Final

Segele Gold Deposit Mineral Resource Update

Akobo Basin District, Ethiopia

Akobo Minerals AB

SRK Consulting (Australasia) Pty Ltd ▪ AKM002 ▪ June 2022

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Akobo Basin District, Ethiopia

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Cover Image:
Aerial view of the Segele Gold Deposit, looking northwest – Akobo Minerals AB

Acknowledgments

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Dr Matt Jackson (Chief Operating Officer, Akobo Minerals AB)

Mr Johan Sjöberg (Chief Exploration Manager, Akobo Minerals AB)

Mr Bezabh Tamene (Exploration Team Manager, Akobo Minerals AB)

Mr Getaneh Zenebe (Exploration Geologist, Akobo Minerals AB)

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Mr Teshome Abera (Technical Manager, Akobo Minerals AB)

in the preparation of the 2022 Segele geological model, Mineral Resource Estimate and this report.

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Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

Akobo	Akobo Minerals AB
Au	gold
CRM	certified reference material
CV	coefficient of variation
DDH	diamond drill hole
EAO	East African Orogen
ETNO	ETNO Mining Plc
g/t	grams per tonne
ID^2	Inverse Distance interpolation to the power of two
KNA	Kriging Neighbourhood Analysis
OK	Ordinary Kriging interpolation
QA/QC	quality assurance, quality control
RC	reverse circulation drilling
S	Sulphur
WES	Western Ethiopian Shield

Executive Summary

Akobo Minerals AB (Akobo) engaged SRK Consulting (Australasia) Pty Ltd (SRK) to complete an updated Mineral Resource estimate for the Segele Gold Deposit located in the Akobo Gold Exploration Project in southwestern Ethiopia.

The April 2022 Segele Gold Deposit Mineral Resource estimate has been classified in accordance with the guidelines of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012 edition) by Mr Michael Lowry who is a member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of SRK Consulting (Australasia) Pty Ltd. Mr Lowry has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

The April 2022 Mineral Resources have been reported above a 2.65 g/t Au cut-off grade (Table ES-1). Mr Lowry is of the opinion that the classified Mineral Resources above a 2.65 g/t Au cut-off would have reasonable prospects of eventual economic extraction using conventional underground mining methods.

Table ES-1: Segele Gold deposit Mineral Resources as of 22 April 2022

Classification	Cut-off grade[1,2] (Au g/t)	Tonnes (kt)[3]	Au (g/t)	Gold ounces (koz)[3]
Measured	≥2.65	0	0	0
Indicated		32	40.6	41
Inferred		62	13.6	27
Total Mineral Resources		**94**	**22.7**	**69**

Notes:

[1] The Mineral Resource cut-off grade assumes the deposit will be mined using a cut and fill underground mining technique which was studied by Akobo Minerals in a 2021 scoping study. The Scoping study concluded that the deposit would be accessed using an inclined shaft from the surface and the ore would be mined using shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill depending on the dip and orientation of the orebody.

[2] The Mineral Resource cut-off grade was calculated using a gold price of US$1,600/oz, costs per tonne for mining, processing, administration, and environment, social and governance (ESG) and a 5% royalty for the federal Government of Ethiopia on gold sales.

[3] Tonnes and ounces are reported as kilotonnes (1,000s of tonnes) and kilo-ounces (1,000s of ounces).

1 Introduction

The Akobo Gold Project in southwestern Ethiopia has been actively explored by Akobo since 2010. In early 2021 Akobo completed a diamond drilling campaign over the Segele Gold Deposit and then engaged SRK to complete a maiden Mineral Resource estimate dated 30 March 2021.

Akobo has completed an additional 59 diamond drill holes over the deposit since 30 March 2021, infilling the previously identified Mineral Resource extents and targeting deeper mineralisation extensions. Akobo engaged SRK in March 2022 to complete an updated Mineral Resource estimate for the deposit

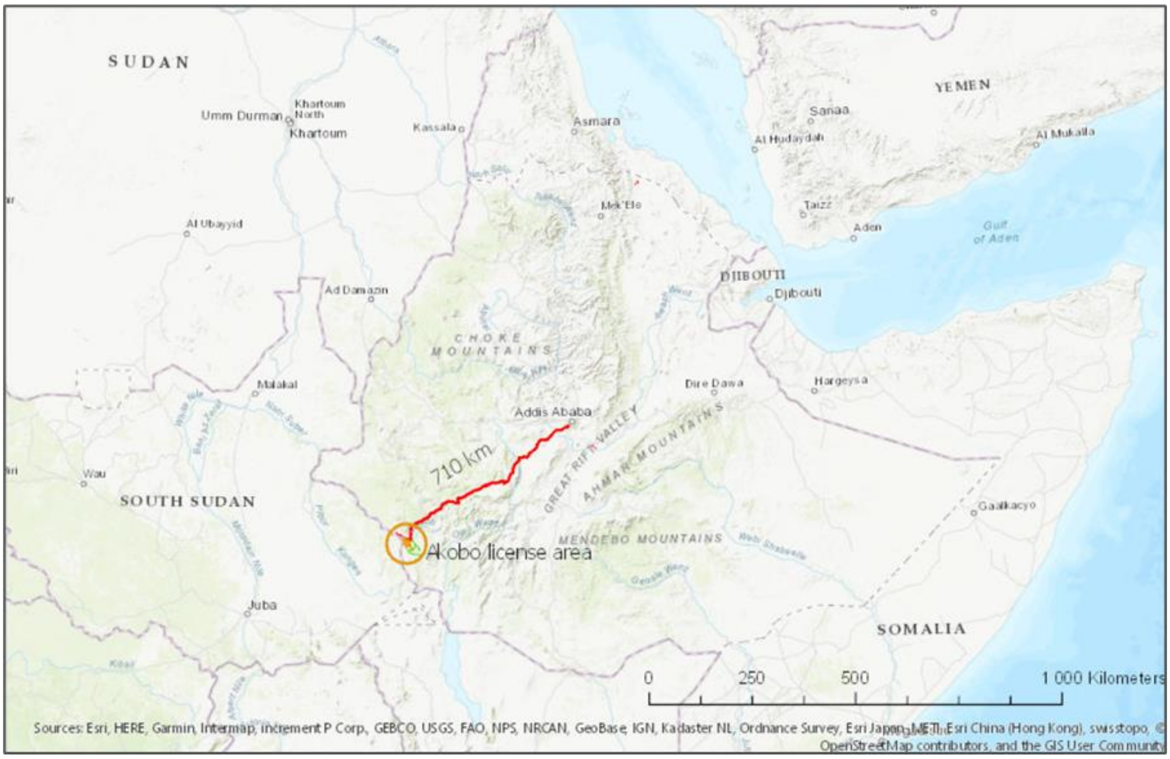
SRK has not been able to conduct an in-person site visit due to COVID-19 travel restrictions, however the Competent Person – Michael Lowry, Principal Consultant, Resource Evaluation – was able to complete a virtual site tour. The virtual site tour was undertaken on 15 March 2021 with Akobo geological staff Bezabh Tamene and Alem Hailegebriel and the Akobo Chief Operating Officer Dr Matt Jackson, using Microsoft Teams. During the virtual tour Mr Lowry observed logging and sampling practices for diamond drill core at the Akobo Gold Project field office and a field visit to the Segele Gold Deposit where he observed drill hole collars, the surface topography and geology, and artisanal mining pits.

Throughout this report where text refers to directions, for example, north, east and elevation, the authors are referring to the Adindan/UTM Zone 36N coordinate system and metres above mean sea level.

2 Location and tenure

The Akobo Gold Project is located in southwest Ethiopia, approximately 710 km southwest of the Ethiopian capital of Addis Ababa and adjacent to the border with South Sudan (Figure 2-1). The project occurs in a region of gently rolling savannah landscape between 600 m and 800 m above mean sea level. The climate of the region is semi-arid with a gentle rainy season from June to November and temperatures above 40°C during the hottest dry periods. Access to the project from Addis Ababa is by 680 km of sealed road and then 30 km by dirt road.

Figure 2-1: Location of the Akobo Gold Project

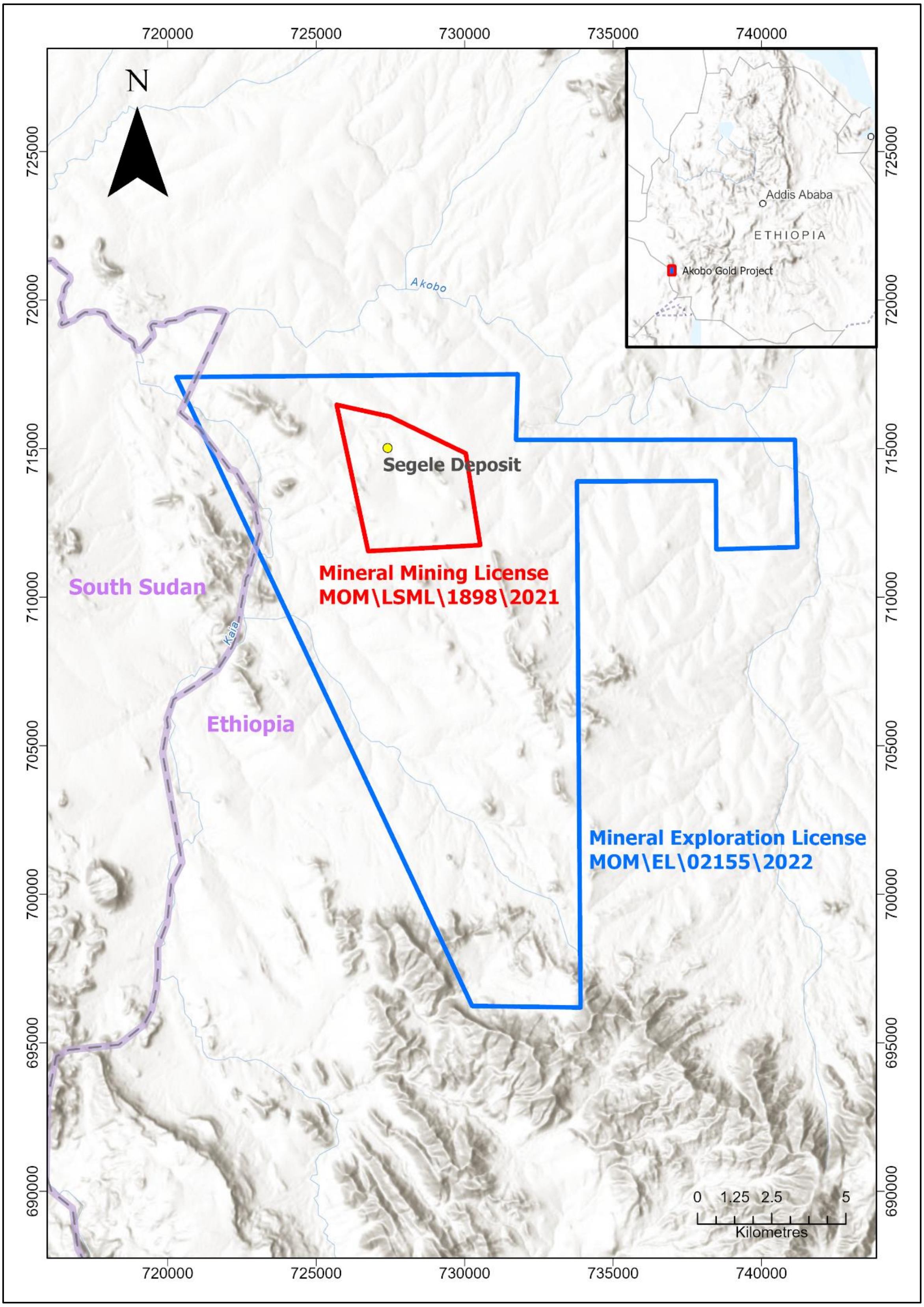


The Akobo Gold project consists of one Mineral Exploration Licence (MOM\EL\02155\2022) 166 km^2 in size adjacent to the border with South Sudan and one Mineral Mining Licence (MOM/LSML/1898/2021) 16.1 km^2 in size which occurs within the Mineral Exploration Licence (Figure 2-2). Both licences are owned by Etno Mining PLC. The Segele deposit lies within the Mineral Mining Licence.

The Mineral Exploration Licence was granted on 3 March 2022 and is valid for 3 years. The Mineral Mining Licence was granted on 30 September 2021 and is valid for 5 years. The mining licence can be renewed up to a maximum of 10 years for each renewal.

There are no known issues relating to third parties, however, a royalty of 5% on the sale price of gold extracted from the project payable to the Federal Government of Ethiopia applies to the Mineral Mining Lease.

Figure 2-2: Akobo Gold Project tenure



3 Geology and mineralisation

The following Segele deposit geological summary was prepared by Bezabh Tamene, Gelana Bedasso, Haftom Gebremeskel and Johan Sjöberg from Akobo Minerals AB.

3.1 Segele deposit geological summary

The Segele Gold Deposit is situated in a mafic to ultramafic complex within a sequence of metasedimentary to ultramafic rock units bounded by large plutons to the north and northeast. The wider host sequence is poorly understood and poorly defined, especially to the west, but likely continues well into South Sudan. On a regional scale the host sequence is overlain by younger basaltic rocks forming the massifs of the Ethiopian highland, but in several areas basement windows expose the older rocks. The Akobo area is situated in one such basement window.

The gold deposits in the Akobo area are typical Orogenic Gold Deposits and the area can be described as a regular greenstone-belt with both vein- and alteration-hosted gold deposits. The metamorphic grade in the Akobo area varies from greenschist to lower amphibolite facies and hence ductile to brittle-ductile deformation plays a key role in the formation of the gold deposits.

The mineralisation in Segele is hosted by altered ultramafic rocks ranging from meta-pyroxenites to meta-peridotites, the alteration is a calc silicate alteration that has primarily interacted with ultramafic rocks close to the contact with a underlaying larger meta-peridotite unit. In several places the alteration continues into the meta-peridotites and the gold grade carries through as well. The alteration minerals are primarily amphiboles, chlorite and orthopyroxenes.

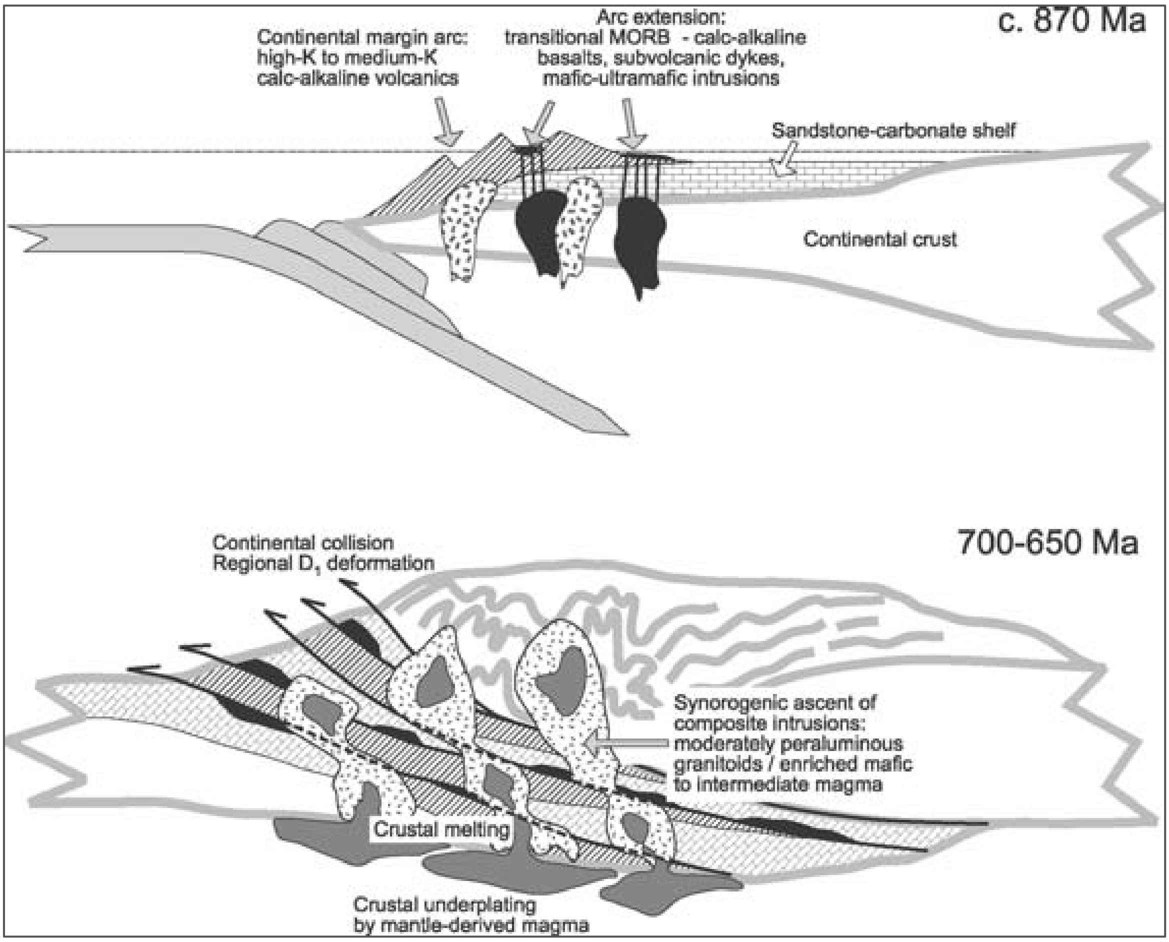
This mineralised envelope takes the form of several small, stacked lenses that are strung out along a predictable structural trend straight to the north from the surface outcrops. The individual lenses seem to follow the regional foliation with an average dip of 55˚ towards 330˚ while the mineralised envelope plunges 45˚ towards 360˚.

The Segele gold mineralisation has a very high nugget effect with abundant visible gold – it is not uncommon for gold grades to vary two orders of magnitude between assays of the same sample. Despite this the position of the deposit is very predictable down plunge.

3.2 Regional geology

The metavolcanic-sedimentary rock sequence of the Akobo area is a part of the southern extension of the Western Greenstone Belt of Ethiopia, which itself is part of the Arabian Nubian Shield (Figure 3-2). Grenne et al. (2003) is the most up-to-date study of the age and paleotectonic evolution of the region (Figure 3-1).

Figure 3-1: Schematic palaeotectonic model for the East African Orogen of Western Ethiopia



Source: Grenne et al. (2003)

Note: Subduction polarity is unknown and is arbitrarily drawn in the figure

Most of Ethiopia is covered by Tertiary or Quaternary volcanic flood basalt sequences. The area of Western Ethiopia, where the Akobo Gold Project occurs, is within a basement window through the younger volcanic cover which allows the underlying Precambrian basement to be observed (United Nations, 1971). This 100 km by 300 km inlier is a north–south trending mobile belt hosting metavolcanic to metasedimentary sequences, zones of gneiss and migmatite, and the ultramafic complexes that are the subject of the current gold exploration (Figure 3-2).

The origin of the ultramafic bodies of Western Ethiopia is the subject of some contradictory interpretation in published literature. Using remote sensing, Berhe and Rothery (1986) linked the ultramafic complexes in Western Ethiopia with those further north and south in East Africa and identified the position of five north–south trending sutures in this part of East Africa. In his discussion of the tectonic consequences, Berhe (1990) considers that these sutures with remnant ophiolites represent the remnants of back-arc basins, supra-subduction zones, and sutures between two continental blocks. Berhe (1990) identified the Baraka – Yubdo - Sekerr suture as being juxtaposed against a similar suture from Eastern Sudan that may continue southward into Tanzania.

Satellite interpretation has shown that the structure continues northwards to Baraka in northeastern Sudan and Eritrea (Berhe and Rothery, 1986). Conversely, Grenne et al. (2003) consider the ultramafic to be geochemically like sediment-hosted dykes and metavolcanites, and hence likely to be solitary intrusions formed in response to arc extension.

The ultramafic complexes are located within the Western Ethiopian Shield (WES) which itself forms part of the greater East African Orogen (EAO). The deformational history of the EAO is divided into two phases: structures associated with the accretionary/collisional phase of the orogeny and post accretionary structures (Abdelsalam and Stern, 1996). Of the collisional structures, two suture types are identified: arc-arc and arc-continental. The Baraka – Yubdo – Sekerr suture is the result of the accretion of two arc terranes (Abdelsalam and Stern, 1996). The deformation within this suture is characterised by north-trending sinistral transpression. Arc-arc sutures in the EAO typically have nappes containing ophiolitic material associated with them, and these were steepened by upright folding during the final stages of collision (Abdelsalam and Stern, 1996).

The post accretionary deformation is in part the development of northwest-trending strike-slip faults and shear zones (Belete et al., 2000; Abdelsalam and Stern, 1996).

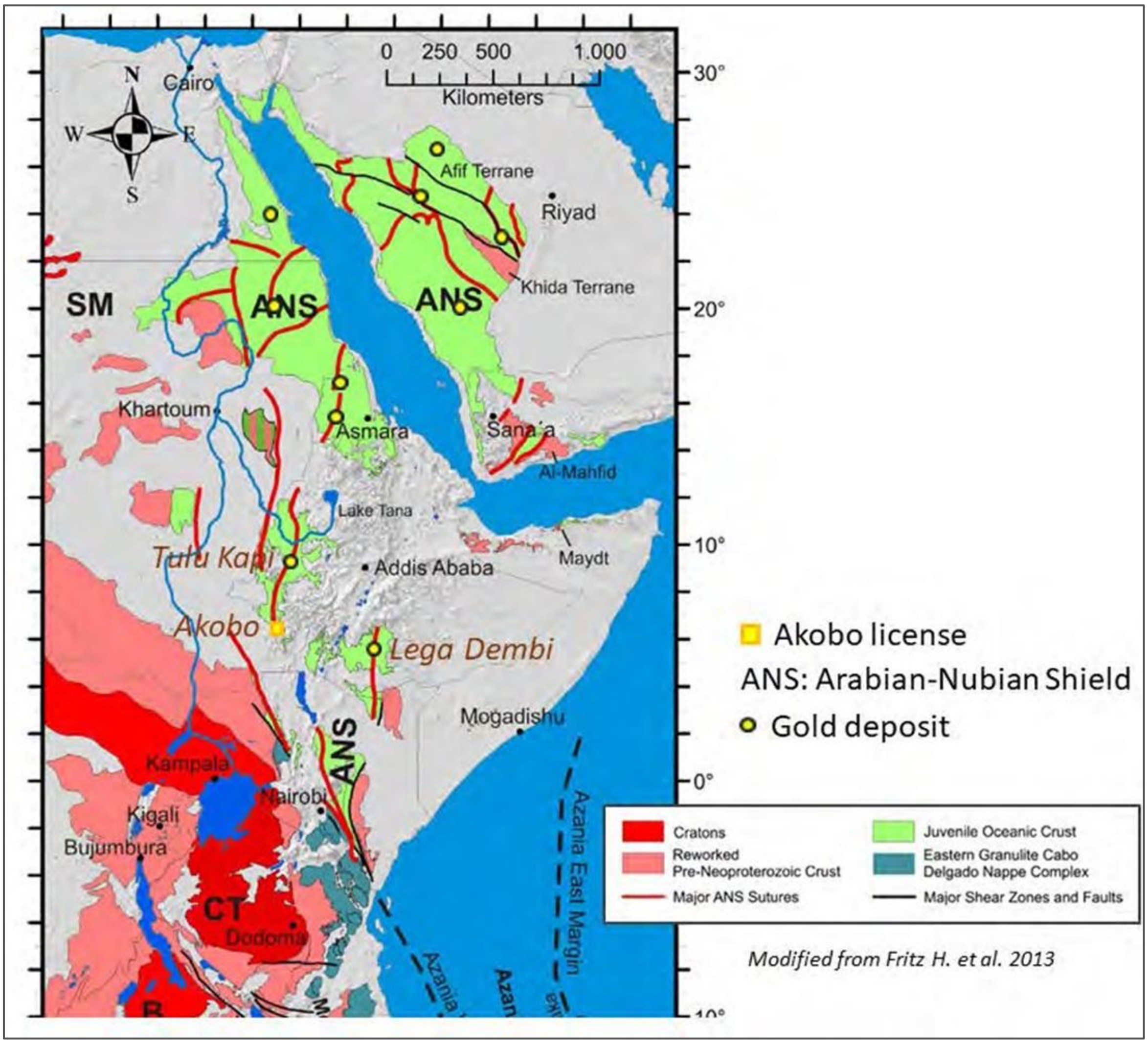
The WES records a history of crustal formation and deformation within the EAO lasting around 500 Ma (Johnson et al., 2004). The shield is divided into three lithotectonic domains: the Baro, Geba, and Birbir domains (Johnson et al., 2004; Ayalew et al., 1990; Allen and Tadesse, 2003). These domains strike north-northeast–south-southwest with the Birbir domain in the centre, this trend is parallel to the trend of the EAO.

The Precambrian crystalline basement of Ethiopia occurs at the interface between the gneissic terrain of the Mozambique Organic Belt to the south in east Africa, and the Pan-African Orogenic complex of Late Proterozoic to early Paleozoic age of the Arabian-Nubian shield to the north. The Ethiopian crystalline basement complex contains rocks that appear to be representative of both types of association. The metamorphic rock assemblages with its attendant plutonic rocks that make up the crystalline basement of southwestern Ethiopia are part of the Mozambique Belt, itself part of the Pan-African Organic System of Late Precambrian to earliest Paleozoic age.

The Pan-African low-grade metamorphic belt of Southwestern Ethiopia is bounded by high metamorphic gneissic terrains to the east and west. The Precambrian basement complex that underlies southwestern Ethiopia has been divided into three major complexes based on contrasting rock assemblages, metamorphism, and structural styles (Davidson et al., 1976; Davidson, 1983). From southeast to northwest these are:

- Hamar domain – high grade layered gneisses and orthogeisses in the southeast, north to northwest structural trend
- Akobo domain – a complex zone containing large variety of rock types including schists of sedimentary and volcanic origin, metamorphosed at middle green schist facies and intruded by syn- to post-tectonic intrusive of felsic to ultramafic compositions in the middle, north and northwest structural trend
- Surma domain – cataclastic and blastomylonitic gneisses in the southwest, characterised by abundant evidence of severe cataclasis, including the development of ultramylonite in narrow zones parallel to the layering, with a strongly developed northwest structural trend referred as Surma Shear Zone (Davidson et al., 1976; Davidson, 1983).

Figure 3-2: Gold in the Arabian Nubian Shield – a large underexplored Precambrian terrane



Source: modified after, Fritz et al. (2013)

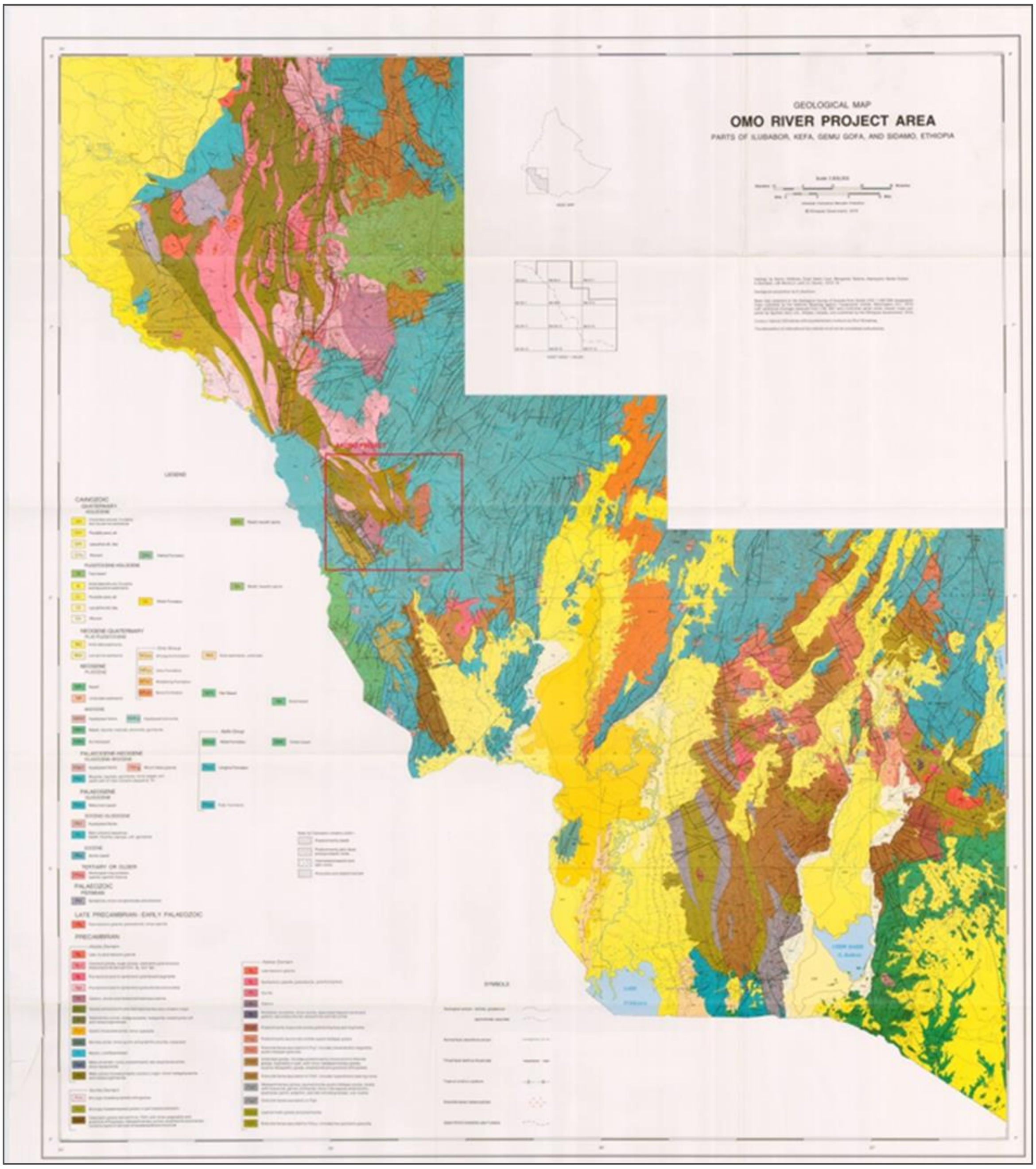
The main distinction between the Hamar and the Akobo domains lies in the greater variety of rocks recognisable as to the protolith and the generally lower metamorphic grade in the Akobo domain, whereas the boundary between the Akobo and Surma domains is of tectonic origin, involving transposition of Akobo domain rocks into straightened gneisses with a northwesterly trend, accompanied by increase in metamorphic grade southwestward across the boundary zone.

There is a marked variation in lithology, metamorphism and structural style within the Akobo domain, which separates it from the two high-grade gneissic terrains, the Hamar and Surma domains. In these gneissic terrains, deformation and amphibolite alteration at higher metamorphic grade has obscured nearly all evidence of earlier fold patterns and lithologic relationships, with resultant structural parallelism. It is possible that the Hamar domain is basement to the supracrustal schists of Akobo domain, and that both are older than the cataclastic tectonism with Surma domain.

The southeastern basement rocks (Hamar domain) are predominantly gneisses of both supracrustal and plutonic origin. They are intruded in places by syn- and post-tectonic plutons mainly granitoid in composition with lesser/minor gabbroic and ultramafic intrusions. Metamorphic grade is dominantly middle to upper amphibolite facies, and locally granulite facies. The structural trend is north-westerly, shallowly dipping to the northeast, steepening eastward, and dipping southwest close to east side of the domain.

The Akobo domain, with a metamorphic grade ranging from middle greenschist to middle amphibolite facies, is intruded by ultramafic and gabbroic to granitoid plutonic rocks of both syn- to post-tectonic types. Structures are north trending, dominantly dipping eastwards. The domain narrows towards the south where it terminates underneath Tertiary lava flows, south of here the Hamar domain is truncated by Surma shear zone.

Figure 3-3: Regional geological map of southwestern Ethiopia, Omo River Project



3.3 Akobo Project local geology

The Akobo Gold Project exploration and mining licences lie within primarily greenschist facies metamorphic supracrustal rocks, containing schists of both mafic and felsic volcanic origin associated with various metasediments as well as mafic and ultramafic rocks. In the Akobo basin to the south the rocks are relatively low-grade metasedimentary and metavolcanic rocks enclosing characteristic meta ultramafic lenses and surrounding well preserved plutons ranging from gabbro to granite.

The major rock types include mafic metavolcanics and metasediments, such as quartzite, marble, graphitic schist, quartz-mica and quartz-feldspar schist. These lithologies were intruded by plutons ranging in composition from mafic to felsic. Granitic and pegmatitic dykes are rare. Quartz veins of variable dimensions, ranging from centimetre to hundreds of meters occur in the area and commonly display a pinch and swell pattern concordant with the foliation of the enclosing rocks that trends northwest to southeast. The quartz veins occur as ridges of variable size and are commonly boudinaged and some veins occur as shear-hosted vein systems.

The Akobo domain is flanked along the southwest side, along the border between Ethiopia and South Sudan, by straight layered and mylonite type gneisses separated from the rest of the region by a zone of intense mylonitisation occurring within the Surma domain. Metamorphic grade is invariably amphibolite facies with gneissic layering trends persistently striking northwest and dipping mainly to southwest for the most part.

The Akobo Gold project is in an area effected by the ‘Surma Shear Zone’ of the Akobo Greenstone Belt. The ‘Surma Shear Zone’ is a north-northwest trending structural zone characterised by folded and sheared, Neoproterozoic mafic schist, ultramafic bodies, metasedimentary schists, marble, and gneisses, that were intruded by late gabbros and granitoids.

One of the characteristic features of the Surma Shear Zone is the development of protomylonite, in places developed to narrow mylonitic shears. All gradation from augen to protomylonite to ultramylonite are present in steep zones. Mesoscopic features such as drag folded shear bands and related porphyroblasts indicate a sinistral sense of movement.

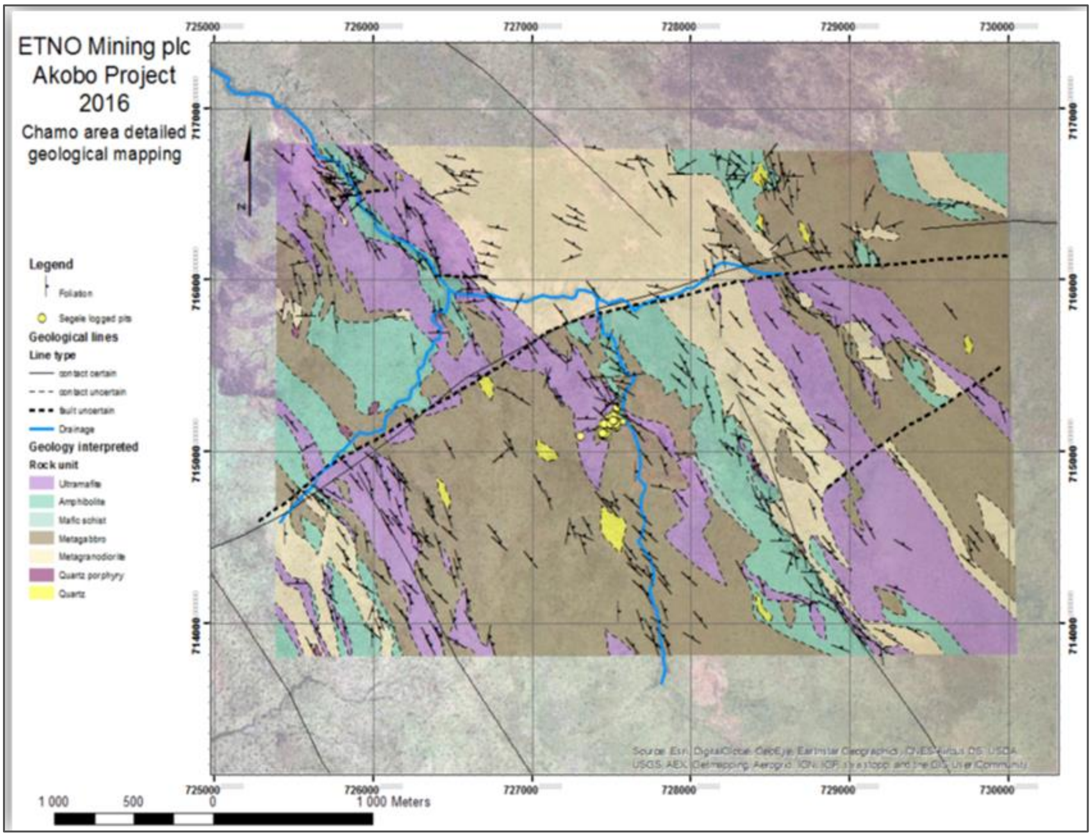
Bodies of ultramafic rocks are common in the Akobo area – the size varies from large ridge-like complexes to small intrusions or lenses. Similar rocks occur along the belt to the north, e.g. at Yubdo, Tulu Kapi, Tulu Dimtu, Baruda etc. Gold is broadly associated with these areas of higher concentration of ultramafic bodies and has been produced from placer deposits in these western areas of Ethiopia since ancient times.

3.4 Segele deposit geology and mineralisation

3.4.1 Major lithological units

The Segele mafic-ultramafic complex can be divided into several distinct units separated by east–west ductile shear zones (Figure 3-4). These shear zones are not parallel to each other but seem to form a large – up to several hundred metres thick – shear lens. The mineralisation is hosted in the footwall of the lower shear zone.

Figure 3-4: Geological map of Chamo-Segele Prospect, 2016



Source: Aboko Minerals AB

Upper mafic unit

This unit is bounded on the lower side by the upper shear zone, this zone strikes due west with a very shallow dip to the north (10° towards 270°). The upper mafics are only observed in the top sections of a few drill holes in the northern end of the Segele resource drilling; based on this they are comprised primarily of amphibolite, mafic rocks with or without porphyritic texture, and of minor amounts of gabbro. Only limited amounts of ultramafics, and no alteration associated with gold have been observed within the upper mafic unit.

Middle mafic-ultramafic unit

The middle unit is bounded above and below by ductile shear zones; the shear zones both strike to the west but the dips are different. The lower shearzone dips at about 45° while the upper zone is very flat laying at about 10° dip. The lithologies are made up of equal amounts of gabbro and other mafics; the gabbro tends to be more frequent in the lower half of the unit while the upper half is dominated by finer grained mafic and porphyritic mafic rocks. There are ultramafic rocks spread out through the entire unit without any clear link to other lithologies. In the gabbroic parts some alteration is present, forming so called metapyroxenites, but no gold has been found in these units. The metapyroxenites do not have any clear link to the shear zones but a general association with the ultramafics seems clear.

Host sequence

The host sequence is made up of major ultramafic bodies surrounded by gabbroic rocks with lesser amounts of amphibolite and plagioclase porphyritic mafic when compared to the upper mafic unit. The host sequence is bounded on the upper side by the lower shear zone and the mineralisation seems to be located in a splay structure in the footwall of the lower shear zone. The orientation of the mineralised zone is oblique to the shear zone and follows the trend of the regional foliation.

3.4.2 Mafic lithologies

Meta gabbro

These rocks have widespread occurrence and outcrop in large areas to the south and southeast as well as in the western parts of the Segele area. The meta gabbro commonly co-exists with ultramafic units as well as other mafic rocks. The meta gabbro has dark grey to dark green colour, often with a white matrix of plagioclase, it is medium to coarse grained, slightly to moderately deformed and metamorphosed to greenschist facies (Figure 3-5). It is composed of hornblende, biotite, plagioclase feldspar and minor oxides. Meta gabbro commonly bounds the gold mineralised metapyroxenite unit but the genetic relationship between the rocks is unknown. Often there is a sheared contact with the ultramafic rocks; this sheared contact sometimes contains pyrite and chalcopyrite mineralisation with moderate serpentine alteration.

This unit is closely related to the gold mineralisation in the area. It is considered as a country rock that bounds both the hanging wall and footwall.

Figure 3-5: Examples of meta gabbro (left) and sheared gabbro (right)

Mafic schist

The mafic schist forms strongly sheared and deformed east–west trending belts with crenulated folds and mylonite structures (Figure 3-6 and Figure 3-7). Fine to medium grained and light grey in colour, the mafic schist sometimes occurs with parallel quartz veins of various width. Carbonate, silica, biotite alteration is common to see. The mafic schist grades into sheared gabbro depending on deformation and alteration intensity. This rock type makes up the major shear zones in Segele.

Figure 3-6: Mafic schist in outcrop (left) and in drill core from SEDD49 (right)

Figure 3-7: Mafic schist with crenulations and micro-folds

Amphibolite and mafic porphyry/plagioclase porphyry

The amphibolite and plagioclase porphyry rocks have a very similar appearance in drill core, both are dark green to black, fine to medium-grained rocks with massive texture, dominated by amphibole with minor biotite and epidote (Figure 3-8). In the case of plagioclase porphyry, a significant portion(<10%) of the rock is made up of plagioclase grains up to 5 mm in size. Primary features such as amygdales have been locally preserved, indicating a volcanic origin. The rocks sometimes display kink microstructures that indicate that they were emplaced before the main deformation and the main mineralisation events.

