the 2008 – 2013 period are not known. There is no reason to suspect that there has been any issue with sample security as consistent results have been obtained from drilling over a 7 year period. The most recent drilling, 2014, included an extensive QAQC program. Results from this program have not indicated that sample security is likely to be an issue.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.
Commentary	There have been no formal audits of the methods used to obtain the data on which the resource report to which this table relates in based. The data has however been collected by three different companies each of which have looked critically at work carried out by their predecessors. Data to 2011 was reviewed by Tim Callaghan of Exploration and Resource Geology as a part of the preparation of his Resource statement in 2011. An Independent Geological Report was prepared on the Tenements for Forward Mining Ltd in 2011 by Simon Tear of Hellman & Schofield Pty Ltd. During the course of 2014 data has been reviewed by the author (GK Whitehouse of Australian Exploration Field Services Pty Ltd) and has been discussed on a number of occasions with industry peers. All work has been ultimately supervised by senior geologists with extensive experience in logging and sampling mineral deposits of different types in a number of countries with the intention of following current best practice.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation
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.
Commentary	The area to which this (JORC) Table 1 relates is held under a mineral exploration licence for Category 1 minerals, issued by the Government of the State of Tasmania as EL 18/2007. EL 18/2007 is held by Blythe River Iron Pty Ltd and wholly owned subsidiary of Forward Mining Ltd which in turn is currently managed by Lottah Mining Pty Ltd. The tenement was originally pegged by Red River Resources Ltd (RVR) and became part of an existing Joint Venture with Iron Mountain Mining Ltd (IRM). Rights to the tenement were transferred to Forward Mining Ltd (FML) in 2011. The transfer agreement is believed to contain a provision for a trailing royalty to IRM if the project moves into production. An application for a mining licence covering the Rogetta North Deposit has been made by Lottah Mining in the name of Forward Mining Ltd and is currently being considered by Mineral Resources Tasmania. The Mineral Resource statement to which this (JORC) Table 1 applies will support the mining licence application as will a DPEMP document being produced by GHD Consultants in relation to the project. The Rogetta project area a mixture of Private land and State Forrest. The Rogetta North deposit is on Parcel 6191768 which is Crown Land managed by Forestry Tasmania. There are no known impacts due to Native Title, Historic Sites, Wilderness, National Parks or Environmental issues.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.
Commentary	Exploration work over the Rogetta North area has a known history of over 75 years. Work prior to 2007 is documented in a variety of Open File Reports held by MRT. Modern exploration of the deposit started in 2007 when IRM drilled a series of RC holes to assess the extent of the mineralisation. Accurate spatial information on historic drilling has not been located by previous workers so the 2007 drilling can be considered as the first modern work on the deposit. IRM / RVR conducted several phases of drilling over Rogetta North prior to the project passing to FML. Forward Mining carried out additional drilling and commissioned Tim Callaghan of Resource and Exploration Geology to assess the resource as then known in 2011. Tim defined an Inferred resource of 16.62 Mt at 37.4 % Fe with a 20% cutoff. This work was followed by the preparation of an Independent Geological Report by Simon Tear of Hellman & Schofield Pty Ltd and a further 3 diamond holes.

Criteria	JORC Code explanation
Geology	Deposit type, geological setting and style of mineralisation.
Commentary	The Rogetta North magnetite mineralisation is considered to be the result of metasomatic replacement of calcareous Ordovician sediments by hydrothermal fluids associated with a roof pendent in the Devonian House Top Granite.
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.
Commentary	Collar Coordinate, azimuth, dip and hole depths together with relevant intersection information for all holes drilled into the Rogetta North mineralisation since 2007 are tabulated in Appendix C of the report to which this (JORC) Table 1 relates
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.
Commentary	Intersection intervals detailed in Appendix C have been generated using the Grade Compositing routines available in Micromine software. Data was composited if : An Fe grade of more than 10% could be maintained for at least 3m. The composited intervals could not contain more than 6m of waste (material below 10% Fe) wether consecutive or not and there were no more than 3 m of non sampled interval contained in the composited interval. All composites had a minimum grade of 10% Fe. This compositing technique yielded a set of composites that fitted very well with the observed mineralisation. The minimum composited grade was 14%.
Relationship between mineralisat-ion 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 (eg 'down hole length, true width not known').

Criteria	**JORC Code explanation**
Commentary	The vast majority of holes drilled into the Rogetta North mineralisation were vertical. The deposit generally occurs in an asymmetric synformal shape with a shallowly dipping eastern margin and a western margin which becomes near vertical. Intersection widths near the axis of the synform are therefore true intersection widths, those on the western margin have in some cases drilled down the western limb of the synform.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.
Commentary	See maps and plans in the body of the report to which this (JORC) Table 1 relates. Drillhole plans and sections are located at Appendix G to this report.
Balanced reporting	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.
Commentary	The totality of information in the report to which this (JORC) Table one relates is considered to provide a full and unbiased overview of the data on the Rogetta North Mineralisation and the resource estimates made on the deposit.
Other substantive exploration data	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.
Commentary	All material exploration has been disclosed in the report to which this (JORC) Table 1 relates. Exploration work other than drilling covers the acquisition if LIDAR based elevations used for vertical control, Ortho photos used for validating reported drill locations and as a general mapping background. The acquisition of detailed aero magnetic data used to inform drill locations and in structural interpretation. Extensive RQD, Magnetic Susceptibility and SG was also obtained and the methods used and results are discussed in the body of the report and in the logging protocols set out in Appendix B of this report. Studies on Groundwater, geotechnical and metallurgical recoveries and potential processing circuits have been conducted and are being reported as part of a DPEMP report being compiled by GHD Consultants.
Further work	The nature and scale of planned further work (eg 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.
Commentary	The latest round of drilling has tested the whole of the Rogetta North Mineralisation. Recommendations have been made for a limited amount of drilling to obtain samples for Davis Tube Recoveries and for geostatistical analysis.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation
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.
Commentary	Data from the 2007 – 2008 drilling was captured in Expedio's OCRIS field data capture system with assay results from the lab merged in a GBIS database maintained by IRM. Data between 2009 and 2013 was manually captured into either Surpac or Micromine. Data from the 2014 drilling campaign was captured using an OCRIS field data capture system. Data from OCRIS was sent to Expedio in Perth and loaded into a SQL 2012 database prior to export for data visualisation and modelling work in Micromine format. The majority of the data was logged using a field data capture system (OCRIS) which provides extensive validation checks against code lists and predefined rules to ensure that data is valid. Data that went in to the Expedio SQL DB was further error checked in the database. Downhole surveys, sample despatch information and assay results were merged directly into the database. All data was then checked using the drillhole validation routines in Micromine to ensure that downhole data was consistent, had no overlaps or gaps etc as appropriate. Once loaded into Micromine all data was subject to extensive interrogation to ensure that drillholes plotted where they should, data ranges were sensible etc. Assay data was subject to extensive QAQC checking using the embedded standards, blanks and sample duplicates to verify the quality of the data received. During the course of the drilling program a number of issues with the data were found, these were corrected and where appropriate procedures were changed to ensure that the same sort of errors were not made again. The error checking is considered to have been effective and the data used for modelling and reporting work accurately reflects the data observed when it was collected. Note that there were issues identified with the historical (Pre 2014) Sulphur values late in the modelling process. There data points were removed from the input dataset until the issues, discussed in the body of the report, have been resolved.
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.
Commentary	The competent Person compiling this report has been closely involved with the project since work on the area was started by IRM. As Managing Director of IRM the Competent Person was responsible for the original tenement application and together with IRM staff set up the 2007 – 2008 drilling and sampling program. Once Forward Mining acquired the project the Competent Person maintained contact with the directors and was asked to comment on a number of occasions on proposed work. In early 2014 after the project management moved to Lottah Mining Pty Ltd the Competent Person was hired as a consultant to Lottah. In his role as consultant the competent Person set up the2014 drill program and maintained a close overview of all work carried out. Numerous site visits were made over a 7 year period to Rogetta North.

Criteria	JORC Code explanation
Geological interpretat-ion	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.
Commentary	The current geological interpretation of the Rogetta North mineralisation is considered to be well defined as it is based on the results of 188 drillholes which have tested the deposit to its limits at a average spacing of approximately 35 m (basically a diamond pattern 50 x 50m drill grid). The current interpretation was developed utilising the 2011 Resource report definition as a starting point. While maintaining the broad shape in the interpretation the current interpretation based on a review of extensive additional data suggests that the deposit shape is more complex than previously assumed. A number of geological staff and observers have seen the current interpretation and none have expressed any opinion that the geological interpretation could be different. The current interpretation was developed using Micromine software on sectional views of the mineralisation. Ore boundaries were guided by a set of Grade composites based on a 10% Fe cutoff, together with lithology. Material classified as Magnetite and Magnetite skarn formed the geological basis of the interpretation. Other information was obtained from assay results and magnetic susceptibility. There were a number of areas where magnetite mineralisation had altered material that, when logged had been classified as other lithological types. In a number of areas lithological and other information was missing due to poor recovery. From an interpretation point of view lithological boundaries were extended to and or through such areas if deemed appropriate by data obtained from neighbouring holes.
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.
Commentary	The mineral resource extends along strike for a length of approximately 1km, it narrows to a point at its northern end while at the southern boundary it is 500m wide, the widest extent. The resource outline is shown in the picture at the start of this report to which this (JORC) Table 1 relates. Drillhole sections showing the boundaries of the resource and plans showing drill hole locations and the boundaries of the resource are found in Appendix G to the report. The resource extends from surface or near surface to a maximum depth of almost 200m in the deepest part of the deposit. The bulk of the deposit is within 100 m of the surface.
Estimation and modelling 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.

Criteria	JORC Code explanation
	The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg 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. 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.
Commentary	There have been no assumptions made regarding the correlation between variables other than the obvious relationship between lithology type and Fe grade. Geological interpretation concentrated on defining the boundary of the roof pendant in the granite hosting the mineralisation and the material that has potentially been mineralised and defining the boundary of the mineralised portion of the material preserved in the roof pendant. The geological interpretation was encoded in 3D wireframes based on sectional interpretations (see Appendix G). The wireframe representing the boundary of the mineralised zone was based on lithology and mineralisation a represents a nominal Fe cutoff of 10%. The resource estimate was constrained to only consider grades of composites within the mineralised boundary. Similarly the estimated blocks in the model were constrained to fit the geological interpretation. Grades used as input to the modelling process were not cut as there was no evidence from statistics or other data to suggest that there were likely to be issues with isolated high grade values skewing the modelled results. The validation process used a mixture of comparison between modelled grades and input data and statistical analysis to confirm the validity of the modelled results. Model and raw data comparisons are discussed in the body of the report to which this (JORC) Table1 relates.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.
Commentary	Tonnages are based on the measured SG of the material sampled. This SG was applied to the volume of rock estimated in the model to obtain a tonnage. Samples used for measurement of SG were whole core and were not dried (other than standing in core trays) prior to measurement. Samples chosen for SG analysis One per core tray per lithology were competent. No measures were made of moisture content. The SG

Criteria	JORC Code explanation
	measurement protocol is detailed in Appendix B
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.
Commentary	The resource model consisted of a block model constrained by ore zone boundaries etc. The model was interrogated against a range of cutoff values to generate a grade tonnage curve. The cutoff grade used for reporting, 15% Fe is at the low end of cutoff grades. (The 2011 Resource report Callaghan T 2011 used a 20% cutoff. The lower cutoff used in this report was chosen after analysis of the grade tonnage curve and after discussions with the metallurgists and ore processing engineers involved in the metallurgical evaluation of the deposit and the development of the process circuit. Metallurgical work had concluded that the generally coarse magnetite mineralisation observed in drill samples would be released at a grind size of 100 Microns. The recovery of the component of interest at coarse grind sizes suggests that it will be possible to recover material of a lower grade (15% Fe) and still produce a high grade product. Decisions on how material is to be blended to produce a suitable feed stock are beyond the scope of a resource estimate and are part of reserve estimation. It would however be incorrect to place an arbitrary high cutoff on the resource and so limit the economic selection of the ore cutoff. The cutoff of 15% also coincides with the natural lower limit, 14%, of 10 % Fe grade composites used to guide the geological interpretation of the ore zone.
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.
Commentary	It has been assumed that any exploitation of the Rogetta North mineral resource will be by an open pit mine (the commodity is Magnetite and the mineralisation outcrops over a wide area) given the scale of the resource, 10's of millions as opposed to 100's of millions of tonnes, and that the nominal production rate of around 3 Mt of ore per annum the pit would able to be mined selectively with 6m benches, split to allow 2 lifts of 3m each. This suggests that a minimum practical mining block would be 9 M^3. If visual ore spotting is used this could be reduced further to say 1.5m blocks. The model has therefore been built with 3m blocks sub-celled to 1.3 East x 1.3 North x 1.5 high. With input data based on 1m composites internal dilution has been built into the model. Model input was restricted to the data points within the magnetite mineralisation wireframe so no external dilution has been applied.
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.
Commentary	In parallel with the resource drill-out conducted in 2014, a 5 twinned RC and PQ holes were drilled along the strike of the deposit. This material was shipped to Perth for Metallurgical studies under the supervision of GHD Consulting (Kris Edwards). This work is the subject of a separate report, however it found that on average the recovery would

Criteria	JORC Code explanation
	be around 30 % and that the material tested would allow the development of a process stream that delivered a 68% magnetite product. The majority of the magnetite would be recovered with a grind size of around 100 micron and that the finished product would have a size of 40 micron.
Environmen-tal 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.
Commentary	In parallel with the resource drill-out data has been collected to meet the requirements of a DPEMP report, this work is being conducted by GHD Consultants. As a part of this work a potential site of the Processing plan has been identified together with locations for a tails dam and waste dumps. The area of the tails dam, the proposed processing plant and the area of the Rogetta North Mineralisation have been the subject of a detailed study while a Preliminary study has been made over a much larger area. No significant impacts on the environment have been identified.
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.
Commentary	Bulk Density measurements, 1032, have been made on core samples from the Rogetta North mineralisation. SG readings have mean values that are consistent with the lithology units that samples came from, these results were then modelled as one of the attributes included in the block model. The full SG sampling method is discussed in Appendix B which contains the logging protocols used for the 2014 drilling campaign while the actual results are discussed in the body of the report to which this (JORC) Table 1 relates.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie 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.
Commentary	The classification of the resource has been based on the number of points and the number of data sources (drillholes) together with the distance of the points from the centre of the estimated block. The full basis of classification has been discussed in the body of the report to which this (JORC) Table 1 relates. The areas classified using the methodology described are considered by the competent person to be appropriate for the current state of knowledge of the deposit.

Criteria	JORC Code explanation
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.
Commentary	There have been (at the date of writing) no formal audits or reviews made of the resource estimate. The work has however been explicitly discussed with the technical personal at Lottah Mining who have been involved in this project (13/03/2015) and there was no disputation of the methods used or the results obtained. The result of the most recent modelling work has generated a tonnage that is greater than that reported in Callaghan T, 2011. There are several reasons for this, the work discussed in the Report to which this (JORC) Table 1 relates has utilised a large amount of new data, this has included drilling which extends the known boundaries of the mineralisation. The cut off grade used for the most recent work is 15% Fe as opposed to 20% used in the 2011 report (at a 20% cutoff the tonnage drops to 24.9 Mt at effectively the same grade). The SG used in this report is slightly higher than that used in the 2011 report, the current SG estimates are based on extensive data which was not available in 2011. The 2011 report foreshadowed the potential for increases in tonnage when the full limits of the mineralisation were known.
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.
Commentary	The classification of the resource as predominantly measured or indicated is a reflection of the largely empirical, confidence that the competent person has in the resource estimate. The primary components of the resource were estimated using Ordinary Kriging and the kriging errors which are a direct measure of the confidence in the estimate are discussed in the body of the report to which this (JORC) Table 1 relates. Note that this deposit has not been mined so it is not possible to relate the resource estimate to production data.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.
Commentary	No Ore Reserves were calculated as a part of this report
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.
Commentary	No Ore Reserves were calculated as a part of this report
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.
Commentary	No Ore Reserves were calculated as a part of this report
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.
Commentary	No Ore Reserves were calculated as a part of this report
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.

Criteria	JORC Code explanation
Commentary	No Ore Reserves were calculated as a part of this report
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?
Commentary	No Ore Reserves were calculated as a part of this report
Environmen-tal	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.
Commentary	No Ore Reserves were calculated as a part of this report
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.
Commentary	No Ore Reserves were calculated as a part of this report
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.
Commentary	No Ore Reserves were calculated as a part of this report
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.
Commentary	No Ore Reserves were calculated as a part of this report
Market	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect

Criteria	JORC Code explanation
assessment	supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.
Commentary	No Ore Reserves were calculated as a part of this report
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs.
Commentary	No Ore Reserves were calculated as a part of this report
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.
Commentary	. No Ore Reserves were calculated as a part of this report
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.
Commentary	No Ore Reserves were calculated as a part of this report
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).
Commentary	No Ore Reserves were calculated as a part of this report
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.
Commentary	No Ore Reserves were calculated as a part of this report
Discussion of relative accuracy/	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and

Criteria	JORC Code explanation
confidence	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. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.
Commentary	No Ore Reserves were calculated as a part of this report

Section 5 Estimation and Reporting of Diamonds and Other Gemstones

(Criteria listed in other relevant sections also apply to this section. Additional guidelines are available in the 'Guidelines for the Reporting of Diamond Exploration Results' issued by the Diamond Exploration Best Practices Committee established by the Canadian Institute of Mining, Metallurgy and Petroleum.)

Criteria	JORC Code explanation
Indicator minerals	Reports of indicator minerals, such as chemically/physically distinctive garnet, ilmenite, chrome spinel and chrome diopside, should be prepared by a suitably qualified laboratory.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Source of diamonds	Details of the form, shape, size and colour of the diamonds and the nature of the source of diamonds (primary or secondary) including the rock type and geological environment.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Sample collection	Type of sample, whether outcrop, boulders, drill core, reverse circulation drill cuttings, gravel, stream sediment or soil, and purpose (eg large diameter drilling to establish stones per unit of volume or bulk samples to establish stone size distribution). Sample size, distribution and representivity.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Sample treatment	Type of facility, treatment rate, and accreditation. Sample size reduction. Bottom screen size, top screen size and re-crush.

Criteria	JORC Code explanation
	Processes (dense media separation, grease, X-ray, hand-sorting, etc). Process efficiency, tailings auditing and granulometry. Laboratory used, type of process for micro diamonds and accreditation.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Carat	One fifth (0.2) of a gram (often defined as a metric carat or MC).
Commentary	This report is not related to Diamonds or other gemstones so this issue is not relevant to this report
Sample grade	Sample grade in this section of Table 1 is used in the context of carats per units of mass, area or volume. The sample grade above the specified lower cut-off sieve size should be reported as carats per dry metric tonne and/or carats per 100 dry metric tonnes. For alluvial deposits, sample grades quoted in carats per square metre or carats per cubic metre are acceptable if accompanied by a volume to weight basis for calculation. In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive sample grade (carats per tonne).
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Reporting of Exploration Results	Complete set of sieve data using a standard progression of sieve sizes per facies. Bulk sampling results, global sample grade per facies. Spatial structure analysis and grade distribution. Stone size and number distribution. Sample head feed and tailings particle granulometry. Sample density determination. Per cent concentrate and undersize per sample. Sample grade with change in bottom cut-off screen size. Adjustments made to size distribution for sample plant performance and performance on a commercial scale. If appropriate or employed, geostatistical techniques applied to model stone size, distribution or frequency from size distribution of exploration diamond samples. The weight of diamonds may only be omitted from the report when the diamonds are considered too small to be of commercial significance. This lower cut-off size should be stated.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Grade estimation for reporting Mineral Resources	Description of the sample type and the spatial arrangement of drilling or sampling designed for grade estimation. The sample crush size and its relationship to that achievable in a commercial treatment plant. Total number of diamonds greater than the specified and reported lower cut-off sieve size. Total weight of diamonds greater than the specified and reported lower cut-off sieve size.

Criteria	JORC Code explanation
and Ore Reserves	The sample grade above the specified lower cut-off sieve size.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Value estimation	Valuations should not be reported for samples of diamonds processed using total liberation method, which is commonly used for processing exploration samples. To the extent that such information is not deemed commercially sensitive, Public Reports should include: diamonds quantities by appropriate screen size per facies or depth. details of parcel valued. number of stones, carats, lower size cut-off per facies or depth. The average $/carat and $/tonne value at the selected bottom cut-off should be reported in US Dollars. The value per carat is of critical importance in demonstrating project value. The basis for the price (eg dealer buying price, dealer selling price, etc). An assessment of diamond breakage.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Security and integrity	Accredited process audit. Whether samples were sealed after excavation. Valuer location, escort, delivery, cleaning losses, reconciliation with recorded sample carats and number of stones. Core samples washed prior to treatment for micro diamonds. Audit samples treated at alternative facility. Results of tailings checks. Recovery of tracer monitors used in sampling and treatment. Geophysical (logged) density and particle density. Cross validation of sample weights, wet and dry, with hole volume and density, moisture factor.
Commentary	This report is not related to Diamonds or other gemstones so these issues are not relevant to this report
Classification	In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive grade (carats per tonne). The elements of uncertainty in these estimates should be considered, and classification developed accordingly.
Commentary	This report is not related to Diamonds or other gemstones so this issue is not relevant to this report

Appendix B

Lottah Mining Logging Protocols

Geological Logging

Drilling is expensive so it is important to maximise the information recovered from each drillhole. All aspects of drilling need to be recorded correctly and accurately and consistently to ensure data recovery is maximised and to ensure accurate recording of the data and traceability of information. A consistent method of working also ensures maximum productivity and less time being spent having to go back and query or check data.

All drilling data is recorded in the OCRIS data collection system currently used by Lottah.

The project geologist is responsible for the handling of drill core at the core logging and sampling facility, as well as the sampling process. Accurate sample selection, collection and documentation are the responsibility of the geologist. The health, safety and environmental aspects of core splitting and cutting must be enforced. This includes protection for the eyes, ears, feet and hands.

Upon arrival, ensure core trays are clean and intact. Document any problems.

Organise and handle trays with care, utilising two people throughout the lifting process.

Measure depth intervals in each tray and document any lost core or depth inaccuracies. Immediately report depth inaccuracies to the drill contractor and initiate a rod count.

Tag trays with metal (or other durable) tags listing hole name and the interval.

Geotechnical analyses must be conducted before samples are selected. All core will be photographed both wet and dry and checked under a UV lamp for Fluorescence. Physical property measurements can be conducted at the same time (i.e. magnetic susceptibility, RQD, specific gravity etc.). When conducting magnetic susceptibility analysis intervals should not exceed 1 metre for skarn deposits in "barren" zones and 200mm within mineralised zones.

Align core to be sampled by matching broken pieces.

The project geologist is responsible for selecting material and intervals to be sampled.

Intervals are selected on the basis of mineralogy (e.g. oxide vs. hypogene, pyrite vs. pyrrhotite) and significant grade variations, textures (grain size, banded vs. massive, disseminated, stringer, folded intervals) and concentrations of specific minor minerals. Sample intervals must never cross geological boundaries and significant grade variations.

All lithological data is to be recorded via the OCRIS data collection system used by Lottah Mining.

The core is to be made wet throughout the lithological examination to enhance colour variation.

Lithological and geotechnical logging must cover the full length of each hole. Lithological logging must note the presence of alteration and mineralisation, whether the material is fresh or oxidised etc. Use descriptions and comments to amplify the Lithology, Alteration and Mineralisation etc codes recorded in OCRIS.

Once drill core is logged and sampled, it is clearly labelled and stored under cover

Sampling

To estimate the quality (grade) and quantity of mineral resources we use among other things the results of test drilling.

The test drilling needs to be sufficiently extensive that it gives us a good idea of the distribution of the minerals and returns material that reflects what is in the ground. Our sampling of the material returned from drilling then needs to accurately represent the material recovered.

Our sampling protocol covers the way we sample the material we receive from drilling to ensure it is representative of what was recovered and to ensure that the results we receive from the assay of our samples is correct.

We will generally be using either RC or diamond drilling to recover samples for resource work. Some other specialised holes drilled to assess things other than the mineral resources we are interested in, may be drilled by open hole techniques. Samples from open hole drilling are generally poor and while they may give a basic lithology log do not allow high quality assessment of mineral potential.

RC Drilling

When RC drilling to ensure good quality sample with minimal contamination we will use a face sampling hammer and will collect all sample returned in plastic sample sacks on a metre by metre basis. If a rotary splitter is available on the rig it will be used as a first preference. Note that if wet samples are being produced it may be necessary to clean the rotary splitter between samples to ensure there is no cross contamination between samples. Collected samples when dry will be riffle split to obtain a representative sub sample for analysis.

When wet sample is returned excess water will be decanted off and a sample collected by spear sampling the wet sample. A record will also be made in the sample log as wet samples can be biased.

From time to time it will be necessary to prepare further sample splits, these will normally be collected from the plastic sample sacks by splitting using a riffle splitter. In cases where a sample is wet then it may be, if it cannot be dried, sampled by using a spear or by placing the sample on a clean board and quartering (see the AusIMM Field Guide for Geoscientists and Technicians, P 137). All specialised sampling is to be coordinated with the Senior Geologist.

Diamond Drilling

Normal resource drilling is likely to be by Diamond drilling with a triple tube sample recovery system. Core will be laid out, and orientated prior to splitting using a suitable core saw. Normally one half of the split core will be bagged and used for assay work. In some cases this may be reduced to one quarter of the core. The remaining core will be kept for reference purposes. Note that when sampling cut core if there is fine material and small broken pieces of core in the core tray a portion (half when submitting half core, a quarter if submitting quarter core) of this material should be included with the sample.

For all resource holes if it is possible to determine the limits of the mineralised zone the whole interval will be sampled if it is not possible to determine where the mineralised zone lies or you are unsure, take more rather than fewer samples. In all resource holes a portion of non mineralised and or waste material will be sampled as well. In at least 10 percent of holes the whole hole should be sampled and analysed. The 10 percent of holes sampled will be chosen to ensure all lithologies are tested by assay.

QAQC

When sampling drill samples we need to ensure we have adequate QAQC samples included in each batch of samples. QAQC samples are samples which have values that can be checked in some way to see if they are correct and we would assume that if the QAQC samples are correct the Alpha samples associated with them are correct. Serious differences between the lab results and the expected values may result in the whole batch of lab results associated with the QAQC samples being suspect and we will ask the lab to revisit their work. QAQC samples can also be used to track periodic or systematic trends in the laboratory results.

There are a number of different types of QAQC samples used :

Coarse Blanks :

Sections of core or bags of RC cuttings which we consider to be largely devoid of the mineralisation (and elements) we are targeting. Coarse blanks are good for detecting issues with the sample preparation process.

Pulp Blanks :

Pre-packaged sample pulps which are certified as having low values of the elements we are interested in. Pulp blanks do not detect issues in the sample preparation process as they are already prepared, they are however very good at detecting issues within the assay process that result in contamination, especially when introduced into the sample stream after a known sample.

Commercial Standards :

Pre packaged sample with certified known values of the elements we are interested in. We would expect 68% of results for a known standard to be within one standard deviation of the expected value, 95% of results in two standard deviations and 99.5% within 3 standard deviations.

Field Standards :

Also called Secondary or In House Standards, bags of RC cuttings which have been blended together to be representative of the ore body being investigated. Unlike commercial standards which undergo extensive intra lab testing to determine their true value prior to distribution, Field Standards have a value which is determined by a smaller set of initial laboratory tests prior to use and the result of repeat testing during the normal course of assay by the laboratory. Statistically repeated sampling of data will produce results which cluster about the mean which in turn is a good indicator of the true value for the population (the deposit) being tested.

Duplicates :

Duplicate samples, i.e. two samples of the same drill interval. Assuming the material being sampled is homogenous (and representative), duplicate (sub) samples would be expected to produce very similar results. In practice it is not easy to know that the duplicate pair of samples are representative and homogenous, particularly when working with drill core and or nuggetty material such as gold, this is much less of a problem when dealing with material such as Iron Ore. RC Duplicate RC samples are usually easy to prepare in the field, duplicates of samples from cored holes are better prepared in the laboratory after the coarse crush or fine crush or both.

The way we allocate Duplicates, Standards and Blanks differs between Diamond and RC Drilling. For Diamond drilling the QAQC sampling adds additional QAQC samples at the start and end of the hole to help to determine possible issues with lab prep. Doing this with RC drilling is not realistic, as drilling proceeds at a greater pace and sample bags etc need to be pre numbered.

Day to Day Sampling – Diamond drilling

In summary diamond holes are started and ended with a Blanks, Standard, Blank sequence and have duplicates every 15m and alternating standards and blanks every 25m. The whole QAQC sequence restarts with each new hole.

1) For diamond holes sample mineralised zones over 1m long will be sampled with samples being based on 1 m intervals. Obviously the start and end of a mineralised zone there may not be an even metre. This can accommodated by stretching or shrinking the relevant interval by up to 0.25m. The idea here is to end up with nearly equal length samples to minimise issues that can arise when compositing samples during resource estimation. There may also be other small intervals, less than 1m with high grade material returned from Diamond drilling. These intervals should also be sampled with a total sample length of 1m. All samples are to be allocated a sample number from a ticket book

2) Intervals that are not sampled are also allocated a sample number from the ticket book and it is marked as NS_SEL, not selected for Geochemistry sampling.

3) Ticket books are to be written as clearly as possible, ideally each page will have the hole ID, Date from and to of each sample or in the case of QAQC samples Hole ID, Date and note to indicate if it is a Standard, Blank or Duplicate. Together with the Standard ID, Blank ID and Alpha ID as appropriate. If the ticket represents a not sampled interval the Hole ID, Date, Interval and nature of the non-sampled interval (i.e. Core Loss or Not Selected for Chemistry) must be stated. The outside of the ticket book should record the Hole ID's, start and end ID's and Gross Intervals. IE Hole X123, samples 368924 – 368935, 16 - 25m. It is acceptable to just record the Hole ID and Date at the start and end of a sample run. End of hole should be indicated on the last ticket for a hole.

4) Intervals of core to be sampled are split in half or even quarters to keep sample weights to about 2 Kg (the lab will charge extra if they have to grind down more sample). This will leave at least half of the core as a reference.

5) All holes will be started and ended with a Blank, a Standard and a Blank. We will additionally add a Standard and a Blank every 25 alpha samples. Note that we have both Field Standards and Commercial Standards, and Coarse Blanks and Pulp Blanks.

6) Duplicate samples will be taken every 15 alpha samples in every hole if less than 15m. If a hole has more than 15 m of mineralisation we will have 2 duplicates, 30 m 3 duplicates etc. For diamond core the duplicate is really a Lab Pulp Duplicate, so the normal sample is bagged and numbered with an additional numbered bag, tied and flagged (with pink flagging) , to the first bag. The laboratory will prepare a split after the sample is crushed and this will be assigned the second sample number.

7) Several sets of Reference Standards covering Low, Medium and High grade values (for Fe) are available to be used. Each grade range has at least two different standards and a suitable grade standard should be chosen, by the geologist, depending on the expected grade of the sample. Do not consistently use the same standard from each grade range, and do not use standard OREAS701 if samples are to be analysed by XRF (the standard method for Fe) as it gives inconsistent results in the laboratory (due to the loss of volatiles (Fluorine) in the assay process).

   Field standards, if available should be alternated with Commercial Standards. Similarly do not use a Coarse Blank with a Field Standard or a Pulp Blank with a Commercial Standard. i.e. A commercial Standard is followed by a Coarse Blank, a Field Standard by a Pulp Blank. See note at the end of this section for a summary.

   Note ensure the actual Standard ID is removed from any Commercial Standards or Blanks (by rubbing off) from the pouch before sending it to the lab.

   All standards are allocated the next available sample number from the ticket book. **Do not Allocate sample numbers to standards or other QAQC samples in a block.**
   The ticket stub left in the ticket book references that the sample is a standard and the identity of the standard.

8) For blanks, a mixture of Commercial Blanks and Field Blanks (actually low grade standards) are used. If additional coarse blank material is required it can be prepared by using some of the granite intervals that have been drilled, leave at least a quarter of the core in the trays for reference purposes. As with the Standards the next available ticket in the ticket book is used. The ticket stub left in the ticket book is referenced with the name of the blank.

9) To guide the placement and selection of reference material into the sample stream the following chart (not included in this report) should be used.

NOTE

Holes Start with a sequence of Coarse Blank, Prepared Standard, Pulp Blank

There are 15 Alpha samples between Duplicate samples

There are 25 Alpha samples between a standard and a Blank

Alternate the use of Field Standards and Coarse Blanks

Always ensure a Pulp Blank follows a Field Standard and a Coarse Blank follows a Prepared Standard

Holes End with a sequence of Coarse Blank, Prepared Standard, Pulp Blank

Day to Day Sampling - RC

In summary RC holes have duplicates every 15m and alternating standards and blanks every 25m. Unlike diamond drilling the QAQC sequence does not restart with each new hole. It just rolls through in a set pattern.

1) For RC holes, all material returned is placed in a plastic sample sack, 1 per meter, a small sample is also collected, washed and placed in a chip tray for reference. If there is a rotary splitter on the rig, collect a sample for each interval from the rotary splitter. If there is no rotary splitter, split (preferably) or spear a sample from the plastic bag. All samples to be numbered and ticketed. The decision on which samples, if any to send for chemistry can be made later.

2) All Intervals allocated a sample number from the ticket book if it is not selected for Geochemistry sampling and it is marked as NS_SEL on the ticket by the geologist.

3) Ticket books are to be written as clearly as possible, ideally each page will have the hole ID, Date from and to of each sample or in the case of QAQC samples Hole ID, Date and note to indicate if it is a Standard, Blank or Duplicate. Together with the Standard ID, Blank ID and Alpha ID as appropriate. If the tick represents a not sampled interval the Hole ID, Date, Interval and nature of the non-sampled interval (i.e. Sample Loss or Not Selected for Chemistry) must be stated. The outside of the ticket book should record the Hole ID's, start and end ID's and Gross Intervals. IE Hole X123, samples 368924 –

368935, 16 - 25m. It is acceptable to just record the Hole ID and Date at the start and end of a sample run. End of hole should be indicated on the last ticket for a hole.

4) For RC drilling we will add a Standard and a Blank every 25 alpha samples.

5) Duplicate samples will be taken every 15 alpha samples. For RC holes the duplicate is a split of the material from the on rig splitter, or if sample is not split on rig the material is to be split from the plastic sack of RC chips for the interval.

6) Several sets of Reference Standards covering Low, Medium and High grade values (for Fe) are available to be used. Each grade range has at least two different standards and a suitable grade standard should be chosen by the geologist depending on the expected grade of the sample. Do not consistently use the same standard from each grade range, and do not use standard OREAS701 if samples are to be analysed by XRF (the standard method for Fe) as it gives inconsistent results in the laboratory (due to the loss of volatiles (Fluorine) in the assay process).

   Field standards, if available should be alternated with Commercial Standards. Similarly do not use a Coarse Blank with a Field Standard or a Pulp Blank with a Commercial Standard. i.e. A commercial Standard is followed by a Coarse Blank, a Field Standard by a Pulp Blank. See note at the end of this section for a summary.

   Note ensure the actual Standard ID is removed from any Commercial Standards or Blanks (by rubbing off) from the pouch before sending it to the lab.

   All standards are allocated the next available sample number from the ticket book. **Do not allocate sample numbers to standards or other QAQC samples in a block.**
   The ticket stub left in the ticket book will reference that the sample is a standard and the identity of the standard.

7) For blanks, a mixture of Commercial Blanks and Field Blanks (actually low grade standards) are used. If additional coarse blank material is required it can be prepared by using some of the granite intervals that have been drilled. As with the Standards the next available tick in the ticket book is used. The ticket stub left in the ticket book is referenced with the name of the blank.

8) To guide the placement and selection of reference material into the sample stream the following chart (Not shown in this report) should be used.

NOTE

There are 15 Alpha samples between Duplicate samples

There are 25 Alpha samples between a standard and a Blank

Alternate the use of Field Standards and Coarse Blanks

Always ensure a Pulp Blank follows a Field Standard and a Coarse Blank follows a Prepared Standard

Bulk Density Protocol

Bulk Density of the material in and surrounding a mineral deposit is an important parameter to assess correctly. It is used in calibration of geophysical tools and methods, calculation of mineral resource estimates and assessments of mining cost and equipment selection. It is an important parameter that is frequently incorrectly measured.

Density of an object is its mass divided by its volume. Bulk density, which is what is needed in mining, is the dry mass of a volume of rock divided by its volume. The most difficult component to measure is the volume as we must measure the volume enclosed by the material but the material may be porous (gaps between grains) or vuggy (holes in the rock). While many methods have been used to measure volume the ones that work best are all based on the use of Archimedes principle.

Archimedes' principle, states, in his treatise, On Floating Bodies[1] "an object, wholly or partially immersed in a fluid, is buoyed up by a force equal to the weight of the fluid displaced by the object". This means that when an object is submerged in a fluid it displaces a weight of fluid proportional to its volume. Since clean water has a density of 1 it also means that if a measure of the volume of fluid displaced when the object is submerged will be its volume. Unfortunately this is actually very difficult to measure directly. However if we can weigh it when submerged it will have a different apparent weight to the weight we measure when the object is dry. The difference in weight between the dry and the wet weight can then be used to determine the displaced volume.

Day to day measuring of density

All cored drillholes are to be measured for density.

As a rule of thumb measure density every lithology in every core tray. If there is only one lithology in a core try then only one density reading is made for that core tray. If there are 3 lithologies in a core tray then three density readings should be made.

The density measuring system uses a load cell scale, with a trough of water and a frame on which acts as a carrier to measure the dry weight of the core. A second frame has a carrier which is suspended in the water and this is used to measure the wet weight of the core. Both wet and dry weights are read off the display on the machine and then recorded into OCRIS.

Two standard bars of material, one stainless steel and the other aluminium are used at the start and end of each set of SG measurements to provide QAQC samples which are also recorded into OCRIS

The section of core to be measured for density should be a single piece as long as possible. Maximum length 300mm will still fit in the wet carrier without touching the ends of the water filled trough. Core to be measured must be competent, we cannot measure unconsolidated material and must, as far as possible be representative of the lithology being measured for SG. Try to avoid porous and vuggy material if possible. Note however that it is important to make sure that this does not bias the results to the more competent material. Doing this will result in particular lithology types being assigned a density that is too high and this will cause problems later. If porous and vuggy material is present in large quantities then it must be measured.

Measuring non porous and non vuggy material

Ensure the density measuring system is clean, and that the trough is filled with clean water and that the apparatus is subject to as little disturbance as possible. Experience has shown that having the doors of the shed open when windy, trucks passing and other people working on the table supporting the apparatus can all have an effect. Similarly fresh cool water is needed in the measuring trough. Both water temperature and suspended solids in the water will have an effect (small) on the results.

1) Before starting zero the scale (with water tough filled etc.).

2) Measure the dry weight of one of the standard bars then measure its wet weight. Record the results in OCRIS, under the SiteID (Hole ID) for the samples being measured with the Reading type Al Bar1 or SS Bar1 as appropriate, repeat the process with the other standard bar. Note also record the date and who made the measurement in OCRIS, use a depth interval of 0 – 1m for the standards.

3) Take the first sample, measure dry and then wet, record the results in OCRIS with the Reading Type of ALPHA-NOWAX, also record the start depth of the sample, the end depth, the date the reading was made and who made the reading. If there are any unusual conditions etc. with the sample of the measurement record an appropriate comment. Repeat this process until all samples for a hole are completed.

4) The last measurements for a sample run should be the standards. Measure the dry weight of one of the standard bars then measure its wet weight. Record the results in OCRIS, under the SiteID (Hole ID) for the samples being measured with the Reading type Al Bar1 or SS Bar1 as appropriate, repeat the process with the other standard bar. Note also record the date and who made the measurement in OCRIS, use a depth interval which is the same as the last depth interval for an Alpha SG sample for that hole.

Measuring porous or vuggy material

When measuring porous or vuggy material it is important to take steps to ensure that the volume being measured represents the volume of the sample, not the volume of the solids in the sample. Vuggy material is usually easy to spot and the surface of the sample instead of being cylindrical will have irregular missing sections in it. Porous material may be less obvious, a good guide is that if the material is submerged for a period of time and its apparent weight increases by more than 5% over a period of 5 mins then it is porous.

The procedure for handing porous material and the procedure for handling vuggy, or vuggy and porous material is slightly different.

Porous material

1) Ensure the sample to be measured is dry, this may take a day or more at 25 degrees. If necessary place the samples, clearly identified in a warm oven (Preferably 25 degrees but definitely under 50 degrees) for a day to dry.

2) Prepare a wax bath of melted core wax. Before starting zero the scale (with water tough filled etc.).

3) Measure the dry weight of one of the standard bars then measure its wet weight. Record the results in OCRIS, under the SiteID (Hole ID) for the samples being measured with the Reading type Al Bar1 or SS Bar1 as appropriate, repeat the process with the other standard bar. Note also record the date and who made the measurement in OCRIS, use a depth interval of 0 – 1m for the standards.

4) Measure the dry weight of the sample with no wax

5) Coat the sample with wax, usually the best way to do this is to tie a piece of string (Jute or cotton, not plastic, plastic melts and this can result is very painful burns if the wax splashes) around the core, dip it into the hot wax then hang it up to dry. Wear gloves and eye protection when handling hot wax and dipping the core.

CAUTION HOT WAX ON HUMAN SKIN BURNS !!!!!!!!

6) Once the wax has set properly, measure the dry weight of the core plus wax

7) Measure the wet weight of the core plus wax.

8) Record the dry weight of the core, the dry weight of the core plus wax, the wet weight of the core plus wax and the density of the wax (see below) in OCRIS with a reading type of ALPHA-WAX. Also record the from and to interval of the sample, the date and the person logging the sample. Repeat as required.

9) The last measurements for a sample run should be the standards. Measure the dry weight of one of the standard bars then measure its wet weight. Record the results in OCRIS, under the SiteID (Hole ID) for the samples being measured with the Reading type Al Bar1 or SS Bar1 as appropriate, repeat the process with the other standard bar. Note also record the date and who made the measurement in OCRIS, use a depth interval which is the same as the last depth interval for and SG sample for that hole.

Vuggy or Porous and Vuggy material

Proceed as for Porous material however before dipping the core sample in wax wrap the sample in glad warp. When wrapping the sample use as little wrap as possible, and ensure as far as possible that there is no air trapped under the wrap. The best way to do this is to cut a length of wrap, place it on a clean dry surface, place the core on top then roll the wrap, firmly around the long axis of the core, if required trim the ends and then carefully close over the ends of the cylinder of core. It is in the ends that air is most likely to be trapped so take care to ensure the wrap fits the ends and does not bridge across ridges and bumps. Once the core is wrapped, proceed to dip it in wax and then follow the Porous core procedure. When recording results note in the comments section of OCRIS that the material was wrapped.

Wax density

Wax density can be measured simply by weighing the blocks of wax to be used and then measuring their volume by measurement of the length, width and depth of the blocks. If there are several blocks measure the dimensions of each block and add them together. The density is then calculated as :

Weight of blocks (in grams) / Sum of (Length + Width + Depth in mm) of blocks.

Density should be calculated for each box of core wax prior to use.

References :

[1] http://en.wikipedia.org/wiki/Archimedes'_principle, 08/01/2015 at 1031 AEST.

Core Photos

Photography

Core should be photographed both wet and dry. Sections which show fluorescence should also be photographed under UV light (dry).

Each tray should have a caption recording the HoleID, the Tray number the meterage at the start and end of the tray. If available a standard colour chart should also be included in each photo.

Wet and dry photos should use the camera flash to ensure consistent colour.

Storing Photos

Locally photos should be downloaded to a local directory

C:\CorePhotos

All photos for each hole should be in a directory named the same as the HoleID

So all photos for hole MT14RGN073 will be placed in a folder MT14RGN073

Naming of photos

Photos should be named by HoleID, Tray number, wether Wet or dry and meterage

So for a hole MT14RGN073 tray 2 Wet from 14.6m – 17.4m would be named

MT14RGN073T2W14.6-17.4.jpg

Appendix C

Drillhole Collars and Intersections

Drillholes 2007 - 2013

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	KND001	402,525.00	5,425,506.00	539.54	136.40	110.0	-60.0
RGN	KND002	402,727.00	5,425,892.00	546.10	111.00	110.0	-60.0
RGN	KND003	402,512.00	5,425,430.00	536.58	80.00	320.0	-60.0
RGN	KND004	402,512.00	5,425,432.00	536.60	117.50	90.0	-60.0
RGN	KND005	402,611.00	5,425,441.00	534.49	86.50	360.0	-90.0
RGN	KND006	402,612.00	5,425,440.00	534.71	94.10	90.0	-60.0
RGN	KND007	402,636.00	5,425,510.00	535.71	154.40	90.0	-60.0
RGN	KNRC001	402,841.00	5,425,897.00	540.04	22.00	360.0	-90.0
RGN	KNRC002	402,793.00	5,425,899.00	540.98	52.00	360.0	-90.0
RGN	KNRC003	402,761.00	5,425,902.00	544.47	64.00	360.0	-90.0
RGN	KNRC004	402,728.00	5,425,892.00	546.07	36.50	360.0	-90.0
RGN	KNRC005	402,839.00	5,425,788.00	540.53	30.00	360.0	-90.0
RGN	KNRC006	402,803.00	5,425,797.00	541.31	34.00	360.0	-90.0
RGN	KNRC007	402,760.00	5,425,798.00	542.64	42.00	360.0	-90.0
RGN	KNRC008	402,720.00	5,425,798.00	544.50	100.00	360.0	-90.0
RGN	KNRC009	402,615.00	5,425,720.00	544.76	15.00	360.0	-90.0
RGN	KNRC010	402,618.00	5,425,658.00	542.99	80.00	360.0	-90.0
RGN	KNRC011	402,658.00	5,425,658.00	541.13	38.00	360.0	-90.0
RGN	KNRC012	402,651.00	5,425,712.00	543.94	9.00	360.0	-90.0
RGN	KNRC012a	402,654.00	5,425,714.00	544.02	40.00	360.0	-90.0
RGN	KNRC013	402,699.00	5,425,718.00	543.10	46.00	360.0	-90.0
RGN	KNRC014	402,731.00	5,425,727.00	542.82	64.00	360.0	-90.0
RGN	KNRC015	402,769.00	5,425,732.00	541.74	50.00	360.0	-90.0
RGN	KNRC016	402,818.00	5,425,720.00	540.49	38.00	360.0	-90.0
RGN	KNRC017	402,707.00	5,425,654.00	541.63	72.00	360.0	-90.0
RGN	KNRC018	402,742.00	5,425,664.00	541.84	64.00	360.0	-90.0
RGN	KNRC019	402,786.00	5,425,671.00	541.10	58.00	360.0	-90.0

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	KNRC020	402,819.00	5,425,654.00	539.69	45.00	360.0	-90.0
RGN	KNRC020A	402,851.00	5,425,663.00	539.24	15.00	360.0	-90.0
RGN	KNRC020B	402,850.00	5,425,616.00	537.46	14.00	360.0	-90.0
RGN	KNRC021	402,580.00	5,425,582.00	539.23	80.00	360.0	-90.0
RGN	KNRC023	402,660.00	5,425,582.00	538.18	66.50	360.0	-90.0
RGN	KNRC025	402,744.00	5,425,589.00	537.51	44.00	360.0	-90.0
RGN	KNRC026	402,781.00	5,425,582.00	535.38	76.00	360.0	-90.0
RGN	KNRC027	402,821.00	5,425,578.00	536.69	50.00	360.0	-90.0
RGN	KNRC029	402,881.00	5,425,501.00	534.02	16.00	360.0	-90.0
RGN	KNRC030	402,843.00	5,425,499.00	534.08	46.00	360.0	-90.0
RGN	KNRC031	402,799.00	5,425,502.00	534.02	70.00	360.0	-90.0
RGN	KNRC033	402,840.00	5,425,420.00	532.96	64.00	360.0	-90.0
RGN	KNRC033A	402,804.00	5,425,420.00	532.46	84.00	360.0	-90.0
RGN	KNRC034	402,880.00	5,425,425.00	534.02	9.00	360.0	-90.0
RGN	KNRC035	402,902.00	5,425,407.00	536.10	40.00	360.0	-90.0
RGN	KNRC035A	402,870.00	5,425,293.00	532.48	10.00	360.0	-90.0
RGN	KNRC036	402,559.00	5,425,502.00	536.28	70.00	360.0	-90.0
RGN	KNRC037	402,598.00	5,425,496.00	535.85	100.00	360.0	-90.0
RGN	KNRC038	402,632.00	5,425,506.00	535.59	70.00	360.0	-90.0
RGN	KNRC039	402,529.00	5,425,509.00	539.45	10.00	360.0	-90.0
RGN	KNRC039A	402,519.00	5,425,509.00	539.72	28.00	360.0	-90.0
RGN	KNRC043	402,507.00	5,425,436.00	536.89	70.00	360.0	-90.0
RGN	KNRC044	402,785.00	5,426,029.00	537.46	34.00	360.0	-90.0
RGN	KNRC045	402,839.00	5,426,017.00	534.69	28.00	360.0	-90.0
RGN	KNRC046	402,857.00	5,426,046.00	530.80	10.00	360.0	-90.0
RGN	KNRC047	402,861.00	5,426,096.00	525.81	20.00	360.0	-90.0
RGN	KNRC048	402,800.00	5,426,104.00	531.21	16.00	360.0	-90.0
RGN	KNRC049	402,834.00	5,425,196.00	533.34	22.00	360.0	-90.0
RGN	KNRC050	402,877.00	5,425,174.00	529.18	16.00	360.0	-90.0
RGN	KNRC051	402,866.00	5,425,257.00	531.81	16.00	360.0	-90.0
RGN	KNRC052	402,851.00	5,425,286.00	532.18	16.00	360.0	-90.0

Note : East and North coordinates are in terms of the MGA projection Zone 55

RL values are in terms of the AHD datum

Azimuth values are measured from UTM North.

Dip Values are measured from the horizontal, a –ve dip indicated a downward direction

AEFS Australian Exploration Field Services

Drillholes 2014 – January 2015

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	14RGN097DD	402,749.41	5,425,601.64	538.28	95.60	360.0	-90.0
RGN	14RGN099DD	402,882.96	5,425,545.35	534.37	20.60	360.0	-90.0
RGN	14RGN103DD	402,504.76	5,425,406.87	536.32	71.70	360.0	-90.0
RGN	14RGN104DD	402,450.35	5,425,397.76	537.42	41.70	360.0	-90.0
RGN	14RGN105GT	402,600.86	5,425,397.92	534.63	130.10	191.6	-62.0
RGN	14RGN106DD	402,829.73	5,425,447.34	534.29	62.70	0.0	-89.6
RGN	14RGN107DD	402,821.22	5,425,545.69	536.25	56.60	0.0	-89.5
RGN	14RGN108DD	402,473.71	5,425,306.87	536.48	43.00	360.0	-90.0
RGN	14RGN109DD	402,771.73	5,425,537.83	535.31	74.60	0.0	-89.0
RGN	14RGN110DD	402,289.60	5,425,046.05	562.59	92.00	0.0	-89.1
RGN	14RGN111DD	402,779.56	5,425,447.95	533.27	99.90	0.0	-89.5
RGN	14RGN112DD	402,722.97	5,425,548.11	537.08	121.50	0.0	-89.0
RGN	14RGN113DD	402,719.10	5,425,472.03	534.07	100.00	0.0	-89.8
RGN	14RGN114DD	402,538.33	5,425,399.74	535.66	71.30	0.0	-89.9
RGN	14RGN115DD	402,672.77	5,425,548.34	537.53	129.10	0.0	-89.3
RGN	14RGN116DD	402,673.57	5,425,457.17	535.09	89.60	0.0	-89.7
RGN	14RGN117DD	402,626.77	5,425,549.82	537.96	161.90	0.0	-88.8
RGN	14RGN118DD	402,492.80	5,425,255.07	537.06	130.10	360.0	-90.0
RGN	14RGN119GT	402,655.00	5,425,496.08	535.60	140.10	117.8	-67.3
RGN	14RGN120DD	402,459.66	5,425,215.05	540.92	17.70	360.0	-90.0
RGN	14RGN121DD	402,572.82	5,425,552.59	537.40	155.70	360.0	-90.0
RGN	14RGN122DD	402,703.07	5,425,506.45	535.38	121.20	360.0	-90.0
RGN	14RGN123DD	402,260.10	5,425,071.27	561.39	71.50	0.0	-89.7
RGN	14RGN124DD	402,746.05	5,425,408.99	532.21	76.80	0.0	-89.3
RGN	14RGN125DD	402,520.93	5,425,553.24	539.48	16.20	360.0	-90.0
RGN	14RGN126DD	402,698.90	5,425,415.75	532.51	120.20	360.0	-90.0
RGN	14RGN127DD	402,704.05	5,425,350.15	531.58	58.80	360.0	-90.0
RGN	14RGN128DD	402,473.88	5,425,533.19	540.06	48.50	360.0	-90.0
RGN	14RGN129DD	402,646.93	5,425,412.47	534.18	59.50	360.0	-90.0
RGN	14RGN130GT	402,490.56	5,425,657.02	533.19	127.40	90.0	-61.1
RGN	14RGN131DD	402,833.78	5,425,626.05	538.51	28.30	360.0	-90.0
RGN	14RGN132DD	402,840.27	5,425,696.97	539.88	20.40	360.0	-90.0
RGN	14RGN133DD	402,619.77	5,425,651.66	542.75	150.10	0.0	-89.0
RGN	14RGN134DD	402,683.58	5,425,740.86	544.16	118.00	360.0	-90.0
RGN	14RGN135DD	402,260.55	5,424,939.99	561.26	79.80	360.0	-90.0

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	14RGN136DD	402,824.27	5,426,052.99	535.51	51.90	360.0	-90.0
RGN	14RGN137DD	402,792.54	5,425,998.34	538.83	35.20	360.0	-90.0
RGN	14RGN138DD	402,605.03	5,425,705.08	545.76	137.50	90.0	-55.0
RGN	14RGN139DD	402,654.58	5,425,703.79	543.85	146.60	360.0	-90.0
RGN	14RGN140DD	402,548.98	5,425,586.11	541.01	24.70	360.0	-90.0
RGN	14RGN141DD	402,796.68	5,425,700.56	541.45	42.40	360.0	-90.0
RGN	14RGN142DD	402,817.08	5,425,744.56	541.16	38.70	360.0	-90.0
RGN	14RGN143DD	402,670.86	5,425,849.26	542.99	9.70	360.0	-90.0
RGN	14RGN144DD	402,724.27	5,425,857.74	545.74	27.70	360.0	-90.0
RGN	14RGN145DD	402,764.06	5,425,757.44	542.16	47.30	360.0	-90.0
RGN	14RGN146DD	402,860.45	5,425,952.76	538.33	20.60	360.0	-90.0
RGN	14RGN147DD	402,814.73	5,425,945.39	540.89	38.50	360.0	-90.0
RGN	14RGN148DD	402,764.86	5,425,941.00	543.27	52.20	360.0	-90.0
RGN	14RGN149DD	402,700.05	5,425,703.08	543.31	94.60	360.0	-90.0
RGN	14RGN150DD	402,848.13	5,426,158.05	524.45	58.60	360.0	-90.0
RGN	14RGN151DD	402,590.17	5,425,354.20	535.14	57.00	360.0	-90.0
RGN	14RGN152DD	402,736.02	5,425,507.64	534.67	140.80	360.0	-90.0
RGN	14RGN153GT	402,643.76	5,425,657.49	540.98	140.10	270.0	-60.0
RGN	14RGN154DD	402,798.40	5,425,350.00	531.96	50.40	90.0	-60.0
RGN	14RGN155GT	402,660.17	5,425,806.88	544.63	120.00	269.1	-63.0
RGN	14RGN156DD	402,879.35	5,426,291.89	522.78	35.60	180.0	-60.0
RGN	14RGN157DD	402,869.35	5,426,253.88	526.33	10.10	360.0	-90.0
RGN	14RGN158DD	402,730.00	5,425,850.00	545.17	78.20	90.0	-55.0
RGN	14RGN159DD	402,850.00	5,425,350.00	534.87	23.20	360.0	-90.0
RGN	14RGN160DD	402,840.00	5,425,310.00	532.29	21.50	360.0	-90.0
RGN	14RGN161DD	402,850.00	5,425,300.00	532.19	26.70	360.0	-90.0
RGN	14RGN162DD	402,835.88	5,425,252.12	531.41	26.70	90.0	-60.0
RGN	14RGN163DD	402,900.00	5,425,350.00	534.33	35.20	270.0	-60.0
RGN	14RGN164DD	402,869.11	5,426,203.09	522.20	5.90	360.0	-90.0
RGN	14RGN165DD	402,821.04	5,425,192.34	533.74	20.50	90.0	-60.0
RGN	14RGN166DD	402,813.50	5,425,899.54	541.39	38.50	360.0	-90.0
RGN	14RGN167DD	402,725.98	5,425,905.69	546.60	54.00	90.0	-75.0
RGN	14RGN168DD	402,755.63	5,426,058.12	533.61	51.20	90.0	-55.0
RGN	14RGN169DD	402,881.36	5,425,173.42	529.12	22.20	360.0	-90.0
RGN	14RGN170DD	402,857.04	5,425,136.89	530.01	10.10	0.0	-60.0
RGN	14RGN171DD	402,848.62	5,426,159.53	524.22	70.20	0.0	-55.0
RGN	14RGN172DD	402,786.22	5,425,276.41	530.34	25.10	360.0	-90.0
RGN	14RGN173DD	402,736.34	5,425,252.38	529.38	46.30	360.0	-90.0

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	14RGN174DD	402,803.45	5,425,280.19	531.06	33.60	360.0	-90.0
RGN	14RGN175DD	402,841.38	5,426,109.91	528.14	64.00	360.0	-90.0
RGN	14RGN176DD	402,733.19	5,425,291.15	531.04	39.00	360.0	-90.0
RGN	14RGN177DD	402,422.37	5,425,346.18	538.70	26.00	360.0	-90.0
RGN	14RGN178DD	402,722.61	5,425,208.00	529.30	14.60	360.0	-90.0
RGN	14RGN179GT	402,707.39	5,425,799.35	544.95	120.00	90.0	-60.0
RGN	14RGN180DD	402,810.83	5,426,161.22	528.62	88.90	90.0	-55.0
RGN	14RGN181DD	402,750.22	5,425,212.63	528.07	31.00	360.0	-90.0
RGN	14RGN182DD	402,817.06	5,426,193.54	527.79	54.90	360.0	-60.0
RGN	14RGN183DD	402,737.56	5,425,178.71	528.24	41.60	360.0	-90.0
RGN	14RGN188RC	402,886.59	5,424,797.96	533.28	50.00	360.0	-90.0
RGN	14RGN189RC	402,915.44	5,424,918.67	523.04	50.00	360.0	-90.0
RGN	14RGN190RC	402,879.68	5,425,089.15	523.66	50.00	360.0	-90.0
RGN	14RGN191RC	402,998.95	5,424,945.24	523.92	50.00	360.0	-90.0
RGN	15RGN184DD	402,874.45	5,425,856.16	537.60	49.90	360.0	-90.0
RGN	15RGN185DD	402,861.72	5,425,795.75	537.12	19.10	360.0	-90.0
RGN	15RGN186GT	402,732.02	5,425,502.25	534.57	91.40	90.0	-66.8
RGN	15RGN187GT	402,804.48	5,425,412.53	532.82	130.00	180.0	-65.0
RGN	DD14RGN071	402,602.41	5,425,600.43	539.49	200.00	360.0	-90.0
RGN	DD14RGN074	402,647.78	5,425,594.83	538.78	209.30	360.0	-90.0
RGN	DD14RGN087	402,827.30	5,425,849.91	539.84	67.20	360.0	-90.0
RGN	DD14RGN091	402,786.17	5,425,850.73	543.67	70.90	360.0	-90.0
RGN	DD14RGN093	402,498.20	5,425,343.38	537.52	55.10	360.0	-90.0
RGN	DD14RGN094	402,738.05	5,425,620.94	540.61	80.60	360.0	-90.0
RGN	DD14RGN095	402,544.24	5,425,444.47	536.40	109.70	360.0	-90.0
RGN	DD14RGN100	402,870.41	5,425,416.87	534.03	56.80	360.0	-90.0
RGN	DD14RGN101	402,887.24	5,425,436.48	534.59	32.70	360.0	-90.0
RGN	DD14RGN102	402,467.72	5,425,447.88	538.14	15.80	360.0	-90.0
RGN	GT14RGN064	403,140.00	5,425,850.00	496.49	62.00	360.0	-90.0
RGN	GT14RGN065	402,901.37	5,426,090.47	521.33	70.10	360.0	-90.0
RGN	GT14RGN079	402,743.10	5,426,000.93	540.87	70.00	360.0	-90.0
RGN	GT14RGN084	402,856.12	5,426,018.09	531.85	50.00	360.0	-90.0
RGN	GT14RGN086	402,572.55	5,425,657.31	543.20	50.00	360.0	-90.0
RGN	GT14RGN088	402,469.67	5,425,489.69	538.54	80.10	360.0	-90.0
RGN	GT14RGN092	402,661.83	5,425,810.14	544.65	120.20	360.0	-90.0
RGN	HY14RGN060	402,715.78	5,425,948.43	545.32	99.00	360.0	-90.0
RGN	HY14RGN061	402,712.37	5,425,958.90	545.02	139.00	360.0	-90.0
RGN	HY14RGN063	402,664.95	5,425,657.72	540.99	145.00	360.0	-90.0

Prospect	Site_ID	East	North	RL	End Depth	Azimuth	Dip
RGN	HY14RGN066	402,585.81	5,425,320.47	535.11	34.00	360.0	-90.0
RGN	HY14RGN068	402,555.32	5,425,886.16	536.79	150.00	360.0	-90.0
RGN	HY14RGN070	402,853.46	5,425,851.42	538.64	150.00	360.0	-90.0
RGN	HY14RGN073	402,922.61	5,426,165.02	511.01	150.00	360.0	-90.0
RGN	HY14RGN075	403,004.23	5,425,854.62	515.85	75.00	360.0	-90.0
RGN	HY14RGN076	402,375.46	5,425,180.11	545.54	150.00	360.0	-90.0
RGN	HY14RGN077	402,465.87	5,425,576.56	535.85	150.00	360.0	-90.0
RGN	MT14RGN062	402,788.69	5,425,906.03	541.67	68.30	360.0	-90.0
RGN	MT14RGN067	402,752.46	5,425,798.02	542.73	62.70	360.0	-90.0
RGN	MT14RGN069	402,753.21	5,425,702.83	542.01	50.00	360.0	-90.0
RGN	MT14RGN072	402,698.70	5,425,592.89	538.63	139.00	360.0	-90.0
RGN	MT14RGN078	402,628.14	5,425,512.09	535.87	164.70	360.0	-90.0
RGN	RC14RGN080	402,788.42	5,425,906.26	541.70	67.00	360.0	-90.0
RGN	RC14RGN081	402,754.49	5,425,797.77	542.71	80.00	360.0	-90.0
RGN	RC14RGN082	402,747.61	5,425,698.48	541.77	80.00	360.0	-90.0
RGN	RC14RGN083	402,698.31	5,425,595.90	538.78	121.00	360.0	-90.0
RGN	RC14RGN085	402,623.32	5,425,509.11	535.61	132.00	360.0	-90.0
RGN	15RGN192DD	402,702.41	5,425,805.24	545.43	70.00	45.0	-55.0
RGN	15RGN193DD	402,740.15	5,425,376.76	531.54	50.00	360.0	-90.0

Note : East and North coordinates are in terms of the MGA projection Zone 55

RL values are in terms of the AHD datum

Azimuth values are measured from UTM North.

Dip Values are measured from the horizontal, a –ve dip indicated a downward direction

Drillhole Intersections 2007 – 2013

Prospect	SiteID	From	To	Interval	Fe %	Al %	Ca %	P %
RGN	KND001	7.00	136.40	129.40	26.526			
RGN	KND002	0.00	14.00	14.00	19.911			
RGN	KND002	43.30	82.80	39.50	37.747			
RGN	KND003	4.50	62.00	57.50	23.307			
RGN	KND004	1.50	101.00	99.50	36.358			
RGN	KND005	39.00	77.00	38.00	29.623			
RGN	KND006	50.70	77.20	26.50	22.116			
RGN	KND007	2.70	76.10	73.40	25.754			
RGN	KND007	128.70	131.70	3.00	14.223			
RGN	KND007	142.50	154.40	11.90	17.403			
RGN	KNRC002	0.00	43.00	43.00	41.407	3.777	12.558	0.043
RGN	KNRC003	7.00	37.00	30.00	27.283	5.203	16.040	0.064
RGN	KNRC003	43.00	49.00	6.00	28.000	4.717	18.667	0.022
RGN	KNRC007	0.00	42.00	42.00	53.043	3.074	6.416	0.030
RGN	KNRC008	20.00	49.00	29.00	32.317	5.662	12.707	0.056
RGN	KNRC008	63.00	90.00	27.00	31.789	4.900	17.311	0.057
RGN	KNRC014	26.00	37.00	11.00	30.991	5.555	15.564	0.035
RGN	KNRC014	42.00	58.00	16.00	35.938	3.919	16.244	0.041
RGN	KNRC015	8.00	20.00	12.00	49.425	4.392	7.673	0.014
RGN	KNRC015	29.00	34.00	5.00	23.960	9.160	14.240	0.020
RGN	KNRC016	2.00	10.00	8.00	42.725	5.913	8.588	0.061
RGN	KNRC016	15.00	25.00	10.00	22.880	5.260	19.000	0.058
RGN	KNRC017	13.00	33.00	20.00	31.140	7.400	10.580	0.112
RGN	KNRC017	57.00	71.00	14.00	25.757	4.129	25.779	0.059
RGN	KNRC018	36.00	50.00	14.00	30.036	4.479	20.550	0.035
RGN	KNRC019	16.00	25.00	9.00	28.644	6.300	20.056	0.069
RGN	KNRC020	12.00	34.00	22.00	28.123	3.105	21.400	0.050
RGN	KNRC020B	0.00	6.00	6.00	38.700	5.900	9.367	0.053
RGN	KNRC021	17.00	32.00	15.00	35.367	4.787	15.793	0.069
RGN	KNRC021	63.00	74.00	11.00	28.427	4.973	21.764	0.073
RGN	KNRC023	22.00	35.00	13.00	33.731	3.938	16.115	0.045
RGN	KNRC023	40.00	66.00	26.00	31.300	3.421	16.912	0.029
RGN	KNRC026	19.00	61.00	42.00	35.292	3.990	17.346	0.016
RGN	KNRC027	5.00	33.00	28.00	35.279	3.757	17.893	0.051
RGN	KNRC030	15.00	36.00	21.00	31.057	3.781	17.843	0.034
RGN	KNRC031	27.00	60.00	33.00	30.710	3.881	18.323	0.030
RGN	KNRC033	16.00	55.00	39.00	40.462	4.246	11.677	0.028

Prospect	SiteID	From	To	Interval	Fe %	Al %	Ca %	P %
RGN	KNRC033A	39.00	75.00	36.00	30.144	4.947	18.034	0.049
RGN	KNRC035	8.00	30.00	22.00	49.863	4.489	2.582	0.037
RGN	KNRC036	30.00	44.00	14.00	38.950	3.529	8.014	0.061
RGN	KNRC037	2.00	10.00	8.00	53.850	2.775	6.400	0.021
RGN	KNRC037	14.00	27.00	13.00	47.515	2.677	11.969	0.028
RGN	KNRC037	47.00	100.00	53.00	41.820	2.762	15.944	0.027
RGN	KNRC043	28.00	52.00	24.00	29.275	3.992	17.946	0.024
RGN	KNRC043	56.00	66.00	10.00	27.440	4.790	18.520	0.028
RGN	KNRC044	3.00	13.00	10.00	33.840	7.090	15.580	0.024
RGN	KNRC045	0.00	10.00	10.00	45.650	4.240	9.289	0.063
RGN	KNRC046	0.00	5.00	5.00	41.080	6.000	4.060	0.020
RGN	KNRC047	0.00	9.00	9.00	33.267	4.078	18.156	0.016
RGN	KNRC049	0.00	10.00	10.00	58.070	2.660	5.544	0.074

Intersections represent those intervals in drillholes where an Fe grade of more than 10% can be sustained over a minimum interval of 3m.