Figure 3-8: Plagioclase porphyry (left) and amphibolite in drill hole EDD58 (right)

3.4.3 Ultramafic lithologies

The term 'ultramafic' is used in the logging as a blanket term for what are likely several rock types. The most common variant is likely a meta-peridotite/serpentinite. It is light to dark green, fine to medium grained, undeformed to moderately sheared and commonly shows brownish colour when weathered. Altered versions are composed of talc, chlorite and sometimes amphiboles and magnetite. The ultramafic rocks show distinct variations.

On a regional scale this unit follows the foliation and forms southeast–northwest trending long ridges. Ultramafic rocks often consist of strong and intact rock with high magnetite content together with serpentinite, talc-chlorite schist, talc-carbonate schist and medium to coarse grained tremolite-actinolite schist. The rock types cover a wide area adjacent to the gabbros in the Segele area and are exposed at the centre of the main Segele drill site and west of the Segele area (Figure 3-9).

The talc-tremolite-actinolite schist and talc-chlorite-actinolite schists are commonly dark to light green, soapy, fine grained schistose and may contain some magnetite.

Sometimes gold is hosted in the sheared ultramafic when these are in contact with metapyroxenite, and the gold seems to be limited to the margins of the ultramafic bodies.

Figure 3-9: Aerial view of the Segele deposit looking northwest

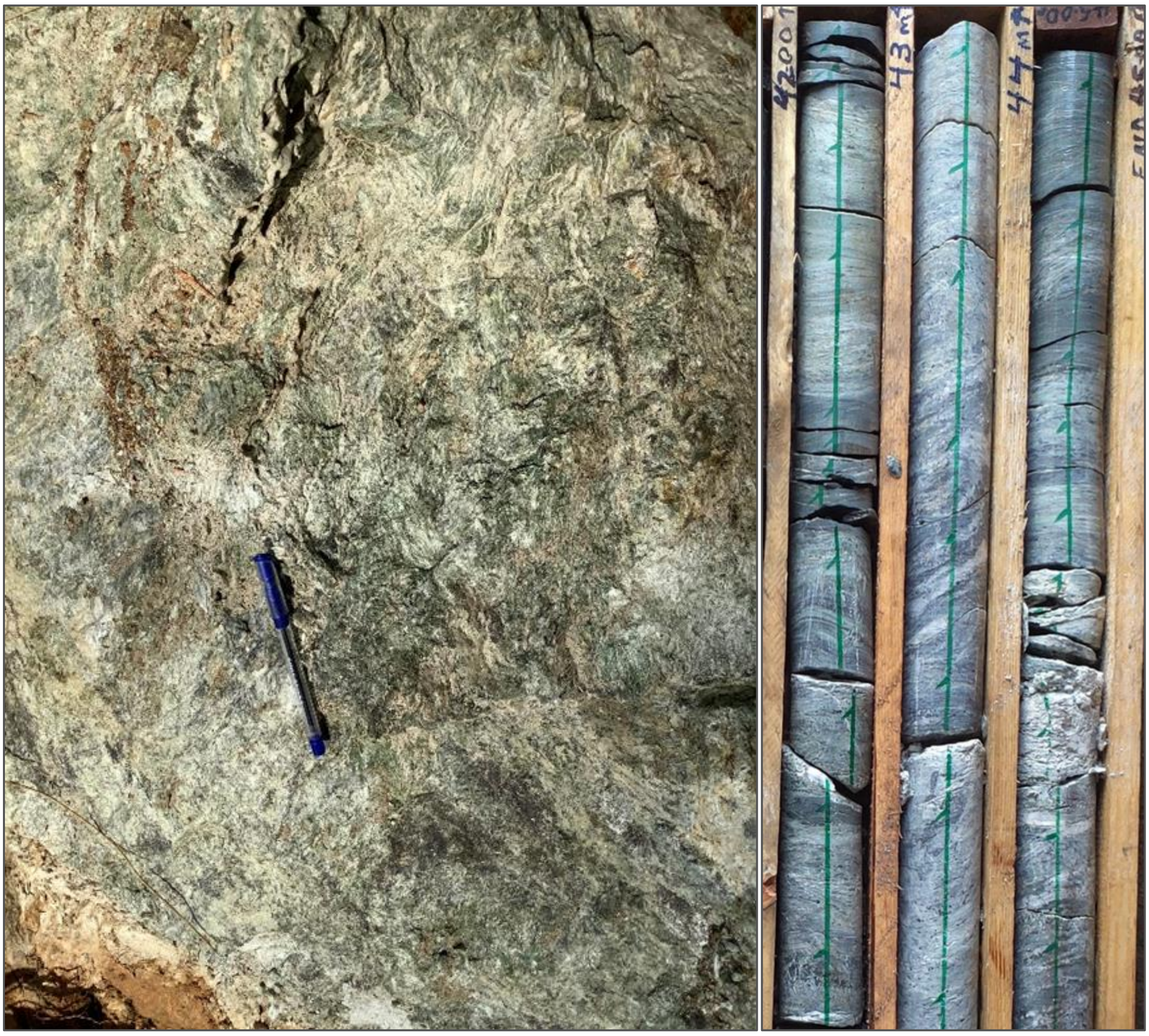
Talc schist – soapstone

White to grey or green coloured fine-grained rock, this unit occurs as foliated to fibrous masses and very soft. It has a distinctly greasy feel. This unit is associated with talc-tremolite-actinolite schist, talc-chlorite schist and talc-carbonates and outcrops on hill slopes or flanks on either side of the ultramafic bodies.

Talc-chlorite-actinolite schist

This unit occurs as thin layers from centimetres to a few metres and is mostly found in contact with metagabbro and highly schistose and occurs as foliated to fibrous masses and very soft. Dark grey to light green colour, fine to medium grained, black shiny chlorite rich with coarse magnetite crystals (Figure 3-10).

Figure 3-10: Fibrous (actinolite-tremolite) talc-chlorite schist (left) and talc schist from drill hole SEDD52 (right)



Metapyroxenite

A medium to coarse grained, dark green to grey colour, partially deformed alteration rock composed of dominantly pyroxene, hornblende with minor plagioclase and traces of carbonate (Figure 3-11). High-grade gold mineralisation is recorded as being related mostly to the less deformed metapyroxenite (Figure 3-12).

Metapyroxenite occurs in both the host sequence as well as in the middle mafic and ultramafic unit. Outside the gold mineralised parts of the deposit, it is not uncommon for the metapyroxenite to be associated with disseminated sulphides, primarily pyrite, chalcopyrite and pyrrhotite.

The metapyroxenite is intriguing as a rock type since it clearly is an alteration rock, but no convincing precursor has been documented so far.

Figure 3-11: Outcropping metapyroxenite

Figure 3-12: Gold-bearing metapyroxenite from drill hole SEDD03

3.4.4 Other lithologies

Quartz veins

The quartz veins are often boudinaged and larger veins form ridges in the landscape. There are at least three different generations of quartz veins present in the wider Segele area. It is common to see quartz veins in the mapped area around Segele following the northwest–southeast foliation. The veins are often found in contact with the shear zones (mafic schist) as well. At least two generations of quartz veins are known to be associated with gold mineralisation: the breccia hosted quartz carbonate veins and one set of quartz veins occurring on a regional scale but these are yet to be properly distinguished from the barren veins.

3.4.5 Late stage/young volcanic dyke – 'Vulcanite'

The vulcanite dyke has a dark grey to green colour, it is fine to medium grained, has a homogenous texture and is highly magnetic (Figure 3-13). The mineralogy is primarily chlorite, amphiboles and magnetite. The rock is undeformed and cross-cuts the Segele mineralisation, splitting it in two halves. The dyke clearly does not have a role in the formation of the gold mineralisation, all contacts are sharp with the surrounding rocks.

Drilling at the Joru deposit 13 km south of Segele has intersected dykes of the same rock type, so the dykes are clearly a regional feature. The dyke is rarely exposed at the surface, most likely due to weathering. According to the Segele modelling it has a southwest–northeast trend but frequently changes direction within the broader trend.

Figure 3-13: Vulcanite dyke

Granitoid rocks

The granitoid/granodiorite rocks are pink to dark grey coloured, coarse-grained, massive away from the contacts but increasingly sheared when closer to the contact with mafic-ultramafic rocks to the south. Composed of biotite, feldspar, and minor quartz the granitoids outcrops at the northern part of the Segele area close to Chamo village and extends up to the Akobo River.

3.4.6 Alteration

The alteration around the Segele deposit is less well understood, however the following observations are pertinent to the deposit:

- The host rocks containing the mineralisation have clearly undergone calc silicate alteration and display a clear alteration trend in the geochemical data.
- Potassic alteration has been recorded in several places but only occasionally in close association with the mineralisation.
- Regional metamorphism has added wide-scale alteration overprinting that may or may not overprint the alteration related to the mineralisation.
- Quartz veins in the area show clear alteration halos with actinolite-tremolite and other minerals depending on host rock.

4 Akobo Gold Project history

The first documented information regarding placer gold potential of the Akobo River basin was completed by Companies Mineralia Ethiopia (Comina) – an Italian company – during prospecting investigations in 1939. Further exploration work was not conducted in the area until 1973–74 when a reconnaissance survey was undertaken by the Ethio-Canadian Omo River Project. The survey – mostly air-photo interpretation based – established the predominant structures and general geology of the Akobo Basin area that could be further pursued to test the potential of the area. This work led to later studies of the Akobo gold mineralisation (1980s) and the 'Akobo Precious and Base metal Exploration Project' (1992–95) by the Ethiopian Institute of Geological Surveys (EIGS, later renamed Geological Survey of Ethiopia – GSE). The 1992–95 exploration project aimed to assess the mineral potential of the 1,500 km^2 area and estimate the previously reported placer potential of the Akobo River basin.

The earliest available documentation is a report of a regional geological-geochemical survey conducted in 1998–99 by Geodev Mineral and Water Resources PLC and AFREDS Mineral, Water and Energy Development PLC. The survey included geological mapping at 1:50,000 scale and the collection of heavy mineral concentrates, stream sediment samples and rock chip samples. The study defined two major prospecting areas:

1. Wolleta – Korkora Prospecting Area, approximately 100 km^2
2. Sholla – Gabissa Prospecting Area, approximately 42 km^2.

ETNO acquired an exploration and placer mining licence in the late 2000s and conducted a limited mapping and sampling campaign in 2010 before conducting more extensive exploration programs between 2011 and 2022 (Table 5-1).

A maiden Mineral Resource estimate for the Segele Gold Deposit was completed by SRK on behalf of Akobo in April 2021.

5 Project data and validation

5.1 Drilling and sampling programs

Exploration work carried out by Akobo over the Segele Gold Deposit includes reconnaissance level soil sampling, detailed geological mapping, trench and pit sampling and the drilling of 4 reverse circulation (RC) and 99 diamond drill holes (DDH) which have been completed on a nominal drill spacing of approximately 5–15 mE × 10–15 mN (Figure 5-1 and Table 5-1).

Figure 5-1: Segele Deposit diamond drilling collar locations

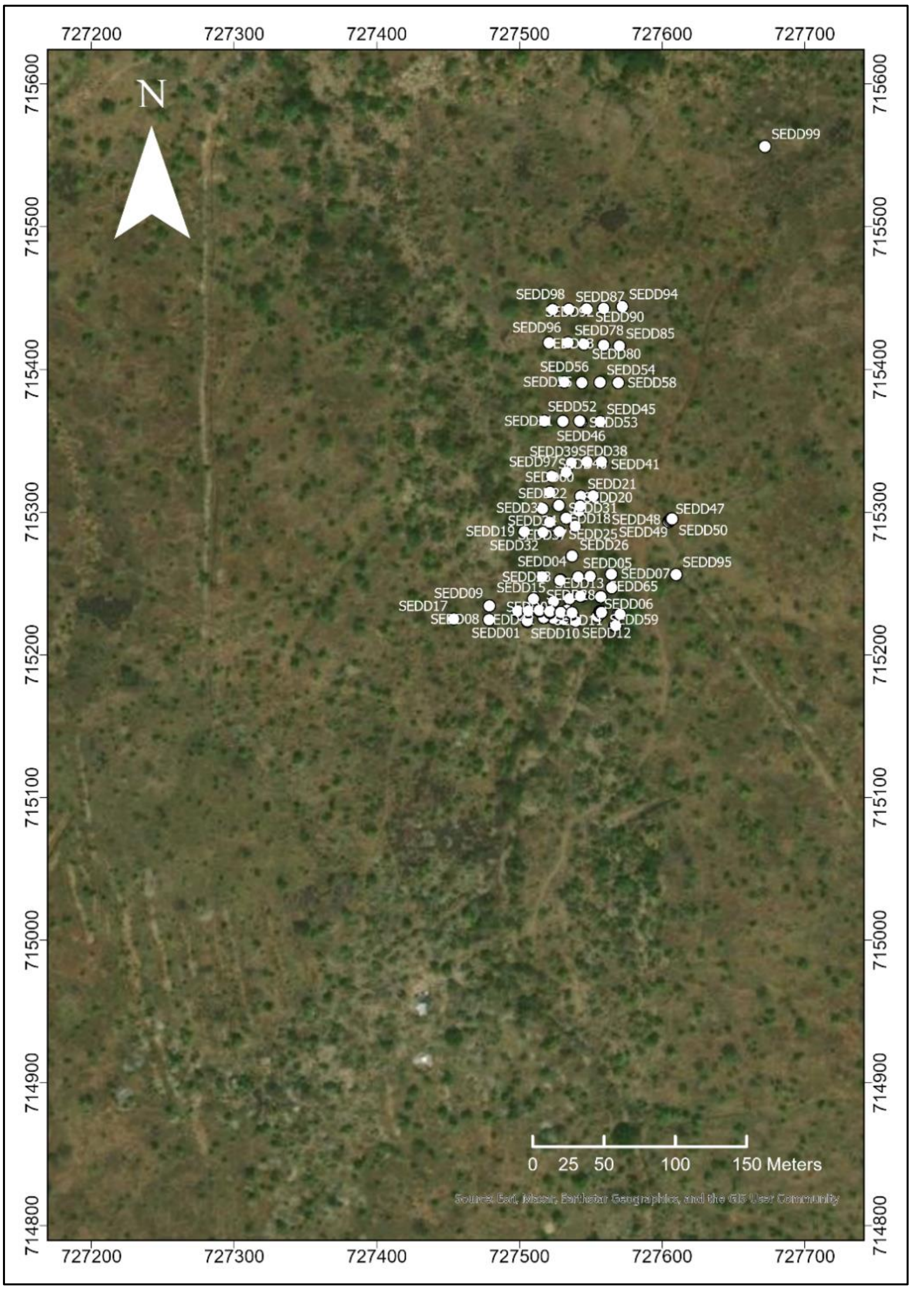


Table 5-1: Segele deposit exploration summary

Deposit	Field season start year	Geological mapping scale	Soil samples	Geophysics		Trenches		Pits		RC drilling		Diamond drilling	
				Type	Quantity	Line km	Number of samples	Number	Samples	Number Holes	Metres	Number of holes	Metres
Segele Gold Deposit	2011	1:10,000	1,032			1.47	147						
	2012			Ground Magnetic	15.6 km^2	0.50	120						
	2014	1:25,000											
	2015		412							4	595		
	2016	1:2,000						37					
	2017					2.28		30	123				
	2020											36	3,735.43
	2021											51	7,532.06
	2022					1.00						10	1,895.50

Soil sampling was conducted by teams consisting of a geologist and day labourers. Samples from 2–3 kg were collected at 100 m intervals along northeast–southwest sample lines oriented at 050°. Sample locations were surveyed using handheld GPS units. Areas covered by alluvial deposits and subjected to intensive artisanal mining were excluded from soil sampling.

Trenches were created along various trends using a Caterpillar M318 excavator. The trenches were geologically logged and sampled at 1 m intervals, with samples weighing between 2 kg and 3 kg, and the samples were then sent to the laboratory for gold analysis. An additional – approximately 10 kg – sample of material was taken from the trench floor at every metre interval and was then panned in the Akobo River.

More than 30 artisanal pits were logged and sampled at 1 m intervals using an iron-framed escalator/pulley system, moving down to the bottom of each pit. Each pit was logged in vertical sections, which showed petrology, alteration, and mineralisation contrast down the depth of each pit. A total of 664 samples were collected from the pits weighing approximately 2 kg each and prepared for geochemical analysis, however only 123 of these samples were sent for analysis.

RC drilling was conducted using a face sampling hammer with a hole diameter of 140 mm. Samples were collected at 1 m intervals via a rig mounted cyclone and Jones-type three-tiered riffle splitter. Samples weighed between 2 kg and 3 kg.

The 99 diamond drill holes were completed using standard tube and NQ (37 holes at a 47.6 mm core diameter), NQTK (59 holes at a 50.6 mm core diameter) or HQ (3 holes at a 63.5 mm core diameter) size drilling equipment.

Diamond core was oriented using a Devicore BBT system. Core loss was encountered frequently at depths less than 30 m (average 78.9%), however, all the mineralised intersections in the drill holes occurred below this depth. Core recovery from depths greater than 30 m was consistently above 97% except for 29 intervals (total of 95.2 m) with recoveries <90% which represents <1% of the drilled metres >30 m depth.

A total of 3,741.45 m of diamond core was sampled and assayed from 4,271 sample intervals ranging from 0.1 to 2.7 m although most samples were taken over 1 m intervals. A total of 267 waste intervals (8,104.34 m) were not sampled. The unsampled intervals ranged from 0.05 m to 170 m. Two metallurgical drill holes (SEDD42 and 43) and five geotechnical drill holes (SEDD 71, 79, 81, 95 and 96) were not sampled at all, and four drill holes (SEDD94, 97, 98 and 99) were yet to be sampled by the drill hole cut-off date for the Mineral Resource estimate.

A total of 614 diamond drill samples ranging in length from 0.1 m to 2.7 m were selected from a range of stratigraphic units and grade ranges and were analysed for specific gravity at ALS (Loughrea) using a multi-pyncometer analytical method which uses an automated gas displacement pycnometer to determine density by measuring the pressure change of helium within a calibrated volume. SRK notes that its preferred method for refined bulk density data collection is the Archimedes method on whole core samples – as this method accounts for voids and as such is a true bulk density measurement – rather than a specific gravity as is collected by a pycnometer.

5.2 Surveying control

5.2.1 Topography

Akobo engaged a third party surveyor to collect ground topography readings in 2020–21. The surveyor used a Leica Total Station and measured 840 topographic survey points. Surveying was limited due to safety concerns with thick grass growing over the deposit area and obscuring the artisanal pits.

5.2.2 Drill hole collar locations

RC drill hole collars were surveyed using a handheld GPS unit with lower accuracy however these drill holes occur to the east of the deposit and have not been used to produce the 2022 geological modelling or resource estimate.

Ninety-two of the diamond drill hole collars, including holes completed in 2020 and 2021, were surveyed by a qualified surveyor in April 2022 using a Leica TCR803 total station with an accuracy of 1–4 mm using the Adindan/UTM Zone 36N datum.

Drill holes SEDD84, 86, 88, 89, 91 and 93 have been surveyed using a handheld GPS unit with lower accuracy however these drill holes occur to the east of the deposit and have not been used to produce the 2022 geological modelling or resource estimate.

Diamond Drill hole SEDD99 has been surveyed using a handheld GPS unit with lower accuracy and has been used to produce the 2022 geological modelling. However, the hole is still awaiting assays to be returned from the laboratory, so it was not used to produce the 2022 resource estimate.

5.2.3 Downhole surveying

RC drill holes have not been downhole surveyed. Planned azimuth and dips have been used to locate the drill holes

Drill holes SEDD01, 02 and 03 have not been downhole surveyed. Planned azimuth and dips have been used to locate the drill holes. All three drill holes have been used to produce the 2022 geological modelling and resource estimate.

Drill holes SEDD04 to SEDD40 were surveyed using a DeviCore BBT tool which oriented the core and recorded changes of the drill hole dip at irregular intervals. The DeviCore tool does not record changes in azimuth and the drill holes are assumed to be straight. The holes were surveyed at approximately 3 m intervals.

Drill holes SEDD41 to SEDD99 were surveyed using a DeviFlex Rapid instrument that measures changes both in azimuth and dip. The holes were surveyed at approximately 3 m intervals.

5.3 Laboratory sample preparation and assaying

In the 2011 sampling program, soil samples were sieved and quartered to produce a 50 g sub-sample using a -80 mesh at the exploration field camp and then sent to ALS Chemex Gauteng (South Africa) where they were analysed using Aqua Regia extraction with ICP-MS and ICP-AES finish analytical techniques for gold and all other elements (ALS code ME-MS41). In the 2015 sampling program, soil samples were sent to Ezana laboratory (Mekele, Ethiopia) and analysed using fire assay with an AAS finish.

Trench and pit samples were sent to ALS (Gauteng) where they were weighed upon receipt and crushed with a jaw crusher to 70% passing 2 mm. The crushed material was split using a Jones-type riffle splitter to split off a 1,000 g sub-sample. The crushed sample was then pulverised to 85% passing 75 µm. Following riffle splitting, a 50 g fire assay was performed using an ICP AES finish. A 50 g fire assay with gravimetric finish was used where the initial fire assay was greater than 10 g/t Au.

RC samples were sent to ALS (Addis Ababa) where they were weighed upon receipt and crushed with a jaw crusher to 70% passing 2 mm. The crushed material was split using a Jones-type riffle splitter to split off a 1,000 g sub-sample. The crushed sample was then pulverised to 85% passing 75 µm. Following riffle splitting the pulp was packaged and sent to ALS (Romania) and analysed using a 50 g fire assay with an ICP-AES finish. A 50 g fire assay with gravimetric finish was used where the initial fire assay was greater than 10 g/t Au.

Diamond drill core was split using a diamond saw, and the half core was sampled and sent to ALS for sample preparation in Addis Ababa (Ethiopia) and then to either ALS Lochrea (Ireland) or ALS Rosia Montana (Romania) for analysis. The average sample mass was 2.1 kg (standard deviation 1 kg). After crushing, either 1,000 g or the entire sample of the crushed material was pulverised. Samples submitted prior to September 2020 were analysed using a 30 g fire assay with an AAS finish (method PGM-ICP27) for samples not containing visible gold or a screen fire assay for samples that did contain visible gold (method Au-SCR24). Some of the 30 g fire assays were subsequently re-assayed using a 50 g fire assay with a gravimetric finish (method Au_GRA22). From September 2020 onwards samples not containing visible gold were analysed using a 50 g fire assay with an AAS finish (Method Au_AA26).

5.4 Chain of custody

Akobo uses the following chain of custody process.

- Drill hole samples are sealed and labelled inside individual plastic bags and then 10 samples are put in bulk bags and sealed.
- All sampling intervals are recorded on paper logs and then entered into the Akobo geological database. ALS laboratory electronic submission forms are then completed for each sample batch and re-checked against the geological database entries.
- Samples are transported by road to the ALS laboratory in Addis Ababa using a company truck. ALS performs a sample reconciliation when the samples are received.

- Following sample preparation in Addis Ababa sample pulps are then exported to Ireland or Romania for analysis at the ALS laboratory in Loughrea or Rosia Montana and a pulp split is sent back to Akobo for storage.
- Assay results are returned digitally and in hard copy form, and are checked against the sampling interval recorded in the geological database.

5.5 Quality assurance, quality control

Quality assurance/quality control (QA/QC) sampling differed between the various exploration programs:

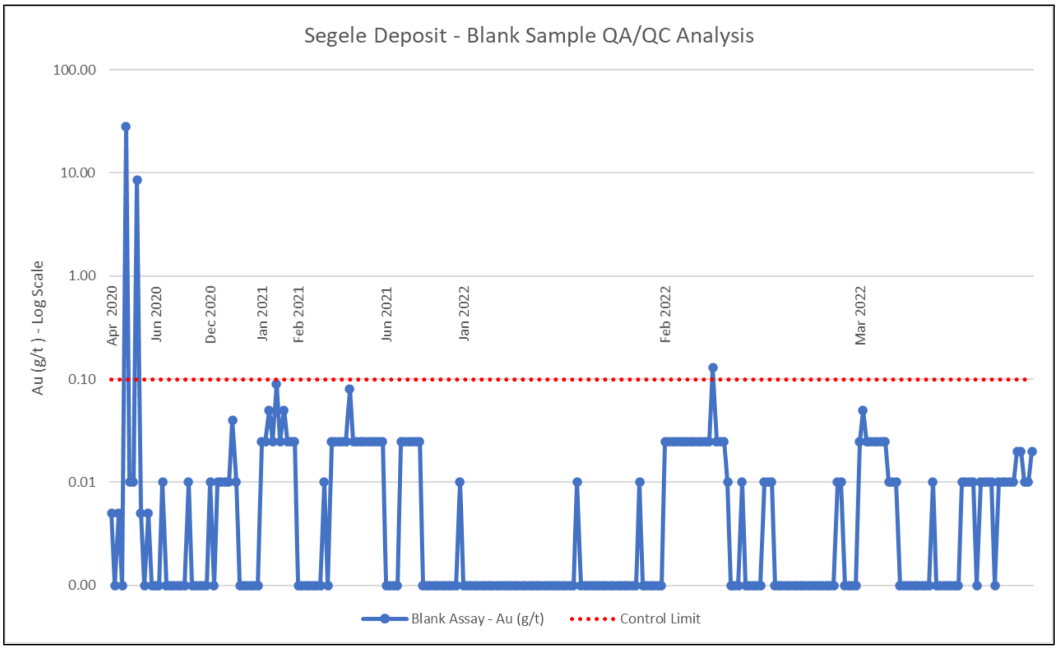
- There were no QA/QC samples inserted during soil and pit sampling programs.
- For the trenching and RC drilling programs:
  - certified reference material (CRM) standards were inserted at a rate of 1:30 samples
  - pulp duplicates were taken at a rate of 1:20 samples.
- For the diamond drilling program:
  - Blank samples were inserted at a rate of 1:25 samples
  - CRM’s were inserted at a rate of 1:25 samples
  - Field duplicates were inserted at a rate of 1:30 samples
  - Crush duplicates were taken at a rate of 1:20 samples
  - Pulp duplicates were taken at a rate 1:20 samples.

QA/QC results were reviewed as each batch of assay results was returned from the laboratory.

5.5.1 Diamond drilling blank sample results

A total of 252 blank quality control samples were submitted for analysis. A sampling batch from April 2022 showed failed QA/QC results for two blank samples which contained high levels of gold following a high-grade intersection. Upon investigation it was noted that the laboratory was only cleaning the preparation equipment with a single quartz flush between sample batches, not regularly between samples. Akobo worked with the laboratory and found that at least two 1 kg quartz flushes were required after high-grade gold samples have been processed in order to control cross contamination between samples. All the sample intervals affected by the original contamination issues were re-assayed using remnant half core duplicate samples from each interval. All the remaining blank quality control samples returned acceptable assay results <0.14 g/t Au (Figure 5-2).

Figure 5-2: Diamond drilling blank quality control sample analysis



5.5.2 Diamond drilling field duplicate sample results

A total of 302 diamond drilling field duplicates were submitted for analysis. The field duplicate results show moderate to poor precision (Figure 5-3, Figure 5-4) which is likely due to the high gold grade variability (high nugget) occurring throughout the mineralised areas of the deposit and/or the small size of half or quarter core samples collected from NQ diamond drill holes.

Figure 5-3: Scatter plot of original versus field duplicate diamond drill holes samples

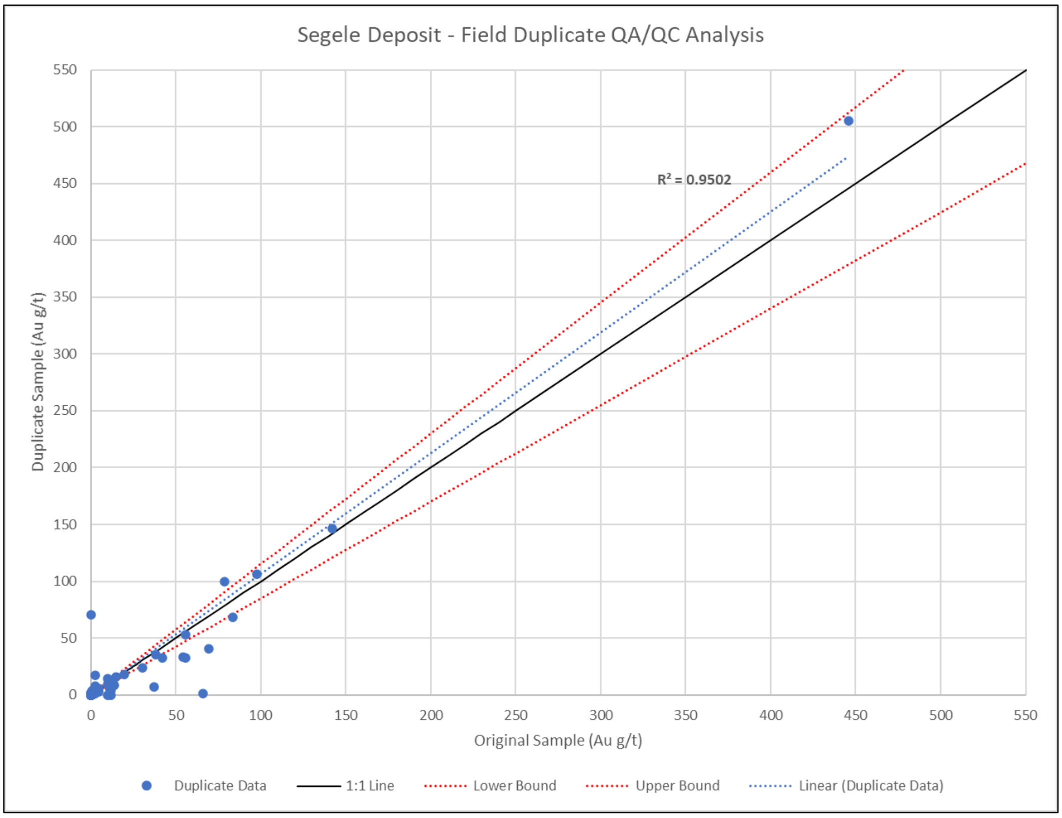
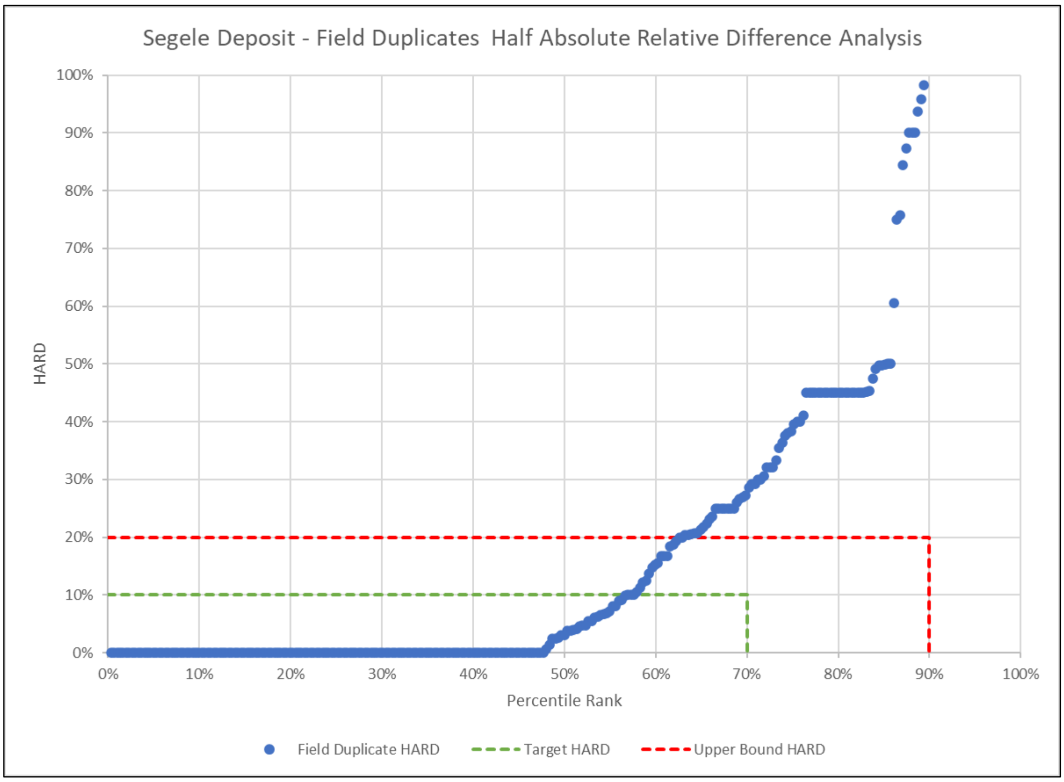


Figure 5-4: Diamond drilling field duplicate HARD plot



5.5.3 Certified reference material sample results

Akobo has used four CRM samples, three supplied by Geostats Pty Ltd and one supplied by Ore Research & Exploration P/L which cover a reasonable range of the gold values encountered within the Segele Gold Deposit with the exception of very high gold values >500 g/t Au:

- OREAS 217 which has a grade of 0.338 g/t Au and a standard deviation of 0.01 g/t Au
- G307-6 which has a grade of 1.07 g/t Au and standard deviation of 0.05 g/t Au
- G906-8 which has a grade of 7.24 g/t Au and standard deviation of 0.27 g/t Au
- G901-8 which has a grade of 47.25 g/t Au and standard deviation of 1.55 g/t Au.

All the CRMs are certified for fire assay analysis. A total of 201 CRM quality control samples were submitted for analysis and were assayed using a 30 g fire assay with an AAS finish (method PGM-ICP27) or a 50 g fire assay with an AAS finish (Method Au_AA26).

Results of the CRM analysis show a general negative bias for each of the CRMs which is most pronounced in CRM G901-8 which also includes a number of lower grade failed results (Figure 5-5 to Figure 5-8).

Figure 5-5: Quality control results for CRM OREAS 217

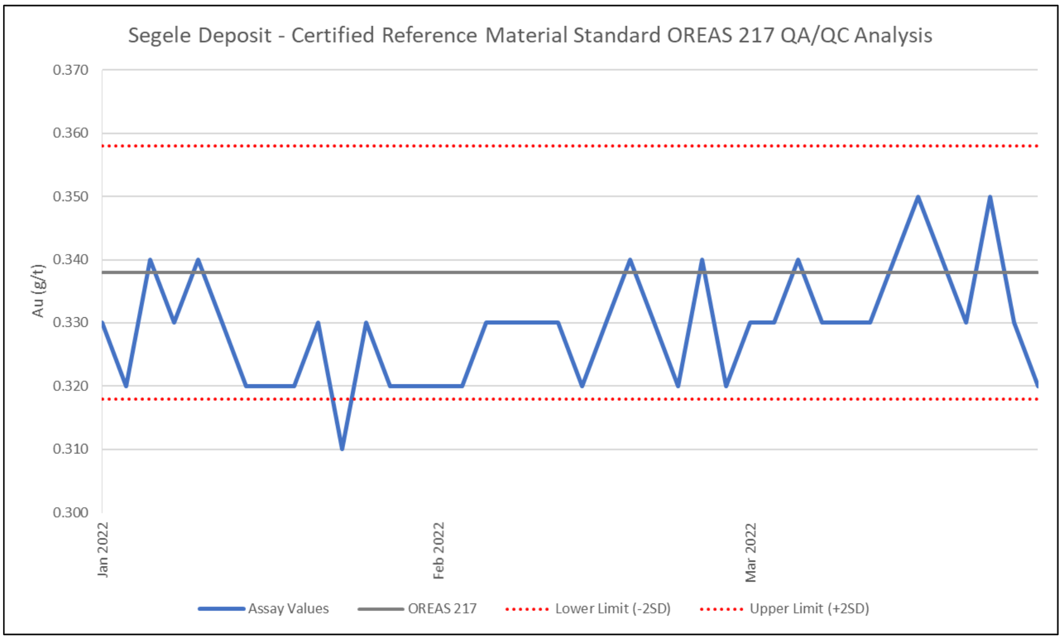


Figure 5-6: Quality control results for CRM G307-6

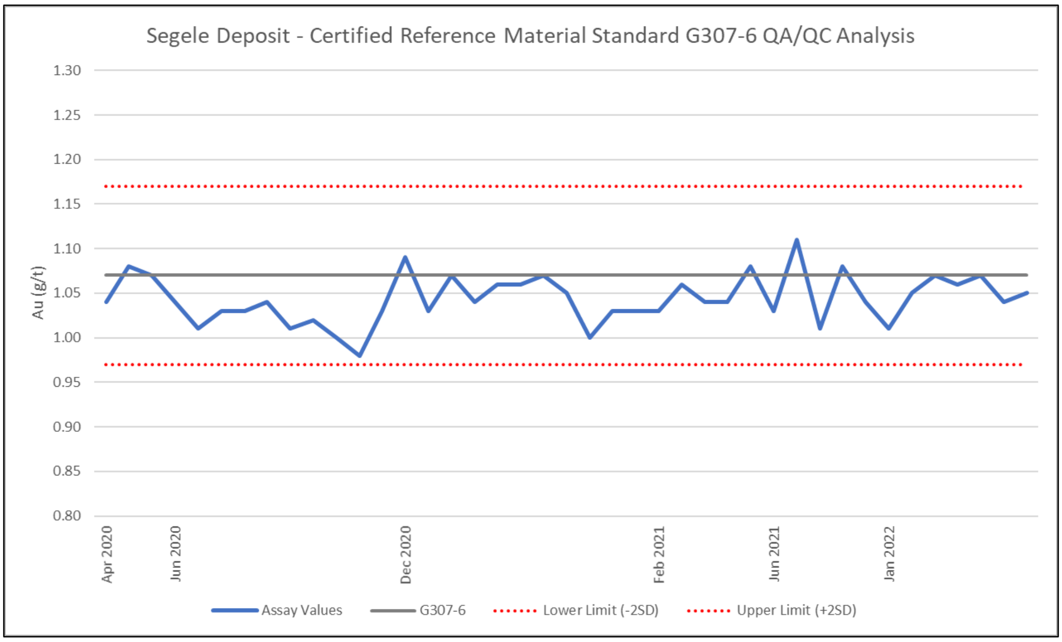


Figure 5-7: Quality control results for CRM G906-8

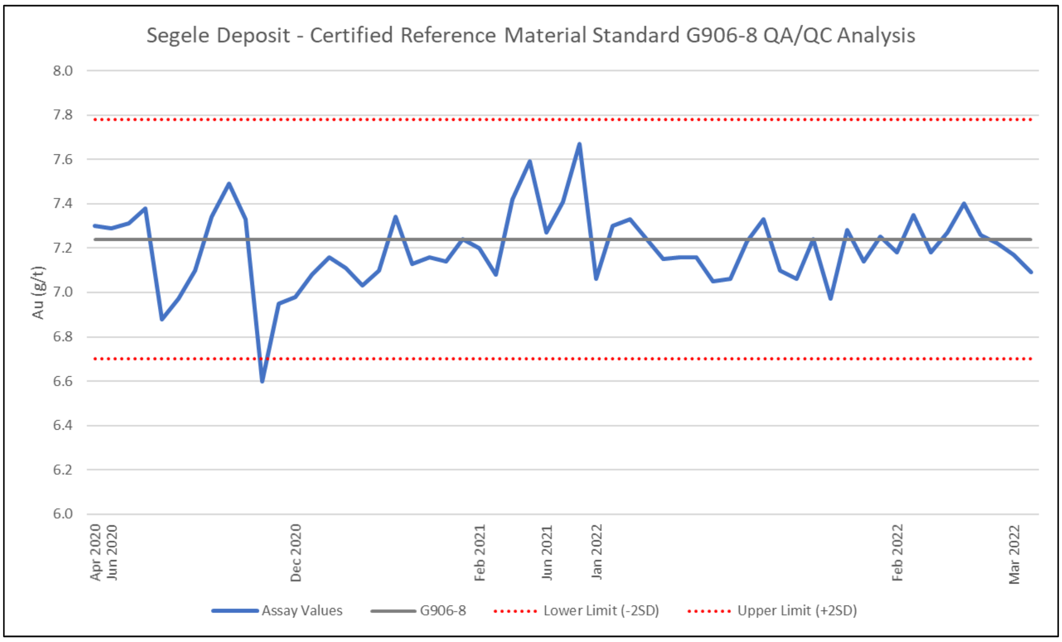
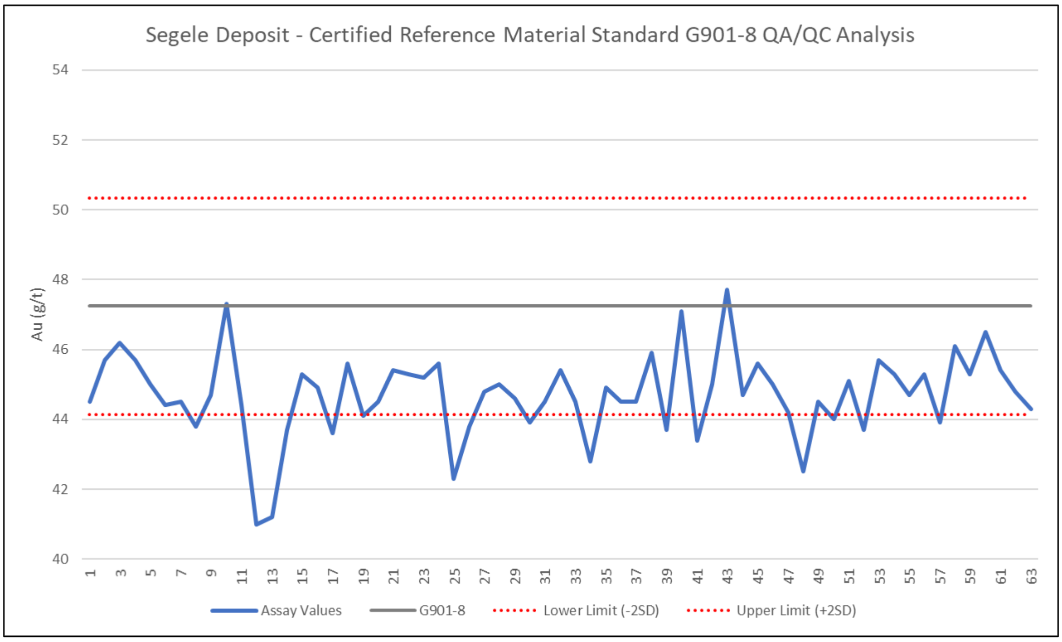


Figure 5-8: Quality control results for CRM G901-8



5.5.4 Laboratory crush and pulp duplicate sample results

A total of 226 crush duplicates and 185 pulp duplicates were submitted for analysis. The laboratory duplicate results show an acceptable level of precision (Figure 5-9 and Figure 5-10).