Drillhole Intersections 2014 – January 2015

Prospect	SiteID	From	To	Interval	Fe %	Al %	Ca %	P %
RGN	14RGN103DD	40.00	61.00	21.00	23.465	5.143	20.450	0.024
RGN	14RGN104DD	23.30	36.00	12.70	21.346	3.256	25.641	0.006
RGN	14RGN106DD	10.00	52.00	42.00	37.997	3.956	10.767	0.016
RGN	14RGN107DD	18.00	41.00	23.00	29.317	4.945	20.026	0.008
RGN	14RGN109DD	22.20	51.00	28.80	31.547	3.525	20.079	0.014
RGN	14RGN111DD	36.00	58.00	22.00	20.816	4.984	21.881	0.004
RGN	14RGN111DD	68.00	77.00	9.00	31.513	3.960	18.192	0.018
RGN	14RGN112DD	23.00	27.40	4.40	20.585	6.245	21.891	0.027
RGN	14RGN112DD	40.30	50.00	9.70	29.713	4.235	15.448	0.007
RGN	14RGN114DD	44.00	67.00	23.00	33.840	4.826	15.187	0.023
RGN	14RGN115DD	5.80	57.00	51.20	34.590	5.212	16.628	0.008
RGN	14RGN117DD	0.00	140.00	140.00	38.114	3.155	18.008	0.011
RGN	14RGN121DD	0.00	85.50	85.50	32.993	7.098	11.269	0.026
RGN	14RGN121DD	91.00	101.00	10.00	18.428	6.238	24.330	0.009
RGN	14RGN121DD	109.00	121.00	12.00	19.036	5.066	28.375	0.001
RGN	14RGN121DD	141.50	145.50	4.00	20.837	4.360	24.575	0.003
RGN	14RGN122DD	37.00	50.50	13.50	21.975	5.209	25.843	0.032
RGN	14RGN122DD	97.50	100.60	3.10	16.725	2.771	18.627	0.013
RGN	14RGN122DD	106.00	112.00	6.00	21.713	3.545	20.483	0.008
RGN	14RGN124DD	27.00	72.00	45.00	29.572	4.037	17.963	0.014
RGN	14RGN126DD	48.00	68.50	20.50	26.540	5.479	14.247	0.019
RGN	14RGN129DD	34.00	48.00	14.00	32.253	2.783	19.029	0.023
RGN	14RGN131DD	0.00	25.40	25.40	35.623	4.792	14.381	0.024
RGN	14RGN133DD	0.00	89.00	89.00	27.021	6.316	16.938	0.022
RGN	14RGN133DD	121.00	134.00	13.00	17.259	4.342	29.646	0.003
RGN	14RGN134DD	0.00	58.50	58.50	40.459	4.764	12.775	0.018
RGN	14RGN134DD	62.00	118.00	56.00	27.542	5.023	22.682	0.026
RGN	14RGN136DD	0.00	41.00	41.00	33.011	6.174	14.165	0.014
RGN	14RGN137DD	0.00	33.00	33.00	28.390	4.882	18.285	0.031
RGN	14RGN138DD	60.00	83.00	23.00	25.461	3.732	15.318	0.013
RGN	14RGN139DD	0.00	33.00	33.00	52.235	5.583	1.906	0.034
RGN	14RGN139DD	40.00	59.00	19.00	25.214	6.031	11.693	0.021
RGN	14RGN139DD	73.00	77.00	4.00	20.450	5.668	23.163	0.008
RGN	14RGN139DD	81.50	98.00	16.50	19.793	5.190	26.467	0.017
RGN	14RGN139DD	105.00	117.00	12.00	19.088	3.793	5.291	0.017
RGN	14RGN139DD	122.00	132.00	10.00	20.895	5.797	5.143	0.010
RGN	14RGN140DD	0.00	10.00	10.00	26.841	6.778	8.965	0.031

Prospect	SiteID	From	To	Interval	Fe %	Al %	Ca %	P %
RGN	14RGN141DD	24.00	33.00	9.00	26.977	3.573	23.117	0.020
RGN	14RGN142DD	18.00	25.00	7.00	27.060	3.224	19.614	0.031
RGN	14RGN144DD	0.00	20.00	20.00	40.370	4.230	13.385	0.028
RGN	14RGN145DD	5.50	40.00	34.50	36.968	4.713	13.961	0.016
RGN	14RGN147DD	0.00	30.00	30.00	47.238	3.565	9.187	
RGN	14RGN148DD	18.00	23.00	5.00	21.050	6.180	26.300	0.009
RGN	14RGN149DD	23.50	91.00	67.50	31.748	4.980	15.935	0.044
RGN	14RGN150DD	35.00	49.00	14.00	30.282	4.461	18.671	0.015
RGN	14RGN152DD	100.00	114.00	14.00	28.586	6.359	14.269	0.002
RGN	14RGN152DD	118.00	130.00	12.00	25.402	8.635	4.213	0.001
RGN	14RGN153GT	65.40	70.00	4.60	29.100	3.170	20.625	0.050
RGN	14RGN153GT	77.00	88.80	11.80	32.554	2.627	20.277	0.038
RGN	14RGN154DD	9.00	34.00	25.00	40.411	2.668	11.960	0.022
RGN	14RGN158DD	8.00	18.00	10.00	44.258	4.454	6.232	0.015
RGN	14RGN158DD	26.50	37.00	10.50	36.299	2.924	20.267	0.025
RGN	14RGN158DD	62.00	70.00	8.00	25.065	3.519	21.369	0.013
RGN	14RGN159DD	7.20	20.50	13.30	40.077	5.066	9.719	0.019
RGN	14RGN162DD	0.00	19.00	19.00	39.963	5.058	11.149	0.016
RGN	14RGN169DD	0.00	6.00	6.00	28.362	3.758	18.775	0.012
RGN	14RGN171DD	0.00	9.00	9.00	50.859	3.118	3.786	0.003
RGN	14RGN171DD	19.00	22.00	3.00	15.580	7.663	16.617	0.009
RGN	14RGN171DD	27.50	59.00	31.50	27.417	5.124	21.352	0.009
RGN	14RGN172DD	12.00	20.50	8.50	31.249	4.548	15.896	0.010
RGN	14RGN173DD	16.50	28.50	12.00	31.478	3.779	17.864	
RGN	14RGN174DD	14.70	21.50	6.80	28.166	3.935	16.367	0.009
RGN	14RGN175DD	14.00	27.00	13.00	26.237	5.188	20.300	0.006
RGN	14RGN176DD	0.00	27.00	27.00	34.652	4.548	16.468	0.008
RGN	14RGN178DD	0.00	3.30	3.30	45.480	1.250	3.750	0.011
RGN	14RGN179GT	25.50	33.70	8.20	27.387	4.548	20.521	0.006
RGN	14RGN179GT	61.10	71.30	10.20	33.574	4.104	18.856	0.013
RGN	14RGN180DD	0.00	39.00	39.00	40.357	4.167	13.112	
RGN	14RGN180DD	43.00	54.30	11.30	29.366	3.873	19.320	
RGN	14RGN181DD	0.00	16.50	16.50	25.238	4.188	17.306	0.017
RGN	15RGN186GT	42.60	48.10	5.50	35.499	4.787	15.747	0.022
RGN	15RGN186GT	70.70	90.00	19.30	23.062	4.978	22.329	0.005
RGN	15RGN187GT	30.85	65.20	34.35	30.483	4.187	16.131	0.011
RGN	15RGN192DD	12.00	23.00	11.00	33.298	3.136	22.455	
RGN	DD14RGN071	0.00	105.00	105.00	21.823	7.603	19.082	0.022
RGN	DD14RGN071	114.00	180.00	66.00	15.043	4.616	29.294	0.006

Prospect	SiteID	From	To	Interval	Fe %	Al %	Ca %	P %
RGN	DD14RGN074	20.00	115.00	95.00	30.320	4.168	21.801	0.006
RGN	DD14RGN091	0.00	28.00	28.00	39.586	4.346	10.816	0.027
RGN	DD14RGN093	15.00	41.00	26.00	45.390	2.023	7.200	0.019
RGN	DD14RGN094	22.00	67.00	45.00	23.765	4.095	24.739	0.017
RGN	DD14RGN095	0.00	10.40	10.40	37.954	7.095	1.077	0.033
RGN	DD14RGN095	41.80	93.00	51.20	37.526	2.998	15.166	0.017
RGN	DD14RGN100	13.20	42.20	29.00	45.109	3.426	7.259	0.004
RGN	DD14RGN101	11.70	26.60	14.90	47.416	2.623	8.659	0.010
RGN	RC14RGN080	0.00	47.00	47.00	34.557	4.075	15.999	0.013
RGN	RC14RGN081	0.00	56.00	56.00	39.521	5.465	10.819	0.020
RGN	RC14RGN082	0.00	44.00	44.00	35.010	5.587	13.348	0.015
RGN	RC14RGN083	0.00	111.00	111.00	23.201	6.098	22.614	0.009
RGN	RC14RGN085	0.00	129.00	129.00	22.703	5.927	23.870	0.014

Intersections represent those intervals in drillholes where an Fe grade of more than 10% can be sustained over a minimum interval of 3m.

Appendix D

Lithology and Rock Unit Codes

Lithology Code Map

LithCode	Lithology	Frequency	Percentage	RockUnitCode	Rock Unit
QTZ	Quartzite	1	0.01	SED	Sediments (undifferentiated)
MUS	Meta - sediment	1	0.01	SED	Sediments (undifferentiated)
SIH	Interbedded shale/siltstone	1	0.01	SED	Sediments (undifferentiated)
LCO	Colluvium	2	0.03	SED	Sediments (undifferentiated)
SBS	Black Shale	2	0.03	SED	Sediments (undifferentiated)
SSLT	Siltstone	2	0.03	SED	Sediments (undifferentiated)
FTZ	Fault Zone	2	0.03	FTZ	Fault Zone
MDST	Mudstone	3	0.04	SED	Sediments (undifferentiated)
LAL	Alluvium	3	0.04	SED	Sediments (undifferentiated)
BFL	Fault Breccia	4	0.06	FTZ	Fault Zone
LSP	Saprolite	4	0.06	SED	Sediments (undifferentiated)
SKHE	Skarn Haematite	4	0.06	SKRN	Skarn (undifferentiated)
MMB	Marble	6	0.08	SED	Sediments (undifferentiated)
IDR	Diorite	6	0.08	IDK	Dyke
CLY	Clay	6	0.08	CLAY	Clay
KST	Talc skarn	7	0.10	SKRN	Skarn (undifferentiated)
WTR	Water inflow	7	0.10	OTH	Other

LithCode	Lithology	Frequency	Percentage	RockUnitCode	Rock Unit
OMT	Organic material	8	0.11	SED	Sediments (undifferentiated)
SAND	Sandstone	8	0.11	SED	Sediments (undifferentiated)
SKPX	Skarn : pyroxene facies	14	0.20	SKRN	Skarn (undifferentiated)
QZIT	Quartzite	15	0.21	SED	Sediments (undifferentiated)
KCS	Calcsilicate Skarn	15	0.21	SKCS	Calcsilicate Skarn
SKDI	Skarn : Diopside	18	0.25	SKRN	Skarn (undifferentiated)
LOS	Core Loss	18	0.25	LOSS	Core Loss
IRN	Ironstone	23	0.32	IRN	Ironstone
GRAV	Gravel	27	0.38	SED	Sediments (undifferentiated)
GRN	Granite	27	0.38	GRAN	Granite
LMST	Limestone	29	0.41	SED	Sediments (undifferentiated)
NSP	No Sampling	33	0.47	LOSS	Core Loss
SIS	Interbedded sandstone/siltstone	42	0.59	SED	Sediments (undifferentiated)
IDK	Dyke	47	0.66	IDK	Dyke
LSD	Sandstone	48	0.68	SED	Sediments (undifferentiated)
IDO	Dolerite	55	0.78	IDK	Dyke
SKCE	Chlorite Epidote Skarn	117	1.65	SKCE	Chlorite Epidote Skarn
LOSS	Core Loss	135	1.91	LOSS	Core Loss
SKRN	Skarn	142	2.00	SKRN	Skarn (undifferentiated)
CLS	Core Loss	165	2.33	LOSS	Core Loss
MMAG	Magnetite	174	2.46	MMAG	Magnetite
SKGT	Garnet Skarn	336	4.74	SKGT	Garnet Skarn
GRAD	Granodiroite	474	6.69	GRAN	Granite
CLAY	Clay	576	8.13	CLAY	Clay
SKCS	Calcsilicate Skarn	1213	17.13	SKCS	Calcsilicate Skarn
SKMG	Magnetite Skarn	1424	20.10	SKMG	Magnetite Skarn
GRAN	Granite	1839	25.96	GRAN	Granite
	Total	7083	100.00		

Rock Units

RockUnitCode	RockUnit	FREQUENCY	Percentage
FTZ	Fault Zone	6	0.08
OTH	Other	7	0.10
IRN	Ironstone	23	0.32
IDK	Dyke	108	1.52
SKCE	Chlorite Epidote Skarn	117	1.65
MMAG	Magnetite	174	2.46
SKRN	Skarn (undifferentiated)	185	2.61
SED	Sediments (undifferentiated)	202	2.85
SKGT	Garnet Skarn	336	4.74
LOSS	Core Loss	351	4.96
CLAY	Clay	582	8.22
SKCS	Calcsilicate Skarn	1228	17.34
SKMG	Magnetite Skarn	1424	20.10
GRAN	Granite	2340	33.04
	Total	**7083**	**100.00**

Appendix E

Statistical Data

Statistical Summary All Assays Prior to Compositing

All Assays before Compositing									
Field	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
Fe %	0.5	67.66	3601	30.13	28.46	33.59	14.531	0.482	0
Al_2O_3 %	0.81	22.2	3138	5.03	4.39	5.02	2.802	0.557	240
CaO %	0.01	43	3138	16.23	16.20	21.93	9.321	0.574	0
P %	0.001	0.549	2821	0.02	0.02	0.03	0.031	1.280	181
LOI %	-2.41	23.97	3138	1.98	0.97	6.48	3.013	1.519	200
Ba ppm	0.001	1260	1328	54.31	40.00	5272.70	86.700	1.596	107
Cr_2O_3 ppm	0.001	1360	2032	34.47	30.00	343.42	38.895	1.128	85
K_2O %	0.001	6.11	2988	0.33	0.02	0.19	1.063	3.209	525
MgO %	0.03	12.15	2369	1.61	0.98	1.74	1.613	1.004	97
Mn ppm	0.227	184000	3143	9736.94	7090.00	49108.0	9980.9	1.025	339
Na_2O %	0.003	6.7	1901	0.68	0.41	1.63	0.850	1.249	116
Pb ppm	0.001	2150	2175	82.36	50.00	772.96	127.460	1.548	180
S %	0.25	490	643	8.42	1.00	4.77	33.925	4.028	90
SiO_2 %	0.9	78.6	3138	28.57	27.50	29.37	14.494	0.507	180
SnO_2 %	0.01	0.96	1187	0.09	0.08	0.10	0.081	0.864	39
Sr ppm	0.001	1060	2115	59.32	40.00	732.36	75.436	1.272	145

All Assays before Compositing									
Field	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
TiO_2 %	0.02	2.8	2597	0.23	0.21	0.23	0.172	0.757	135
V %	0	0.028	2077	0.00	0.00	0.00	0.002	0.507	12
WO_3 %	0.01	0.41	834	0.08	0.07	0.08	0.055	0.702	31
Zn ppm	0.008	15000	3144	964.21	630.00	5881.94	976.411	1.013	48
As ppm	0.001	15000	2153	152.24	50.00	1944.54	553.373	3.635	196
Bi ppm	0.13	607	612	61.24	32.35	113.90	76.038	1.242	21
Cd ppm	0.02	2200	1094	60.99	25.00	209.04	103.939	1.704	35
Cl %	0.001	0.409	2229	0.03	0.02	0.03	0.039	1.345	198
Co ppm	0.001	110	1911	25.90	20.00	273.96	18.334	0.708	60
Cu ppm	0.001	2920	2254	59.27	30.00	328.49	187.892	3.170	210
Ni ppm	0.001	360	2182	25.86	20.00	222.37	21.524	0.832	9
Zr ppm	0.001	570	2371	115.06	110.00	983.40	64.736	0.563	23

Statistical Summary All Assays After Compositing

All Assays After Compositing									
Field	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
SG	1.88	5.1	5289	3.18	3.21	3.17	0.612	0.193	0
Fe %	0.5	67.66	3621	30.53	28.80	33.59	14.294	0.468	0
Al_2O_3 %	0.81	22.2	3426	5.04	4.39	5.03	2.823	0.561	264
CaO %	0.01	43	3426	16.04	16.15	22.03	9.344	0.583	0
P %	0.001	0.549	3327	0.02	0.01	0.03	0.029	1.332	181
LOI %	-2.41	23.97	3426	2.18	1.13	6.71	3.241	1.485	207
Ba ppm	0.001	1260	2664	34.21	5.00	296.83	77.283	2.259	204
Cr_2O_3 ppm	0.001	1360	2657	29.47	30.00	248.94	36.133	1.226	50
K_2O %	0.001	6.11	3426	0.31	0.02	0.17	1.022	3.319	602
MgO %	0.03	12.15	2657	1.54	0.91	1.67	1.595	1.035	133
Mn ppm	0.227	184000	3433	9678.41	7080.0	62239.3	10029.80	1.036	346
Na_2O %	0.003	6.7	3426	0.39	0.01	0.85	0.719	1.870	188
Pb ppm	0.001	2150	2664	75.89	50.00	723.30	121.238	1.598	220
S %	5	31900	2461	366.81	30.00	191.49	1994.786	5.438	310
SiO_2 %	0.9	78.6	3426	28.29	27.33	29.17	14.448	0.511	187
SnO_2 %	0.002	0.76	1307	0.09	0.08	0.10	0.078	0.853	44
Sr ppm	0.001	1060	2664	52.42	40.00	537.23	73.263	1.398	196
TiO_2 %	0.01	2.8	3426	0.20	0.19	0.25	0.175	0.898	125
V %	0	0.028	2664	0.00	0.00	0.00	0.002	0.603	15

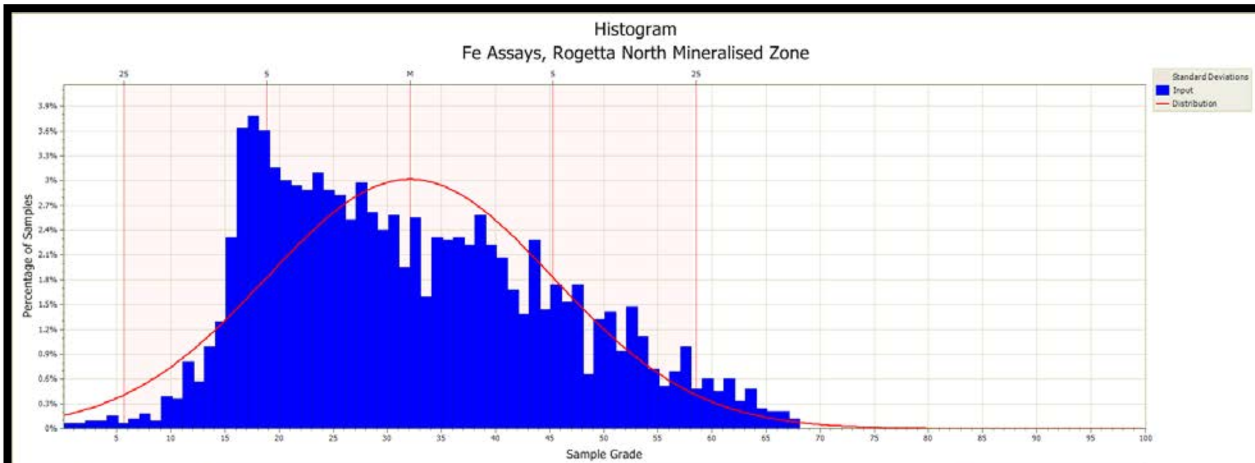
All Assays After Compositing									
Field	**Minimum**	**Maximum**	**Points**	**Mean**	**Median**	**Sichel's T**	**Std Dev**	**COV**	**Outliers**
WO_3 %	0	0.41	946	0.07	0.06	0.08	0.056	0.809	17
Zn ppm	0.008	15000	3433	935.28	610.00	7429.59	960.780	1.027	66
As ppm	0.001	15000	2664	149.49	50.00	1639.85	621.797	4.159	226
Bi ppm	0.13	607	1279	52.49	50.00	75.20	49.055	0.935	352
Cd ppm	0.01	2200	1235	54.03	25.00	947.98	99.729	1.846	35
Cl %	0.001	0.409	2657	0.03	0.02	0.03	0.038	1.431	240
Co ppm	0.001	110	2664	21.97	20.00	172.58	18.984	0.864	77
Cu ppm	0.001	2920	2664	59.60	30.00	381.45	194.308	3.260	225
Ni ppm	0.001	360	2664	24.16	20.00	219.48	22.052	0.913	8
Zr ppm	0.001	570	2664	113.91	110.00	1239.90	66.393	0.583	28
RQD	0	113.64	6994	40.02	38.00	60.69	34.610	0.865	0

Statistical Summary All Composites in Ore Zone

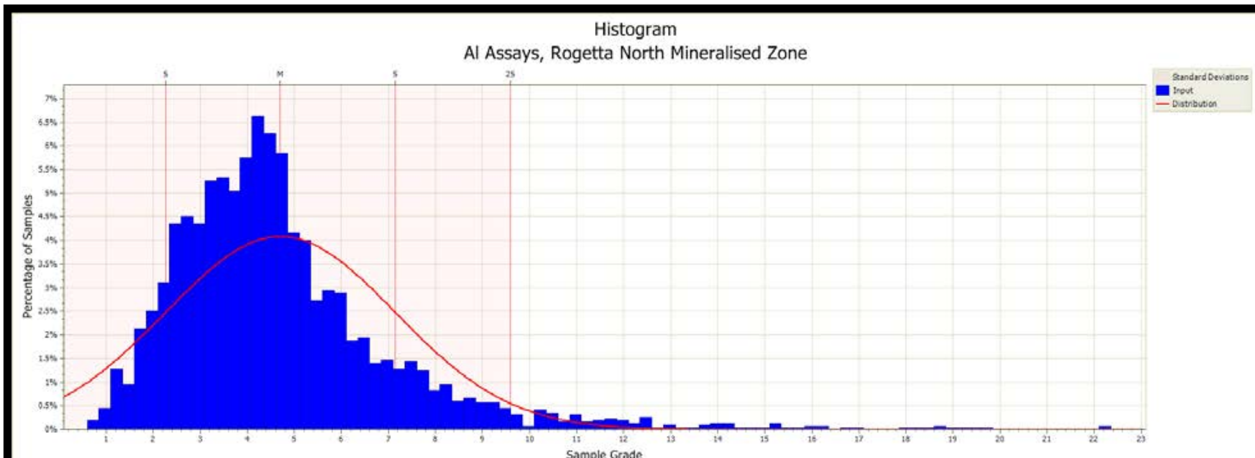
All Composites in Ore Zone									
Field Name	Minimum	Maximum	Points	Mean	Median	Sichel's T	Std Dev	COV	Outliers
SG	1.99	5.10	1847	3.62	3.64	3.62	0.556	0.154	125
Fe %	0.61	67.66	3329	32.08	30.10	32.44	13.219	0.412	0
Al_2O_3 %	0.81	22.20	3151	4.70	4.28	4.71	2.443	0.519	151
CaO %	0.01	43.00	3151	16.59	16.70	21.50	8.985	0.542	0
P %	0.00	0.55	3066	0.02	0.01	0.03	0.029	1.297	173
LOI %	-2.41	23.97	3151	2.19	1.20	7.38	3.236	1.478	173
Ba ppm	0.00	1260.00	2411	30.44	5.00	194.67	76.189	2.503	126
Cr_2O_3 ppm	0.00	360.00	2411	29.94	30.00	215.95	25.348	0.847	46
K_2O %	0.00	4.99	3151	0.11	0.02	0.07	0.411	3.650	530
MgO %	0.03	12.15	2411	1.60	0.99	1.70	1.568	0.982	96
Mn ppm	0.40	184000.0	3151	10235.45	7330.00	52929.59	10181.491	0.995	343
Na_2O %	0.00	6.70	3151	0.30	0.01	0.56	0.558	1.868	223
Pb ppm	0.00	2150.00	2411	79.38	50.00	648.62	125.737	1.584	191
S %	5.00	31900.00	2244	370.62	30.00	186.63	2036.442	5.495	303
SiO_2 %	0.90	78.60	3151	26.04	26.50	26.98	10.951	0.421	45
SnO_2 %	0.01	0.76	1220	0.09	0.08	0.10	0.079	0.837	43
Sr ppm	0.00	1060.00	2411	51.67	40.00	431.38	73.745	1.427	172
TiO_2 %	0.01	1.44	3151	0.19	0.19	0.25	0.141	0.736	105
V %	0.00	0.02	2411	0.00	0.00	0.00	0.001	0.516	13

All Composites in Ore Zone									
Field Name	Minimum	Maximum	Points	Mean	Median	Sichel's T	Std Dev	COV	Outliers
WO_3 %	0.00	0.41	883	0.07	0.06	0.08	0.055	0.771	25
Zn ppm	0.01	15000.0	3151	982.38	670.00	6237.28	961.137	0.978	58
As ppm	0.00	15000.0	2411	147.78	50.00	1601.53	490.915	3.322	232
Bi ppm	0.59	607.00	1154	55.67	50.00	57.76	49.234	0.884	468
Cd ppm	0.01	2200.00	1119	57.41	25.00	688.56	102.781	1.790	34
Cl %	0.00	0.41	2411	0.03	0.02	0.03	0.039	1.428	217
Co ppm	0.00	110.00	2411	23.10	20.00	155.02	19.146	0.829	78
Cu ppm	0.00	2920.00	2411	63.42	30.00	345.81	203.587	3.210	241
Ni ppm	0.00	360.00	2411	24.99	20.00	193.34	21.134	0.846	8
Zr ppm	0.00	570.00	2411	114.40	110.00	1059.74	66.212	0.579	24
RQD	0.00	113.64	2589	41.47	42.00	61.52	34.566	0.834	0

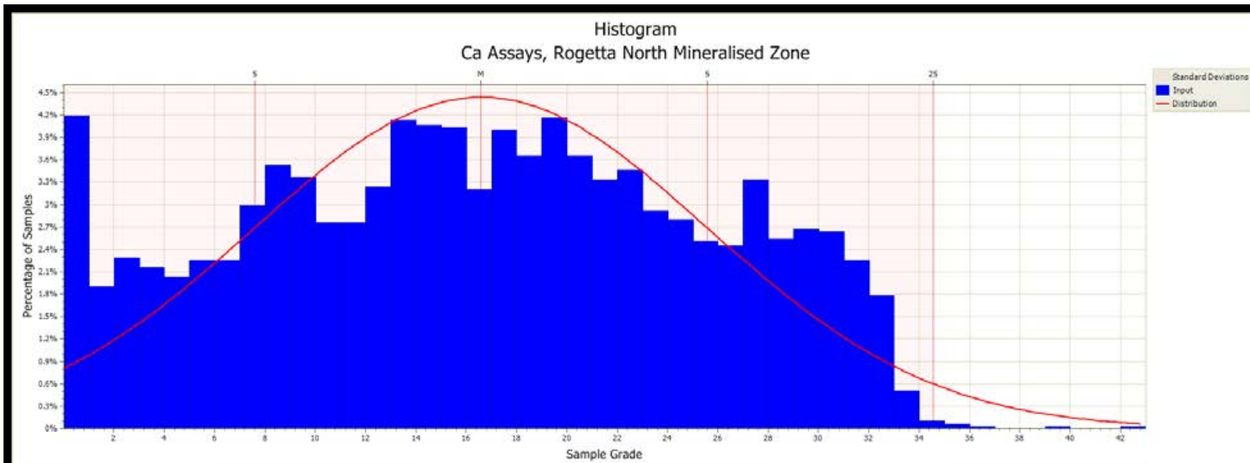
Histograms of Major Elements



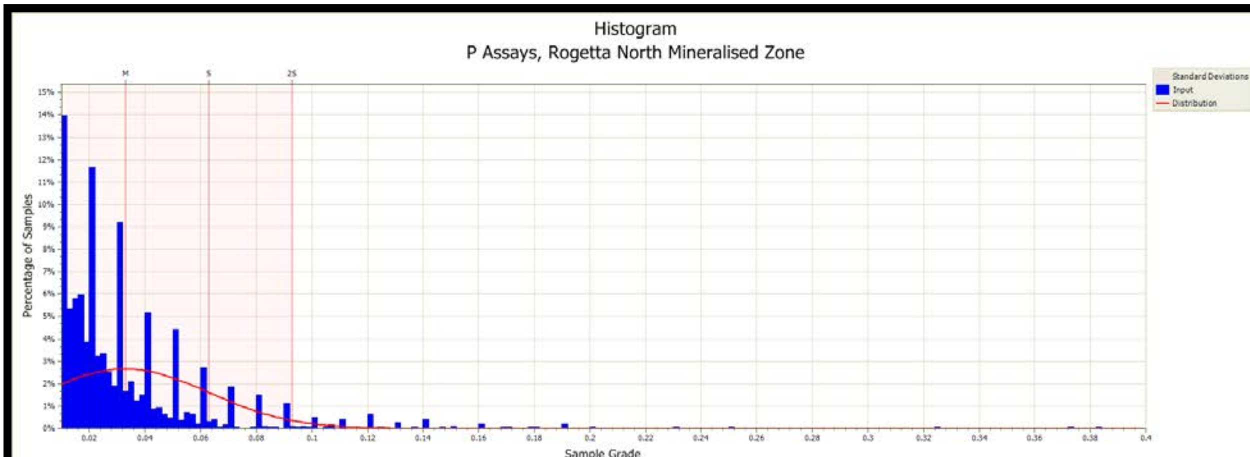
Minimum value	0.610	Variance	174.739	Geometric std dev	1.582
Maximum value	67.660	Standard deviation	13.219	Sichel's estimator	32.444
2nd highest	67.660	Coeff. of variation	0.412	Sichel's V	0.211
3rd highest	67.300	Median	30.100	Sichel's gamma	1.111
4th highest	67.160	Ln mean	3.374	Chi-Square Test	607.479
N	3329	Ln std deviation	0.459	Degrees of freedom	68
Mean	32.079	Geometric mean	29.200		



Minimum value	0.810	Variance	5.967	Geometric std dev	1.622
Maximum value	22.200	Standard deviation	2.443	Sichel's estimator	4.708
2nd highest	22.200	Coeff. of variation	0.519	Sichel's V	0.234
3rd highest	19.750	Median	4.280	Sichel's gamma	1.124
4th highest	19.350	Ln mean	1.432	Chi-Square Test	1543.121
N	3151	Ln std deviation	0.484	Degrees of freedom	45
Mean	4.704	Geometric mean	4.188		

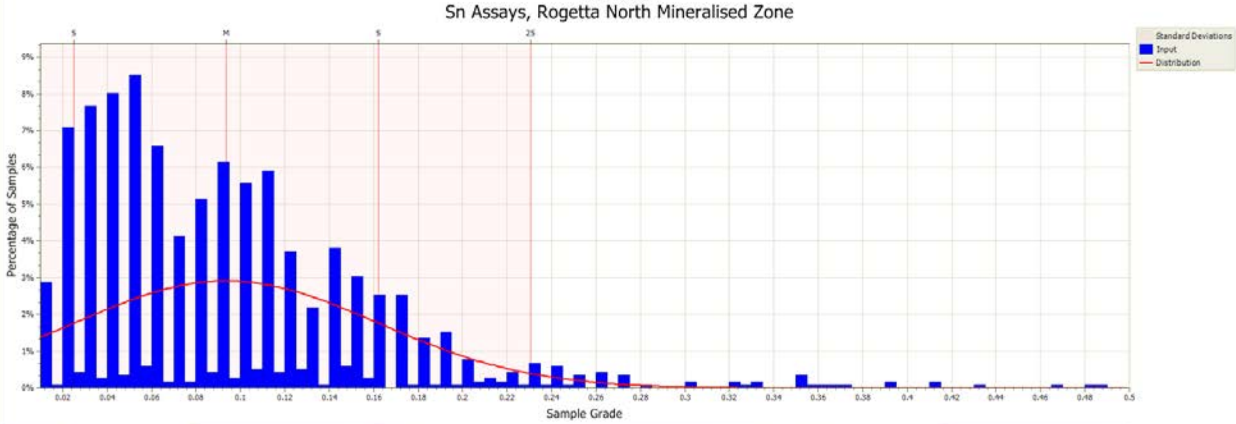


Minimum value	0.010	Variance	80.730	Geometric std dev	2.885
Maximum value	43.000	Standard deviation	8.985	Sichel's estimator	21.500
2nd highest	39.300	Coeff. of variation	0.542	Sichel's V	1.123
3rd highest	36.300	Median	16.700	Sichel's gamma	1.753
4th highest	35.700	Ln mean	2.507	Chi-Square Test	663.689
N	3151	Ln std deviation	1.060	Degrees of freedom	41
Mean	16.587	Geometric mean	12.266		



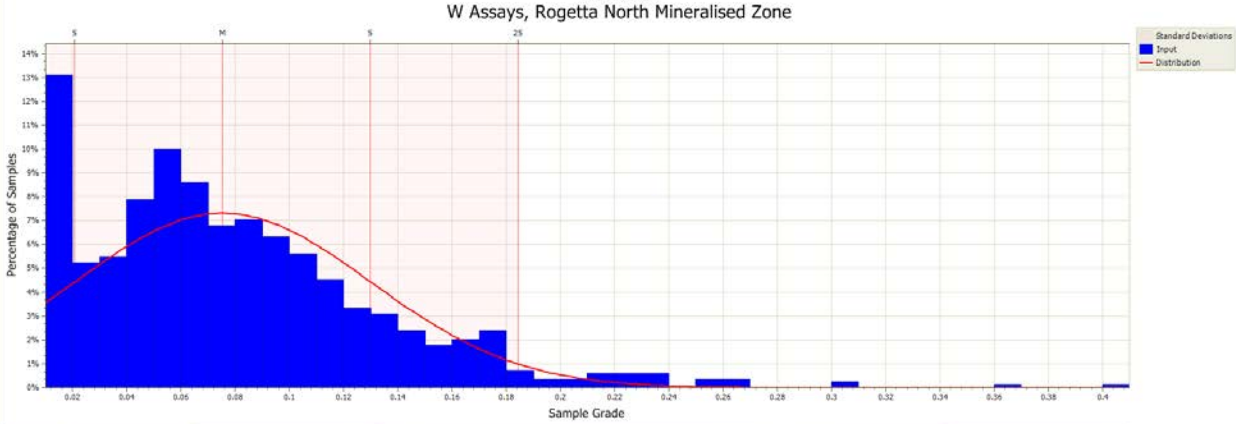
Minimum value	0.010	Variance	0.001	Geometric std dev	1.946
Maximum value	0.382	Standard deviation	0.030	Sichel's estimator	0.032
2nd highest	0.373	Coeff. of variation	0.910	Sichel's V	0.443
3rd highest	0.325	Median	0.024	Sichel's gamma	1.248
4th highest	0.250	Ln mean	-3.665	Chi-Square Test	3637.086
N	1946	Ln std deviation	0.666	Degrees of freedom	48
Mean	0.033	Geometric mean	0.026		

Histogram
Sn Assays, Rogetta North Mineralised Zone



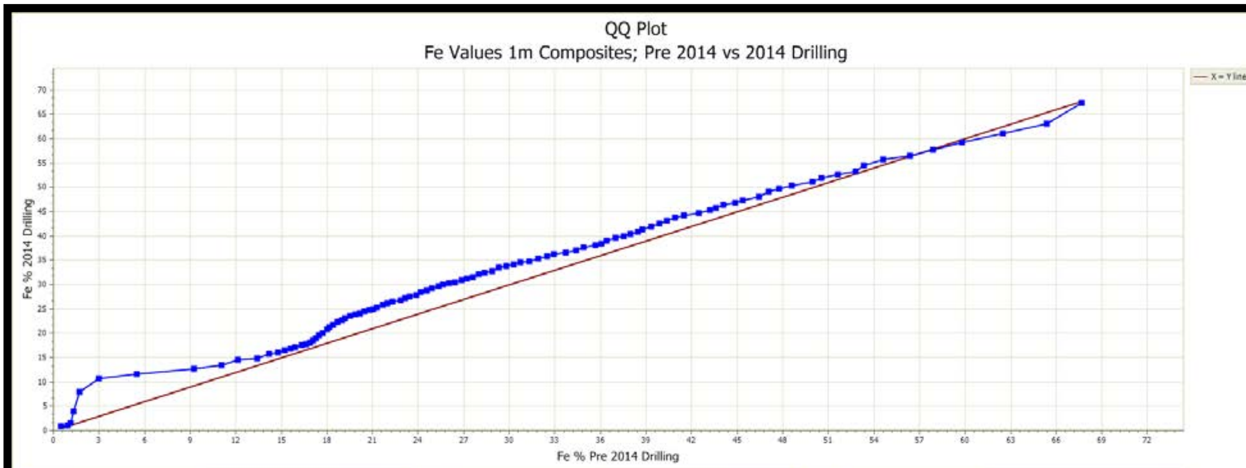
Minimum value	0.010	Variance	0.005	Geometric std dev	2.156
Maximum value	0.485	Standard deviation	0.068	Sichel's estimator	0.096
2nd highest	0.480	Coeff. of variation	0.732	Sichel's V	0.590
3rd highest	0.466	Median	0.080	Sichel's gamma	1.343
4th highest	0.432	Ln mean	-2.634	Chi-Square Test	1654.683
N	1186	Ln std deviation	0.768	Degrees of freedom	48
Mean	0.094	Geometric mean	0.072		

Histogram
W Assays, Rogetta North Mineralised Zone

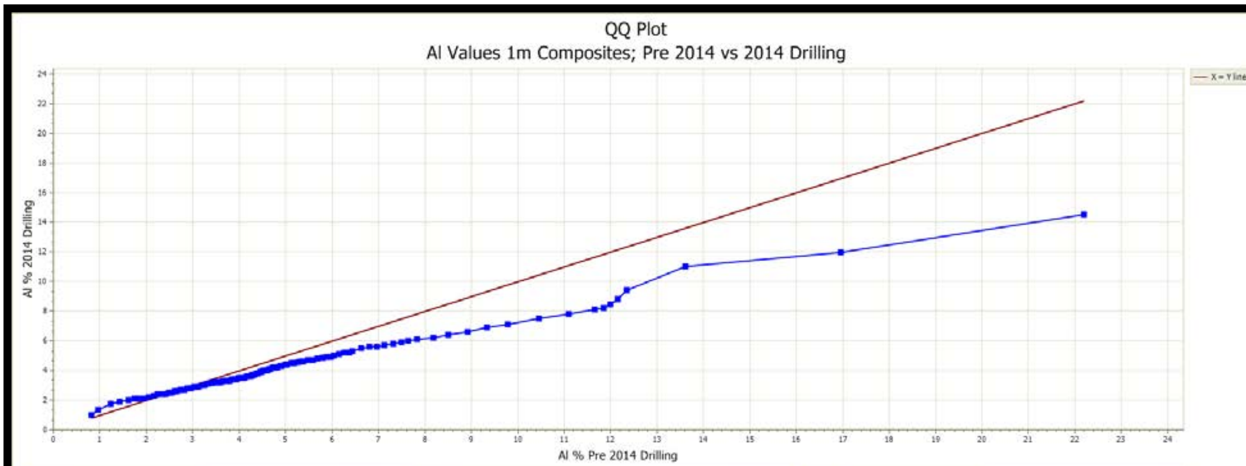


Minimum value	0.010	Variance	0.003	Geometric std dev	2.390
Maximum value	0.410	Standard deviation	0.055	Sichel's estimator	0.081
2nd highest	0.360	Coeff. of variation	0.724	Sichel's V	0.759
3rd highest	0.300	Median	0.060	Sichel's gamma	1.462
4th highest	0.300	Ln mean	-2.895	Chi-Square Test	295.964
N	839	Ln std deviation	0.871	Degrees of freedom	19
Mean	0.075	Geometric mean	0.055		

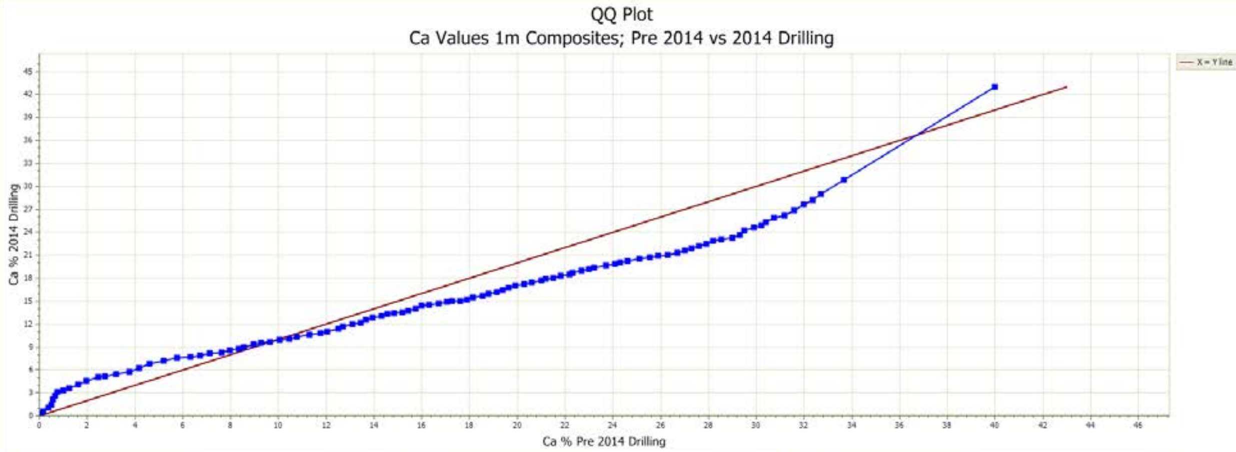
Comparisons between Pre 2014 Drill Results and 2014 Results, Major Elements



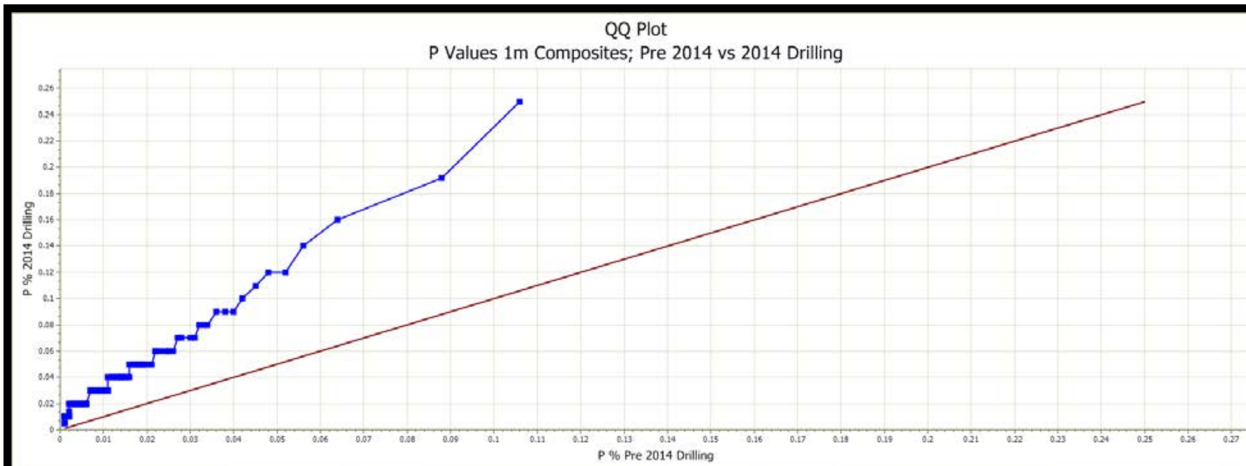
File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	FePcnt	X name	FePcnt	Corr coeff	0.996
Sample Ny	1307	Sample Nx	2664	Rank Corr Coeff	-1152846766.335
Y Mean	32.08	X Mean	29.33	xVar / yVar	1.10
Y variance	194.58	X variance	213.61	Precision	4.92
Y Standard Deviation	13.95	X Standard Deviation	14.62		



File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	Al2O3Pcnt	X name	Al2O3Pcnt	Corr coeff	0.997
Sample Ny	769	Sample Nx	2657	Rank Corr Coeff	-1152846766.338
Y Mean	4.37	X Mean	5.23	xVar / yVar	2.25
Y variance	3.98	X variance	8.96	Precision	19.39
Y Standard Deviation	2.00	X Standard Deviation	2.99		

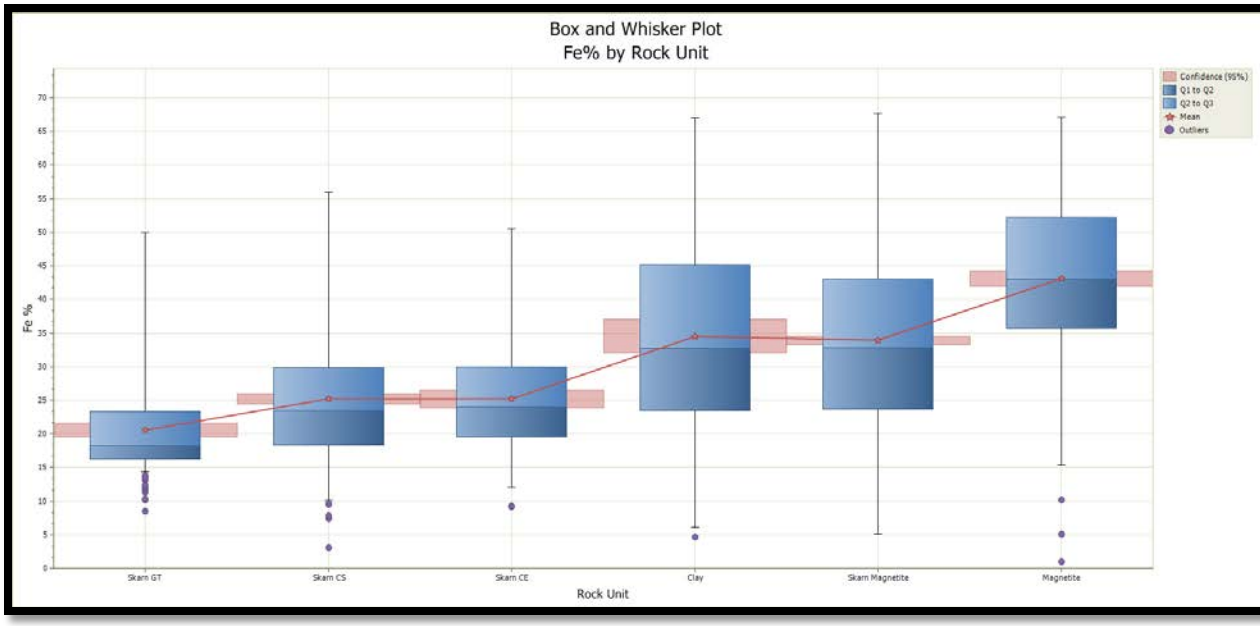


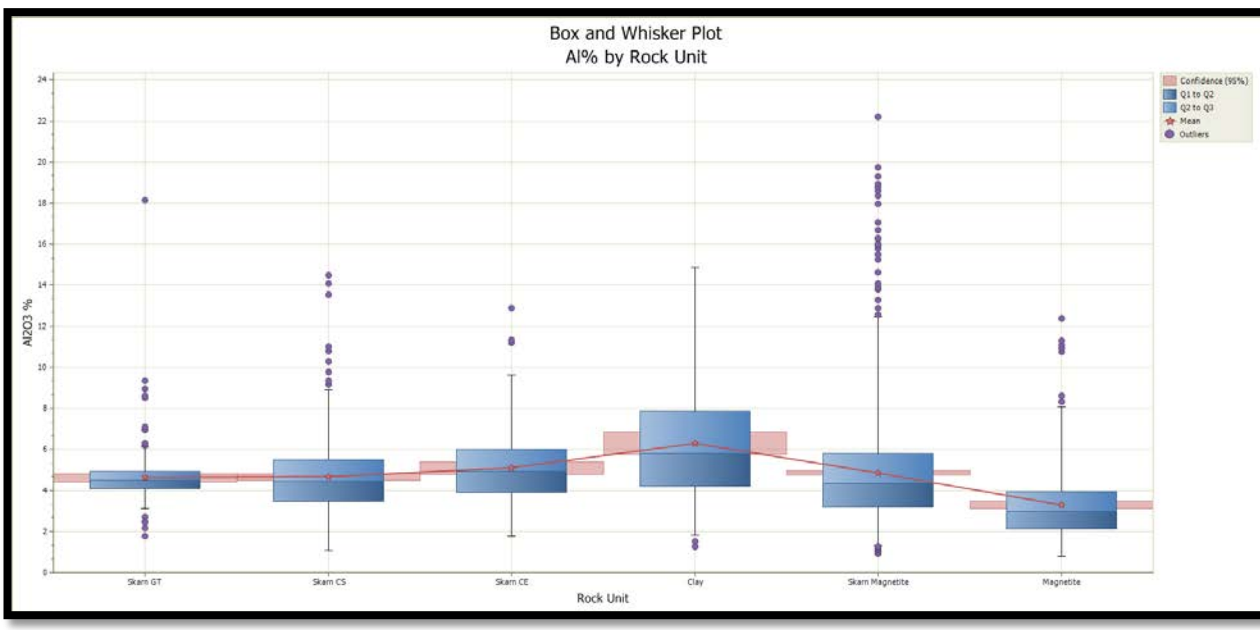
File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	CaOPcnt	X name	CaOPcnt	Corr coeff	0.987
Sample Ny	769	Sample Nx	2657	Rank Corr Coeff	-1152846766.338
Y Mean	14.58	X Mean	16.46	xVar / yVar	1.74
Y variance	55.06	X variance	95.89	Precision	16.73
Y Standard Deviation	7.42	X Standard Deviation	9.79		

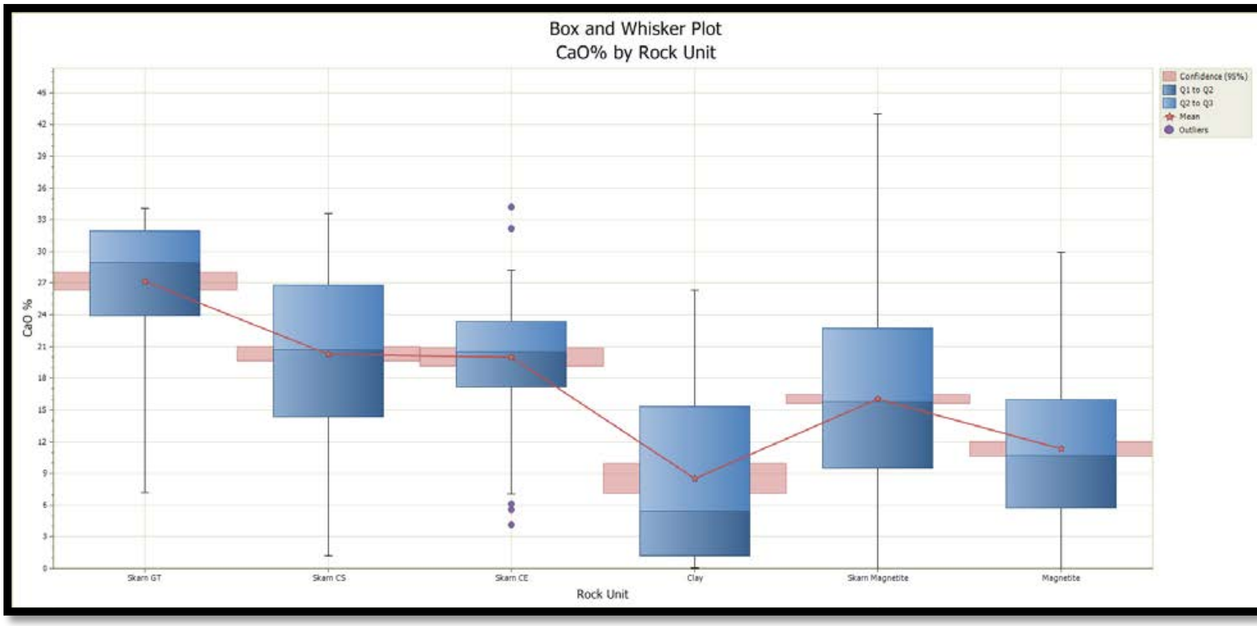


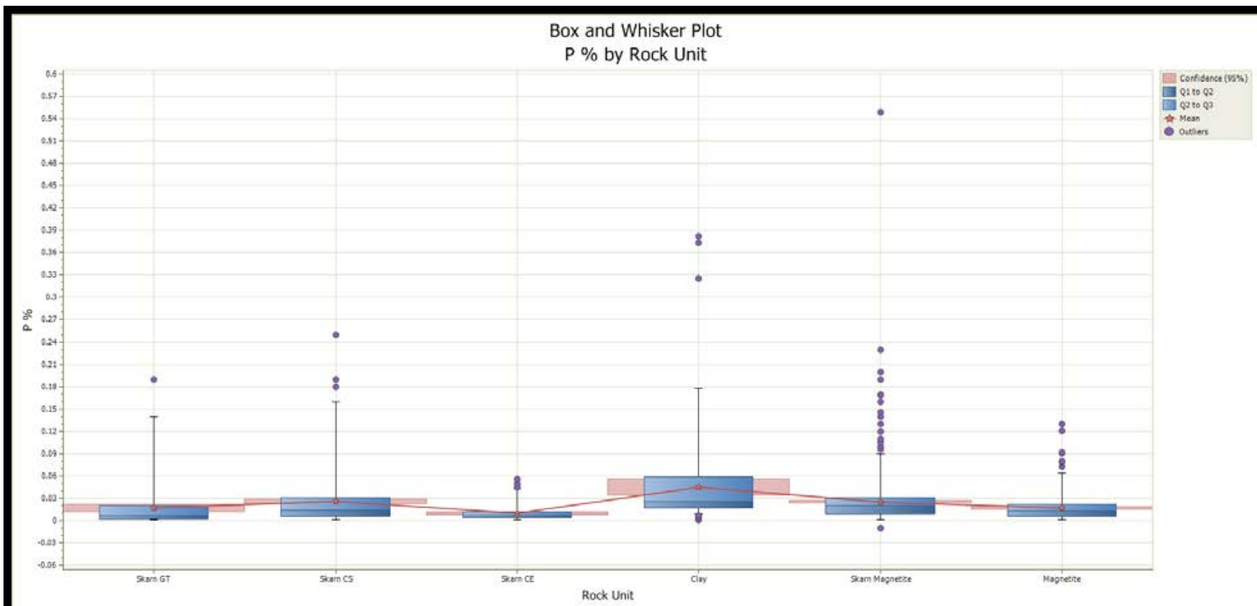
File name 1	RGN_DHAssayComp1ForModel_201503	File name 2	RGN_DHAssayComp1ForModel_201503	N quantiles	100
Y name	PPcnt	X name	PPcnt	Corr coeff	0.996
Sample Ny	769	Sample Nx	2542	Rank Corr Coeff	0.943
Y Mean	0.04	X Mean	0.01	xVar / yVar	0.20
Y variance	0.00	X variance	0.00	Precision	132.00
Y Standard Deviation	0.03	X Standard Deviation	0.02		

Box and Whisker Plots, Major elements by Rock Type

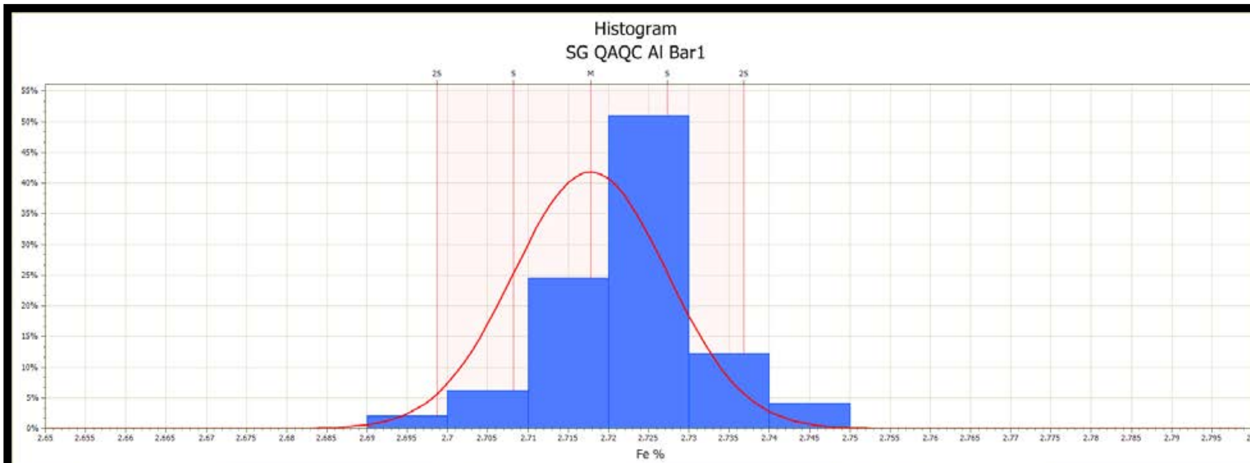




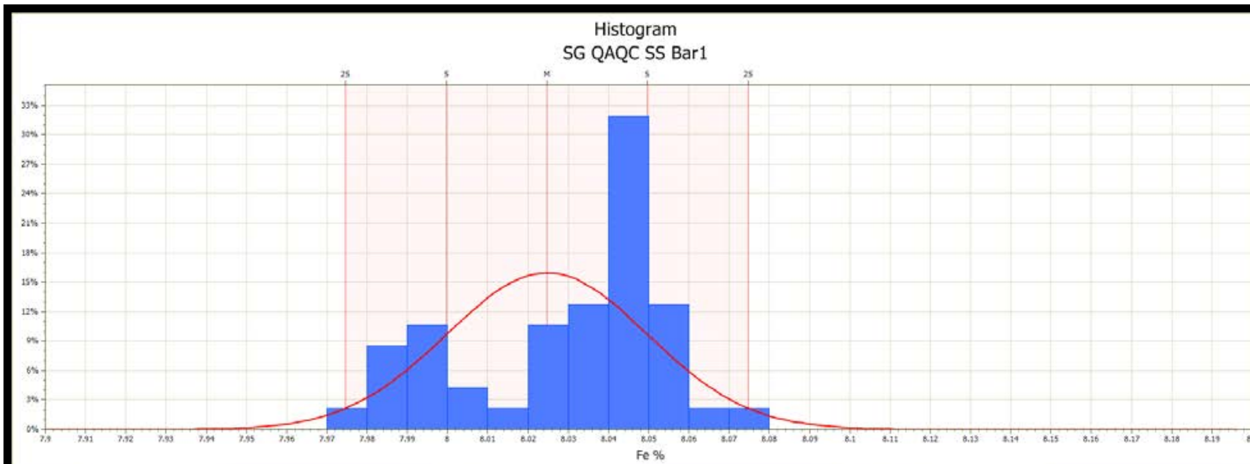

Box and Whisker Plot
CaO% by Rock Unit
CaO %
Rock Unit
Skarn GT
Skarn CS
Skarn CE
Clay
Skarn Magnetite
Magnetite
Confidence (95%)
Q1 to Q2
Q2 to Q3
Mean
Outliers


Box and Whisker Plot
P % by Rock Unit
P %
Rock Unit
Skarn GT
Skarn CS
Skarn CE
Clay
Skarn Magnetite
Magnetite
Confidence (95%)
Q1 to Q2
Q2 to Q3
Mean
Outliers

QAQC Sample results for SG Standards



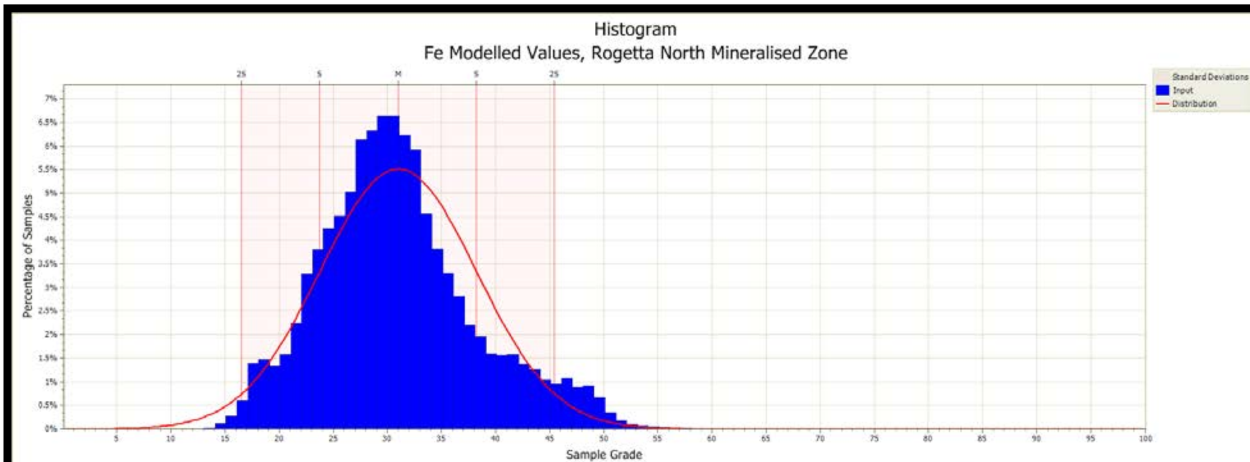
Minimum value	2.690	Variance	0.000	Geometric std dev	1.004
Maximum value	2.740	Standard deviation	0.010	Sichel's estimator	2.718
2nd highest	2.740	Coeff. of variation	0.004	Sichel's V	0.000
3rd highest	2.730	Median	2.720	Sichel's gamma	1.000
4th highest	2.730	Ln mean	1.000	Chi-Square Test	236.481
N	49	Ln std deviation	0.004	Degrees of freedom	4
Mean	2.718	Geometric mean	2.718		



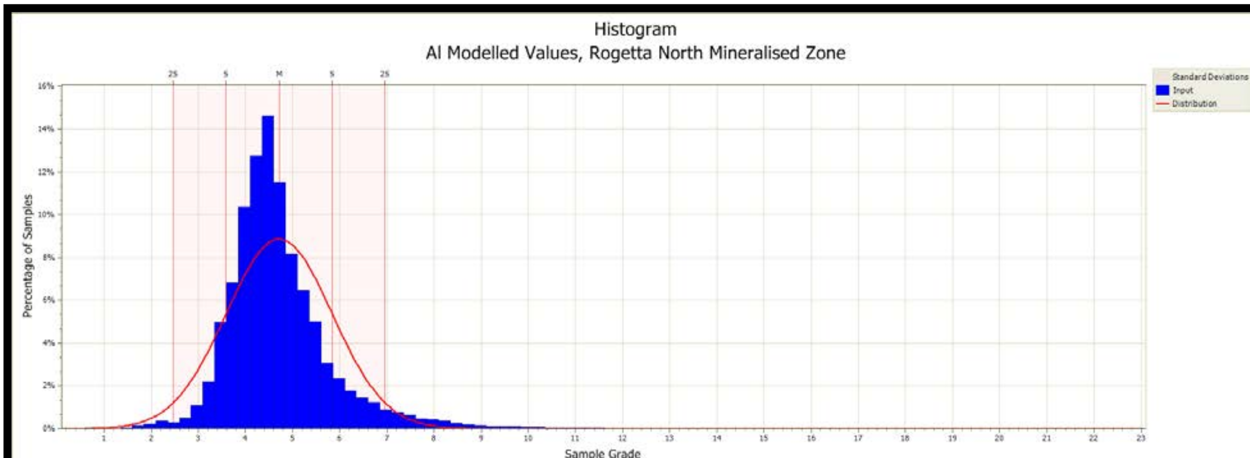
Minimum value	7.970	Variance	0.001	Geometric std dev	1.003
Maximum value	8.070	Standard deviation	0.025	Sichel's estimator	8.025
2nd highest	8.060	Coeff. of variation	0.003	Sichel's V	0.000
3rd highest	8.050	Median	8.030	Sichel's gamma	1.000
4th highest	8.050	Ln mean	2.083	Chi-Square Test	52.111
N	47	Ln std deviation	0.003	Degrees of freedom	7
Mean	8.025	Geometric mean	8.025		

Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

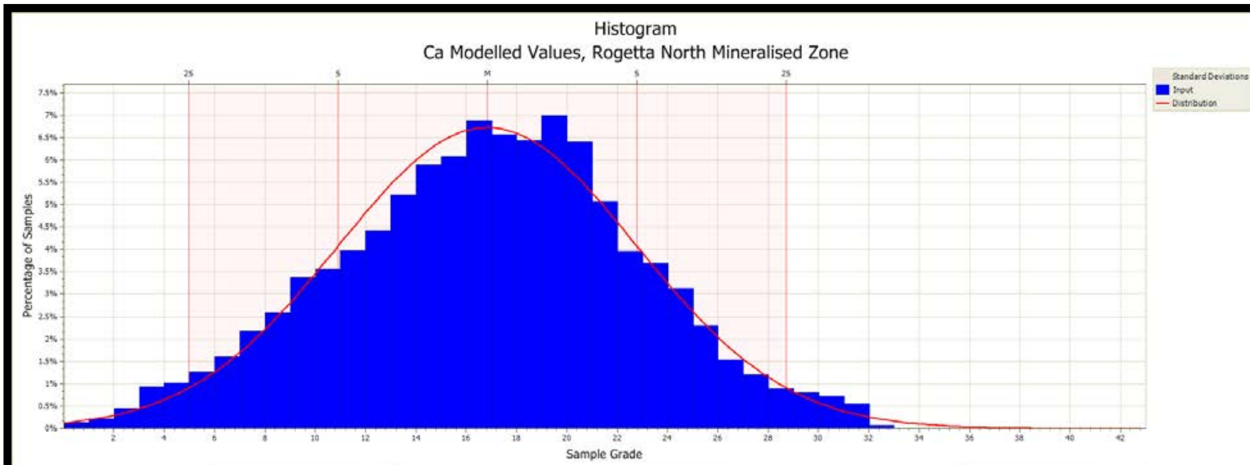
Histograms of Modelled Values, Major Elements



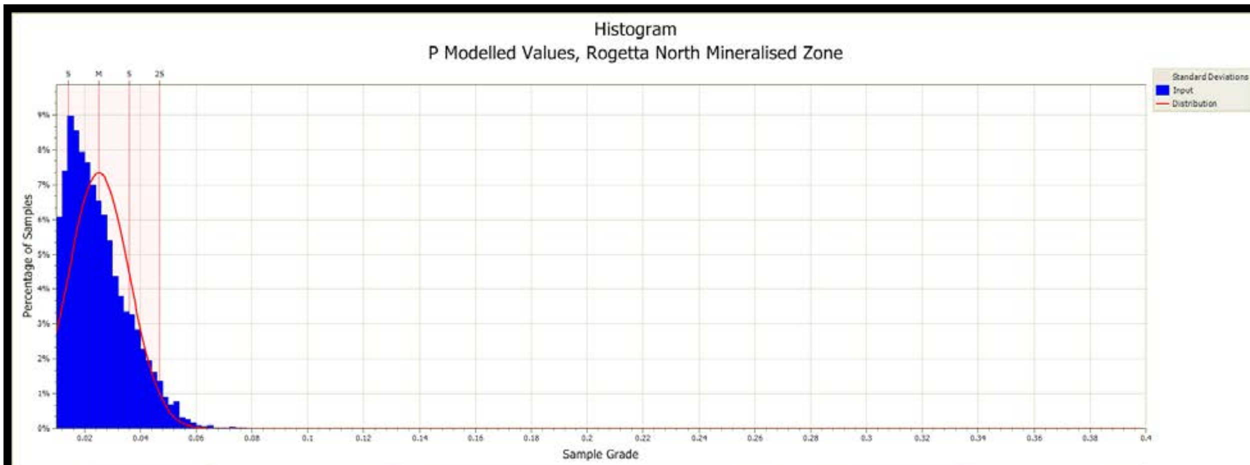
Minimum value	13.89328	Variance	52.32758	Geometric std dev	1.26327
Maximum value	61.38020	Standard deviation	7.23378	Sichel's estimator	31.00054
2nd highest	57.80369	Coeff. of variation	0.23340	Sichel's V	0.05462
3rd highest	57.79741	Median	30.24899	Sichel's gamma	1.02769
4th highest	57.60234	Ln mean	3.40670	Chi-Square Test	3308.88581
N	24467	Ln std deviation	0.23370	Degrees of freedom	52
Mean	30.99255	Geometric mean	30.16540		



Minimum value	0.84871	Variance	1.26697	Geometric std dev	1.25100
Maximum value	15.54349	Standard deviation	1.12560	Sichel's estimator	4.71067
2nd highest	14.69224	Coeff. of variation	0.23883	Sichel's V	0.05015
3rd highest	14.15024	Median	4.52709	Sichel's gamma	1.02539
4th highest	14.00109	Ln mean	1.52475	Chi-Square Test	46180.69989
N	24467	Ln std deviation	0.22395	Degrees of freedom	33
Mean	4.71293	Geometric mean	4.59401		

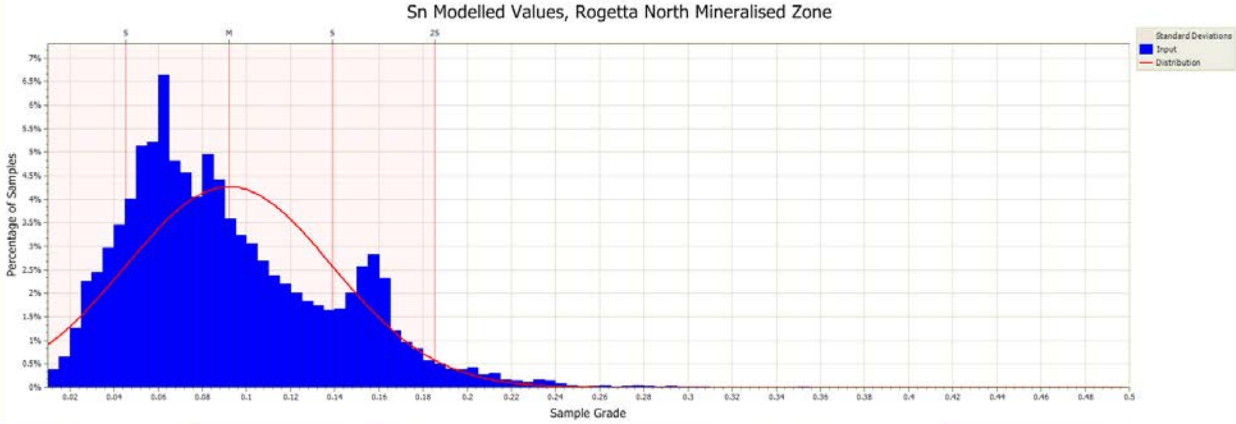


Minimum value	0.26640	Variance	35.19370	Geometric std dev	1.57453
Maximum value	32.64062	Standard deviation	5.93243	Sichel's estimator	17.19154
2nd highest	32.51151	Coeff. of variation	0.35226	Sichel's V	0.20608
3rd highest	32.39561	Median	17.05379	Sichel's gamma	1.10853
4th highest	32.38462	Ln mean	2.74138	Chi-Square Test	1172.37054
N	24467	Ln std deviation	0.45396	Degrees of freedom	37
Mean	16.84082	Geometric mean	15.50834		



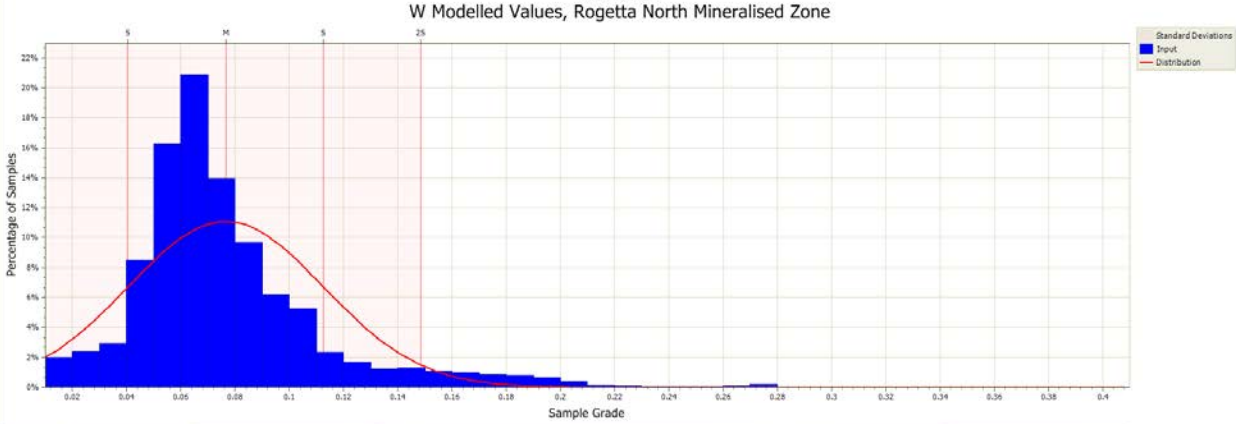
Minimum value	0.01000	Variance	0.00012	Geometric std dev	1.52206
Maximum value	0.11196	Standard deviation	0.01086	Sichel's estimator	0.02515
2nd highest	0.10323	Coeff. of variation	0.43171	Sichel's V	0.17646
3rd highest	0.10098	Median	0.02293	Sichel's gamma	1.09224
4th highest	0.09359	Ln mean	-3.77102	Chi-Square Test	4766.49302
N	20432	Ln std deviation	0.42007	Degrees of freedom	26
Mean	0.02516	Geometric mean	0.02303		

Histogram
Sn Modelled Values, Rogetta North Mineralised Zone



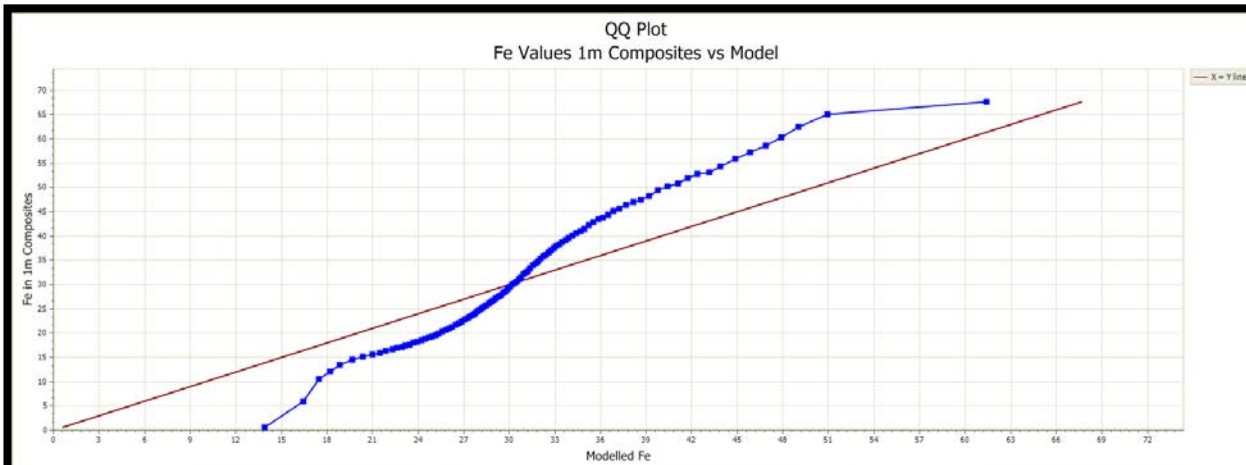
Minimum value	0.01040	Variance	0.00218	Geometric std dev	1.71184
Maximum value	0.36173	Standard deviation	0.04670	Sichel's estimator	0.09301
2nd highest	0.35434	Coeff. of variation	0.50730	Sichel's V	0.28898
3rd highest	0.35155	Median	0.08210	Sichel's gamma	1.15545
4th highest	0.33935	Ln mean	-2.51956	Chi-Square Test	6172.54079
N	23124	Ln std deviation	0.53757	Degrees of freedom	48
Mean	0.09206	Geometric mean	0.08049		