Figure 5-9: Scatter plot of original versus laboratory crush duplicate samples

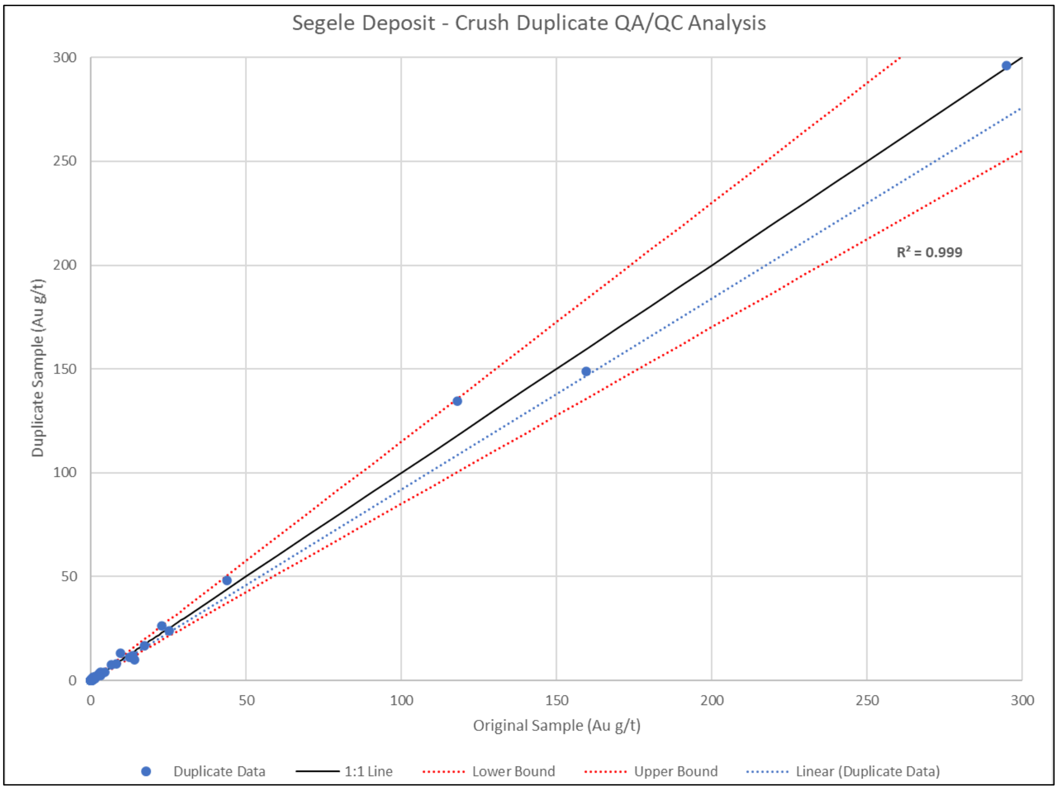
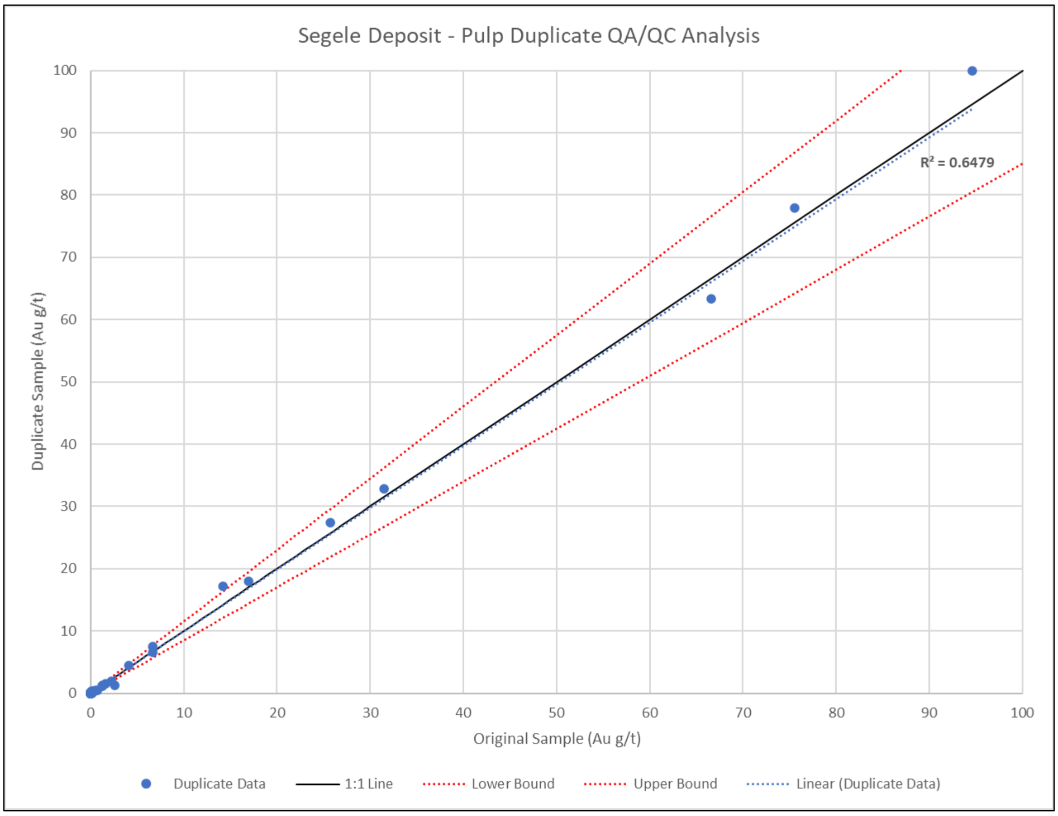


Figure 5-10: Scatter plot of original versus laboratory crush duplicate samples



5.5.5 QA/QC summary

SRK is of the opinion that Akobo has a robust QA/QC system in place that can identify and rectify sample preparation and assaying contamination and accuracy issues in a timely manner. However, SRK notes that sample precision and high-grade CRM analysis continue to be an issue.

Akobo had planned to conduct a bulk sampling study in late 2021 to test gold grade variability versus diamond drilling sample sizing, but the study has yet to be completed. SRK would recommend that the study is completed as soon as possible to help plan for future drilling programs.

Additionally, SRK would recommend that Akobo review the ongoing low assay grade bias seen for the high-grade CRM, G901-8.

5.6 Drill hole logging

Qualitative lithology logging has been completed for all trenches and RC and diamond drill holes, typically matching the sampling intervals. Alteration, structural geology, and mineralisation logging has also been completed for the diamond drill holes.

Geological logging and sampling information is initially recorded on paper logs which are subsequently entered into the geological database and then validated.

5.7 Geological database

Akobo uses the cloud based geological database MX Deposit® which has built-in validations for logging and sampling data entry to store and manage the Akobo Project geological data. The database is managed by an Akobo employee who performs regular validations including sample interval checks, geological logging checks and assay value checks against returned laboratory certificates. In addition, SRK has reviewed a selection of laboratory certificates against the Akobo database and found no transcription errors or missing data.

A database extract of all the drilling data for the Segele deposit was provided to SRK on 21 March 2021 which included comma separated files for collar locations, downhole surveys, sampling intervals and assay results, lithological logging, alteration logging, structural logging, mineralisation logging and geotechnical logging. Supplementary extracts were supplied on 2 April (updated drill hole collar surveys) and 6 April 2022 (assay results for drill holes SEDD78 and SEDD90) which was used as the database cut-off date.

SRK imported the drilling information into two Maptek Vulcan® Isis drill hole databases. Gold assays were imported into database seg_220406_res_au.s22.isis whereas specific gravity results were imported into database seg_220406_res_dens.s22.isis. The data within each of the databases were then validated to check for:

- any large differences between drill hole collars and the topographic surface
- excessive downhole kinks in downhole traces due to downhole surveying errors
- any overlapping sampling or geological logging intervals, or intervals that extend past the maximum depth of each drill hole.

Several downhole survey kink errors were identified during the checks and the erroneous survey readings were either removed or corrected in the database where the azimuth (for drill holes drilled at less than 80˚ dip) or dip deviated more than 2.5˚ over a 5 m interval.

Additionally, a few drill holes were excluded from the geological modelling and/or the resource estimation:

- All the RC holes were excluded from the database as the drill holes did not intersect the gold mineralisation.
- Diamond drill holes SEDD84, 86, 88, 89, 91 and 93 were excluded from the database as the holes were drilled to the east of the deposit.
- Diamond drill hole SEDD46 was excluded from the database due to a systematic survey error. The hole was re-drilled as hole SEDD53.
- Diamond drill holes SEDD42 and 43 (metallurgical holes) and SEDD71, 79, 81, 95 and 96 (geotechnical holes) were retained in the database for geological modelling but were not used for resource estimation as they were not sampled.
- Diamond drill hole SEDD44 (metallurgical hole) was assayed but it was identified that the assay results may be problematic as the drill hole was sampled as quarter core and only assayed using a 50 g fire assay. The hole was retained in the database for geological modelling but was not used for resource estimation.
- Diamond drill holes SEDD97 and 99 were still awaiting assay results at the database cut-off date. The drill holes were retained in the database for geological modelling but were not used for resource estimation.

6 Geological modelling

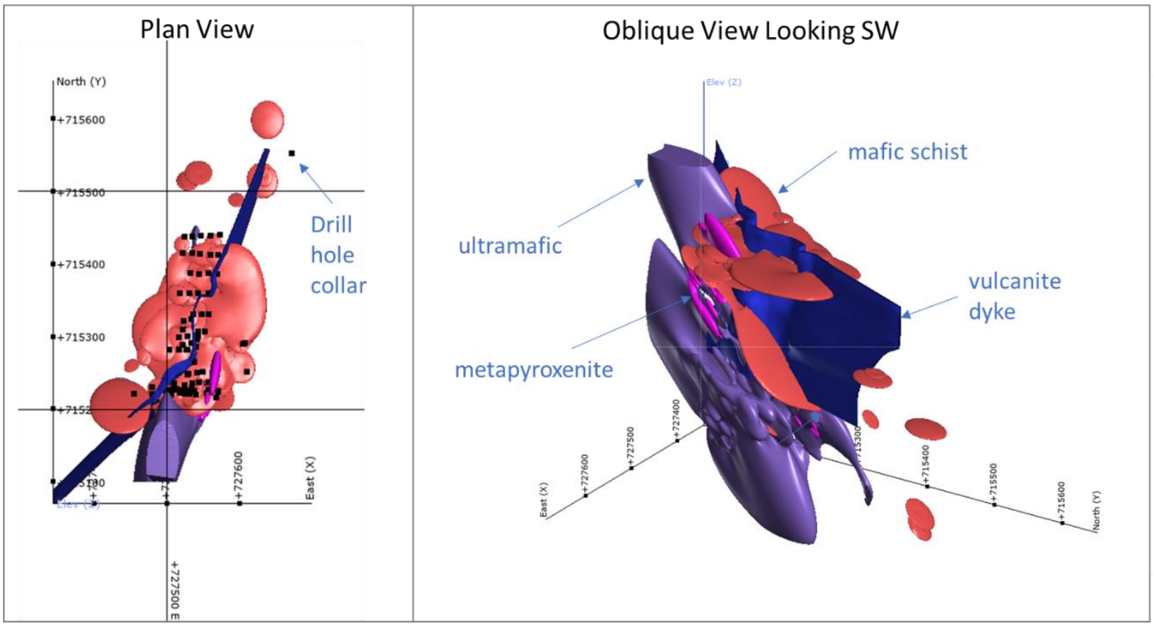
The 2022 Segele geological model has been constructed as a series of wireframe solids in Vulcan® and Leapfrog® software using information from sample trenching, artisanal pit mapping and diamond drill holes. Lithological and mineralisation models were snapped to logging and sampling intervals in the diamond drill holes whereas the information from the sampling trenches and artisanal pits was only used to guide the modelling.

Eighteen different lithologies have been identified at Segele. After reviewing the lithological logging in the diamond drill holes, five broad lithological units were modelled: mafic (which represents the base lithology), ultramafic, metapyroxenite, mafic schist and a younger cross-cutting vulcanite dyke (Figure 6-1). The lithology groupings for the Segele deposit are shown in Table 6-1. Core loss intervals were merged into the adjacent lithology grouping.

Table 6-1: Segele Gold Deposit modelled lithology

Akobo lithology codes	Segele 2022 geological model lithology groupings	
	Description	Model Code
Amphibolite	Ultramafic	um
Serpentinite		
Ultramafic		
Metapyroxenite	Metapyroxenite	mpx
Chlorite schist	Mafic	mafic
Gabbro		
Gabbro, altered		
Mafic rock		
Mafic rock, altered		
Mafic rock porphyritic		
Mafic-ultramafic unit		
Quartz chlorite schist		
Talc carbonate		
Talc chlorite schist		
Quartz vein		
Quartzite		
Mafic schist	Mafic Schist	mschist
Vulcanite	Vulcanite Dyke	vol
Core loss/no core	Core loss/No core	nc

Figure 6-1: Lithological wireframe models



Note: The background stratigraphy is flagged as mafic in the block model.

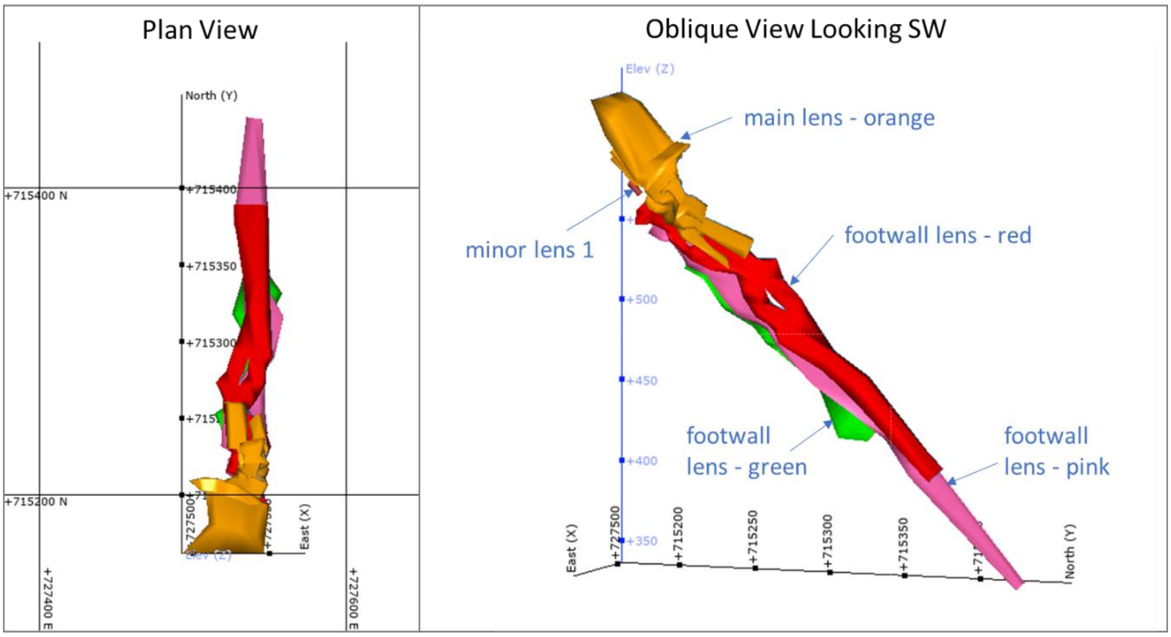
Gold mineralisation was modelled as a series of continuous, thin, and sometimes bifurcating lenses, using a cut-off grade of between 0.2 and 0.3 g/t Au. The mineralised lenses occur mostly within the ultramafic and metapyroxenite units but do also extend upwards into the overlying mafic units and they are cut, but not offset, by the younger vulcanite dyke approximately 80 m below the surface. Six mineralised lenses (domains) were modelled (Figure 6-2):

- a main lens (colour coded orange) which extends from the surface to approximately 90 m below the surface
- three stacked footwall lenses (colour coded red, pink, and green) which extend from approximately 60 m below the surface to between 195 m and 280 m below the surface
- two minor discontinuous lenses occurring either at the periphery of the other lenses (minor lens 1) or wedged between the red and pink footwall lenses (minor lens 2).

The mineralised lenses strike east-southeast to west-northwest and dip between 40° and 45° to the north. The mineralised lenses appear to be closed off along strike, however the pink footwall lens is still open down-dip. The lenses are approximately 20–40 m wide and vary in thickness between 2 m and 15 m.

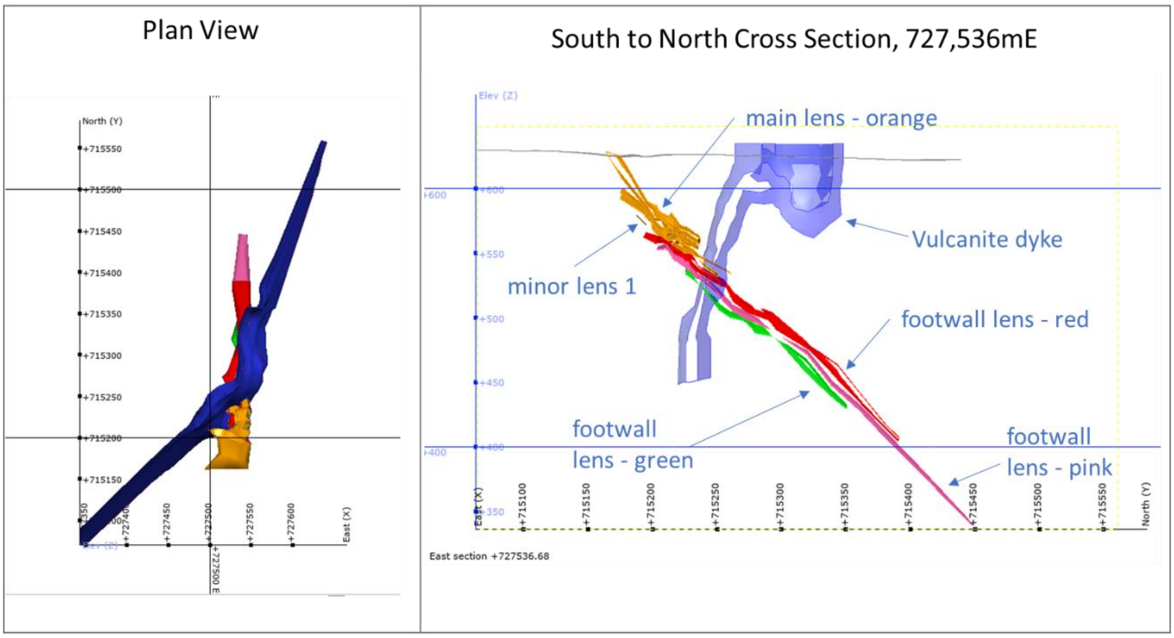
The mineralised models were extended approximately half the drill spacing past the last drill hole intercept except for the main lens which was extended upwards to intersect the main artisanal open pit.

Figure 6-2: Modelled mineralisation domains



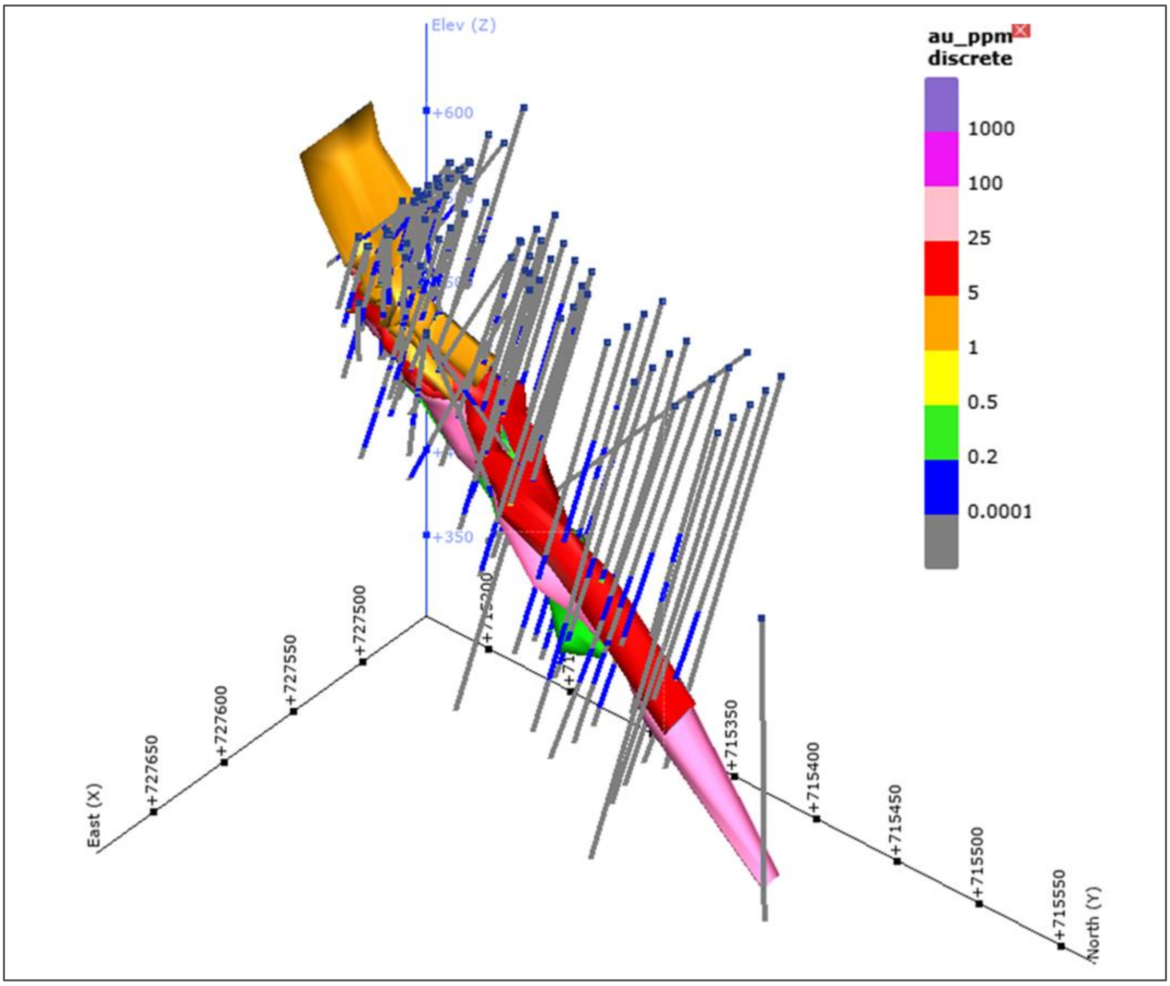
Note: Minor lens 2 is obscured.

Figure 6-3: Modelled mineralisation domains and the cross-cutting vulcanite dyke



Note: Minor lens 2 is obscured.

Figure 6-4: Oblique view, looking southwest, of the modelled mineralisation domains and the supporting diamond drill holes



7 Exploratory data analysis

Exploratory data analysis was conducted using Datamine Supervisor® geostatistical software.

7.1 Data flagging

Sample intervals were flagged with lithological (database variable = strat) and mineralisation (database variable = geozon) domain codes in the gold drill hole database seg_220406_res_au.s22.isis and with lithology (strat) codes in the density drill hole database seg_220406_res_dens.s22.isis (Table 7-1 and Table 7-2). The flagging routine coded samples where the sample interval's centroid fell within each lithology or mineralisation wireframe solid. The drill hole flagging was validated visually against the wireframe models prior to exploratory data analysis and Mineral Resource estimation.

Table 7-1: Lithology domain flagging

Strat	Description	Wireframe Model
mafic	Mafic	base lithology
mpx	metapyroxinite	Segele_2022_strat_MPX.00t
mschist	Mafic Schist	Segele_2022_strat_mschist_u1.00t
		Segele_2022_strat_mschist_u2.00t
		Segele_2022_strat_mschist_l.00t
um	ultramafic	Segele_2022_strat_UM.00t
vol	vulcanite	Segele_2022_strat_VOL.00t

Table 7-2: Mineralisation domain flagging

Geozon	Description	Wireframe Model
0	waste	base geozon code and inside Segele_2022_red_int_waste.00t
10	main lens	Segele_2022_min_10_orange.00t
20	footwall lens 1	Segele_2022_min_20_red.00t
30	footwall lens 2	Segele_2022_min_30_pink.00t
40	footwall lens 3	Segele_2022_min_40_green.00t
50	minor lens 1	Segele_2022_min_50_minor.00t
60	minor lens 2	Segele_2022_min_60_minor.00t

7.2 Global statistics and domaining

7.2.1 Gold domains

Descriptive statistics for gold samples broken down by lithology (database variable = strat) and mineralisation (database variable = geozon) domains are presented in Table 7-3 and Table 7-4. Gold mineralisation is associated mostly within the metapyroxenite strat domain although there are several mineralised samples also occurring within the ultramafic, mafic, and mafic schist domains. The limited assaying within the vulcanite dyke suggests the unit is barren.

The strat domains have not been used for gold grade estimation because:

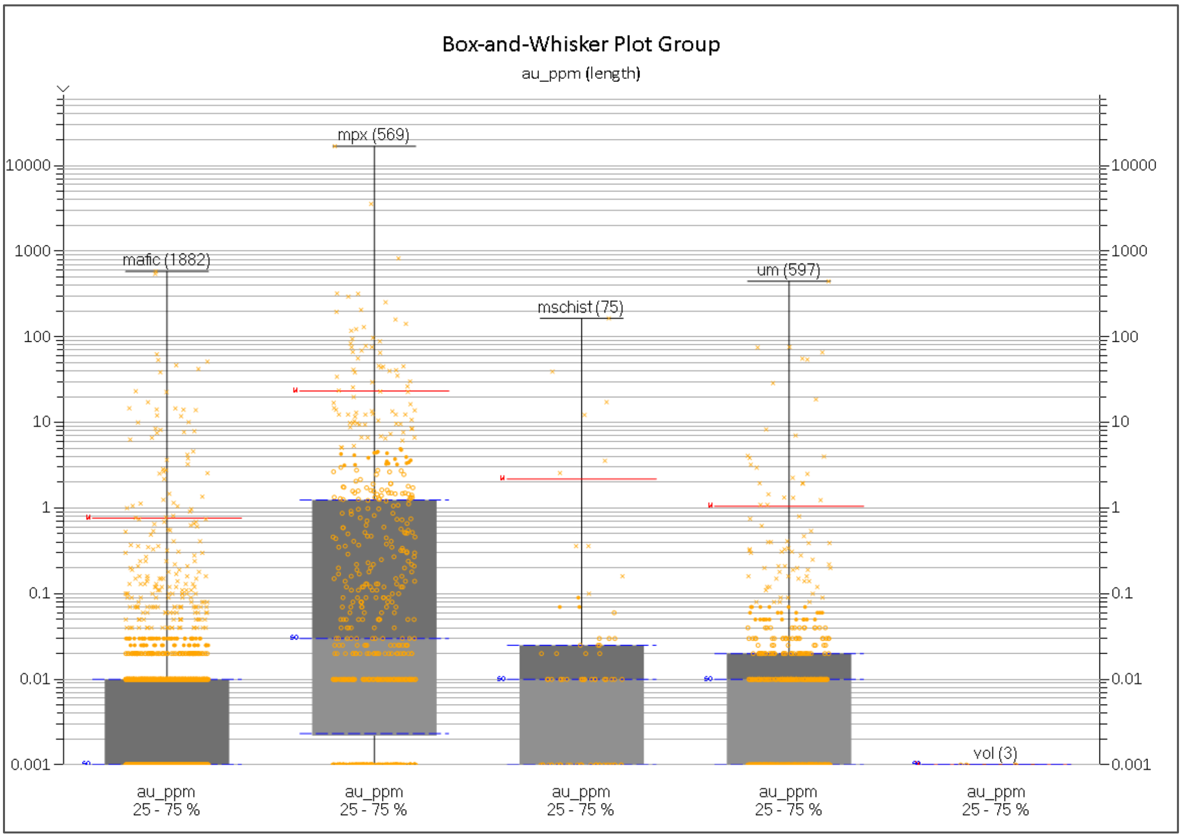
a. the strat domains do not align with the orientation of the mineralised lenses

b. they do not segregate waste samples from mineralised samples.

Table 7-3: Descriptive statistics for gold broken down by strat domain

Domain	Number of samples	Gold (Au g/t)						
		Minimum	Maximum	Mean	Median	Standard Deviation	CV	Skewness
All samples	3,126	0.001	16,850.00	4.84	0.01	204.78	**42.31**	80.33
mafic	1,882	0.001	580.00	0.77	0.00	16.82	**21.99**	282.98
mpx	569	0.001	16,850.00	23.36	0.03	485.80	**20.79**	236,002.29
mschist	75	0.001	164.50	2.19	0.01	14.77	**6.75**	218.10
um	597	0.001	446.00	1.05	0.01	14.91	**14.24**	222.21
vol	3	0.001	0.001	0.001	0.001	0.00	0.00	0.00

Figure 7-1: Gold box and whisker plots broken down by strat domain



The geozon domains show reasonable stationarity (Figure 7-2) although geozon domains 50 and 60 have limited sample numbers. Geozon domains 10, 20, 30 and 40 are all moderately to strongly positively skewed with high coefficients of variation indicating highly variable, 'nuggety' gold grade populations (Figure 7-3). Geozon domain 10 (main lens) contains the greatest number of very high-grade samples >100 g/t Au. The geozon domains were used as hard boundaries for further exploratory data analysis and gold grade estimation.

Table 7-4: Descriptive statistics for density broken down by geozon domains

Domain	Number of samples	Gold (Au g/t)						
		Minimum	Maximum	Mean	Median	Standard Deviation	CV	Skewness
All samples	3,126	0.001	16,850	4.84	0.01	204.78	**42.31**	80.33
0	2,785	0.001	0.80	0.02	0.001	0.04	**2.68**	7.70
10	169	0.010	16,850	77.7	3.15	890.17	**11.46**	18.58
20	89	0.001	580	19.9	1.77	65.69	**3.29**	5.78
30	43	0.200	3,570	13.8	1.13	189.84	**13.73**	18.63
40	32	0.140	65.2	6.78	1.18	13.66	**2.01**	3.25
50	3	0.025	12.4	5.01	0.37	5.88	**1.18**	0.46
60	2	1.060	1.30	1.22	1.12	0.11	0.09	0.00
100	3	0.001	0.001	0.00	0.001	0.00	0.00	0.00

Figure 7-2: Gold box and whisker plots broken down by geozon domains

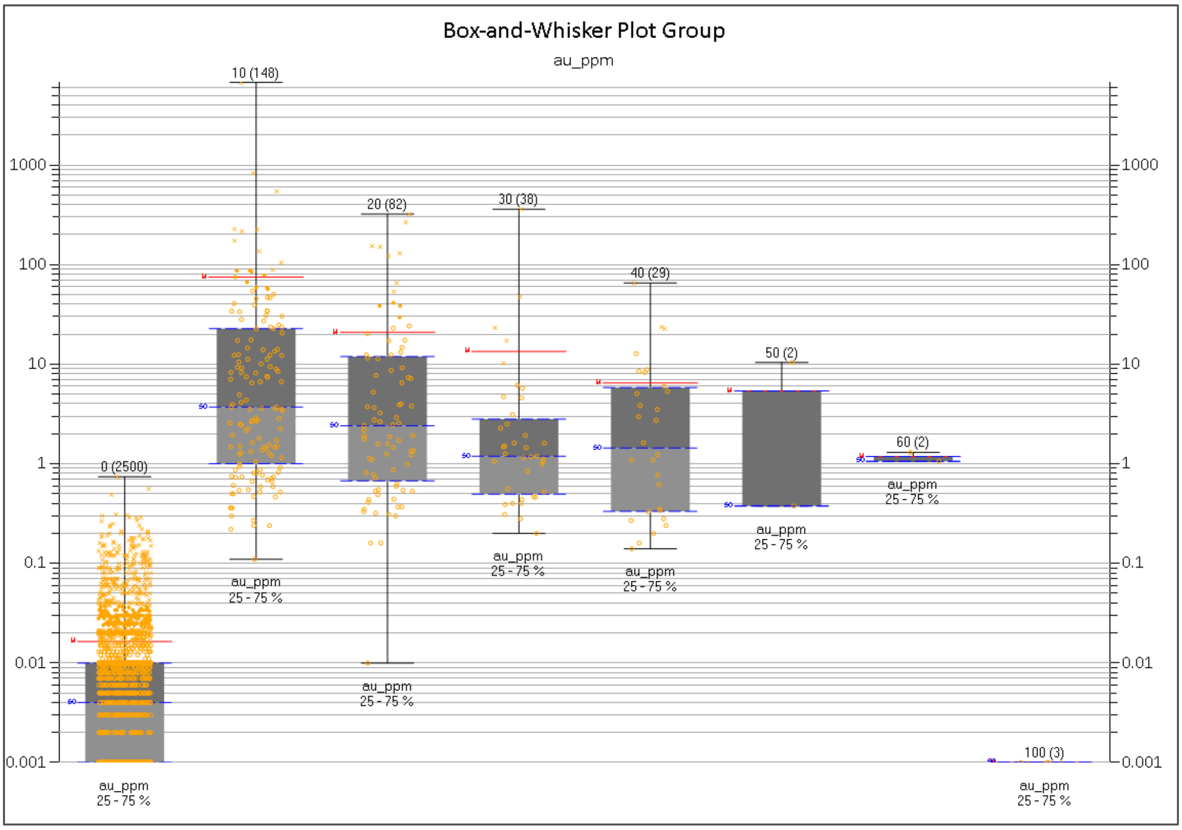
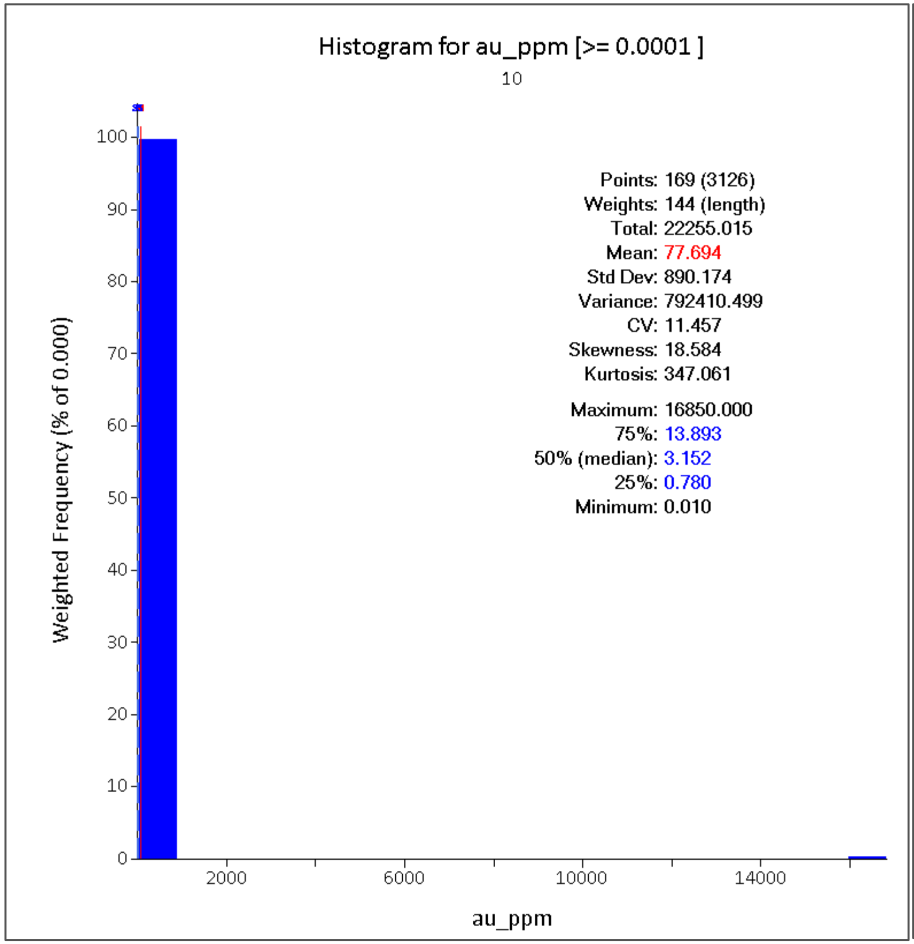
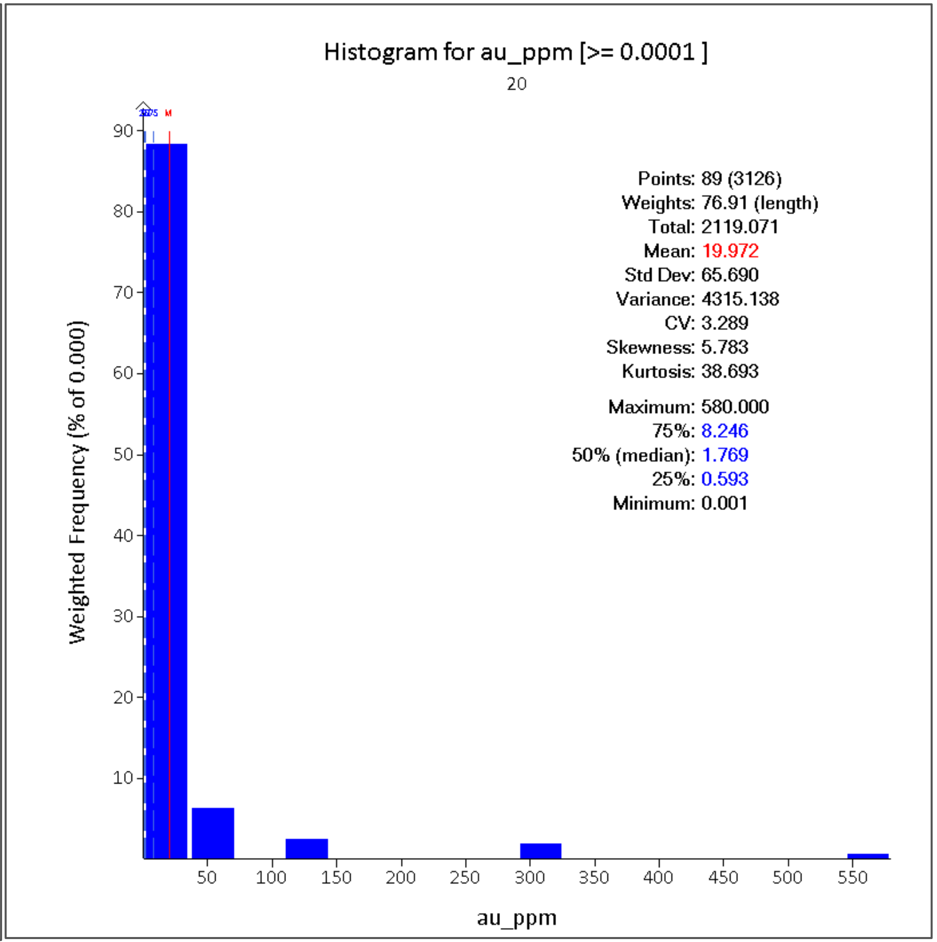