Histogram
W Modelled Values, Rogetta North Mineralised Zone

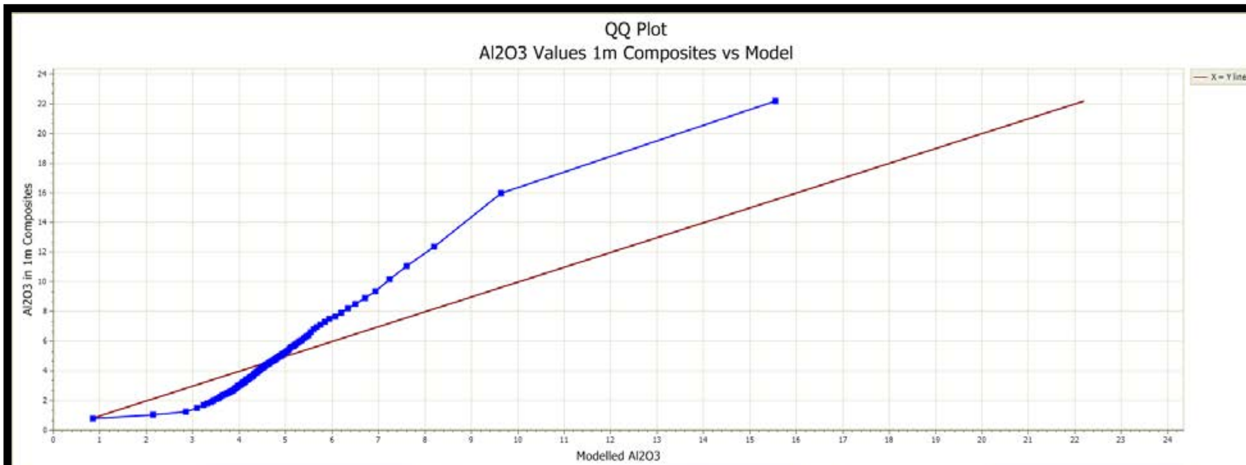


Minimum value	0.01000	Variance	0.00130	Geometric std dev	1.58964
Maximum value	0.28580	Standard deviation	0.03601	Sichel's estimator	0.07700
2nd highest	0.28580	Coeff. of variation	0.47058	Sichel's V	0.21484
3rd highest	0.27620	Median	0.06808	Sichel's gamma	1.11340
4th highest	0.27130	Ln mean	-2.67137	Chi-Square Test	33548.32768
N	20685	Ln std deviation	0.46351	Degrees of freedom	19
Mean	0.07653	Geometric mean	0.06916		

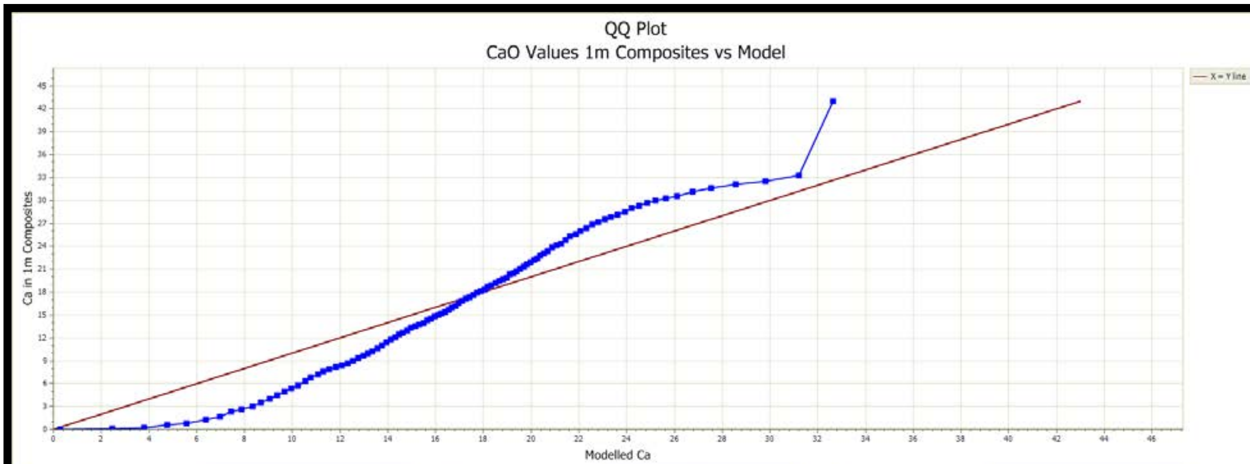
QQ Plots Composite Values vs Modelled Values, Major Elements



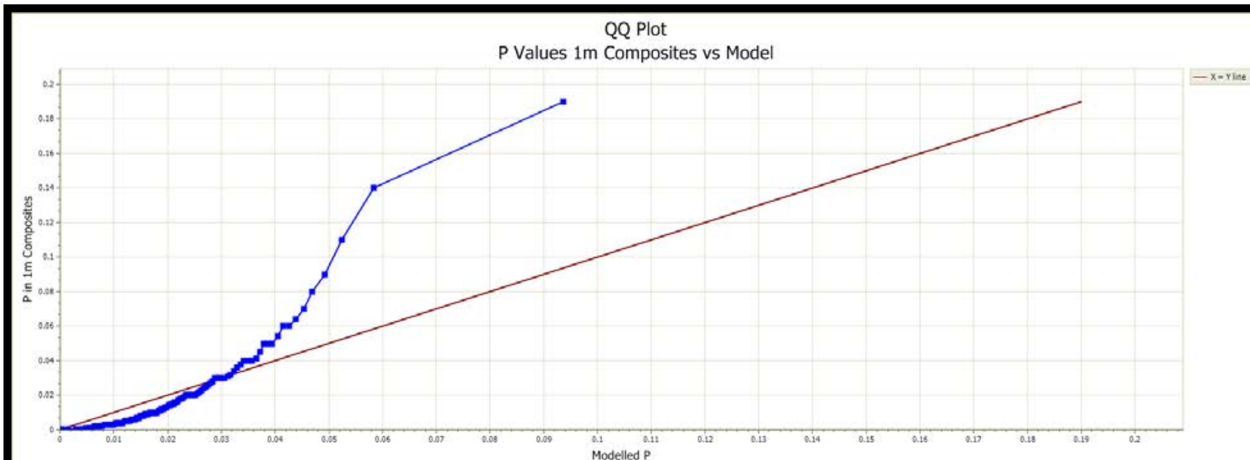
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	FePcnt	X name	FePcnt	Corr coeff	1.020
Sample Ny	3329	Sample Nx	24467	Rank Corr Coeff	-1152856932.127
Y Mean	32.08	X Mean	30.99	xVar / yVar	0.30
Y variance	174.74	X variance	52.33	Precision	18.23
Y Standard Deviation	13.22	X Standard Deviation	7.23		



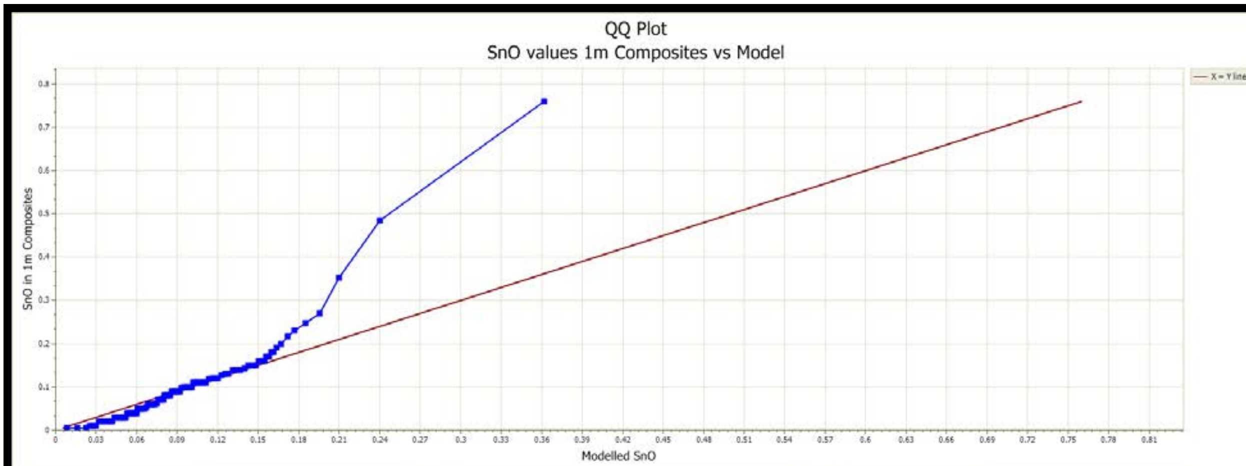
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	Al2O3Pcnt	X name	Al2O3Pcnt	Corr coeff	1.003
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	4.70	X Mean	4.71	xVar / yVar	0.21
Y variance	5.97	X variance	1.27	Precision	27.80
Y Standard Deviation	2.44	X Standard Deviation	1.13		



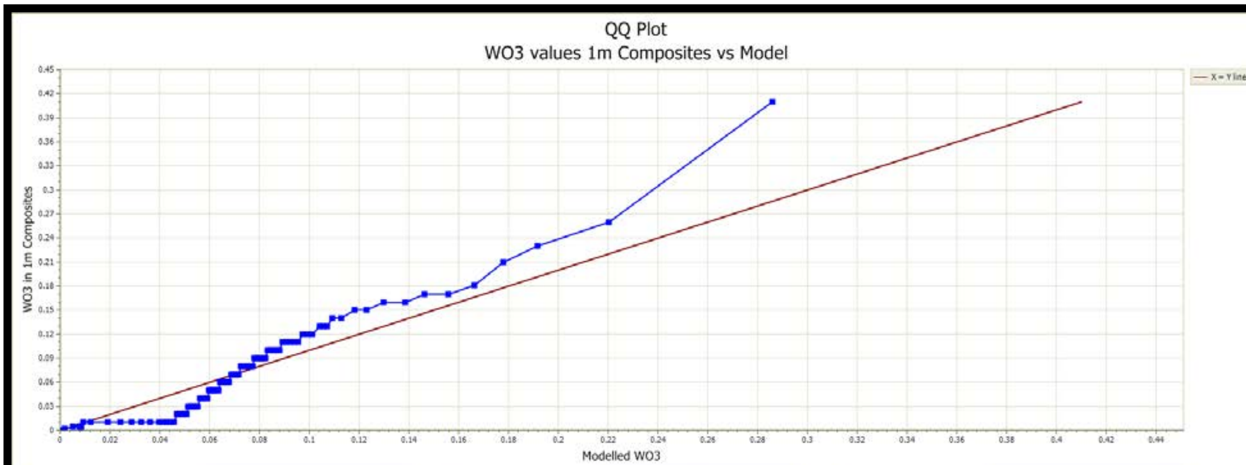
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	CaOPcnt	X name	CaOPcnt	Corr coeff	0.996
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	16.59	X Mean	16.84	xVar / yVar	0.44
Y variance	80.73	X variance	35.20	Precision	18.50
Y Standard Deviation	8.98	X Standard Deviation	5.93		



File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	PPcnt	X name	PPcnt	Corr coeff	0.952
Sample Ny	3059	Sample Nx	24464	Rank Corr Coeff	-1115016291.195
Y Mean	0.02	X Mean	0.02	xVar / yVar	0.24
Y variance	0.00	X variance	0.00	Precision	61.99
Y Standard Deviation	0.02	X Standard Deviation	0.01		

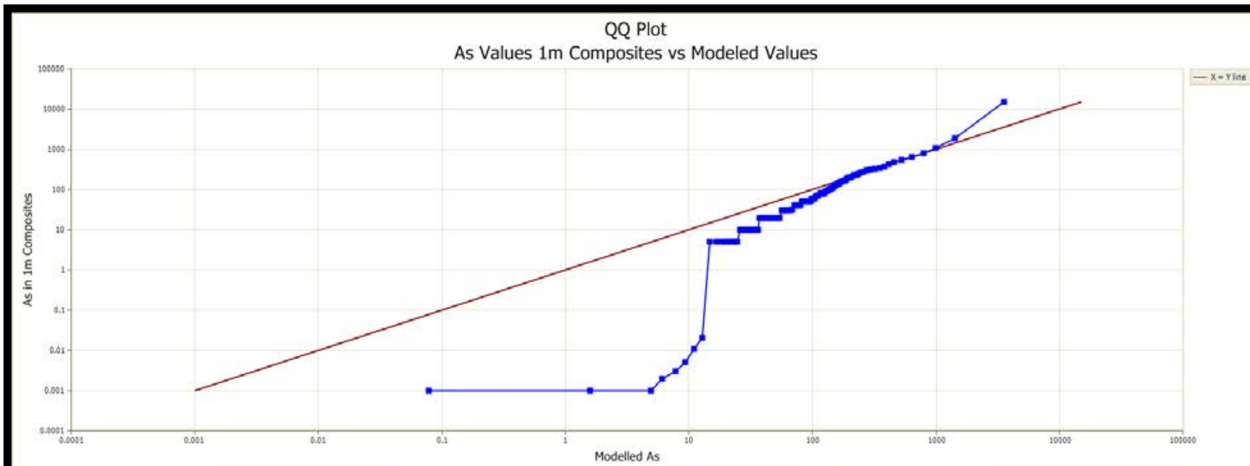


File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	SnO2PCT	X name	SnO2PCT	Corr coeff	0.955
Sample Ny	1220	Sample Nx	23127	Rank Corr Coeff	-1152856931.680
Y Mean	0.09	X Mean	0.09	xVar / yVar	0.35
Y variance	0.01	X variance	0.00	Precision	40.12
Y Standard Deviation	0.08	X Standard Deviation	0.05		

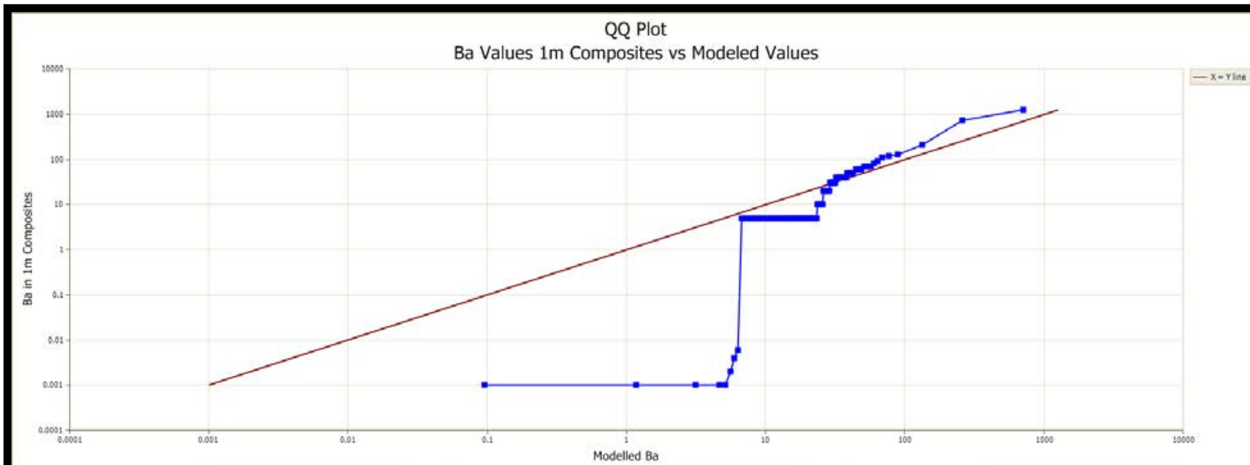


File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	WO3PCT	X name	WO3PCT	Corr coeff	0.979
Sample Ny	883	Sample Nx	21950	Rank Corr Coeff	0.999
Y Mean	0.07	X Mean	0.07	xVar / yVar	0.49
Y variance	0.00	X variance	0.00	Precision	26.63
Y Standard Deviation	0.06	X Standard Deviation	0.04		

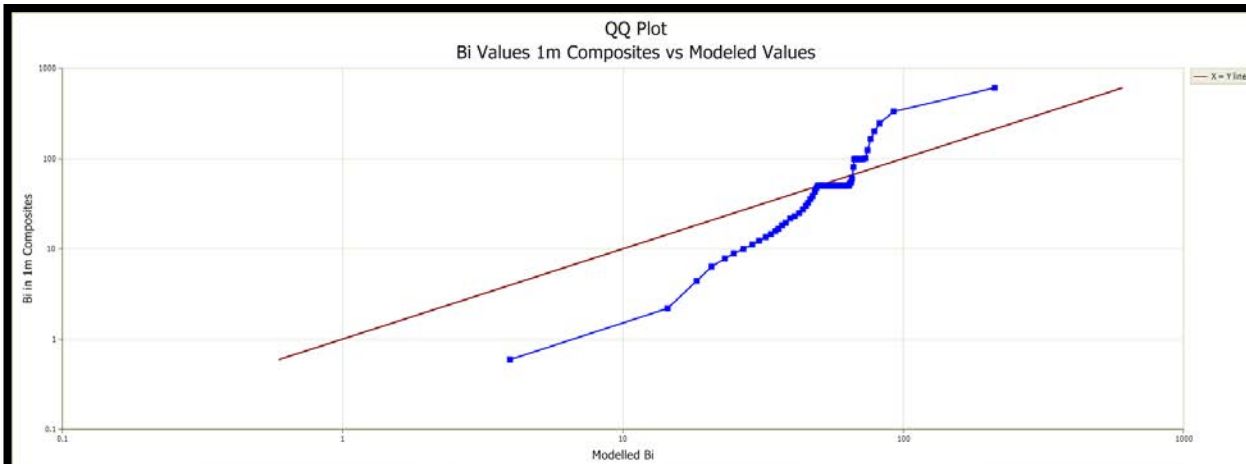
QQ Plots Composite Values vs Modelled Values, Minor Elements



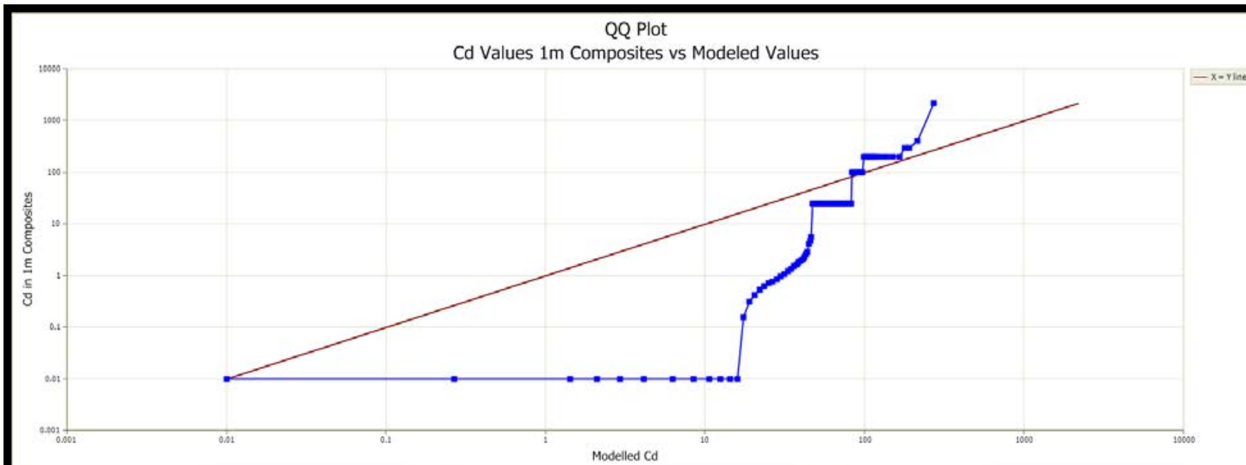
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	AsPPM	X name	AsPPM	Corr coeff	0.931
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	-1152856931.679
Y Mean	3.36	X Mean	4.37	xVar / yVar	0.17
Y variance	8.05	X variance	1.39	Precision	41.03
Y Standard Deviation	2.84	X Standard Deviation	1.18		



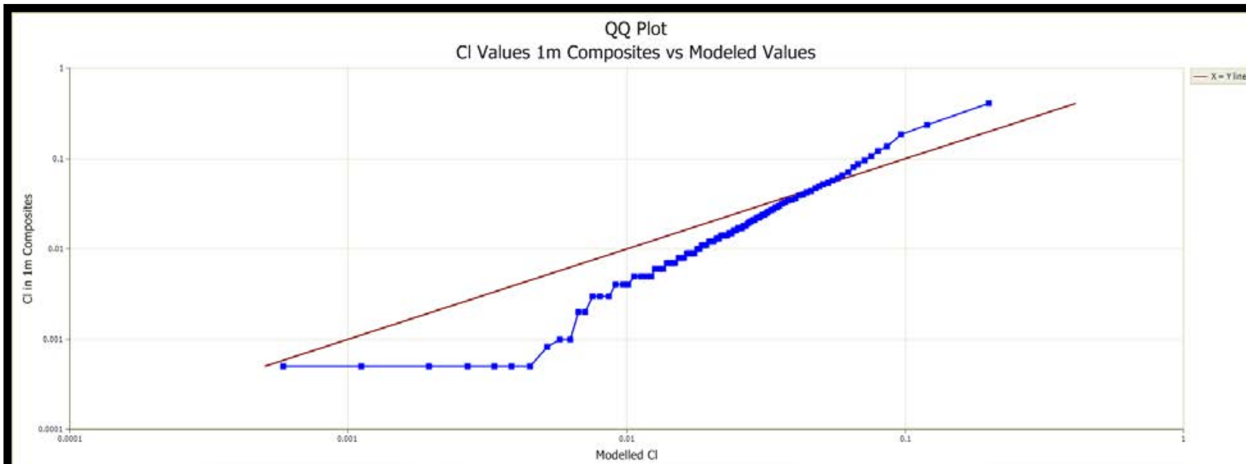
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	BaPPM	X name	BaPPM	Corr coeff	0.981
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	0.999
Y Mean	2.00	X Mean	3.01	xVar / yVar	0.10
Y variance	6.55	X variance	0.66	Precision	58.85
Y Standard Deviation	2.56	X Standard Deviation	0.81		



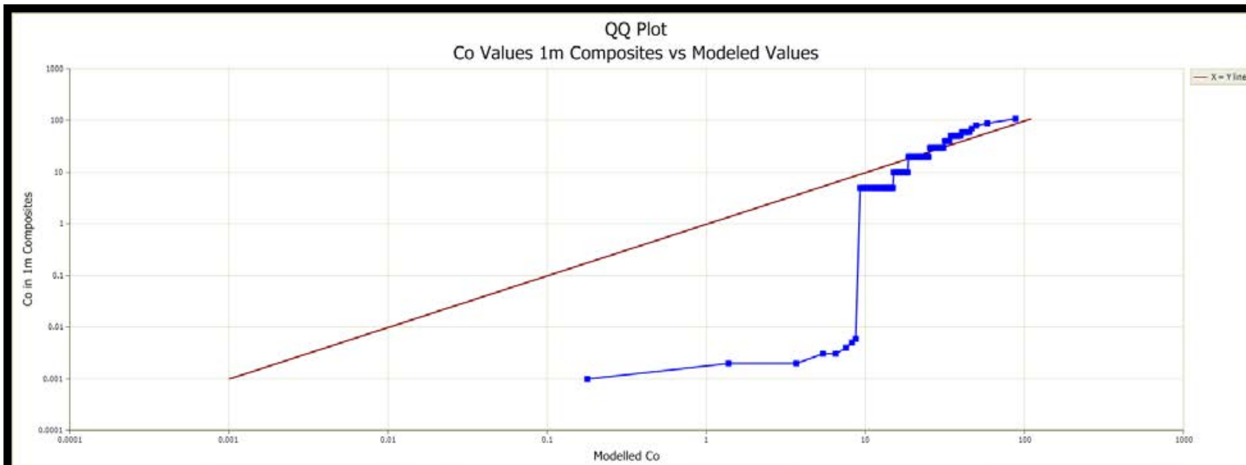
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	BiPPM	X name	BiPPM	Corr coeff	0.927
Sample Ny	1154	Sample Nx	24465	Rank Corr Coeff	0.901
Y Mean	3.77	X Mean	3.94	xVar / yVar	0.17
Y variance	0.58	X variance	0.10	Precision	12.31
Y Standard Deviation	0.76	X Standard Deviation	0.31		



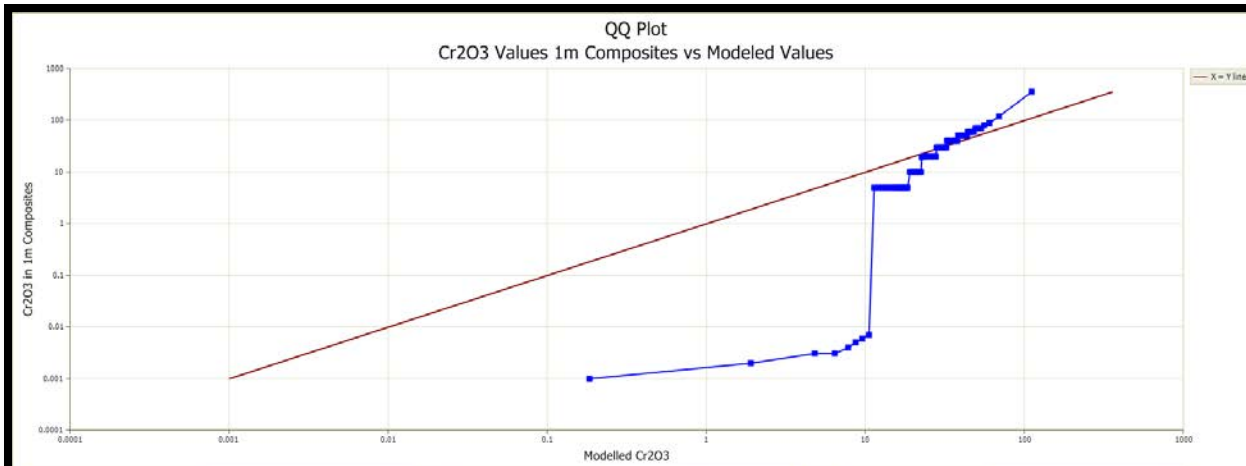
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	CdPPM	X name	CdPPM	Corr coeff	0.709
Sample Ny	1119	Sample Nx	24465	Rank Corr Coeff	1.000
Y Mean	2.16	X Mean	3.84	xVar / yVar	0.13
Y variance	8.79	X variance	1.13	Precision	60.76
Y Standard Deviation	2.96	X Standard Deviation	1.06		



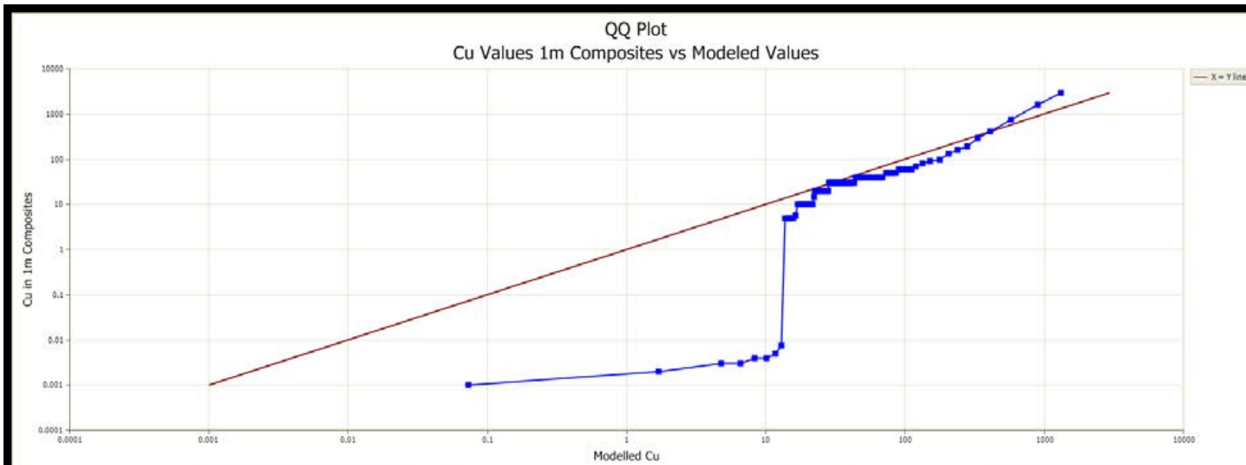
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	ClPcnt	X name	ClPcnt	Corr coeff	0.968
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-4.35	X Mean	-3.85	xVar / yVar	0.38
Y variance	1.89	X variance	0.72	Precision	-15.33
Y Standard Deviation	1.37	X Standard Deviation	0.85		



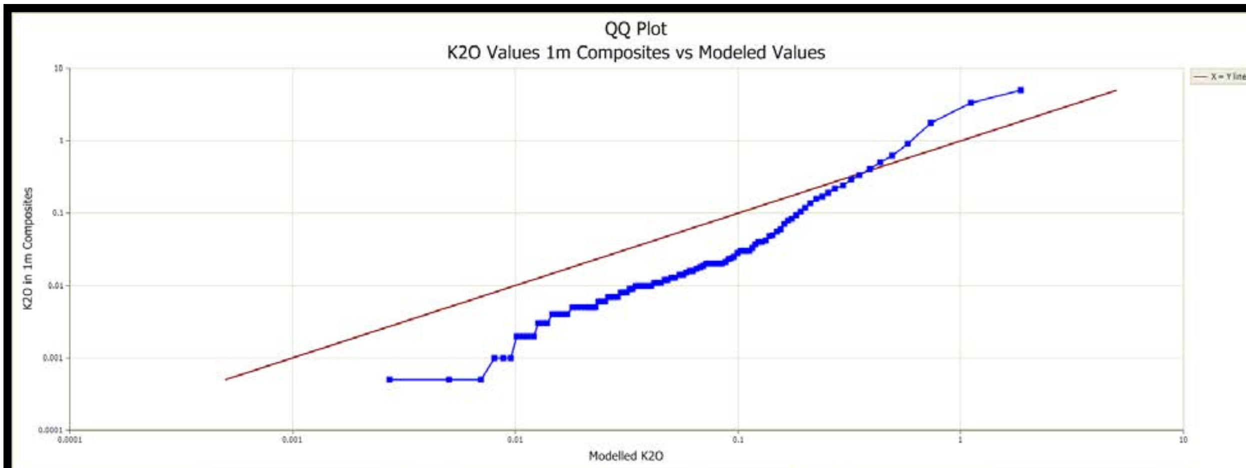
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	CoPPM	X name	CoPPM	Corr coeff	0.979
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	2.31	X Mean	2.99	xVar / yVar	0.06
Y variance	5.46	X variance	0.33	Precision	59.42
Y Standard Deviation	2.34	X Standard Deviation	0.57		



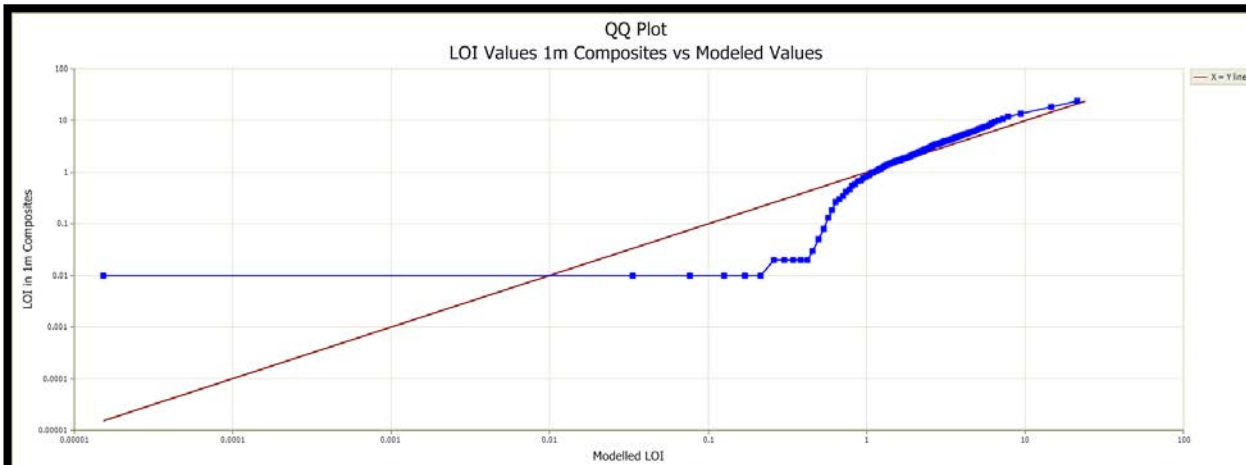
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	Cr2O3PPM	X name	Cr2O3PPM	Corr coeff	0.917
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	2.57	X Mean	3.26	xVar / yVar	0.06
Y variance	5.62	X variance	0.32	Precision	57.31
Y Standard Deviation	2.37	X Standard Deviation	0.56		



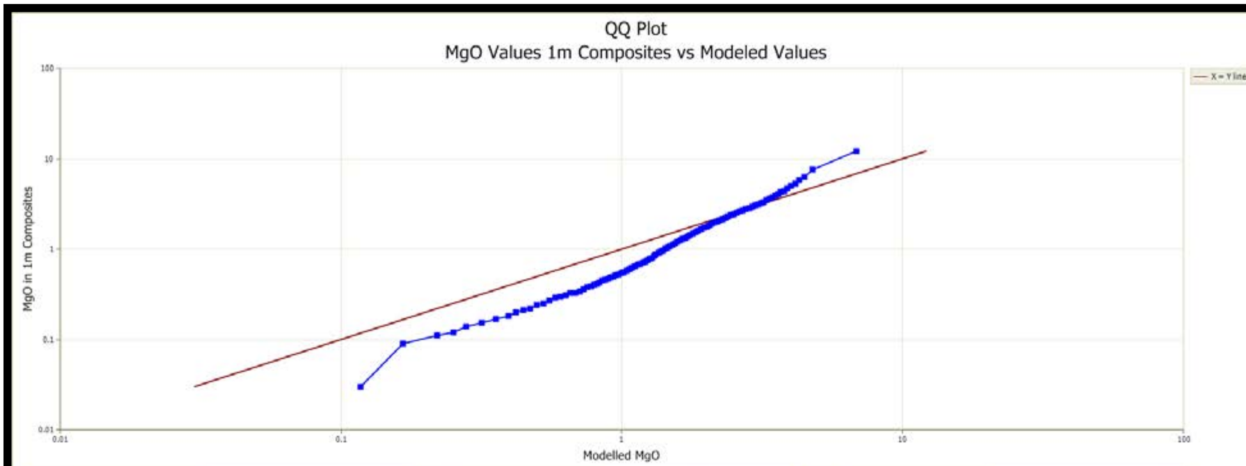
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	CuPPM	X name	CuPPM	Corr coeff	0.963
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	2.77	X Mean	3.59	xVar / yVar	0.15
Y variance	6.17	X variance	0.92	Precision	44.00
Y Standard Deviation	2.48	X Standard Deviation	0.96		



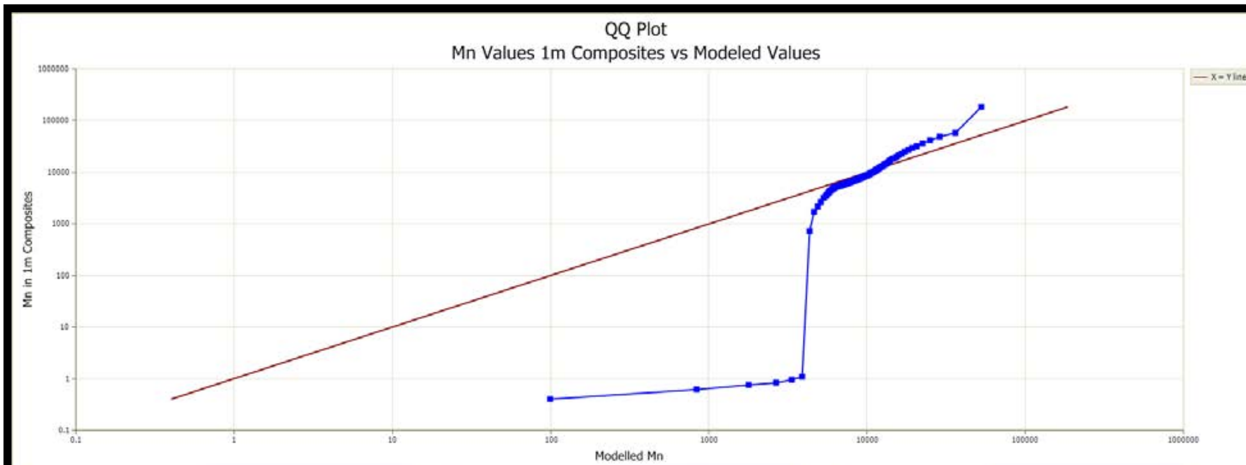
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	K2OPcnt	X name	K2OPcnt	Corr coeff	0.959
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-4.00	X Mean	-2.84	xVar / yVar	0.45
Y variance	2.87	X variance	1.30	Precision	-23.99
Y Standard Deviation	1.69	X Standard Deviation	1.14		



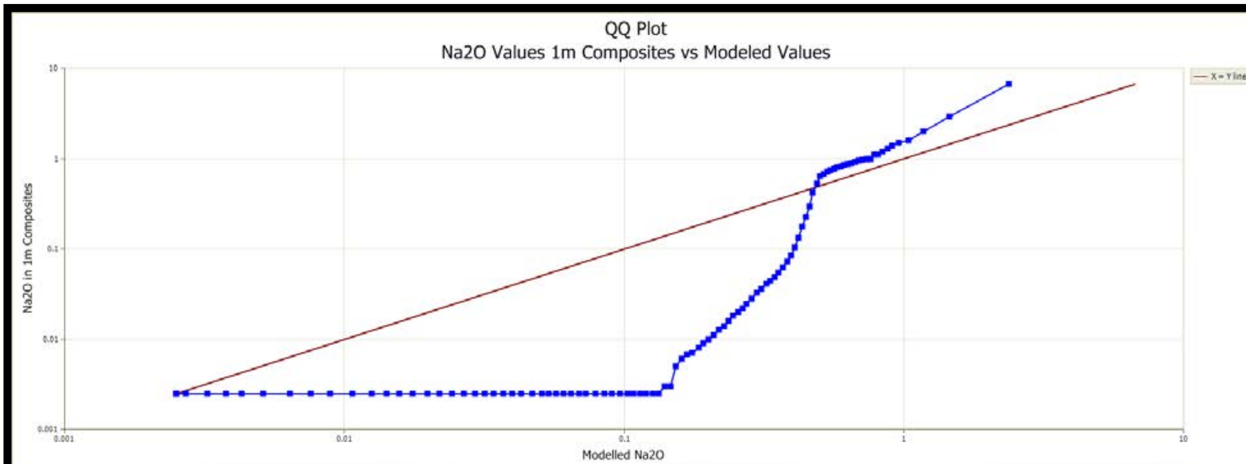
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	LOIPcnt	X name	LOIPcnt	Corr coeff	0.989
Sample Ny	2308	Sample Nx	23883	Rank Corr Coeff	1.000
Y Mean	0.23	X Mean	0.51	xVar / yVar	0.32
Y variance	3.55	X variance	1.12	Precision	168.07
Y Standard Deviation	1.88	X Standard Deviation	1.06		



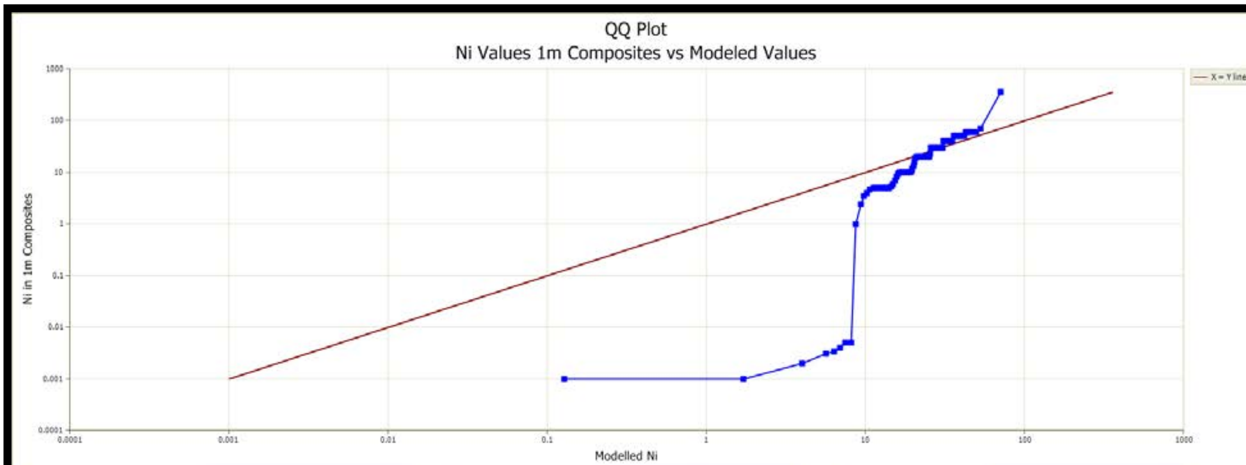
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	MgOPcnt	X name	MgOPcnt	Corr coeff	0.971
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-0.03	X Mean	0.30	xVar / yVar	0.49
Y variance	1.12	X variance	0.56	Precision	127.30
Y Standard Deviation	1.06	X Standard Deviation	0.75		



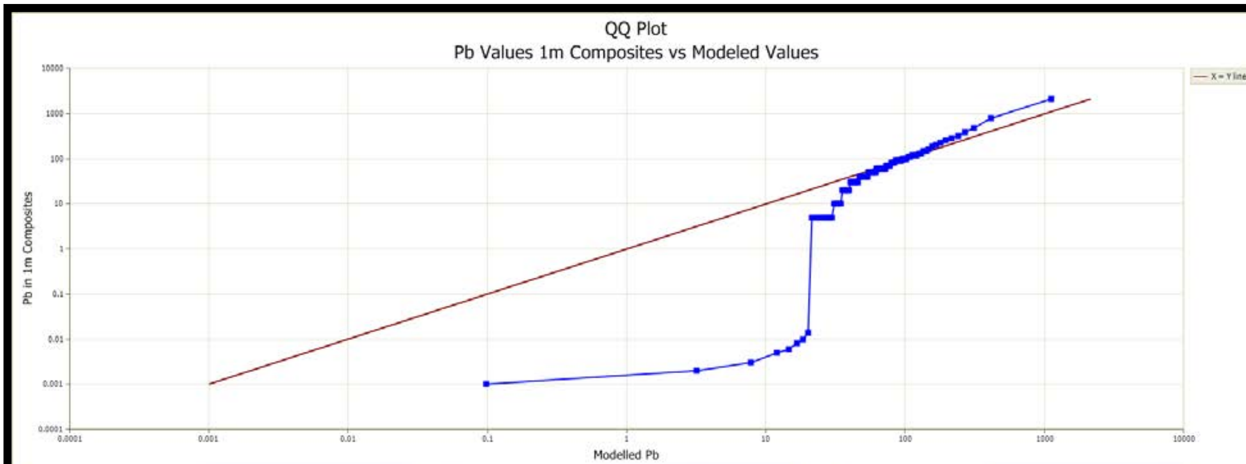
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	MnPPM	X name	MnPPM	Corr coeff	0.925
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	8.55	X Mean	9.07	xVar / yVar	0.06
Y variance	4.67	X variance	0.28	Precision	18.52
Y Standard Deviation	2.16	X Standard Deviation	0.53		



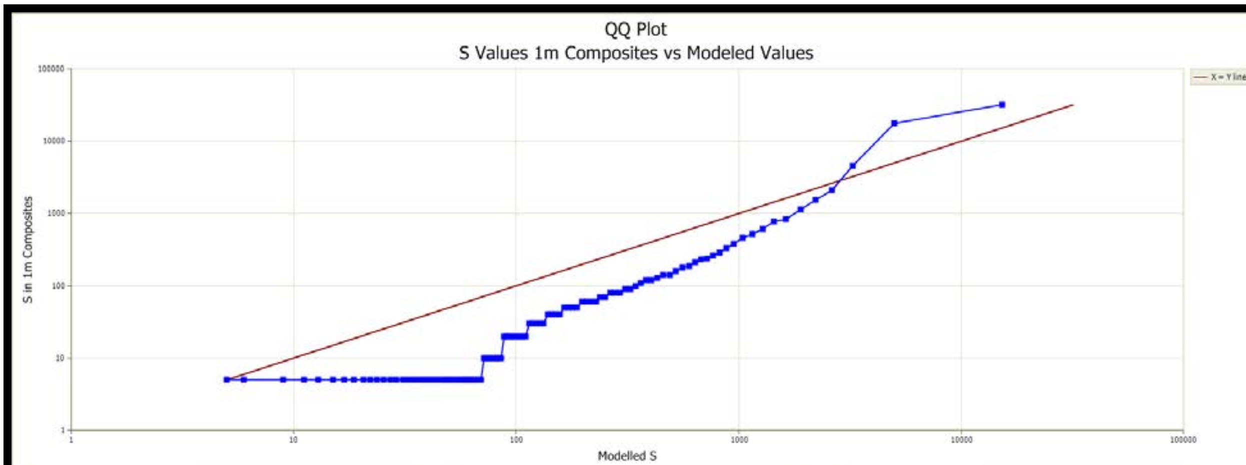
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	Na2OPcnt	X name	Na2OPcnt	Corr coeff	0.927
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-3.70	X Mean	-2.02	xVar / yVar	0.41
Y variance	6.24	X variance	2.53	Precision	-58.72
Y Standard Deviation	2.50	X Standard Deviation	1.59		



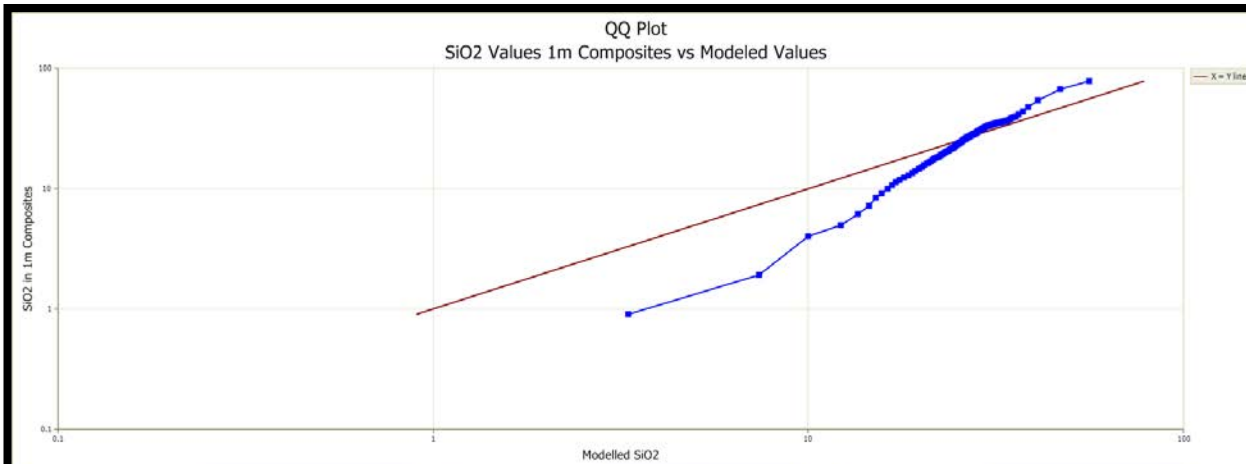
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	NiPPM	X name	NiPPM	Corr coeff	0.777
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	2.35	X Mean	3.07	xVar / yVar	0.06
Y variance	5.84	X variance	0.35	Precision	64.95
Y Standard Deviation	2.42	X Standard Deviation	0.59		



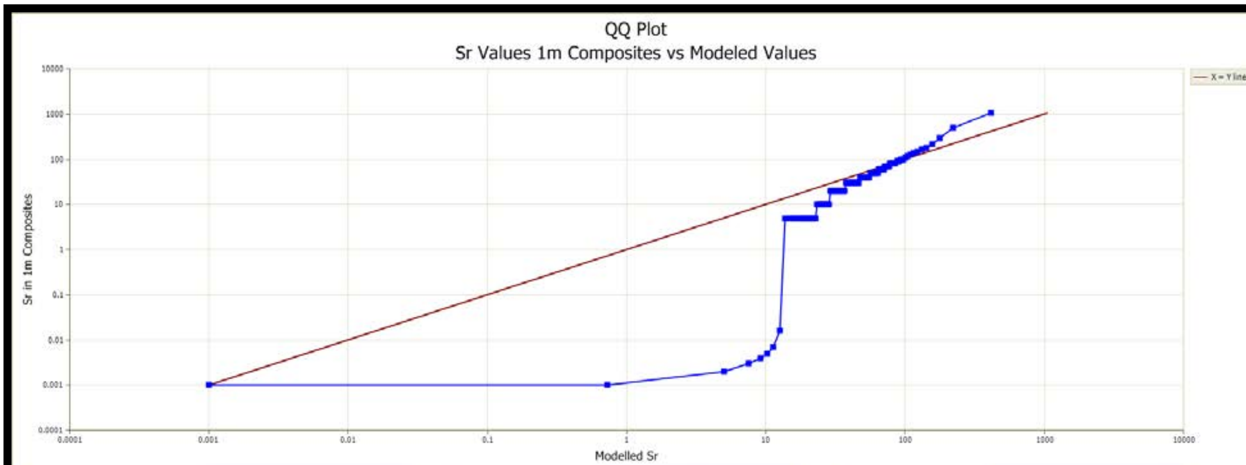
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	PbPPM	X name	PbPPM	Corr coeff	0.993
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	0.999
Y Mean	3.26	X Mean	4.06	xVar / yVar	0.09
Y variance	6.44	X variance	0.59	Precision	43.76
Y Standard Deviation	2.54	X Standard Deviation	0.77		



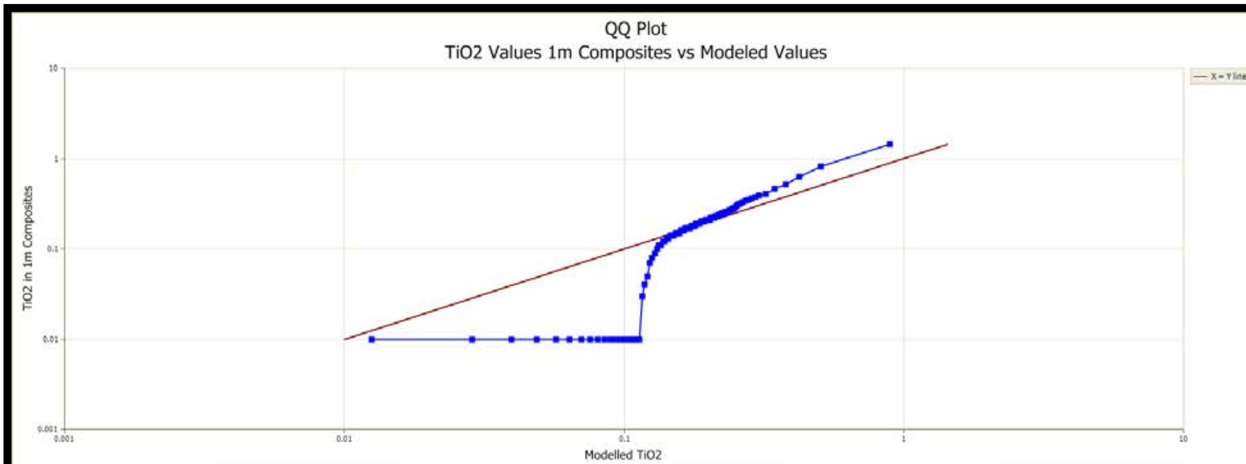
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	SPPM	X name	SPPM	Corr coeff	0.957
Sample Ny	2244	Sample Nx	24467	Rank Corr Coeff	-62.216
Y Mean	3.50	X Mean	4.94	xVar / yVar	0.58
Y variance	3.47	X variance	2.00	Precision	13.26
Y Standard Deviation	1.86	X Standard Deviation	1.41		



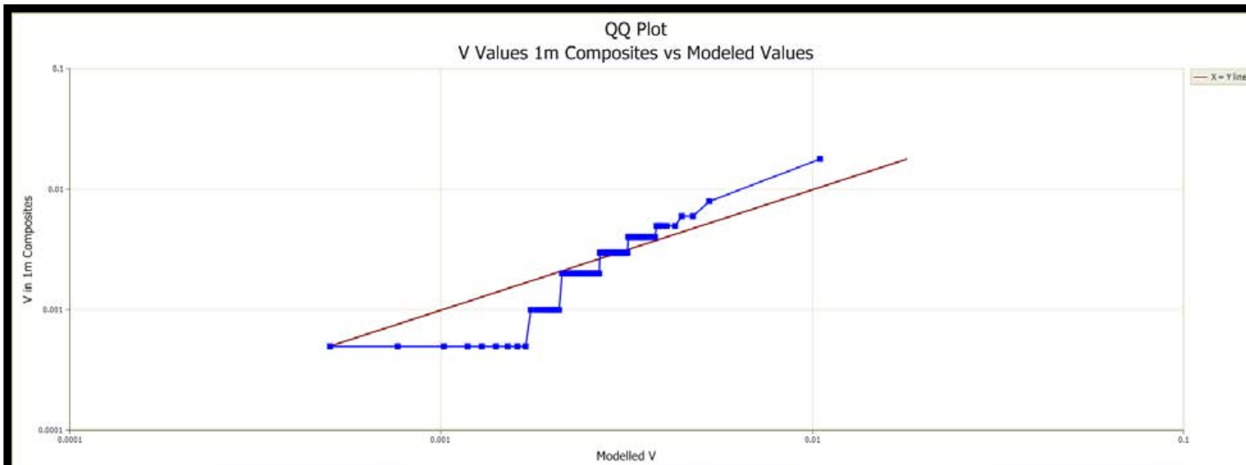
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	SiO2Pcnt	X name	SiO2Pcnt	Corr coeff	1.012
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	3.14	X Mean	3.23	xVar / yVar	0.28
Y variance	0.31	X variance	0.09	Precision	7.97
Y Standard Deviation	0.56	X Standard Deviation	0.29		



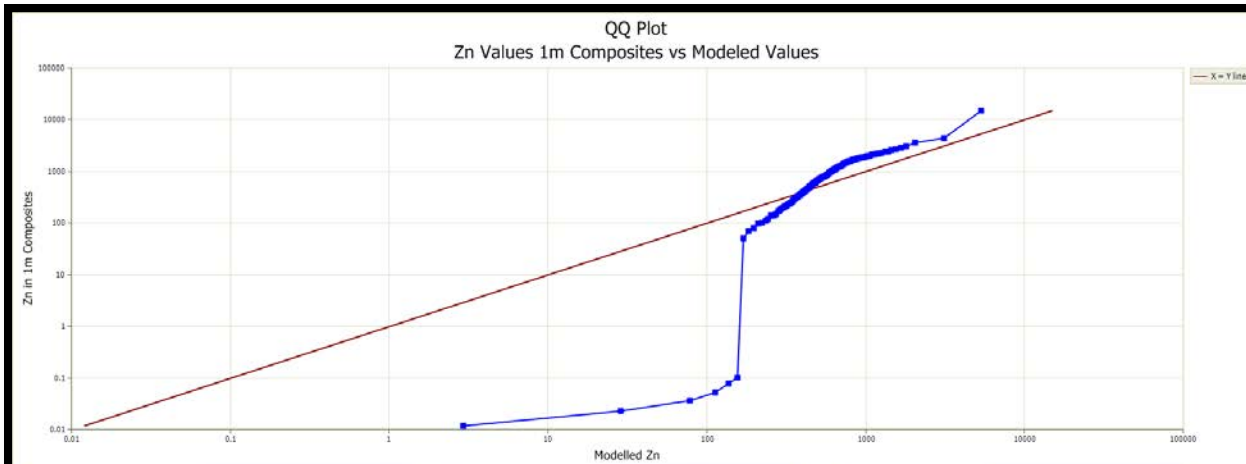
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	SrPPM	X name	SrPPM	Corr coeff	0.956
Sample Ny	2411	Sample Nx	24455	Rank Corr Coeff	0.998
Y Mean	2.86	X Mean	3.70	xVar / yVar	0.15
Y variance	6.42	X variance	0.94	Precision	44.04
Y Standard Deviation	2.53	X Standard Deviation	0.97		



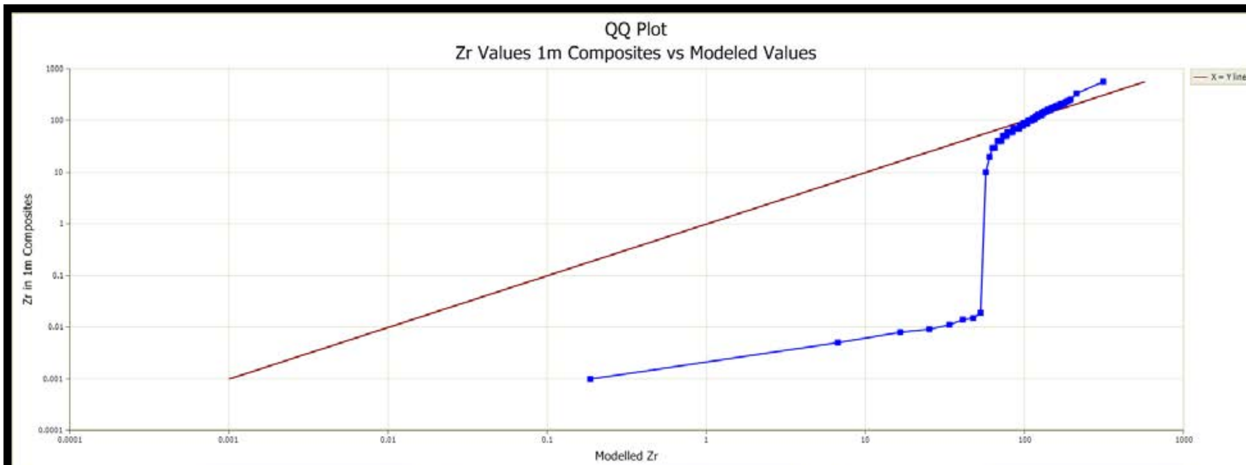
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	TiO2Pcnt	X name	TiO2Pcnt	Corr coeff	0.996
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-2.12	X Mean	-1.78	xVar / yVar	0.15
Y variance	1.50	X variance	0.23	Precision	-41.91
Y Standard Deviation	1.22	X Standard Deviation	0.48		



File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	VPcnt	X name	VPcnt	Corr coeff	0.994
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	-6.02	X Mean	-5.91	xVar / yVar	0.25
Y variance	0.39	X variance	0.10	Precision	-5.32
Y Standard Deviation	0.62	X Standard Deviation	0.31		



File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	ZnPPM	X name	ZnPPM	Corr coeff	0.971
Sample Ny	3151	Sample Nx	24467	Rank Corr Coeff	1.000
Y Mean	6.00	X Mean	6.22	xVar / yVar	0.09
Y variance	5.47	X variance	0.51	Precision	26.64
Y Standard Deviation	2.34	X Standard Deviation	0.71		

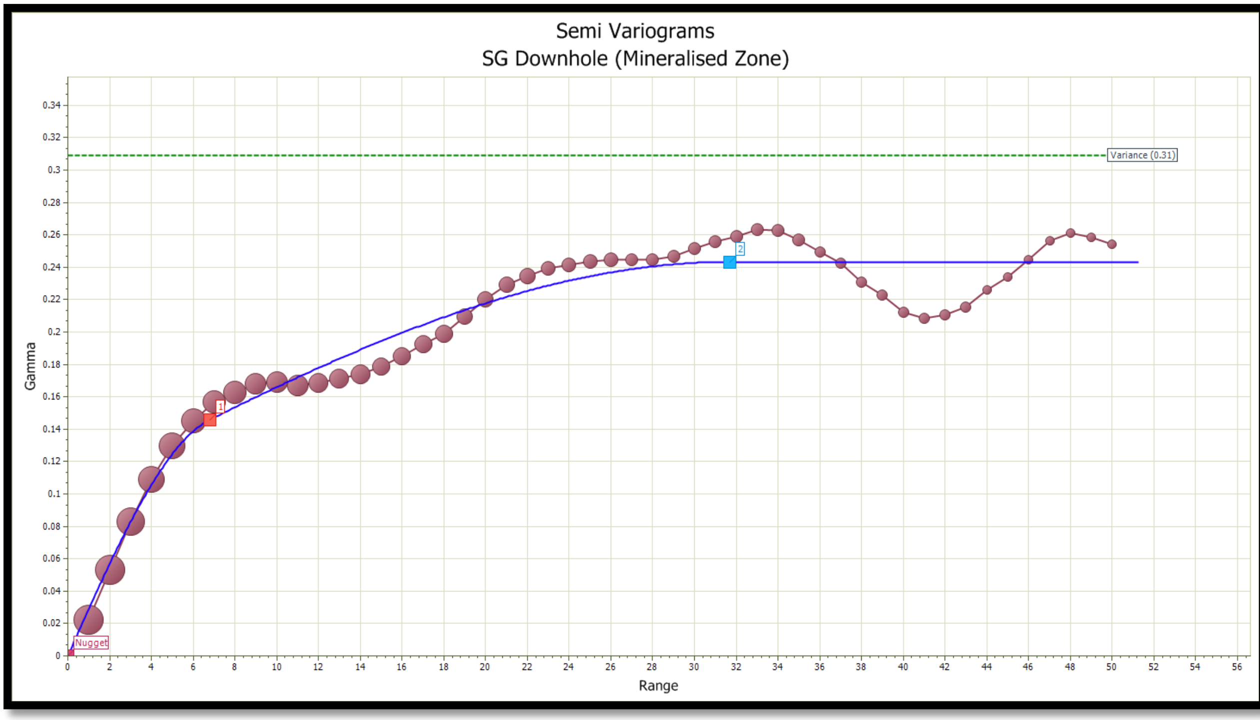


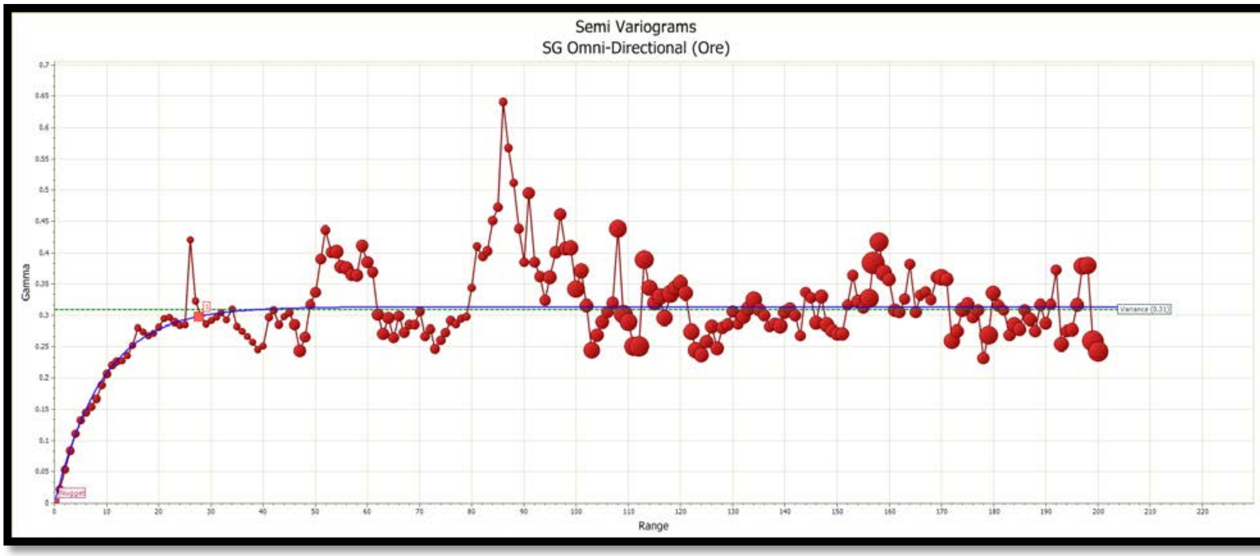
File name 1	RGN_DHCombinedComp1ForModel_201503	File name 2	RGN_OBM201503AllVb	N quantiles	100
Y name	ZrPPM	X name	ZrPPM	Corr coeff	0.983
Sample Ny	2411	Sample Nx	24467	Rank Corr Coeff	0.999
Y Mean	4.02	X Mean	4.64	xVar / yVar	0.05
Y variance	5.89	X variance	0.27	Precision	41.37
Y Standard Deviation	2.43	X Standard Deviation	0.52		

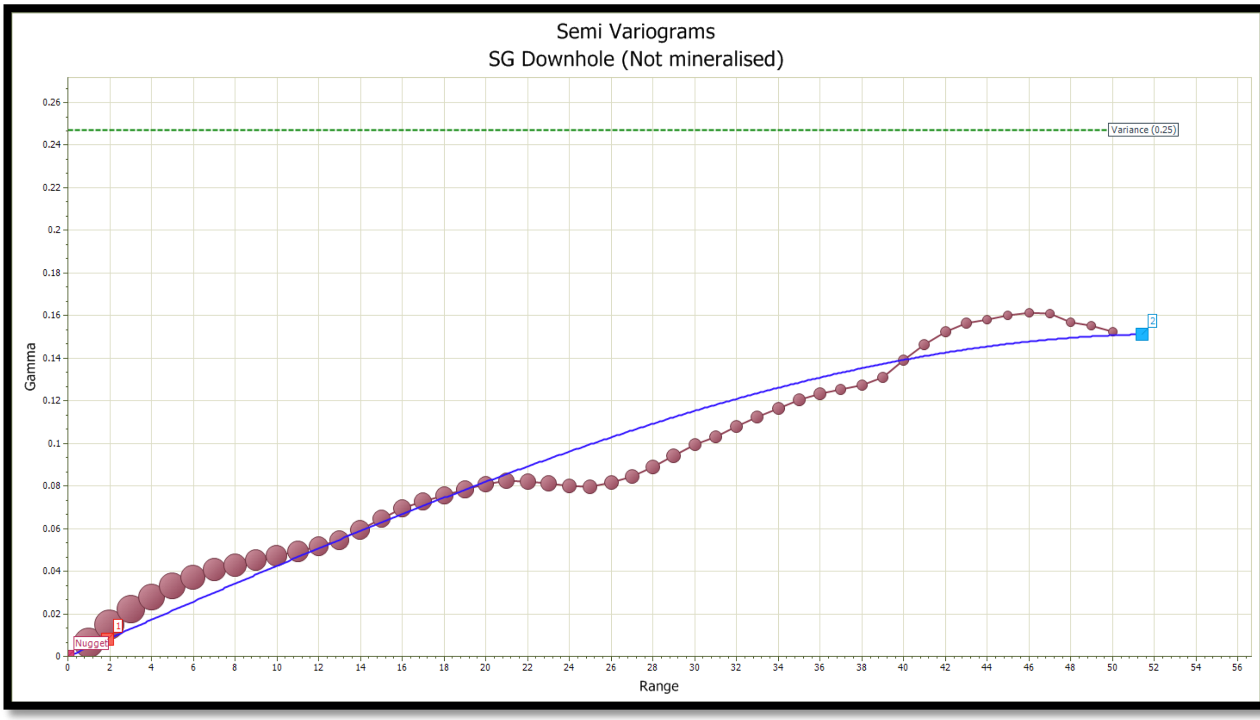
Appendix F

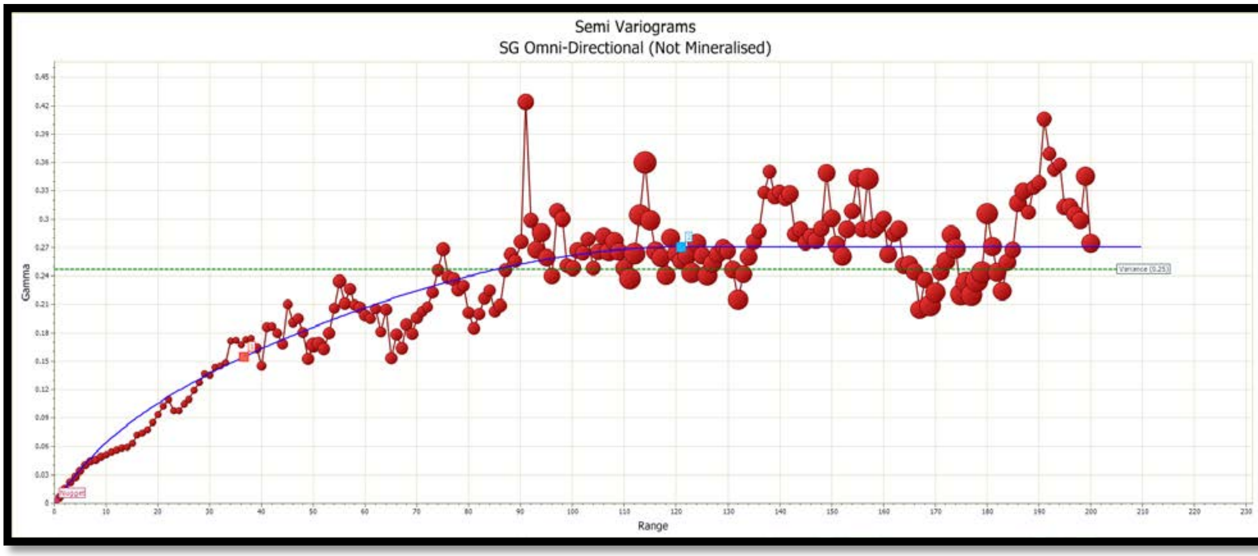
Experimental Semi Variograms and Validation

Semi Variograms for Bulk Density (SG)