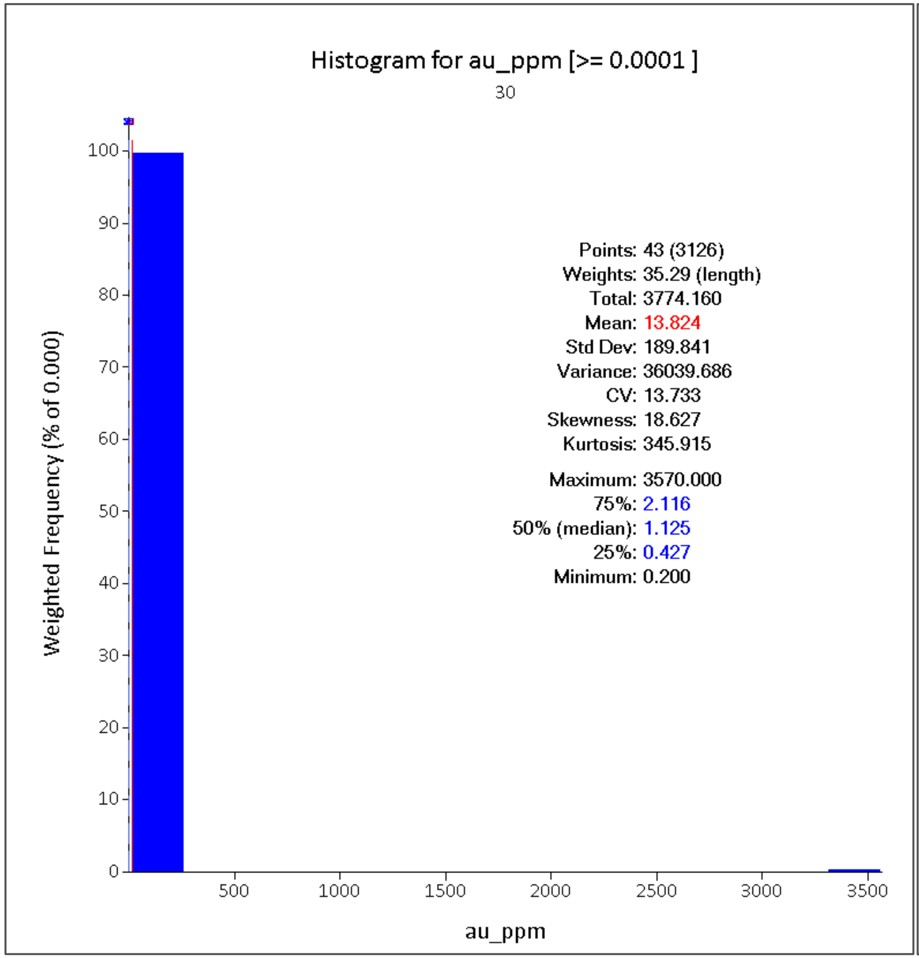
Figure 7-3: Gold histograms for geozon domains



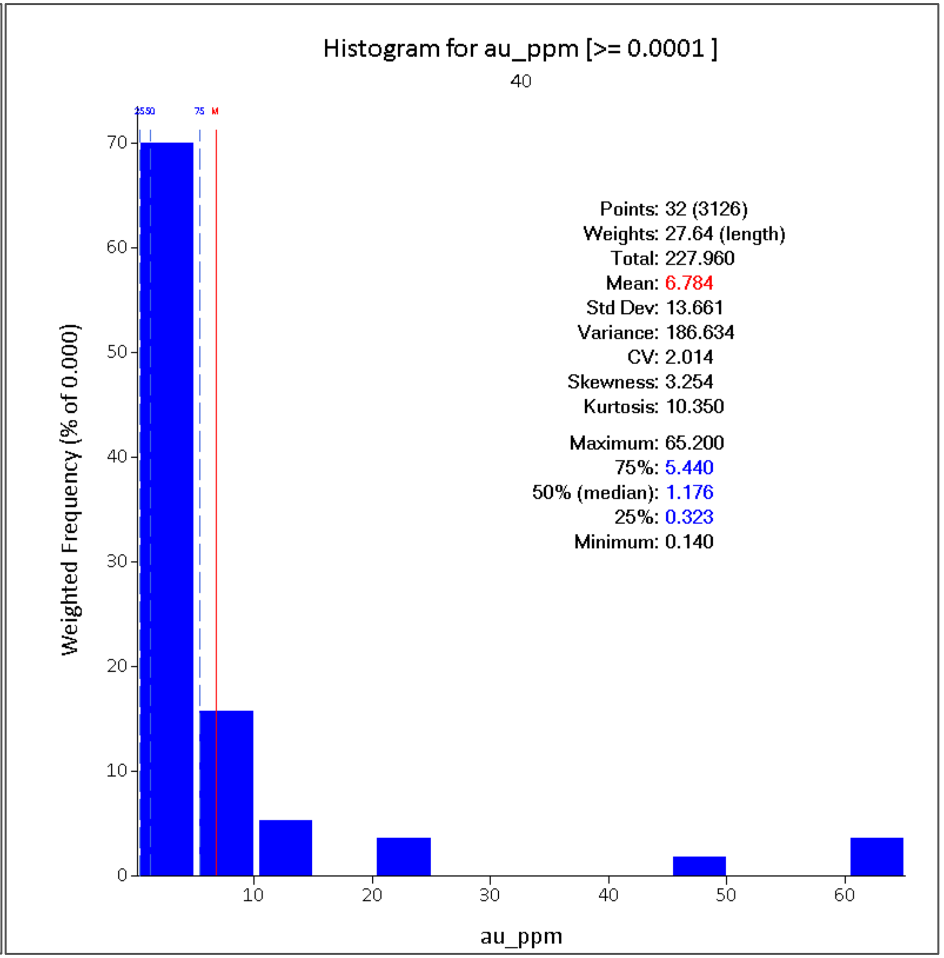
Geozone domain 10



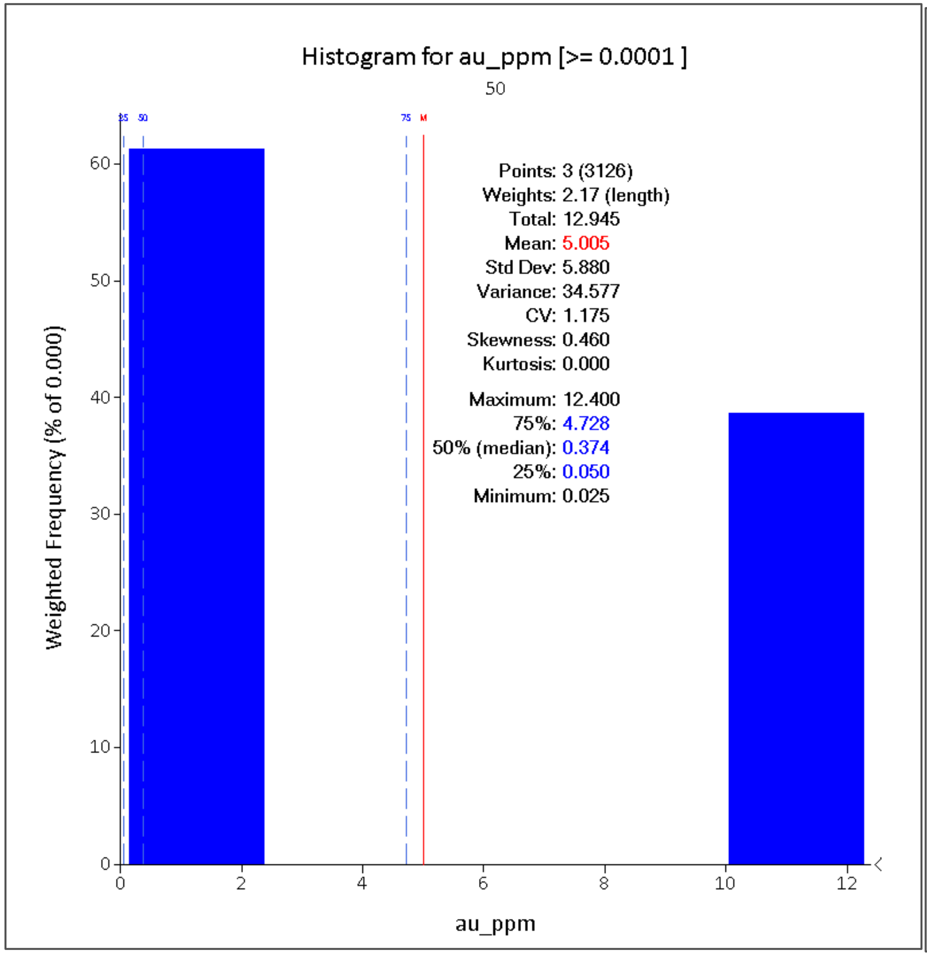
Geozone domain 20



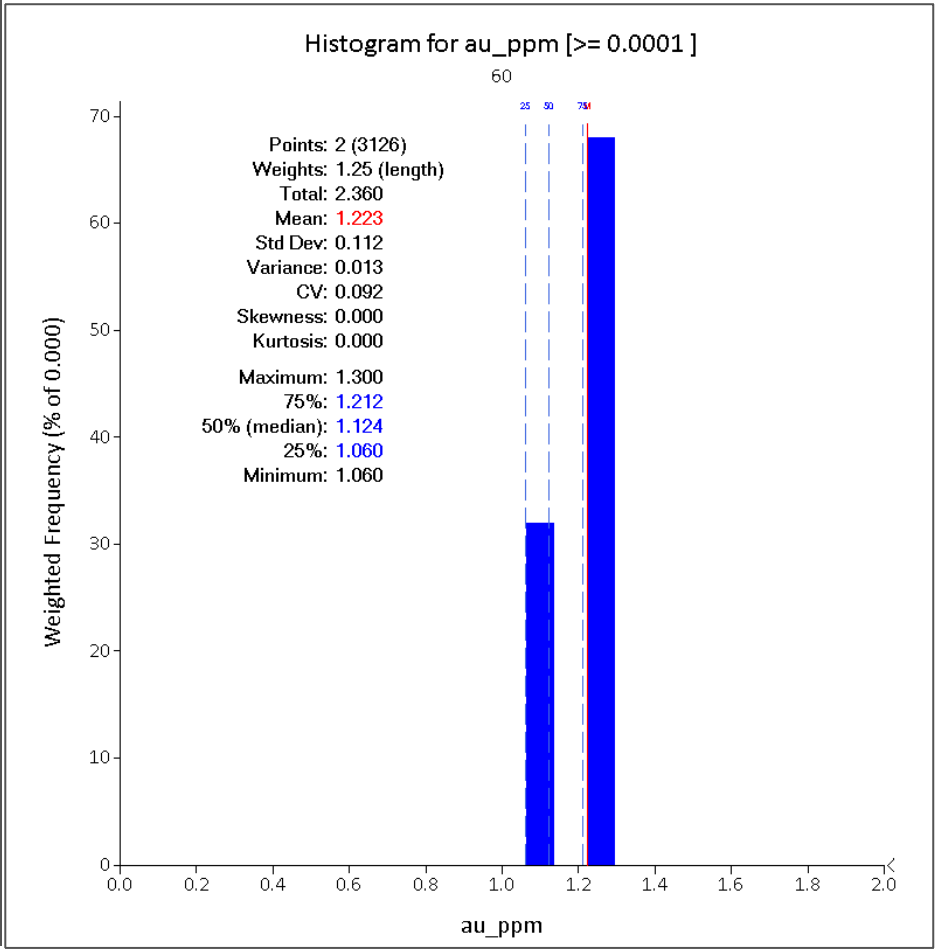
Geozone domain 30



Geozone domain 40



Geozone domain 50



Geozone domain 60

7.2.2 Density domains

Descriptive statistics for density samples broken down by lithology (database variable = strat) domains are presented in Table 7-5. The density data display reasonable stationarity when broken down into each of the strat domains with each domain displaying semi-normal distributions with low coefficients of variation. A quick analysis did not find any correlation between density and gold grade so the strat domains were used as hard boundaries for further exploratory data analysis and density estimation.

Table 7-5: Descriptive statistics for density broken down by strat domains

Domain	Number of samples	Density (g/m^3)						
		Minimum	Maximum	Mean	Median	Standard Deviation	CV	Skewness
All samples	614	2.560	3.30	2.99	2.99	0.08	0.03	-0.95
mafic	356	2.560	3.30	2.98	2.99	0.08	0.03	-1.21
mpx	103	2.690	3.29	3.04	3.05	0.09	0.03	-1.92
mschist	15	2.790	3.07	2.92	2.92	0.08	0.03	-0.10
um	140	2.740	3.14	2.97	2.97	0.07	0.02	-0.62
vol	0	-	-	-	-	-	-	-

Figure 7-4: Density box and whisker plots broken down by strat domains

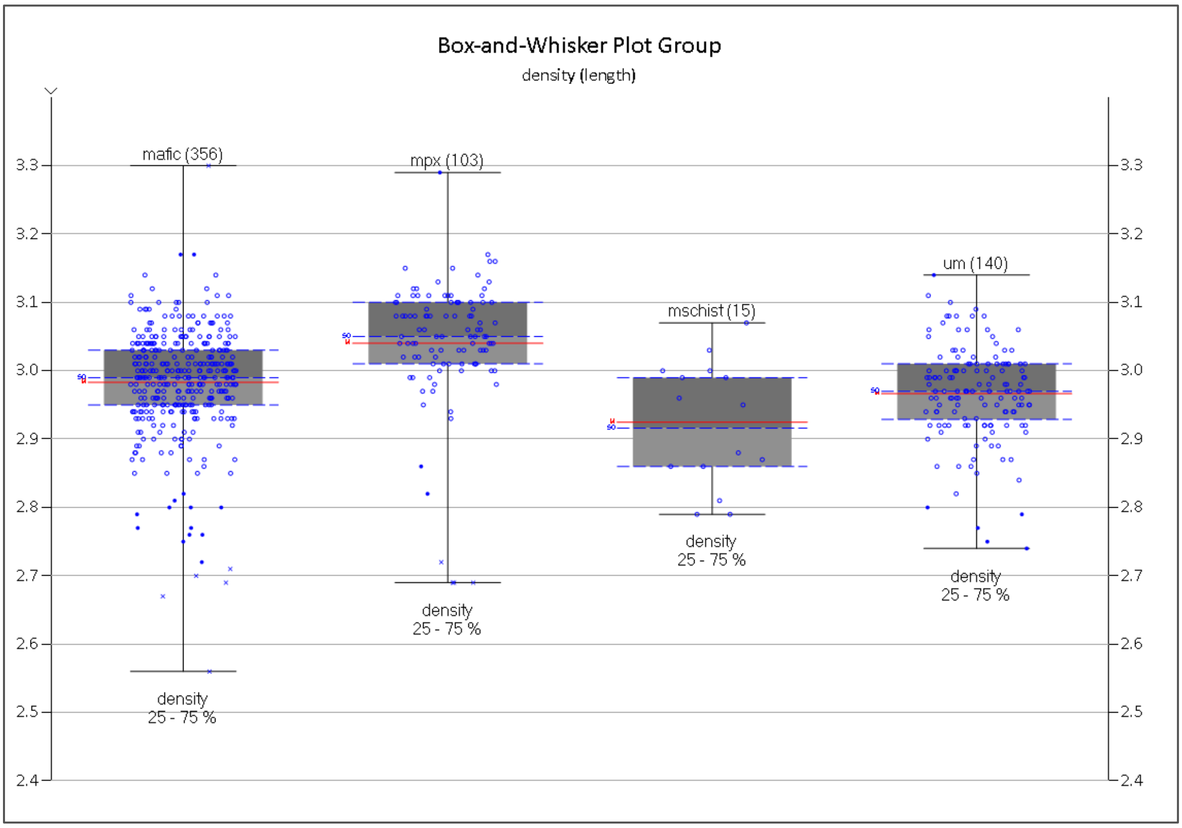
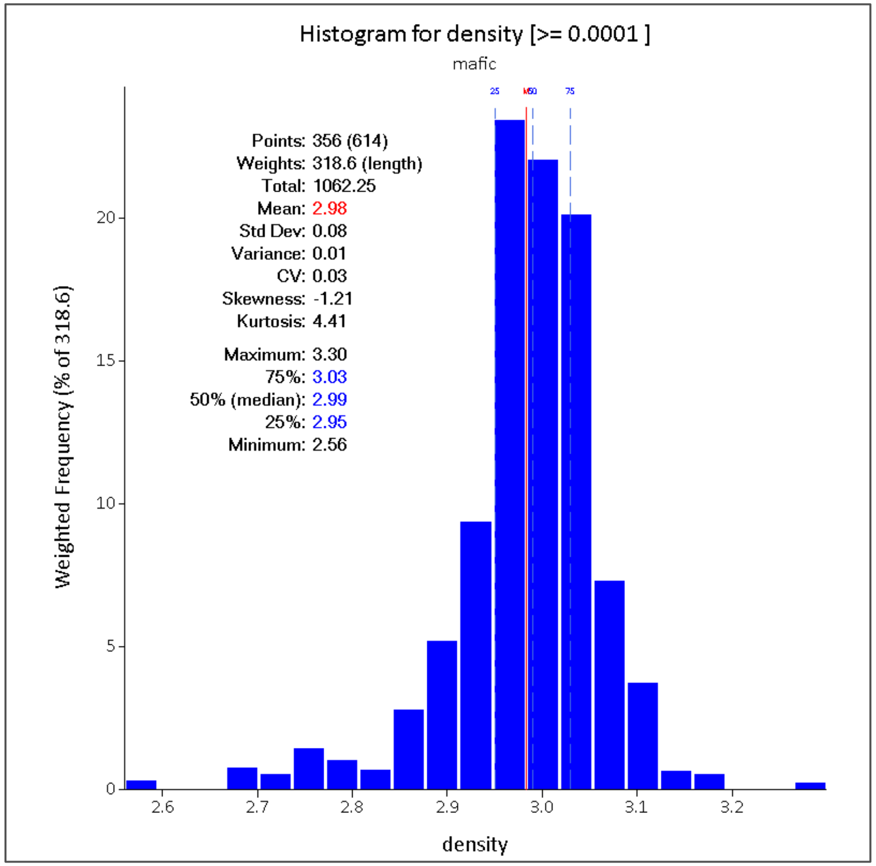
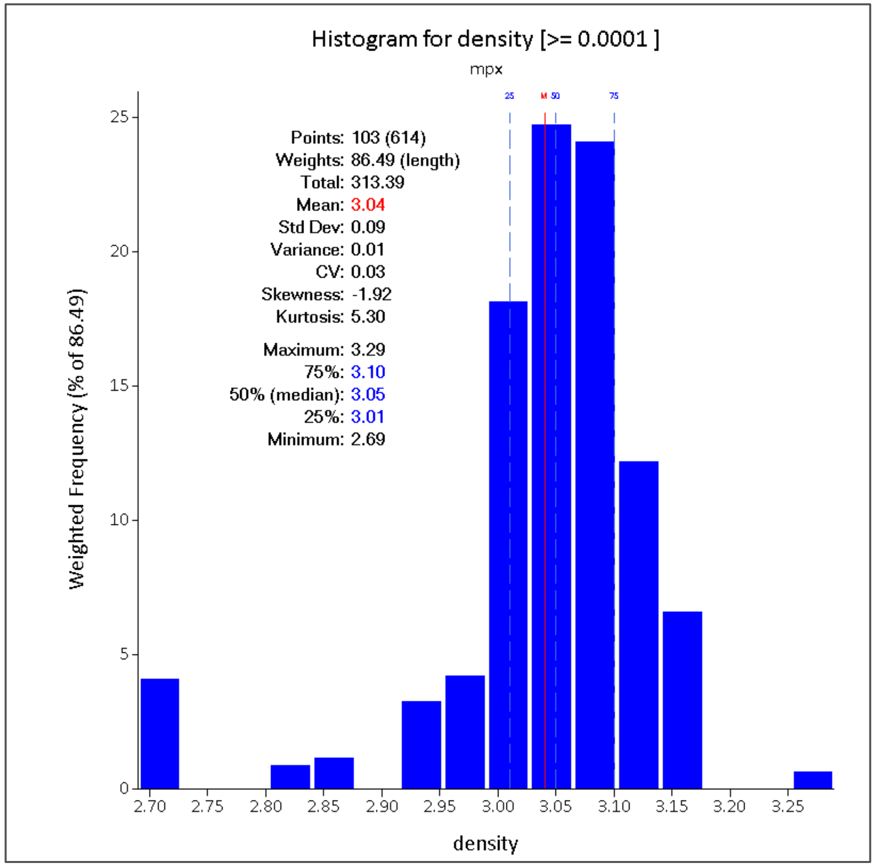


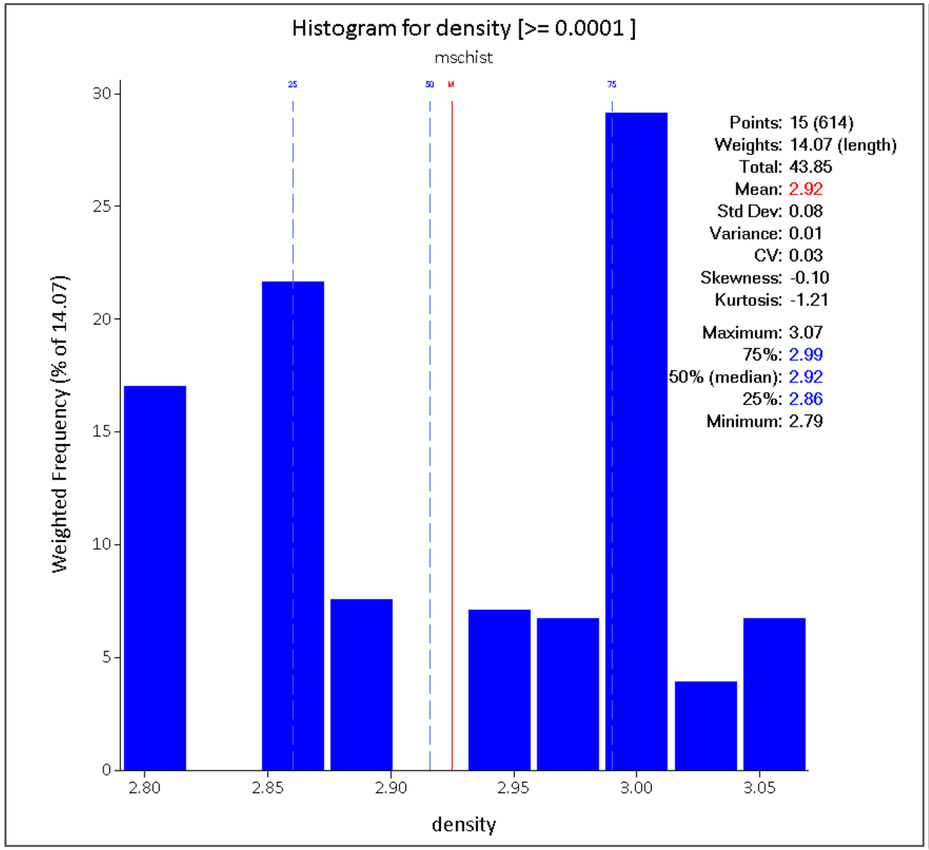
Figure 7-5: Density histograms for strat domains



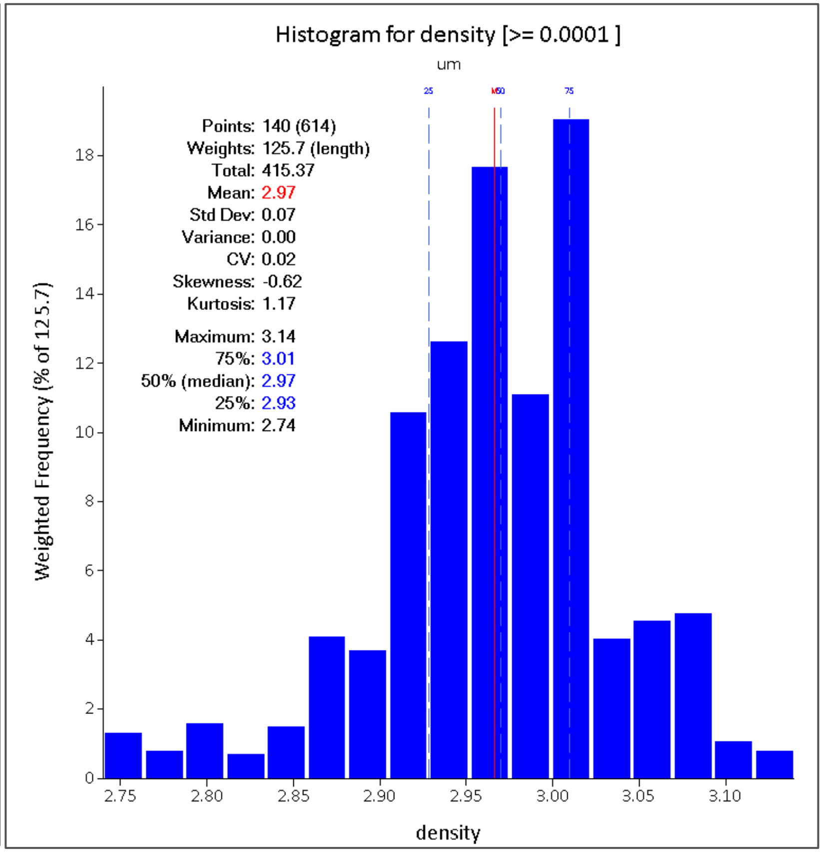
Strat domain mafic



Strat domain mpx



Strat domain mschist



Strat domain um

7.3 Sample compositing

Several different samples lengths were used to sample the Segele diamond drill holes. Mineralised samples ranged from 0.1 to 1.7 m in length with 96% of the samples ≤1.0 m in length. Waste samples ranged from 0.1 to 2.7 m in length with 96% of the samples ≤1.0 m in length.

The raw gold drill hole samples were composited into 1 m sample lengths which were broken at geozon domain boundaries into the composite database seg_220404_au_1m.cmp.isis whereas the raw density samples were composited into 1 m sample lengths which were broken at strat domain boundaries into the composite database seg_220404_dens_1m.cmp.isis. Residual samples ≤0.5 m were appended to the previous composite sample.

The 1 m composite samples compare favourably with the raw sampling data as shown in Table 7-6 and Table 7-7. Compositing resulted in 322 fewer gold samples and 3 additional density samples overall with 37 fewer gold samples in the mineralised domains. The mean gold grades and densities remained constant between the raw and composited datasets and there was no significant change to the length weighted, calculated metal for either gold or density.

Table 7-6: Segele composite length analysis statistics of gold samples

Geozon domain		0	10	20	30	40	50	60	100
Raw samples (# 3,126)	Number of samples	2,785	169	89	43	32	3	2	3
	Minimum	0.001	0.01	0.001	0.2	0.14	0.025	1.06	0.001
	Maximum	0.80	16,850	580	3,570	65.2	12.4	1.30	0.001
	Mean	**0.02**	**77.7**	**19.9**	**13.8**	**6.78**	**5.00**	**1.22**	**0.001**
	Median	0.001	3.15	1.77	1.13	1.18	0.37	1.12	0.001
	Skewness	7.70	18.58	5.78	18.63	3.25	0.46	0.00	0.00
	CV	2.68	11.46	3.29	13.73	2.01	1.18	0.09	0.00
	Metal	**1.31**	**359.72**	**49.38**	**15.68**	**6.03**	**0.35**	**0.05**	**0.00**
1 m composites (# 2,804)	Number of samples	2,500	148	82	38	29	2	2	3
	Minimum	0.001	0.11	0.01	0.2	0.14	0.376	1.06	0.001
	Maximum	0.74	6,746	322	361	65.2	10.4	1.30	0.001
	Mean	**0.02**	**77.7**	**19.9**	**13.8**	**6.78**	**5.01**	**1.22**	**0.001**
	Median	0.004	3.85	2.36	1.18	1.58	0.38	1.12	0.001
	Skewness	6.854	11.45	3.90	5.52	3.47	0.00	0.00	0.00
	CV	2.42	7.27	2.52	4.32	1.90	1.00	0.09	0.00
	Metal	**1.31**	**359.67**	**49.38**	**15.70**	**6.03**	**0.35**	**0.05**	**0.00**
Difference	Number of samples	-285	-21	-7	-5	-3	-1	0	0
	Minimum	0.00	0.10	0.01	0.00	0.00	0.35	0.00	0.00
	Maximum	-0.06	-10,104	-258	-3,209	0.00	-2.0	0.00	0.00
	Mean	**0.00**	**-0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**
	Median	0.00	0.69	0.59	0.05	0.40	0.00	0.00	0.00
	Skewness	-0.84	-7.14	-1.88	-13.10	0.22	-0.46	0.00	0.00
	CV	-0.257	-4.187	-0.769	-9.41	-0.116	-0.175	0	0
	Metal	**0.00**	**-0.05**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Gold metal for each domain was calculated as the total sample length × weighted average gold grade divided by 31.1034768.

Table 7-7: Segele composite length analysis statistics of density samples

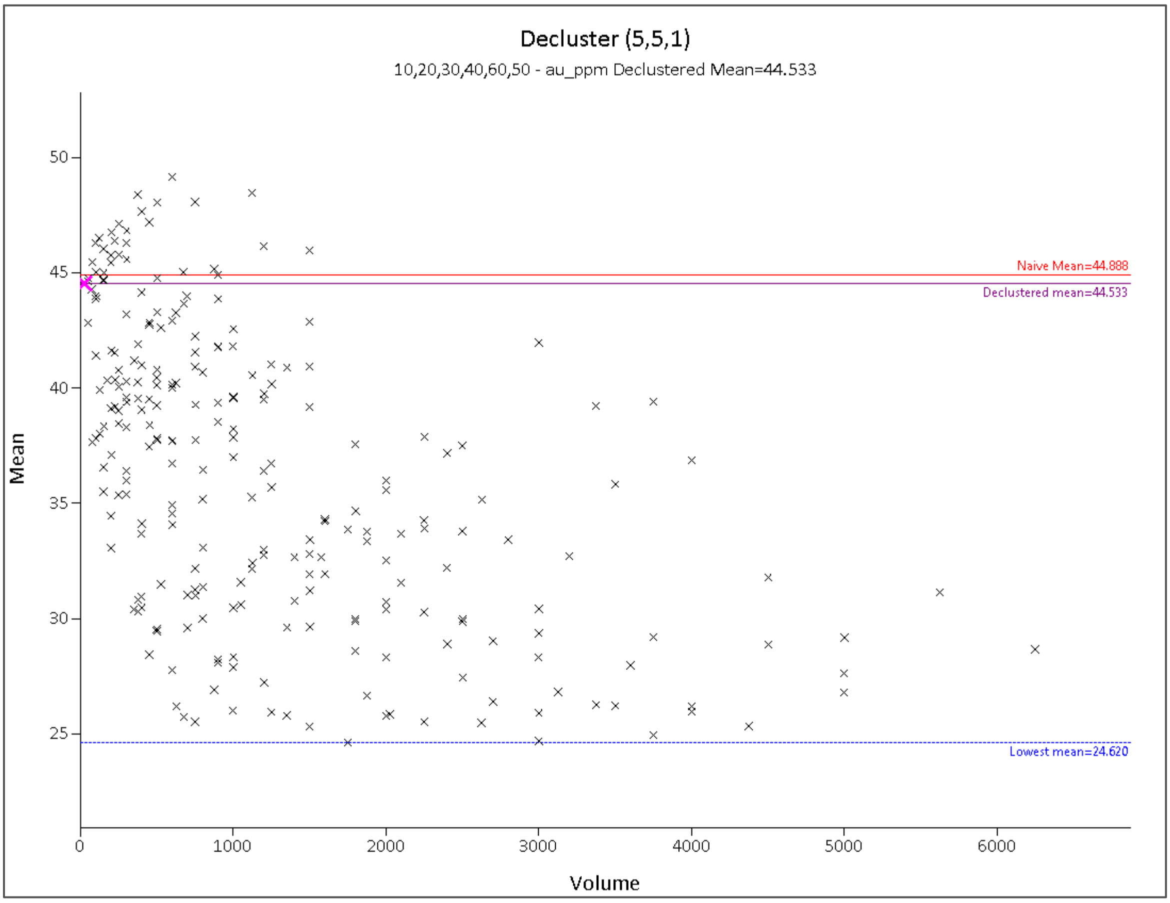
Strat domain		mafic	mpx	mschist	um
Raw samples (# 614)	Number of samples	356	103	15	140
	Minimum	2.56	2.69	2.79	2.74
	Maximum	3.30	3.29	3.07	3.14
	Mean	**2.98**	**3.04**	**2.92**	**2.97**
	Median	2.99	3.05	2.92	2.97
	Skewness	-1.21	-1.92	-0.10	-0.62
	CV	0.03	0.03	0.03	0.02
	Metal	**950.44**	**262.95**	**41.15**	**372.76**
1 m composites (# 617)	Number of samples	358	103	15	141
	Minimum	2.56	2.69	2.79	2.74
	Maximum	3.3	3.29	3.07	3.14
	Mean	**2.98**	**3.04**	**2.92**	**2.97**
	Median	2.990	3.05	2.92	2.97
	Skewness	-1.16	-1.86	-0.11	-0.59
	CV	0.03	0.03	0.03	0.02
	Metal	**950.44**	**262.95**	**41.15**	**372.76**
Difference	Number of samples	2	0	0	1
	Minimum	0.00	0.00	0.00	0.00
	Maximum	0.00	0.0	0.0	0.0
	Mean	**0.00**	**0.00**	**0.00**	**0.00**
	Median	0.00	0.00	0.00	0.00
	Skewness	0.05	0.06	-0.01	0.03
	CV	0	0	0	0
	Metal	**0.00**	**0.00**	**0.00**	**0.00**

Note: Density metal for each domain was calculated as the total sample length × weighted average density grade.

7.4 Declustering analysis

The diamond drilling at Segele has been completed on a semi-regular grid approximately 5–15 mE × 10–15 mN. Declustering analysis was conducted for cell sizes between 5 mX × 5 mY × 1 mX and 25 mX × 25 mY × 5 mX. There was little difference between the naïve and declustered mean gold grades for cell sizes up to 15 mX × 15 mY × 2 mX indicating that the drill hole data is not inherently clustered at cell sizes less than half the approximate the drill hole spacing (Figure 7-6).

Figure 7-6: Segele mineralised domain geozon=10 (main lens) declustering analysis



Note: Declustered displayed mean above is for a 5 mX × 5 mY × 1 mRL block

7.5 Outlier analysis

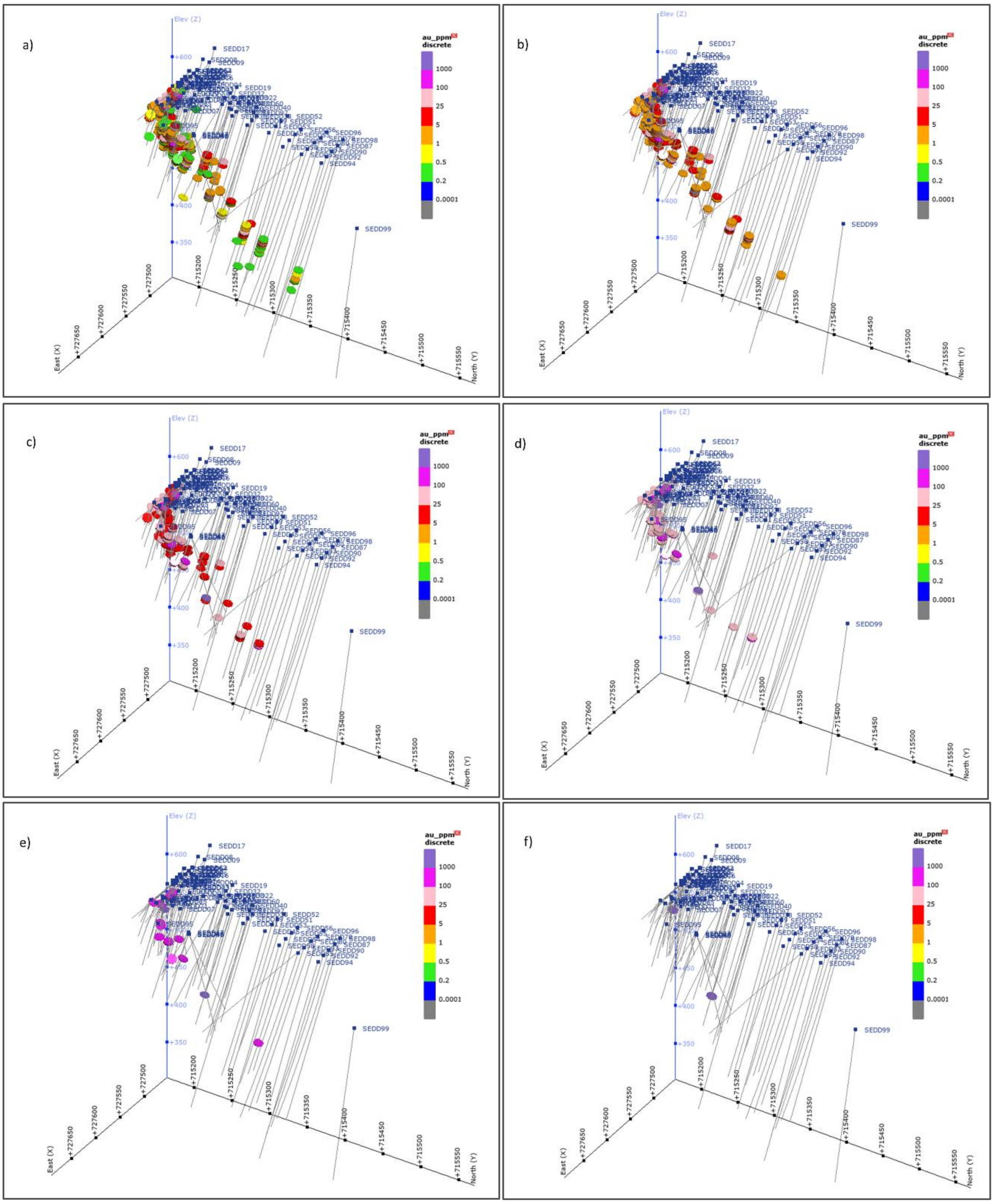
Outlier analysis for gold values was conducted on the 1 m composite database. Mineralised domains 10, 20, 30 and 40 all contain positively skewed gold populations with moderate to high coefficients of variation values indicating that high-grade values may contribute significantly to the mean grade of each domain and cause high-grade smearing during Mineral Resource estimation (Figure 7-7). Histograms (Figure 7-8) and probability plots were used to identify high-grade outliers within each of the mineralised domains and formulate high-grade thresholds for distance restrictions (geozon domains 20, 30 and 40) and top-cuts (geozon domain 10).

Geozon domains 20 and 30 contain high-grade outliers >300 g/t Au, however due to the low number of samples in each domain it was decided to use high-grade restrictions for samples >150 g/t Au during estimation rather than applying a top-cut as this more closely represents the mineralisation style.

Geozon domain 10 has one very large outlier of 6,746 g/t Au, approximately eight times higher than the next highest gold value of 827 g/t Au. The 6,746 g/t Au composite was top-cut to 850 g/t Au resulting in a drop of the domain mean from 77.7 g/t Au to 28.7 g/t Au and a slight reduction in the median value from 3.85 g/t Au to 3.53 g/t Au.

No gold top-cuts or distance restrictions were applied to Geozon domains 40, 50 and 60 and no density tops-cut were applied to any of the strat domains.