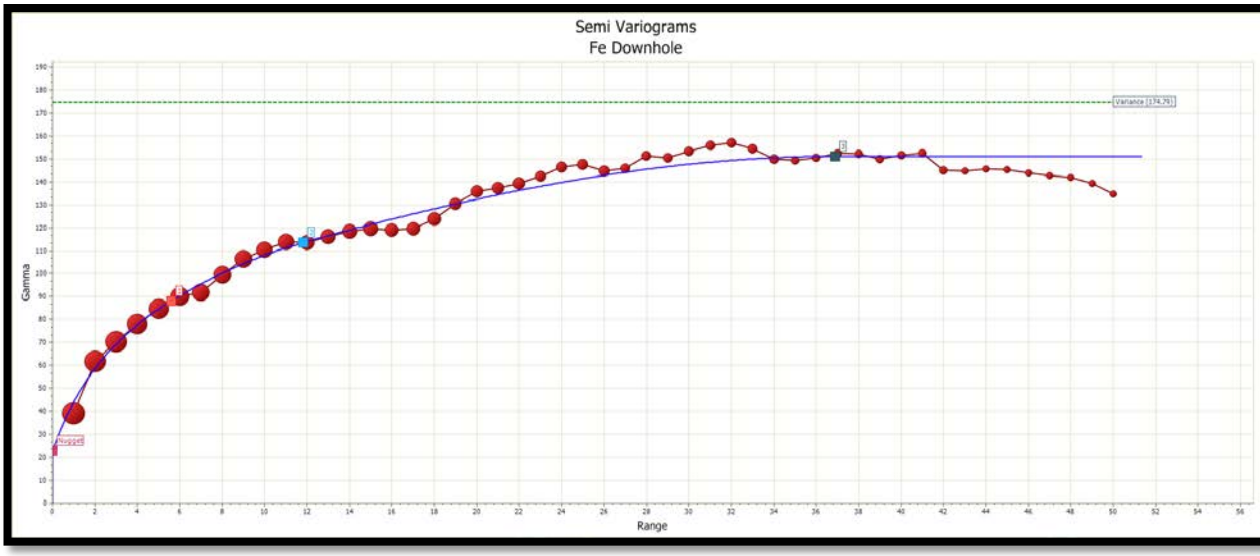


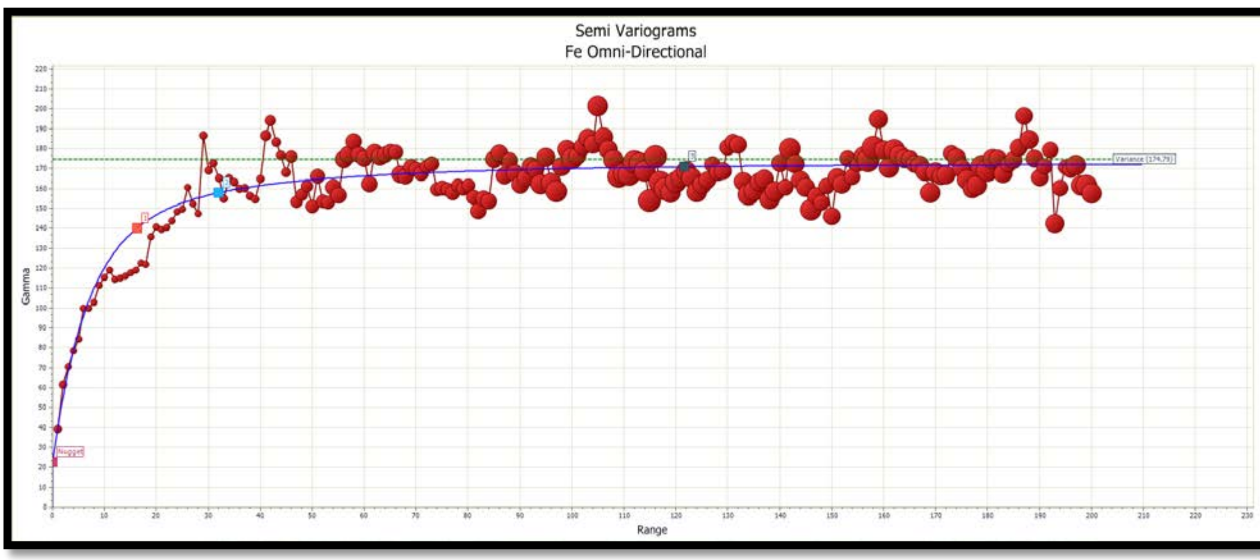

Semi Variograms
SG Omni-Directional (Ore)
Gamma
Range
Nugget
Variance (0.31)


Semi Variograms
SG Downhole (Not mineralised)
Gamma
Range
Nugget
Variance (0.25)

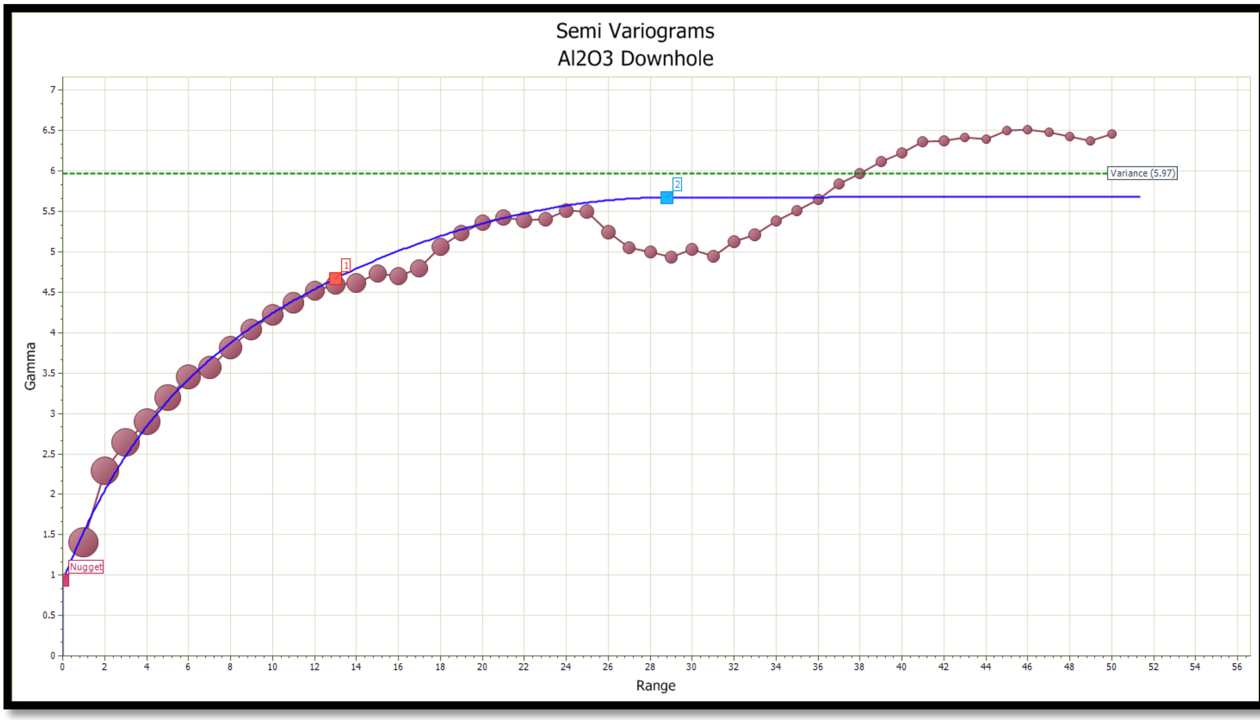

Semi Variograms
SG Omni-Directional (Not Mineralised)
Gamma
Range
Nugget
Variance (0.25)

Semi Variograms for Iron (Fe)





Semi Variograms for Aluminium (Al)



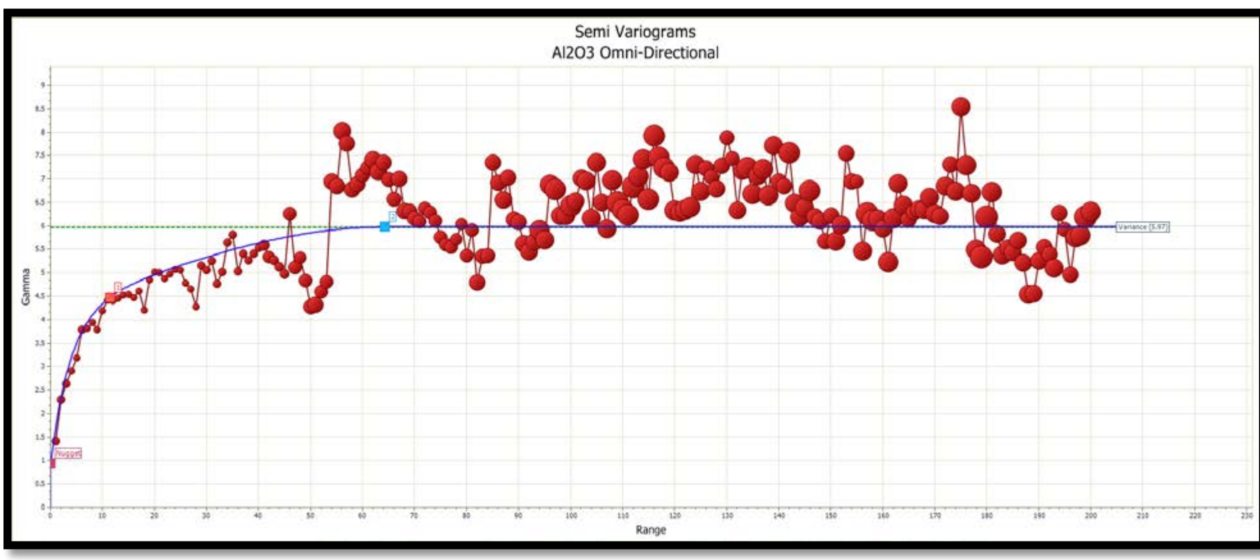
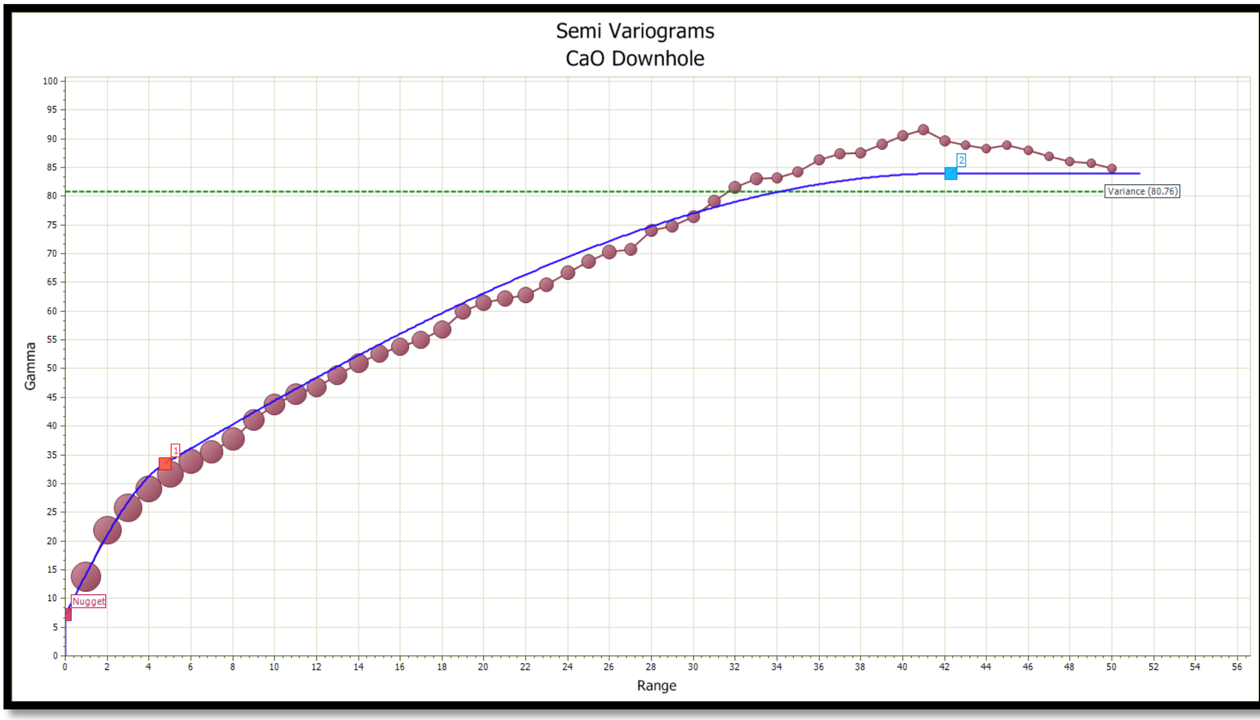
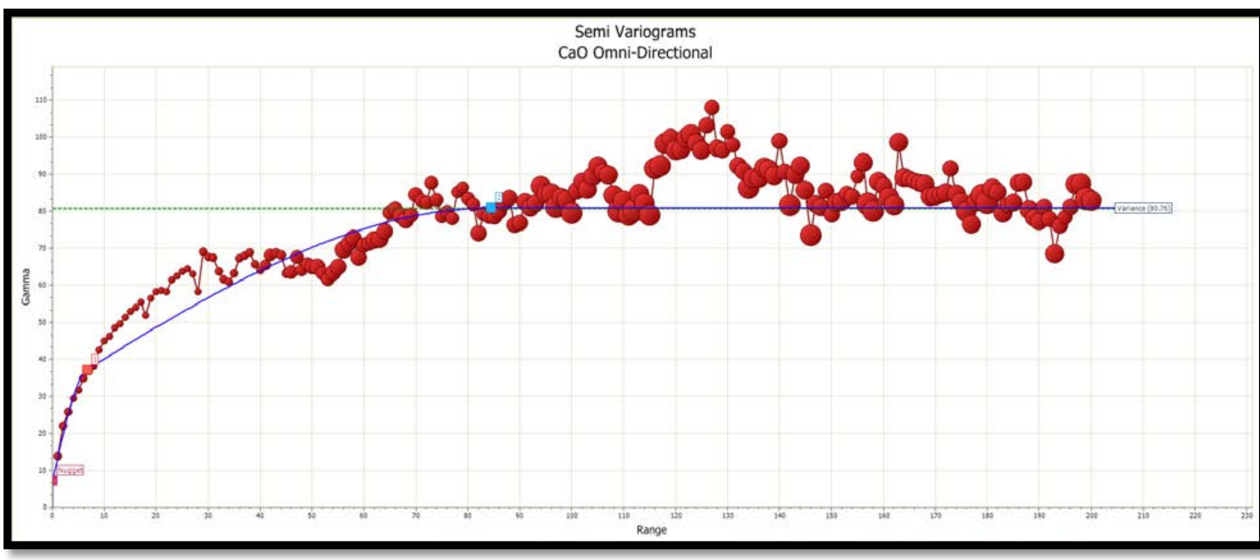


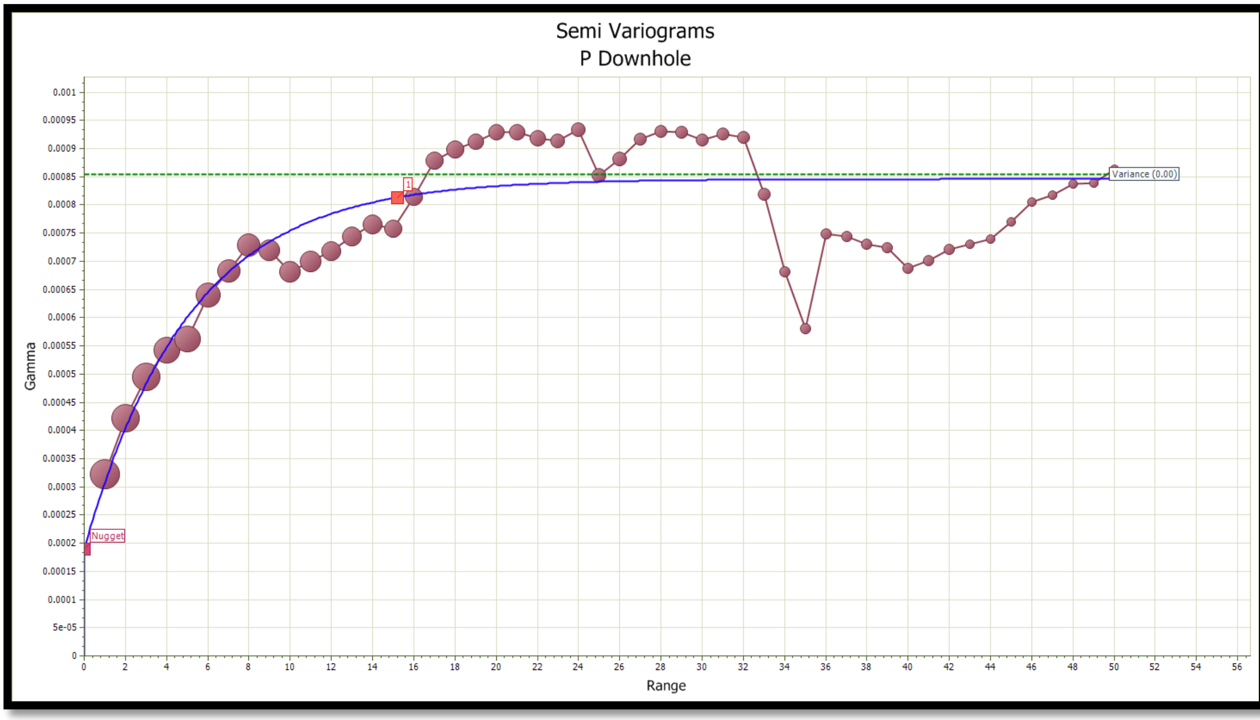
Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

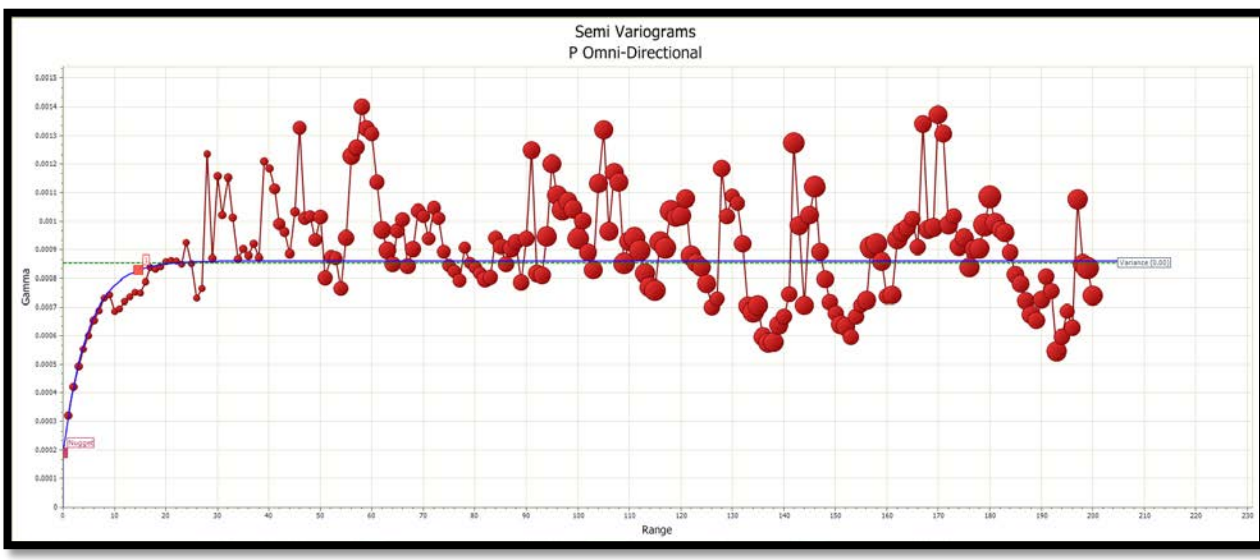
Semi Variograms for Calcium (Ca)



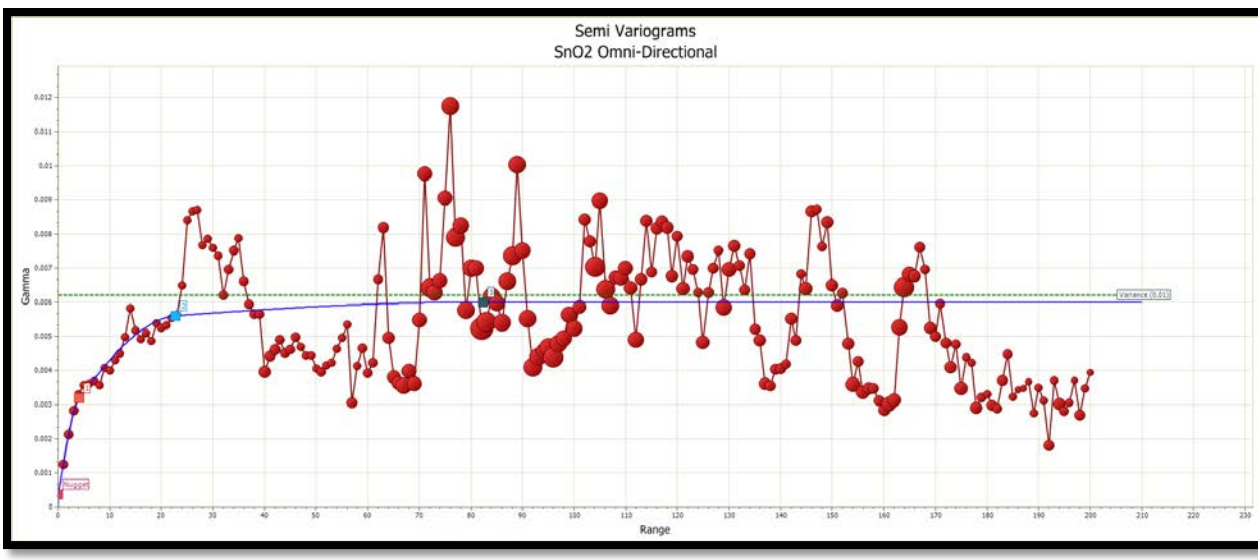


Semi Variograms for Phosphorous (P)

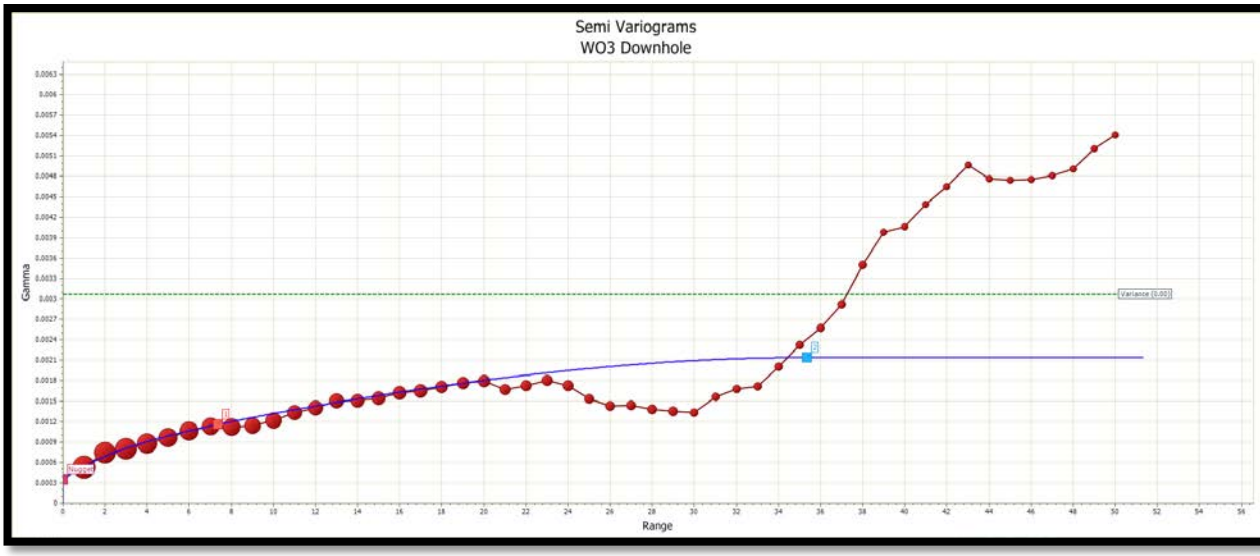


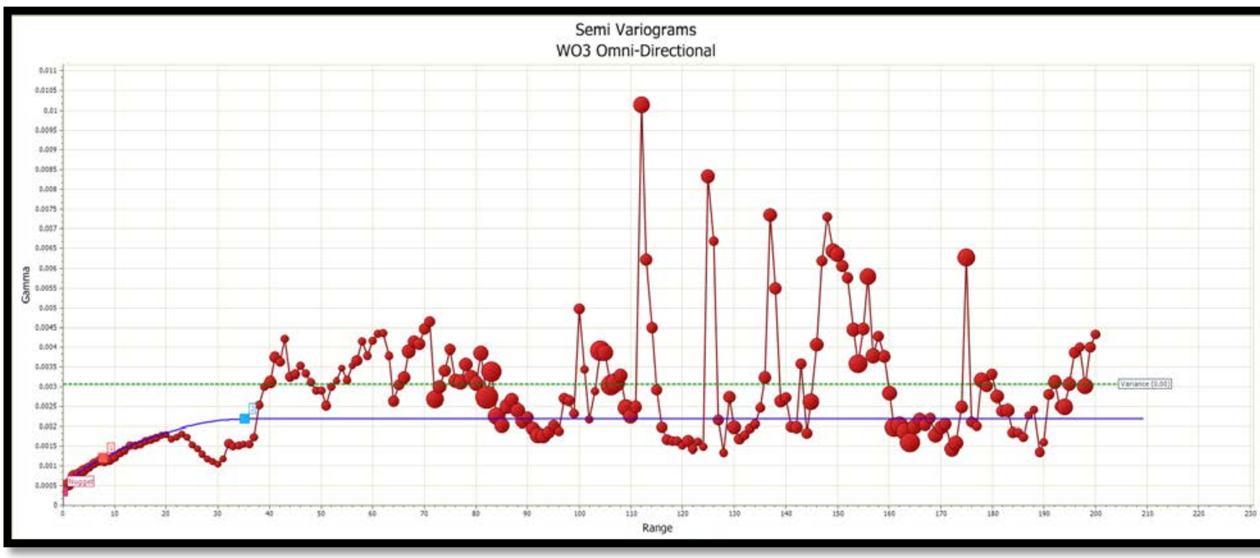


Semi Variograms for Tin (Sn)

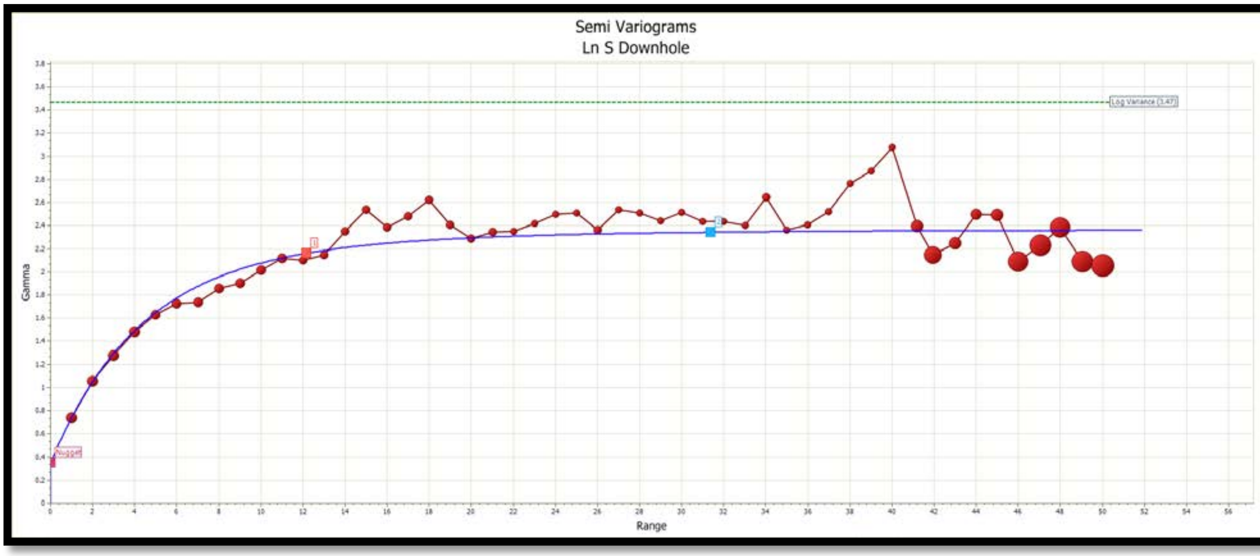


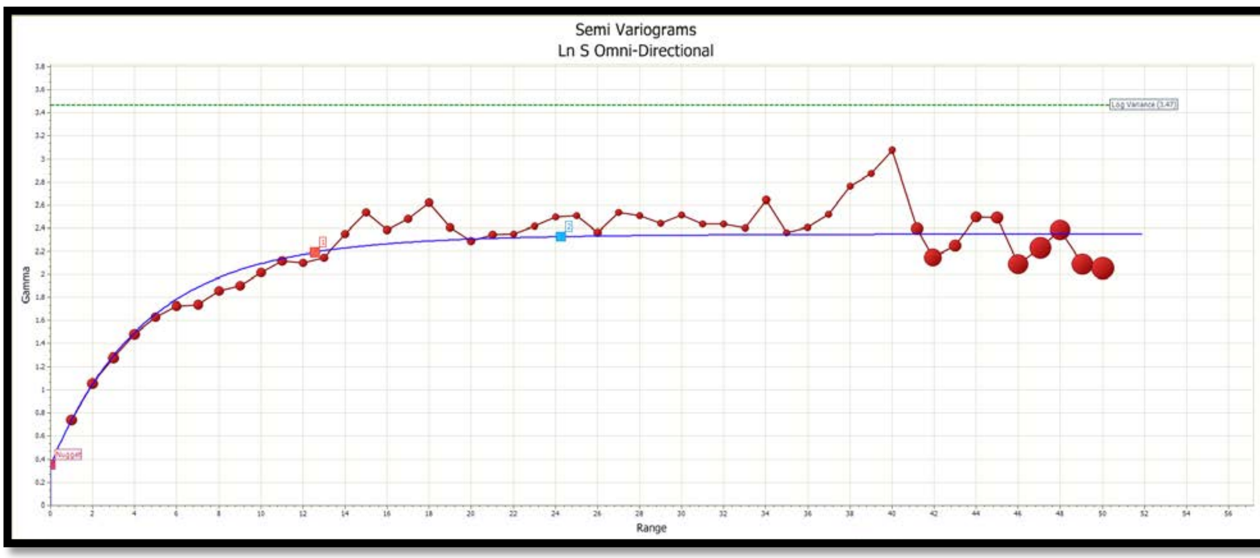
Semi Variograms for Tungsten (W)



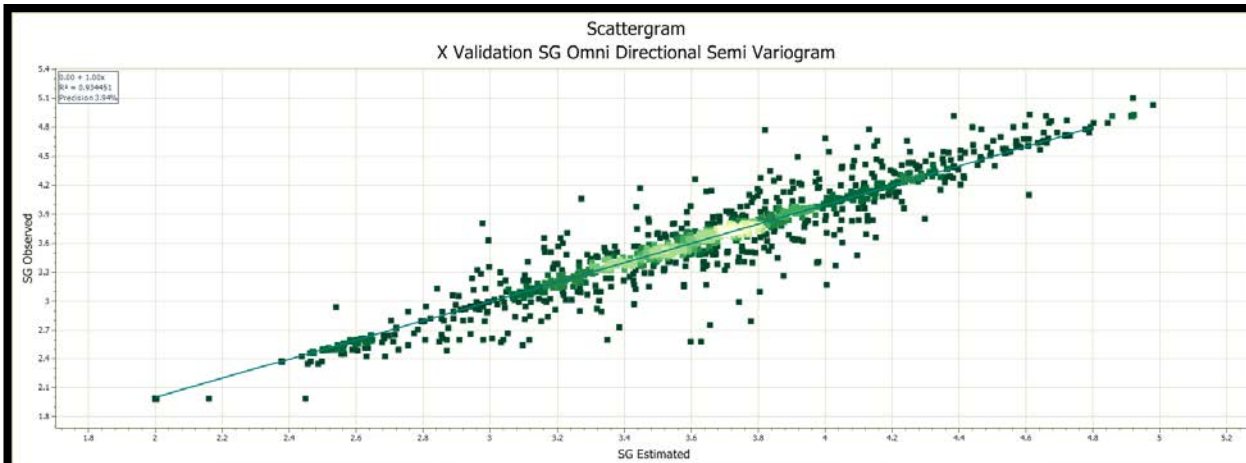


Semi Variograms for Sulphur (S) (Ln values)

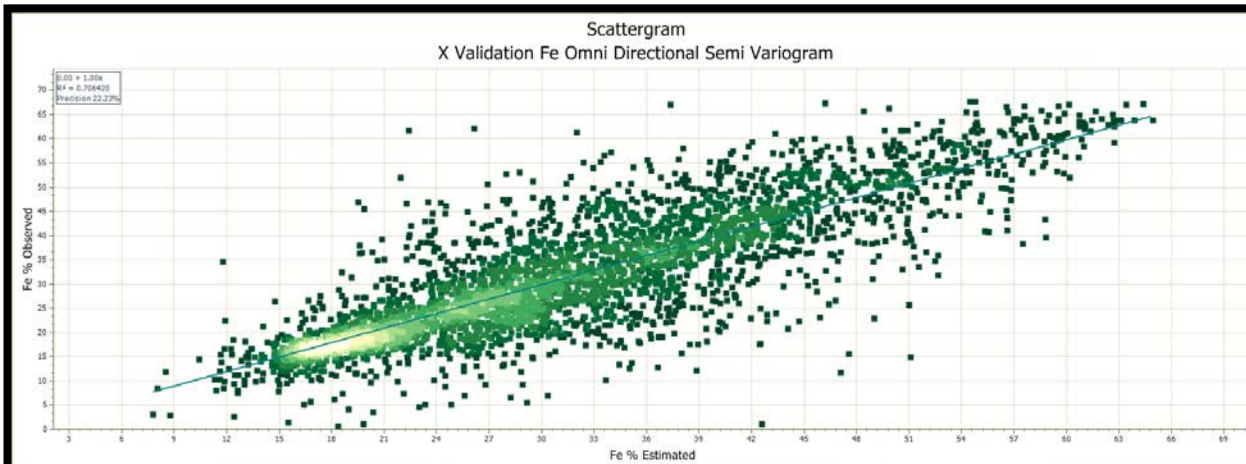




Cross Validation Plots, Estimated values vs Observed Values, Major Elements

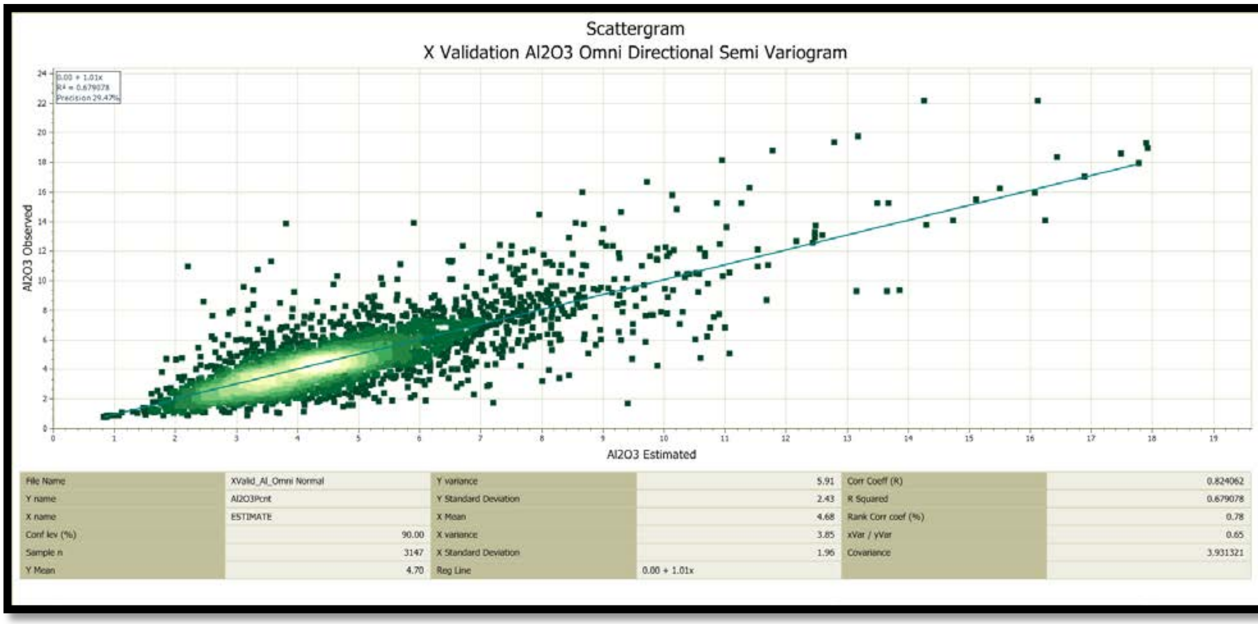


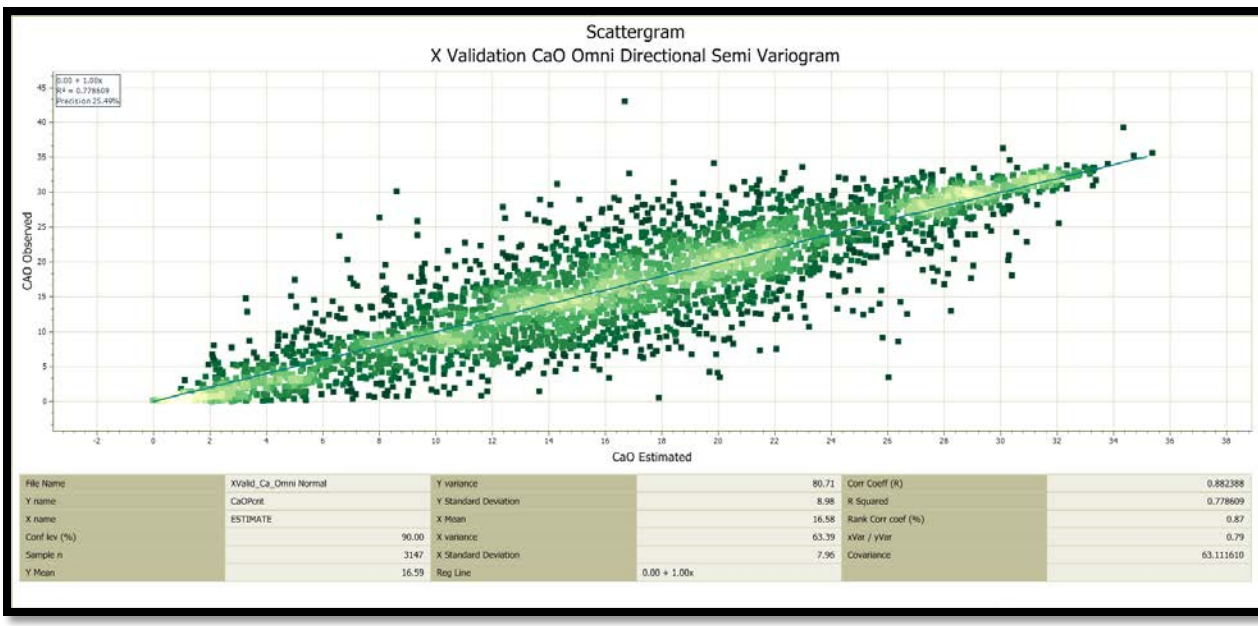
File Name	XValid_SG_Omni Normal	Y variance	0.31	Corr Coeff (R)	0.966670
Y name	SG	Y Standard Deviation	0.56	R Squared	0.934451
X name	ESTIMATE	X Mean	3.62	Rank Corr coef (%)	0.96
Conf lev (%)	90.00	X variance	0.28	xVar / yVar	0.90
Sample n	1837	X Standard Deviation	0.53	Covariance	0.282392
Y Mean	3.62	Reg Line	0.00 + 1.00x		

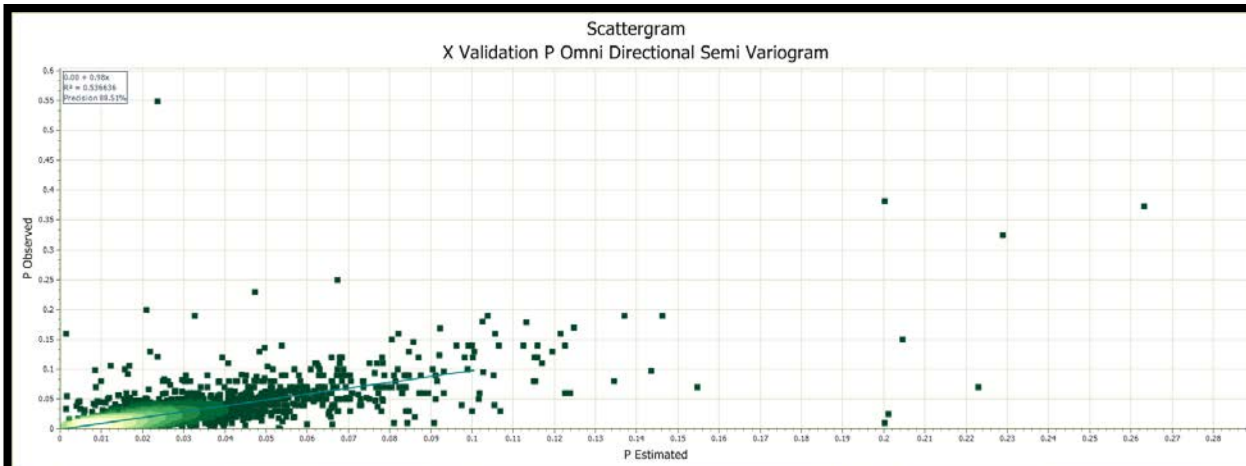


File Name	XValid_Fe Omni Normal	Y variance	174.43	Corr Coeff (R)	0.840488
Y name	FePcnt	Y Standard Deviation	13.21	R Squared	0.706420
X name	ESTIMATE	X Mean	32.19	Rank Corr coef (%)	0.83
Conf lev (%)	90.00	X variance	125.29	xVar / yVar	0.72
Sample n	3325	X Standard Deviation	11.19	Covariance	124.251958
Y Mean	32.10	Reg Line	0.00 + 1.00x		

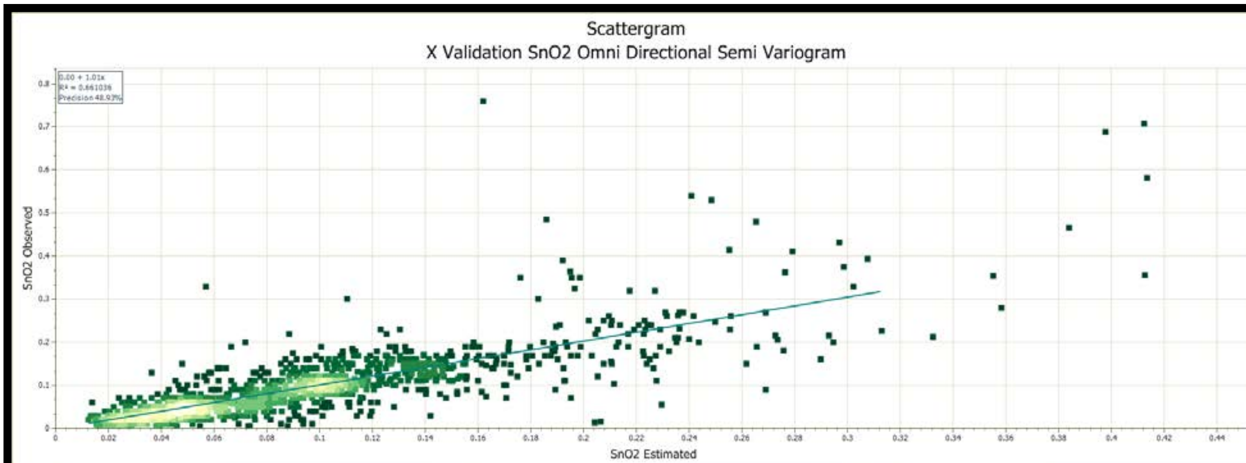
Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 701


Scattergram
X Validation Al2O3 Omni Directional Semi Variogram
0.00 + 1.01x
R² = 0.679078
Precision 29.47%
Al2O3 Observed
Al2O3 Estimated
File Name XValid_Al_Omni Normal
Y name Al2O3Pcnt
X name ESTIMATE
Conf lev (%) 90.00
Sample n 3147
Y Mean 4.70
Y variance 5.91
Y Standard Deviation 2.43
X Mean 4.68
X variance 3.85
X Standard Deviation 1.96
Reg Line 0.00 + 1.01x
Corr Coeff (R) 0.824062
R Squared 0.679078
Rank Corr coef (%) 0.78
xVar / yVar 0.65
Covariance 3.931321

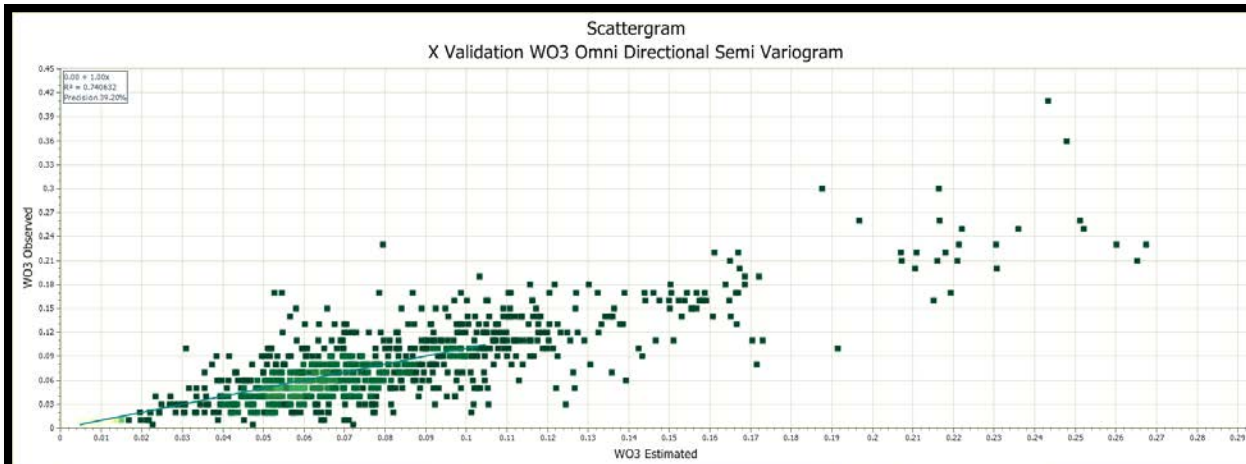

Scattergram
X Validation CaO Omni Directional Semi Variogram
0.00 + 1.00x
R² = 0.778609
Precision 25.49%
CAO Observed
CaO Estimated
File Name XValid_Ca_Omni Normal
Y name CaOPcnt
X name ESTIMATE
Conf lev (%) 90.00
Sample n 3147
Y Mean 16.59
Y variance 80.71
Y Standard Deviation 8.98
X Mean 16.58
X variance 63.39
X Standard Deviation 7.96
Reg Line 0.00 + 1.00x
Corr Coeff (R) 0.882388
R Squared 0.778609
Rank Corr coef (%) 0.87
xVar / yVar 0.79
Covariance 63.111610



File Name	XValid_P_Omni Normal	Y variance	0.00	Corr Coeff (R)	0.732554
Y name	PPcnt	Y Standard Deviation	0.03	R Squared	0.536636
X name	ESTIMATE	X Mean	0.02	Rank Corr coef (%)	0.84
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	0.57
Sample n	3062	X Standard Deviation	0.02	Covariance	0.000474
Y Mean	0.02	Reg Line	0.00 + 0.98x		

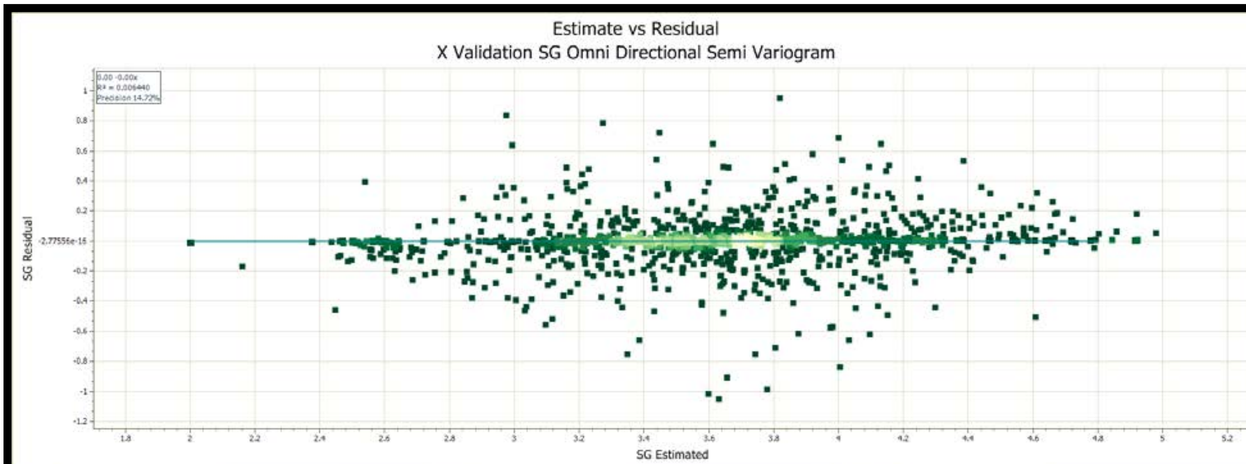


File Name	XValid_Sn_Omni Normal	Y variance	0.01	Corr Coeff (R)	0.813041
Y name	SnO2PCT	Y Standard Deviation	0.08	R Squared	0.661036
X name	ESTIMATE	X Mean	0.09	Rank Corr coef (%)	0.84
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	0.60
Sample n	1220	X Standard Deviation	0.06	Covariance	0.003931
Y Mean	0.09	Reg Line	0.00 + 1.01x		

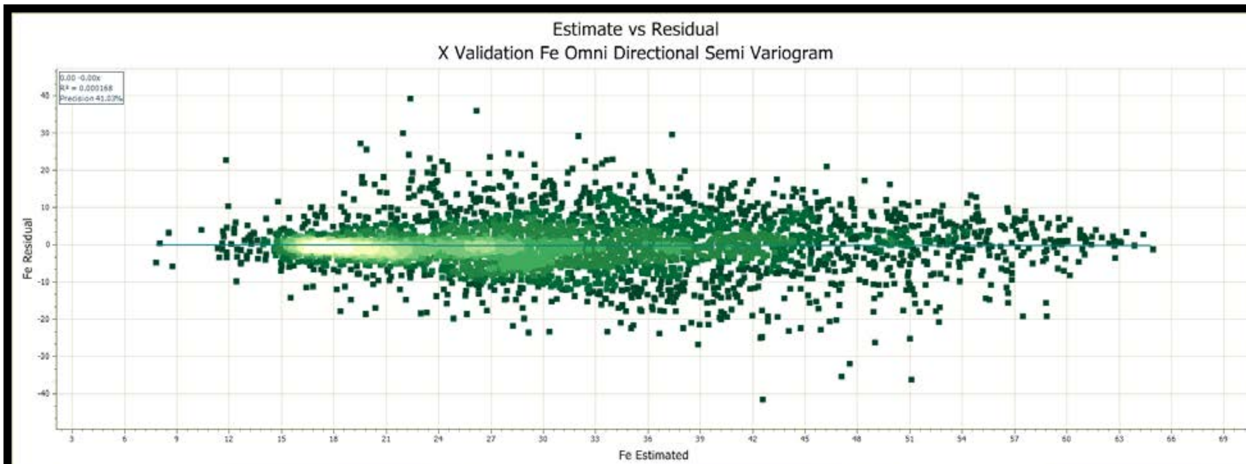


File Name	XValid_W_Omni Normal	Y variance	0.00	Corr Coeff (R)	0.860600
Y name	WO3PCT	Y Standard Deviation	0.06	R Squared	0.740632
X name	ESTIMATE	X Mean	0.07	Rank Corr coef (%)	0.83
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	0.72
Sample n	883	X Standard Deviation	0.05	Covariance	0.002241
Y Mean	0.07	Reg Line	0.00 + 1.00x		

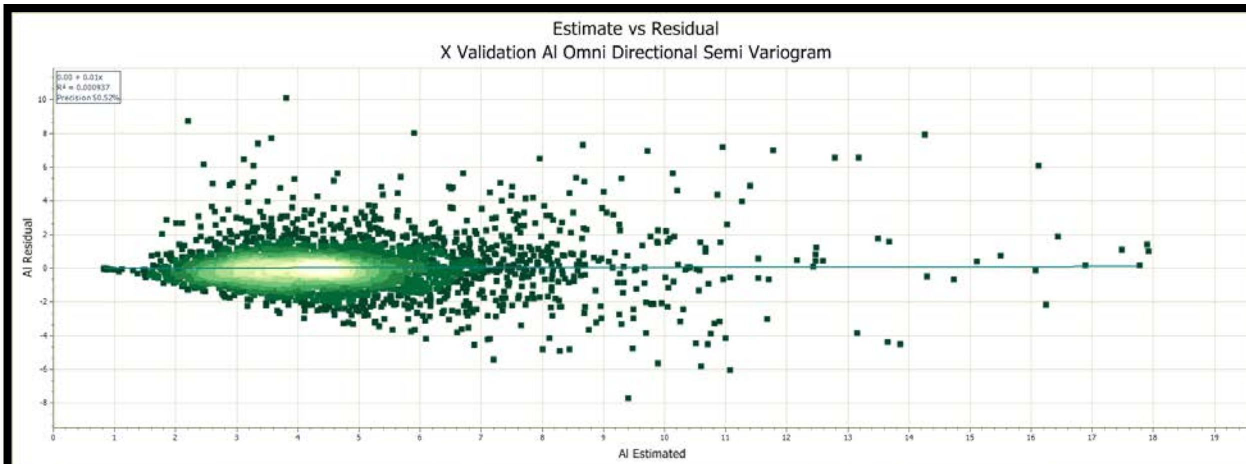
Cross Validation Plots : Residuals vs Estimates, Major Elements



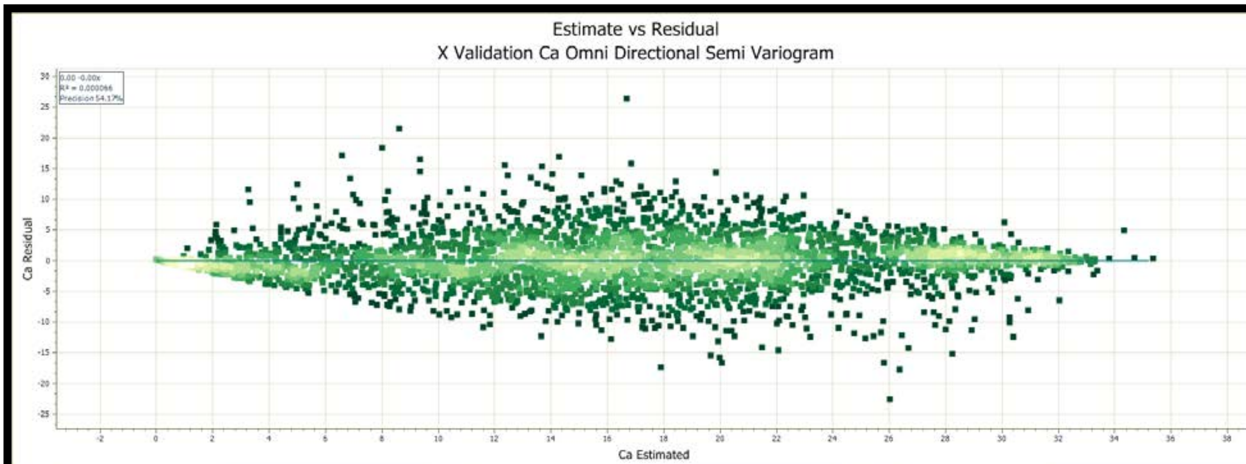
File Name	XValid_SG_Omni Normal	Y variance	0.02	Corr Coeff (R)	0.080247
Y name	RESIDUAL	Y Standard Deviation	0.14	R Squared	0.006440
X name	ESTIMATE	X Mean	3.62	Rank Corr coef (%)	0.32
Conf lev (%)	90.00	X variance	0.28	xVar / yVar	13.57
Sample n	1837	X Standard Deviation	0.53	Covariance	0.006021
Y Mean	-0.00	Reg Line	0.00 -0.00x		



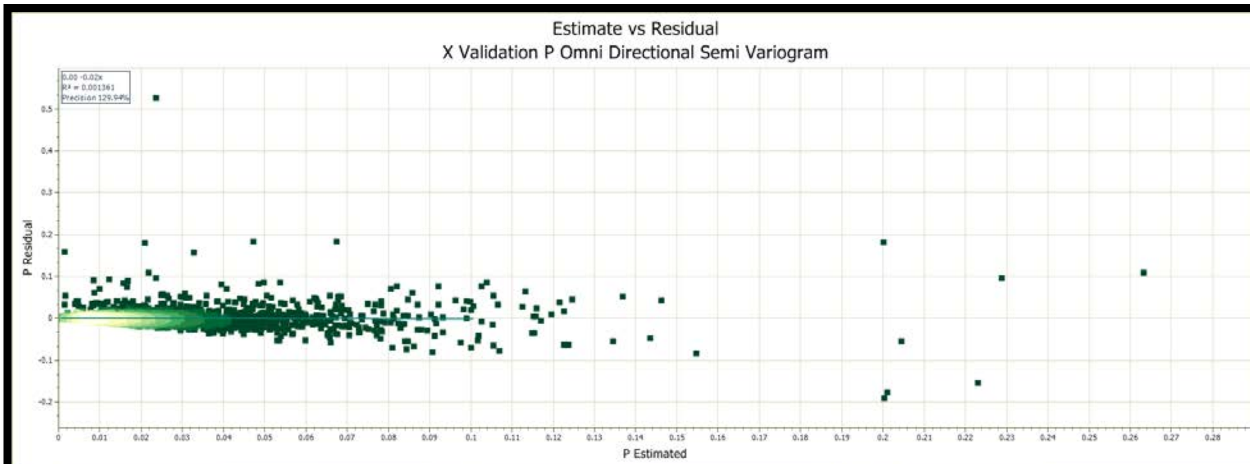
File Name	XValid_Fe Omni Normal	Y variance	51.22	Corr Coeff (R)	0.012961
Y name	RESIDUAL	Y Standard Deviation	7.16	R Squared	0.000168
X name	ESTIMATE	X Mean	32.19	Rank Corr coef (%)	0.04
Conf lev (%)	90.00	X variance	125.29	xVar / yVar	2.45
Sample n	3325	X Standard Deviation	11.19	Covariance	1.038232
Y Mean	-0.09	Reg Line	0.00 -0.00x		



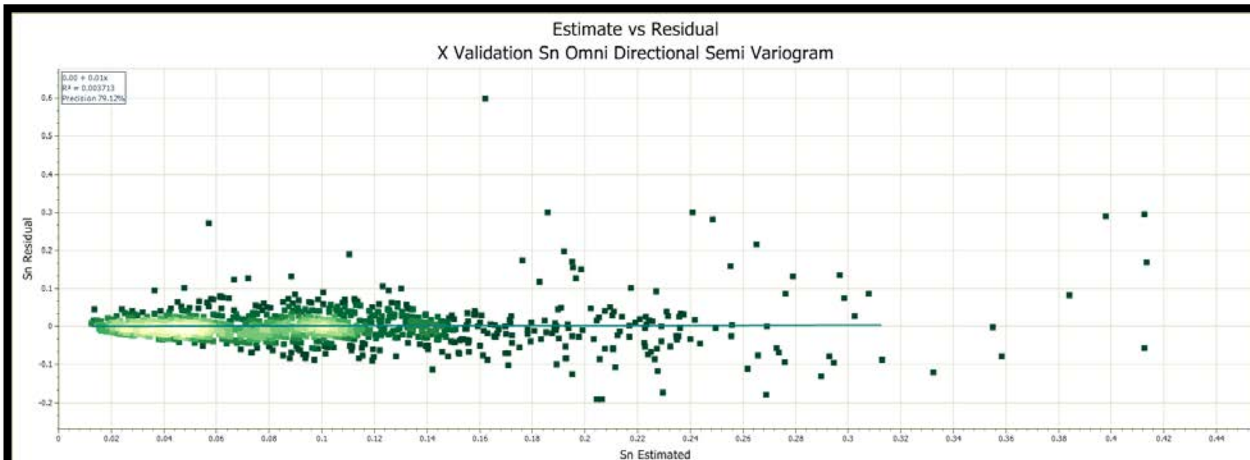
File Name	XValid_Al_Omni Normal	Y variance	1.90	Corr Coeff (R)	0.030614
Y name	RESIDUAL	Y Standard Deviation	1.38	R Squared	0.000937
X name	ESTIMATE	X Mean	4.68	Rank Corr coef (%)	0.01
Conf lev (%)	90.00	X variance	3.85	xVar / yVar	2.03
Sample n	3147	X Standard Deviation	1.96	Covariance	0.082775
Y Mean	0.02	Reg Line	0.00 + 0.01x		



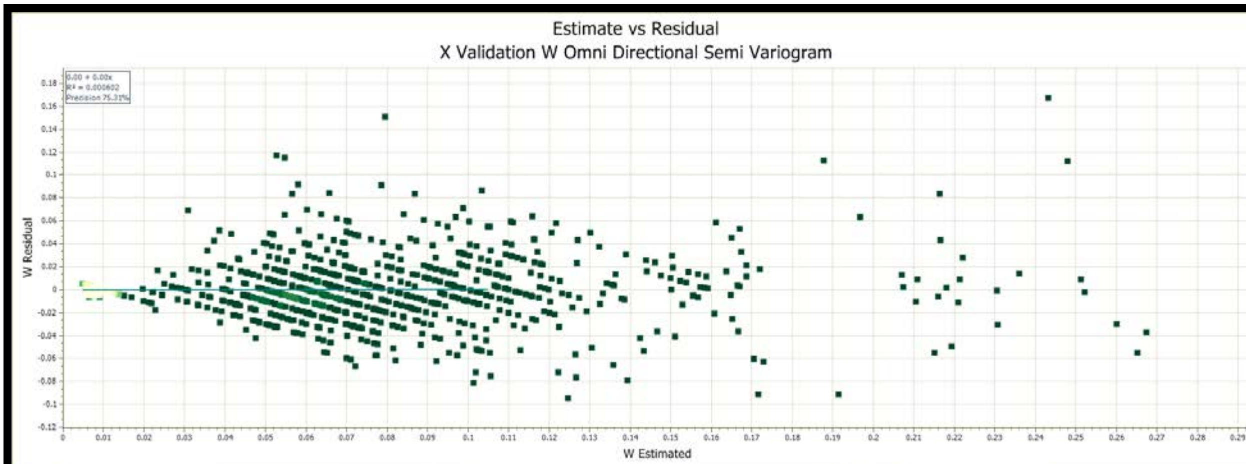
File Name	XValid_Ca_Omni Normal	Y variance	17.87	Corr Coeff (R)	0.008141
Y name	RESIDUAL	Y Standard Deviation	4.23	R Squared	0.000066
X name	ESTIMATE	X Mean	16.58	Rank Corr coef (%)	0.05
Conf lev (%)	90.00	X variance	63.39	xVar / yVar	3.55
Sample n	3147	X Standard Deviation	7.96	Covariance	0.273993
Y Mean	0.01	Reg Line	0.00 -0.00x		



File Name	XValid_P_Omni Normal	Y variance	0.00	Corr Coeff (R)	0.036897
Y name	RESIDUAL	Y Standard Deviation	0.02	R Squared	0.001361
X name	ESTIMATE	X Mean	0.02	Rank Corr coef (%)	-0.07
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	1.24
Sample n	3062	X Standard Deviation	0.02	Covariance	0.000016
Y Mean	-0.00	Reg Line	0.00 -0.02x		



File Name	XValid_Sn_Omni Normal	Y variance	0.00	Corr Coeff (R)	0.060936
Y name	RESIDUAL	Y Standard Deviation	0.05	R Squared	0.003713
X name	ESTIMATE	X Mean	0.09	Rank Corr coef (%)	-0.03
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	1.78
Sample n	1220	X Standard Deviation	0.06	Covariance	0.000172
Y Mean	0.00	Reg Line	0.00 + 0.01x		



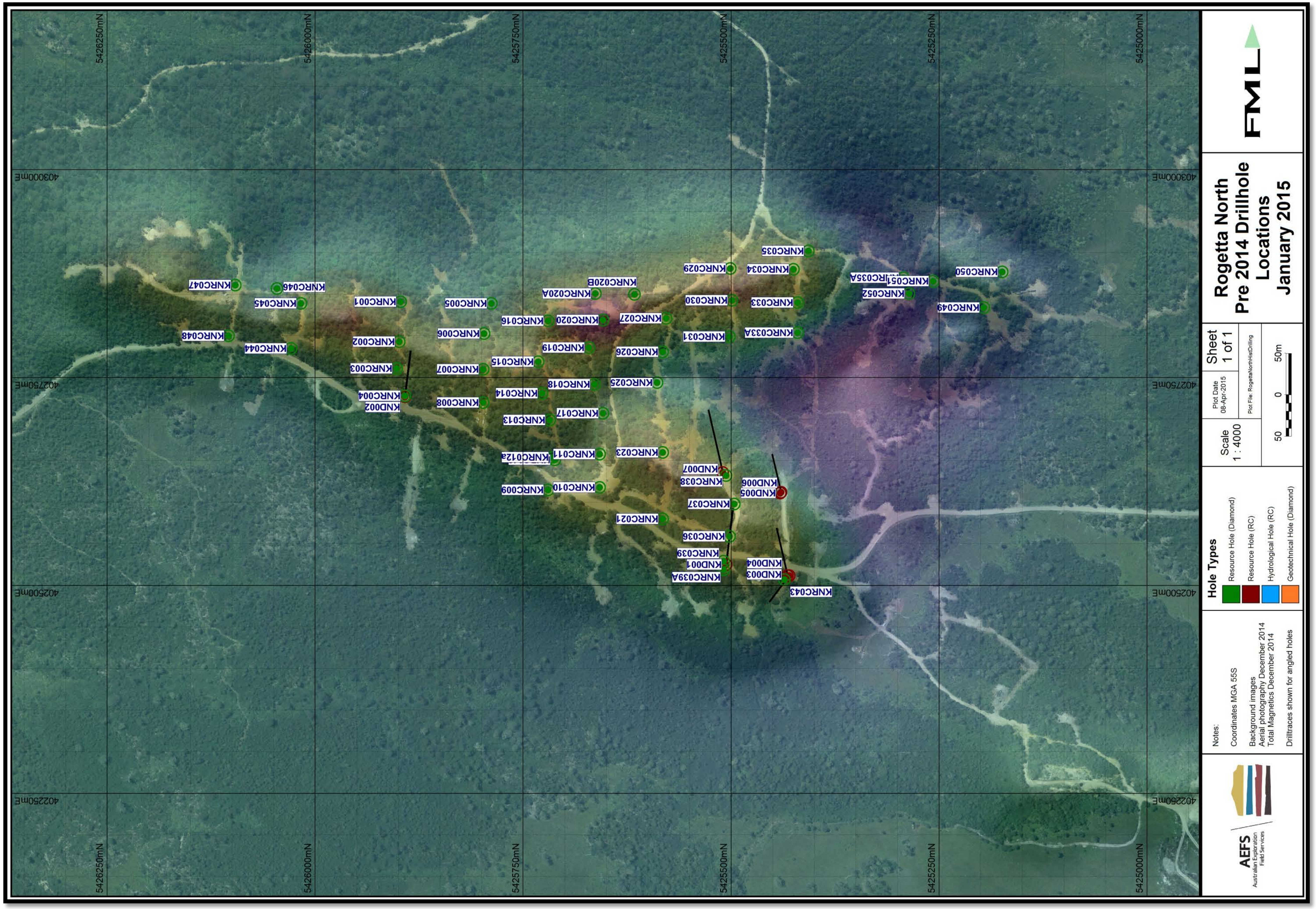
File Name	XValid_W_Omni Normal	Y variance	0.00	Corr Coeff (R)	0.024536
Y name	RESIDUAL	Y Standard Deviation	0.03	R Squared	0.000602
X name	ESTIMATE	X Mean	0.07	Rank Corr coef (%)	0.00
Conf lev (%)	90.00	X variance	0.00	xVar / yVar	2.77
Sample n	883	X Standard Deviation	0.05	Covariance	0.000033
Y Mean	-0.00	Reg Line	0.00 + 0.00x		

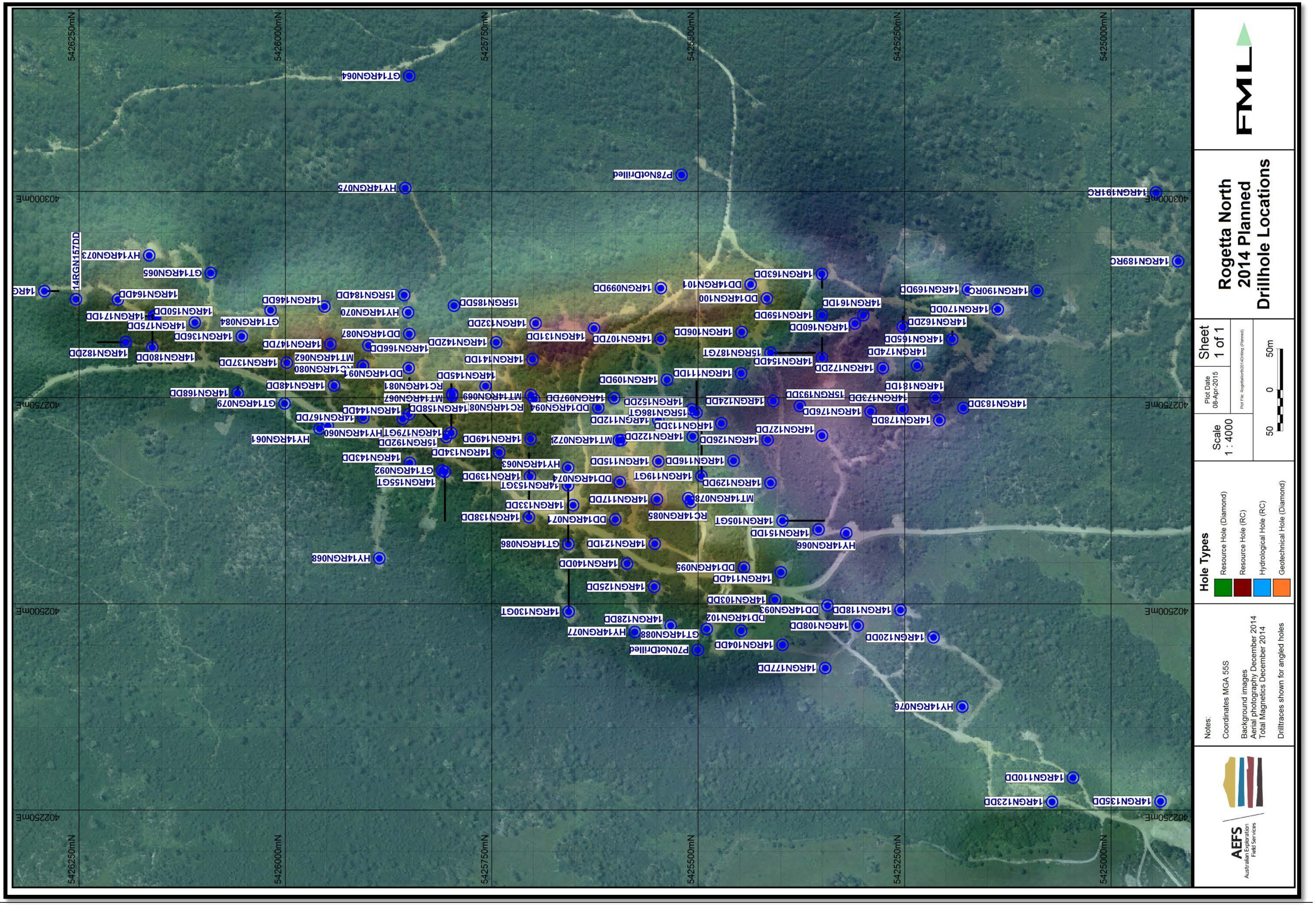
Appendix G

Plans and Sections

Drill Hole Plans

A) Location of drillholes drilled prior to 2014
B) Planned locations of 2014 drillholes
C) Final location of 2014 drillholes
D) All drilling sheet A
E) All drilling sheet B


Rogetta North
Pre 2014 Drillhole
Locations
January 2015
Sheet
1 of 1
Scale
1 : 4000
Hole Types
Resource Hole (Diamond)
Resource Hole (RC)
Hydrological Hole (RC)
Geotechnical Hole (Diamond)
Notes:
Coordinates MGA 55S
Background images
Aerial photography December 2014
Total Magnetics December 2014
Drilltraces shown for angled holes


Rogetta North
2014 Planned
Drillhole Locations
Sheet
1 of 1
Scale
1 : 4000
50
0
50m
Hole Types
Resource Hole (Diamond)
Resource Hole (RC)
Hydrological Hole (RC)
Geotechnical Hole (Diamond)
Notes:
Coordinates MGA 55S
Background images
Aerial photography December 2014
Total Magnetics December 2014
Drilltraces shown for angled holes

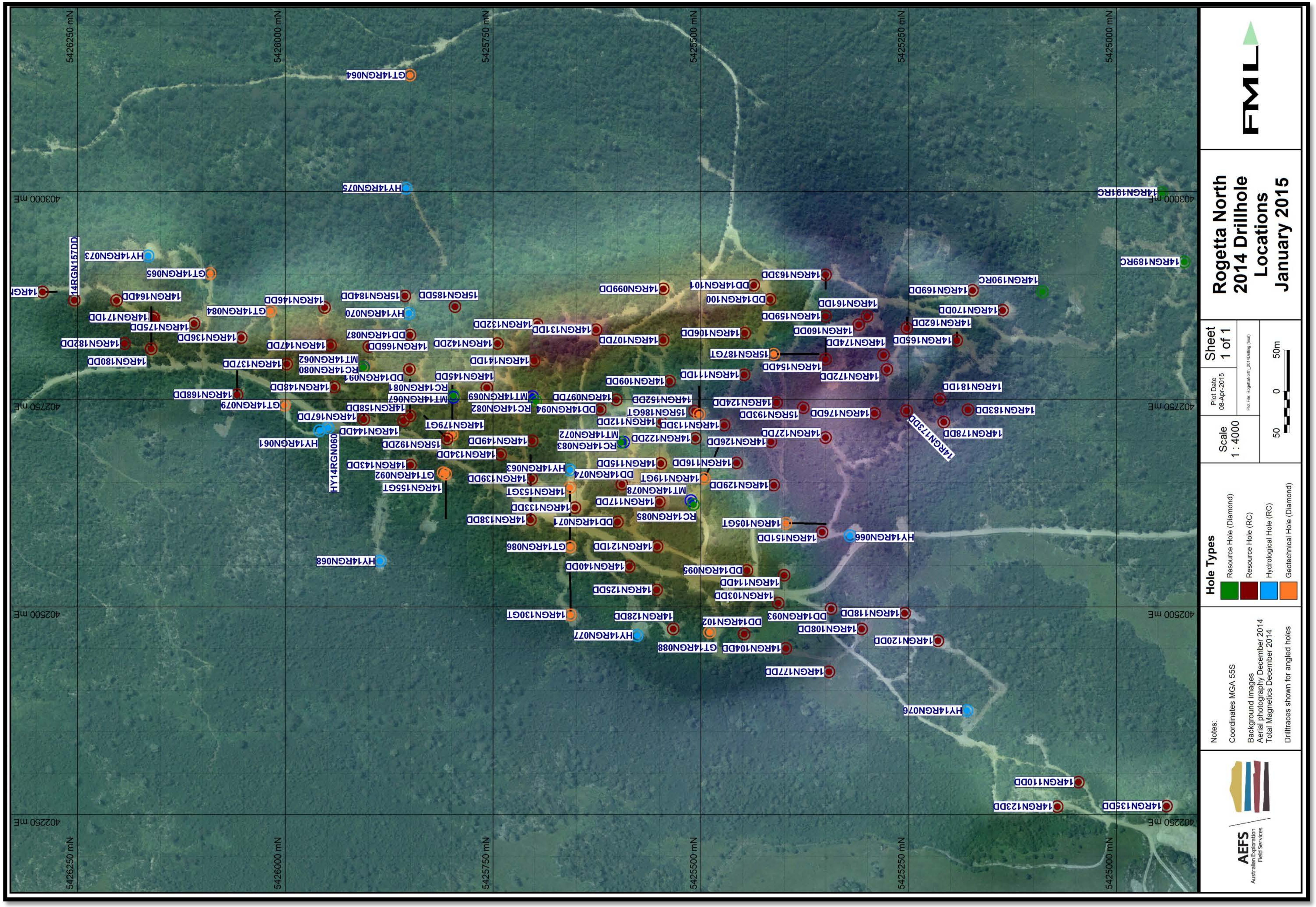


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

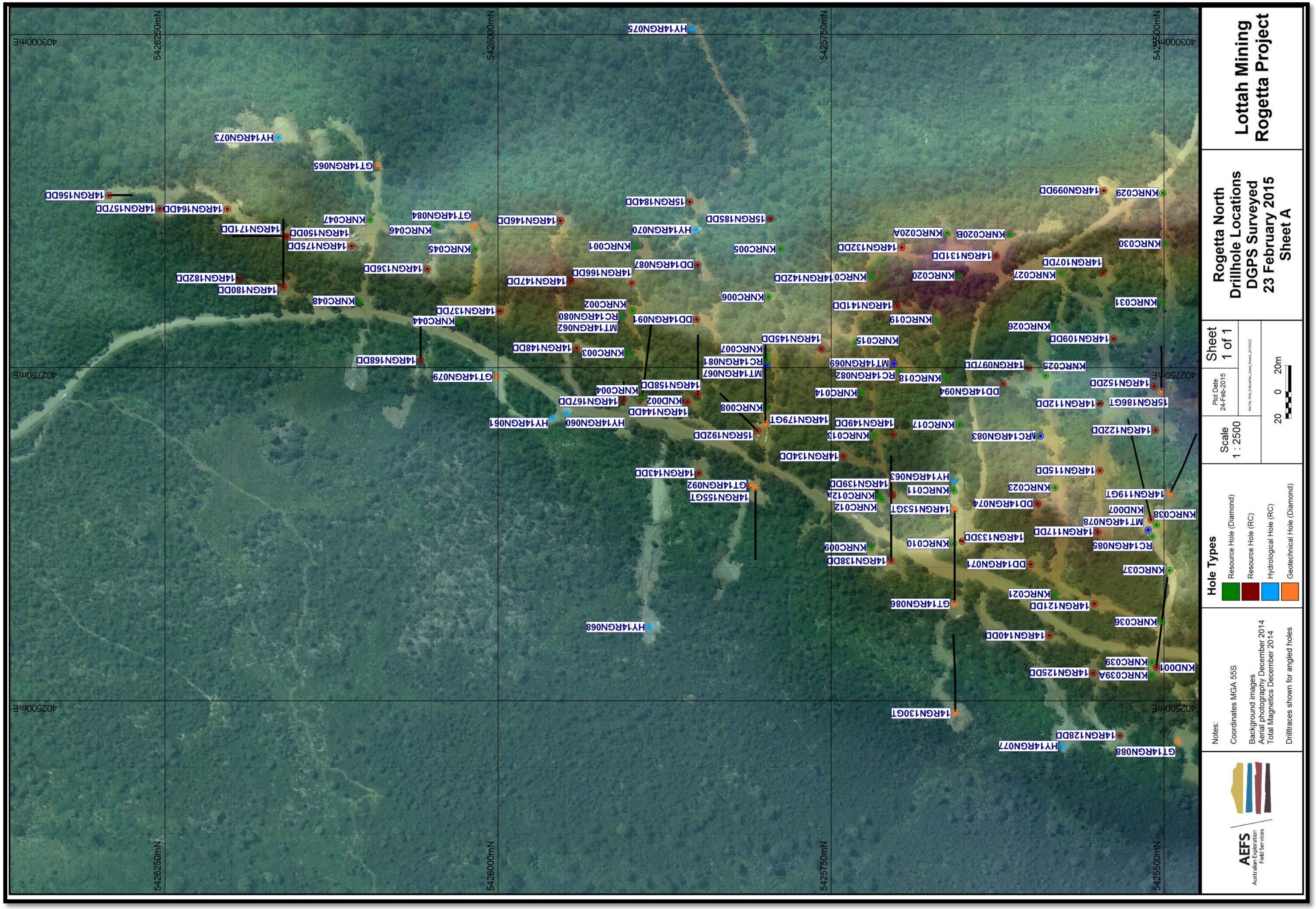
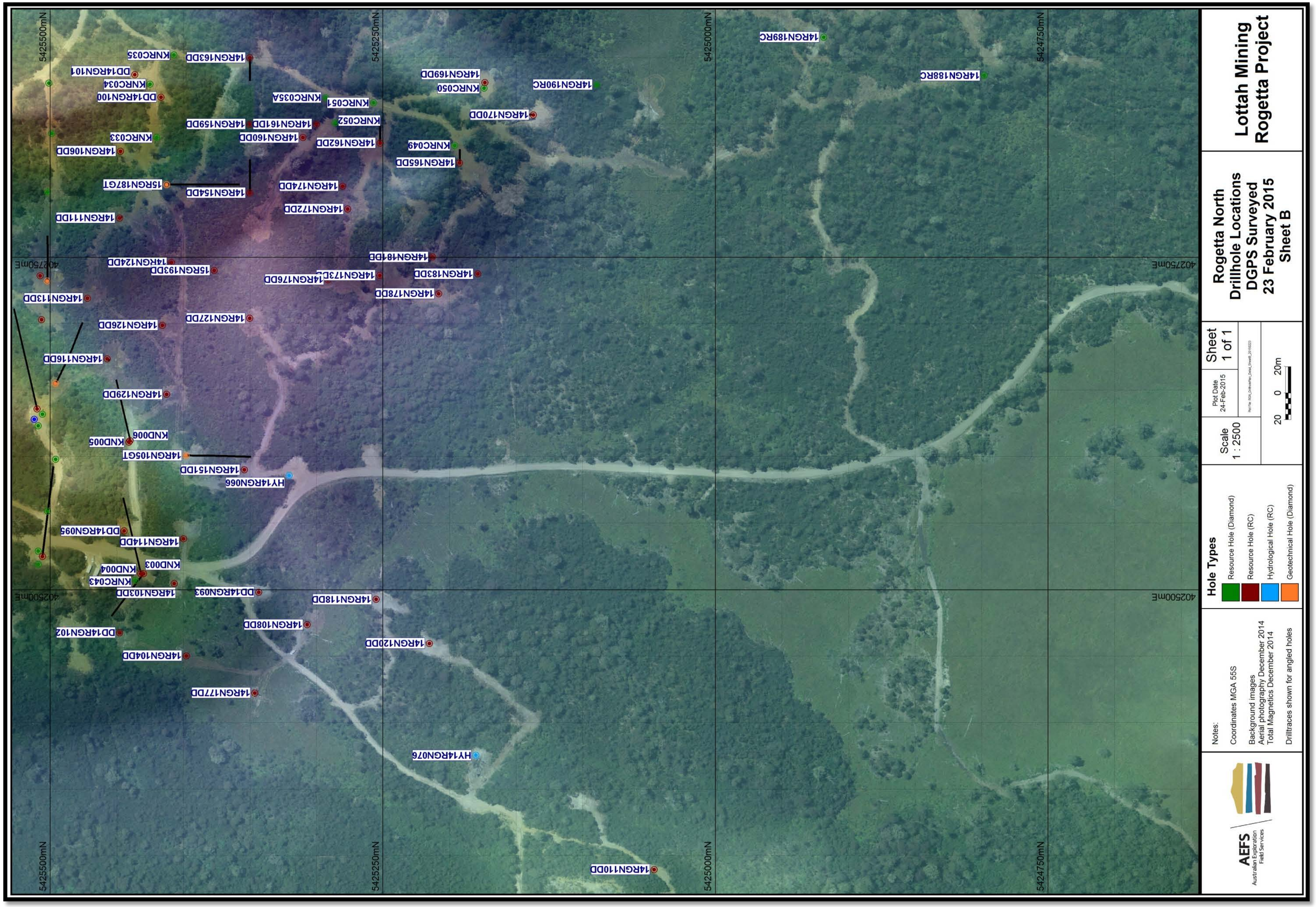


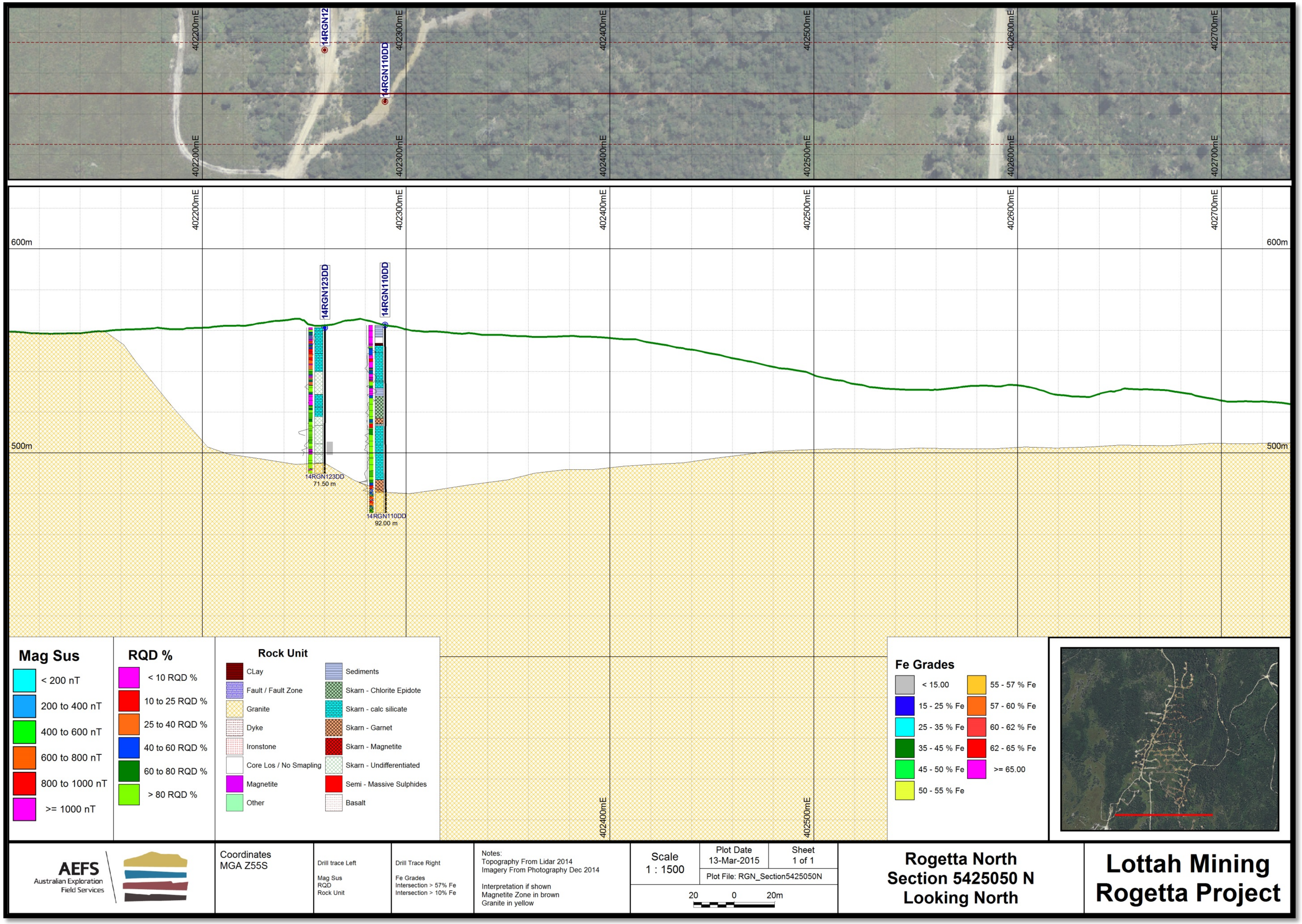
Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

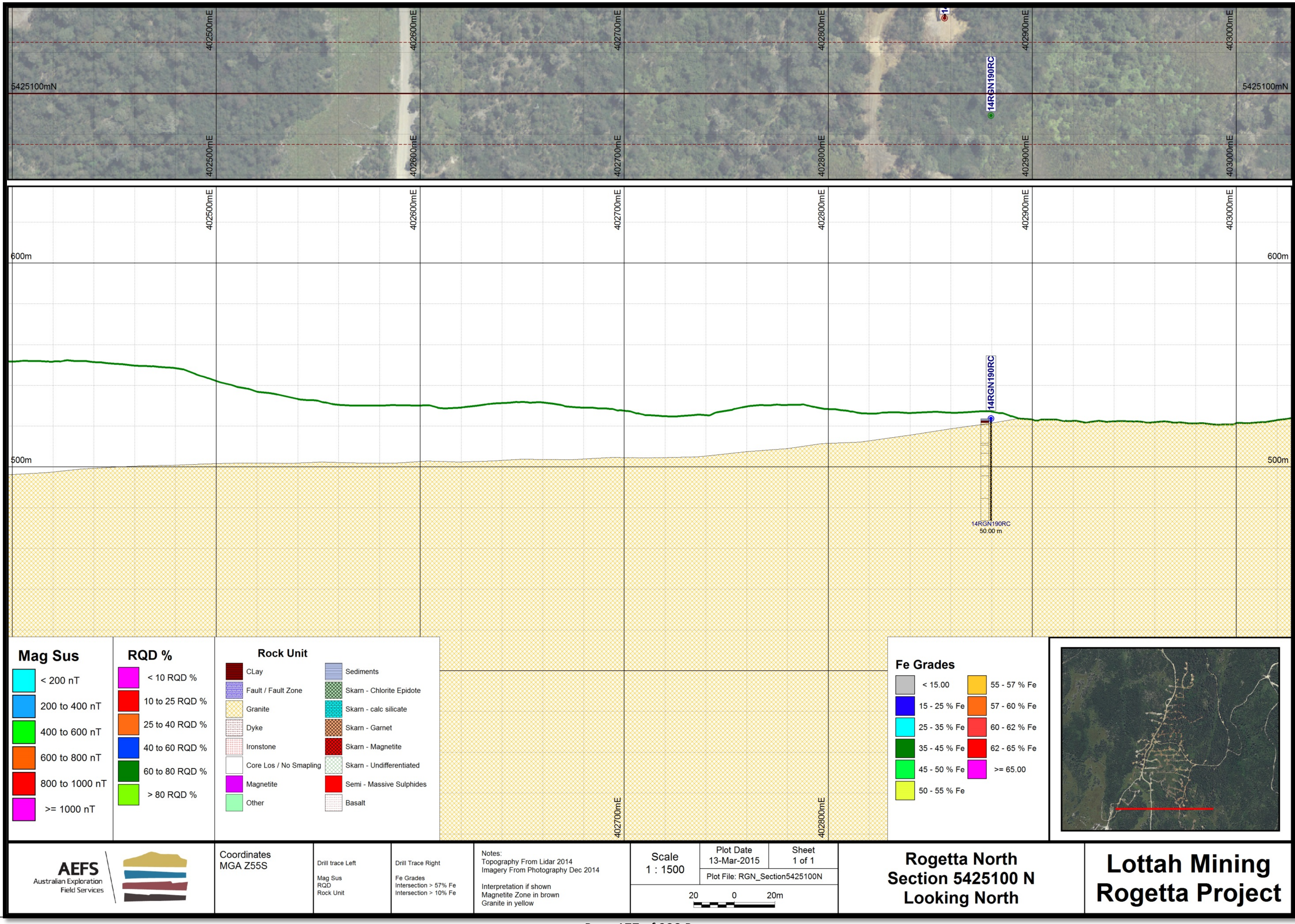

Lottah Mining
Rogetta Project
Rogetta North
Drillhole Locations
DGPS Surveyed
23 February 2015
Sheet B
Sheet
1 of 1
Plot Date
24-Feb-2015
Scale
1 : 2500
20 0 20m
Hole Types
Resource Hole (Diamond)
Resource Hole (RC)
Hydrological Hole (RC)
Geotechnical Hole (Diamond)
Notes:
Coordinates MGA 55S
Background images
Aerial photography December 2014
Total Magnetics December 2014
Drilltraces shown for angled holes
AEFS
Australian Exploration Field Services

Cross Sections through the Rogetta North Orebody

Cross Sections are drawn on looking North every 50 m from 5425050 N to 5426350 N.

Section centres may vary slightly between section to ensure that all relevant data is displayed.


14RGN123DD
14RGN110DD
402200mE
402300mE
402400mE
402500mE
402600mE
402700mE
600m
500m
14RGN123DD 71.50 m
14RGN110DD 92.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425050N
20 0 20m
Rogetta North
Section 5425050 N
Looking North
Lottah Mining
Rogetta Project


402500mE
402600mE
402700mE
402800mE
402900mE
403000mE
5425100mN
14RGN190RC
600m
500m
14RGN190RC
50.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425100N
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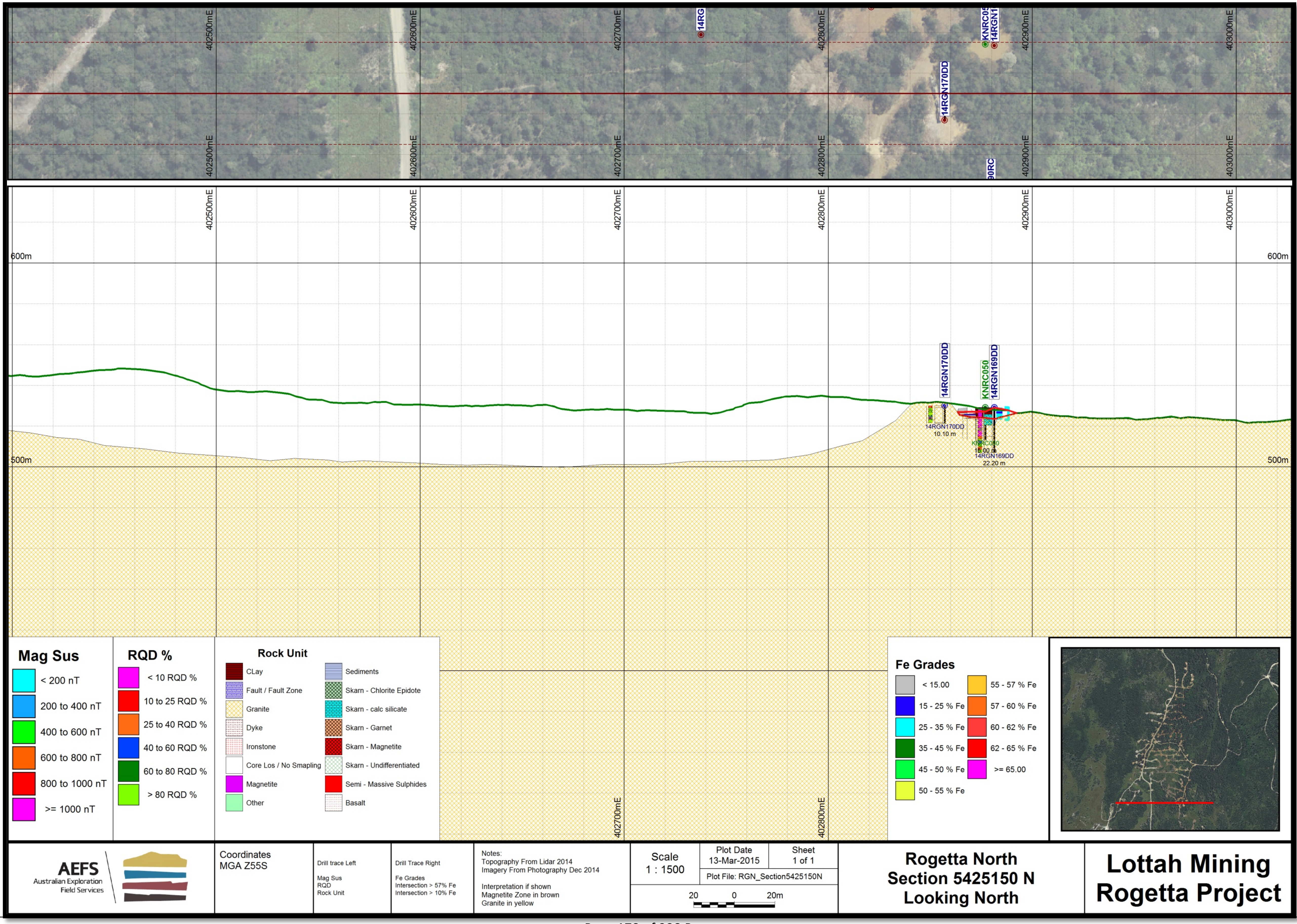
Rogetta North
Section 5425100 N
Looking North
Lottah Mining
Rogetta Project


402500mE
402600mE
402700mE
402800mE
402900mE
403000mE
14RGN170DD
KNRC050
14RGN169DD
600m
500m
14RGN170DD 10.10 m
14RGN169DD 22.20 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS Australian Exploration Field Services
Coordinates MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale 1 : 1500
Plot Date 13-Mar-2015
Sheet 1 of 1
Plot File: RGN_Section5425150N
20 0 20m
Rogetta North
Section 5425150 N
Looking North
Lottah Mining
Rogetta Project

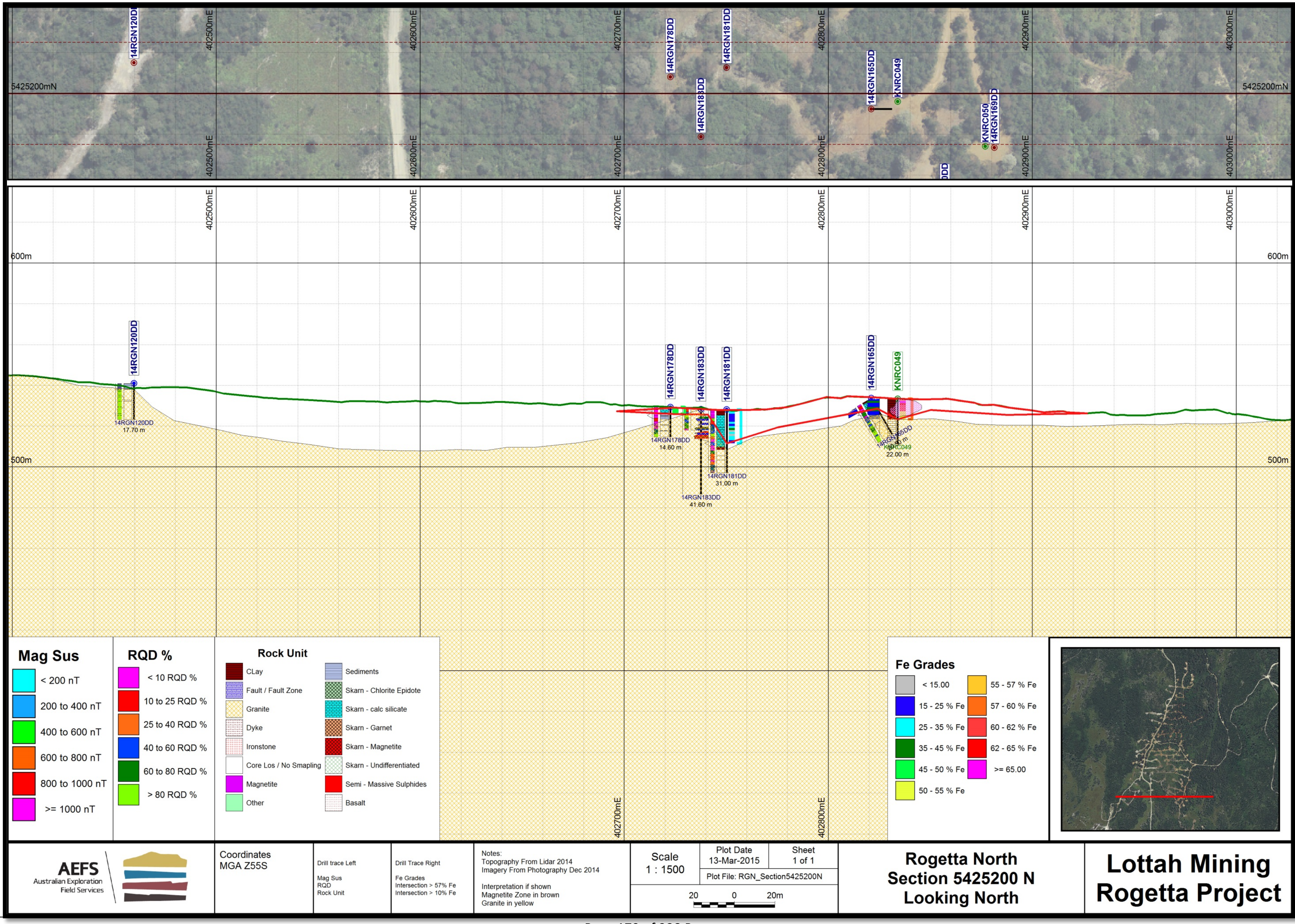
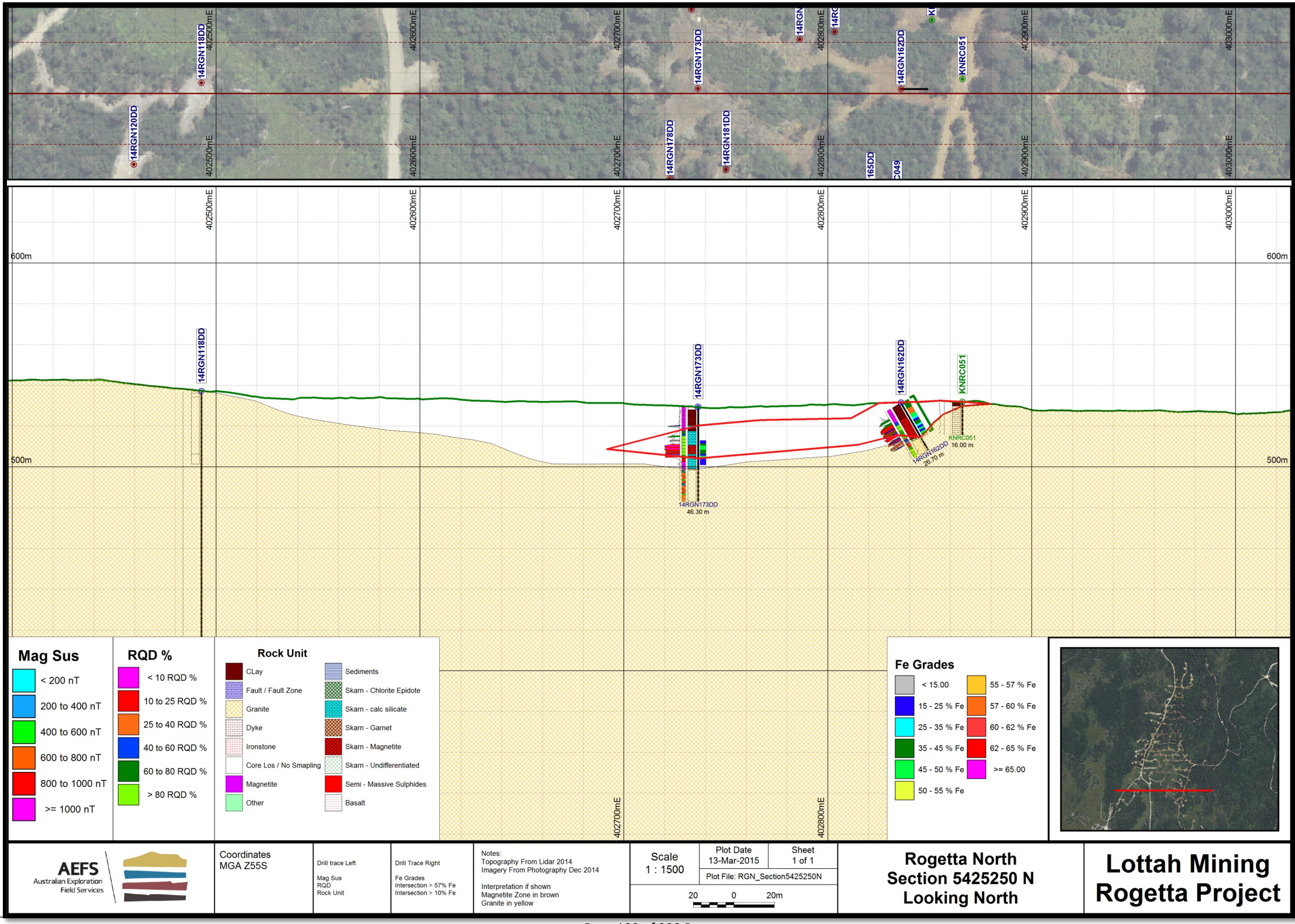


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791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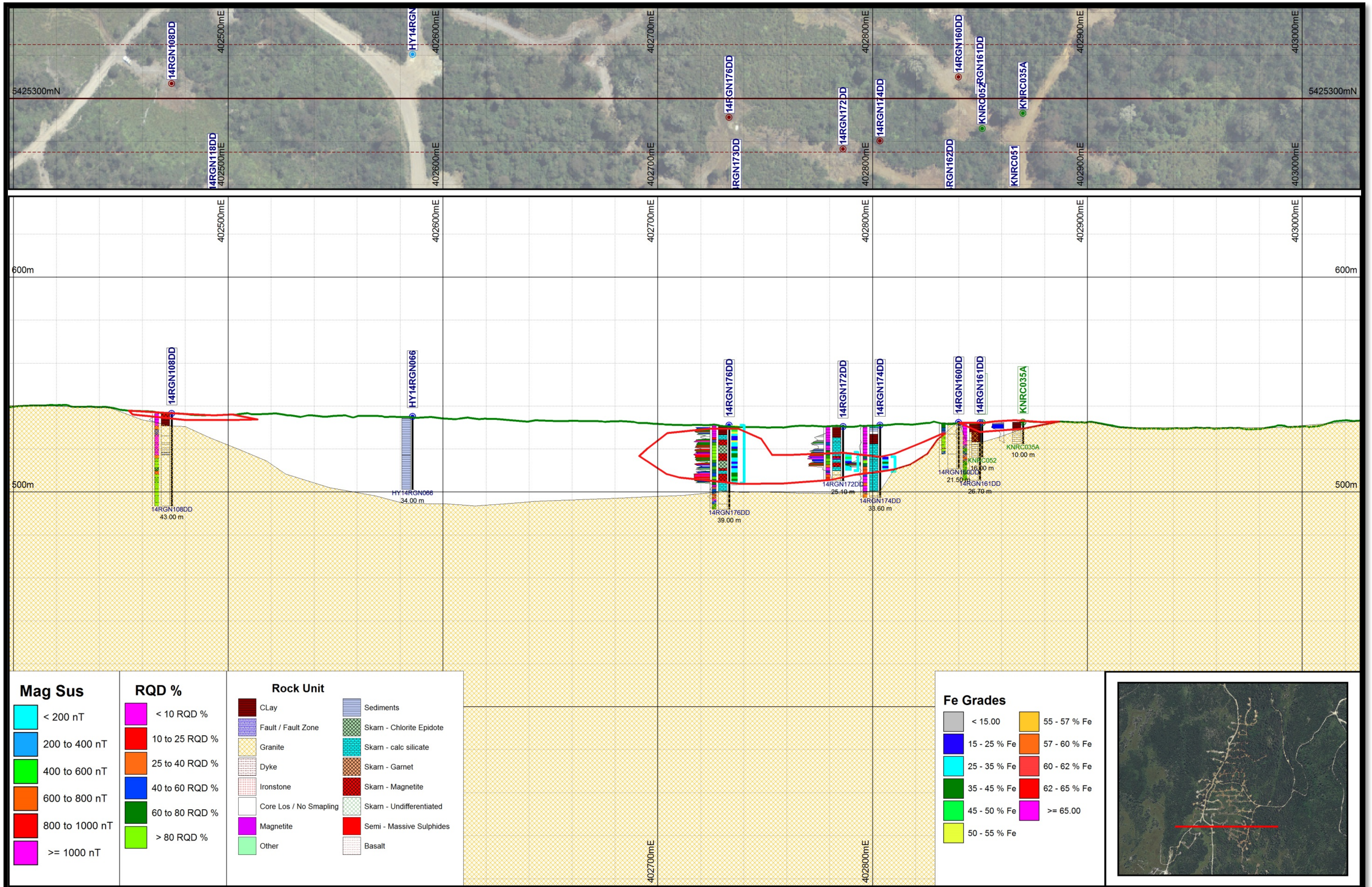
402600mE
402700mE
402800mE
402900mE
403000mE
14RGN118DD
14RGN120DD
14RGN173DD
14RGN178DD
14RGN181DD
14RGN162DD
KNRC051
600m
500m
14RGN173DD
46.30 m
KNRC051
16.00 m
14RGN162DD
26.70 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration
Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425250N
20
0
20m
Rogetta North
Section 5425250 N
Looking North
Lottah Mining
Rogetta Project



AEFS Australian Exploration Field Services

Coordinates
MGA Z55S

Drill trace Left
Mag Sus
RQD
Rock Unit

Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe

Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow

Scale
1 : 1500

Plot Date
13-Mar-2015

Sheet
1 of 1

Plot File: RGN_Section5425300N

20 0 20m

Rogetta North
Section 5425300 N
Looking North

Lottah Mining
Rogetta Project

Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

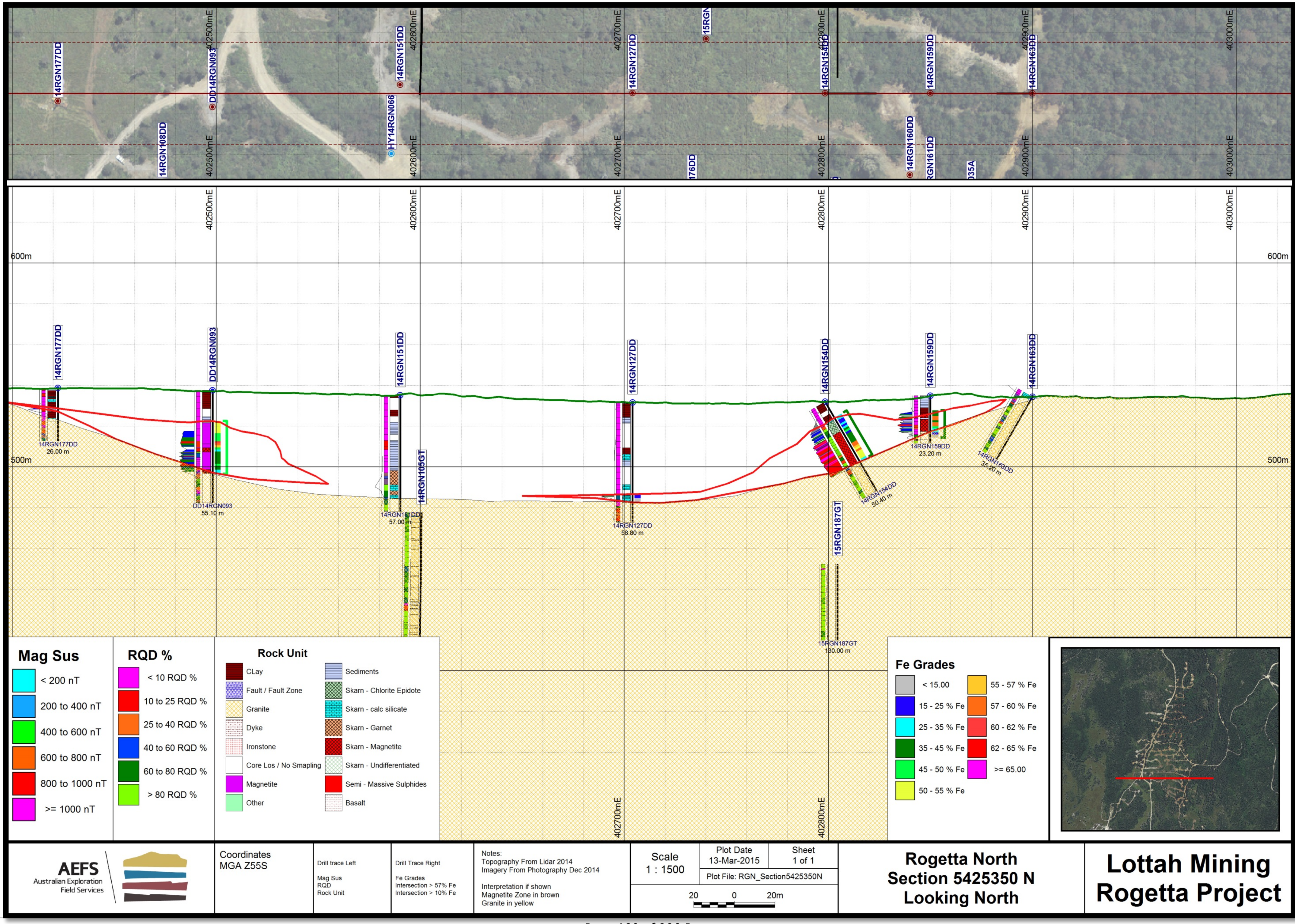
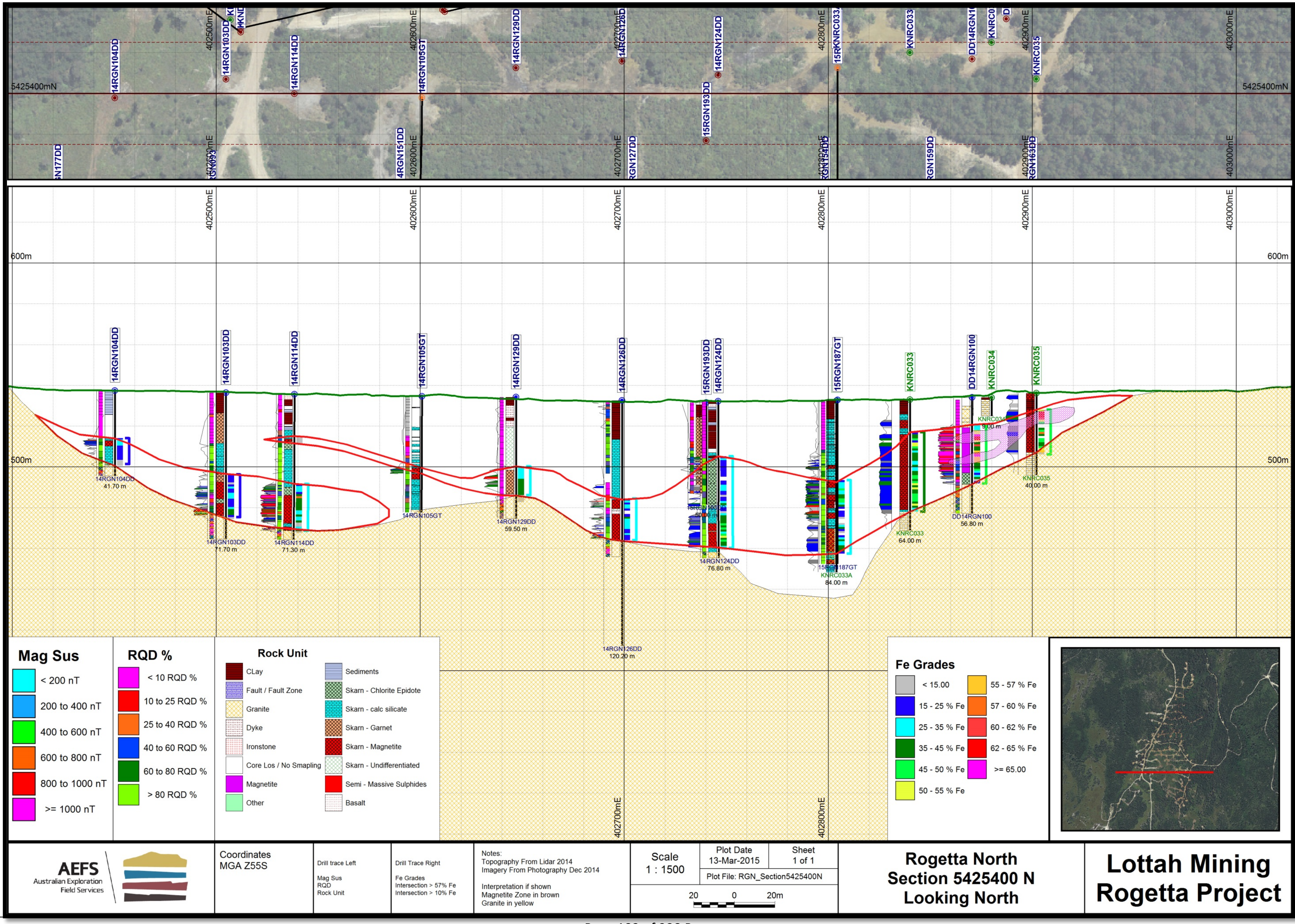
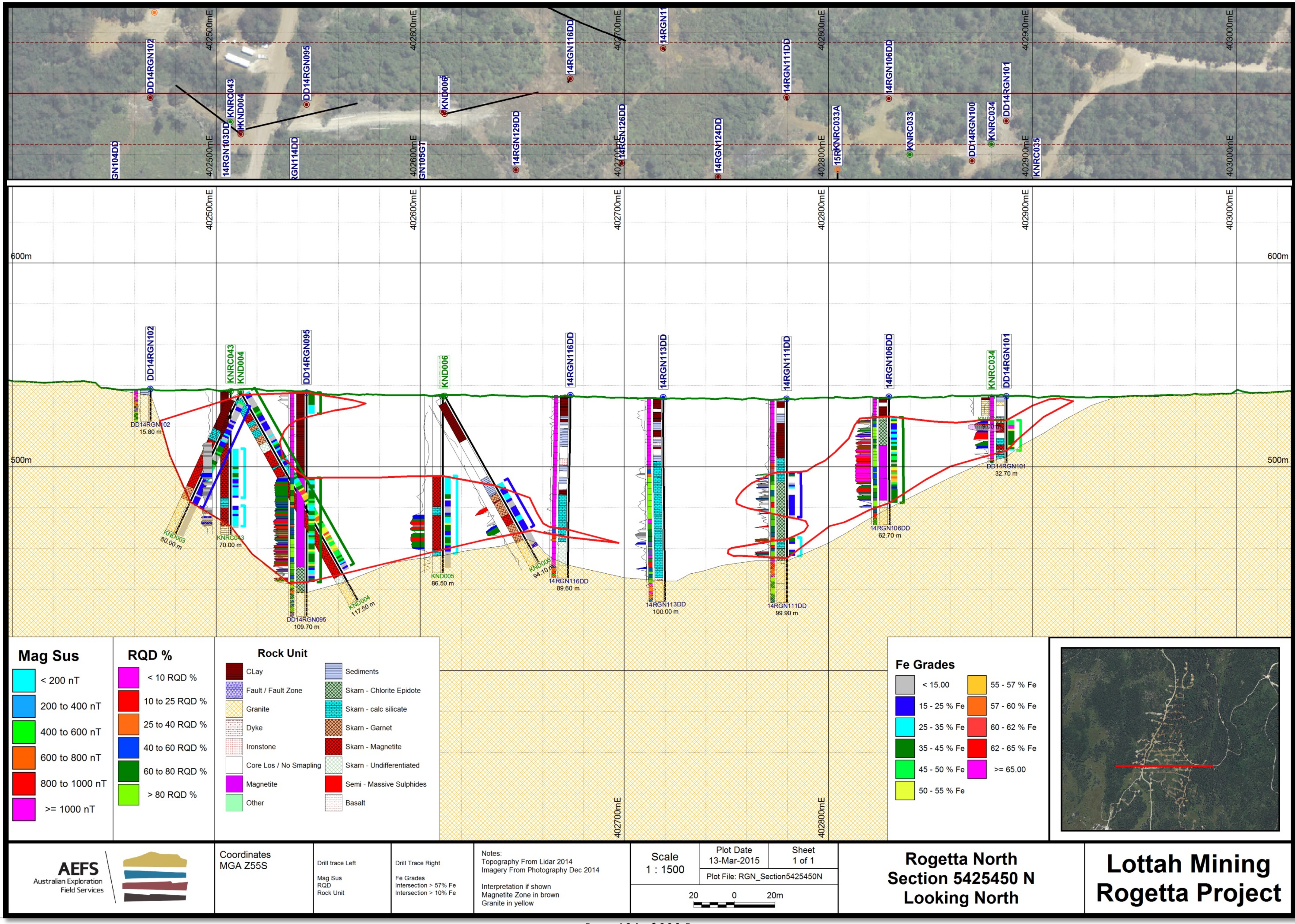


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791


5425400mN
402500mE
402600mE
402700mE
402800mE
402900mE
403000mE
600m
500m
14RGN104DD
14RGN103DD
14RGN114DD
14RGN105GT
14RGN129DD
14RGN126DD
15RGN193DD
14RGN124DD
15RGN187GT
KNRC033
DD14RGN100
KNRC034
KNRC035
14RGN104DD 41.70 m
14RGN103DD 71.70 m
14RGN114DD 71.30 m
14RGN129DD 59.50 m
14RGN124DD 76.80 m
KNRC033A 84.00 m
KNRC033 64.00 m
DD14RGN100 56.80 m
KNRC035 40.00 m
14RGN126DD 120.20 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425400N
20 0 20m
Rogetta North
Section 5425400 N
Looking North
Lottah Mining
Rogetta Project


Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
600m
500m
402500mE
402600mE
402700mE
402800mE
402900mE
403000mE
DD14RGN102
KNRC043
KND004
DD14RGN095
KND006
14RGN116DD
14RGN113DD
14RGN111DD
14RGN106DD
KNRC034
DD14RGN101
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425450N
20 0 20m
Rogetta North
Section 5425450 N
Looking North
Lottah Mining
Rogetta Project

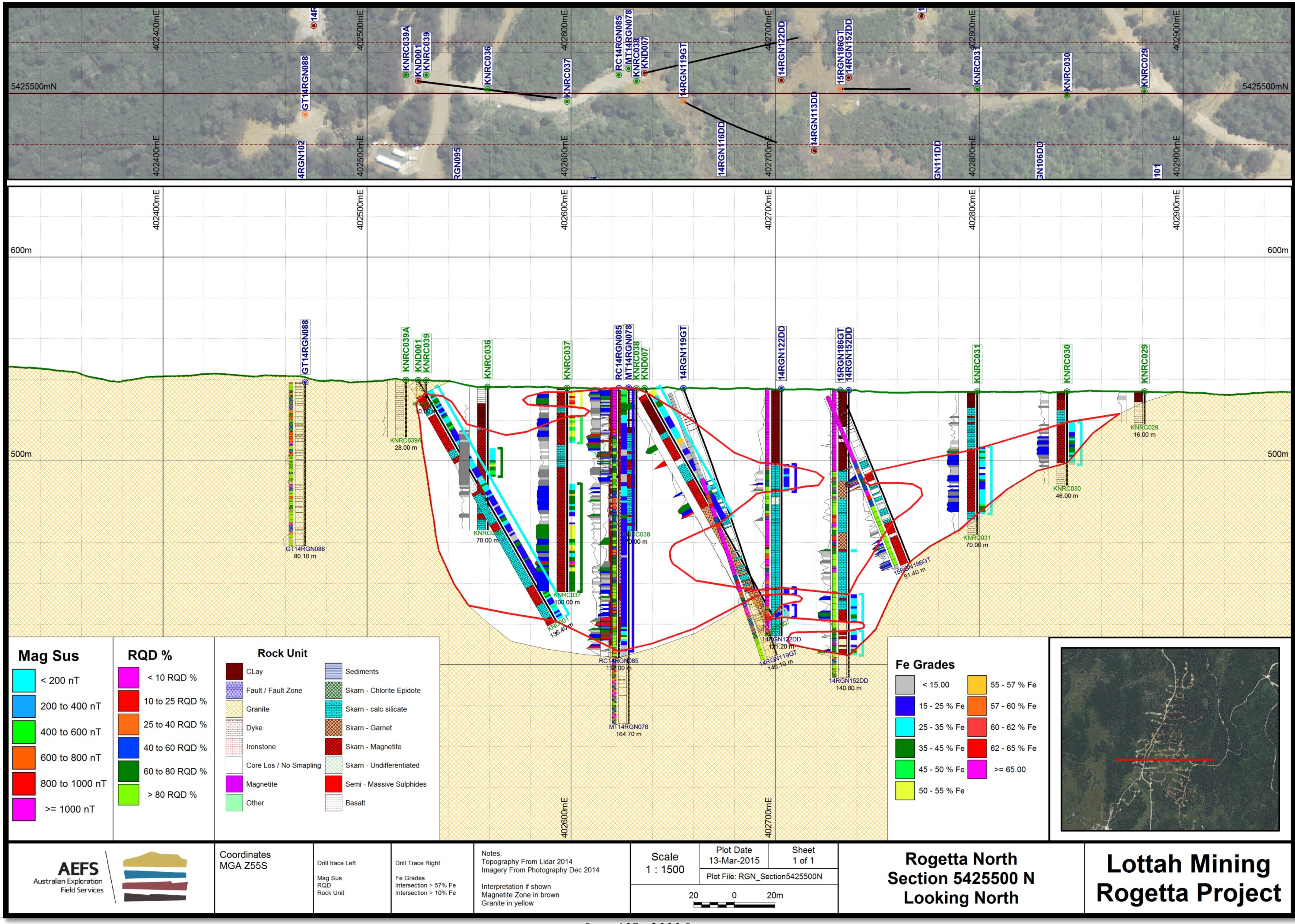
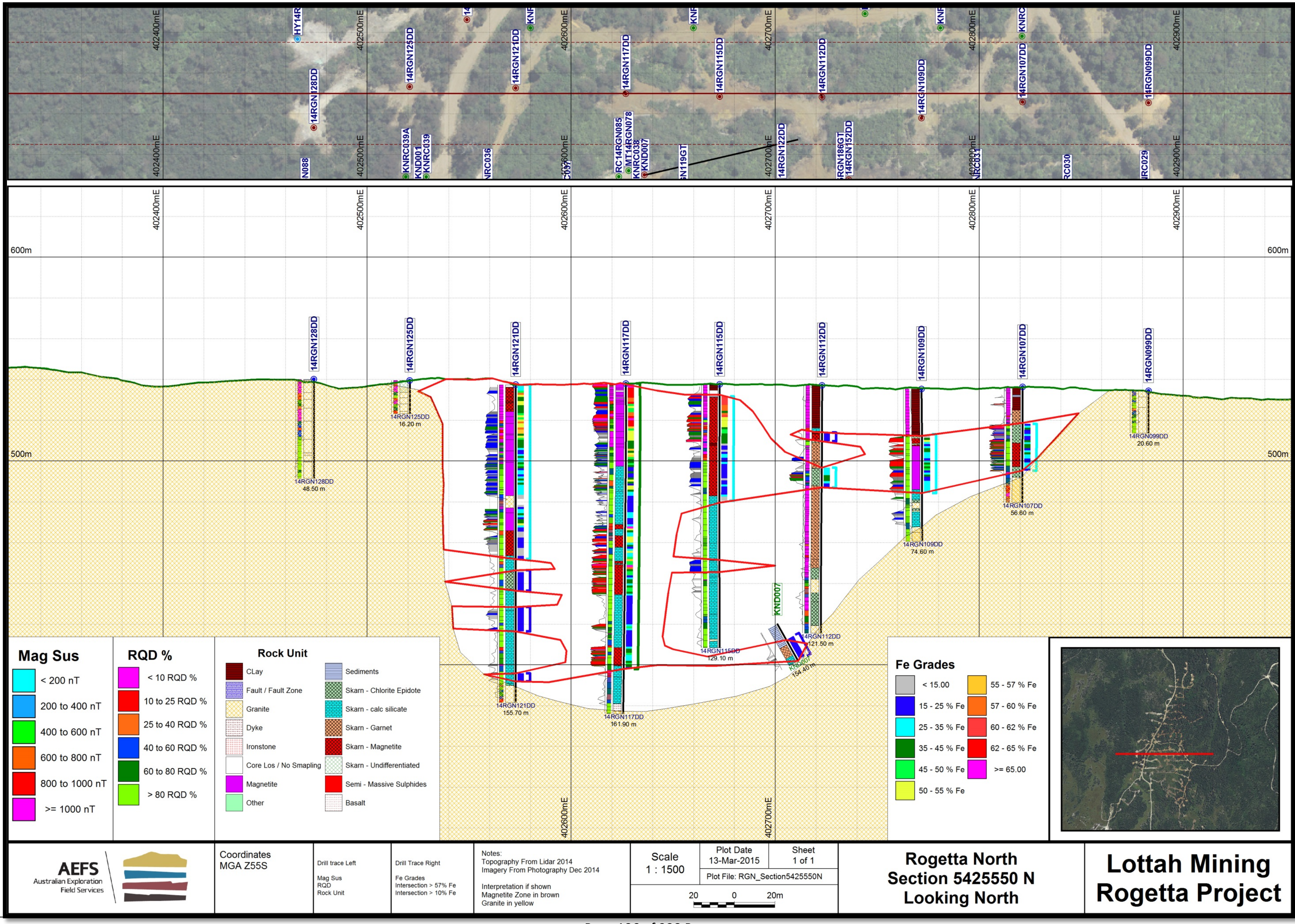
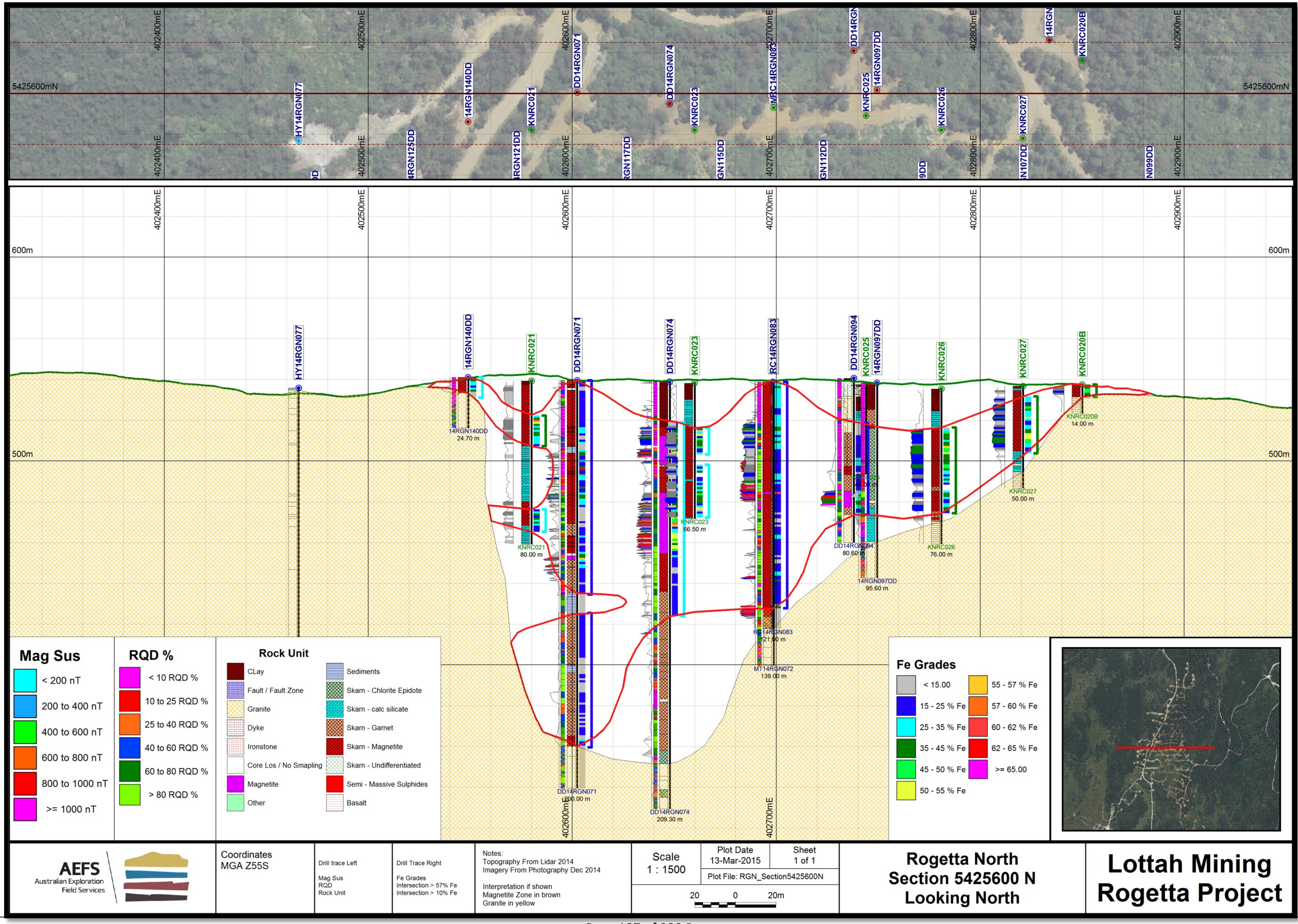


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791


402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
600m
500m
14RGN128DD
48.50 m
14RGN125DD
16.20 m
14RGN121DD
155.70 m
14RGN117DD
161.90 m
14RGN115DD
129.10 m
14RGN112DD
121.50 m
14RGN109DD
74.60 m
14RGN107DD
56.60 m
14RGN099DD
20.60 m
KND007
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
20 0 20m
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425550N
Rogetta North
Section 5425550 N
Looking North
Lottah Mining
Rogetta Project


402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
5425600mN
600m
500m
HY14RGN077
14RGN140DD
KNRC021
DD14RGN071
DD14RGN074
KNRC023
RC14RGN083
DD14RGN094
KNRC025
14RGN097DD
KNRC026
KNRC027
KNRC020B
14RGN140DD 24.70 m
KNRC021 80.00 m
DD14RGN071 200.00 m
DD14RGN074 209.30 m
KNRC023 66.50 m
RC14RGN083 121.00 m
MT14RGN072 139.00 m
DD14RGN094 80.60 m
14RGN097DD 95.60 m
KNRC026 76.00 m
KNRC027 50.00 m
KNRC020B 14.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425600N
20 0 20m
Rogetta North
Section 5425600 N
Looking North
Lottah Mining
Rogetta Project

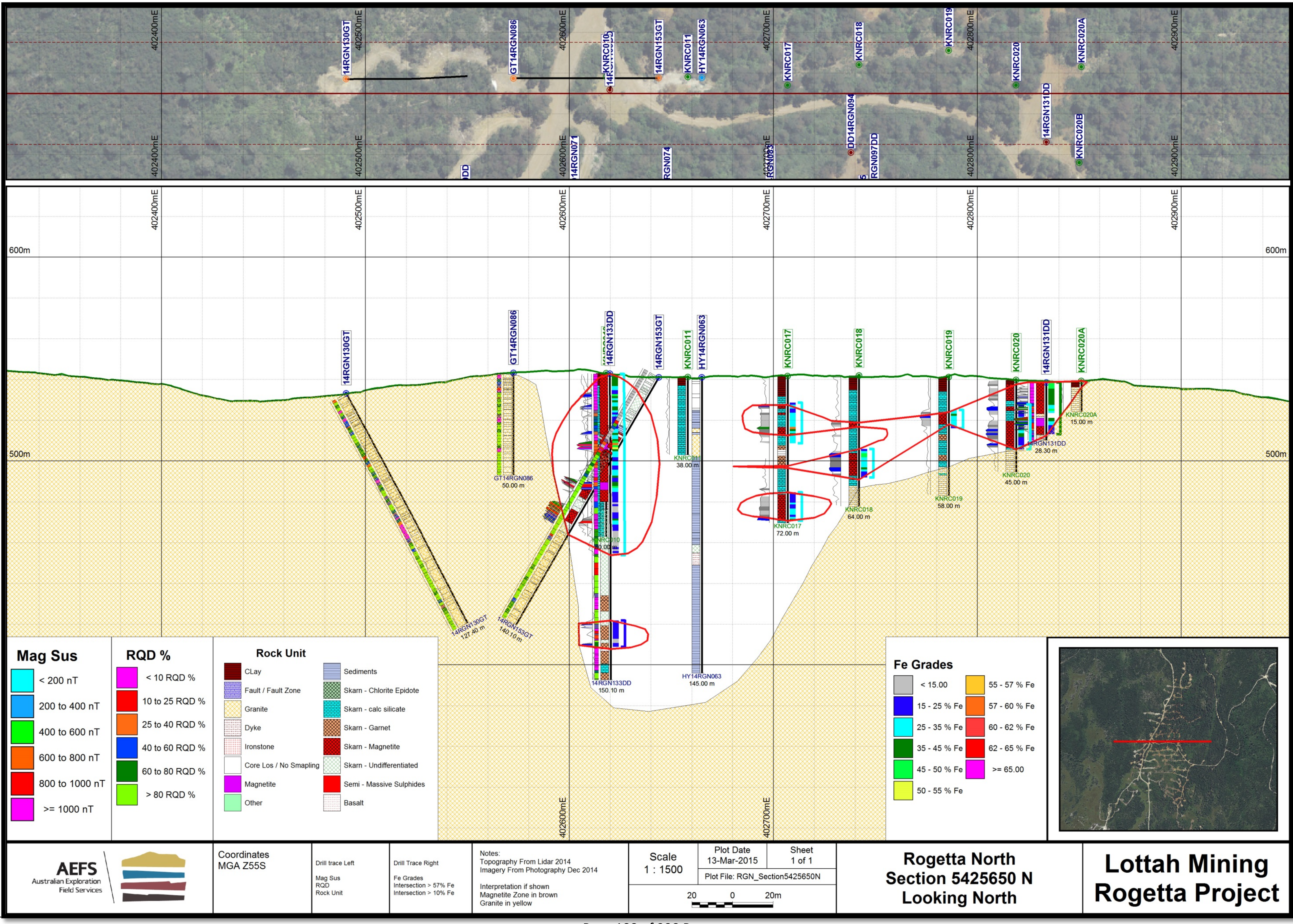
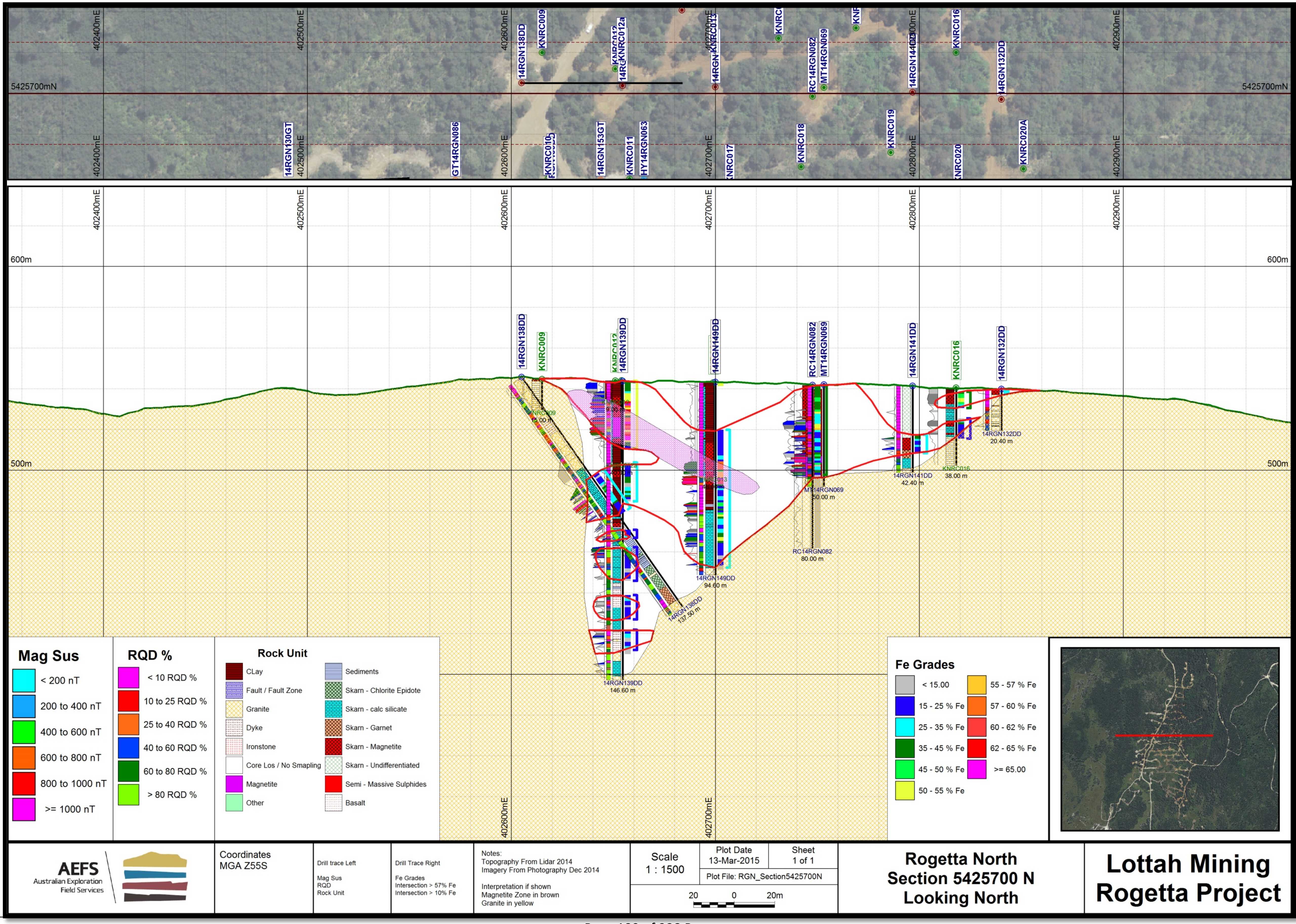


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791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600m
500m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
14RGN138DD
KNRC009
14RGN139DD
14RGN149DD
RC14RGN082
MT14RGN069
14RGN141DD
KNRC016
14RGN132DD
14RGN139DD 146.60 m
14RGN138DD 137.50 m
14RGN149DD 94.60 m
RC14RGN082 80.00 m
MT14RGN069 50.00 m
14RGN141DD 42.40 m
KNRC016 38.00 m
14RGN132DD 20.40 m
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
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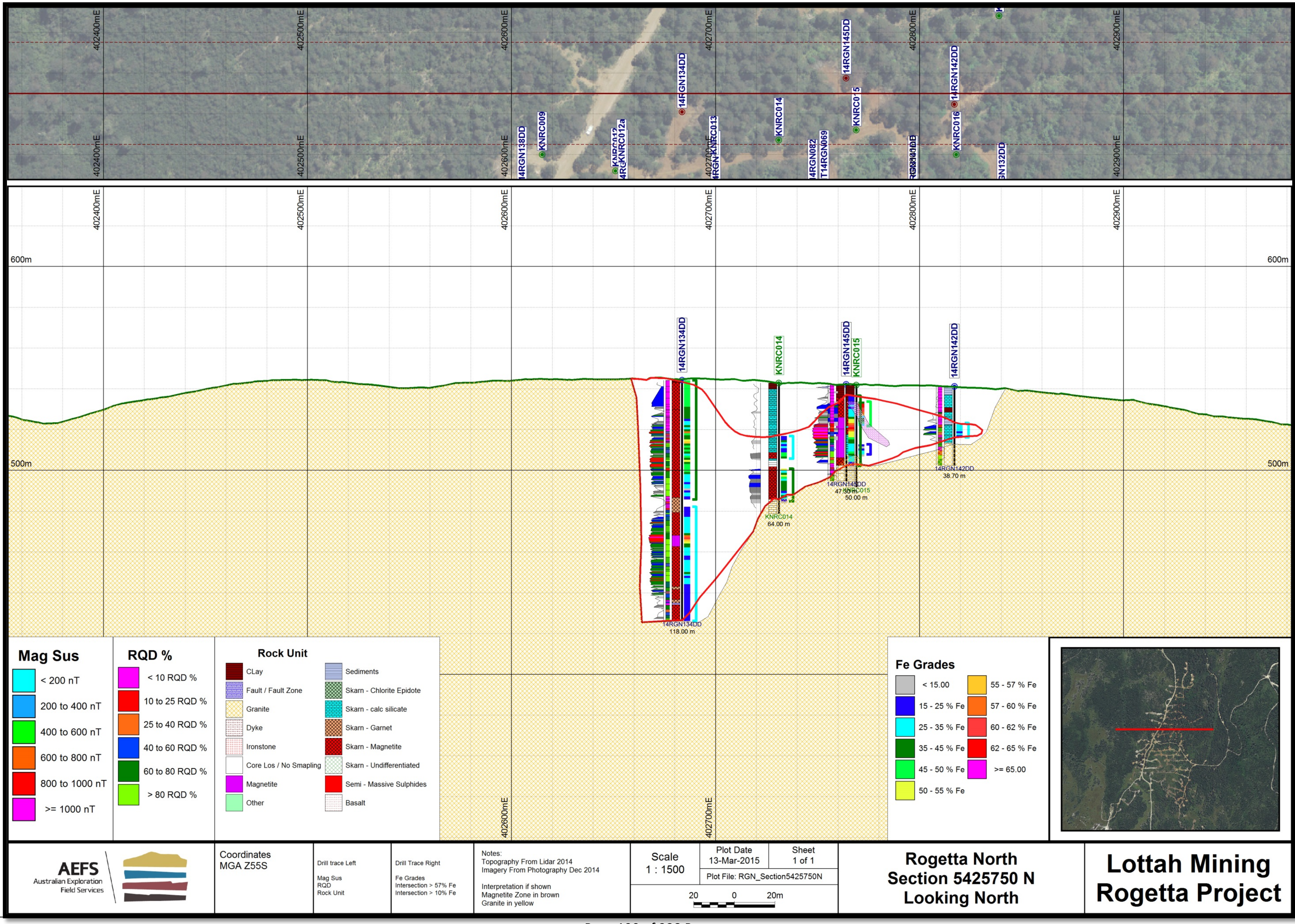
Rogetta North
Section 5425700 N
Looking North
Lottah Mining
Rogetta Project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KNRC016
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KNRC013
14RGN138DD
14RGN082
T14RGN069
14RGN132DD
600m
500m
14RGN134DD
118.00 m
KNRC014
64.00 m
14RGN145DD
47.50 m
KNRC015
50.00 m
14RGN142DD
38.70 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration
Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
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13-Mar-2015
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Rogetta North
Section 5425750 N
Looking North
Lottah Mining
Rogetta Project