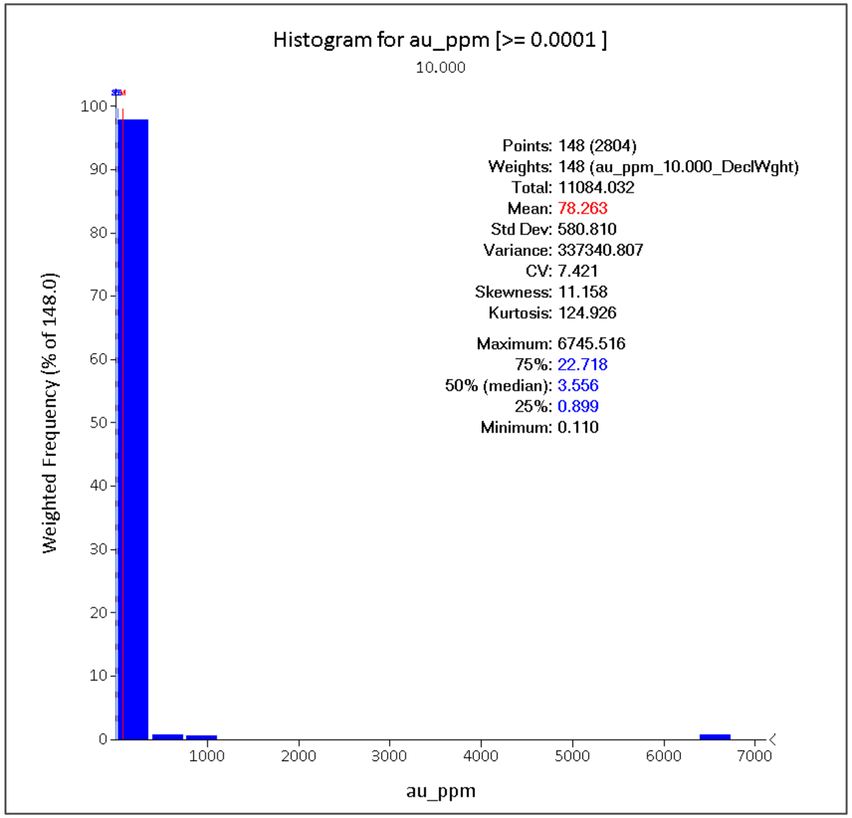
Figure 7-7: Gold grade three dimensional distributions – raw samples



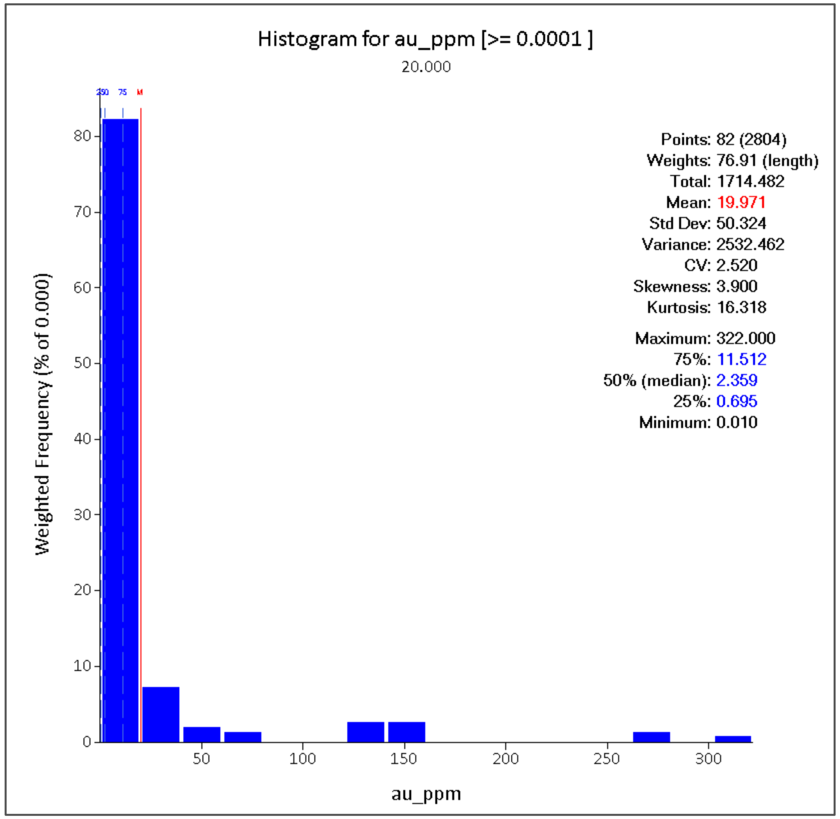
Note:

a) ≥0.2 g/t Au
b) ≥1.0 g/t Au
c) ≥5.0 g/t Au
d) ≥25 g/t Au
e) ≥100 g/t Au
f) ≥1,000 g/t Au

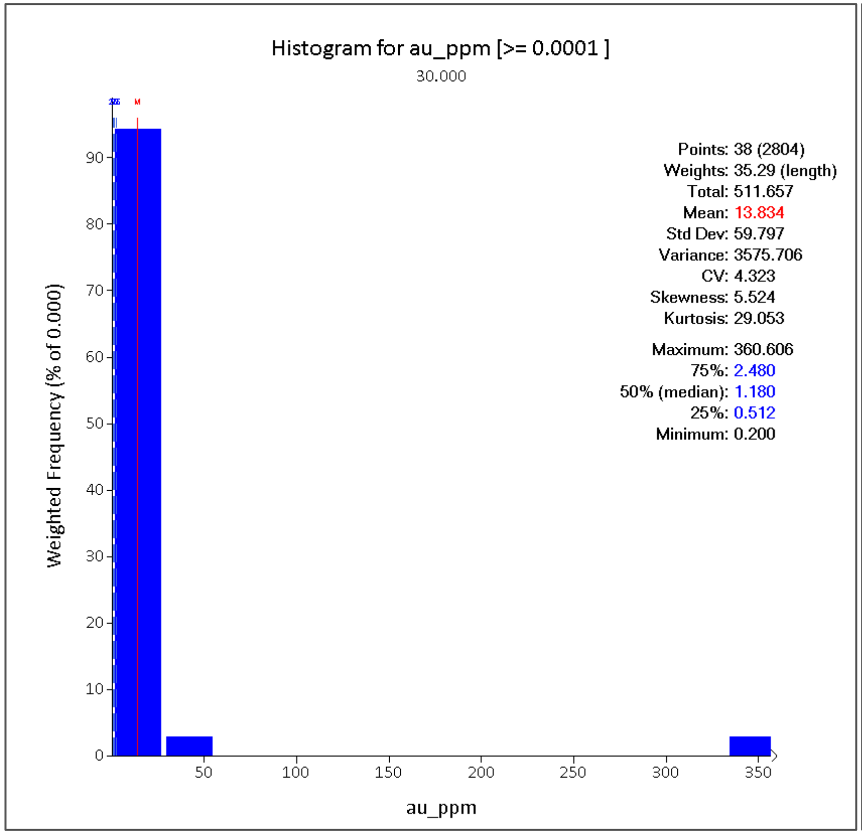
Figure 7-8: 1 m composite gold histograms for mineralised geozon domains



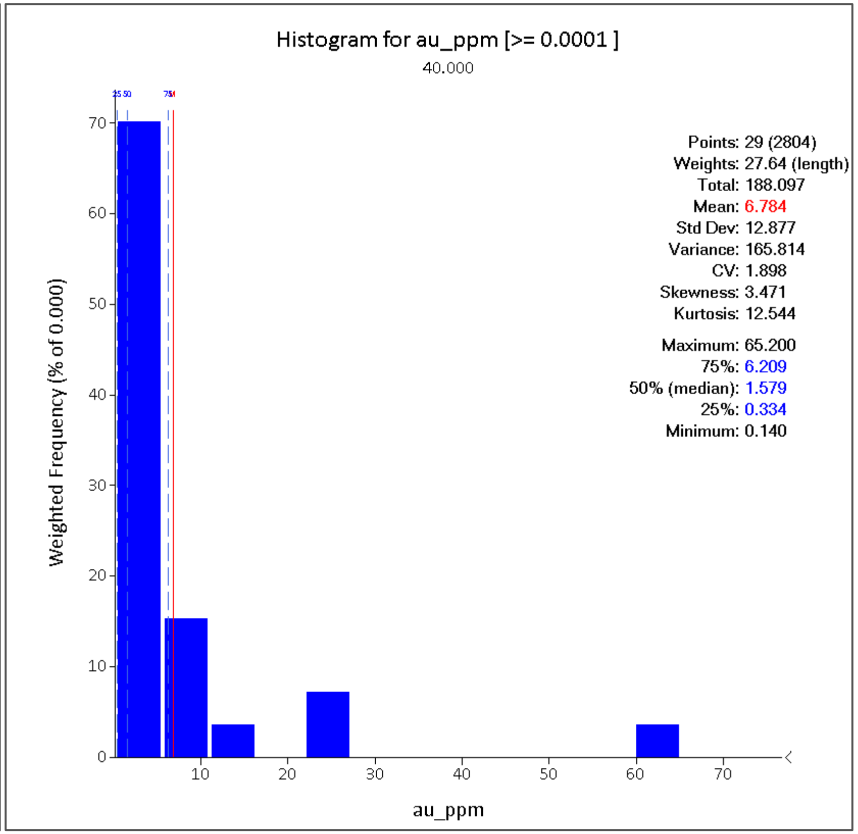
Geozone domain 10



Geozone domain 20



Geozone domain 30



Geozone domain 40

7.6 Variography

Variography models (Table 7-8) were constructed for:

- gold in the main mineralised domain 10 (Figure 7-9 and Figure 7-10)
- gold in a combined model for footwall domains 20, 30 and 40
- density in a combined model for all strat domains (Figure 7-11 and Figure 7-12).

The 1 m composite data were transformed into normal scores prior to variogram modelling and back transformed into Vulcan ZXY rotations prior to Mineral Resource estimation.

Gold in the main lens shows weak to moderate anisotropy with the direction of major continuity occurring in a northwest to southeast direction (along strike), the semi major direction plunging to the northeast (down-dip) and the minor direction occurring perpendicular to the strike of the lens. The variogram was modelled with two spherical structures which show limited continuity in all directions.

Gold in the footwall lenses shows weak to moderate anisotropy with the direction of major continuity occurring in a northwest to southeast direction (along strike), the semi major direction plunging steeply to the northeast and the minor direction occurring perpendicular to the strike of the lens. The variogram was modelled with two spherical structures which show limited continuity in all directions.

Density shows moderate to strong anisotropy with the direction of major continuity occurring in a northeast to southwest direction, the semi major direction plunging slightly to the northwest and the minor direction occurring across strike. The variogram was modelled with two spherical structures which show limited continuity in all directions.

Table 7-8: Segele 2022 variogram models

Variogram Model	Component	Sill	Major	Semi-Major	Minor
geozon = 10 (Au)	Direction		000→135	035→225	055→045
	(Vulcan ZXY rotation)		135	0	35
	Nugget	0.32			
	Structure 1	0.56	8 m	14 m	4 m
	Structure 2	0.12	25 m	20 m	15 m
geozon = 20, 30, 40 (Au)	Direction		019→140	065→280	015→045
	(Vulcan ZXY rotation)		140.38	19.29	74.09
	Nugget	0.25			
	Structure 1	0.51	12 m	5 m	4 m
	Structure 2	0.24	31 m	13 m	5 m
strat = all domains (density)	Direction		000→035	015→125	075→305
	(Vulcan ZXY rotation)		35	0	15
	Nugget	0.18			
	Structure 3	0.28	12 m	30 m	6 m
	Structure 4	0.54	121 m	35 m	11 m

Figure 7-9: Gold variogram maps for domain geozon = 10 (main lens)

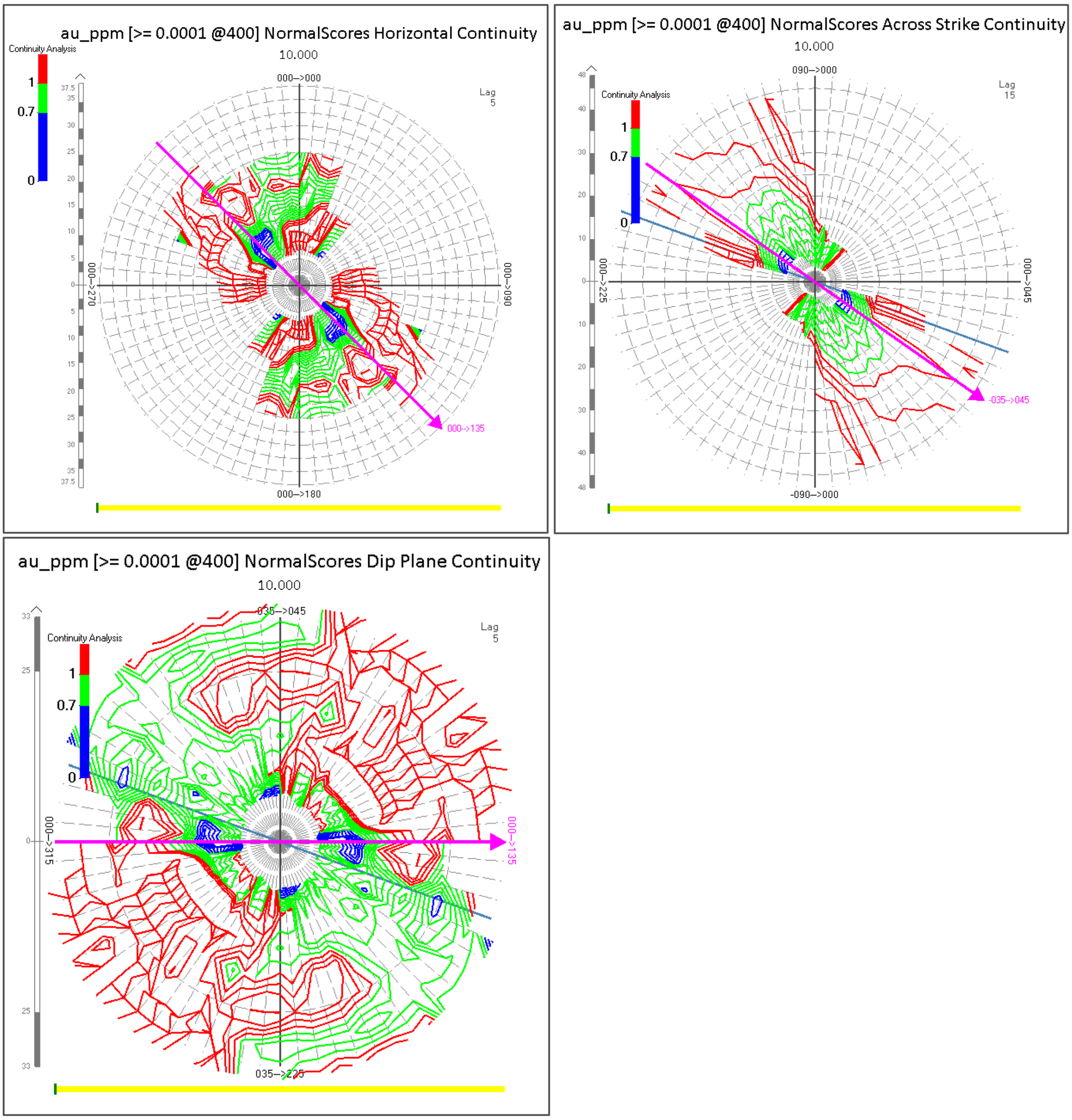
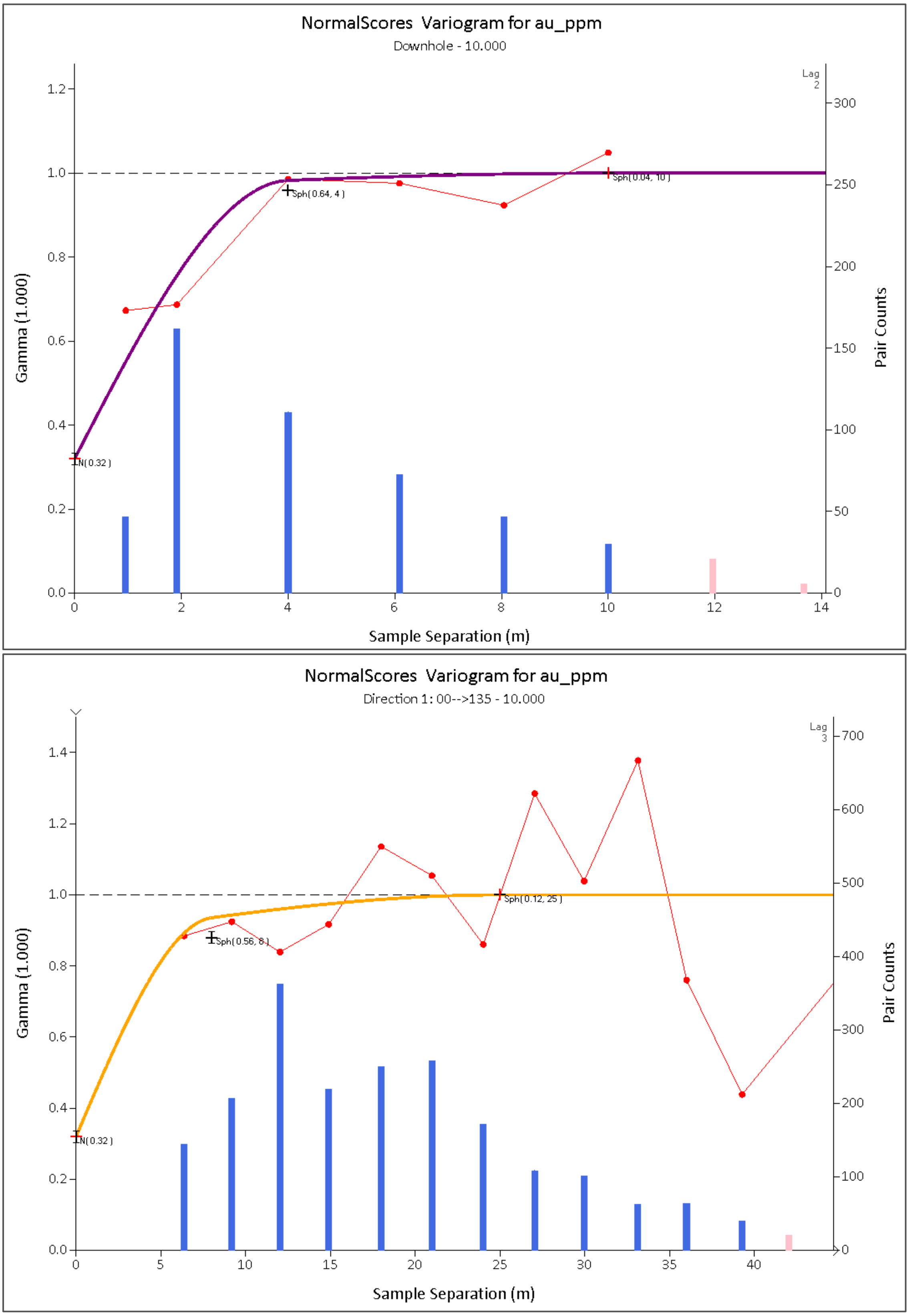
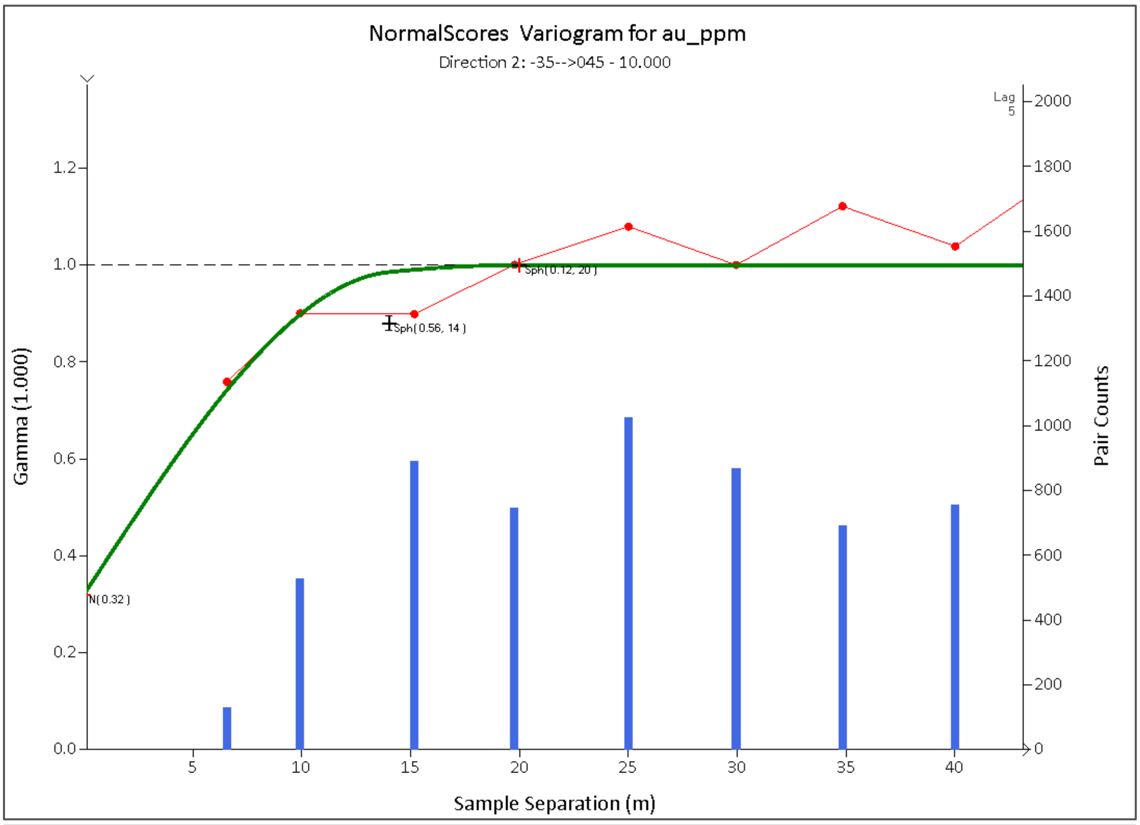


Figure 7-10: Gold variogram model for domain geozon = 10 (main lens)




NormalScores Variogram for au_ppm
Direction 2: -35-->045 - 10.000
Gamma (1.000)
Pair Counts
Lag 5
Sph(0.12, 20)
Sph(0.56, 14)
N(0.32)
Sample Separation (m)

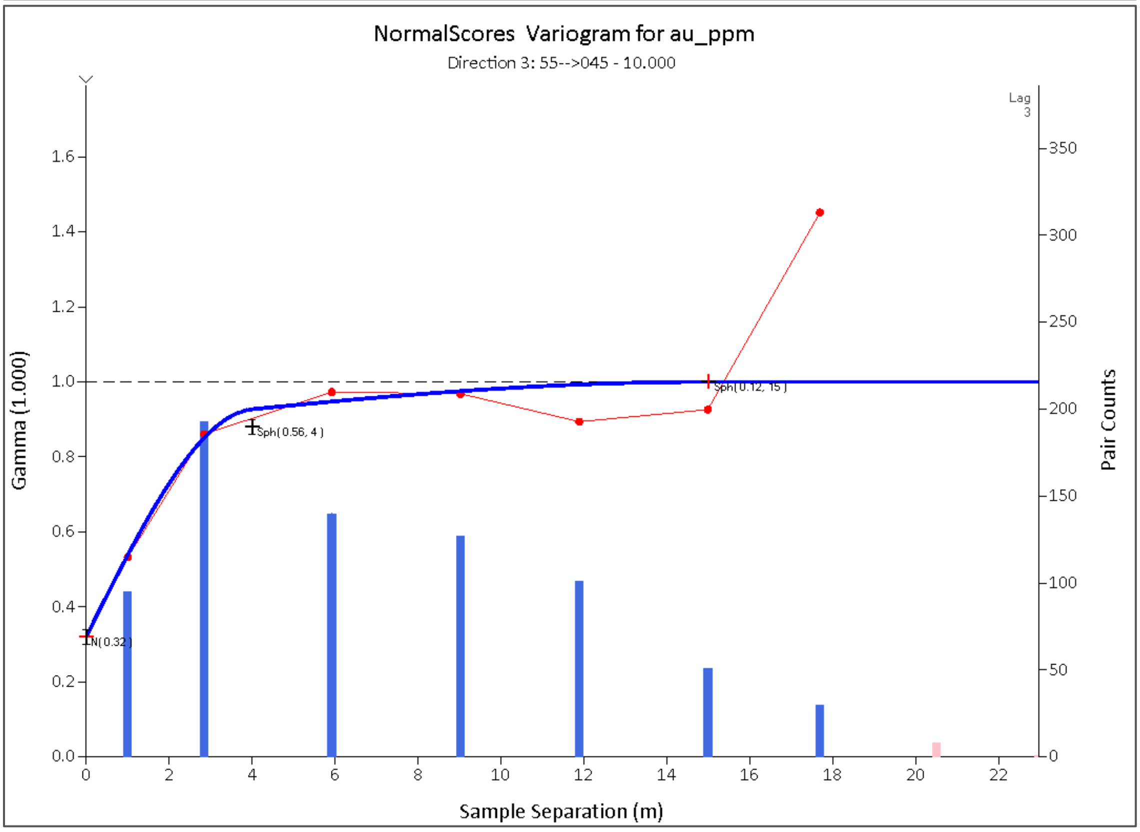

NormalScores Variogram for au_ppm
Direction 3: 55-->045 - 10.000
Gamma (1.000)
Pair Counts
Lag 3
Sph(0.12, 15)
Sph(0.56, 4)
N(0.32)
Sample Separation (m)

Figure 7-11: Density variogram maps – all strat domains combined

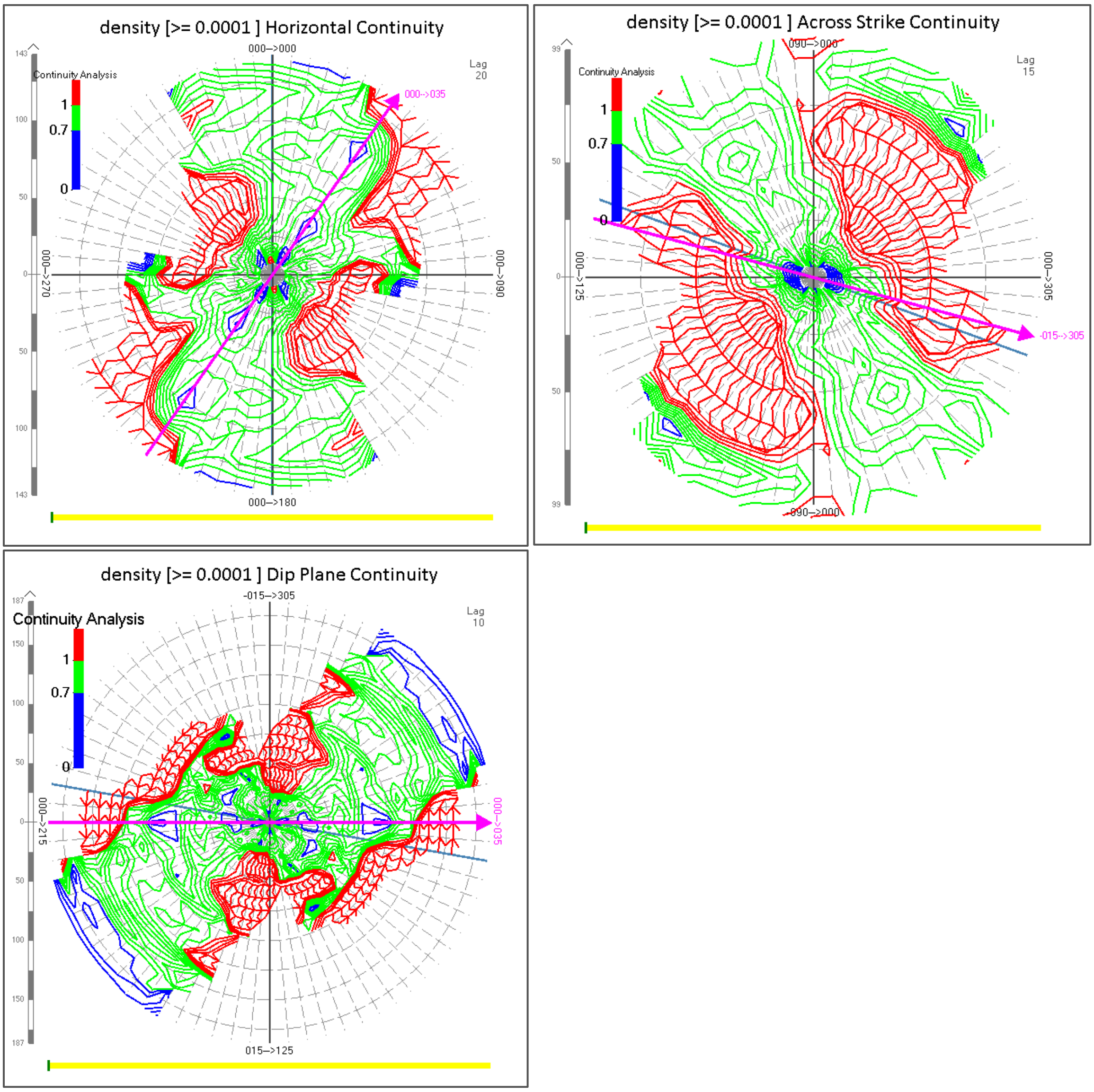
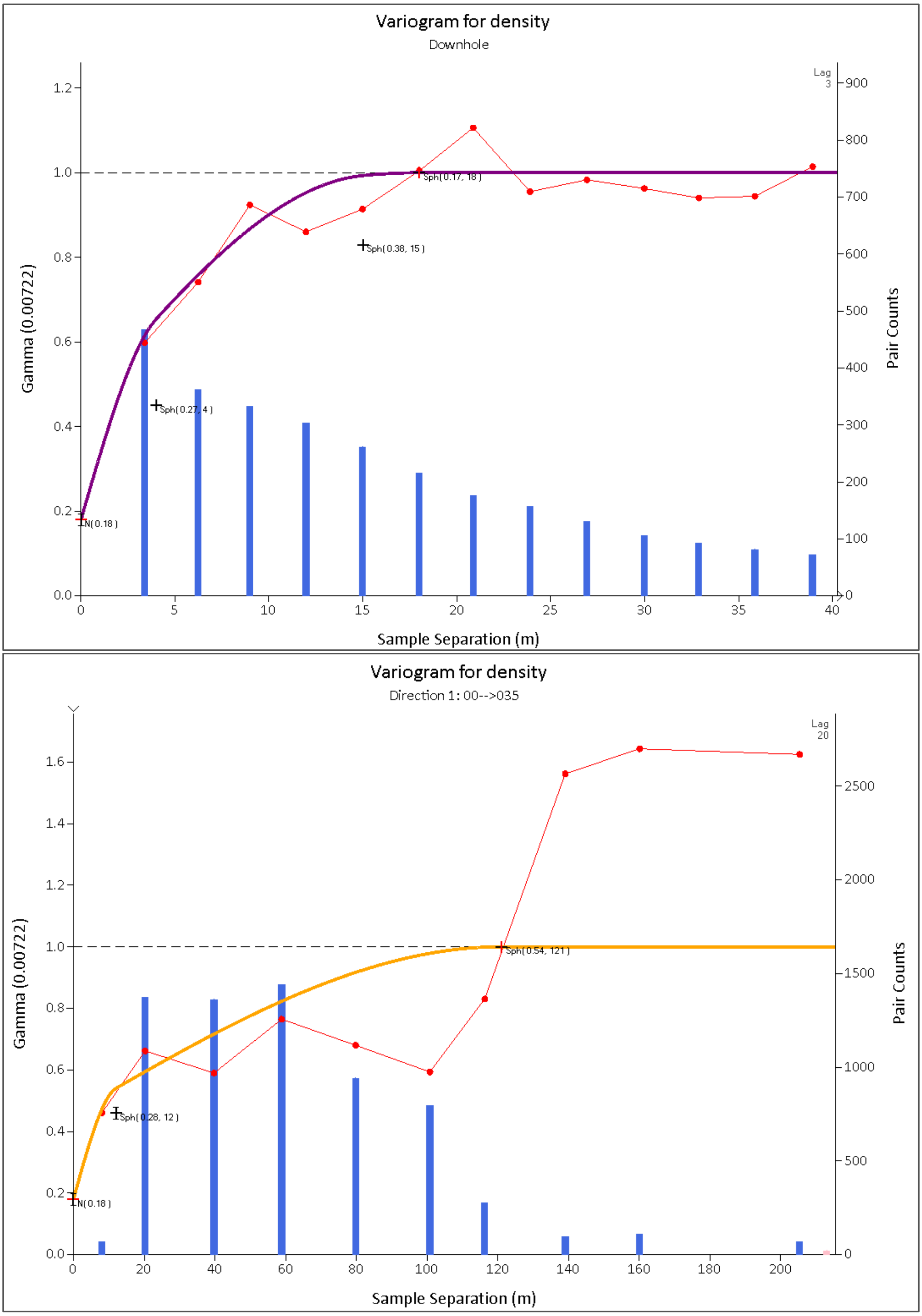
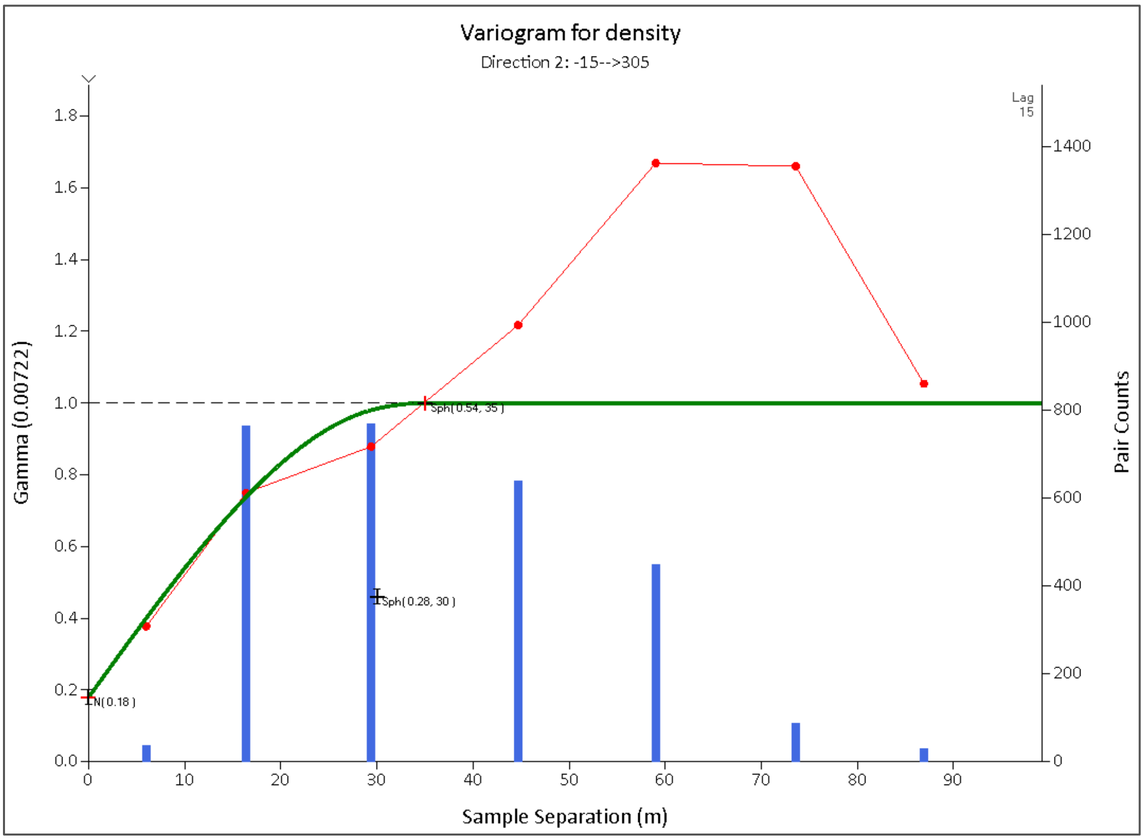
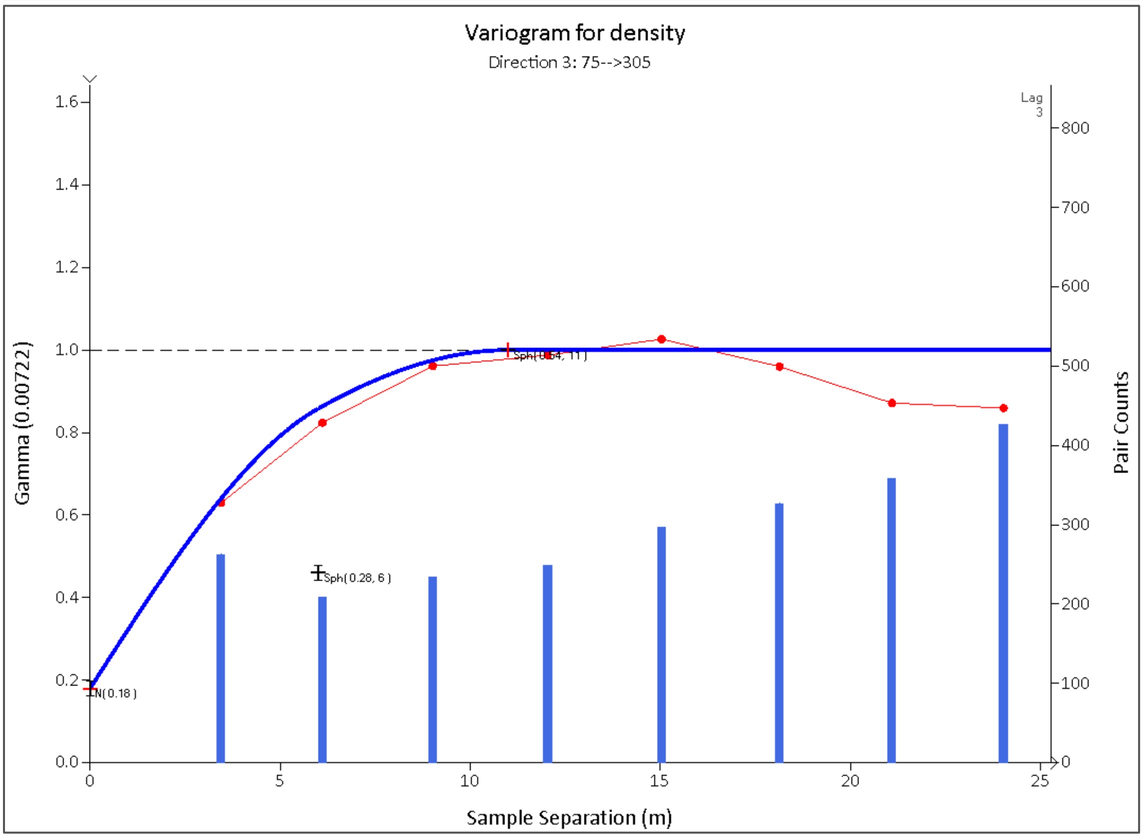


Figure 7-12: Density variogram model – all strat domains combined




Variogram for density
Direction 2: -15-->305
Gamma (0.00722)
Pair Counts
Lag 15
Sph(0.54, 35)
Sph(0.28, 30)
N(0.18)
Sample Separation (m)


Variogram for density
Direction 3: 75-->305
Gamma (0.00722)
Pair Counts
Lag 3
Sph(0.28, 6)
N(0.18)
Sample Separation (m)

7.7 Kriging neighbourhood analysis

Kriging neighbourhood analysis (KNA) was conducted using composite and variogram model data from geozon domain 10 (gold), the combined geozon domains 20, 30 and 40 (gold) and the combined strat domains (density) with the resulting search parameters applied to all the other waste and mineralised domains. The KNA analysis indicated the following parameters:

- an optimised estimation block size of 5 mX × 5 mY × 1 mRL (Figure 7-13)
- a minimum of 6 samples and a maximum of 22 samples per block estimate (Figure 7-14)
- an optimised initial search range of 30 mX × 15 mY × 10 mRL (Figure 7-15)
- an optimised discretisation of 5 X × 5 Y × 1 Z (Figure 7-16).