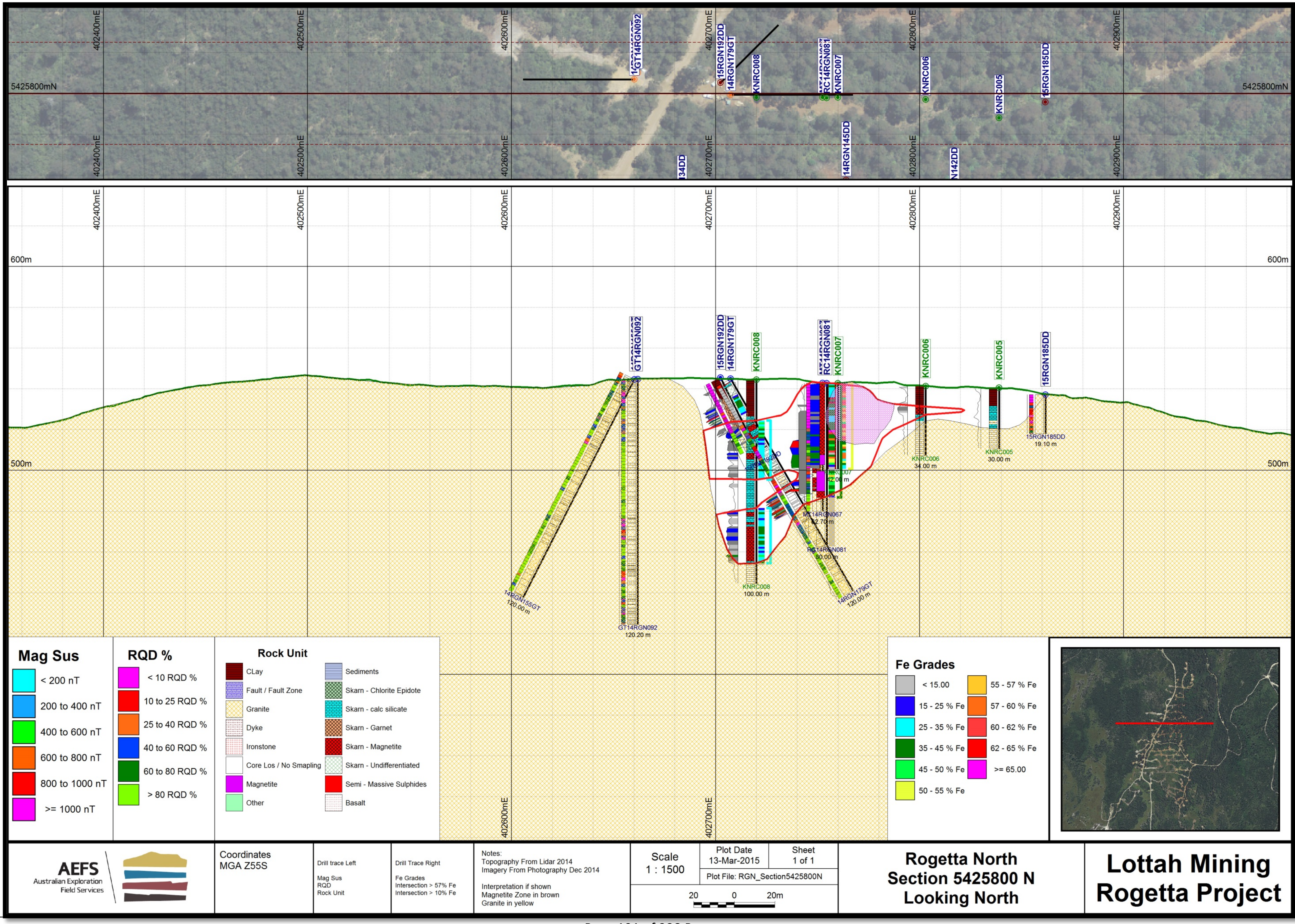
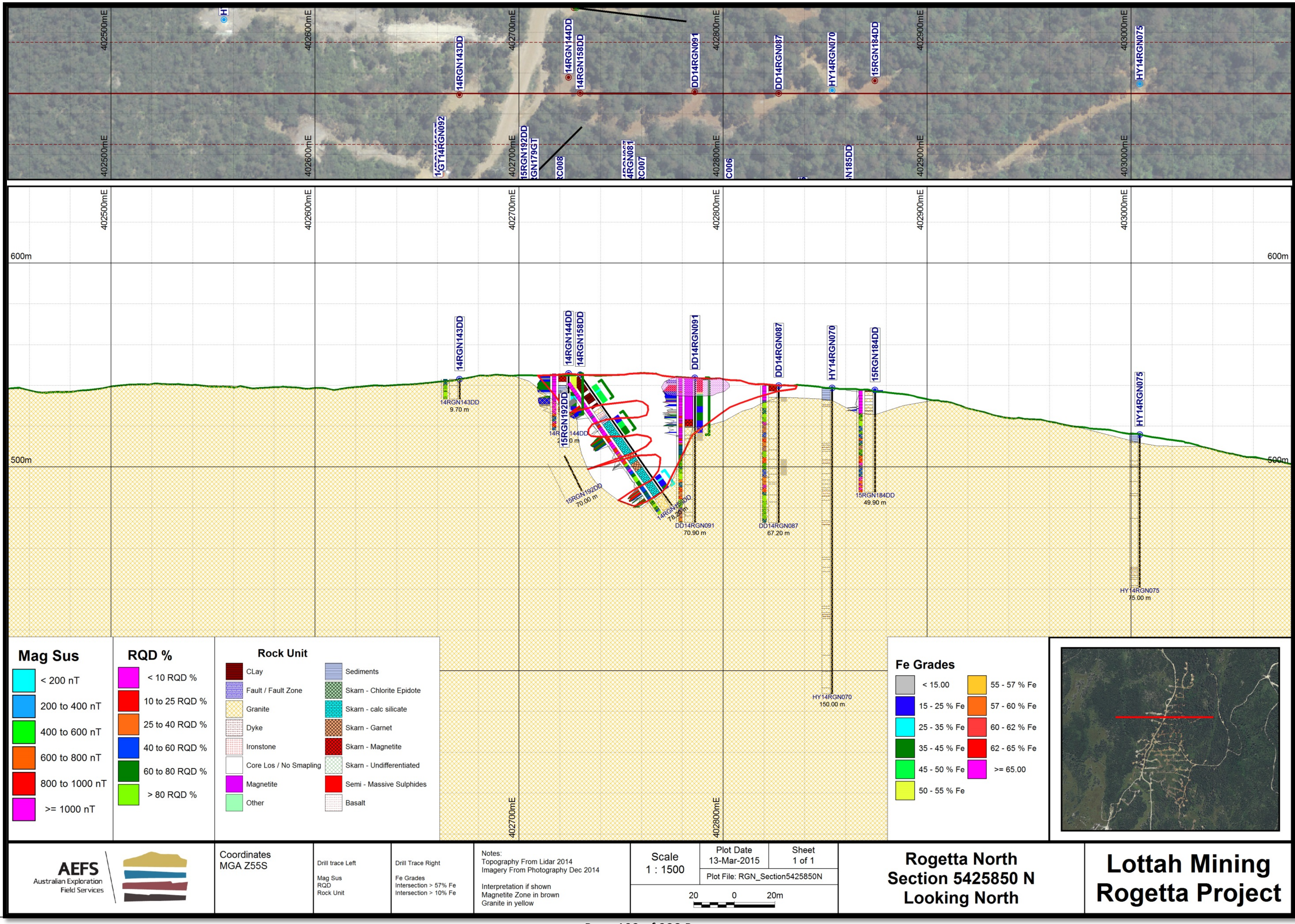


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791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15RGN192DD
DD14RGN091
DD14RGN087
HY14RGN070
15RGN184DD
HY14RGN075
14RGN143DD 9.70 m
15RGN192DD 70.00 m
DD14RGN091 70.90 m
DD14RGN087 67.20 m
15RGN184DD 49.90 m
HY14RGN070 150.00 m
HY14RGN075 75.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
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Plot Date
13-Mar-2015
Sheet
1 of 1
Plot File: RGN_Section5425850N
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Rogetta North
Section 5425850 N
Looking North
Lottah Mining
Rogetta Project

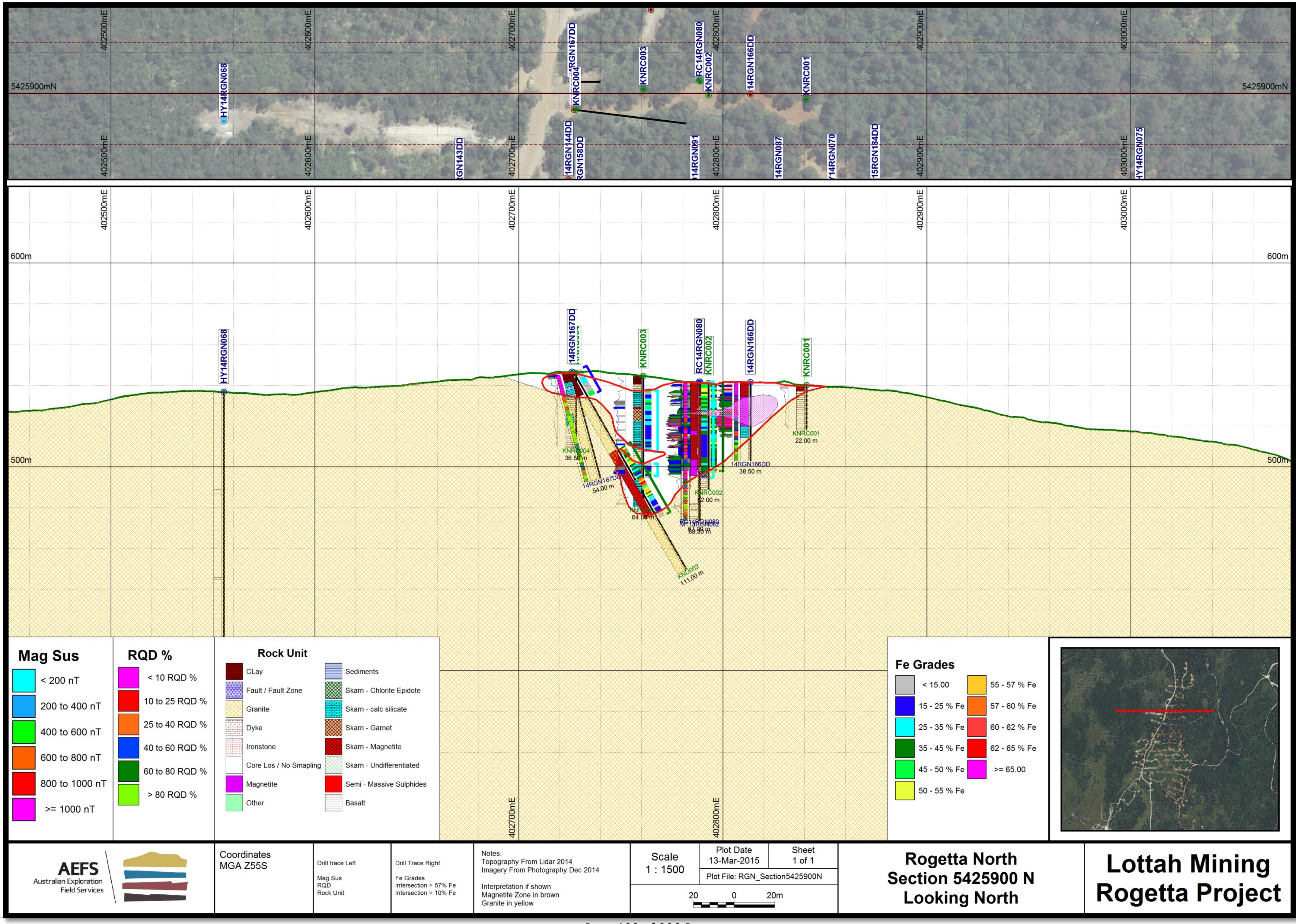


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

AEFS
Australian Exploration Field Services

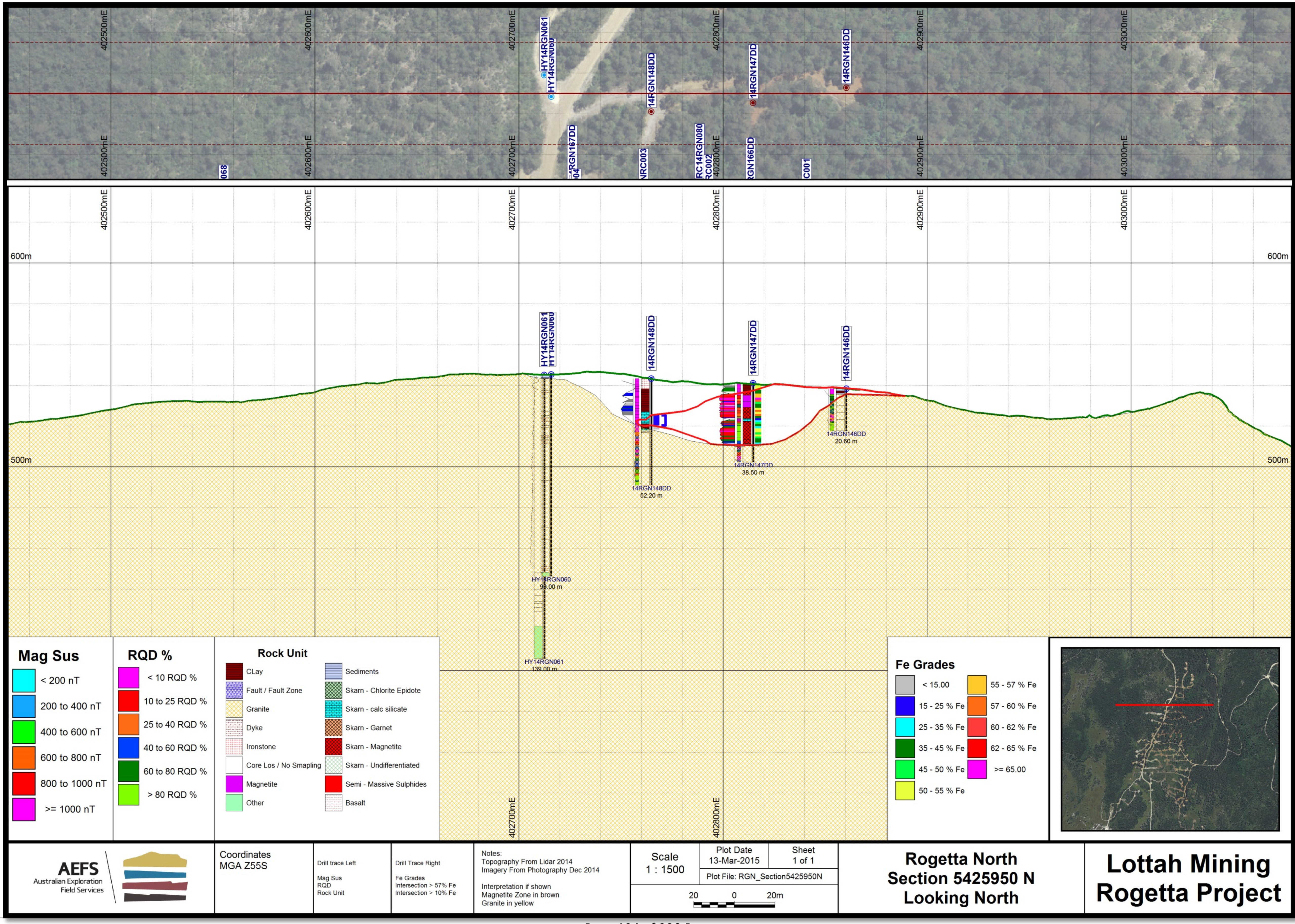
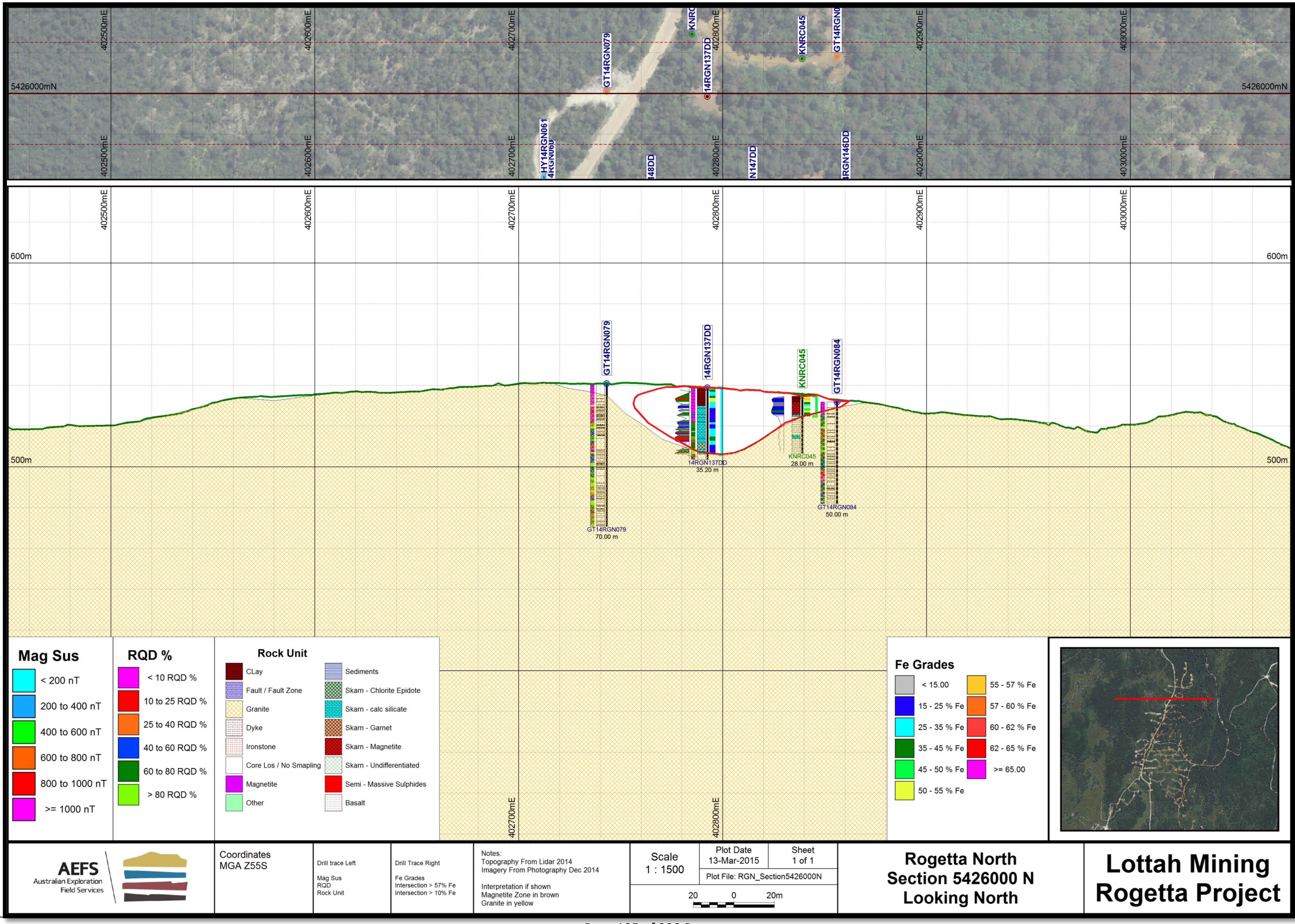


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791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402800mE
402900mE
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5426000mN
600m
500m
GT14RGN079
14RGN137DD
KNRC045
GT14RGN084
GT14RGN079 70.00 m
14RGN137DD 35.20 m
KNRC045 28.00 m
GT14RGN084 50.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
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Plot Date
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Sheet
1 of 1
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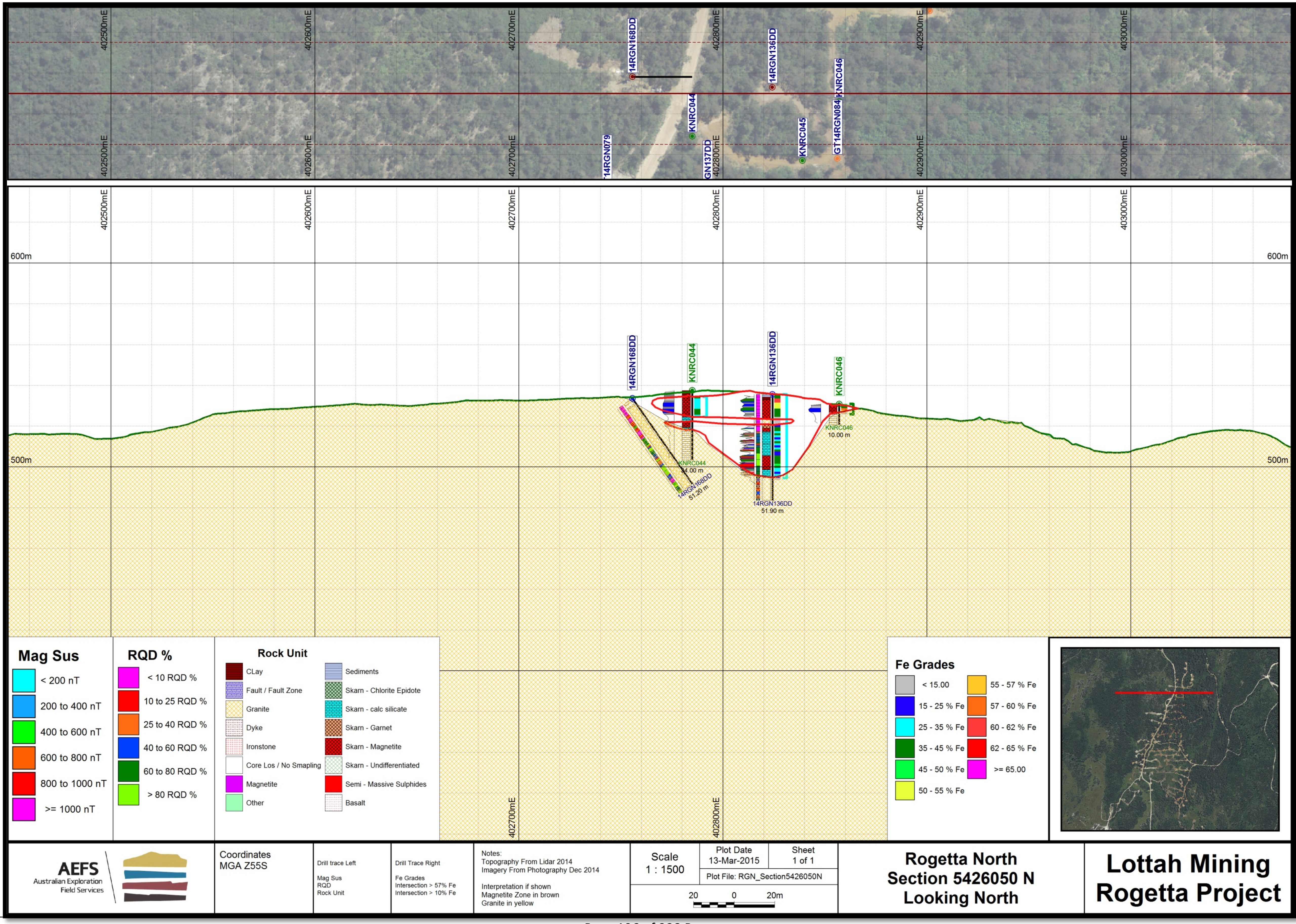
Rogetta North
Section 5426000 N
Looking North
Lottah Mining
Rogetta Project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KNRC045
KNRC046
GT14RGN084
14RGN079
600m
500m
KNRC044
14RGN168DD
51.20 m
14RGN136DD
51.90 m
KNRC046
10.00 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
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Plot Date
13-Mar-2015
Sheet
1 of 1
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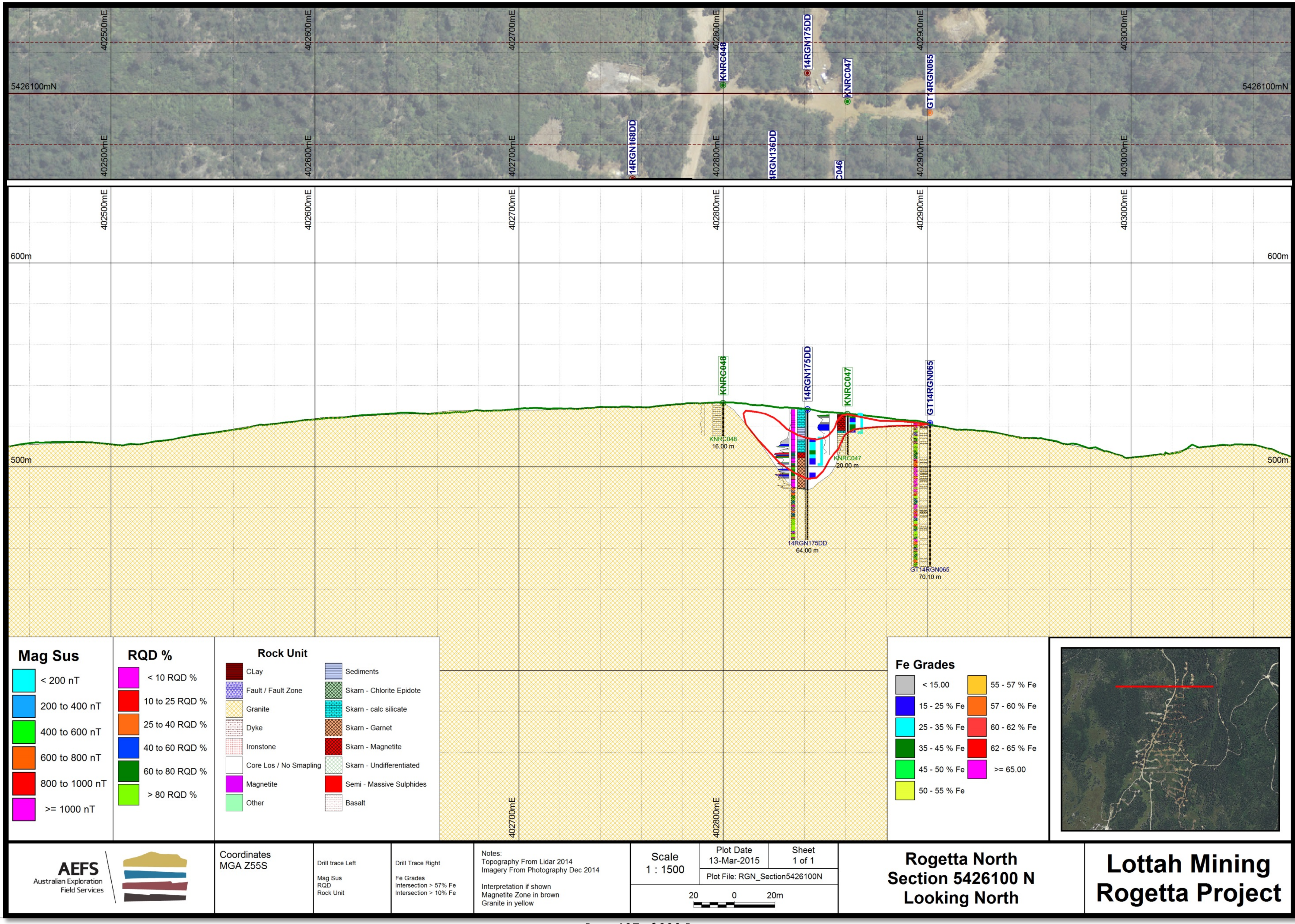
Rogetta North
Section 5426050 N
Looking North
Lottah Mining
Rogetta Project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5426100mN
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KNRC047
GT14RGN065
14RGN168DD
4RGN136DD
C046
600m
500m
KNRC048
16.00 m
KNRC047
20.00 m
14RGN175DD
64.00 m
GT14RGN065
70.10 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
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Granite in yellow
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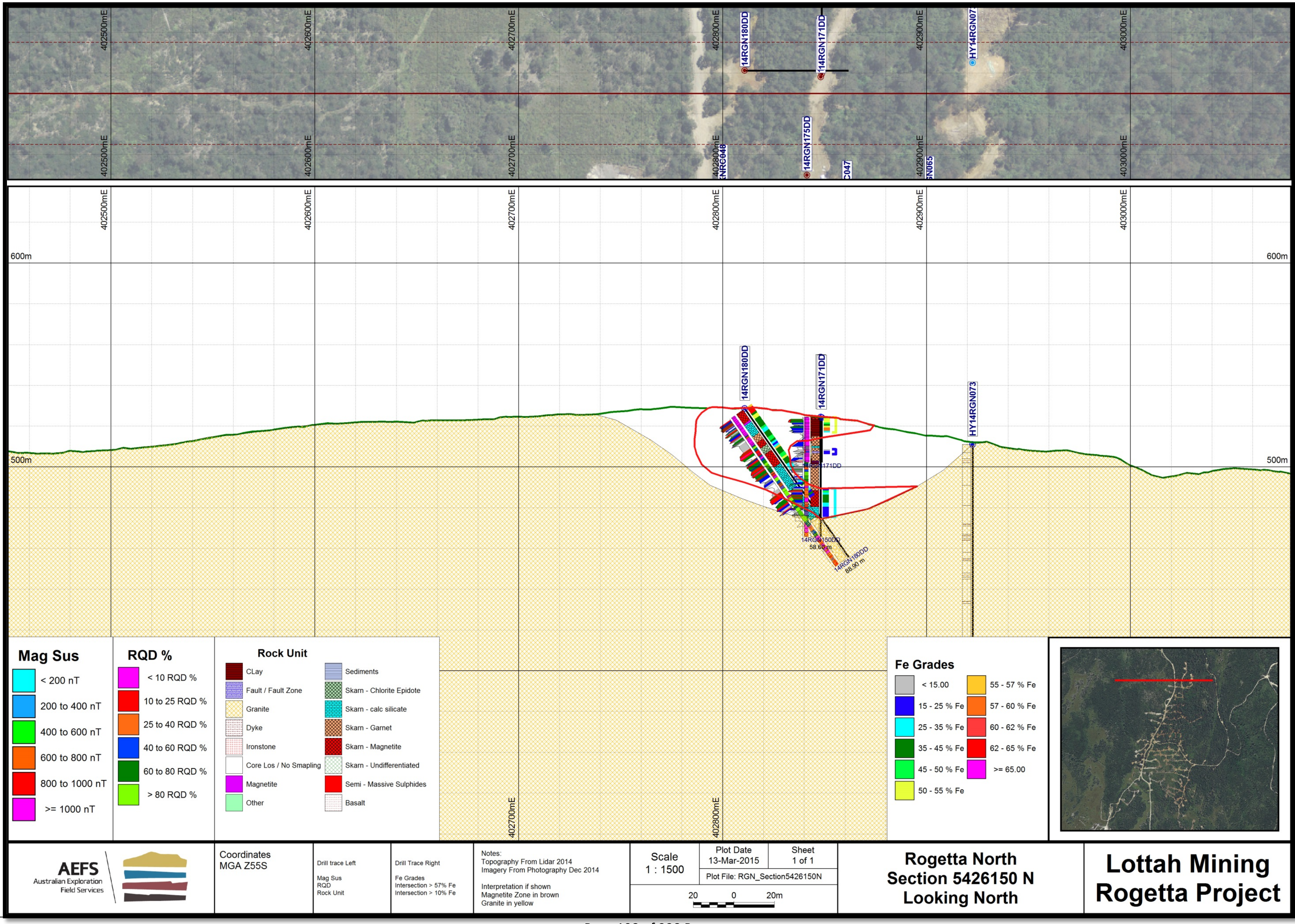
Section 5426100 N
Looking North
Lottah Mining
Rogetta Project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< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
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600m
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402700mE
402800mE
402900mE
403000mE
14RGN180DD
14RGN171DD
HY14RGN073
14RGN175DD
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
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Plot Date
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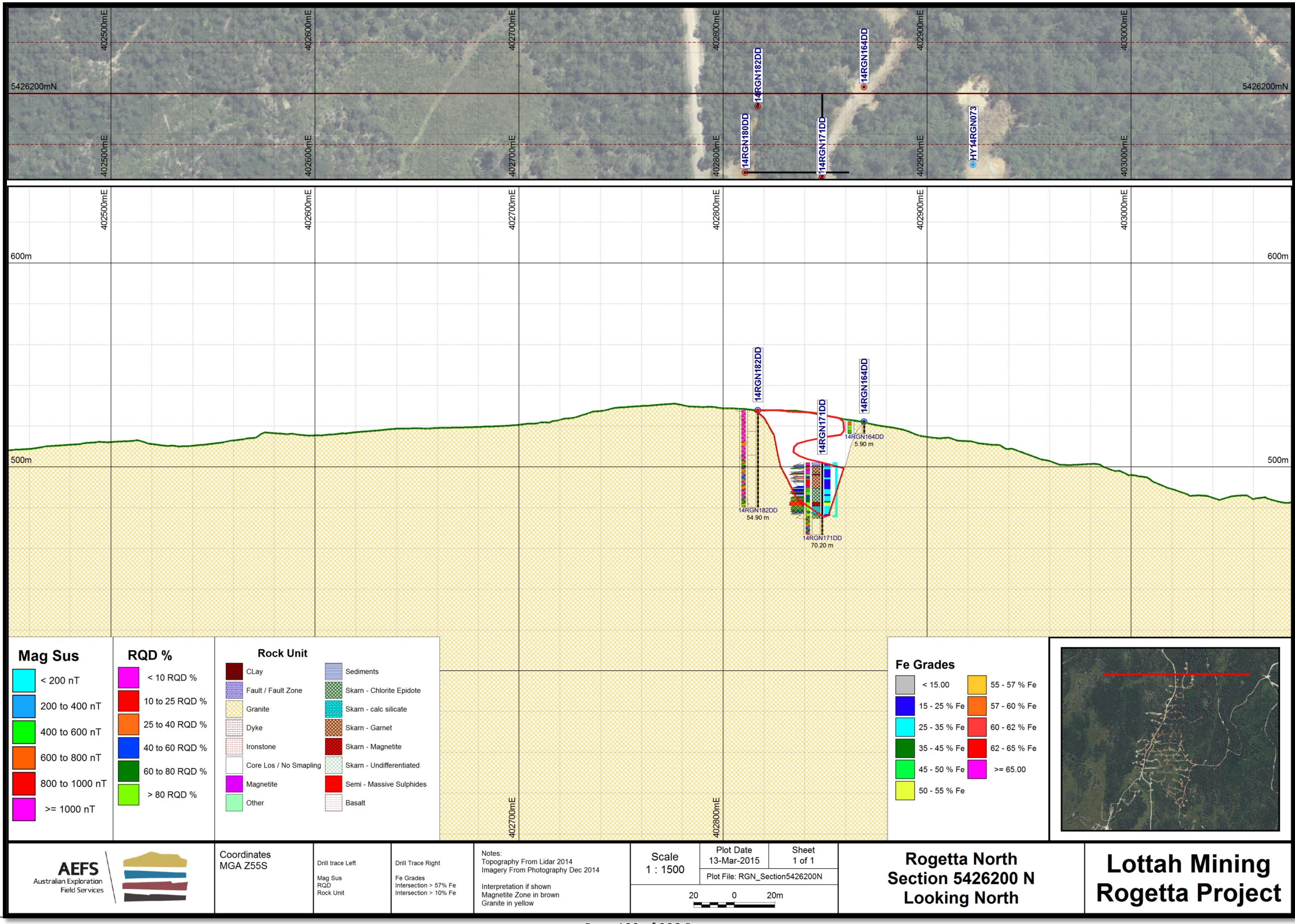
Section 5426150 N
Looking North
Lottah Mining
Rogetta Project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14RGN171DD
HY14RGN073
600m
500m
14RGN164DD
5.90 m
14RGN182DD
54.90 m
14RGN171DD
70.20 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration
Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
1 : 1500
Plot Date
13-Mar-2015
Sheet
1 of 1
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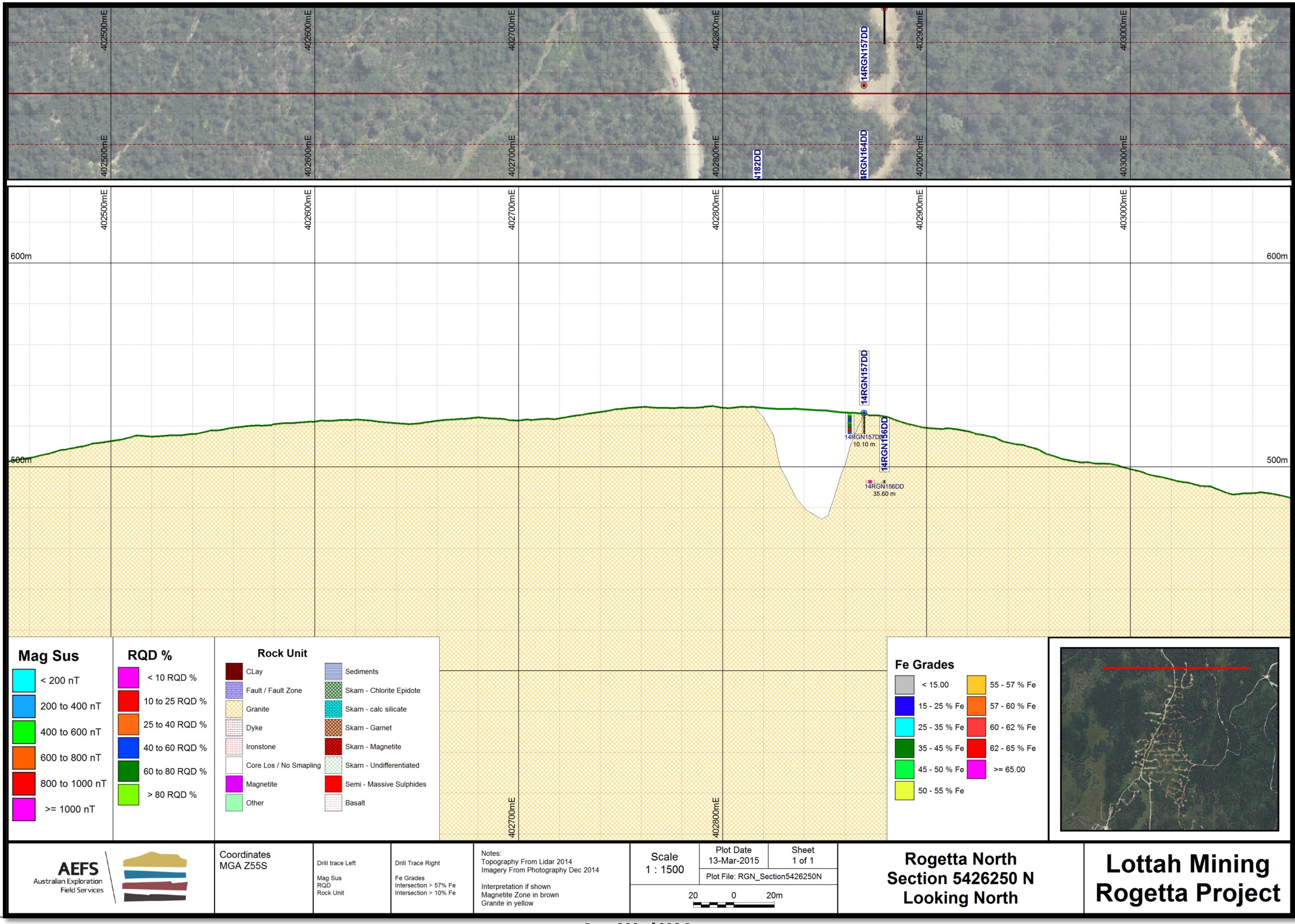
Rogetta North
Section 5426200 N
Looking North
Lottah Mining
Rogetta Project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600m
500m
14RGN157DD
10.10 m
14RGN156DD
35.60 m
Mag Sus
< 200 nT
200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration
Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
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Plot Date
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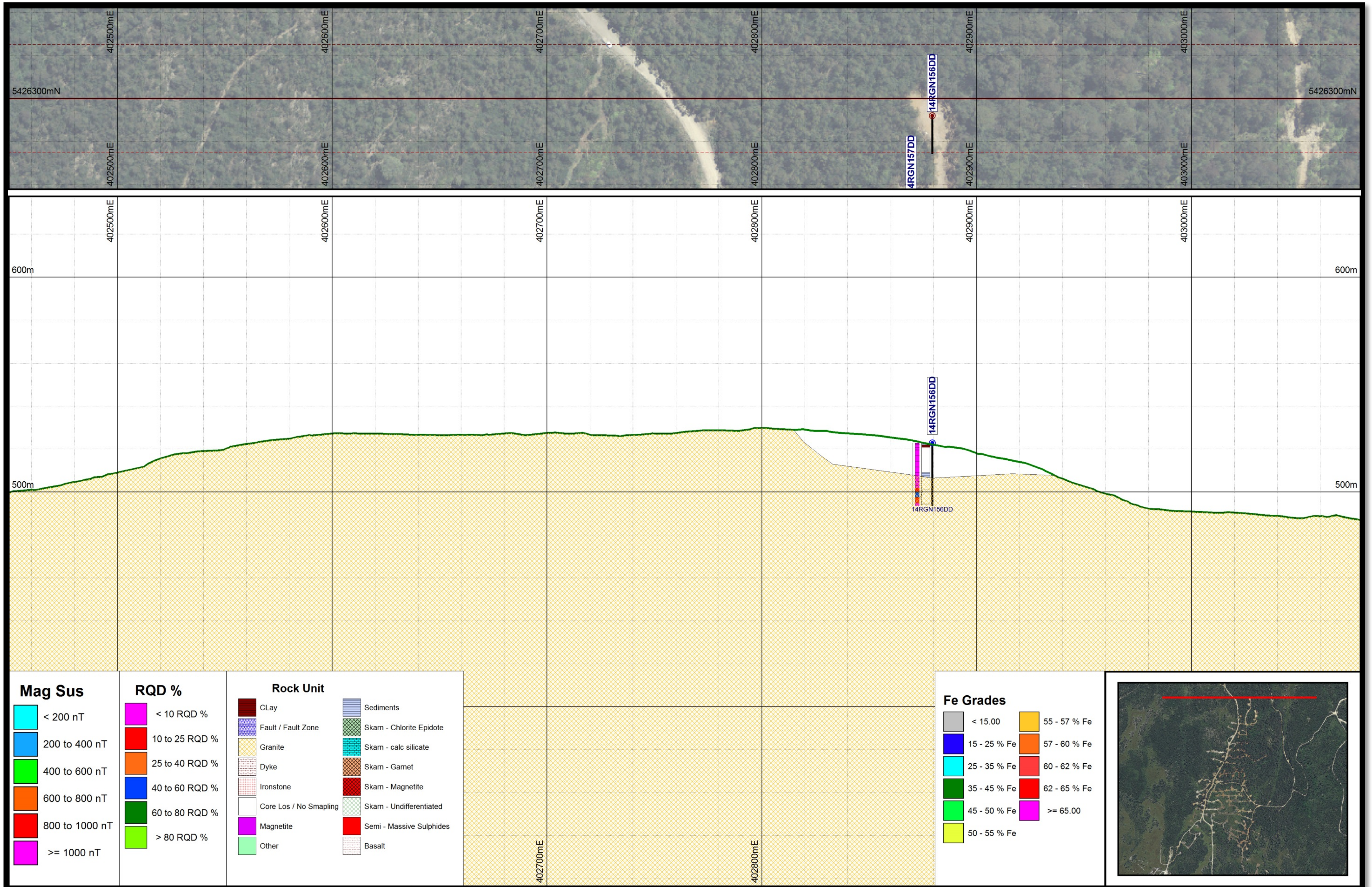
Rogetta North
Section 5426250 N
Looking North
Lottah Mining
Rogetta Project



AEFS Australian Exploration Field Services

Coordinates
MGA Z55S

Drill trace Left
Mag Sus
RQD
Rock Unit

Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe

Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014

Interpretation if shown
Magnetite Zone in brown
Granite in yellow

Scale	Plot Date	Sheet
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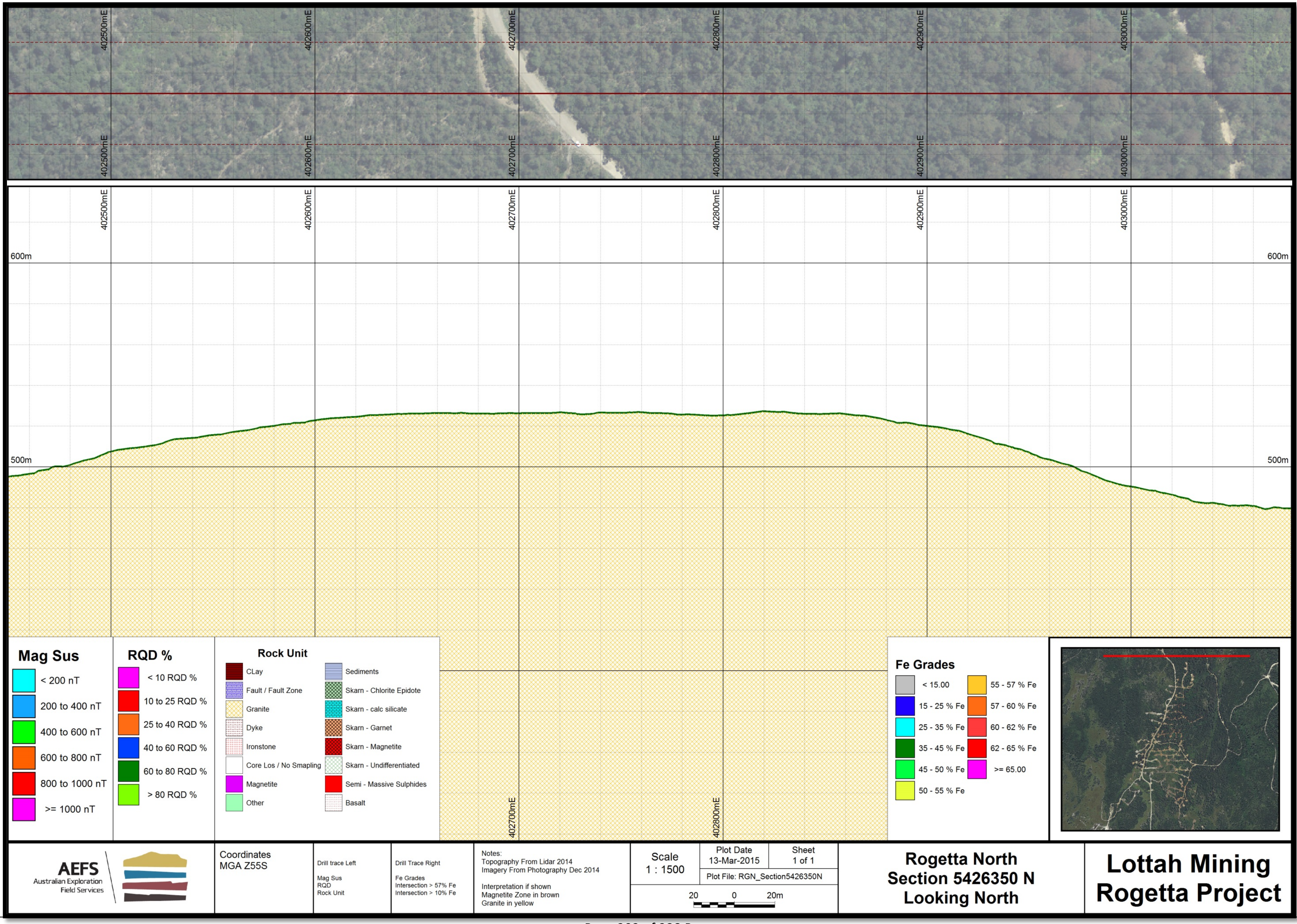
20 0 20m

Rogetta North
Section 5426300 N
Looking North

Lottah Mining
Rogetta Project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500m
Mag Sus
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200 to 400 nT
400 to 600 nT
600 to 800 nT
800 to 1000 nT
>= 1000 nT
RQD %
< 10 RQD %
10 to 25 RQD %
25 to 40 RQD %
40 to 60 RQD %
60 to 80 RQD %
> 80 RQD %
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration
Field Services
Coordinates
MGA Z55S
Drill trace Left
Mag Sus
RQD
Rock Unit
Drill Trace Right
Fe Grades
Intersection > 57% Fe
Intersection > 10% Fe
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
Interpretation if shown
Magnetite Zone in brown
Granite in yellow
Scale
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Plot Date
13-Mar-2015
Sheet
1 of 1
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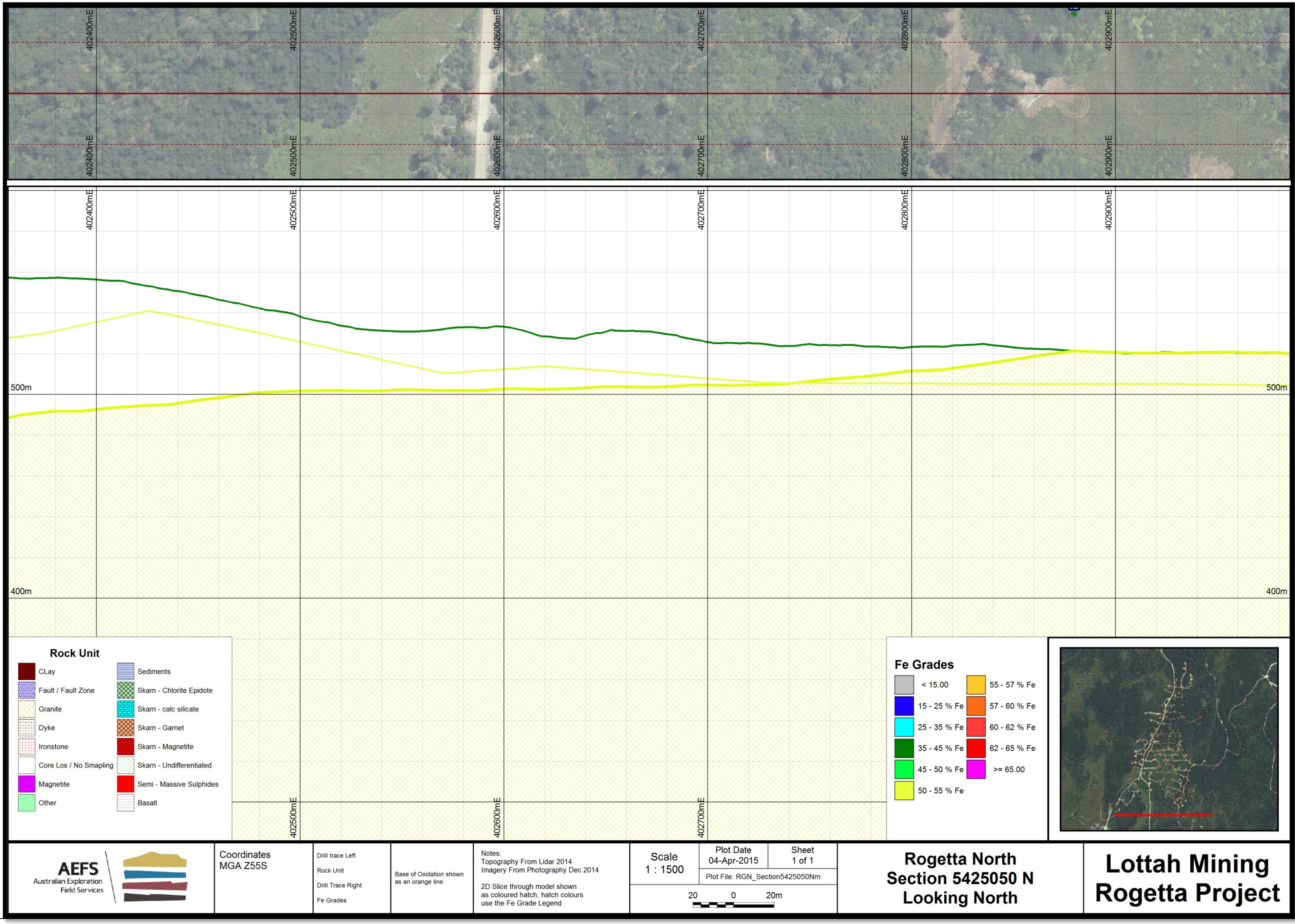
Rogetta North
Section 5426350 N
Looking North
Lottah Mining
Rogetta Project

Sections Through Block Model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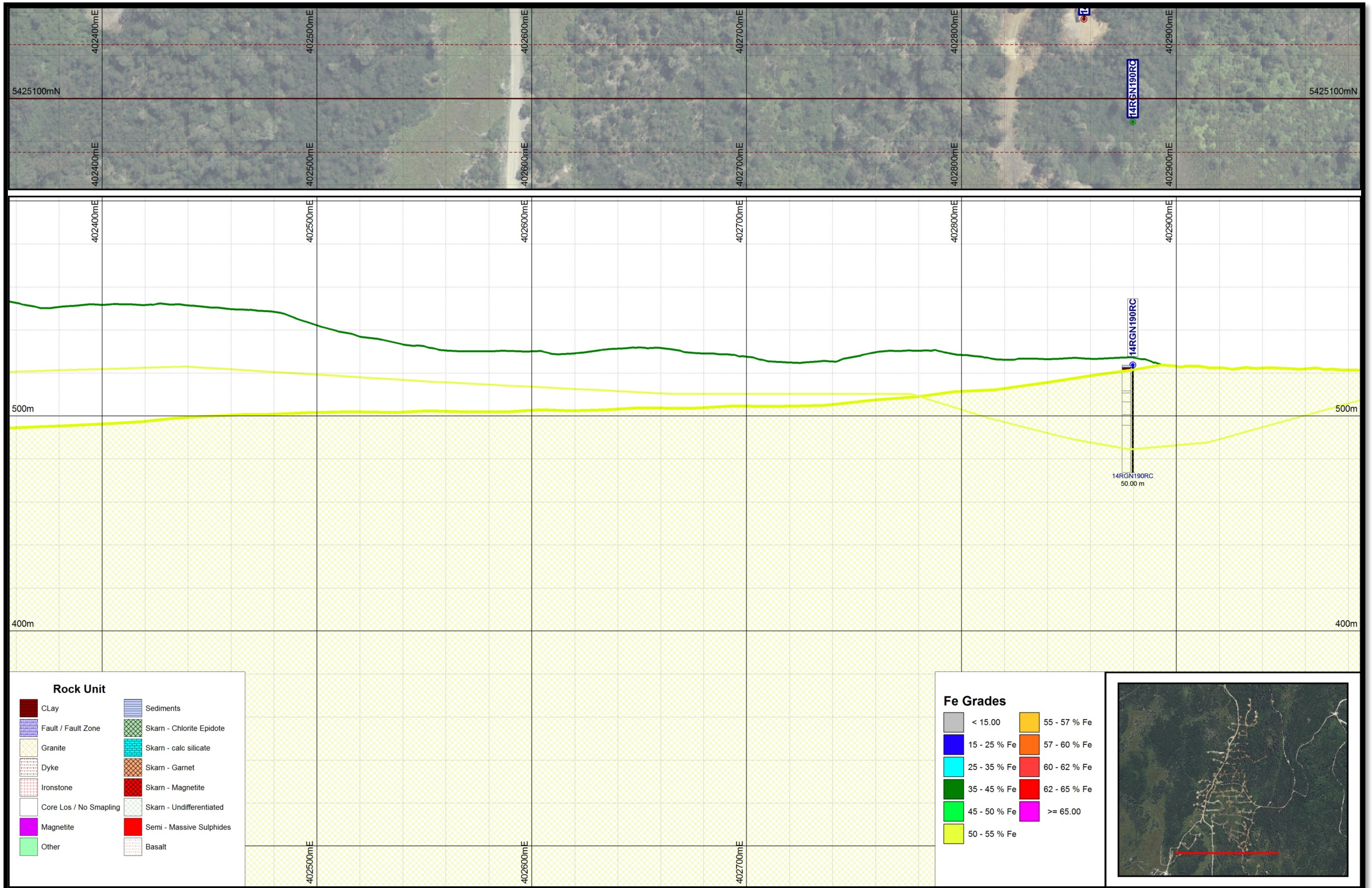
500m
400m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425050Nm
20
0
20m
Rogetta North
Section 5425050 N
Looking North
Lottah Mining
Rogetta Project



AEFS Australian Exploration Field Services

Coordinates MGA Z55S

Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades

Base of Oxidation shown as an orange line

Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014

2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend

Scale 1 : 1500

Plot Date 04-Apr-2015

Sheet 1 of 1

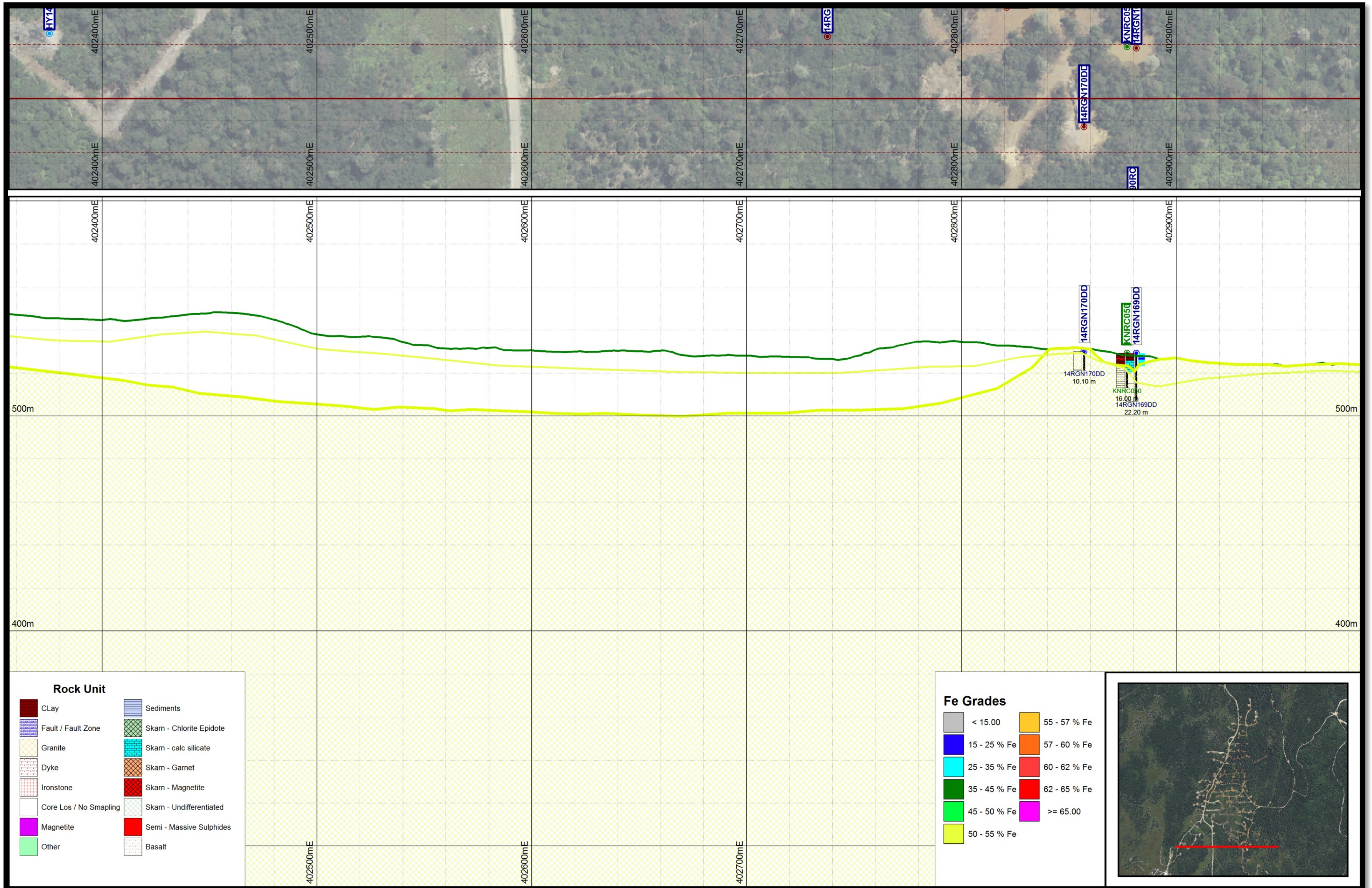
Plot File: RGN_Section5425100Nm

20 0 20m

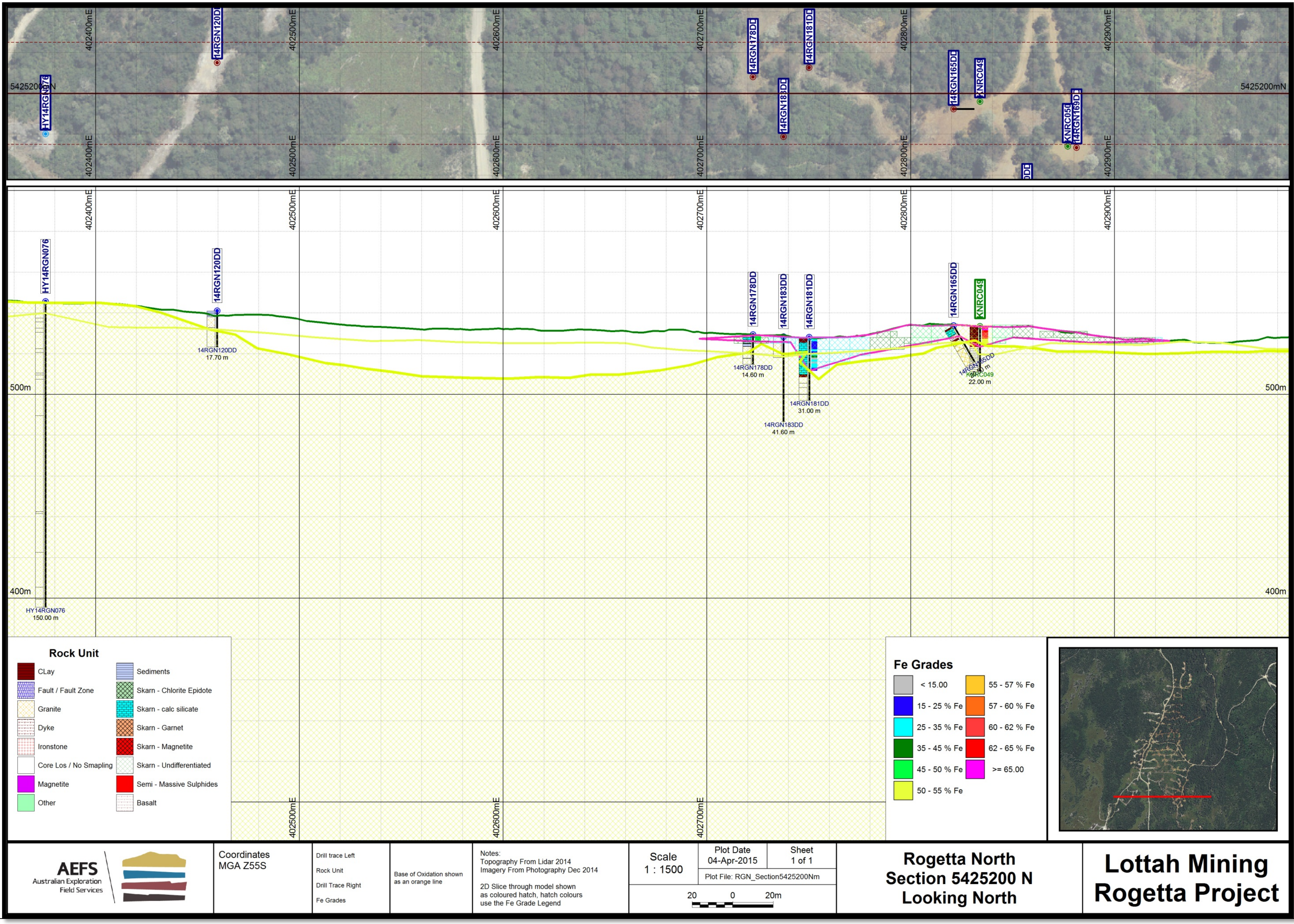
Rogetta North Section 5425100 N Looking North

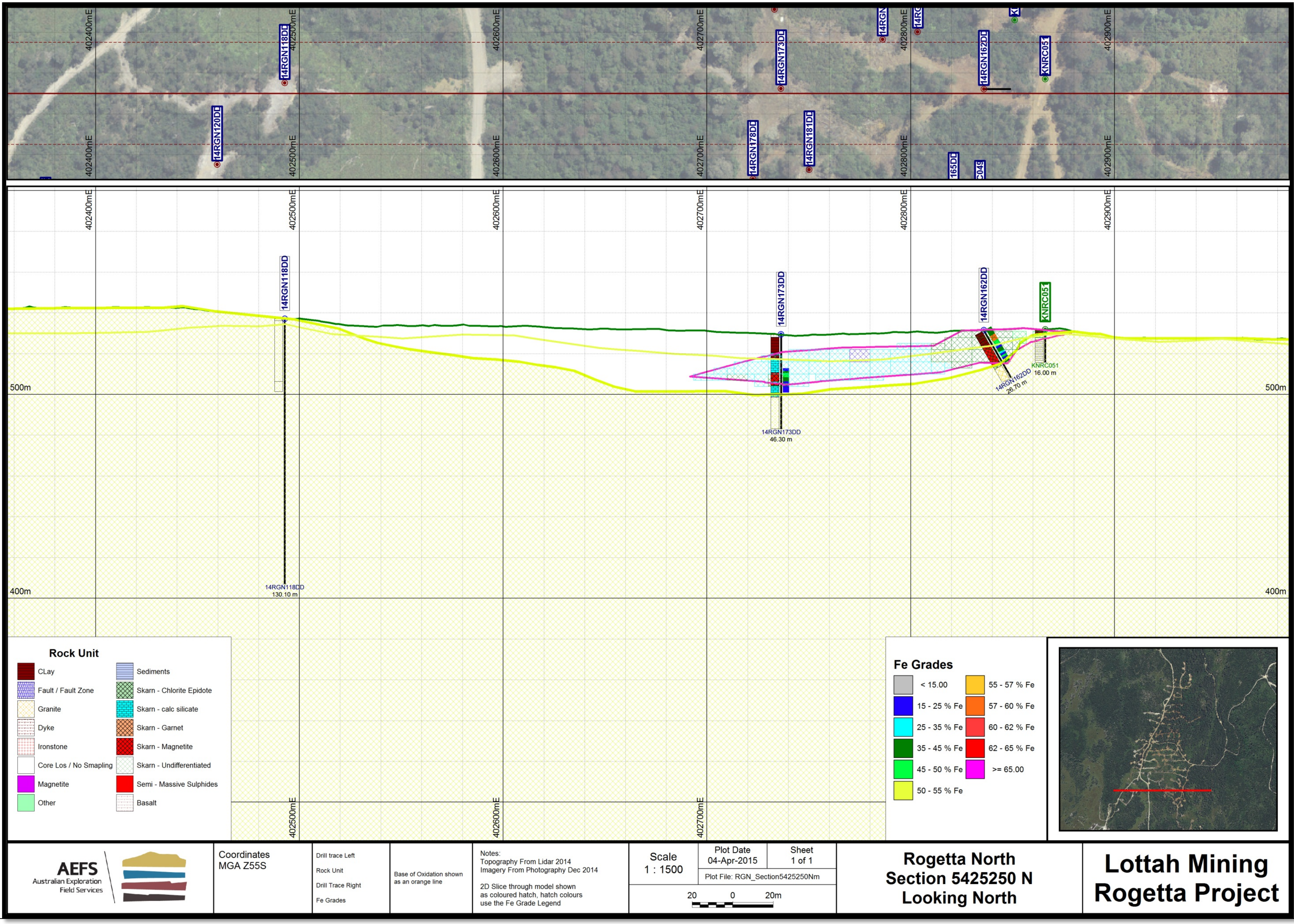
Lottah Mining Rogetta Project

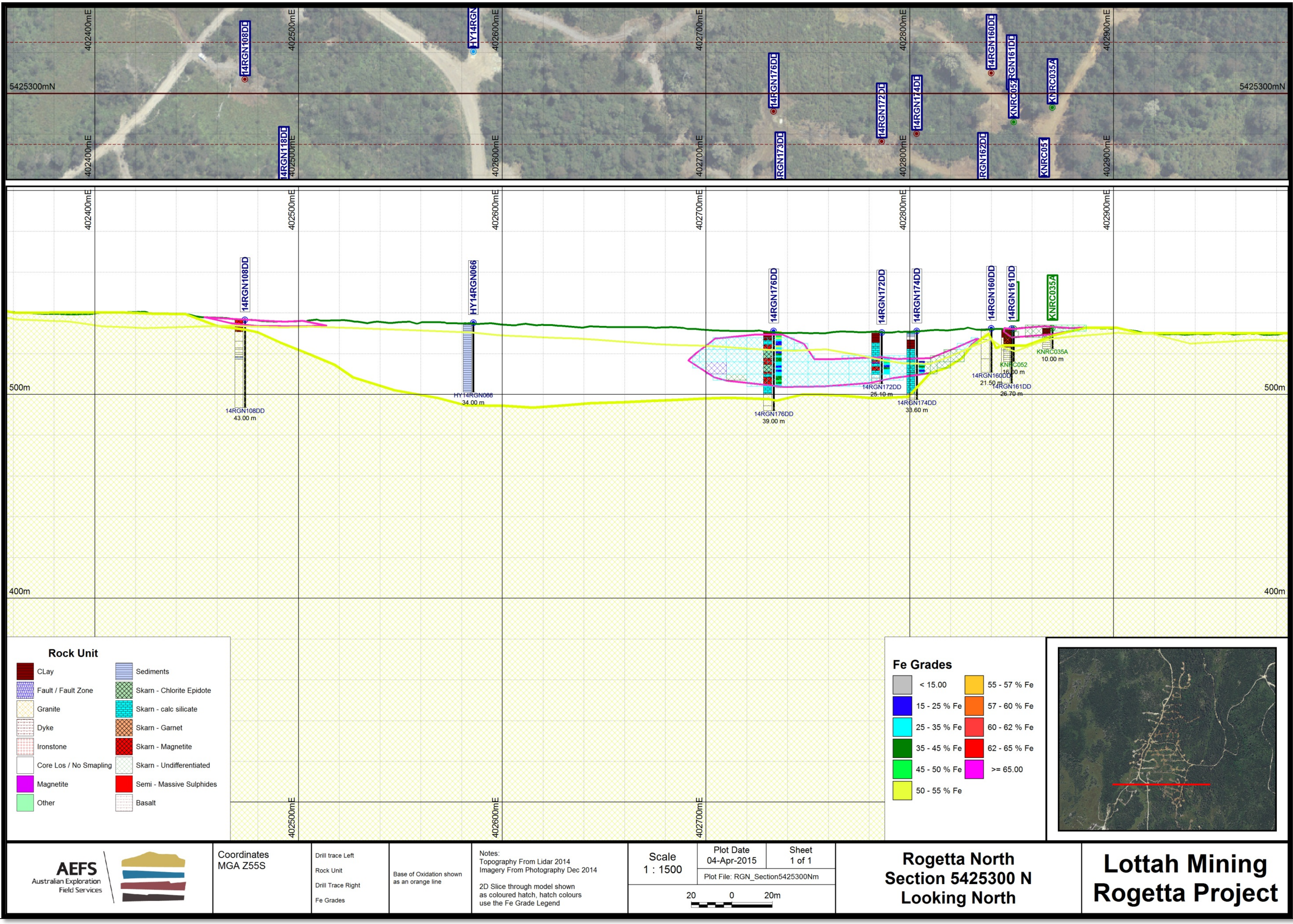
Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 701



AEFS Australian Exploration Field Services	Coordinates MGA Z55S	Drill trace Left Rock Unit Drill Trace Right Fe Grades	Base of Oxidation shown as an orange line	Notes: Topography From Lidar 2014 Imagery From Photography Dec 2014 2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend	Scale 1 : 1500	Plot Date 04-Apr-2015	Sheet 1 of 1	Rogetta North Section 5425150 N Looking North	Lottah Mining Rogetta Project
					20 0 20m	Plot File: RGN_Section5425150Nm			


402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
5425200mN
HY14RGN076
14RGN120DD
14RGN178DD
14RGN183DD
14RGN181DD
14RGN165DD
KNRC049
KNRC050
14RGN169DD
14RGN120DD 17.70 m
14RGN178DD 14.60 m
14RGN181DD 31.00 m
14RGN183DD 41.60 m
KNRC049 22.00 m
HY14RGN076 150.00 m
500m
400m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS Australian Exploration Field Services
Coordinates MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale 1 : 1500
Plot Date 04-Apr-2015
Sheet 1 of 1
Plot File: RGN_Section5425200Nm
20 0 20m
Rogetta North
Section 5425200 N
Looking North
Lottah Mining
Rogetta Project


402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
14RGN118DD
14RGN120DD
14RGN173DD
14RGN178DD
14RGN181DD
14RGN162DD
KNRC051
500m
400m
14RGN118DD 130.10 m
14RGN173DD 46.30 m
14RGN162DD 26.70 m
KNRC051 16.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425250Nm
20 0 20m
Rogetta North
Section 5425250 N
Looking North
Lottah Mining
Rogetta Project


5425300mN
14RGN108DD
HY14RGN066
14RGN176DD
14RGN172DD
14RGN174DD
14RGN160DD
14RGN161DD
KNRC035A
KNRC052
KNRC051
402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
500m
400m
14RGN108DD 43.00 m
HY14RGN066 34.00 m
14RGN176DD 39.00 m
14RGN172DD 25.10 m
14RGN174DD 33.60 m
14RGN160DD 21.50 m
14RGN161DD 26.70 m
KNRC035A 10.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425300Nm
20 0 20m
Rogetta North
Section 5425300 N
Looking North
Lottah Mining
Rogetta Project

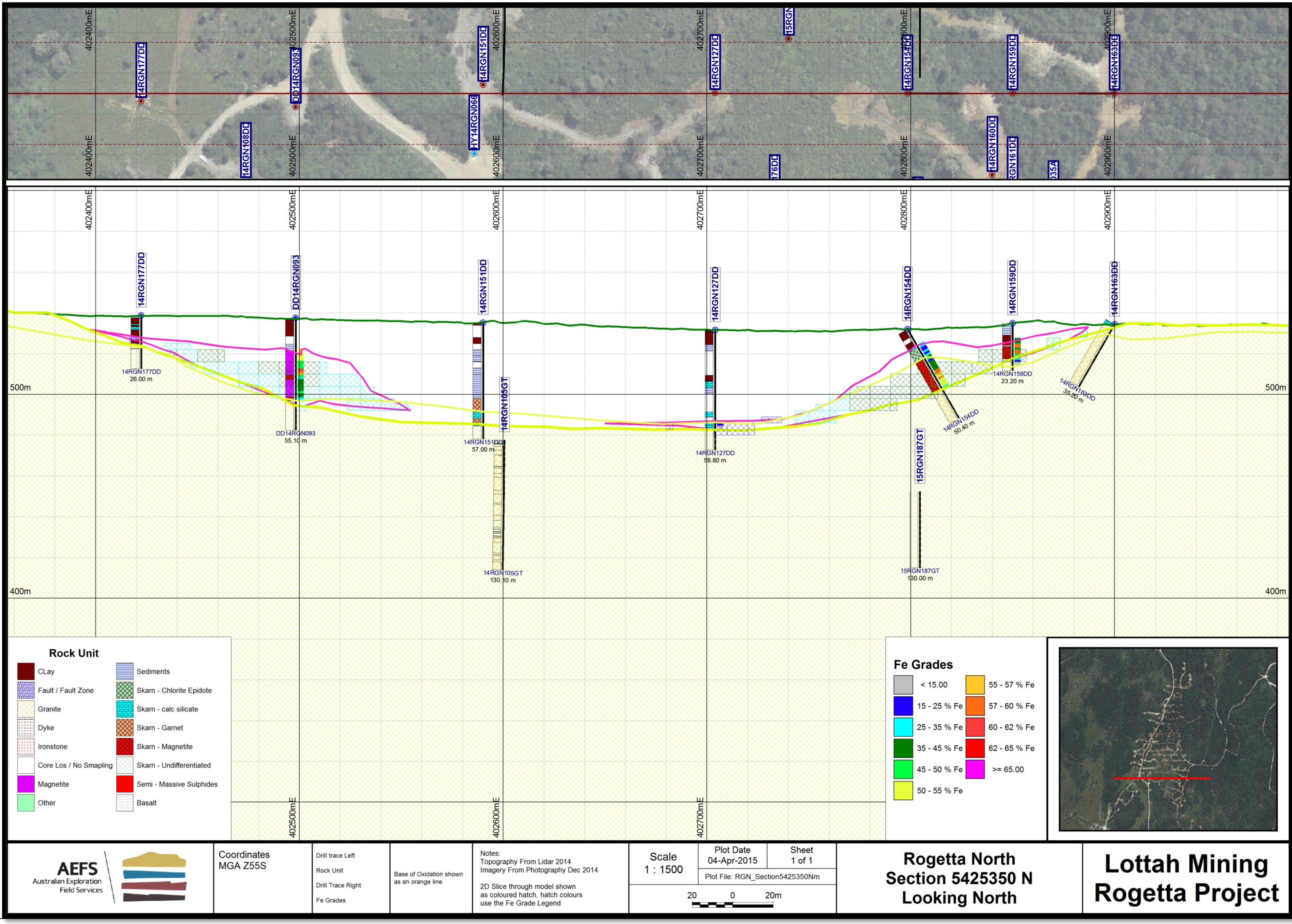
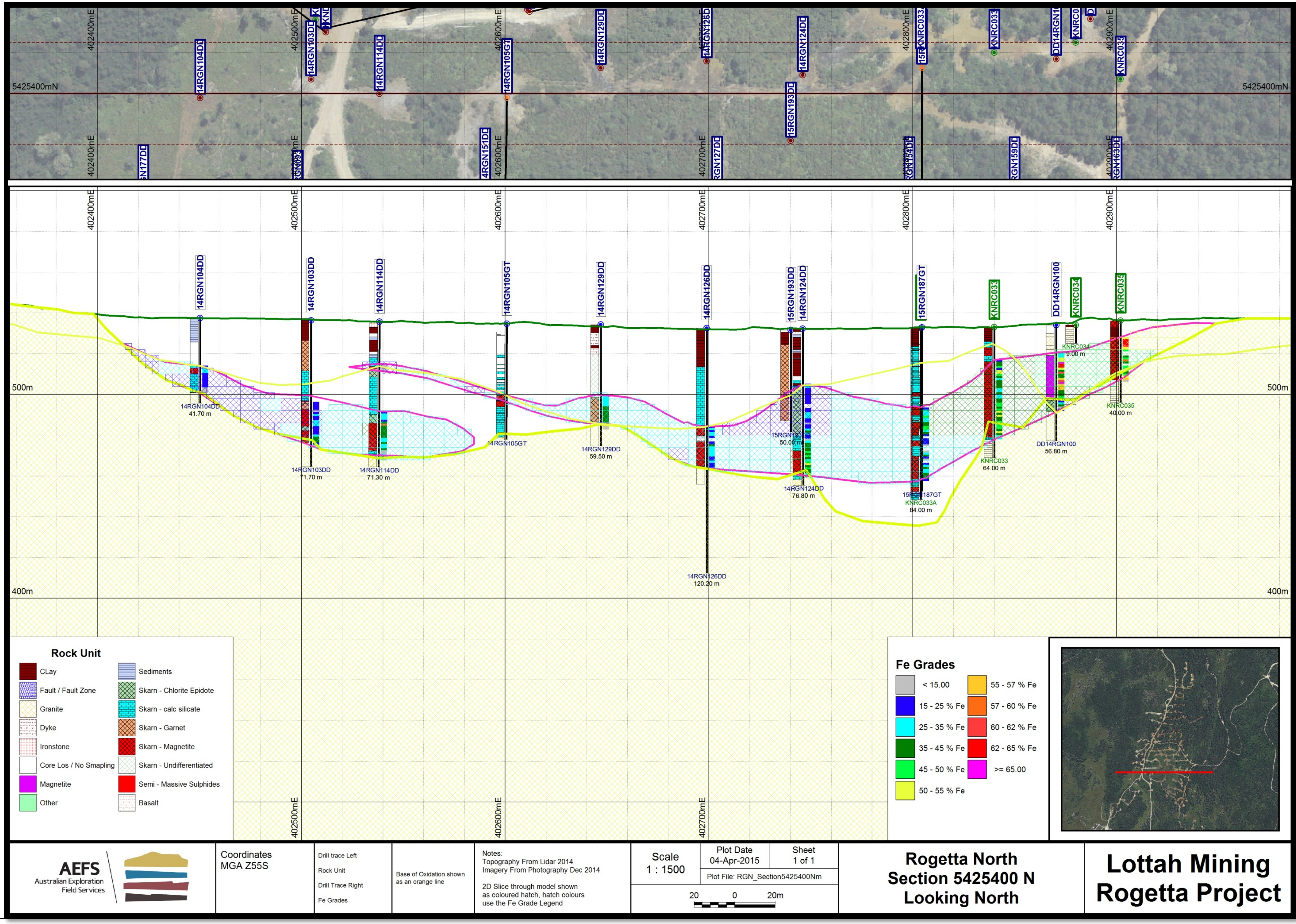


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 701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402500mE
402600mE
402700mE
402800mE
402900mE
500m
400m
14RGN104DD
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14RGN114DD
14RGN105GT
14RGN129DD
14RGN126DD
15RGN193DD
14RGN124DD
15RGN187GT
KNRC033
DD14RGN100
KNRC034
KNRC035
14RGN104DD 41.70 m
14RGN103DD 71.70 m
14RGN114DD 71.30 m
14RGN105GT
14RGN129DD 59.50 m
14RGN126DD 120.20 m
14RGN124DD 76.80 m
KNRC033A 84.00 m
KNRC033 64.00 m
DD14RGN100 56.80 m
KNRC034 9.00 m
KNRC035 40.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425400Nm
20 0 20m
Rogetta North
Section 5425400 N
Looking North
Lottah Mining
Rogetta Project

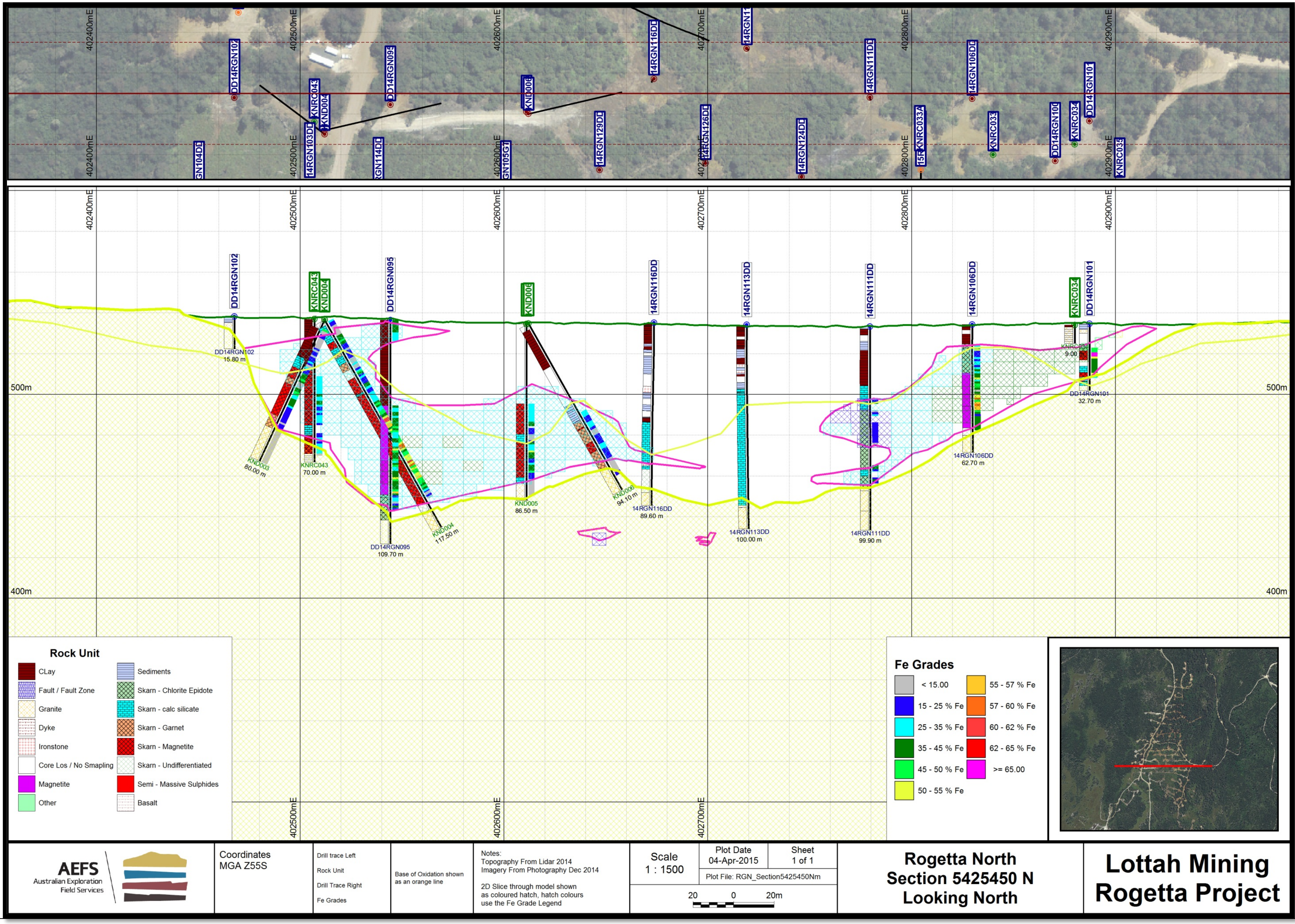
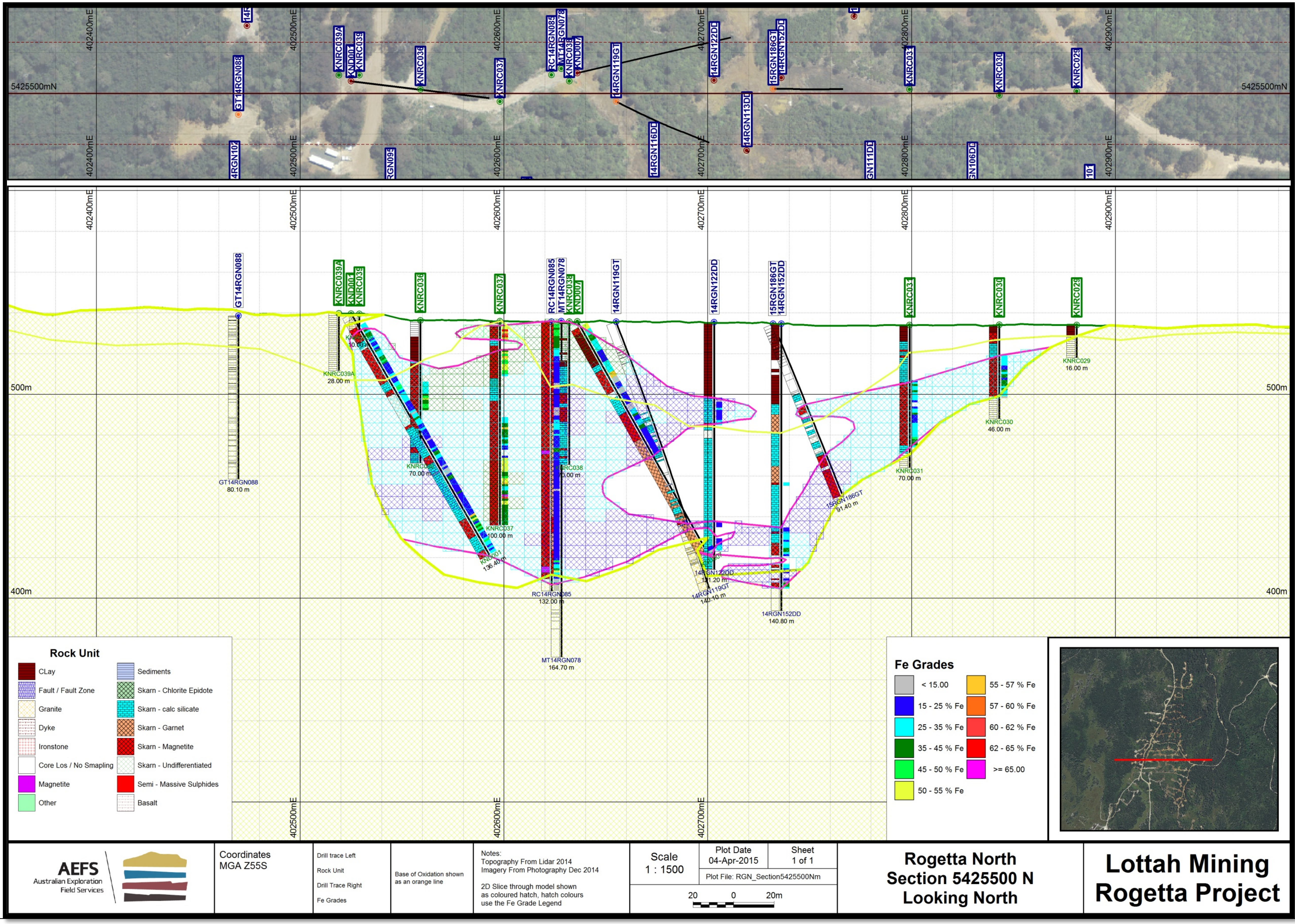
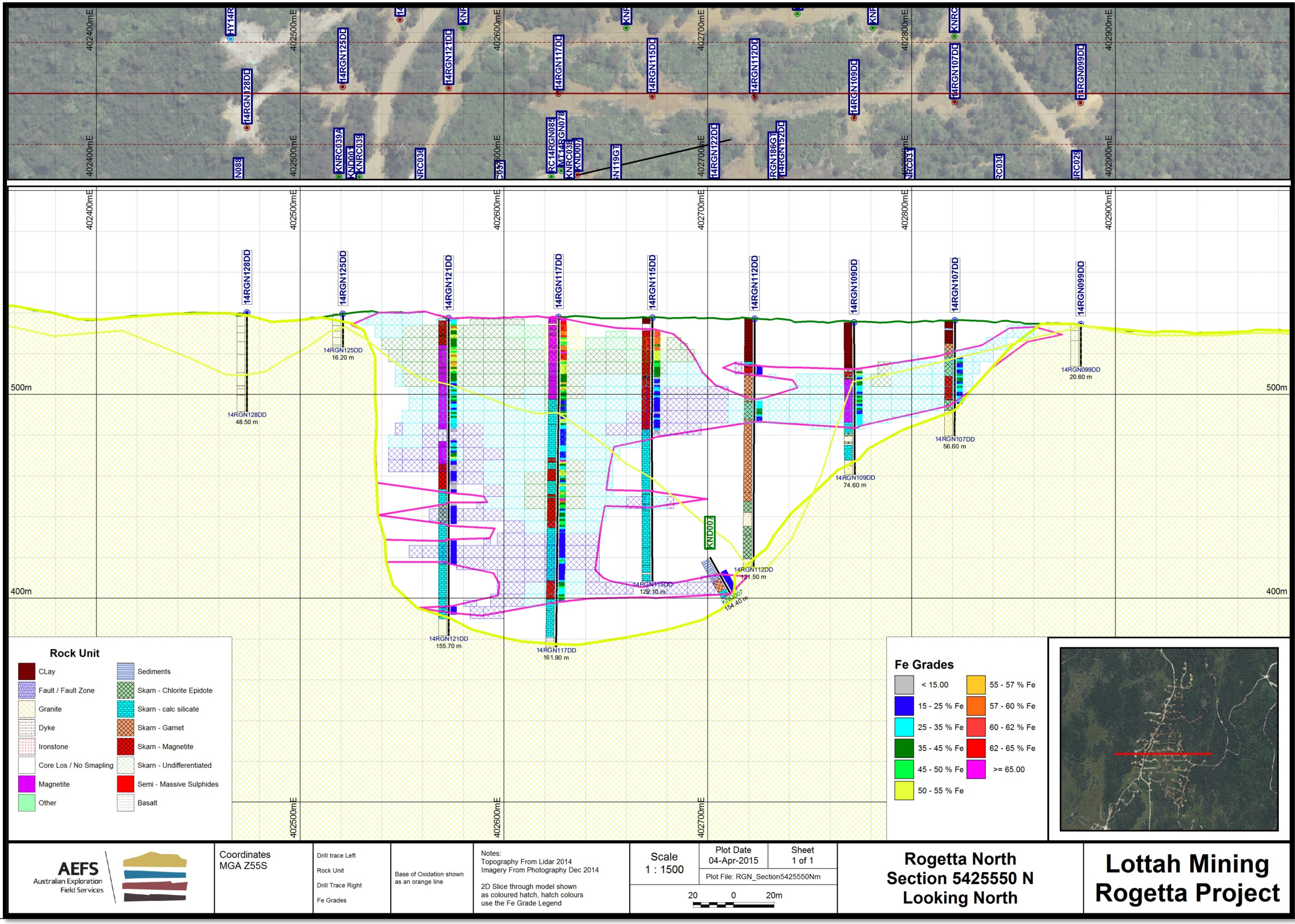
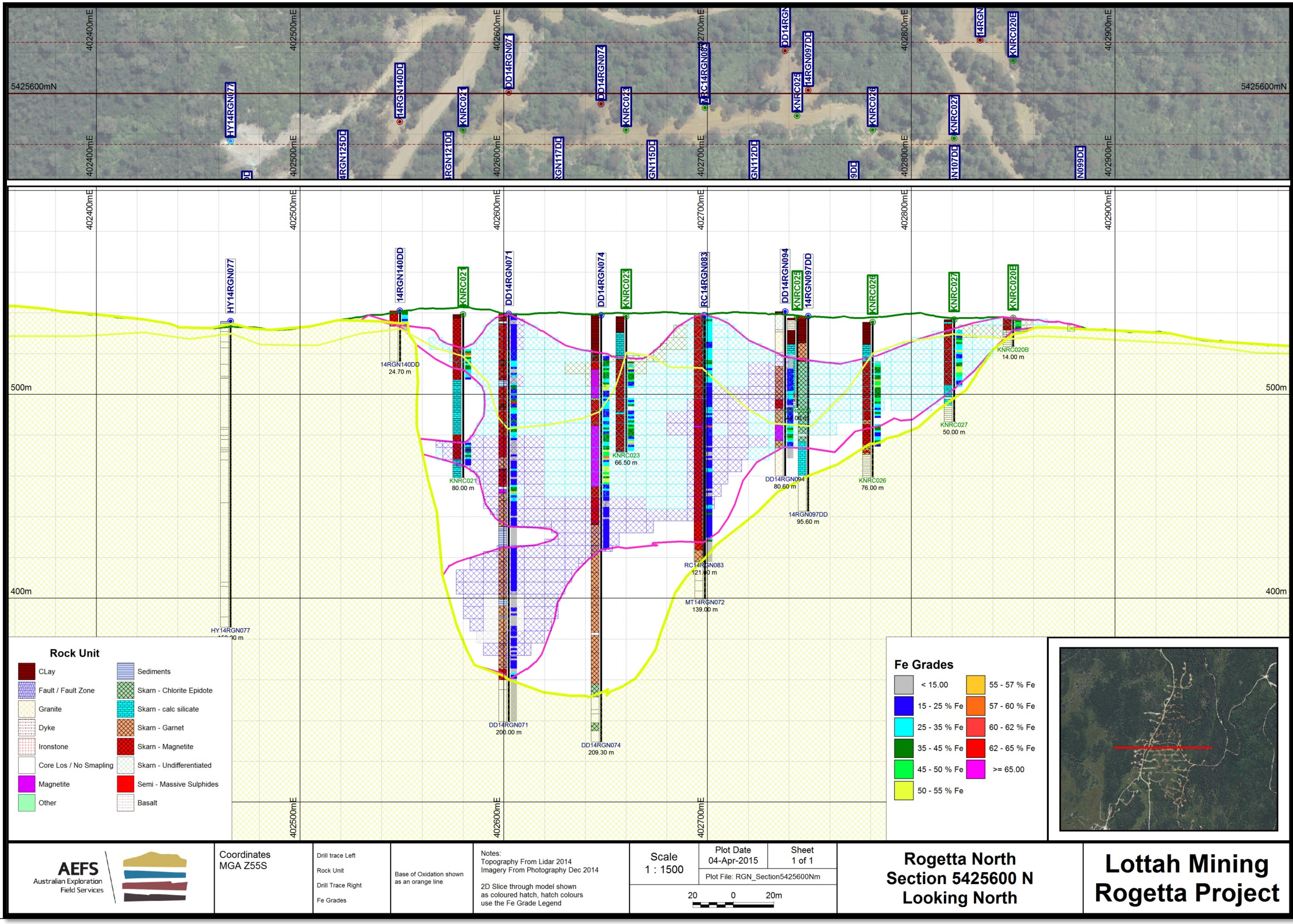


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 701


Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
5425500mN
500m
400m
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425500Nm
Rogetta North
Section 5425500 N
Looking North
Lottah Mining
Rogetta Project


Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
500m
400m
402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
14RGN128DD
48.50 m
14RGN125DD
16.20 m
14RGN121DD
155.70 m
14RGN117DD
161.90 m
14RGN115DD
129.10 m
14RGN112DD
121.50 m
14RGN109DD
74.60 m
14RGN107DD
56.60 m
14RGN099DD
20.60 m
KND007
154.40 m
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425550Nm
20
0
20m
Rogetta North
Section 5425550 N
Looking North
Lottah Mining
Rogetta Project


5425600mN
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402600mE
402700mE
402800mE
402900mE
500m
400m
HY14RGN077
14RGN140DD
KNRC021
DD14RGN071
DD14RGN074
KNRC023
RC14RGN083
DD14RGN094
KNRC025
14RGN097DD
KNRC026
KNRC027
KNRC020B
14RGN140DD 24.70 m
KNRC020B 14.00 m
KNRC027 50.00 m
KNRC023 66.50 m
KNRC021 80.00 m
DD14RGN094 80.60 m
KNRC026 76.00 m
14RGN097DD 95.60 m
RC14RGN083 121.00 m
MT14RGN072 139.00 m
DD14RGN071 200.00 m
DD14RGN074 209.30 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425600Nm
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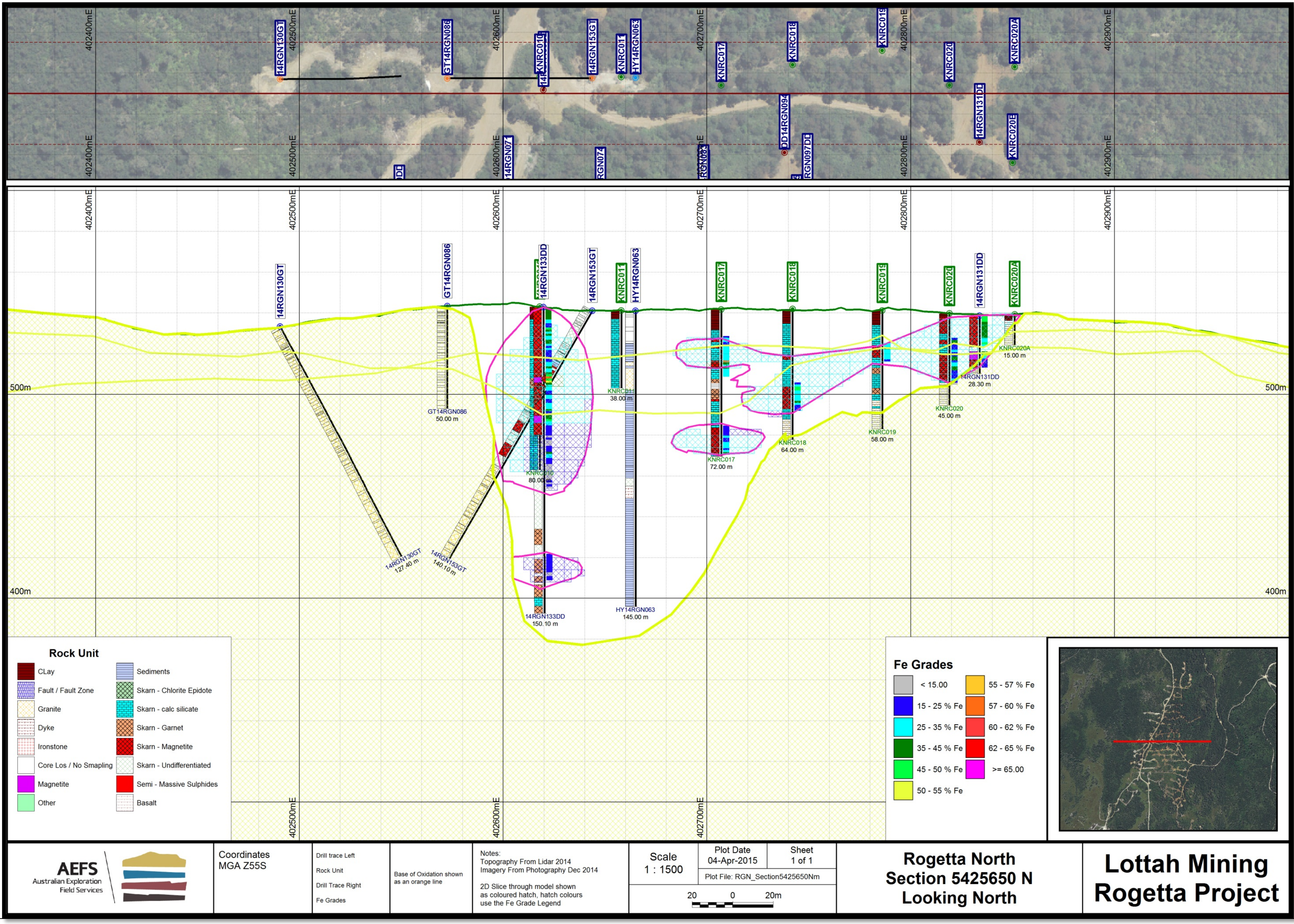
Rogetta North
Section 5425600 N
Looking North
Lottah Mining
Rogetta Project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402500mE
402600mE
402700mE
402800mE
402900mE
500m
400m
14RGN130GT
GT14RGN086
14RGN133DD
14RGN153GT
KNRC011
HY14RGN063
KNRC017
KNRC018
KNRC019
KNRC020
14RGN131DD
KNRC020A
14RGN130GT 127.40 m
14RGN153GT 140.10 m
GT14RGN086 50.00 m
14RGN133DD 150.10 m
HY14RGN063 145.00 m
KNRC011 38.00 m
KNRC017 72.00 m
KNRC018 64.00 m
KNRC019 58.00 m
KNRC020 45.00 m
14RGN131DD 28.30 m
KNRC020A 15.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425650Nm
20 0 20m
Rogetta North
Section 5425650 N
Looking North
Lottah Mining
Rogetta Project

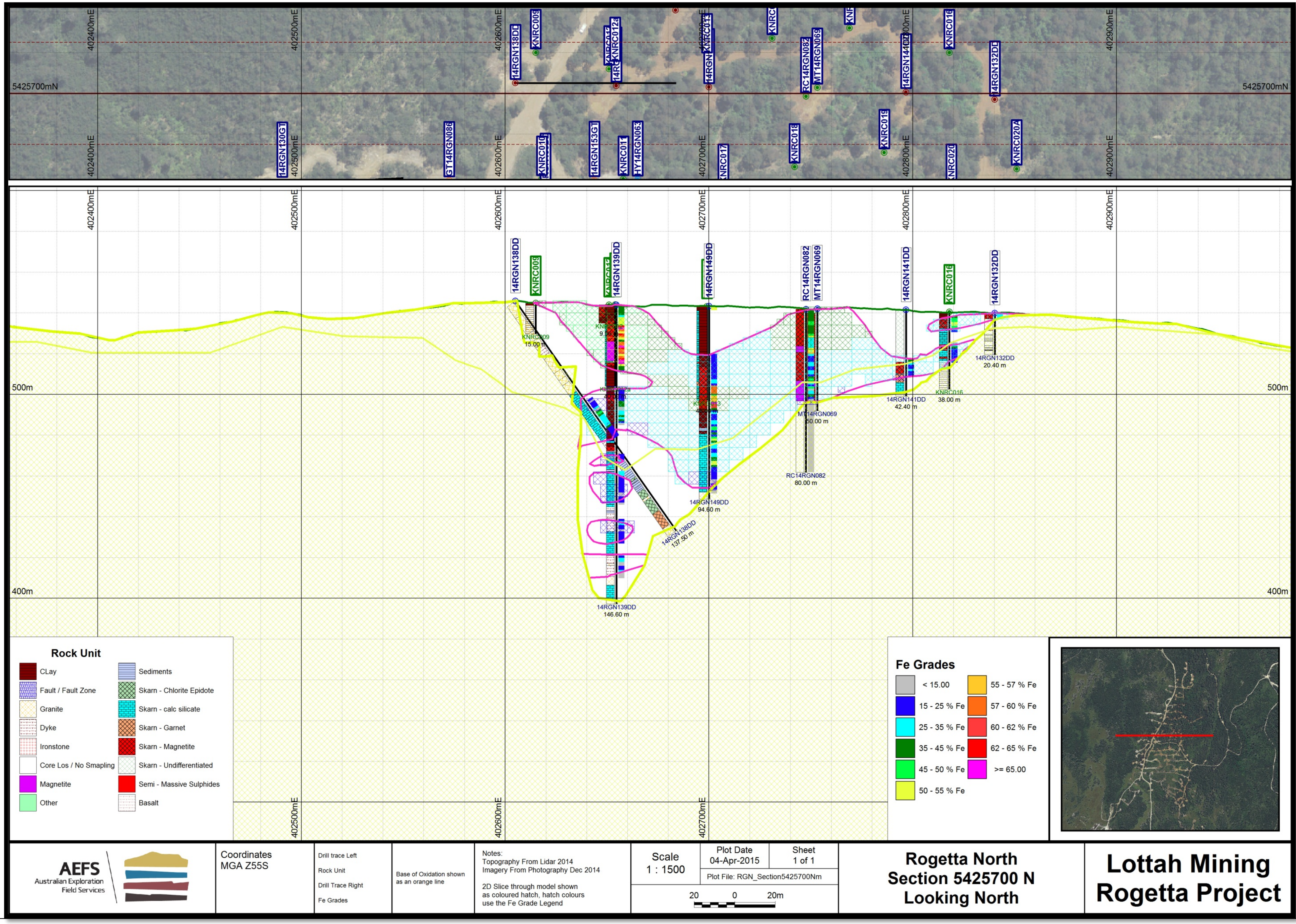
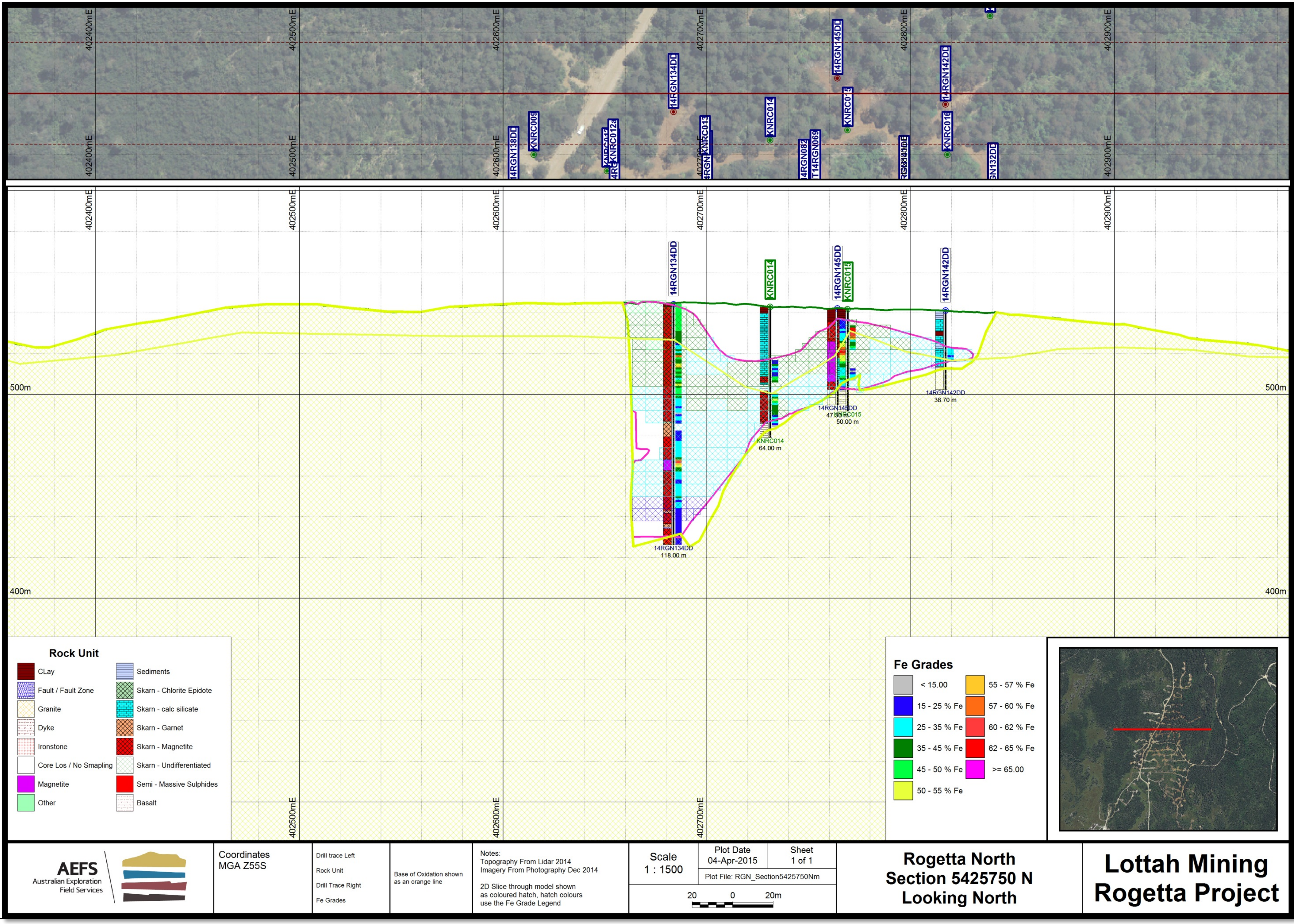
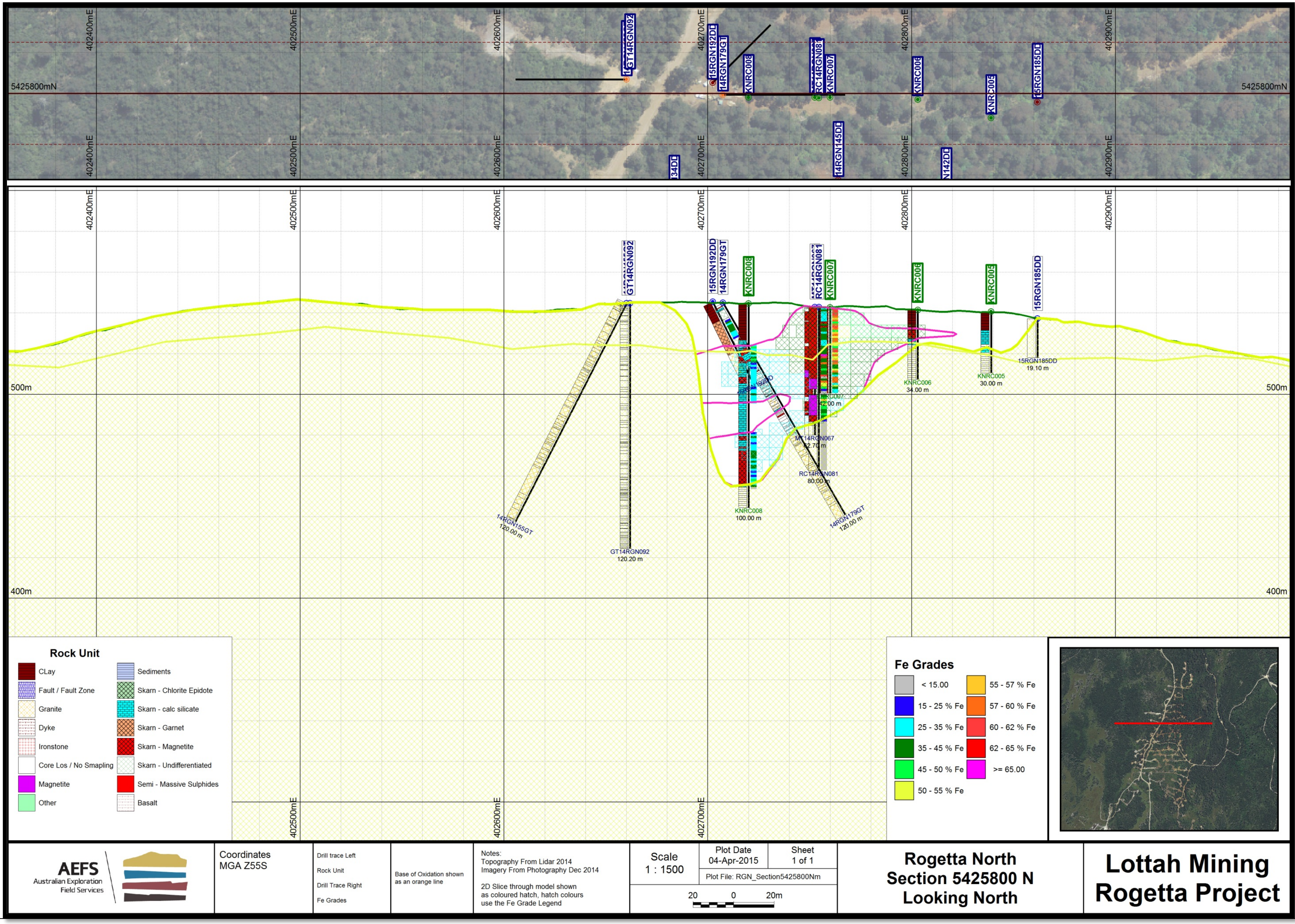


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 701


Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
500m
400m
14RGN134DD
118.00 m
KNRC014
64.00 m
14RGN145DD
47.50 m
KNRC015
50.00 m
14RGN142DD
38.70 m
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425750Nm
Rogetta North
Section 5425750 N
Looking North
Lottah Mining
Rogetta Project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402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
500m
400m
GT14RGN092
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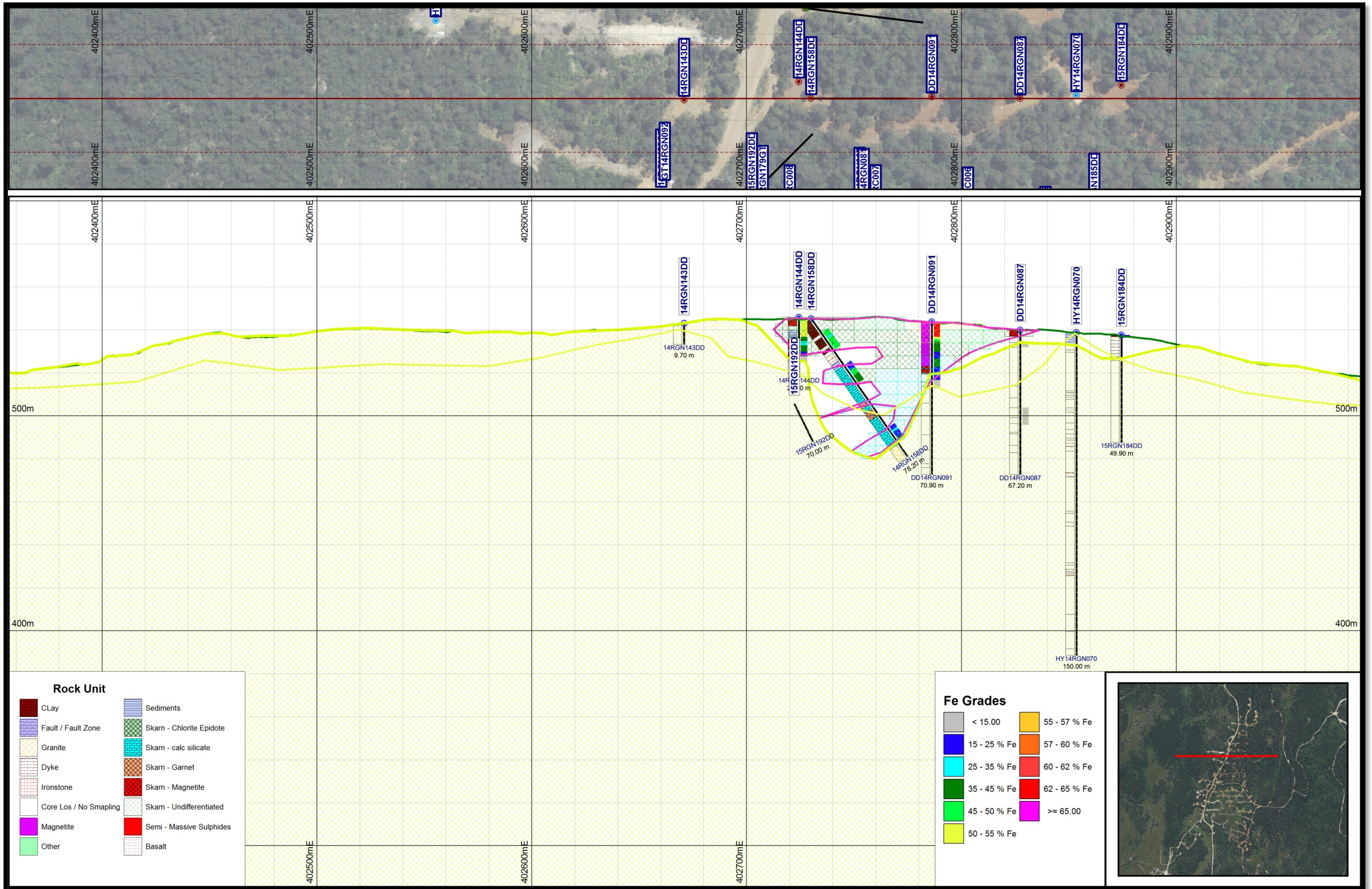
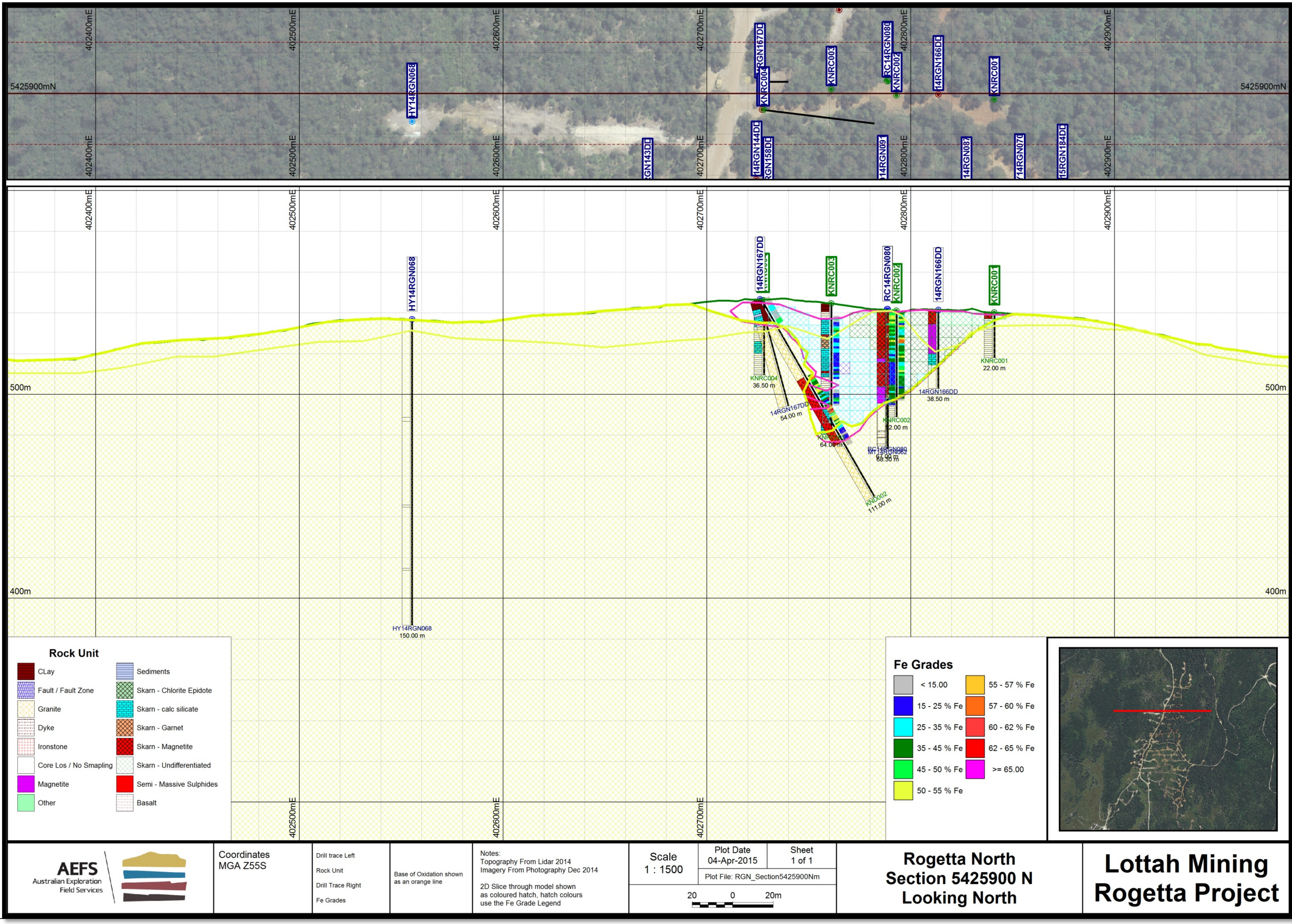
14RGN179GT
KNRC008
RC14RGN081
KNRC007
KNRC006
KNRC005
15RGN185DD
14RGN155GT
120.00 m
GT14RGN092
120.20 m
KNRC008
100.00 m
MT14RGN067
RC14RGN081
80.00 m
14RGN179GT
120.00 m
KNRC006
34.00 m
KNRC005
30.00 m
15RGN185DD
19.10 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
1 : 1500
Plot Date
04-Apr-2015
Sheet
1 of 1
Plot File: RGN_Section5425800Nm
20 0 20m
Rogetta North
Section 5425800 N
Looking North
Lottah Mining
Rogetta Project