Figure 7-13: geozon = 10 (main lens), KNA block size analysis

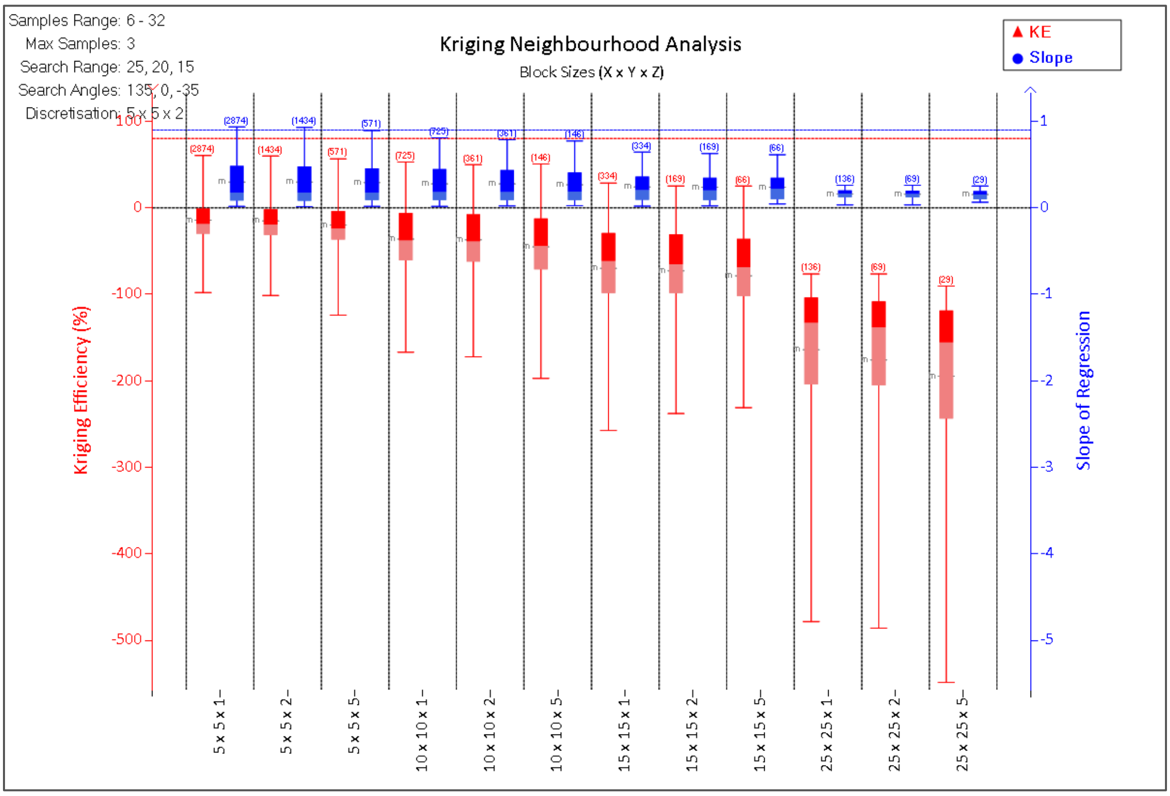


Figure 7-14: geozon = 10 (main lens), KNA sample range analysis

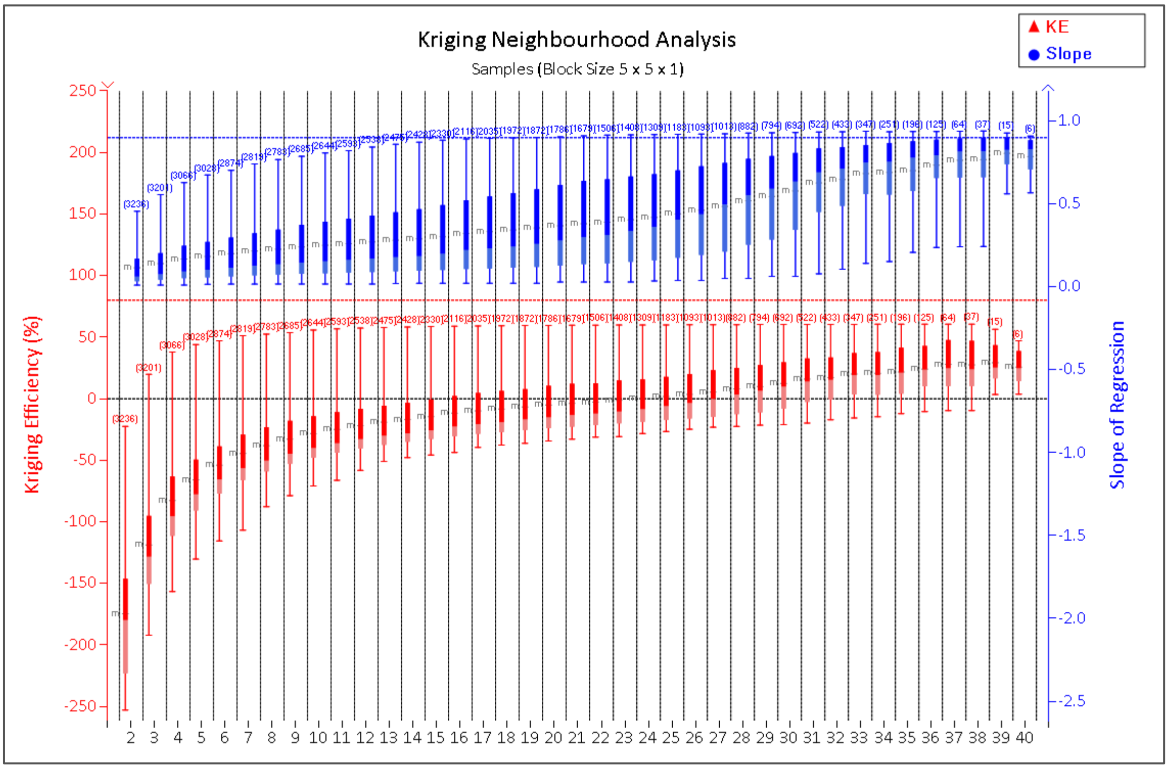


Figure 7-15: geozon = 10 (main lens), KNA search range analysis

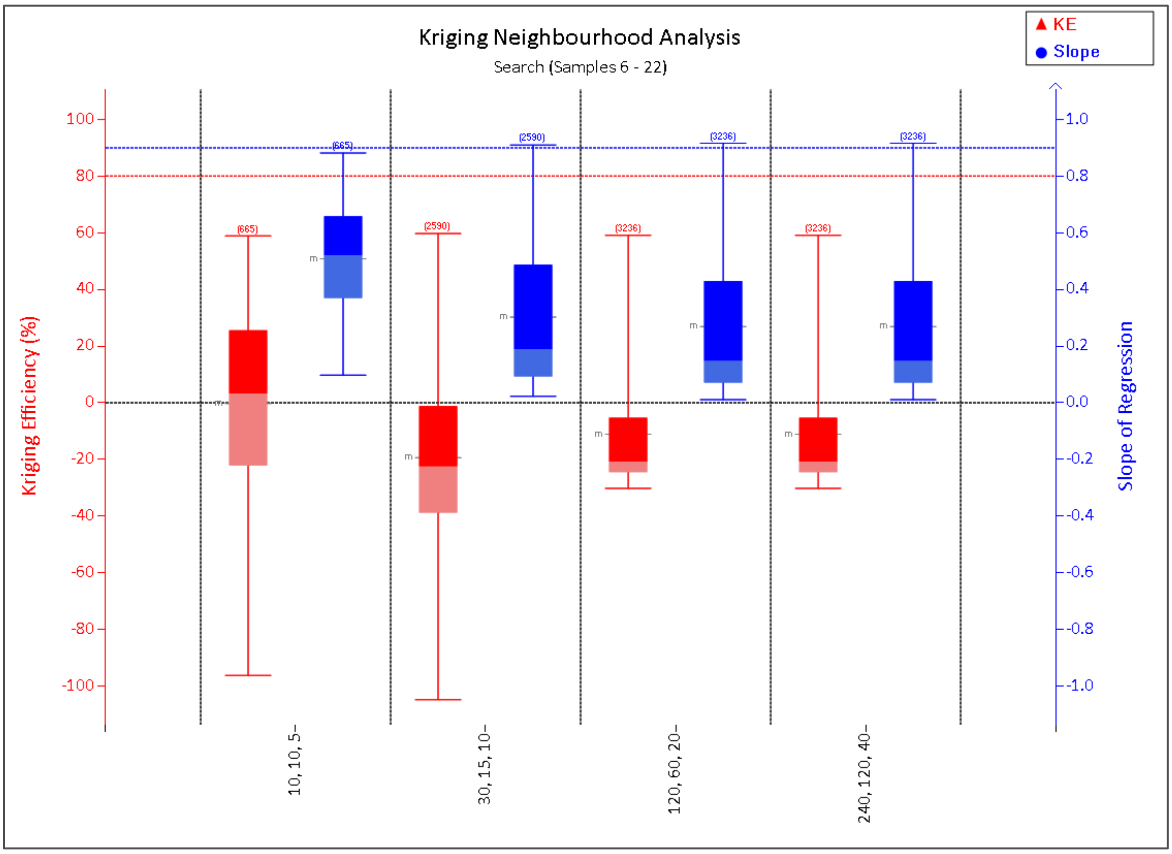
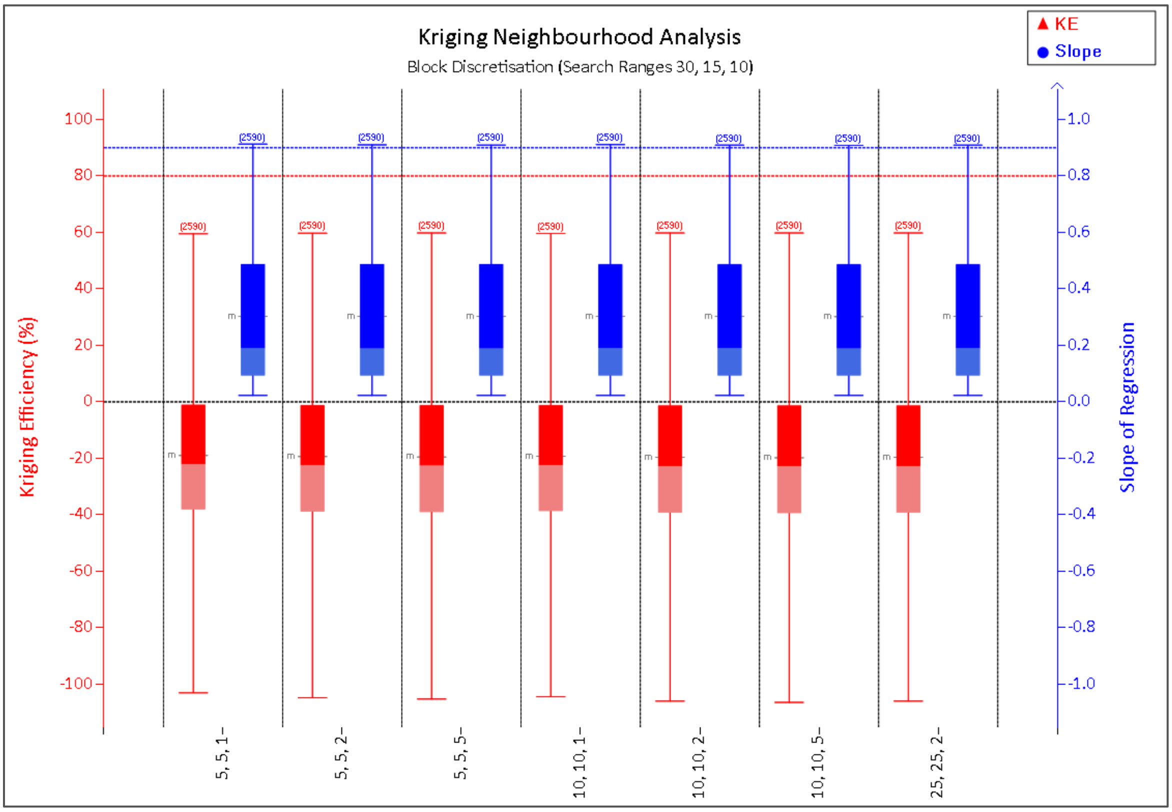


Figure 7-16: geozon = 10 (main lens), KNA block discretisation analysis



8 Mineral Resource estimation

8.1 Block model construction

The April 2022 Segele block model dimensions were selected to match the size and extents of the modelled mineralised lenses. The parent block size used was 5 mE × 5 mN × 1 mRL with minimum sub-cells sized 0.5 mX × 0.5 mY × 0.5 mRL to match the optimised estimation cell dimensions identified during KNA while also accommodating the narrow and variable nature of the lithological contacts and mineralised lenses (Table 8-1). Blocks were limited to the topographic surface, i.e. no blocks were constructed above the topography.

A range of grade, domain, estimation and other coding variables were added the block model during initial block construction (Table 8-2). The domain variables 'geozon' and 'strat' were flagged during the block model construction using the Segele lithological and mineralisation wireframe models and the same coding that was applied to the Segele drill hole database (Table 7-1 and Table 7-2). The block model was validated in plan and cross section to ensure correct block model extents and coding.

Table 8-1: Segele 2022 block model dimensions

Block model – segele_OK_20220421_V1			
	X	Y	Z
Origin (m)	0	0	0
Rotation (degrees)	90	0	0
Start offset (m)	727,350	715,100	300
End offset (m)	727,700	715,500	700
Dimensions	350	400	400
Parent cell size (m)	5	5	1
Number parent cells	70	80	400
Sub-cell size (m)	0.5	0.5	0.5

Table 8-2: Segele 2022 block model variables

Variable	Default value	Variable type	Description
deposit	unkn	name	deposit name
tenement	unkn	name	tenement
strat	unkn	name	stratigraphy
geozon	-99	integer	domain code
au_ok	-99	double	Au (g/t) estimate – ordinary kriging
au_ok_uc	-99	double	Au (g/t) uncut estimate – ordinary kriging
au_id	-99	double	Au (g/t) estimate – inverse distance
density	-99	double	density
numsam	-99	float	number of samples used in estimate
numholes	-99	float	number of drill holes used in estimate
au_slope	-99	double	Au estimate – slope of regression
pass	-99	integer	estimation pass
res_class	-99	short	Mineral Resource Classification
da_strike	-99	double	dynamic anisotropy strike
da_plunge	-99	double	dynamic anisotropy plunge
da_dip	-99	double	dynamic anisotropy dip
minor	-99	double	dynamic anisotropy minor
dist_sam_car	-99	double	cartesian distance to samples
dist_sam_aniso	-99	double	anisotropic distance to samples
id_pass	-99	integer	IDW pass
uc_pass	-99	integer	uncut pass
dens_pass	-99	integer	density pass
depth	-99	double	depth from surface

8.2 Estimation parameters

Gold estimates in the mineralised domains were completed over three or four estimation passes using Ordinary Kriging interpolation into 5 mX × 5 mY × 1 mRL sized parent cells with each of the mineralised domains treated as hard boundaries and estimated separately (Table 8-3 to Table 8-5). Waste material was estimated as a single domain in one pass using Inverse Distance interpolation to the power of two into 15 mX × 15 mY × 2 mRL sized parent cells.

A top-cut of 850 g/t Au was applied to the main lens (geozon = 10) to remove one high-grade outlier. Distance restrictions were applied to the main lens and the upper two footwall lenses (geozon = 20 and 30) to control high-grade smearing. The first pass used for geozon domains 10, 20 and 30 approximated a tightly controlled nearest neighbour estimate where composite samples >150 g/t Au were limited to a 5 mX × 5 mY × 1 mRL radius from the sample. The second, third and fourth passes limited the composite samples >150g/t Au to a 10 mX × 10 mY × 2 mRL radius from the sample.

The search ranges varied from 5 mX × 5 mY × 1 mRL to 240 mX × 120 mY × 40 mRL, and sample ranges varied from a minimum sample count of between 1 and 6 samples to a maximum sample count of 22 samples, including a maximum of 3 or 4 samples per drill hole. Dynamic anisotropy was used to align the search ellipse for each estimation cell in the mineralised domains based on the orientation of the mineralisation contacts.

No estimates were completed in mineralised domains 50, 60 and 100 due to the low number of composite samples available. Length weighted average composite gold grades were assigned to these domains which represent <1% of the Mineral Resources.

Density estimates were completed for the mafic, metapyroxenite, mafic schist and ultramafic domains over four estimation passes using Ordinary Kriging interpolation into 5mX × 5mY × 2 mRL sized parent cells with each of the lithology domains treated as hard boundaries and estimated separately. The search ranges varied from 5 mX × 5 mY × 1 mRL to 240 mX × 120 mY × 40 mRL, and sample ranges varied from a minimum sample count of 6 samples to a maximum sample count of 22 samples, including a maximum of 3 samples per drill hole.

Table 8-3: 2022 Segele resource estimation methodology

Variable	Domain	Number of composites	Volume of blocks (m^3)	% Mineralised blocks	Estimation method	Dynamic anisotropy
Gold	0	2,500	38,549,000		Inverse Distance Squared	No
	10	148	15,382	40.5%	Ordinary Kriging	Yes
	20	82	12,032	31.7%	Ordinary Kriging	Yes
	30	38	5,885	15.5%	Ordinary Kriging	Yes
	40	29	4,517	11.9%	Ordinary Kriging	Yes
	50	2	57	0.15%	None – default grades	No
	60	2	101	0.26%	None – default grades	No
	100	3	390,924		None – default grades	No
Density	mafic	356	36,026,477		Ordinary Kriging	No
	mpx	103	66,995		Ordinary Kriging	No
	mschist	15	519,861		Ordinary Kriging	No
	um	140	1,973,641		Ordinary Kriging	No
	vol	0	390,924		None – default grades	No

Table 8-4: Segele 2022 resource estimation search parameters

Variable	Domain	Estimation method	Search orientation (degrees)			Pass 1 search dimensions (m)			Pass 2 search dimensions (m)			Pass 3 search dimensions (m)			Pass 4 search dimensions (m)		
			Bearing	Dip	Plunge	Major	Semi-major	Minor	Major	Semi-major	Minor	Major	Semi-major	Minor	Major	Semi-major	Minor
Gold	0	ID^2	0	0	-45	100	50	25									
	10	OK	Dynamic Anisotropy			5	5	1	10	10	5	25	20	15	100	80	60
	20	OK				5	5	1	10	10	5	35	15	10	120	60	20
	30	OK				5	5	1	35	15	10	120	60	20	240	120	40
	40	OK				10	10	5	35	15	10	120	60	20			
Density	mafic	OK	35	15	0	25	25	5	120	35	10	240	70	20	500	250	100
	mpx	OK															
	mschist	OK															
	um	OK															

Table 8-5: Segele 2022 resource estimation sample selection

Variable	Domain	Estimation method	Pass 1 sample selection			Pass 2 sample selection			Pass 3 sample selection			Pass 4 sample selection		
			Min	Max	Max per drill hole	Min	Max	Max per drill hole	Min	Max	Max per drill hole	Min	Max	Max per drill hole
Gold	0	ID^2	4	20	4									
	10	OK	1	1	-	6	22	3	6	22	3	6	22	3
	20	OK	1	1	-	6	22	3	6	22	3	6	22	3
	30	OK	1	1	-	6	22	3	6	22	3	6	22	3
	40	OK	6	22	3	6	22	3	6	22	3			
Density	All domains	OK	6	22	3	6	22	3	6	22	3	6	22	3

8.3 Model validation

The April 2022 Segele Mineral Resource estimate has undergone several validation checks including:

- visual validation of the block estimates against the diamond drill hole sampling
- global statistical comparisons between the composite samples and the estimated blocks
- Swath plot validations comparing averaged panel composite and estimated blocks grades along strike, along the dip direction and vertically
- comparison of the main Ordinary Kriging interpolation against an Inverse Distance squared interpolation
- internal SRK peer review.

8.3.1 Blocks filled

Gold in the mineralised geozon domains 10, 20, 30 and 40 were all estimated (Table 8-6). The first localised nearest neighbour estimate used for geozon domains 10, 20 and 30 resulted in 1–2% of the cells in each domain being estimated as very high grade as expected, however the bulk of the estimates occurred within the second or third estimation pass.

No blocks were estimated in the first estimation pass for geozon domain 40, but all of the cells were estimated in passes two and three.

Density estimates for the mafic, mschist and um strat domains occurred mostly in the third and fourth estimation passes, and some cells were not estimated (Table 8-7). All the cells within the mpx strat domain were estimated.

Table 8-6: Percentage of blocks filled and average gold grade per estimation pass

Domain	Volume (m^3)	Blocks filled					Average grade (Au g/t)			
		Pass 1	Pass 2	Pass 3	Pass 4	Not estimated	Pass 1	Pass 2	Pass 3	Pass 4
0	38,549,000	20%	-	-	-	80%	0.0001	-	-	-
10	15,382	2%	36%	30%	31%	0%	496.4	24.5	16.8	20.1
20	12,032	1%	9%	54%	35%	0%	237.6	18.0	9.9	7.5
30	5,885	1%	44%	45%	10%	0%	360.6	7.3	2.8	5.0
40	4,517	0%	52%	48%	-	0%	-	7.3	5.1	-
50	57	-	-	-	-	100%	-	-	-	-
60	101	-	-	-	-	100%	-	-	-	-
100	390,924	-	-	-	-	100%	-	-	-	-

Table 8-7: Percentage of blocks filled and average density per estimation pass

Domain	Volume (m^3)	Blocks filled					Average density (g/m^3)			
		Pass 1	Pass 2	Pass 3	Pass 4	Not estimated	Pass 1	Pass 2	Pass 3	Pass 4
mafic	36,026,477	0%	7%	22%	60%	10%	2.99	2.98	2.98	2.96
mpx	66,995	20%	34%	28%	18%	0%	3.05	3.02	3.02	3.00
mschist	519,861	0%	4%	30%	59%	7%	2.90	2.90	2.87	2.94
um	1,973,641	2%	8%	28%	58%	4%	2.96	2.97	2.97	2.97
vol	390,924	-	-	-	-	100%	-	-	-	-

8.3.2 Visual validation

Visual validations between drill hole composite data and the estimated blocks were carried out using north–south cross sections (Figure 8-1 and Figure 8-2) and plan sections along each mineralisation lens.

Overall, the gold grade estimates have successfully reproduced global grade trends seen in the mineralised lenses including the localisation of the very high gold grades. However due to the narrow width of the mineralised lenses and the high-grade variability, there are some localised grade mismatches between the blocks and the composite samples in areas of wider drill hole spacing.

Figure 8-1: North–south cross section 727,544 mE looking west showing mineralised lens 10, 20, 30 and 40

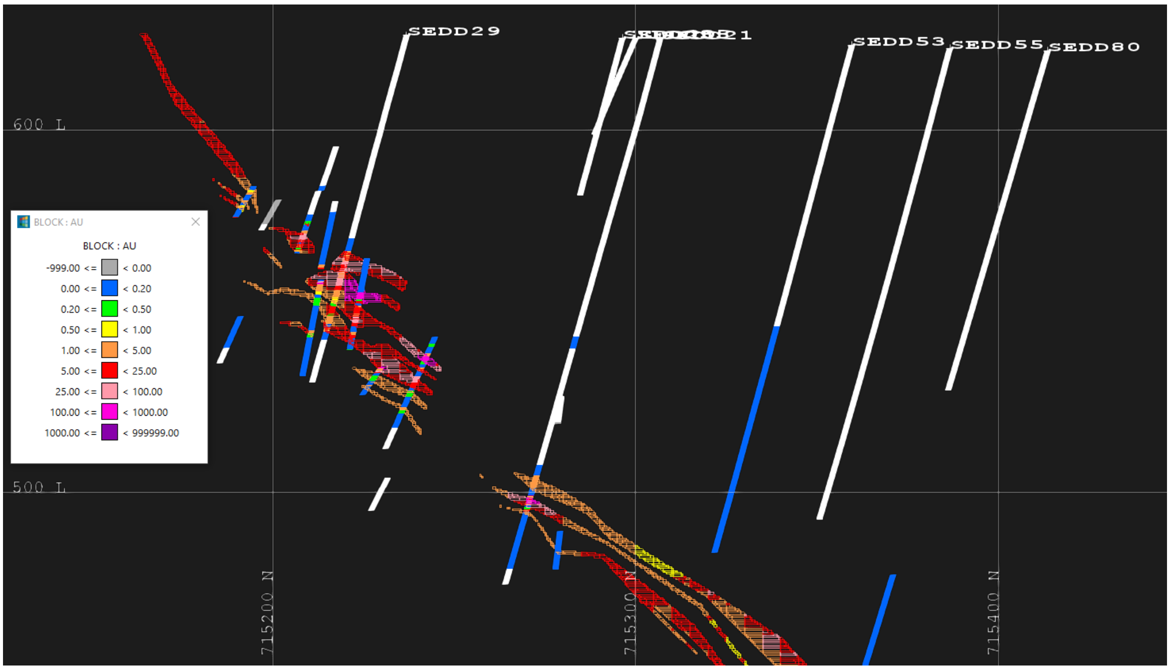
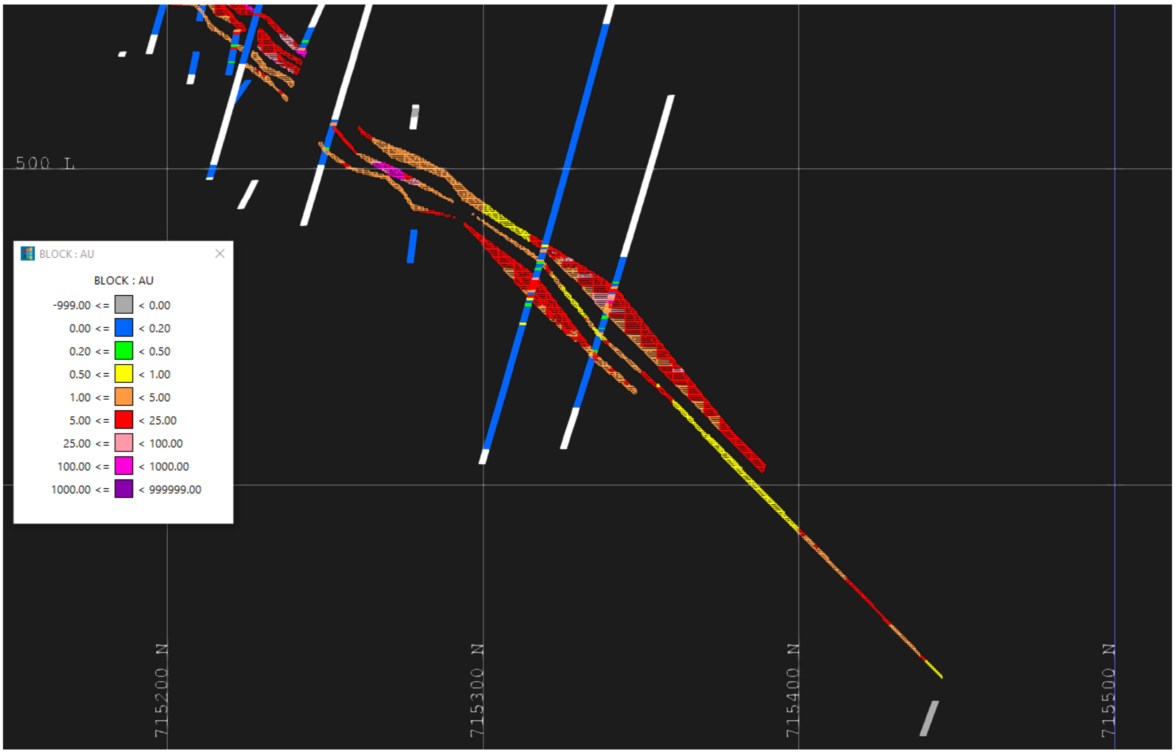


Figure 8-2: North–south cross section 727,540 mE looking west showing mineralised lens 20, 30 and 40



8.3.3 Global statistic validation

Comparisons between gold grades and densities for the length weighted composite samples and volume weighted blocks broken down by mineralisation and lithology domains are shown in Table 8-8 and Table 8-9.

The block gold estimates in mineralised domains 10, 20, 30 and 40 have lower mean grades but higher median grades overall compared with the composite samples. Top-cutting and spatial limiting of the high-grade outliers has generally limited the impact of very high-grades smearing throughout the block estimates, however the grade populations of the estimated blocks in mineralised domains 10 and 40 show a greater proportion of blocks in the grade range of 10–25 g/t Au than the supporting composite samples but a lower proportion at higher gold grades (Figure 8-3). The Competent Person is of the opinion that the estimation results are reasonable given the current level of drilling and the spatial distribution of the gold mineralisation.

The block density estimates have produced similar mean and median grades to the composite samples.

Table 8-8: Comparison of gold statistics between drill composite sample and estimated blocks

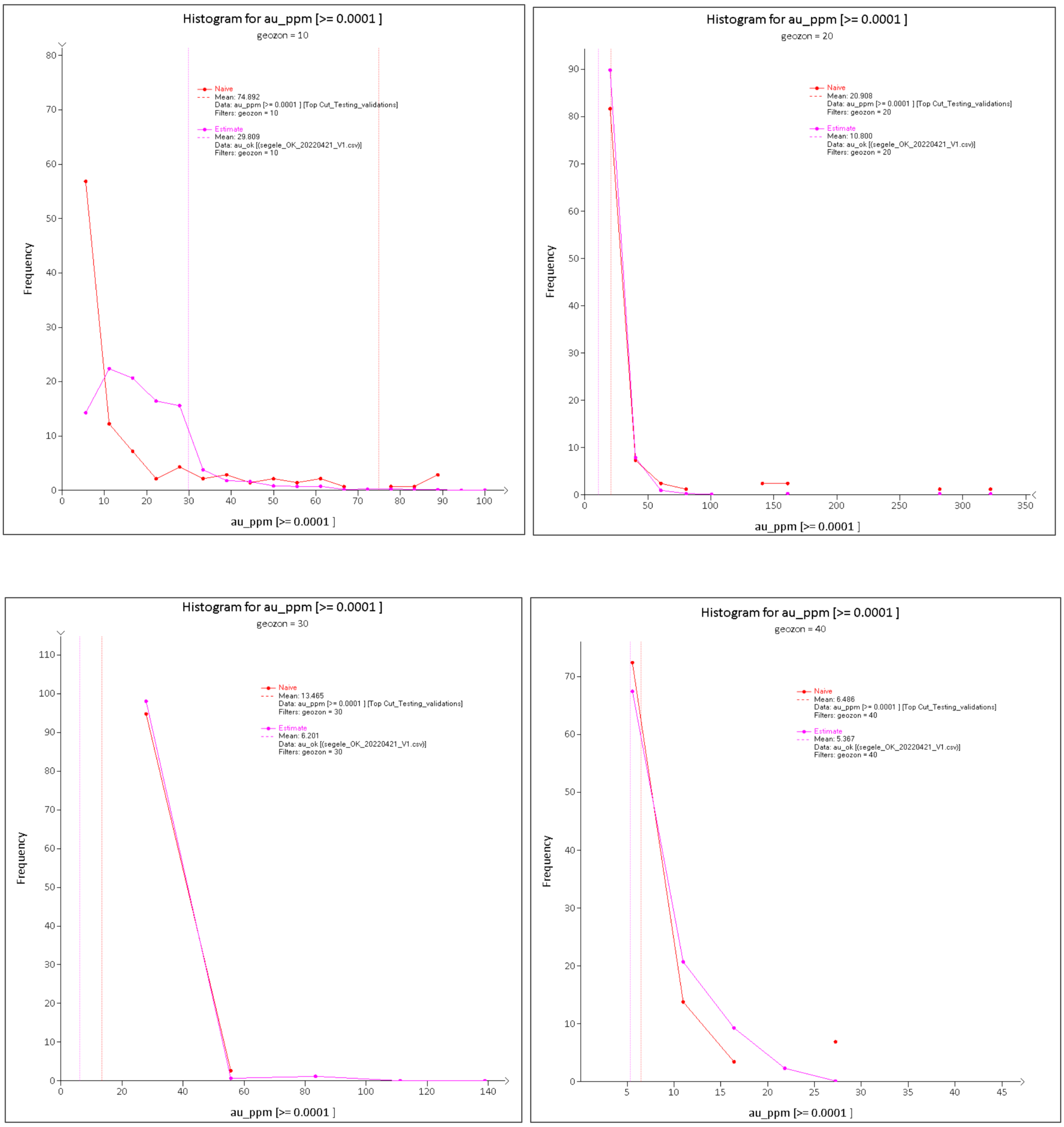
Domain		0	10*	20	30	40	50	60	100
Composite samples	Number of composite samples	2,500	148	82	38	29	2	2	3
	Minimum Au (g/t)	0.001	0.11	0.01	0.2	0.14	0.38	1.06	0.001
	Maximum Au (g/t)	0.74	827 (6,746)	322	361	65.2	10.4	1.30	0.001
	Mean Au (g/t)	**0.016**	**30.1 (77.7)**	**20.0**	**13.8**	**6.78**	**5.01**	**1.22**	**0.001**
	Median Au (g/t)	0.004	3.68 (3.85)	2.36	1.18	1.58	0.38	1.12	0.001
Estimated blocks	Block volume (m³)	38,549,000	15,382	12,032	5,885	4,517	57	101	390,924
	Minimum Au (g/t)	0.001	0.71	0.67	0.82	1.04	-	-	-
	Maximum Au (g/t)	0.07	850	322	360.6	23.0	-	-	-
	Mean Au (g/t)	**0.008**	**29.8**	**10.8**	**6.20**	**5.37**	-	-	-
	Median Au (g/t)	0.006	14.7	5.47	3.88	4.06	-	-	-

Notes: Uncut composite sample statistics for geozon domain 10 are show in red in brackets.

Table 8-9: Comparison of density statistics between drill composite sample and estimated blocks

Domain		mafic	mpx	mschist	um	vol
Composite samples	Number of composite samples	358	103	15	141	0
	Minimum density (g/m³)	2.56	2.69	2.79	2.74	-
	Maximum density (g/m³)	3.30	3.29	3.07	3.14	-
	Mean density (g/m³)	**2.98**	**3.04**	**2.92**	**2.97**	-
	Median density (g/m³)	2.98	3.04	2.92	2.97	-
Estimated blocks	Block volume (m³)	36,026,477	66,995	519,861	1,973,641	390,924
	Minimum density (g/m³)	2.67	2.75	2.82	2.80	-
	Maximum density (g/m³)	3.18	3.18	3.00	3.09	-
	Mean density (g/m³)	**2.97**	**3.02**	**2.91**	**2.97**	-
	Median density (g/m³)	2.97	3.03	2.92	2.97	-

Figure 8-3: Gold histogram graphs comparing 1 m composite versus estimated blocks for geozon domains 10, 20, 30 and 40



8.3.4 Swath plot validation

Swath validation plots comparing drill hole composite samples and estimated blocks from the Ordinary Kriging and Inverse Distance estimates were generated along east–west, north–south and depth section lines for geozon domains 10, 20, 30 and 40 (Figure 8-4 to Figure 8-15).

The swath plots show that the Ordinary Kriging gold estimates are smoothed, however they do not appear to be overly biased, and they reproduce the overall grade trends of the drill hole composite to an acceptable level given the current drill spacing and inherent grade variability.

Figure 8-4: West to east swath plot for domain geozon = 10 (main lens)

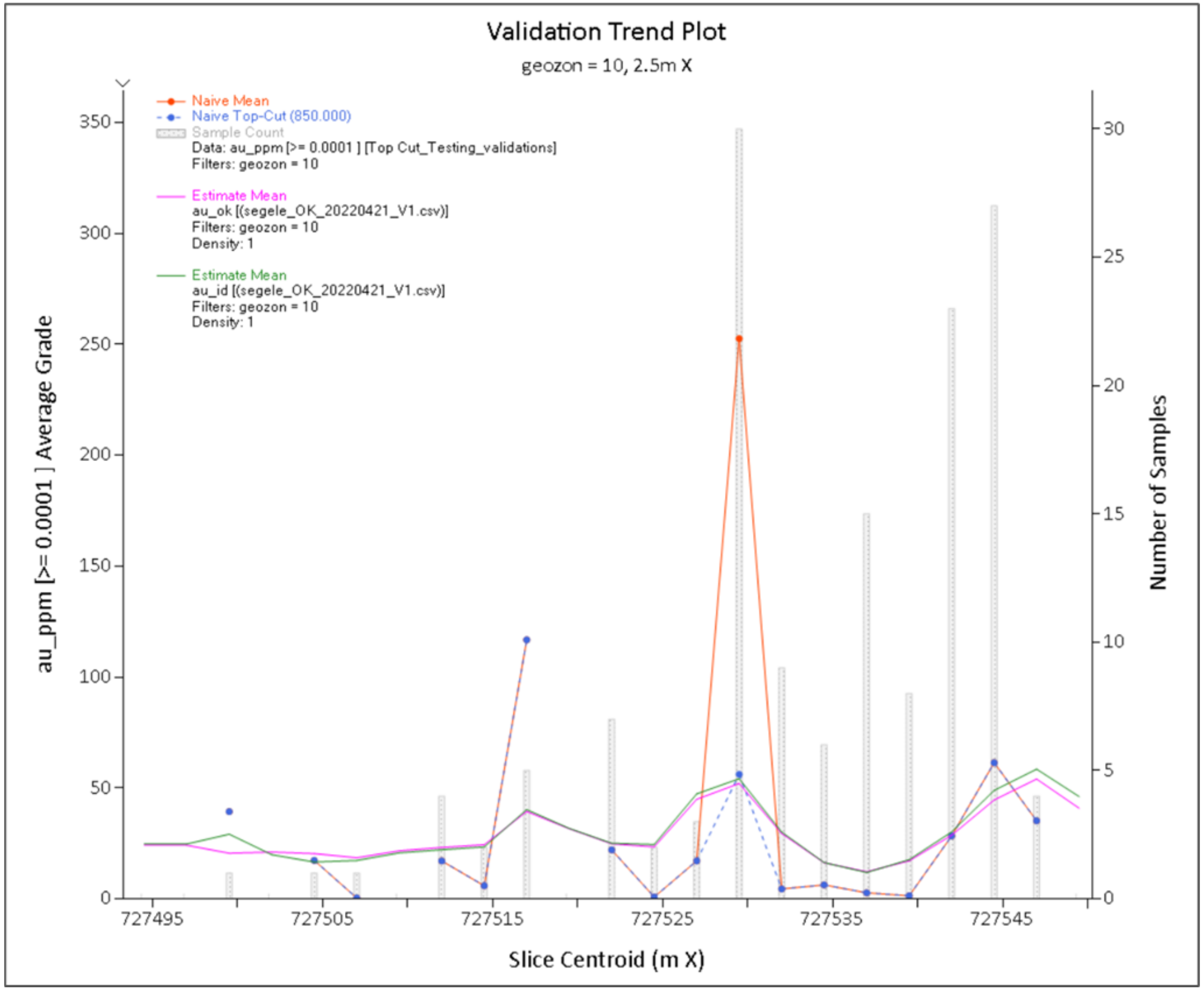


Figure 8-5: South to north swath plot for domain geozon = 10 (main lens)

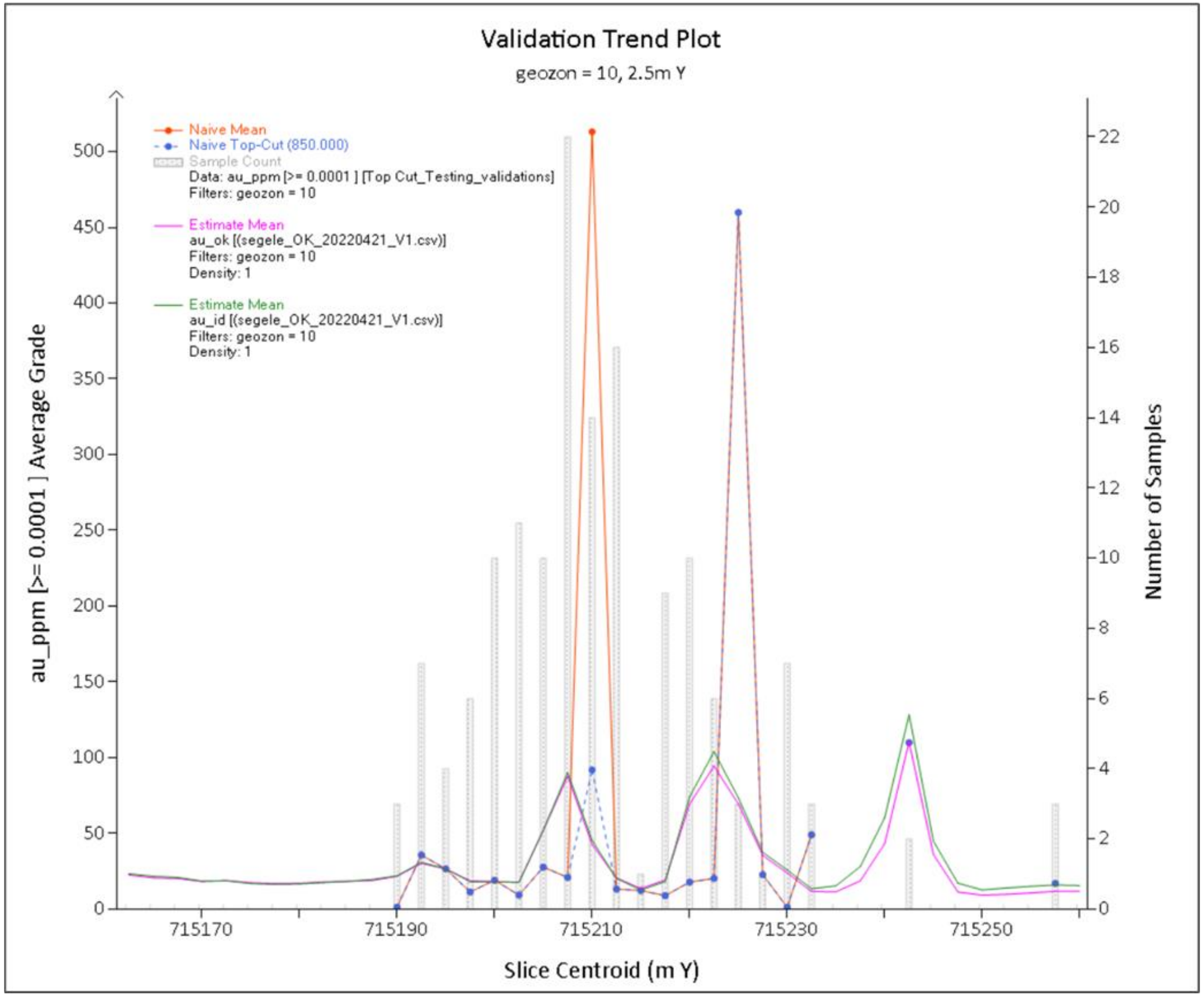


Figure 8-6: Elevation swath plot for domain geozon = 10 (main lens)

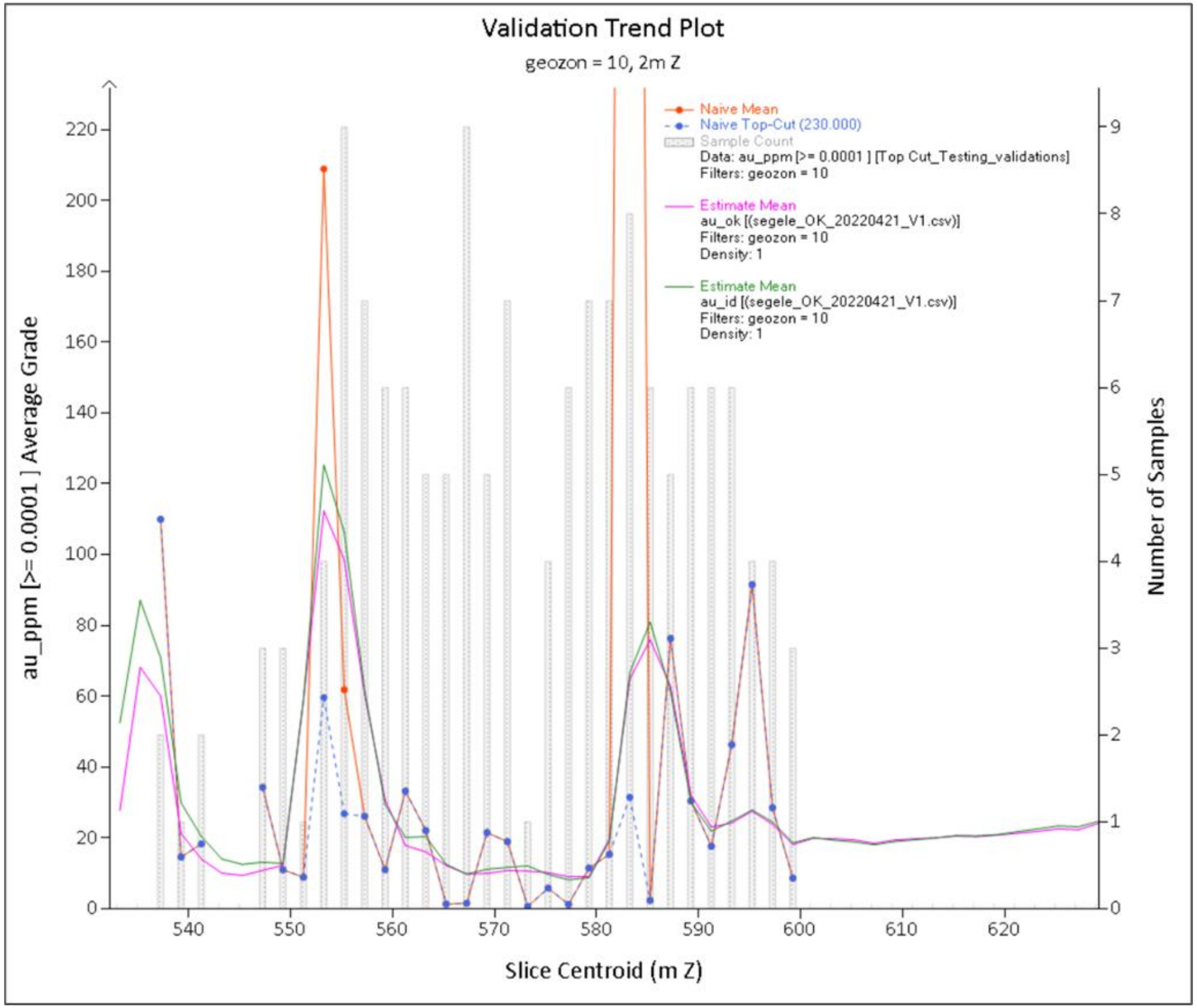


Figure 8-7: West to east swath plot for domain geozon = 20 (footwall lens 1)

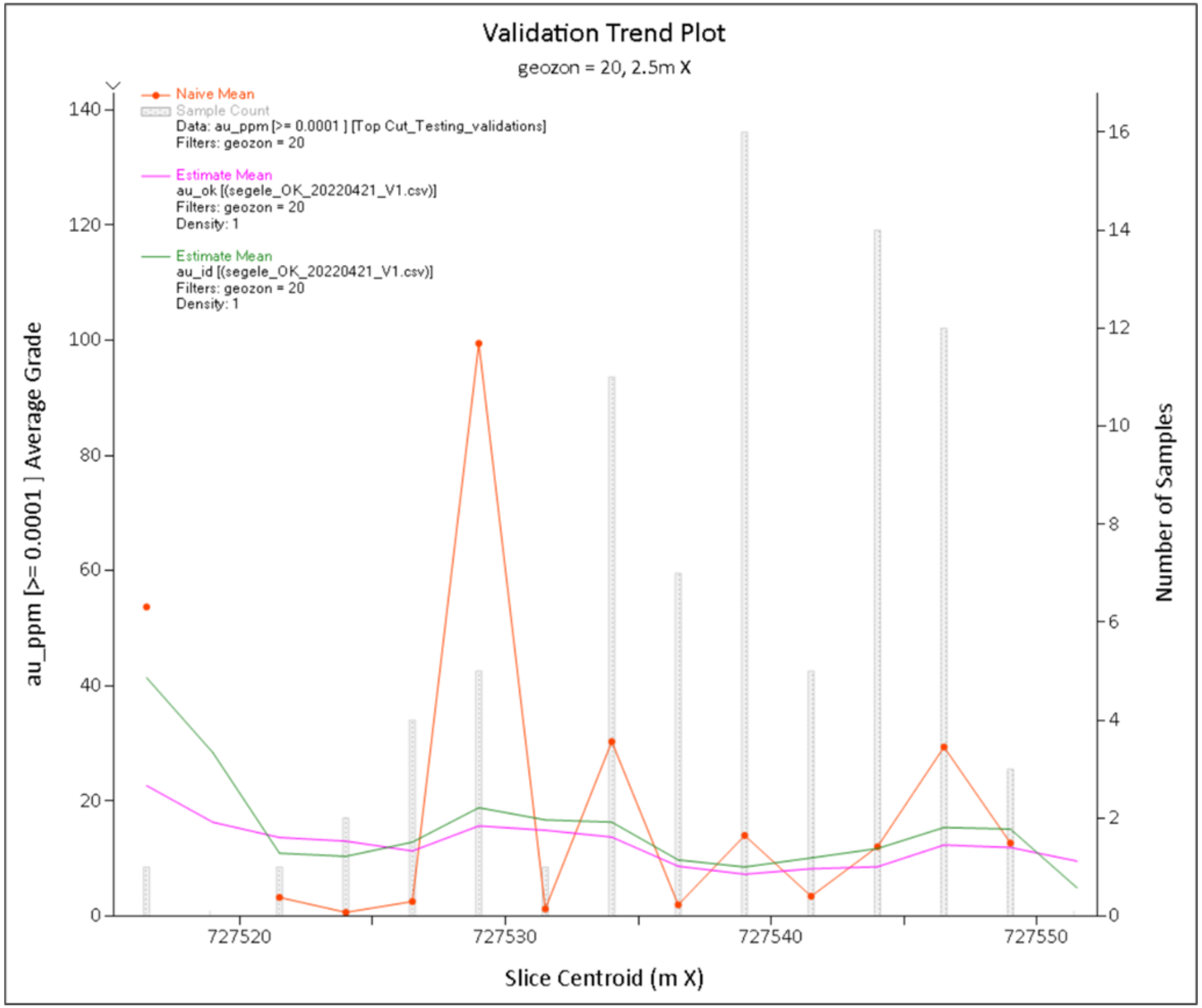


Figure 8-8: South to north swath plot for domain geozon = 20 (footwall lens 1)

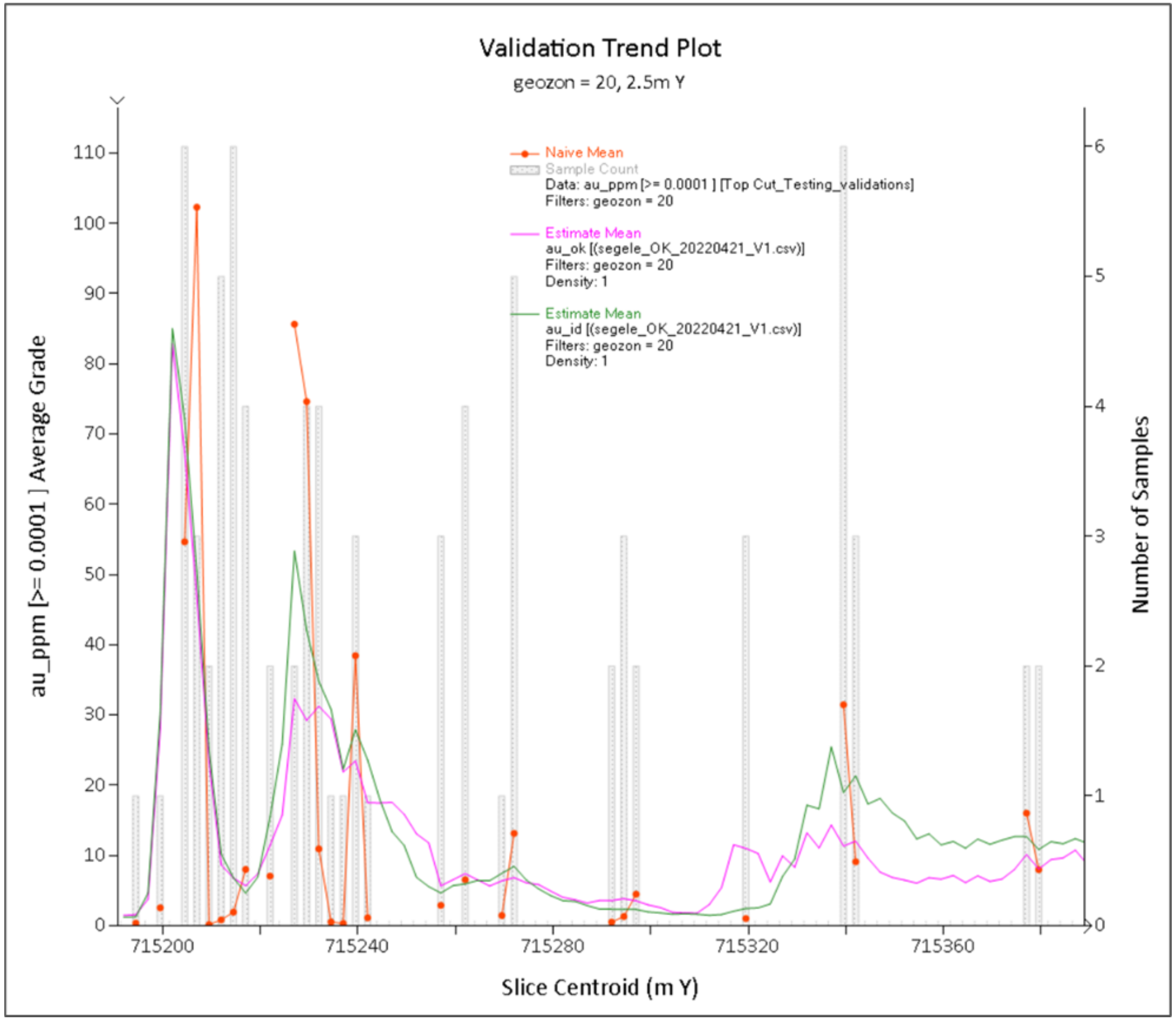


Figure 8-9: Elevation swath plot for domain geozon – 20 (footwall lens 1)

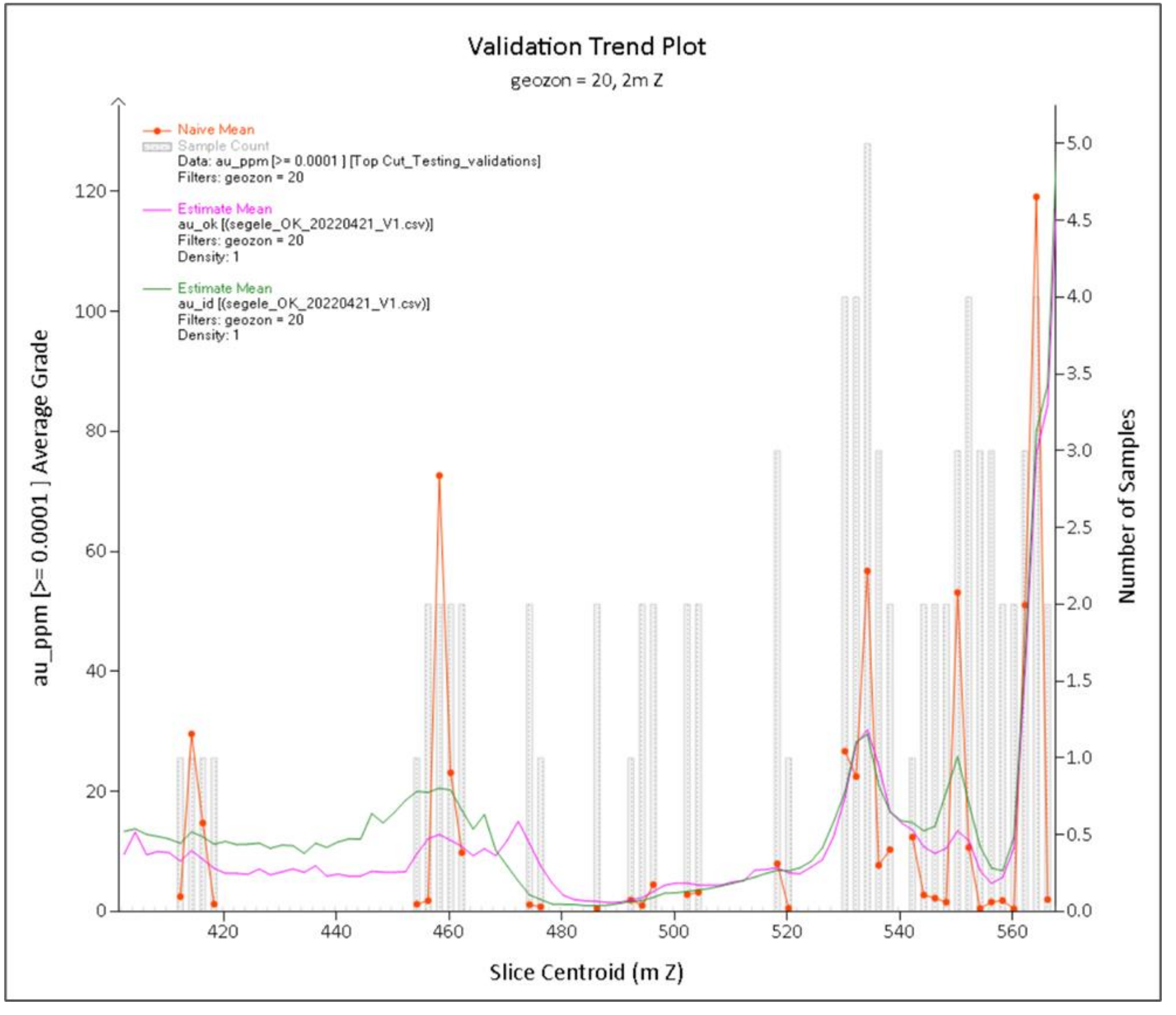


Figure 8-10: West to east swath plot for domain geozon = 30 (footwall lens 2)

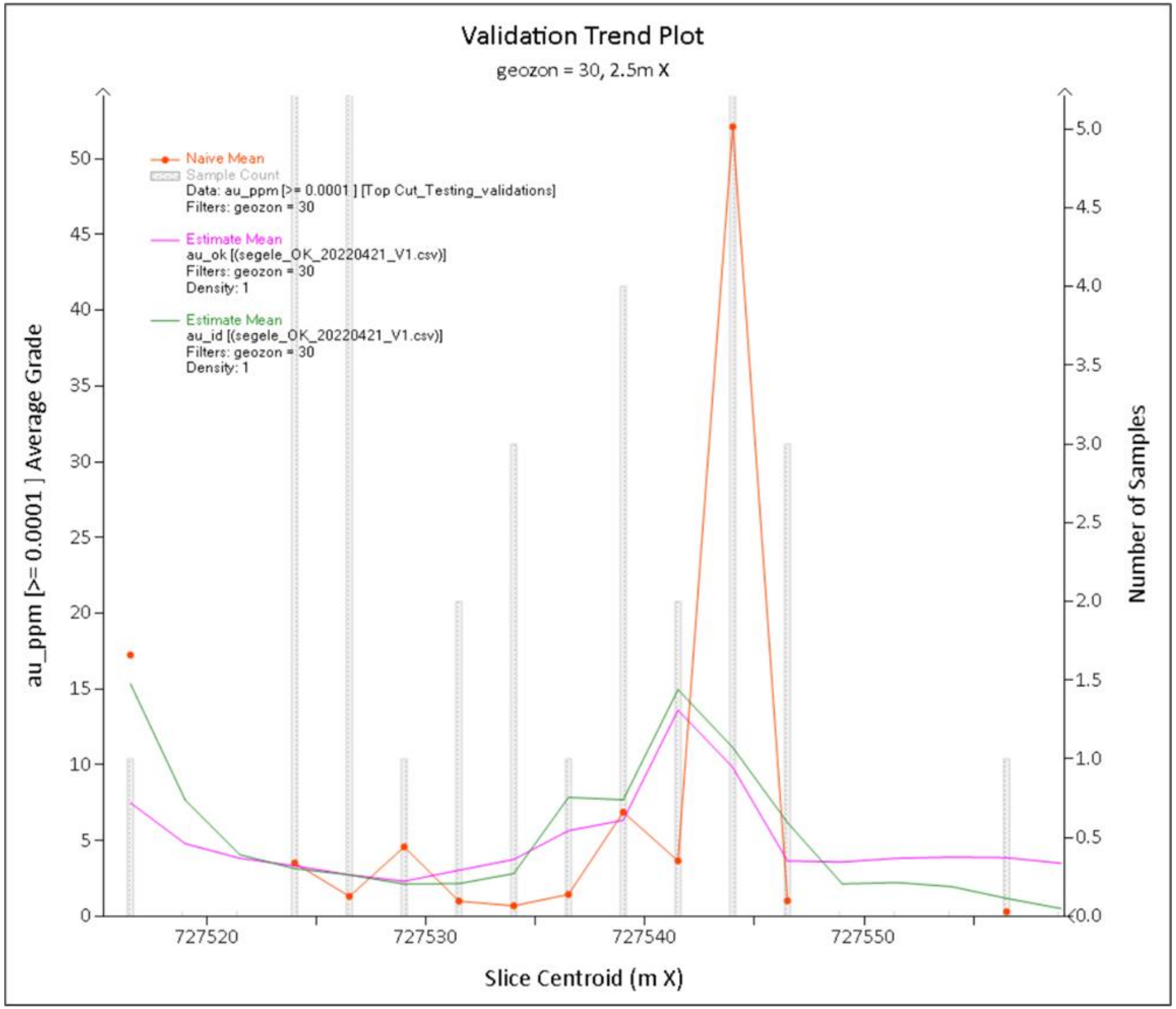


Figure 8-11: South to north swath plot for domain geozon = 30 (footwall lens 2)

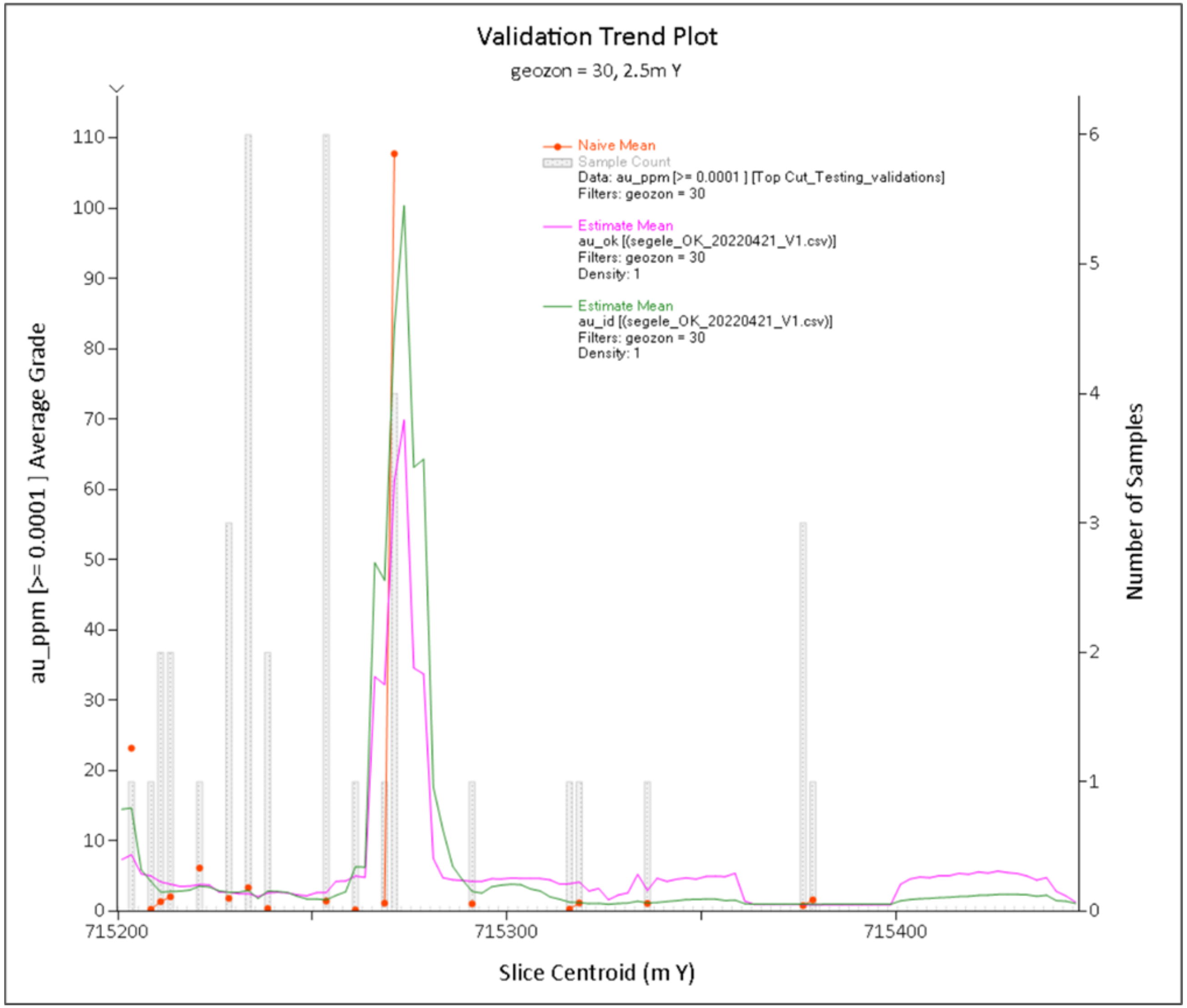


Figure 8-12: Elevation swath plot for domain geozon = 30 (footwall lens 2)

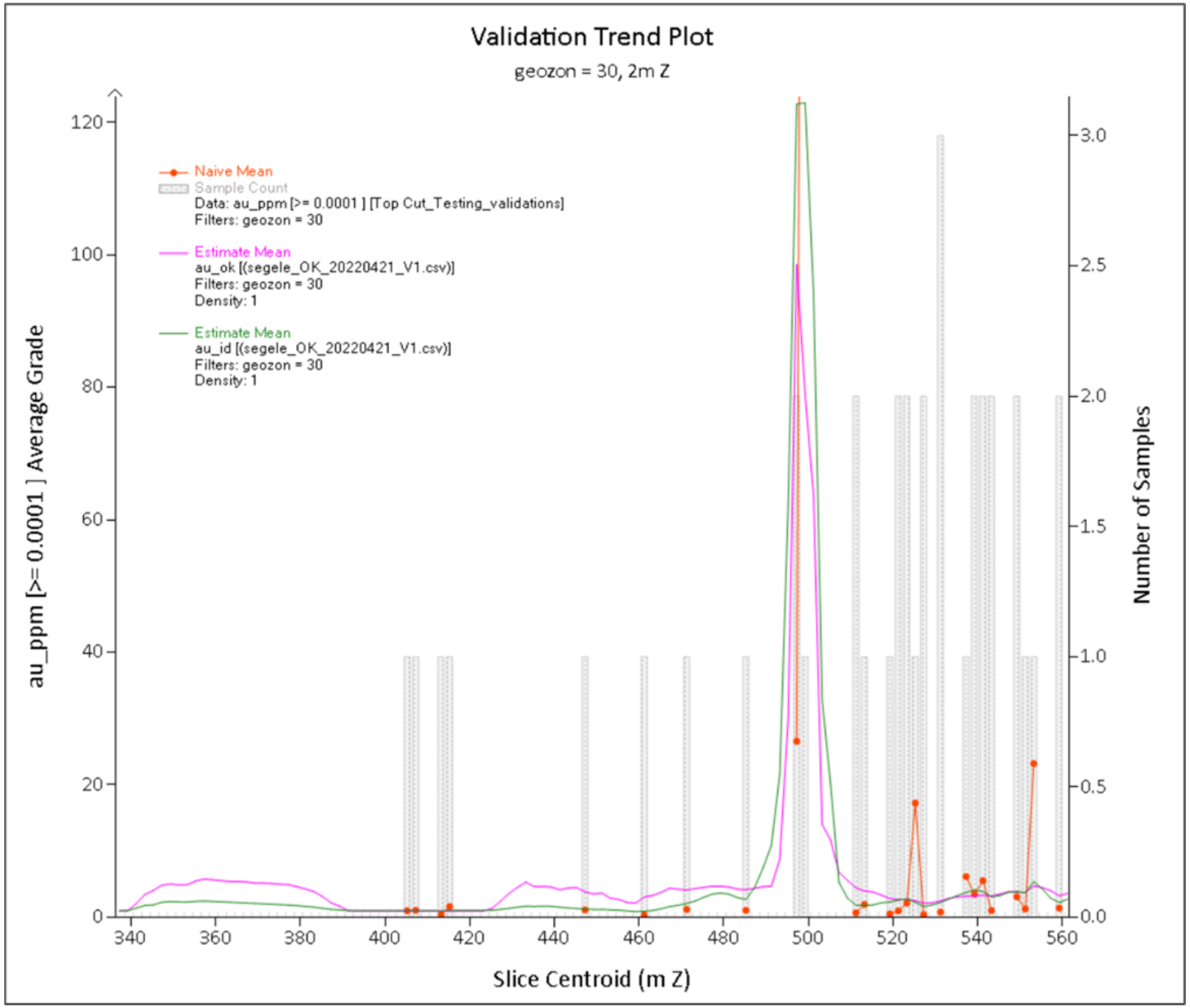


Figure 8-13: West to east swath plot for domain geozon = 40 (footwall lens 3)

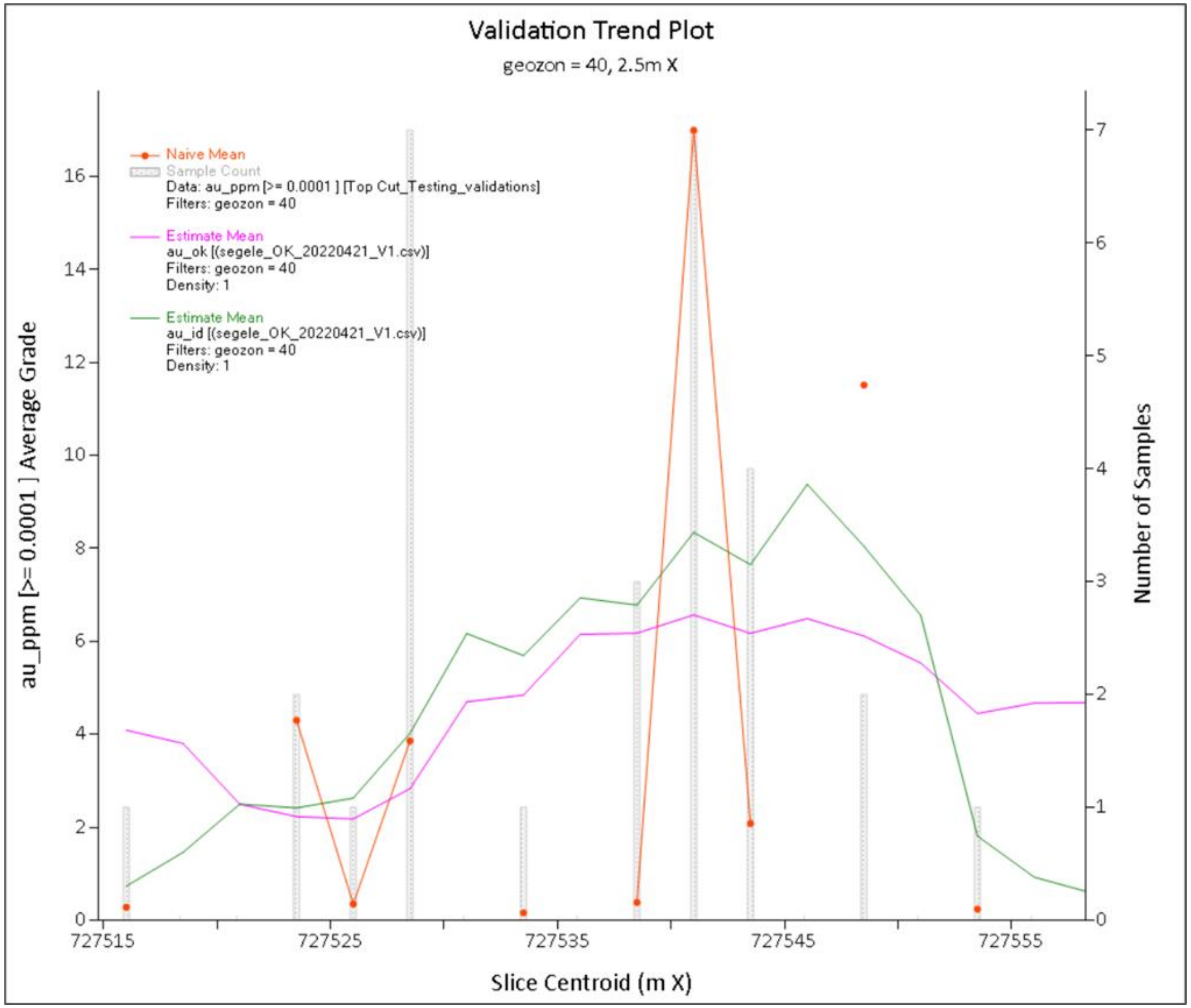


Figure 8-14: South to north swath plot for domain geozon = 40 (footwall lens 3)

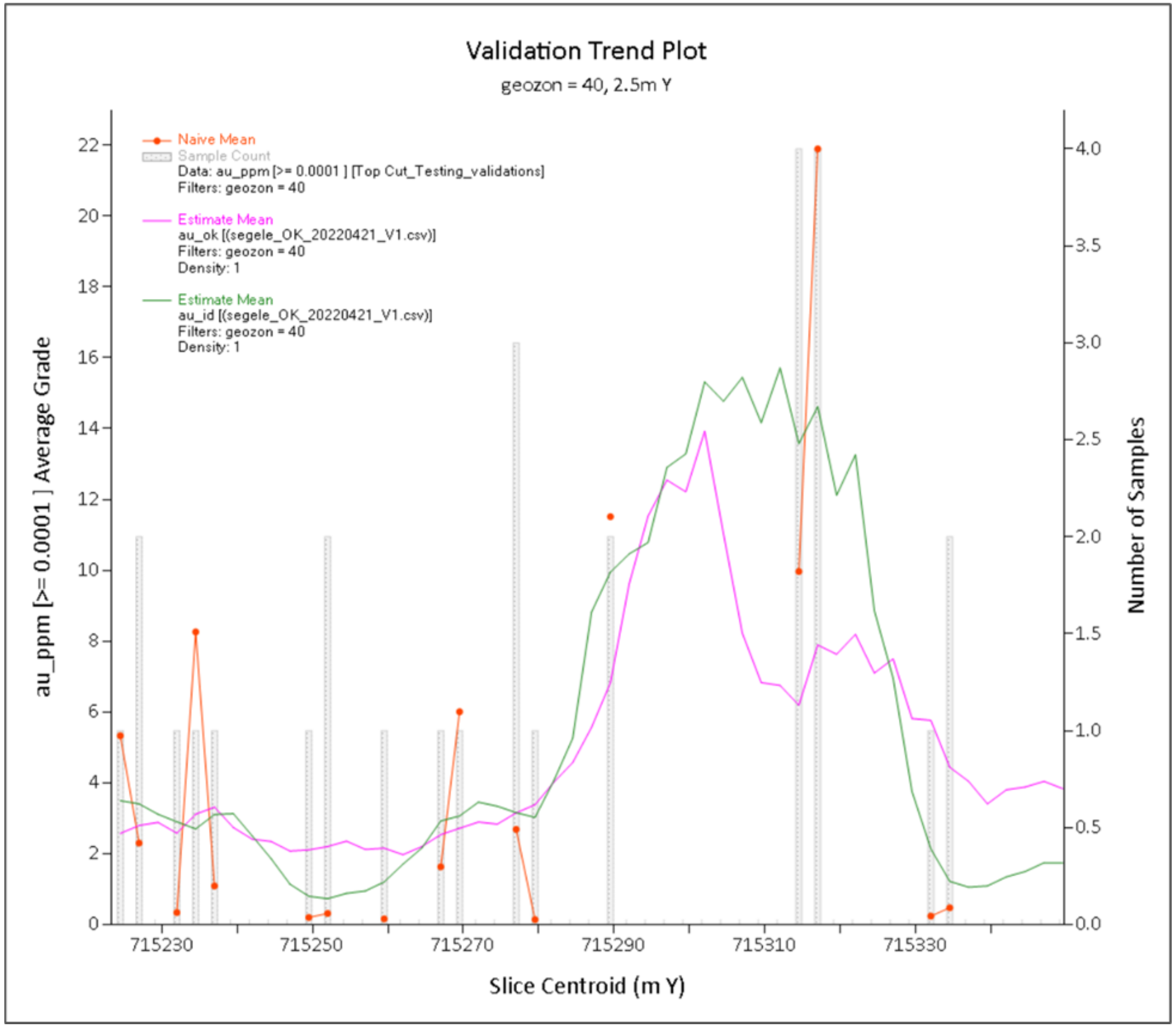
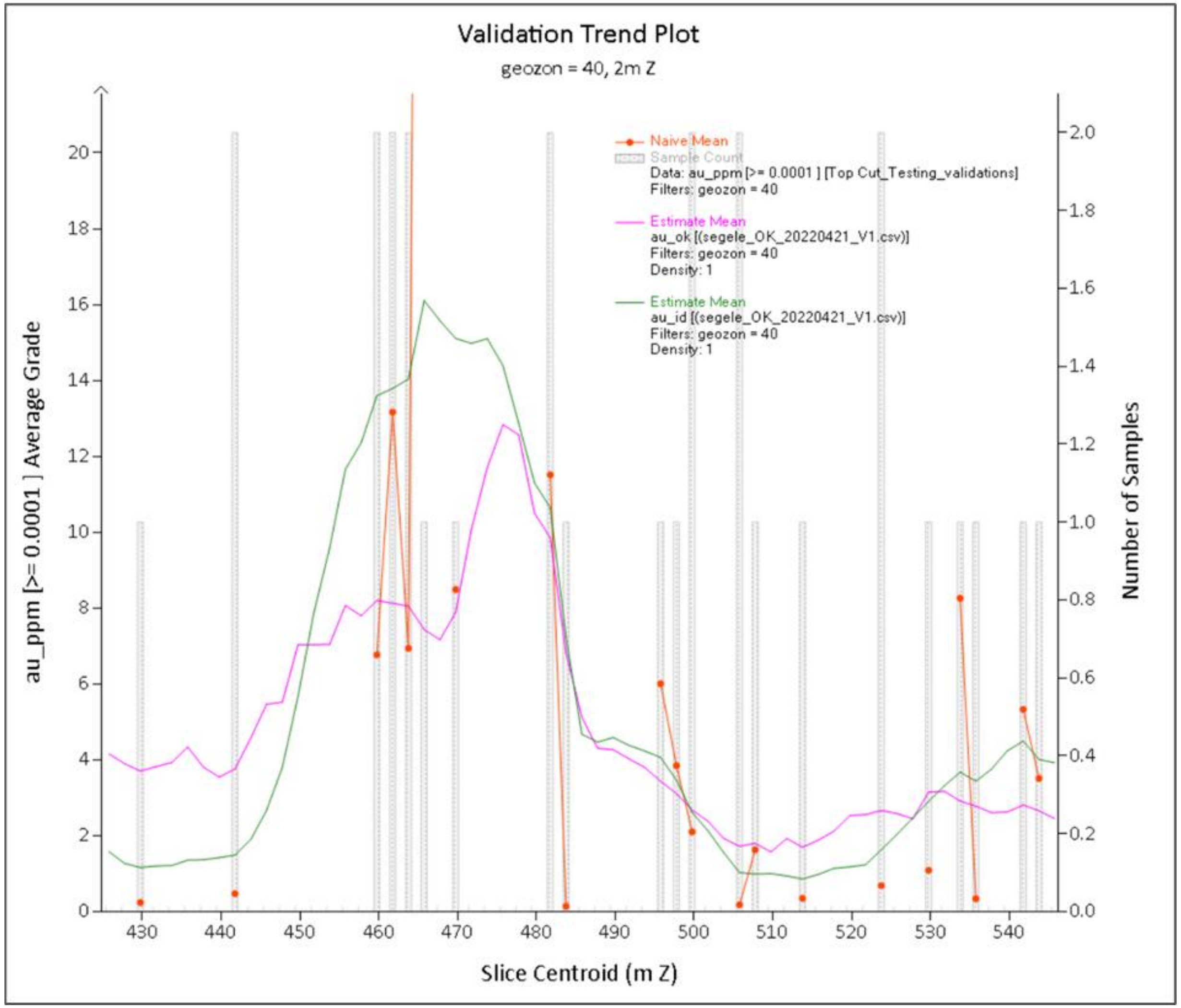


Figure 8-15: Elevation swath plot for domain geozon = 40 (footwall lens 3)

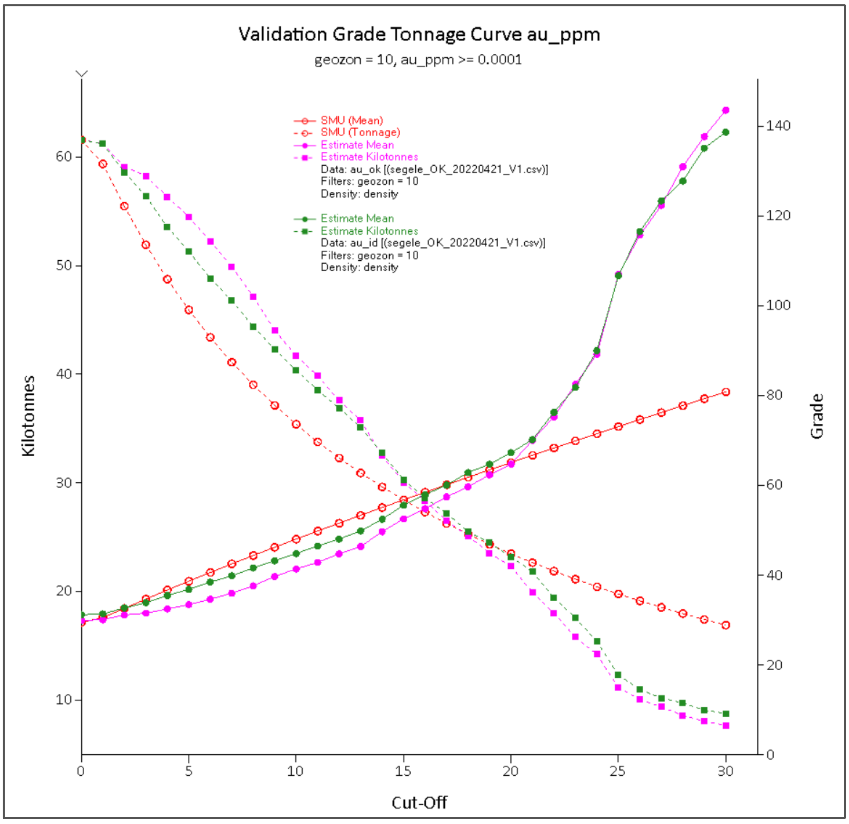


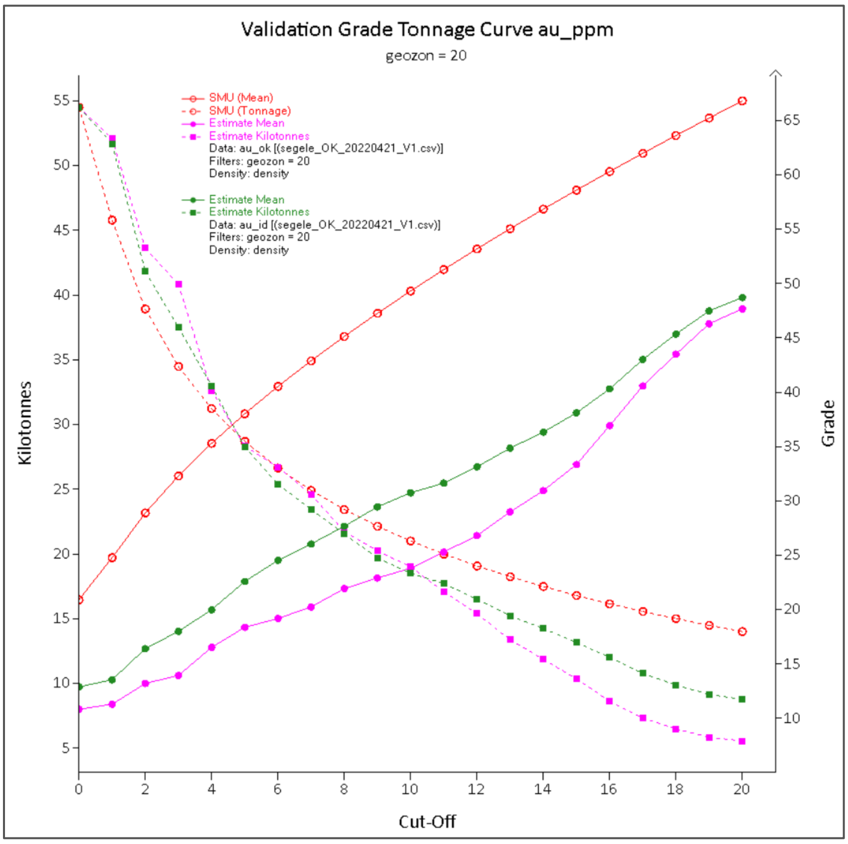
8.3.5 Theoretical grade tonnage validation

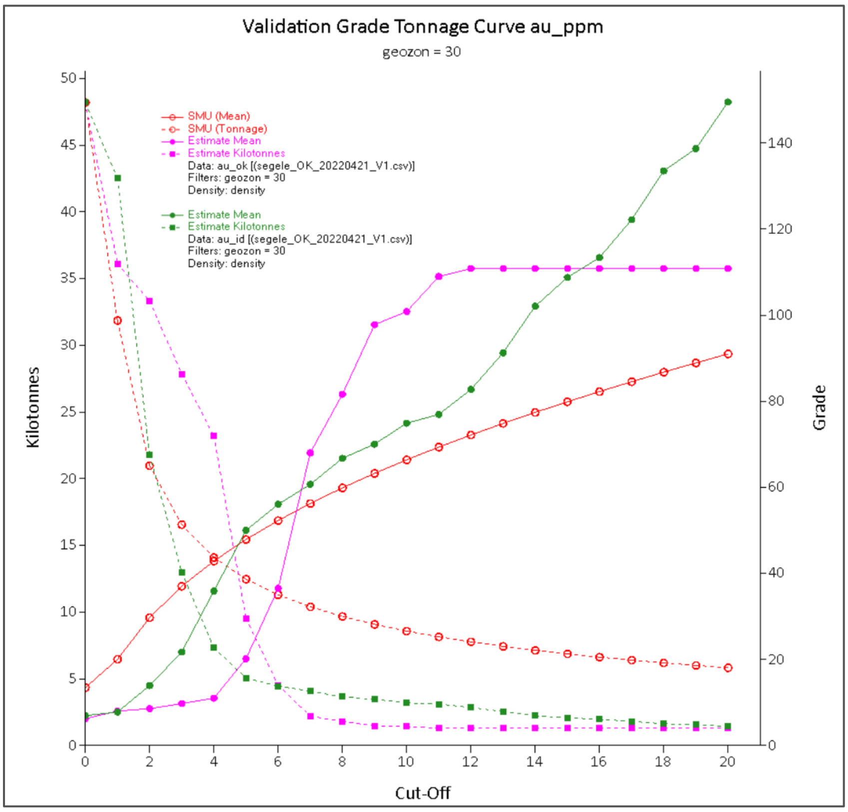
Theoretical gold grade tonnage curves were constructed for geozon domains 10, 20, 30 and 40. Theoretical grade tonnage curves for the drill hole composite data were calculated using a change of support model based upon a smallest mining unit (SMU) size of 5 mX × 5 mY × 1 mZ. The theoretical curves were then compared to gold grade tonnage curves of the Ordinary Kriging and Inverse Distance estimates at the same block support (Figure 8.11). Given the current drill spacing and inherent grade variability, the Ordinary Kriging estimates reasonably reproduce the theoretical grade tonnage distribution however SRK notes the following.