AEFS Australian Exploration Field Services	Coordinates MGA Z55S	Drill trace Left Rock Unit Drill Trace Right Fe Grades	Base of Oxidation shown as an orange line	Notes: Topography From Lidar 2014 Imagery From Photography Dec 2014 2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend	Scale 1 : 1500 20 0 20m	Plot Date 04-Apr-2015 Sheet 1 of 1 Plot File: RGN_Section5425850Nm	Rogetta North Section 5425850 N Looking North	Lottah Mining Rogetta Project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402400mE
402500mE
402600mE
402700mE
402800mE
402900mE
500m
400m
HY14RGN068
150.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
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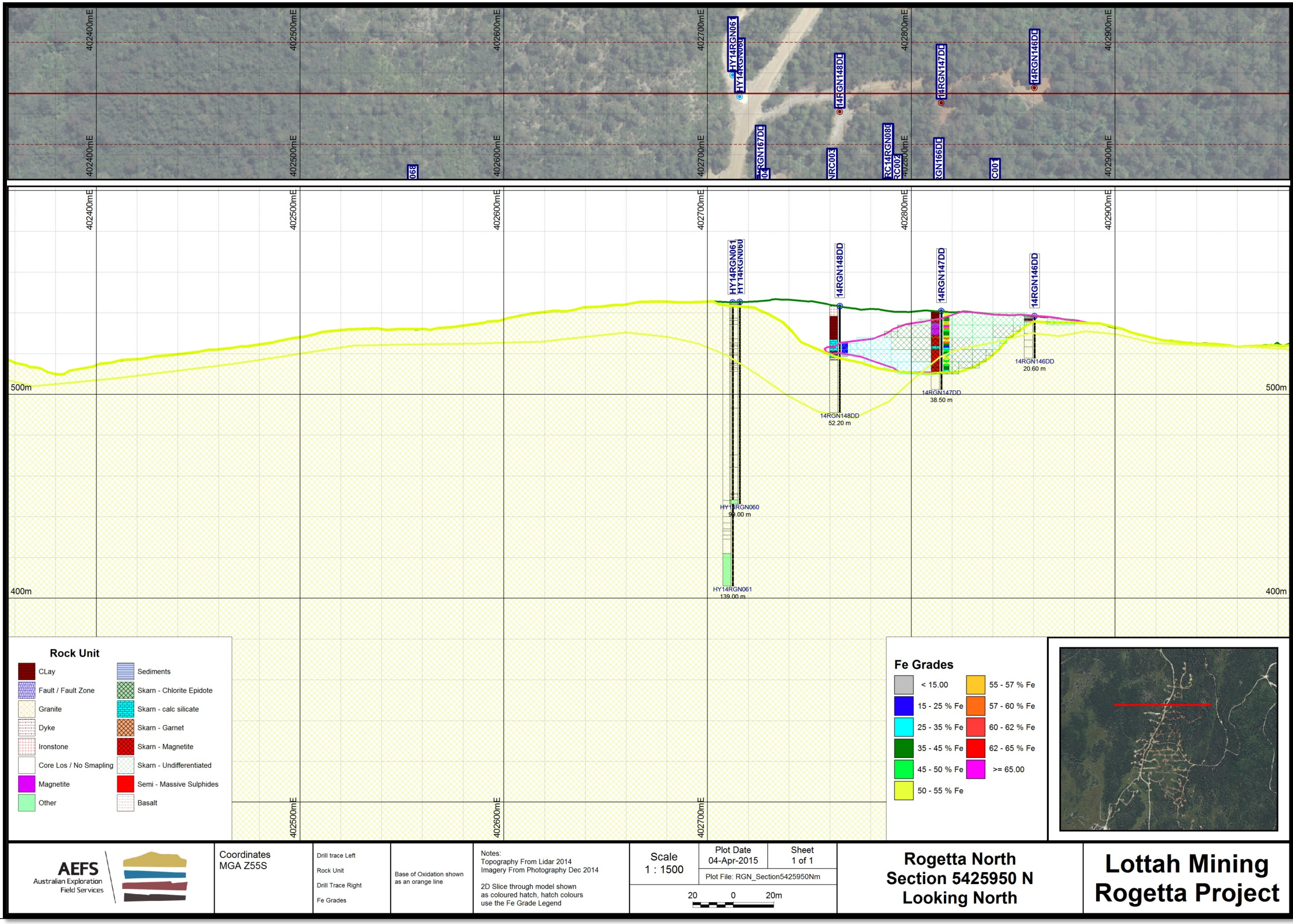
Looking North
Lottah Mining
Rogetta Project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14RGN147DD
14RGN146DD
500m
400m
HY14RGN060
90.00 m
HY14RGN061
139.00 m
14RGN148DD
52.20 m
14RGN147DD
38.50 m
14RGN146DD
20.60 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
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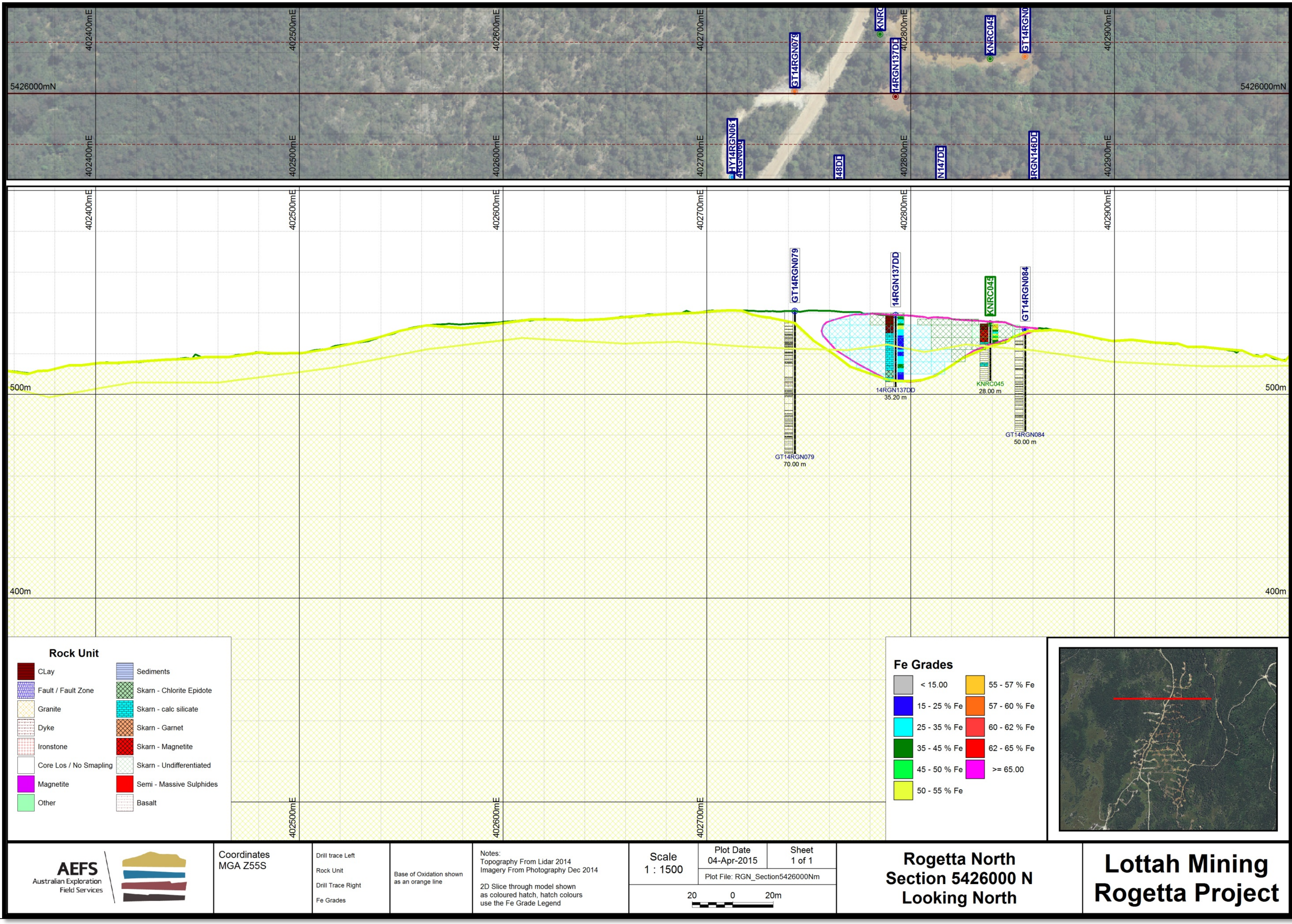
Looking North
Lottah Mining
Rogetta Project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GT14RGN084
500m
400m
GT14RGN079
70.00 m
14RGN137DD
35.20 m
KNRC045
28.00 m
GT14RGN084
50.00 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
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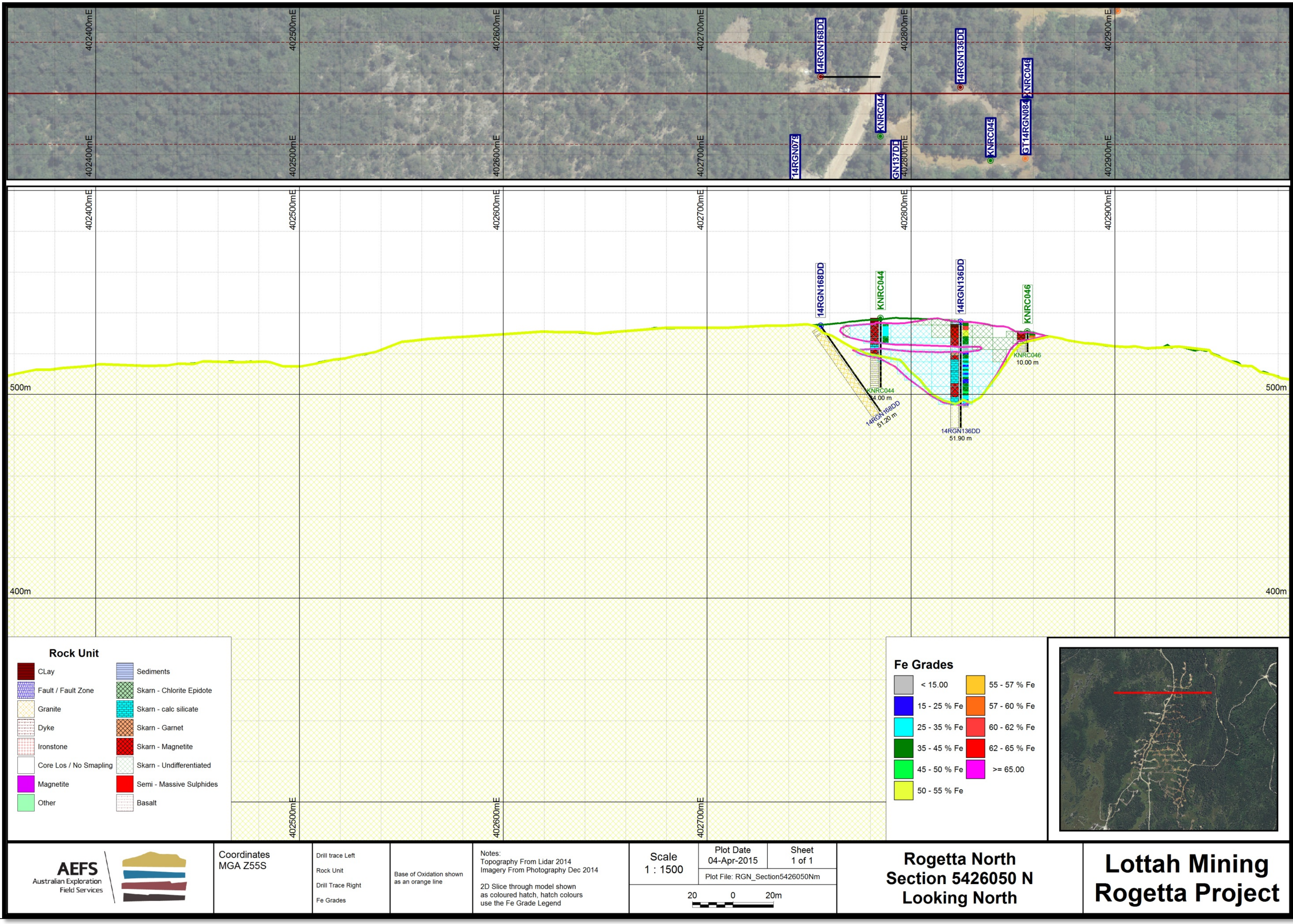
Section 5426000 N
Looking North
Lottah Mining
Rogetta Project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500m
400m
KNRC046 10.00 m
KNRC044 34.00 m
14RGN168DD 51.20 m
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Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
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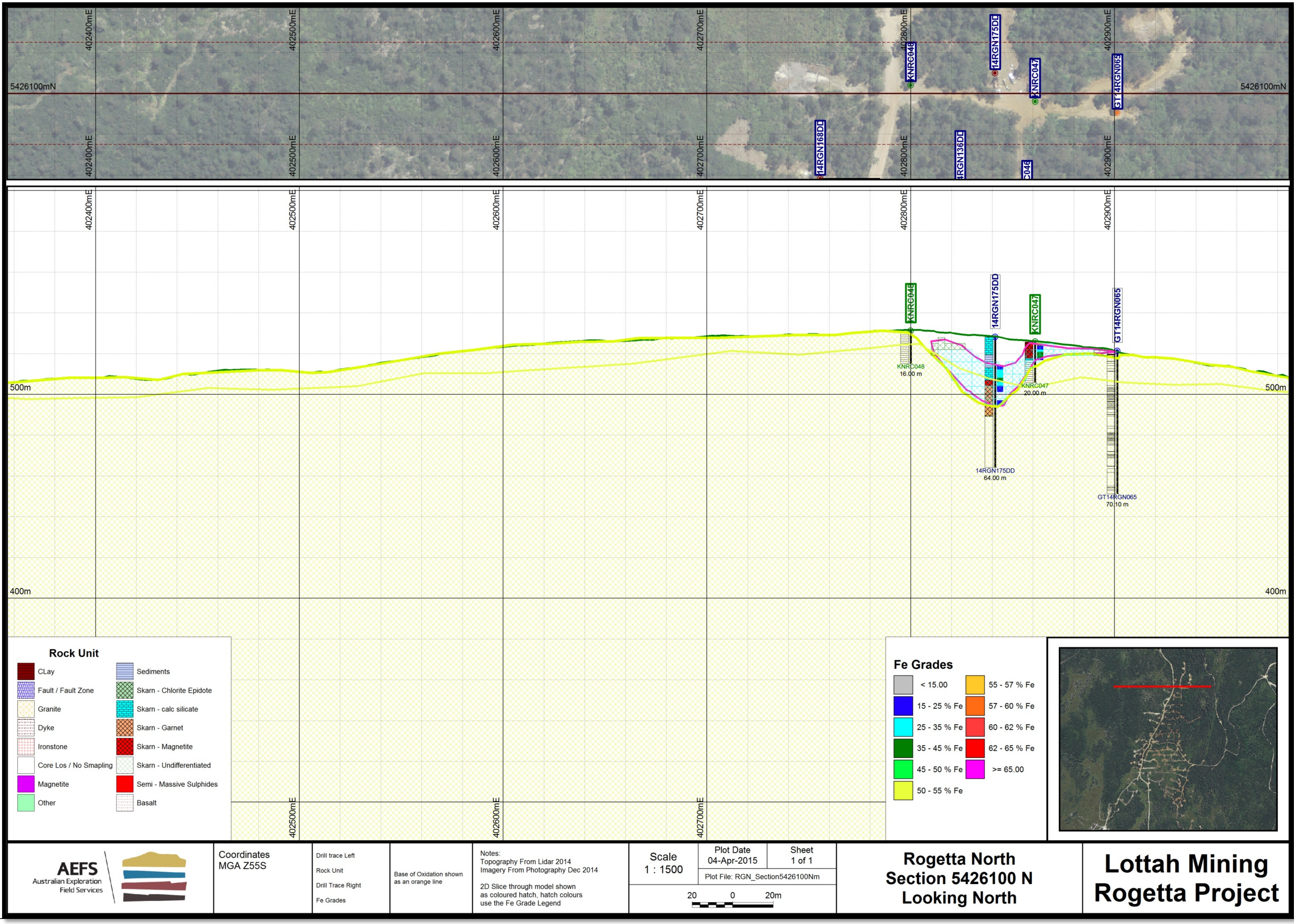
Section 5426050 N
Looking North
Lottah Mining
Rogetta Project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400m
KNRC048
16.00 m
KNRC047
20.00 m
14RGN175DD
64.00 m
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70.10 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
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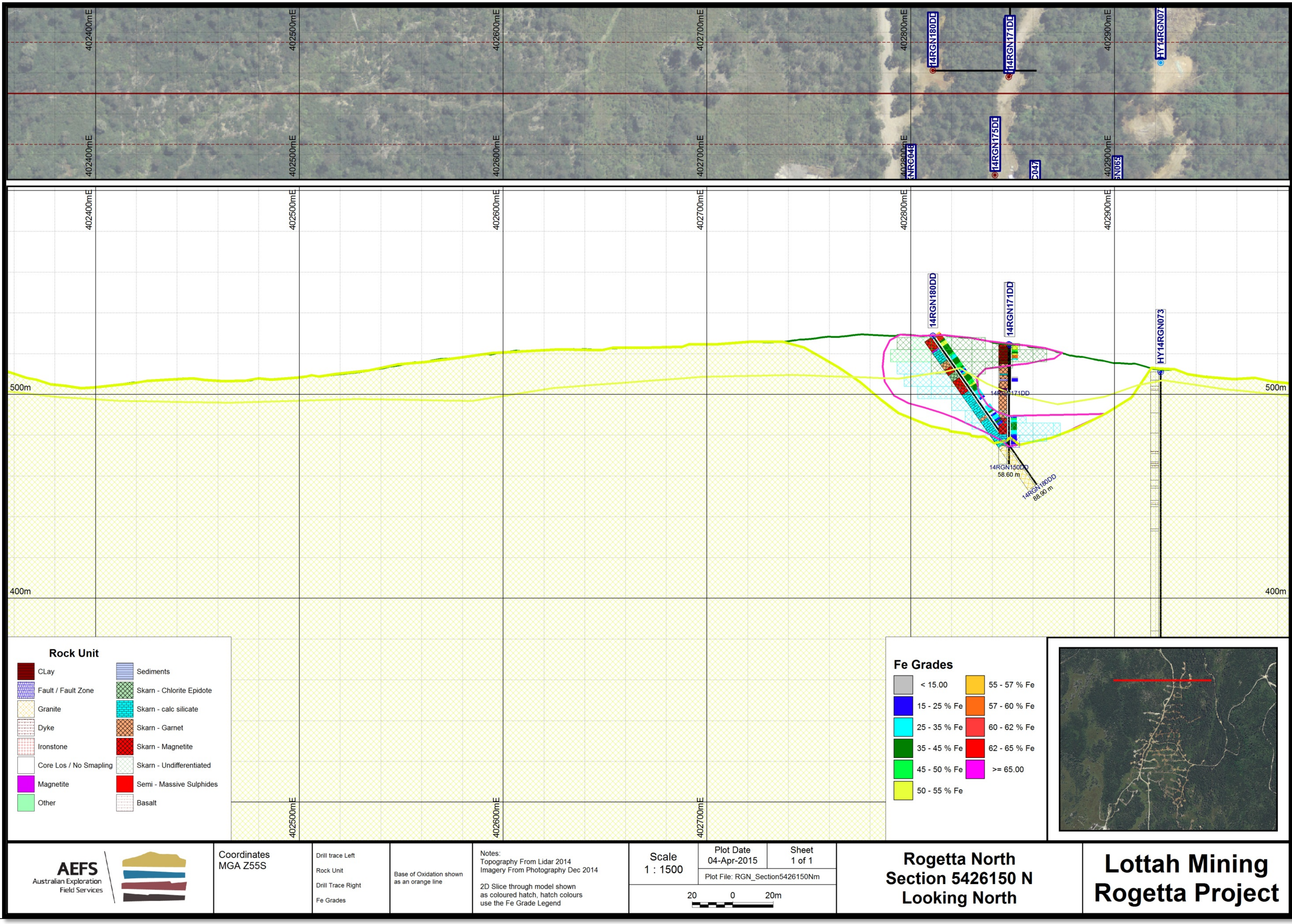
Rogetta North
Section 5426100 N
Looking North
Lottah Mining
Rogetta Project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500m
400m
14RGN150DD
58.60 m
14RGN180DD
88.90 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
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Plot Date
04-Apr-2015
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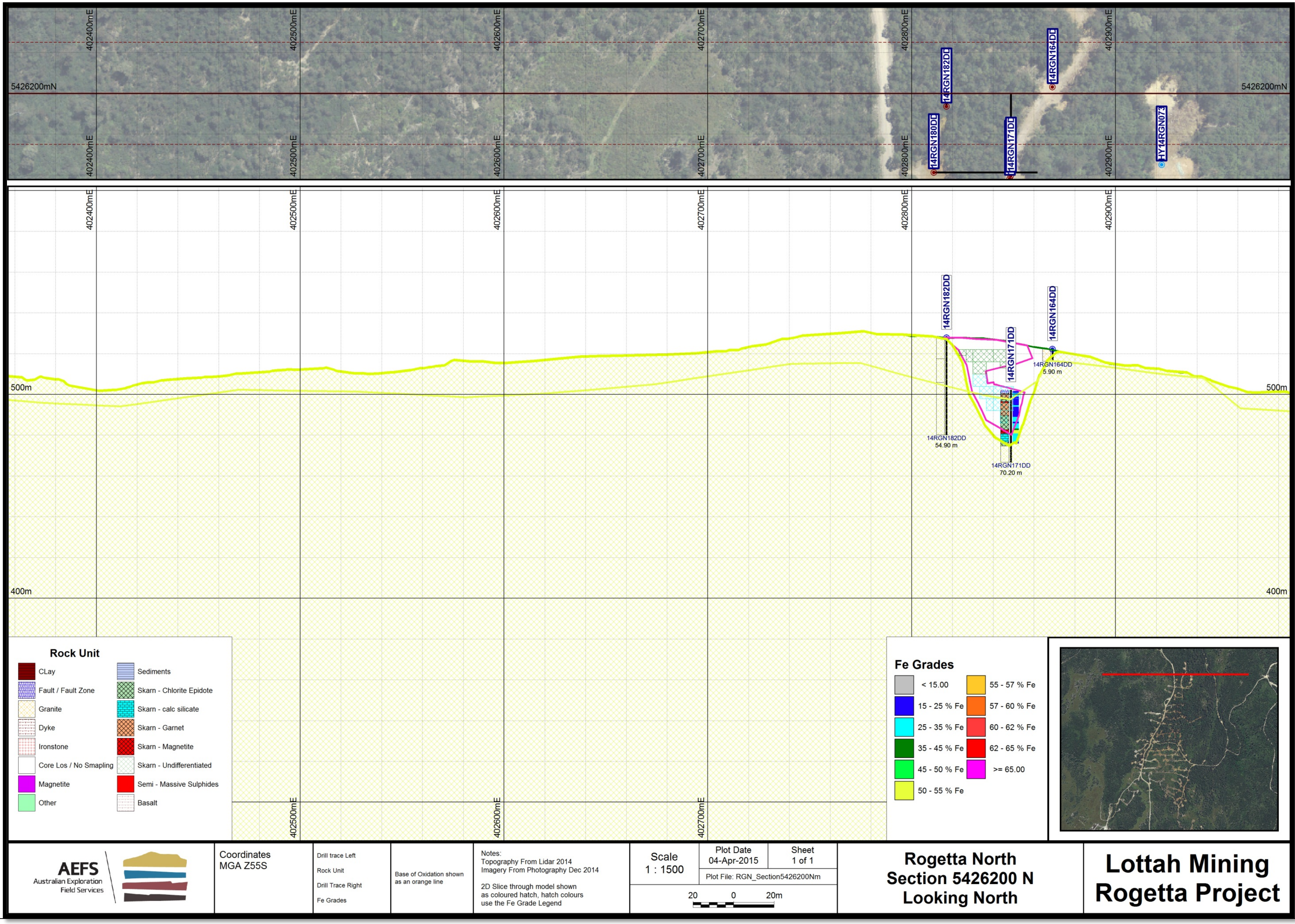
Rogetta North
Section 5426150 N
Looking North
Lottah Mining
Rogetta Project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14RGN171DD
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500m
400m
14RGN164DD 5.90 m
14RGN182DD 54.90 m
14RGN171DD 70.20 m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
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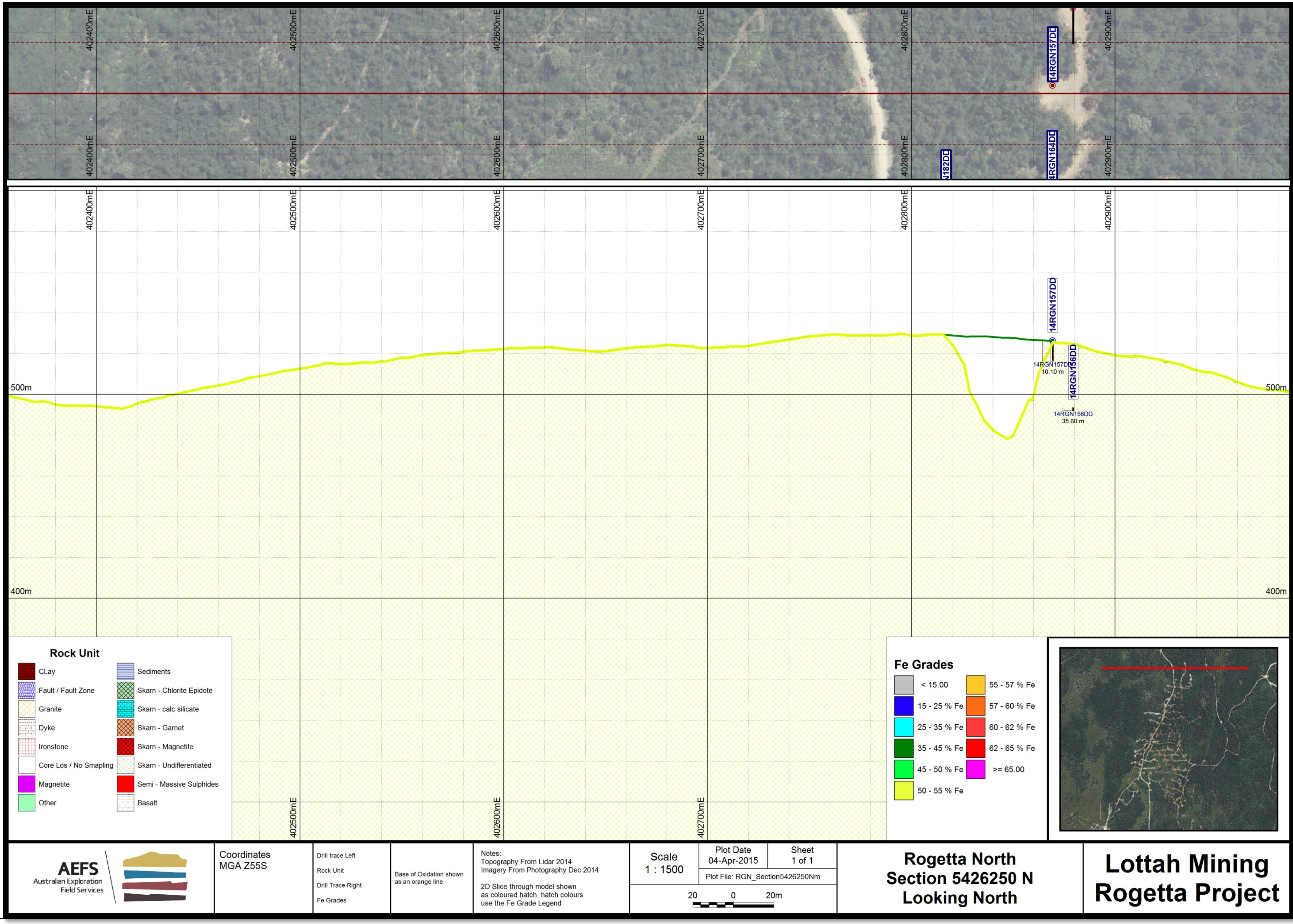
Rogetta North Section 5426200 N Looking North
Lottah Mining Rogetta Project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500m
400m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
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45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
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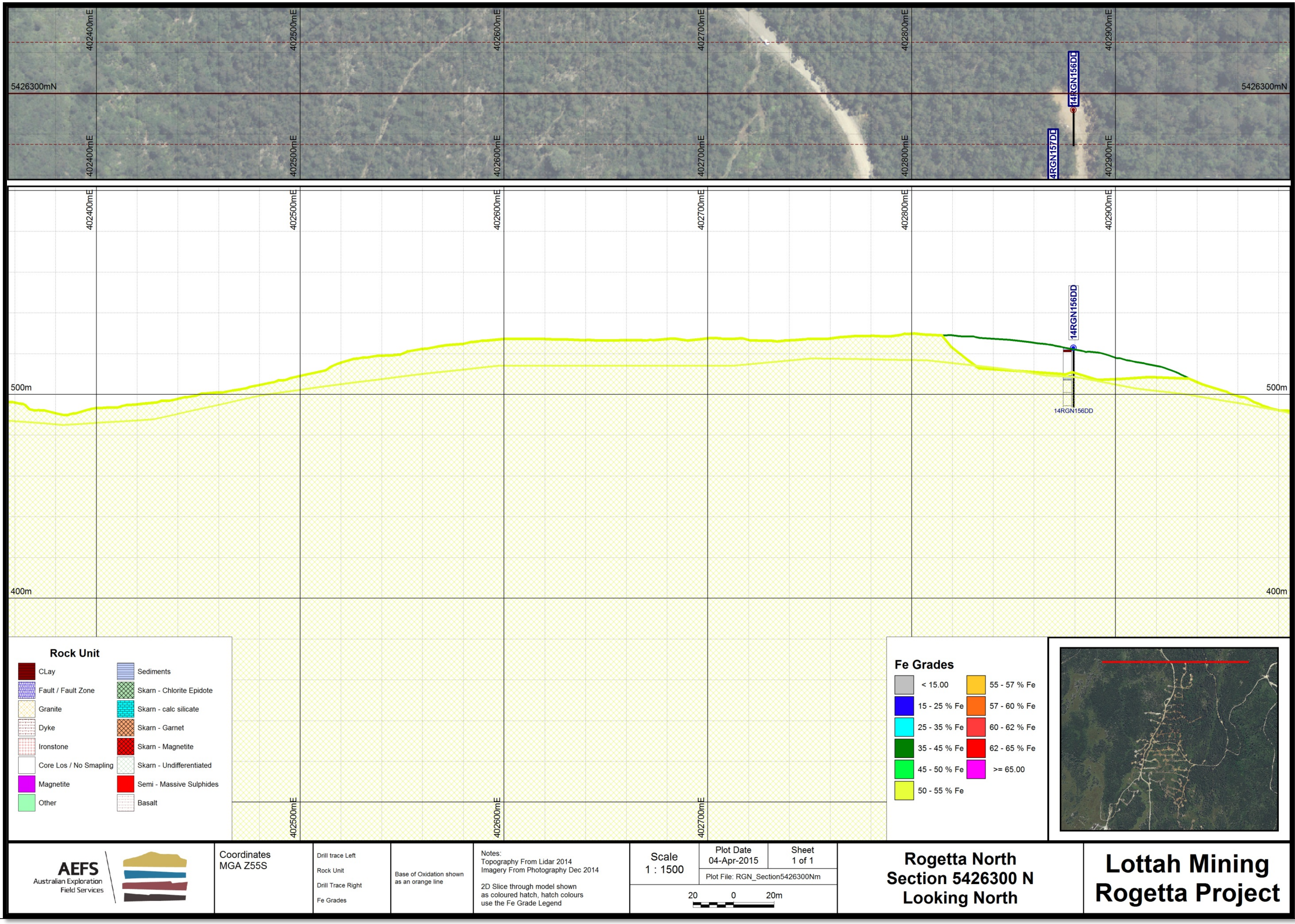
Section 5426250 N
Looking North
Lottah Mining
Rogetta Project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500m
400m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
Scale
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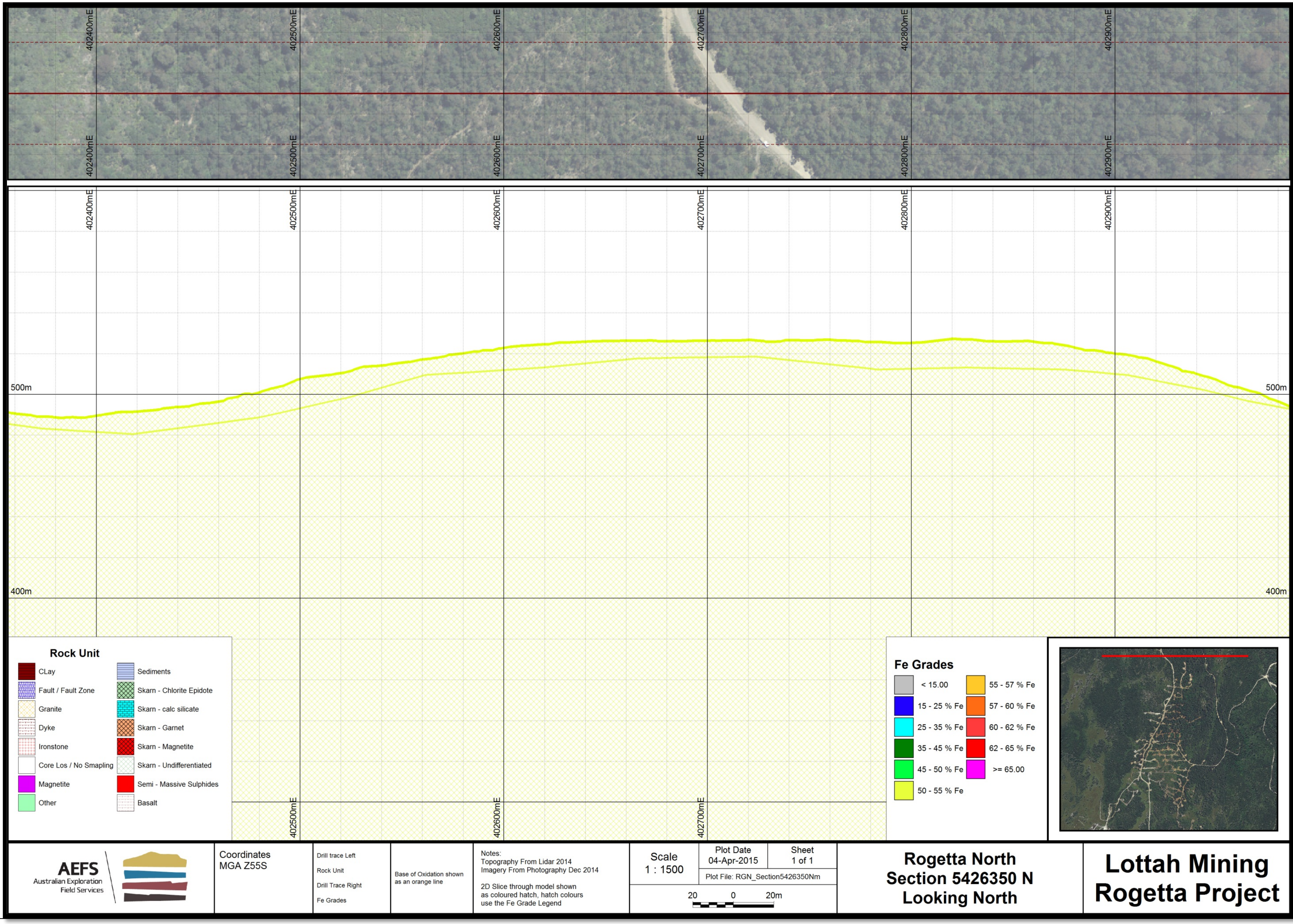
Rogetta North
Section 5426300 N
Looking North
Lottah Mining
Rogetta Project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500m
400m
Rock Unit
CLay
Fault / Fault Zone
Granite
Dyke
Ironstone
Core Los / No Smapling
Magnetite
Other
Sediments
Skarn - Chlorite Epidote
Skarn - calc silicate
Skarn - Garnet
Skarn - Magnetite
Skarn - Undifferentiated
Semi - Massive Sulphides
Basalt
Fe Grades
< 15.00
15 - 25 % Fe
25 - 35 % Fe
35 - 45 % Fe
45 - 50 % Fe
50 - 55 % Fe
55 - 57 % Fe
57 - 60 % Fe
60 - 62 % Fe
62 - 65 % Fe
>= 65.00
AEFS
Australian Exploration Field Services
Coordinates
MGA Z55S
Drill trace Left
Rock Unit
Drill Trace Right
Fe Grades
Base of Oxidation shown as an orange line
Notes:
Topography From Lidar 2014
Imagery From Photography Dec 2014
2D Slice through model shown as coloured hatch, hatch colours use the Fe Grade Legend
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Sheet
1 of 1
Plot File: RGN_Section5426350Nm
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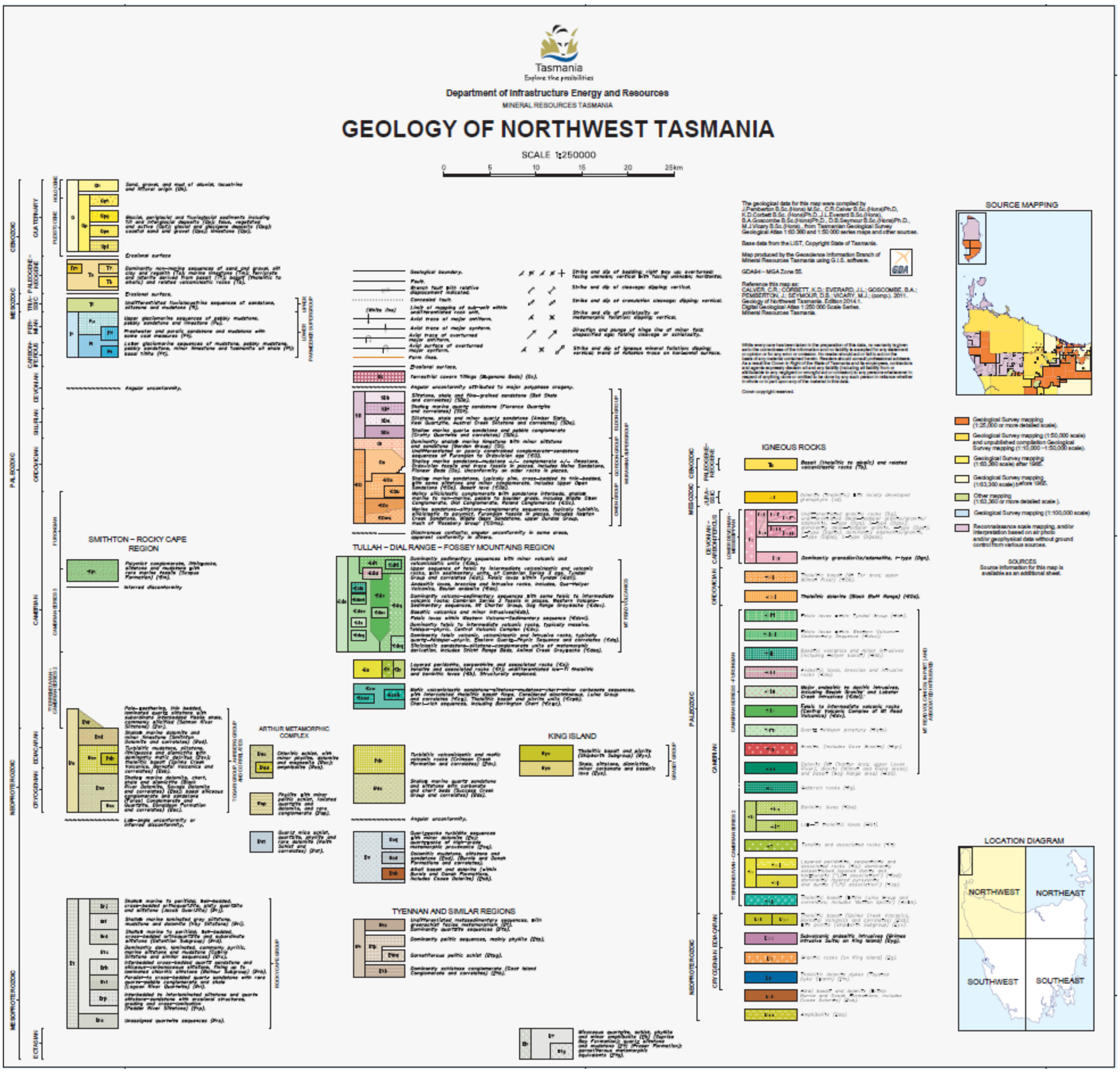
Rogetta North
Section 5426350 N
Looking North
Lottah Mining
Rogetta Project

Miscellaneous Plans

A) Legend; 250K Geology
B) Drillhole coverage Rogetta North, January 2015



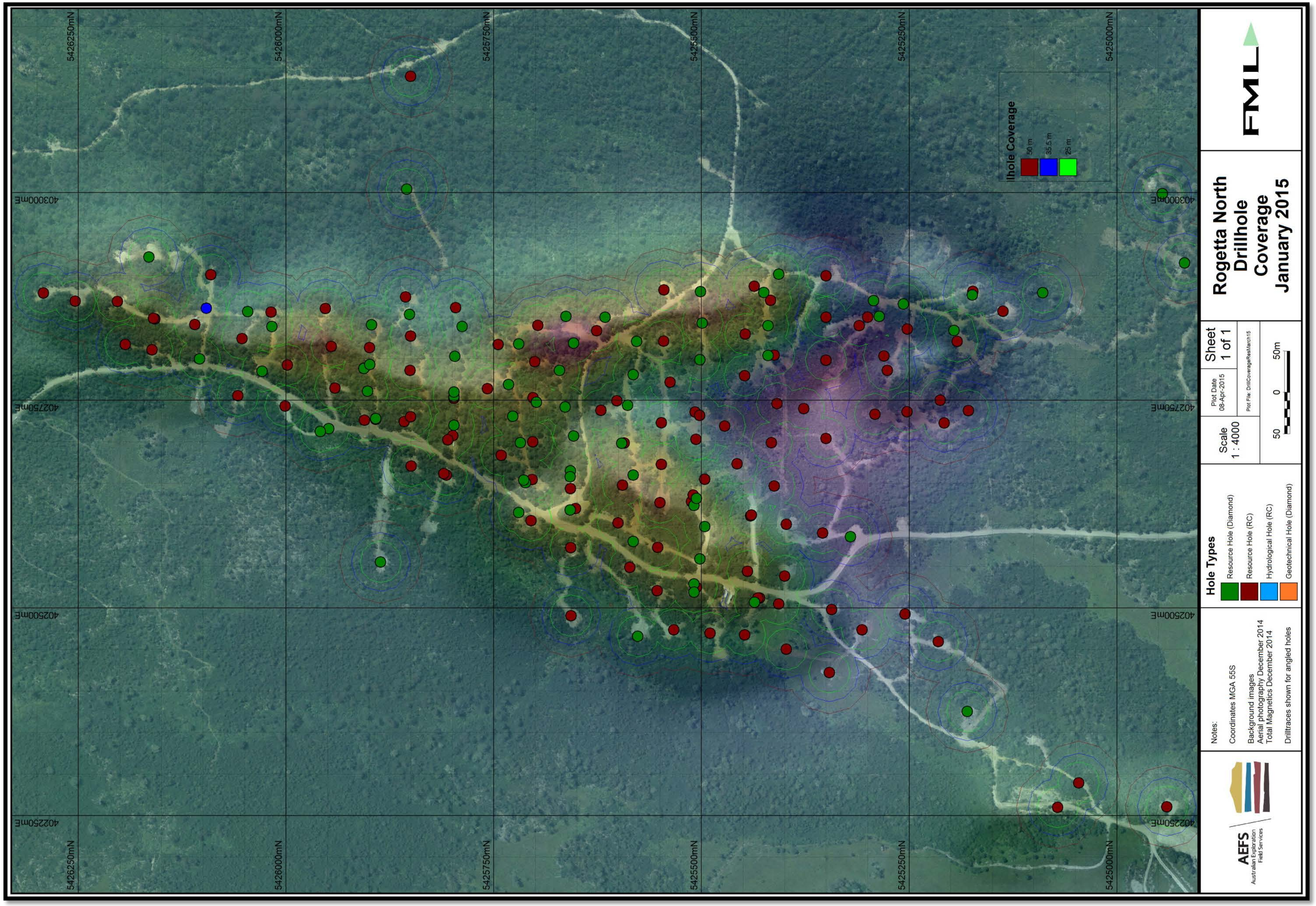


Image source: A. Holmes, Principles of Physical Geology, 2nd Edition 1965, Fig 791

Appendix H

Rogetta North : Mineral Resources by Cutoff Grade, Type and Resource Category

Oxidised Material by Resource Category

Oxidised : Inferred

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn %	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn %	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Oxidised	Inferred	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
55.0	Oxidised	Inferred	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
45.0	Oxidised	Inferred	18,000	59,000	3.38	49.47	4.16	4.14	0.032	0.078	1.50	0.062	0.073	540.094	0.451	0.576	13.28	9.92	18.04	0.095	0.069	28.21	17.13	19.47	49.88	1.188	20.58	39.36	0.003	69.25	55.83	53.36
35.0	Oxidised	Inferred	34,000	112,000	3.34	44.22	3.97	7.38	0.028	0.066	4.34	0.071	0.055	469.236	0.548	0.360	15.61	8.80	19.83	0.129	0.065	22.54	18.07	17.63	47.58	1.236	19.70	41.76	0.002	71.43	56.44	80.25
30.0	Oxidised	Inferred	51,000	170,000	3.37	40.19	3.82	9.83	0.023	0.062	5.02	0.060	0.040	368.602	0.635	0.275	17.64	15.25	25.48	0.152	0.068	21.22	20.54	20.30	44.59	1.495	20.56	49.31	0.003	81.97	56.96	94.56
27.5	Oxidised	Inferred	54,000	184,000	3.37	39.40	3.84	10.37	0.022	0.060	5.02	0.059	0.038	353.326	0.640	0.262	18.06	15.76	26.26	0.155	0.067	21.05	20.34	20.32	43.77	1.524	20.55	49.33	0.003	83.23	57.03	94.05
25.0	Oxidised	Inferred	57,000	192,000	3.39	38.84	3.90	10.68	0.022	0.062	4.92	0.057	0.037	349.748	0.647	0.256	18.45	17.26	27.40	0.159	0.067	21.35	20.39	20.66	43.71	1.596	20.86	49.34	0.003	85.15	56.95	92.97
22.5	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
20.0	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
17.5	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
15.0	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
12.5	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
10.0	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81
0.0	Oxidised	Inferred	60,000	203,000	3.39	37.99	3.97	11.16	0.022	0.067	4.84	0.055	0.035	342.950	0.656	0.251	19.00	18.71	28.83	0.163	0.066	22.13	20.61	20.97	43.80	1.657	21.53	49.49	0.003	87.41	56.86	93.81

Oxidised : Indicated

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn %	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn %	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Oxidised	Indicated	0	0	4.41	61.38	2.37	1.49	0.015	0.015	-0.11	0.062	0.067	43.178	1.667	0.012	3.31	5.35	15.69	0.176	0.163	91.69	87.82	40.45	47.74	0.430	58.77	51.38	0.003	62.83	45.96	26.92
55.0	Oxidised	Indicated	2,000	7,000	3.80	56.34	3.27	3.25	0.030	0.017	0.34	0.065	0.064	74.535	1.042	0.144	6.12	12.61	11.39	0.143	0.130	57.28	58.77	33.19	71.13	0.832	45.36	47.68	0.003	64.93	50.29	31.04
45.0	Oxidised	Indicated	183,000	655,000	3.57	48.00	4.52	5.93	0.030	0.093	1.93	0.069	0.103	884.282	1.053	0.301	13.01	9.67	33.33	0.175	0.084	67.18	24.09	21.24	70.35	0.818	20.97	61.36	0.003	78.12	57.05	58.45
35.0	Oxidised	Indicated	582,000	2,075,000	3.57	42.27	4.80	8.98	0.026	0.079	2.96	0.075	0.100	644.814	1.035	0.233	16.76	12.61	35.05	0.203	0.085	58.35	25.65	23.86	74.28	0.874	22.43	70.50	0.003	86.89	59.14	72.08
30.0	Oxidised	Indicated	981,000	3,489,000	3.56	38.25	5.05	11.25	0.026	0.079	3.17	0.081	0.092	471.589	1.040	0.250	20.21	17.70	36.87	0.211	0.090	48.49	24.82	26.92	77.89	1.071	23.05	80.43	0.003	101.00	59.19	76.50
27.5	Oxidised	Indicated	1,173,000	4,157,000	3.54	36.73	5.03	12.33	0.025	0.077	3.27	0.081	0.086	426.038	1.056	0.253	21.35	19.04	38.56	0.209	0.089	45.01	24.51	27.61	75.12	1.149	23.50	82.87	0.003	105.04	59.27	74.28
25.0	Oxidised	Indicated	1,291,000	4,567,000	3.54	35.80	5.03	13.11	0.025	0.076	3.27	0.081	0.083	400.092	1.068	0.249	22.05	19.87	39.90	0.210	0.085	43.47	24.86	28.21	72.31	1.197	24.21	82.14	0.003	107.83	58.60	71.44
22.5	Oxidised	Indicated	1,368,000	4,834,000	3.53	35.15	5.04	13.64	0.024	0.076	3.28	0.081	0.081	384.878	1.069	0.242	22.53	20.89	40.91	0.213	0.083	42.57	25.23	28.62	70.23	1.242	24.88	81.18	0.003	109.72	58.00	69.04
20.0	Oxidised	Indicated	1,393,000	4,923,000	3.53	34.91	5.05	13.82	0.024	0.077	3.29	0.082	0.080	381.778	1.068	0.240	22.68	21.45	41.37	0.214	0.082	42.28	25.37	28.74	69.56	1.270	25.12	80.71	0.003	110.11	57.81	68.32
17.5	Oxidised	Indicated	1,397,000	4,936,000	3.53	34.87	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.776	1.066	0.241	22.73	21.54	41.52	0.214	0.082	42.29	25.37	28.75	69.51	1.276	25.15	80.59	0.003	110.20	57.80	68.27
15.0	Oxidised	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.241	22.73	21.55	41.54	0.214	0.082	42.30	25.37	28.75	69.51	1.277	25.15	80.58	0.003	110.21	57.79	68.26
12.5	Oxidised	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.241	22.73	21.55	41.54	0.214	0.082	42.30	25.37	28.75	69.51	1.277	25.15	80.58	0.003	110.21	57.79	68.26
10.0	Oxidised	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.241	22.73	21.55	41.54	0.214	0.082	42.30	25.37	28.75	69.51	1.277	25.15	80.58	0.003	110.21	57.79	68.26
0.0	Oxidised	Indicated	1,397,000	4,937,000	3.53	34.86	5.05	13.83	0.024	0.079	3.29	0.082	0.080	381.822	1.066	0.241	22.73	21.55	41.54	0.214	0.082	42.30	25.37	28.75	69.51	1.277	25.15	80.58	0.003	110.21	57.79	68.26

Oxidised : Measured

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn %	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn %	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Oxidised	Measured	1,000	5,000	3.87	56.30	2.77	3.55	0.019	0.044	1.01	0.073	0.080	377.476	1.117	0.110	6.84	8.25	13.53	0.179	0.125	45.80	58.91	37.92	189.07	0.437	38.17	61.56	0.003	68.13	49.82	38.05
45.0	Oxidised	Measured	97,000	361,000	3.72	47.96	3.90	6.21	0.023	0.124	1.34	0.069	0.092	840.062	0.826	0.291	14.53	9.84	18.50	0.180	0.102	26.03	31.61	30.65	134.77	0.790	20.93	69.56	0.003	85.62	57.05	46.87
35.0	Oxidised	Measured	511,000	1,882,000	3.68	40.71	4.68	10.45	0.026	0.099	2.06	0.085	0.104	743.278	0.830	0.318	19.01	14.84	30.16	0.191	0.091	29.03	26.27	30.58	188.32	0.761	21.70	85.97	0.003	98.11	63.10	62.65
30.0	Oxidised	Measured	870,000	3,191,000	3.67	37.33	4.93	12.45	0.028	0.103	2.08	0.084	0.098	532.802	0.906	0.363	21.77	18.19	35.46	0.188	0.088	28.13	25.20	31.41	150.27	0.889	22.46	86.48	0.003	104.74	61.21	65.33
27.5	Oxidised	Measured	1,039,000	3,803,000	3.66	35.97	5.03	13.17	0.028	0.103	2.17	0.084	0.096	481.314	0.942	0.363	22.90	19.65	36.85	0.190	0.087	27.24	24.66	31.43	135.99	0.943	23.11	88.02	0.003	107.27	60.56	65.43
25.0	Oxidised	Measured	1,125,000	4,112,000	3.65	35.24	5.08	13.61	0.028	0.103	2.24	0.084	0.096	452.371	0.962	0.354	23.46	20.63	37.19	0.194	0.086	27.31	24.53	31.50	129.85	0.963	23.51	89.00	0.003	109.18	60.04	64.52
22.5	Oxidised	Measured	1,188,000	4,336,000	3.65	34.65	5.07	14.04	0.027	0.101	2.30	0.084	0.094	434.804	0.969	0.341	23.84	21.91	38.00	0.195	0.084	27.31	24.84	31.56	125.13	1.002	23.89	87.97	0.003	110.83	58.98	62.84
20.0	Oxidised	Measured	1,197,000	4,366,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.230	0.969	0.339	23.90	22.12	38.22	0.196	0.083	27.32	24.93	31.56	124.48	1.010	23.99	87.76	0.003	110.99	58.83	62.61
17.5	Oxidised	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.339	23.90	22.13	38.23	0.196	0.083	27.32	24.93	31.56	124.46	1.010	23.99	87.76	0.003	111.00	58.83	62.61
15.0	Oxidised	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.339	23.90	22.13	38.23	0.196	0.083	27.32	24.93	31.56	124.46	1.010	23.99	87.76	0.003	111.00	58.83	62.61
12.5	Oxidised	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.339	23.90	22.13	38.23	0.196	0.083	27.32	24.93	31.56	124.46	1.010	23.99	87.76	0.003	111.00	58.83	62.61
10.0	Oxidised	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.339	23.90	22.13	38.23	0.196	0.083	27.32	24.93	31.56	124.46	1.010	23.99	87.76	0.003	111.00	58.83	62.61
0.0	Oxidised	Measured	1,197,000	4,367,000	3.65	34.56	5.07	14.10	0.027	0.101	2.31	0.085	0.094	432.173	0.969	0.339	23.90	22.13	38.23	0.196	0.083	27.32	24.93	31.56	124.46	1.010	23.99	87.76	0.003	111.00	58.83	62.61

Oxidised Total

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn %	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn %	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Oxidised	Total	0	0	4.41	61.38	2.37	1.49	0.015	0.015	-0.11	0.062	0.067	43.178	1.667	0.012	3.31	5.35	15.69	0.176	0.163	91.69	87.82	40.45	47.74	0.430	58.77	51.38	0.003	62.83	45.96	26.92
55.0	Oxidised	Total	3,000	12,000	3.83	56.32	3.07	3.37	0.025	0.028	0.60	0.068	0.071	194.380	1.072	0.131	6.41	10.89	12.24	0.157	0.128	52.74	58.83	35.06	117.79	0.676	42.51	53.17	0.003	66.19	50.10	33.82
45.0	Oxidised	Total	298,000	1,075,000	3.61	48.07	4.30	5.91	0.028	0.102	1.71	0.068	0.097	849.563	0.944	0.314	13.52	9.74	27.60	0.172	0.089	51.47	26.13	24.20	90.14	0.831	20.93	62.74	0.003	80.04	56.98	54.38
35.0	Oxidised	Total	1,126,000	4,069,000	3.61	41.62	4.72	9.60	0.026	0.088	2.59	0.079	0.101	684.263	0.927	0.275	17.75	13.51	32.38	0.195	0.087	43.98	25.71	26.73	125.24	0.834	22.02	76.66	0.003	91.52	60.86	68.05
30.0	Oxidised	Total	1,902,000	6,850,000	3.60	37.88	4.96	11.76	0.027	0.089	2.72	0.082	0.094	496.847	0.968	0.302	20.86	17.86	35.92	0.199	0.089	38.46	24.88	28.80	110.11	0.999	22.72	82.37	0.003	102.21	60.05	71.87
27.5	Oxidised	Total	2,267,000	8,144,000	3.59	36.45	5.00	12.67	0.026	0.089	2.81	0.082	0.090	449.636	0.994	0.304	21.99	19.24	37.48	0.199	0.087	36.29	24.48	29.19	102.27	1.063	23.25	84.43	0.003	105.54	59.81	70.70
25.0	Oxidised	Total	2,473,000	8,870,000	3.59	35.62	5.02	13.28	0.026	0.088	2.84	0.082	0.088	422.726	1.010	0.297	22.61	20.16	38.38	0.202	0.085	35.61	24.60	29.53	97.84	1.100	23.81	84.51	0.003	107.93	59.22	68.79
22.5	Oxidised	Total	2,616,000	9,373,000	3.58	34.99	5.03	13.77	0.026	0.087	2.87	0.082	0.086	406.596	1.014	0.287	23.04	21.30	39.31	0.204	0.083	35.17	24.95	29.78	94.56	1.142	24.36	83.54	0.003	109.72	58.42	66.79
20.0	Oxidised	Total	2,650,000	9,493,000	3.58	34.82	5.04	13.88	0.025	0.087	2.88	0.082	0.085	403.686	1.014	0.285	23.15	21.69	39.67	0.204	0.082	35.07	25.06	29.84	93.78	1.162	24.53	83.19	0.003	109.99	58.25	66.32
17.5	Oxidised	Total	2,653,000	9,505,000	3.58	34.80	5.04	13.89	0.025	0.088	2.88	0.082	0.085	403.632	1.013	0.285	23.17	21.74	39.75	0.205	0.082	35.08	25.06	29.84	93.72	1.165	24.54	83.12	0.003	110.05	58.24	66.29
15.0	Oxidised	Total	2,654,000	9,507,000	3.58	34.80	5.04	13.89	0.025	0.089	2.88	0.082	0.085	403.654	1.013	0.285	23.18	21.75	39.76	0.205	0.082	35.09	25.06	29.84	93.71	1.165	24.54	83.12	0.003	110.05	58.24	66.29
12.5	Oxidised	Total	2,654,000	9,507,000	3.58	34.80	5.04	13.89	0.025	0.089	2.88	0.082	0.085	403.654	1.013	0.285	23.18	21.75	39.76	0.205	0.082	35.09	25.06	29.84	93.71	1.165	24.54	83.12	0.003	110.05	58.24	66.29
10.0	Oxidised	Total	2,654,000	9,507,000	3.58	34.80	5.04	13.89	0.025	0.089	2.88	0.082	0.085	403.654	1.013	0.285	23.18	21.75	39.76	0.205	0.082	35.09	25.06	29.84	93.71	1.165	24.54	83.12	0.003	110.05	58.24	66.29
0.0	Oxidised	Total	2,654,000	9,507,000	3.58	34.80	5.04	13.89	0.025	0.089	2.88	0.082	0.085	403.654	1.013	0.285	23.18	21.75	39.76	0.205	0.082	35.09	25.06	29.84	93.71	1.165	24.54	83.12	0.003	110.05	58.24	66.29

Fresh Material by Resource Category

Fresh : Inferred

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Fresh	Inferred	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
55.0	Fresh	Inferred	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
45.0	Fresh	Inferred	0	1,000	3.53	47.76	4.10	4.60	0.022	0.175	0.26	0.042	0.074	151.872	0.837	0.682	15.27	21.16	28.07	0.096	0.074	39.03	20.23	21.34	22.40	1.697	26.08	38.62	0.003	82.67	53.17	48.14
35.0	Fresh	Inferred	1,000	4,000	3.58	39.99	3.99	10.15	0.023	0.096	4.15	0.056	0.059	295.579	0.911	0.303	20.66	24.53	38.41	0.150	0.070	25.33	21.98	21.14	26.71	2.123	26.56	37.86	0.003	83.81	54.48	70.16
30.0	Fresh	Inferred	4,000	12,000	3.54	33.94	3.70	16.08	0.015	0.090	3.15	0.076	0.039	210.954	0.837	0.176	25.98	35.08	43.33	0.197	0.055	22.04	29.92	29.42	44.05	2.017	33.99	43.89	0.003	118.67	56.76	123.76
27.5	Fresh	Inferred	6,000	21,000	3.52	31.81	3.99	16.75	0.015	0.095	3.10	0.071	0.034	267.176	0.791	0.157	26.85	40.24	46.09	0.209	0.051	25.58	27.04	27.73	45.27	2.208	32.41	47.91	0.003	119.30	56.07	111.67
25.0	Fresh	Inferred	16,000	56,000	3.50	28.39	4.35	18.61	0.013	0.138	3.37	0.111	0.023	197.614	0.803	0.162	29.42	43.42	72.05	0.205	0.047	24.67	24.84	29.98	45.53	1.879	28.84	68.31	0.003	130.51	51.61	99.58
22.5	Fresh	Inferred	35,000	123,000	3.50	25.75	4.44	21.00	0.010	0.148	3.34	0.125	0.024	275.895	0.803	0.151	30.95	46.00	74.93	0.207	0.041	27.48	23.10	33.52	43.07	1.522	26.34	64.64	0.003	143.39	43.81	78.19
20.0	Fresh	Inferred	42,000	148,000	3.50	25.07	4.44	21.67	0.010	0.135	3.29	0.124	0.026	273.417	0.804	0.137	31.49	47.25	74.33	0.207	0.041	26.85	22.65	34.59	40.81	1.503	25.78	61.88	0.003	146.54	42.50	69.83
17.5	Fresh	Inferred	44,000	154,000	3.50	24.82	4.45	21.85	0.010	0.132	3.29	0.119	0.025	289.119	0.807	0.132	31.77	47.70	76.04	0.208	0.045	27.18	22.47	34.98	40.02	1.518	26.49	62.27	0.003	148.39	41.63	67.35
15.0	Fresh	Inferred	45,000	158,000	3.50	24.62	4.44	21.98	0.010	0.129	3.27	0.116	0.024	284.438	0.812	0.129	32.01	47.67	76.07	0.208	0.045	27.46	22.38	35.00	39.33	1.522	26.87	63.31	0.003	149.64	41.18	66.15
12.5	Fresh	Inferred	45,000	158,000	3.50	24.62	4.44	21.98	0.010	0.129	3.27	0.116	0.024	284.438	0.812	0.129	32.01	47.67	76.07	0.208	0.045	27.46	22.38	35.00	39.33	1.522	26.87	63.31	0.003	149.64	41.18	66.15
10.0	Fresh	Inferred	45,000	158,000	3.50	24.62	4.44	21.98	0.010	0.129	3.27	0.116	0.024	284.438	0.812	0.129	32.01	47.67	76.07	0.208	0.045	27.46	22.38	35.00	39.33	1.522	26.87	63.31	0.003	149.64	41.18	66.15
0.0	Fresh	Inferred	45,000	158,000	3.50	24.62	4.44	21.98	0.010	0.129	3.27	0.116	0.024	284.438	0.812	0.129	32.01	47.67	76.07	0.208	0.045	27.46	22.38	35.00	39.33	1.522	26.87	63.31	0.003	149.64	41.18	66.15

Fresh : Indicated

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Fresh	Indicated	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
45.0	Fresh	Indicated	16,000	60,000	3.67	47.57	3.49	6.67	0.021	0.173	-0.01	0.042	0.088	114.478	0.929	0.452	16.18	15.65	24.74	0.130	0.087	29.67	23.33	26.60	25.30	1.816	20.07	50.45	0.003	79.15	53.27	55.07
35.0	Fresh	Indicated	234,000	857,000	3.66	39.35	3.79	12.28	0.022	0.105	1.14	0.055	0.090	315.379	1.001	0.382	19.80	50.97	32.90	0.146	0.061	29.91	23.45	23.07	50.71	2.493	23.49	54.84	0.003	84.04	54.42	67.11
30.0	Fresh	Indicated	842,000	3,023,000	3.59	34.08	4.09	15.76	0.022	0.092	1.42	0.066	0.065	447.447	1.070	0.377	23.06	56.95	43.89	0.154	0.058	27.11	24.45	28.14	61.31	2.499	24.27	60.61	0.003	99.19	56.46	66.28
27.5	Fresh	Indicated	1,297,000	4,622,000	3.56	32.21	4.21	16.98	0.022	0.087	1.61	0.073	0.062	424.887	1.078	0.364	24.49	56.34	48.53	0.159	0.056	24.86	24.47	29.63	56.27	2.376	24.71	65.32	0.003	106.33	55.77	64.14
25.0	Fresh	Indicated	1,723,000	6,117,000	3.55	30.75	4.35	17.78	0.021	0.097	1.81	0.081	0.058	429.422	1.032	0.339	25.77	56.75	54.41	0.168	0.053	24.42	24.52	30.43	53.32	2.314	24.57	69.25	0.003	111.20	54.70	60.96
22.5	Fresh	Indicated	2,077,000	7,358,000	3.54	29.58	4.44	18.39	0.020	0.106	2.02	0.089	0.056	420.157	0.993	0.312	26.82	57.87	60.08	0.173	0.051	24.75	23.98	30.53	49.54	2.256	24.43	70.07	0.003	115.35	52.76	57.72
20.0	Fresh	Indicated	2,291,000	8,108,000	3.54	28.82	4.48	18.92	0.019	0.109	2.09	0.093	0.054	407.519	0.971	0.295	27.48	58.42	61.58	0.177	0.050	24.88	23.62	30.92	47.68	2.220	24.79	69.23	0.003	118.67	51.39	55.62
17.5	Fresh	Indicated	2,465,000	8,711,000	3.53	28.13	4.50	19.43	0.018	0.107	2.12	0.094	0.052	387.909	0.957	0.277	28.16	58.25	62.84	0.181	0.049	24.65	23.08	31.17	46.03	2.159	25.17	70.39	0.003	121.26	50.21	53.81
15.0	Fresh	Indicated	2,543,000	8,984,000	3.53	27.78	4.50	19.73	0.018	0.106	2.12	0.093	0.051	379.369	0.954	0.270	28.47	58.14	63.31	0.183	0.048	24.54	22.78	31.42	45.24	2.137	25.48	70.51	0.003	122.78	49.58	52.89
12.5	Fresh	Indicated	2,552,000	9,016,000	3.53	27.73	4.50	19.76	0.018	0.105	2.12	0.093	0.051	378.300	0.954	0.269	28.51	58.17	63.42	0.183	0.048	24.57	22.75	31.45	45.13	2.137	25.53	70.60	0.003	122.96	49.49	52.77
10.0	Fresh	Indicated	2,552,000	9,016,000	3.53	27.73	4.50	19.76	0.018	0.105	2.12	0.093	0.051	378.300	0.954	0.269	28.51	58.17	63.42	0.183	0.048	24.57	22.75	31.45	45.13	2.137	25.53	70.60	0.003	122.96	49.49	52.77
0.0	Fresh	Indicated	2,552,000	9,016,000	3.53	27.73	4.50	19.76	0.018	0.105	2.12	0.093	0.051	378.300	0.954	0.269	28.51	58.17	63.42	0.183	0.048	24.57	22.75	31.45	45.13	2.137	25.53	70.60	0.003	122.96	49.49	52.77

Fresh : Measured

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Fresh	Measured	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
45.0	Fresh	Measured	13,000	50,000	3.80	46.70	3.54	8.72	0.019	0.139	0.64	0.052	0.129	207.245	0.955	0.452	15.67	23.15	33.55	0.141	0.094	42.08	27.57	29.88	70.13	1.264	24.96	101.68	0.003	75.89	66.47	60.28
35.0	Fresh	Measured	335,000	1,243,000	3.71	38.77	3.92	12.94	0.023	0.168	0.85	0.066	0.094	300.620	1.162	0.533	20.37	50.27	42.63	0.127	0.066	26.84	23.70	25.92	78.73	2.134	20.63	73.52	0.002	84.50	56.02	66.38
30.0	Fresh	Measured	1,020,000	3,710,000	3.64	34.45	4.14	15.50	0.024	0.138	1.03	0.078	0.079	417.672	1.217	0.504	23.29	53.24	51.84	0.136	0.061	24.60	25.53	29.30	76.73	2.194	22.71	75.44	0.003	100.14	55.12	67.92
27.5	Fresh	Measured	1,436,000	5,197,000	3.62	32.82	4.26	16.49	0.024	0.131	1.14	0.083	0.075	431.535	1.195	0.475	24.66	53.04	53.17	0.145	0.058	23.58	25.07	29.53	69.73	2.131	23.69	77.79	0.003	105.07	54.96	67.63
25.0	Fresh	Measured	1,733,000	6,261,000	3.61	31.72	4.34	17.16	0.024	0.129	1.24	0.086	0.073	424.428	1.174	0.454	25.54	52.88	54.13	0.151	0.057	23.36	25.07	29.99	66.09	2.083	24.05	78.21	0.003	108.71	54.42	66.24
22.5	Fresh	Measured	1,916,000	6,916,000	3.61	30.98	4.38	17.67	0.023	0.128	1.32	0.090	0.072	406.129	1.149	0.433	26.06	53.37	55.21	0.155	0.056	23.35	25.13	30.44	63.34	2.056	24.36	77.86	0.003	110.63	53.71	64.36
20.0	Fresh	Measured	1,983,000	7,156,000	3.61	30.66	4.41	17.92	0.023	0.126	1.36	0.092	0.071	398.652	1.139	0.422	26.29	53.59	55.76	0.156	0.056	23.30	25.02	30.55	62.22	2.046	24.57	77.93	0.003	111.22	53.44	63.71
17.5	Fresh	Measured	2,012,000	7,259,000	3.61	30.50	4.41	18.06	0.023	0.125	1.38	0.092	0.071	394.644	1.135	0.417	26.40	53.62	55.94	0.157	0.055	23.24	24.92	30.63	61.70	2.039	24.68	77.79	0.003	111.64	53.28	63.36
15.0	Fresh	Measured	2,018,000	7,282,000	3.61	30.46	4.41	18.10	0.023	0.124	1.38	0.093	0.071	393.758	1.134	0.416	26.42	53.62	55.96	0.157	0.055	23.21	24.90	30.66	61.59	2.036	24.71	77.77	0.003	111.77	53.24	63.28
12.5	Fresh	Measured	2,018,000	7,282,000	3.61	30.46	4.41	18.10	0.023	0.124	1.38	0.093	0.071	393.758	1.134	0.416	26.42	53.62	55.96	0.157	0.055	23.21	24.90	30.66	61.59	2.036	24.71	77.77	0.003	111.77	53.24	63.28
10.0	Fresh	Measured	2,018,000	7,282,000	3.61	30.46	4.41	18.10	0.023	0.124	1.38	0.093	0.071	393.758	1.134	0.416	26.42	53.62	55.96	0.157	0.055	23.21	24.90	30.66	61.59	2.036	24.71	77.77	0.003	111.77	53.24	63.28
0.0	Fresh	Measured	2,018,000	7,282,000	3.61	30.46	4.41	18.10	0.023	0.124	1.38	0.093	0.071	393.758	1.134	0.416	26.42	53.62	55.96	0.157	0.055	23.21	24.90	30.66	61.59	2.036	24.71	77.77	0.003	111.77	53.24	63.28

Fresh : Total

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Fresh	Total	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
45.0	Fresh	Total	30,000	112,000	3.73	47.19	3.52	7.54	0.020	0.158	0.28	0.046	0.106	155.897	0.939	0.455	15.94	19.04	28.67	0.135	0.090	35.27	25.16	27.98	45.03	1.571	22.31	72.89	0.003	77.76	59.09	57.27
35.0	Fresh	Total	570,000	2,103,000	3.69	39.01	3.86	12.66	0.023	0.142	0.97	0.061	0.092	306.669	1.096	0.471	20.13	50.50	38.63	0.135	0.064	28.10	23.59	24.74	67.13	2.281	21.82	65.79	0.003	84.31	55.36	66.69
30.0	Fresh	Total	1,866,000	6,746,000	3.61	34.28	4.11	15.61	0.023	0.117	1.21	0.073	0.073	430.723	1.150	0.446	23.19	54.88	48.23	0.144	0.060	25.73	25.05	28.78	69.71	2.331	23.44	68.68	0.003	99.75	55.73	67.28
27.5	Fresh	Total	2,739,000	9,841,000	3.59	32.53	4.24	16.72	0.023	0.110	1.37	0.078	0.068	428.023	1.139	0.422	24.59	54.57	50.96	0.152	0.057	24.19	24.79	29.58	63.30	2.247	24.19	71.82	0.003	105.70	55.35	66.08
25.0	Fresh	Total	3,472,000	12,434,000	3.58	31.22	4.34	17.47	0.022	0.114	1.54	0.084	0.066	425.854	1.102	0.396	25.67	54.75	54.35	0.159	0.055	23.89	24.79	30.21	59.66	2.197	24.33	73.72	0.003	110.05	54.55	63.78
22.5	Fresh	Total	4,028,000	14,397,000	3.57	30.21	4.41	18.07	0.021	0.117	1.70	0.090	0.063	412.233	1.066	0.369	26.49	55.63	57.89	0.165	0.053	24.11	24.52	30.51	56.04	2.154	24.41	73.73	0.003	113.35	53.14	61.05
20.0	Fresh	Total	4,316,000	15,411,000	3.57	29.63	4.45	18.49	0.021	0.117	1.77	0.093	0.062	402.135	1.047	0.352	26.97	56.09	59.03	0.168	0.052	24.17	24.25	30.79	54.29	2.133	24.70	73.16	0.003	115.52	52.25	59.48
17.5	Fresh	Total	4,521,000	16,125,000	3.57	29.15	4.46	18.85	0.020	0.115	1.80	0.093	0.060	389.946	1.035	0.338	27.41	56.09	59.90	0.171	0.052	24.05	23.89	30.97	52.95	2.099	24.97	73.60	0.003	117.24	51.49	58.19
15.0	Fresh	Total	4,607,000	16,424,000	3.57	28.92	4.46	19.04	0.020	0.114	1.81	0.093	0.059	384.743	1.031	0.332	27.61	56.06	60.22	0.172	0.051	23.99	23.70	31.12	52.34	2.087	25.16	73.62	0.003	118.22	51.10	57.57
12.5	Fresh	Total	4,616,000	16,456,000	3.56	28.89	4.46	19.06	0.020	0.114	1.81	0.093	0.059	384.141	1.031	0.332	27.63	56.07	60.28	0.172	0.051	24.00	23.68	31.14	52.27	2.087	25.19	73.66	0.003	118.33	51.05	57.50
10.0	Fresh	Total	4,616,000	16,456,000	3.56	28.89	4.46	19.06	0.020	0.114	1.81	0.093	0.059	384.141	1.031	0.332	27.63	56.07	60.28	0.172	0.051	24.00	23.68	31.14	52.27	2.087	25.19	73.66	0.003	118.33	51.05	57.50
0.0	Fresh	Total	4,616,000	16,456,000	3.56	28.89	4.46	19.06	0.020	0.114	1.81	0.093	0.059	384.141	1.031	0.332	27.63	56.07	60.28	0.172	0.051	24.00	23.68	31.14	52.27	2.087	25.19	73.66	0.003	118.33	51.05	57.50

All Material by Resource Category

Total : Inferred

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppm	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Total	Inferred	0	0	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00
55.0	Total	Inferred	0	0	3.38	49.43	4.16	4.15	0.031	0.080	1.47	0.062	0.073	531.451	0.000	0.000	0.00	0.00	0.00	0.000	0.000	28.45	17.20	19.51	49.27	1.199	20.70	39.35	0.003	69.55	55.77	53.24
45.0	Total	Inferred	18,000	61,000	3.35	44.09	3.97	7.46	0.028	0.066	4.34	0.070	0.055	463.726	0.459	0.579	13.32	10.17	18.27	0.095	0.069	22.63	18.20	17.74	46.92	1.264	19.92	41.63	0.002	71.82	56.38	79.93
35.0	Total	Inferred	35,000	116,000	3.38	39.78	3.82	10.24	0.022	0.064	4.90	0.061	0.040	358.306	0.559	0.358	15.77	9.30	20.42	0.129	0.065	21.27	21.15	20.90	44.56	1.529	21.44	48.96	0.003	84.37	56.95	96.47
30.0	Total	Inferred	54,000	183,000	3.39	38.64	3.86	11.01	0.022	0.064	4.83	0.060	0.037	344.682	0.648	0.269	18.18	16.54	26.64	0.155	0.067	21.51	21.01	21.07	43.92	1.592	21.74	49.19	0.003	86.85	56.93	95.81
27.5	Total	Inferred	60,000	205,000	3.41	36.52	4.00	12.44	0.020	0.078	4.57	0.069	0.034	316.072	0.655	0.251	18.94	18.21	28.25	0.161	0.066	22.08	21.38	22.72	44.11	1.659	22.63	53.54	0.003	95.19	55.77	94.43
25.0	Total	Inferred	73,000	248,000	3.43	33.48	4.15	14.79	0.017	0.097	4.28	0.081	0.031	318.217	0.681	0.235	20.88	23.05	37.29	0.169	0.062	24.11	21.52	25.60	43.53	1.607	23.30	55.08	0.003	108.06	52.04	88.05
22.5	Total	Inferred	95,000	325,000	3.44	32.65	4.16	15.51	0.017	0.095	4.20	0.084	0.031	314.206	0.710	0.214	23.41	28.78	45.83	0.179	0.057	24.08	21.45	26.60	42.56	1.593	23.29	54.61	0.003	111.85	50.92	83.90
20.0	Total	Inferred	102,000	350,000	3.44	32.41	4.17	15.69	0.017	0.094	4.18	0.082	0.031	320.149	0.717	0.204	24.16	30.51	47.64	0.181	0.056	24.27	21.40	26.91	42.20	1.598	23.63	54.90	0.003	113.24	50.41	82.60
17.5	Total	Inferred	104,000	357,000	3.44	32.24	4.17	15.82	0.017	0.093	4.16	0.082	0.030	317.781	0.720	0.201	24.41	30.99	48.83	0.182	0.057	24.42	21.37	27.00	41.88	1.599	23.83	55.44	0.003	114.18	50.11	81.91
15.0	Total	Inferred	105,000	361,000	3.44	32.24	4.17	15.82	0.017	0.093	4.16	0.082	0.030	317.781	0.723	0.198	24.60	31.17	49.15	0.183	0.057	24.42	21.37	27.00	41.88	1.599	23.83	55.44	0.003	114.18	50.11	81.91
12.5	Total	Inferred	105,000	361,000	3.44	32.24	4.17	15.82	0.017	0.093	4.16	0.082	0.030	317.781	0.723	0.198	24.60	31.17	49.15	0.183	0.057	24.42	21.37	27.00	41.88	1.599	23.83	55.44	0.003	114.18	50.11	81.91
10.0	Total	Inferred	105,000	361,000	3.44	32.24	4.17	15.82	0.017	0.093	4.16	0.082	0.030	317.781	0.723	0.198	24.60	31.17	49.15	0.183	0.057	24.42	21.37	27.00	41.88	1.599	23.83	55.44	0.003	114.18	50.11	81.91
0.0	Total	Inferred	105,000	361,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.723	0.198	24.60	31.17	49.15	0.183	0.057	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00

Total : Indicated

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Total	Indicated	2,000	7,000	3.58	47.96	4.43	5.99	0.030	0.099	1.77	0.067	0.101	821.129	1.042	0.144	6.12	12.61	11.39	0.143	0.130	64.10	24.03	21.68	66.65	0.900	20.90	60.47	0.003	78.21	56.74	58.18
45.0	Total	Indicated	200,000	715,000	3.59	41.43	4.51	9.93	0.025	0.086	2.44	0.069	0.097	550.251	1.043	0.313	13.27	10.16	32.63	0.171	0.084	50.19	25.02	23.63	67.51	1.339	22.74	66.00	0.003	86.07	57.79	70.66
35.0	Total	Indicated	816,000	2,932,000	3.57	36.32	4.61	13.33	0.024	0.085	2.36	0.074	0.080	460.437	1.025	0.276	17.63	23.62	34.44	0.187	0.078	38.61	24.65	27.48	70.23	1.731	23.62	71.28	0.003	100.17	57.93	71.78
30.0	Total	Indicated	1,824,000	6,512,000	3.55	34.36	4.60	14.77	0.023	0.082	2.40	0.077	0.073	425.434	1.054	0.309	21.53	35.83	40.11	0.184	0.076	34.43	24.49	28.67	65.22	1.793	24.13	73.65	0.003	105.72	57.43	68.96
27.5	Total	Indicated	2,471,000	8,779,000	3.54	32.91	4.64	15.78	0.023	0.088	2.44	0.081	0.069	416.856	1.068	0.311	23.00	38.63	43.80	0.183	0.071	32.58	24.66	29.48	61.46	1.836	24.42	74.77	0.003	109.76	56.37	65.45
25.0	Total	Indicated	3,014,000	10,684,000	3.54	31.79	4.68	16.50	0.022	0.094	2.52	0.086	0.066	406.151	1.048	0.300	24.18	40.95	48.19	0.186	0.067	31.83	24.48	29.77	57.75	1.853	24.61	74.48	0.003	113.11	54.84	62.22
22.5	Total	Indicated	3,445,000	12,192,000	3.54	31.12	4.70	16.99	0.021	0.097	2.54	0.089	0.064	397.784	1.023	0.284	25.11	43.19	52.47	0.189	0.064	31.46	24.28	30.10	55.95	1.861	24.91	73.57	0.003	115.43	53.82	60.42
20.0	Total	Indicated	3,684,000	13,031,000	3.53	30.57	4.70	17.41	0.020	0.097	2.54	0.089	0.062	385.691	1.008	0.274	25.67	44.44	53.93	0.191	0.062	31.03	23.91	30.30	54.52	1.839	25.16	74.08	0.003	117.26	52.95	59.04
17.5	Total	Indicated	3,862,000	13,647,000	3.53	30.29	4.70	17.64	0.020	0.096	2.54	0.089	0.061	380.239	0.997	0.264	26.19	44.97	55.13	0.193	0.061	30.84	23.70	30.47	53.84	1.832	25.36	74.08	0.003	118.32	52.49	58.34
15.0	Total	Indicated	3,940,000	13,921,000	3.53	30.25	4.69	17.67	0.020	0.096	2.53	0.089	0.061	379.546	0.994	0.259	26.43	45.17	55.59	0.194	0.060	30.84	23.67	30.50	53.75	1.832	25.40	74.13	0.003	118.45	52.42	58.25
12.5	Total	Indicated	3,949,000	13,953,000	3.53	30.25	4.69	17.67	0.020	0.096	2.53	0.089	0.061	379.546	0.994	0.259	26.47	45.21	55.68	0.194	0.060	30.84	23.67	30.50	53.75	1.832	25.40	74.13	0.003	118.45	52.42	58.25
10.0	Total	Indicated	3,949,000	13,953,000	3.53	30.25	4.69	17.67	0.020	0.096	2.53	0.089	0.061	379.546	0.994	0.259	26.47	45.21	55.68	0.194	0.060	30.84	23.67	30.50	53.75	1.832	25.40	74.13	0.003	118.45	52.42	58.25
0.0	Total	Indicated	3,949,000	13,953,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.994	0.259	26.47	45.21	55.68	0.194	0.060	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00

Total : Measured

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
55.0	Total	Measured	1,000	5,000	3.73	47.81	3.86	6.51	0.022	0.126	1.26	0.067	0.096	764.116	1.117	0.110	6.84	8.25	13.53	0.179	0.125	27.96	31.13	30.56	127.01	0.847	21.41	73.41	0.003	84.45	58.18	48.48
45.0	Total	Measured	110,000	412,000	3.69	39.94	4.38	11.43	0.025	0.126	1.58	0.077	0.100	567.958	0.841	0.310	14.67	11.44	20.31	0.175	0.101	28.17	25.25	28.73	144.92	1.305	21.28	81.04	0.003	92.72	60.30	64.13
35.0	Total	Measured	846,000	3,124,000	3.65	35.77	4.50	14.09	0.026	0.122	1.51	0.081	0.088	470.655	0.962	0.403	19.55	28.87	35.10	0.165	0.081	26.23	25.38	30.27	110.57	1.594	22.60	80.52	0.003	102.26	57.92	66.73
30.0	Total	Measured	1,890,000	6,901,000	3.64	34.14	4.58	15.09	0.026	0.119	1.57	0.083	0.084	452.438	1.074	0.439	22.59	37.11	44.30	0.160	0.073	25.11	24.89	30.33	97.56	1.632	23.45	82.09	0.003	105.99	57.31	66.71
27.5	Total	Measured	2,475,000	9,000,000	3.63	33.11	4.63	15.76	0.025	0.119	1.64	0.085	0.082	435.428	1.088	0.428	23.92	39.02	46.32	0.164	0.070	24.91	24.86	30.59	91.19	1.642	23.84	82.45	0.003	108.90	56.63	65.56
25.0	Total	Measured	2,858,000	10,373,000	3.63	32.39	4.65	16.28	0.025	0.117	1.70	0.088	0.080	417.104	1.090	0.415	24.72	40.18	47.46	0.168	0.068	24.87	25.02	30.87	86.99	1.652	24.18	81.73	0.003	110.71	55.73	63.77
22.5	Total	Measured	3,104,000	11,253,000	3.62	32.13	4.66	16.48	0.025	0.116	1.72	0.089	0.080	411.289	1.080	0.398	25.21	41.33	48.62	0.170	0.067	24.81	24.98	30.93	85.65	1.656	24.35	81.63	0.003	111.13	55.47	63.30
20.0	Total	Measured	3,180,000	11,522,000	3.62	32.01	4.66	16.58	0.025	0.116	1.72	0.089	0.079	408.641	1.075	0.391	25.39	41.75	49.16	0.171	0.066	24.76	24.92	30.98	85.11	1.655	24.42	81.51	0.003	111.40	55.35	63.08
17.5	Total	Measured	3,209,000	11,626,000	3.62	31.98	4.66	16.61	0.025	0.115	1.72	0.090	0.079	408.057	1.073	0.388	25.47	41.88	49.33	0.172	0.066	24.74	24.91	31.00	84.99	1.654	24.44	81.48	0.003	111.49	55.32	63.03
15.0	Total	Measured	3,215,000	11,649,000	3.62	31.98	4.66	16.61	0.025	0.115	1.72	0.090	0.079	408.057	1.072	0.387	25.49	41.90	49.36	0.172	0.066	24.74	24.91	31.00	84.99	1.654	24.44	81.48	0.003	111.49	55.32	63.03
12.5	Total	Measured	3,215,000	11,649,000	3.62	31.98	4.66	16.61	0.025	0.115	1.72	0.090	0.079	408.057	1.072	0.387	25.49	41.90	49.36	0.172	0.066	24.74	24.91	31.00	84.99	1.654	24.44	81.48	0.003	111.49	55.32	63.03
10.0	Total	Measured	3,215,000	11,649,000	3.62	31.98	4.66	16.61	0.025	0.115	1.72	0.090	0.079	408.057	1.072	0.387	25.49	41.90	49.36	0.172	0.066	24.74	24.91	31.00	84.99	1.654	24.44	81.48	0.003	111.49	55.32	63.03
0.0	Total	Measured	3,215,000	11,649,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	1.072	0.387	25.49	41.90	49.36	0.172	0.066	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00

All Material

From	Oxidation	Category	Volume	Tonnes	Density	Fe %	Al2O3%	CaO%	P%	K2O%	LOI	SnO2%	WO3%	S ppm	Mn ppm	Na2O %	SiO2%	RQD	Sr ppm	TiO2%	Zn ppm	Ba ppm	Co ppm	Cr2O3 ppr	Cu ppm	MgO%	Ni ppm	Pb ppm	V%	Zr ppm	Bi ppm	Cd ppm
60.0	Total	Total	0	0	3.83	56.32	3.07	3.37	0.025	0.028	0.60	0.068	0.071	195.587	1.667	0.012	3.31	5.35	15.69	0.176	0.163	52.69	58.83	35.08	118.26	0.674	42.49	53.23	0.003	66.21	50.10	33.84
55.0	Total	Total	3,000	12,000	3.62	47.98	4.22	6.08	0.027	0.108	1.57	0.066	0.098	785.074	1.072	0.130	6.41	10.87	12.25	0.157	0.128	49.71	26.13	24.65	86.58	0.898	21.07	63.89	0.003	79.92	57.19	54.57
45.0	Total	Total	328,000	1,187,000	3.64	40.72	4.43	10.66	0.025	0.106	2.03	0.073	0.098	556.398	0.943	0.326	13.76	10.62	27.62	0.169	0.089	38.45	25.00	26.10	106.16	1.326	21.95	73.11	0.003	89.15	59.02	67.52
35.0	Total	Total	1,696,000	6,173,000	3.61	36.09	4.54	13.68	0.025	0.103	1.96	0.077	0.083	464.343	0.984	0.343	18.58	26.14	34.51	0.175	0.080	32.07	24.97	28.81	90.43	1.659	23.07	75.66	0.003	101.02	57.92	69.53
30.0	Total	Total	3,768,000	13,596,000	3.59	34.30	4.58	14.89	0.024	0.100	2.01	0.080	0.078	438.088	1.058	0.374	22.02	36.23	42.05	0.172	0.074	29.61	24.65	29.42	81.24	1.710	23.76	77.60	0.003	105.65	57.37	68.13
27.5	Total	Total	5,006,000	17,984,000	3.58	33.05	4.63	15.73	0.024	0.103	2.07	0.083	0.075	424.767	1.073	0.369	23.42	38.57	44.87	0.173	0.071	28.72	24.72	29.94	75.81	1.739	24.11	78.27	0.003	109.18	56.50	65.84
25.0	Total	Total	5,945,000	21,305,000	3.58	32.10	4.66	16.37	0.023	0.105	2.15	0.087	0.072	410.170	1.064	0.355	24.40	40.34	47.70	0.177	0.068	28.43	24.69	30.24	71.47	1.754	24.39	77.66	0.003	111.91	55.23	63.30
22.5	Total	Total	6,644,000	23,770,000	3.58	31.61	4.67	16.73	0.023	0.106	2.18	0.089	0.071	402.894	1.046	0.337	25.14	42.08	50.55	0.180	0.065	28.28	24.57	30.44	69.57	1.761	24.63	77.04	0.003	113.40	54.55	62.08
20.0	Total	Total	6,966,000	24,904,000	3.57	31.25	4.67	17.01	0.022	0.105	2.20	0.089	0.070	395.228	1.035	0.327	25.52	42.97	51.62	0.182	0.064	28.10	24.33	30.56	68.30	1.751	24.80	77.20	0.003	114.55	54.01	61.20
17.5	Total	Total	7,175,000	25,630,000	3.57	31.08	4.67	17.15	0.022	0.105	2.19	0.089	0.069	391.906	1.027	0.319	25.84	43.34	52.40	0.183	0.063	28.01	24.21	30.66	67.74	1.748	24.93	77.16	0.003	115.20	53.73	60.77
15.0	Total	Total	7,261,000	25,931,000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.316	25.98	43.47	52.69	0.184	0.063	28.02	24.19	30.67	67.68	1.748	24.95	77.18	0.003	115.27	53.70	60.72
12.5	Total	Total	7,270,000	25,962,000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.315	26.00	43.49	52.74	0.184	0.063	28.02	24.19	30.67	67.68	1.748	24.95	77.18	0.003	115.27	53.70	60.72
10.0	Total	Total	7,270,000	25,962,000	3.57	31.06	4.67	17.16	0.022	0.105	2.19	0.089	0.069	391.519	1.025	0.315	26.00	43.49	52.74	0.184	0.063	28.02	24.19	30.67	67.68	1.748	24.95	77.18	0.003	115.27	53.70	60.72
0.0	Total	Total	7,270,000	25,962,000	0.00	0.00	0.00	0.00	0.000	0.000	0.00	0.000	0.000	0.000	1.025	0.315	26.00	43.49	52.74	0.184	0.063	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.00

Grade Tonnage Curve