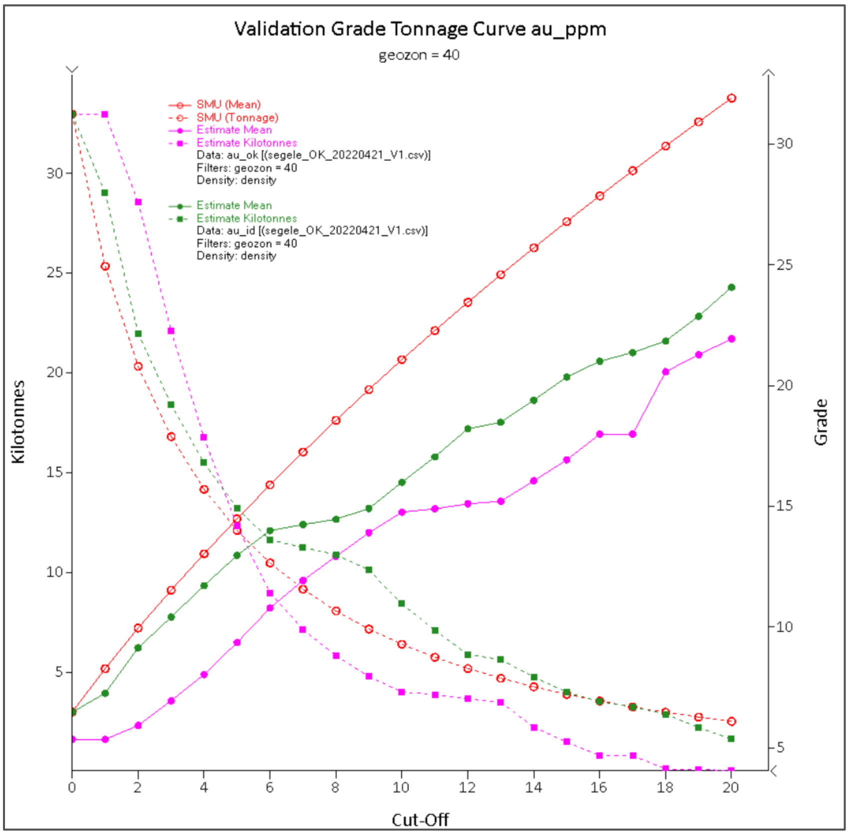
- The estimated blocks in the main mineralised lens (geozon = 10) overestimate tonnes and underestimate grade at gold cut-off grades between 0.3 g/t Au and 22g/t Au and then produce less tonnes at a higher grade above 24 g/t Au cut-off with respect to the theoretical grade tonnage curve.
- The estimated blocks in the footwall lens 1 (geozon = 20) generally underestimate tonnes and grade with respect to the theoretical grade tonnage curve.
- The estimated blocks in the footwall lens 2 (geozon = 30) overestimate tonnes and underestimate grade at gold cut-off grades between 0.3 g/t Au and 6 g/t Au and then produce less tonnes at a higher grade above 7 g/t Au cut-off with respect to the theoretical grade tonnage curve.
- The estimated blocks in the footwall lens 3 (geozon = 20) generally predict tonnes well but underestimate grade with respect to the theoretical grade tonnage curve.

Figure 8-16: Theoretical (from 1 m composite data) versus estimated blocks' grade tonnage curves for geozon domains 10, 20, 30 and 40









Notes:

- Composite data in geozon = 10 is top-cut to 850 g/t Au
- Composite data shown in grade tonnage curves has not been distance restricted.

8.4 Default grades

Mineralised geozon domains 50 (minor lens 1) and 60 (minor lens 2) did not have enough sample intervals to complete gold estimates. Geozon domains 50 and 60 represent less than 1% of the total mineralised volume. The length weighted average sample grade was assigned to the un-estimated blocks in each domain:

- geozon domain 50 (three samples) – 5.05 g/t Au
- geozon domain 50 (two samples) – 1.22 g/t Au.

Of the waste blocks, 80% were not estimated and were assigned a gold value of 0.0001 g/t Au based on the volume weighted mean of the waste blocks that were estimated, and in the case of the vulcanite dyke, the length weighted average of the three available composite samples.

Default densities based upon the volume weighted mean of the waste blocks that were estimated were applied to un-estimated blocks within each strat domain except for the vulcanite dyke which had no density samples. A default density of 2.90 t/m^3 was applied to the vulcanite dyke:

- Strat domain mafic – 2.97 t/m^3
- strat domain mpx – 3.02 t/m^3
- strat domain mschist – 2.91 t/m^3
- strat domain um – 2.97 t/m^3.

9 Discussion of relative accuracy and confidence

The April 2022 Segele Mineral Resource estimate has been completed using information from diamond drill holes, trenching and artisanal pit and surface mapping completed between 2011 and 2022. The information from the trenching and artisanal pit and surface mapping has only been used to help guide the geological modelling. The estimation of gold and density values has only used information from the diamond drill holes.

All of the diamond drill hole collars were picked up in April 2022 using a Leica TCR803 total station using the Adindan/UTM Zone 36N datum. Downhole surveys for diamond drill holes SEDD01 to SEDD41 were completed using a DeviCore BBT tool which oriented the core and recorded changes in the drill hole dip at irregular intervals although it does not record changes in azimuth. All the drill holes are therefore assumed to be straight. All drill holes drilled from June 2021 (SEDD42 to SEDD99) have been surveyed using a DeviFlex Rapid instrument that measures changes both in azimuth and dip. The downhole surveying methods for the earlier diamond drill holes have introduced some uncertainty into the exact location of each drill hole trace however this is mitigated to some extent by the close drill hole spacing and the more recent infill drilling which was more accurately surveyed.

Six gold mineralisation domains have been modelled however two of the domains are only supported by two sample intervals and have been populated with default gold values (mineralised domains geozon = 50 and geozon = 60). Two of the remaining three mineralised domains also have limited supporting samples, particularly at depth however they have been able to be estimated (geozon = 30 and geozon = 40). These four domains should be viewed as being lower confidence.

The gold mineralisation domains are all highly variable with positively skewed populations and – in some cases – high-grade outliers. While top-cutting and spatially limiting high-grade outliers has successfully limited the impact of very high-grades smearing throughout the block estimates, the low number of composite samples available in the lower parts of the deposit has resulted in some grade smoothing.

There has been extensive surface and underground shaft artisanal mining in and around the Segele deposit. The current topographic surface includes two of the larger artisanal pits however it does not include any surveys of the smaller pits or the artisanal shafts. The largest artisanal pit and associated shaft mining lines up with where the main mineralised lens (mineralised domain geozon = 10) is interpreted to insect the surface. While the artisanal pit volume has been removed from the Mineral Resource estimate, the depth of artisanal shaft mining is unknown and has not been removed. The remaining mineralised domains are not thought to be currently impacted by the artisanal mining.

SRK is of the opinion that the 2022 Segele Mineral Resource estimate represents an appropriate global estimate that reproduces the overall grade trends and tenor seen in the diamond drill hole samples. However, due to the geological complexity and the high gold grade variability, the estimate should not be considered as an accurate local estimate.

10 Mineral Resource classification

SRK considered several factors impacting the confidence in the geological modelling and grade estimation when determining the 2022 Mineral Resource classification scheme for the Segele deposit. These factors include:

- artisanal mining
- downhole survey data accuracy
- sampling and assaying methodology and quality
- drill hole spacing
- confidence in the geological model
- estimation performance (both for gold and density estimations).

SRK is of the opinion that the unknown depth of artisanal shaft mining, downhole surveying methodologies for drill holes SEDD01 to SEDD40, low sample counts in some domains, confidence in the geological modelling, and the high gold grade variability present the largest impacts on the confidence in the Mineral Resource estimate.

The Segele deposit mineralisation was classified as either Indicated or Inferred Mineral Resources. Indicated Mineral Resources were restricted to blocks within mineralised domains geozon 10, 20, 30 and 40, in areas with a nominal drill spacing of 5 mE × 10–15 mN, and which were estimated within the first three estimation passes. All the remaining mineralised blocks were classified as Inferred Mineral Resources.

A Scoping study was completed for the Segele deposit in September 2021 by Akobo Minerals, their subsidiary Etno Mining, Goshawk Network Technologies CC (responsible for Metallurgy), Sazani Resource and Development Ltd (responsible for ESG), Borrego Sun Pty Ltd (responsible for Mining Engineering) and SRK Consulting (Australia) Pty Ltd (responsible for Mineral Resource Estimation). The Scoping study concluded that the deposit would be accessed using an inclined shaft from the surface and the ore would be mined using either shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill depending on the dip and orientation of the orebody.

The Mineral Resources have been reported above a cut-off grade of 2.65 g/t Au which was calculated using the Scoping study costs for mining (note the mining costs have been revised upwards to US$72/t), processing (US$35/t), administration (US$5/t), and ESG (US$5/t), a royalty cost of 5% on gold sales to the federal Government of Ethiopia, a gold recovery of 90% and a gold price of US$1,600/oz.

Mineral Resource classification was coded into the 'res_class' (resource category) variable in the Segele block model *segele_OK_20220421_V1.bmf*. Blocks were flagged as either:

- Indicated – res_class = 2
- Inferred – res_class = 3
- Unclassified mineralisation below the 2.65 g/t Au cut-off grade – res_class = 4
- Waste – res_class = 0.

11 Mineral Resource statement

The April 202 Segele Mineral Resource estimate has been prepared and classified in accordance with the guidelines of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012 edition) by Mr Michael Lowry who is a member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of SRK Consulting (Australasia) Pty Ltd. Mr Lowry has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012).

Mr Lowry is of the opinion that the Segele Gold Deposit Mineral Resources have reasonable prospects of eventual economic extraction using either shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill underground mining methods.

A summary of the Segele Mineral Resources as of 22 April 2022 is presented in Table 11-1.

Table 11-1: Segele Gold Deposit Mineral Resources as of 22 April 2022

Classification	Cut off grade[1,2] (Au g/t)	Tonnes (kt)[3]	Au (g/t)	Gold ounces (koz)[3]
Measured	≥2.65	0	0	0
Indicated		32	40.6	41
Inferred		62	13.6	27
Total Mineral Resources		**94**	**22.7**	**69**

Notes:

[1]The Mineral Resource cut-off grade assumes the deposit will be mined using a cut and fill underground mining technique which was studied by Akobo Minerals in a 2021 scoping study. The Scoping study concluded that the deposit would be accessed using an inclined shaft from the surface and the ore be mined using shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill depending on the dip and orientation of the orebody.

[2]The Mineral Resource cut-off grade was calculated using a gold price of US$1,600/oz, costs per tonne for mining, processing, administration, and ESG and a 5% royalty for the federal Government of Ethiopia on gold sales.

[3]Tonnes and ounces are reported as kilotonnes (1,000s of tonnes) and kilo-ounces (1000s of ounces).

11.1 Comparison to the previous Mineral Resource estimate

The previous (maiden) Mineral Resource estimate for the Segele deposit was reported on 6 April 2021. The Mineral Resources were reported above a 0.5 g/t Au cut-off (Table 11-2) as it was assumed at the time that the deposit would be mined using open pit mining methods.

Table 11-2: Segele Gold Deposit Mineral Resources as of 6 April 2021

Classification	Cut-off (Au g/t)	Tonnes (kt)	Au (g/t)	Gold ounces (koz)
Measured	≥0.5	0	0	0
Indicated		0	0	0
Inferred		78	20.9	52
Total Mineral Resources		**78**	**20.9**	**52**

For comparison purposes SRK has reported the April 2021 Mineral Resources above a 2.65 g/t Au cut-off and compared them to the 2022 Mineral Resources (Table 11-3 and Figure 11-1). The 2022 Mineral Resource estimate has approximately 40% more tonnes, 5% lower gold grade and 33% more gold ounces than the maiden 2021 Mineral Resource estimate.

The increase in Mineral Resource tonnes can be attributed to:

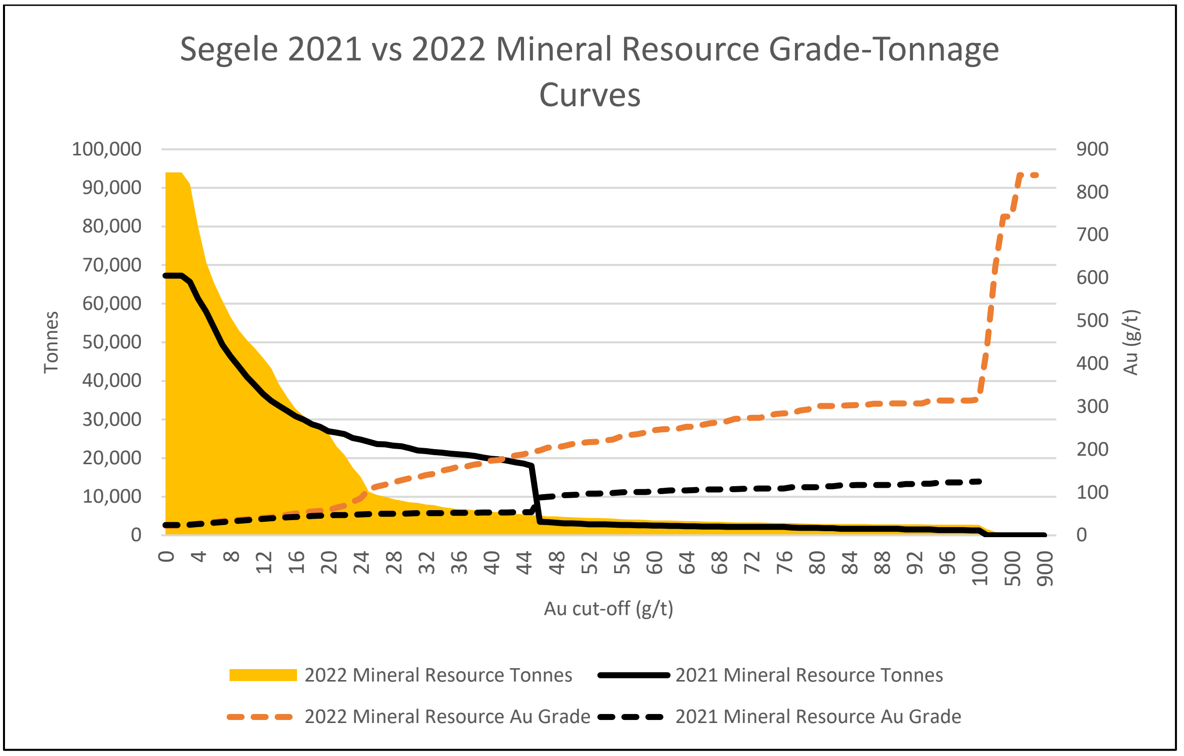
1. Extensions to the mineralisation at depth. The 2021 Mineral Resources only occur to a maximum depth below surface of approximately 140 m whereas the 2022 Mineral Resources have extended to a depth below surface of approximately 280 m.
2. A change in interpretation of the main mineralisation lens (geozon = 10) has resulted in more tonnes closer to the surface.

The overall decrease in Mineral Resource gold grade can be attributed to the drilling completed between May 2021 and April 2022 generally intersecting more mineralised material in the 0.2–20 g/t Au grade range that the previous drilling. Overall, this has led to more tonnes being estimated in this grade range and less tonnes being estimated in the 20–50 g/t Au range.

Table 11-3: Comparison between the 2021 and 2022 Segele Gold Deposit Mineral Resource estimates

Resource model	Classification	Cut-off (Au g/t)	Tonnes (kt)	Au (g/t)	Gold ounces (koz)
April 2021	Measured	2.65	0	0	0
	Indicated		0	0	0
	Inferred		67	24.0	52
	Total Mineral Resources		**67**	**24.0**	**52**
April 2022	Measured	2.65	0	0	0
	Indicated		32	40.6	41
	Inferred		62	13.6	27
	Total Mineral Resources		**94**	**22.7**	**69**

Figure 11-1: 2021 versus 2022 Mineral Resource grade-tonnage comparison



12 Recommendations for further work

SRK recommends the following actions to improve the Segele exploration dataset, and future updates to the geological model and Mineral Resource estimate:

- Sample waste domain areas in drill holes that are likely to be within future mining zones or in proximal footwall and hanging wall locations to aid grade control and mine waste assessments.
- Regularly assay for deleterious elements such as arsenic and sulphur to aid mine waste assessments.
- Continue to collect and assess additional bulk density samples – preferably by the Archimedes method – ensuring samples are collected from a variety of lithological, weathering and mineralisation domains and estimate density for use in future Mineral Resource estimates.
- Review the current lithology logging system and investigate if it can be condensed into a more manageable set of logging codes.
- Review the updated geological model as more data become available, and in particular incorporate structural geology trends.
- Formulate mine geology procedures including geological mapping, face sampling, grade control modelling and mining reconciliation.

Closure

This report, Segele Gold Deposit Mineral Resource Update, was prepared by

Michael Lowry
Principal Consultant – Resource Evaluation

and reviewed by

David Slater
Principal Consultant – Resource Evaluation

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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Appendix A JORC (2012) Table 1

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	Commentary
Sampling techniques	▪ Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	▪ 1,444 soil samples were conducted at 100 m intervals along northwest–southwest sample lines oriented across the Segele deposit. Each sample was collected manually and weight between 2–3 kg. ▪ 4.25 km of trenching was completed over the deposit. The trenches were geologically logged and sampled at 1 m intervals, with samples weighing between 2–3 kg, and the samples were then sent to the laboratory for gold analysis. An additional, approximately 10 kg, sample of material was taken from the trench floor at 1 m intervals and was then panned in the Akobo River. ▪ Artisanal pits were logged and sampled at 1 m intervals using an iron-framed escalator/pulley system, moving down to the bottom of each pit. Each pit was logged in vertical sections, which showed petrology, alteration, and mineralisation contrast down depth. 123 samples were collected from the pits weighing approximately 2 kg each and then prepared and sent for analysis. ▪ 4 Reverse Circulation (RC) holes were completed using a face sampling hammer with a hole diameter of 140 mm. Samples were collected at 1 m intervals via a rig mounted cyclone and Jones-type three-tiered riffle splitter. Samples weighed between 2–3 kg. ▪ 99 Diamond drill holes were completed for 13,810.99 m using either NQ (47.6 mm diameter core) NQTK (50.6 mm diameter core) or HQ (63.5 mm diameter core) sized drilling and using a standard tube drilling. Core loss was encountered frequently at depths less than 30 m (average 78.9%), however, all the mineralised intersections in the drill holes occurred below this depth. Core recovery from depths greater than 30 m was consistently above 97% except for 29 intervals over 95.2 m with recoveries <90% which represents <1% of the drilled metres >30 m depth. Diamond drill samples were taken over intervals ranging from 0.1 to 2.7 m although most samples were taken over 1 m intervals.

Criteria	JORC Code explanation	Commentary
Drilling techniques	■ Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	■ 4 RC holes were completed in 2015 using a face sampling hammer with a hole diameter of 140 mm. ■ 99 Diamond drill holes were completed using either NQ (47.6 mm diameter core) NQTK (50.6 mm diameter core) or HQ (63.5 mm diameter core) sized drilling and using a standard tube drilling. Core was oriented using a Devicore BBT system which marks the base of the hole for each core run.
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.	■ The mass of RC sample splits and sample spoil was not recorded and therefore there has been no assessment of the relationship between recovery and grade for the RC holes. ■ Diamond drill recoveries were calculated by measuring the core recovered against the drillers recorded depth for each diamond core run. Core loss was encountered frequently at depths less than 30 m (average 78.9%), however, all the mineralised intersections in the drill holes occurred below this depth. Core recovery from depths greater than 30 m was consistently above 97% except for 29 intervals over 95.2 m with recoveries <90% which represents <1% of the drilled meters >30 m depth. There is no apparent correlation between grade and sample mass, hence it is not believed that the drilling method could have introduced bias.
Logging	■ Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. ■ Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. ■ The total length and percentage of the relevant intersections logged.	■ Full qualitative lithology logging has been completed for all the trench sampling intervals and the RC drilling intervals. ■ Full qualitative lithology and structural logging have been performed for Diamond drill 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.	■ Soil samples were sieved and quartered to produce a 50 g sub-sample using a -80 mesh at the exploration field camp and then sent for analysis. ■ Trench and pit samples were collected manually as channel samples weighing approximately 2–3 kg. The samples were weighed upon receipt at the laboratory and then crushed with a jaw crusher to 70% passing 2 mm. The crushed material was split using a Jones-type riffle splitter to split off a 1000 g sub-sample. The crushed sample was then pulverised to 85% passing 75 microns. ■ RC samples were collected at 1 m intervals via a rig mounted cyclone and Jones-type three-tiered riffle splitter weighing between 2–3 kg. The samples were then weighed upon receipt at the laboratory and subjected to crushing with a jaw crusher to 70% passing 2 mm. The crushed material

Criteria	JORC Code explanation	Commentary
		was split using a Jones-type riffle splitter to split off a 1000 g sub-sample. The crushed sample was then pulverised to 85% passing 75 microns. ■ Diamond drill core was split using a diamond saw and half core was sampled at intervals ranging from 0.1 to 2.7 m. The samples were then weighed upon receipt at the laboratory and crushed with a jaw crusher. After crushing either 1000 g or the entire sample of the crushed material was pulverised. ■ Analysis of half and quarter core field duplicates has resulted in a coefficient of variation of 4.7 which is consistent with a highly variable, nuggety gold deposit. However, the size of samples taken from the Diamond drilling at Segele may be too small given the coarse-gold nature of the mineralisation. Akobo Minerals AB is investigating options for bulk sampling to validate the Diamond drilling results.
Quality of assay data and laboratory tests	■ The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. ■ For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. ■ Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	■ Soil samples processed prior to 2015 were analysed at ALS Chemex Gauteng (South Africa) using Aqua Regia extraction with ICP-MS and ICP-AES finish analytical techniques for gold and all other elements (ALS code ME-MS41). In 2015, soil samples were sent to Ezana laboratory (Mekele, Ethiopia) and analysed using fire assay with an ASS finish. ■ Trench and pit samples were analysed at ALS (Gauteng) using a 50 g fire assay with an ICP-AES finish. A 50 g fire assay with a gravimetric finish was used where the initial fire assay was greater than 10 g/t Au. ■ RC samples were prepared at ALS (Addis Ababa) and then sent to ALS (Romania) and analysed using a 50 g fire assay with an ICP-AES finish. A 50 g fire assay with gravimetric finish was used where the initial fire assay was greater than 10 g/t Au. ■ Diamond drill samples were prepared at ALS (Addis Ababa) and then sent to ALS (Loughrea or Rosia Montana) and analysed. Samples submitted prior to September 2020 were analysed using a 30 g fire assay for samples not containing visible gold or a screen fire assay for samples that did contain visible gold. Some of the 30 g fire assays were subsequently re-assayed using a 50 g fire assay. From September 2020 onwards, samples not containing visible gold were analysed using a 50 g fire assay. ■ Quality control/quality assurance (QA/QC) sampling: – RC drilling and trench sampling – insertion of certified reference material samples (CRMs) at a rate of 1:30, pulp duplicates at a rate of 1:20.

Criteria	JORC Code explanation	Commentary
		– Diamond Drilling - blanks at a rate 1:25, CRMs at a rate of 1:25, field duplicates at a rate of 1:20, crush duplicates at a rate of 1:20 and pulp duplicates at a rate of 1:20. ▪ The analysis of the available QC data indicates acceptable accuracy and precision of the RC and Diamond drilling assay results with no major failed results recorded.
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.	▪ The Competent Person has independently verified the database by checking drill hole collar locations, sampling and logging intervals and validating a selection of assay results against laboratory certificates. ▪ There are no twin drill holes completed at Segele. ▪ The company has implemented a cloud-based data management system (MX Deposit) which minimises transcription errors and allows transparent and accurate data collection. ▪ No adjustments to assay data have been made.
Location of data points	▪ Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. ▪ Specification of the grid system used. ▪ Quality and adequacy of topographic control.	▪ 840 topographic points were surveyed using a Leica Total Station survey tool. ▪ RC collars were picked up using a handheld GPS unit. ▪ All the Diamond drill holes were surveyed by a qualified surveyor in early April 2022 using a Leica TCR803 total station using the Adinda/ UTM Zone 36N datum ▪ Downhole surveys of holed drilled prior to SEDD41 were conducted using a DeviCore BBT tool which oriented the core and recorded changes in the drill hole dip at irregular intervals. The DeviCore tool does not record changes in azimuth and the drill holes are assumed to be straight. ▪ All drill holes drilled from June 2021 (SEDD42 – 99) have been surveyed using a DeviFlex Rapid instrument that measures changes both in Azimuth and Dip. ▪ All work has been carried out using Adinda/UTM Zone 36N datum coordinate system ▪ Topographic control is based upon 840 survey points but is complicated by the extensive artisanal mining which has occurred through the Segele deposit area. A topographic surface has been modelled.
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	▪ The trenching, pit sampling and geological mapping we used to help guide the lithological and mineralisation modelling. ▪ The four RC drill holes lie outside the Segele mineralisation and were not used in the geological modelling or Mineral Resource estimation.

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied. ▪ Whether sample compositing has been applied.	▪ Seven Diamond drill holes were excluded from the geological modelling and Mineral Resource estimation. One drill hole had downhole surveying errors while six drill holes were drilled to the east of the deposit. ▪ 92 Diamond drill holes were used to produce the 2022 Segele geological model. ▪ 82 Diamond drill holes were used to produce the 2022 Mineral Resource estimate. 8 Diamond drill holes were not used as they were completed as either metallurgical or geotechnical holes and had no assays and two drill holes were awaiting assays to be returned from the laboratory. ▪ Diamond drilling at Segele was completed on a nominal drill spacing varying between 5–15 mE by 10–15 mN. The Diamond drilling spacing is sufficient to establish the geological and grade continuity of the Segele deposit for Mineral Resource estimation. ▪ Diamond drill samples were composited to 1 m lengths, for estimation purposes, broken by the mineralised domains, with residual composites <0.5 m added to the previous 1 m composite.
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.	▪ Diamond drilling at the Segele deposit has been conducted approximately perpendicular to the trend of the mineralisation. It does not appear that the orientation of the drilling has resulted in a sampling bias.
Sample security	▪ The measures taken to ensure sample security.	▪ Diamond drill hole samples are sealed and labelled inside individual plastic bags and then 10 samples are put in bulk bags and sealed. ▪ All sampling intervals are recorded on paper logs and then entered into the Akobo geological database. ALS laboratory electronic submission forms are then completed for each sample batch and re-checked against the geological database entries. ▪ Samples are then transported by road to the ALS laboratory in Addis Ababa using a company truck. ALS performs a sample reconciliation when the samples are received. ▪ Sample pulps are then exported to Ireland or Romania for analysis at the ALS laboratory in Loughrea or Rosia Montana and a pulp split is sent back to Akobo for storage. ▪ Assay results are returned digitally and hard copy form and are checked against the sampling interval recorded in the geological database.

Criteria	JORC Code explanation	Commentary
Audits or reviews	▪ The results of any audits or reviews of sampling techniques and data.	▪ There have been no audits or reviews of the sampling techniques and data, however, the Competent Person has viewed/confirmed the conduct of the sampling to the documented procedures during a virtual site visit.

Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>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.</td><td>The Segele deposit lies within the Mining Licence (MOM/LSML/1898/2021) which was granted on 30 September 2021 and is valid for 5 years. The mining licence can be renewed up to a maximum of 10 years for each renewal.
There are no known issues relating to third parties, however, a royalty of 5% on the sale price of gold extracted from the project and payable to the Federal Government of Ethiopia applies.</td></tr>
<tr><td>Exploration done by other parties</td><td>Acknowledgment and appraisal of exploration by other parties.</td><td>All exploration work has been carried out by ETNO Mining Plc (ETNO) which is 99.97% owned by Akobo Minerals AB.</td></tr>
<tr><td>Geology</td><td>Deposit type, geological setting and style of mineralisation.</td><td>The Segele deposit is a high-grade orogenic gold deposit hosted within altered ultramafic and mafic rocks. The mineralisation is controlled by east–west shear movement which has created local dilatational zones oriented in a northwest–southeast direction which favoured precipitation of gold in narrow zones and pockets of intense shearing within the ultramafic and overlying mafic units. Gold appears to have been introduced during hydrothermal alteration of the ultramafic pyroxenite, where the mineral pyroxene was altered to amphibole by hydrous solutions carrying gold.
The mineralisation has been modelled as a series of compact thin and sometimes bifurcating lenses using a cut-off 0.20–0.3 g/t Au. The lenses occurred mostly within the ultramafic units but do also extend upwards into the overlying mafic units.</td></tr>
<tr><td>Drill hole Information</td><td>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:
– easting and northing of the drillhole collar
– elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar
– dip and azimuth of the hole
– downhole 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</td><td>RC drill holes
<table>
<tr><th>Hole number</th><th>Easting</th><th>Northing</th><th>Elevation</th><th>Dip</th><th>Azimuth</th><th>Hole Depth</th></tr>
<tr><td>SERC001</td><td>727,581</td><td>715228</td><td>634</td><td>-60</td><td>230</td><td>145</td></tr>
<tr><td>SERC002</td><td>727362</td><td>715025</td><td>642</td><td>-50</td><td>270</td><td>150</td></tr>
<tr><td>SERC003</td><td>727511</td><td>715303</td><td>635</td><td>-50</td><td>230</td><td>150</td></tr>
<tr><td>SERC004</td><td>727622</td><td>715125</td><td>636</td><td>-50</td><td>300</td><td>150</td></tr>
</table></td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	understanding of the report, the Competent Person should clearly explain why this is the case.	▪ Diamond drill Holes

Hole number	Easting	Northing	Elevation	Dip	Azimuth	Hole Depth
SEDD01	727,506	715,219	628	-60	180	32.8
SEDD02	727,505	715,220	629	-75	180	59.0
SEDD03	727,530	715,221	627	-75	180	101.1
SEDD04	727,516	715,250	627	-75	180	95.5
SEDD05	727,541	715,250	626	-75	180	134.8
SEDD06	727,555	715,223	620	-75	180	104.9
SEDD07	727,564	715,252	619	-75	180	137.5
SEDD08	727,479	715,220	630	-75	180	44.6
SEDD09	727,479	715,230	630	-60	150	95.9
SEDD10	727,531	715,221	627	-80	330	99.0
SEDD11	727,518	715,222	628	-70	180	69.3
SEDD12	727,539	715,219	626	-75	180	93.4
SEDD13	727,535	715,235	627	-75	180	105.0
SEDD14	727,524	715,233	627	-75	180	91.0
SEDD15	727,510	715,232	628	-75	180	24.0
SEDD16	727,510	715,235	628	-75	180	92.4
SEDD17	727,454	715,221	632	-75	180	129.3
SEDD18	727,527	715,281	626	-75	180	138.5
SEDD19	727,504	715,282	628	-75	180	126.2
SEDD20	727,542	715,296	625	-75	180	45.2
SEDD21	727,543	715,307	625	-75	180	156.3
SEDD22	727,516	715,298	627	-75	180	131.4
SEDD23	727,529	715,248	626	-75	180	111.3
SEDD24	727,524	715,221	627	-80	180	90.3
SEDD25	727,528	715,282	626	-65	160	129.2
SEDD26	727,537	715,265	625	-72	180	117.2
SEDD27	727,533	715,224	627	-75	180	33.5
SEDD28	727,533	715,227	627	-75	180	87.2
SEDD29	727,544	715,237	626	-75	180	99.2
SEDD30	727,550	715,251	625	-75	180	114.2
SEDD31	727,528	715,300	626	-75	180	144.0

Criteria	JORC Code explanation	Commentary

Hole number	Easting	Northing	Elevation	Dip	Azimuth	Hole Depth
SEDD32	727,516	715,282	627	-75	180	125.7
SEDD33	727,521	715,289	626	-75	180	123.2
SEDD34	727,533	715,291	626	-75	180	135.2
SEDD35	727,542	715,300	625	-65	160	150.2
SEDD36	727,552	715,307	624	-75	180	168.0
SEDD37	727,539	715,286	626	-75	180	150.2
SEDD38	727,536	715,330	624	-75	180	165.2
SEDD39	727,547	715,331	624	-75	180	180.1
SEDD40	727,523	715,321	625	-75	180	141.2
SEDD41	727,557	715,331	623	-75	180	183.2
SEDD42	727,517	715,222	628	-70	180	51.4
SEDD43	727,528	715,248	626	-75	180	99.0
SEDD44	727,543	715,237	626	-75	180	100.0
SEDD45	727,556	715,359	622	-75	180	220.5
SEDD46	727,543	715,359	623	75	180	220.5
SEDD47	727,605	715,289	622	-45	225	200.0
SEDD48	727,606	715,290	622	-55	225	200.2
SEDD49	727,607	715,291	622	-65	261	200.2
SEDD50	727,607	715,291	622	-57	261	200.0
SEDD51	727,530	715,359	624	-75	180	249.3
SEDD52	727,517	715,360	624	-75	180	222.3
SEDD53	727,542	715,360	623	75	180	225.0
SEDD54	727,556	715,387	621	-75	180	225.0
SEDD55	727,544	715,387	622	-75	180	222.0
SEDD56	727,532	715,387	623	75	180	225.0
SEDD57	727,557	715,226	620	-60	230	85.0
SEDD58	727,569	715,387	620	75	180	250.0
SEDD59	727,557	715,226	620	70	230	99.1
SEDD60	727,521	715,310	625	-75	180	180.0
SEDD61	727,557	715,225	620	65	220	93.4
SEDD62	727,499	715,226	629	-50	180	96.0
SEDD63	727,558	715,225	620	-75	240	96.1
SEDD64	727,499	715,227	628	-60	180	74.9
SEDD65	727,557	715,236	620	75	225	93.1

Criteria	JORC Code explanation	Commentary

Hole number	Easting	Northing	Elevation	Dip	Azimuth	Hole Depth
SEDD66	727,506	715,226	628	-50	180	85.0
SEDD67	727,506	715,227	628	-60	180	75.0
SEDD68	727,514	715,226	628	-50	180	85.0
SEDD69	727,514	715,227	628	-60	180	75.0
SEDD70	727,521	715,226	627	-50	180	85.0
SEDD71	727,565	715,243	619	75	225	111.1
SEDD72	727,521	715,226	627	-60	180	75.0
SEDD73	727,529	715,225	627	-50	180	85.4
SEDD74	727,529	715,226	627	-60	180	75.2
SEDD75	727,567	715,216	620	-50	225	83.3
SEDD76	727,537	715,224	627	-50	180	85.3
SEDD77	727,537	715,225	627	-60	180	75.0
SEDD78	727,534	715,414	622	-75	180	250.0
SEDD79	727,567	715,216	620	60	215	84.0
SEDD80	727,545	715,413	622	75	180	252.0
SEDD81	727,570	715,224	620	-50	225	89.8
SEDD82	727,570	715,224	620	-60	215	97.1
SEDD83	727,559	715,413	620	-75	180	260.0
SEDD84	727,754	715,032	630	-55	245	102.0
SEDD85	727,570	715,412	619	-75	180	261.0
SEDD86	727,760	715,019	630	55	245	117.1
SEDD87	727,535	715,438	621	-75	180	276.0
SEDD88	727,754	715,046	630	-55	245	115.0
SEDD89	727,776	715,054	630	-55	245	127.4
SEDD90	727,547	715,438	620	-75	180	276.9
SEDD91	727,766	715,064	630	-55	245	104.7
SEDD92	727,559	715,438	619	-75	180	285.0
SEDD93	727,754	715,057	629	-55	245	104.7
SEDD94	727,572	715,440	619	-75	180	300.0
SEDD95	727,610	715,252	624	-50	230	131.9
SEDD96	727,521	715,414	623	-75	180	150.0
SEDD97	727,533	715,324	625	-50	180	300.0
SEDD98	727,523	715,438	622	-75	180	276.0
SEDD99	727,672	715,552	653	-60	230	372.0

Criteria	JORC Code explanation	Commentary
Data aggregation methods	▪ In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. ▪ Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. ▪ The assumptions used for any reporting of metal equivalent values should be clearly stated.	▪ All trench and drilling data is provided as weighted average intervals. The weighting is applied according to intersection length. No high- or low-grade cut-off was used. ▪ The minimum sampling width used was 1 m for RC and 0.1 m for Diamond drill holes. ▪ No Exploration Results are presented in this report. Mineral Resources are reported and are based upon 3D geological modelling and Mineral Resource estimates. The geological modelling has been based primarily on Diamond drill sampling with the trenching, pit sampling and geological mapping only used to help guide the lithological and mineralisation modelling up dip from the drill holes. The Mineral Resource estimate only uses information from the Diamond drill hole sampling.
Relationship between mineralisation widths and intercept lengths	▪ These relationships are particularly important in the reporting of Exploration Results. ▪ If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. ▪ If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	▪ No Exploration Results are presented in this report. Mineral Resources are reported and are based upon 3D geological modelling and Mineral Resource estimates. The geological modelling has been based primarily on diamond drill sampling with the trenching, pit sampling and geological mapping only used to help guide the lithological and mineralisation modelling up dip from the drill holes. The Mineral Resource estimate only uses information from the Diamond drill hole sampling.
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 drillhole collar locations and appropriate sectional views.	▪ No Exploration Results are presented in this report. Mineral Resources are reported and are based upon 3D geological modelling and Mineral Resource estimates. The geological modelling has been based primarily on Diamond drill sampling with the trenching, pit sampling and geological mapping only used to help guide the lithological and mineralisation modelling up dip from the drill holes. The Mineral Resource estimate only uses information from the Diamond drill hole sampling.
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.	▪ No Exploration Results are presented in this report. Mineral Resources are reported and are based upon 3D geological modelling and Mineral Resource estimates. The geological modelling has been based primarily on diamond drill sampling with the trenching, pit sampling and geological mapping only used to help guide the lithological and mineralisation modelling up dip from the drill holes. The Mineral Resource estimate only uses information from the Diamond drill hole sampling.
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	▪ Geological mapping has been conducted over the Segele deposit at various scales; 1:2000, 1:10,000 and 1:25,000.

Criteria	JORC Code explanation	Commentary
	treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	▪ A ground magnetic geophysical survey has been completed over a 15.6 km^2 section of the deposit area.
Further work	▪ The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). ▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	▪ No Exploration Results are presented in this report. Mineral Resources are reported and are based upon 3D geological modelling and Mineral Resource estimates. The geological modelling has been based primarily on diamond drill sampling with the trenching, pit sampling and geological mapping only used to help guide the lithological and mineralisation modelling up dip from the drill holes. The Mineral Resource estimate only uses information from the Diamond drill hole sampling. ▪ Future exploration work testing for lateral extensions of the Segele mineralisation is ongoing.

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	Commentary
Database integrity	▪ Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. ▪ Data validation procedures used.	▪ Akobo utilise a MX Deposit geological database which has built-in validations for logging and sampling data entry. ▪ The database is managed by an Akobo employee who performs regular validations including sample interval checks, geological logging checks and assay value checks against returned laboratory certificates. ▪ In addition to this, Akobo is implementing a Micromine Nexus data management system to further improve the data management.
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.	▪ The Competent Person has not been able to undertake a physical site visit due to COVID-19 travel restrictions, although a site visit is planned for either May or June 2022. ▪ The Competent Person has completed a virtual site visit with the Akobo Minerals Chief Operating Officer and Geological staff using Microsoft Teams in 2021. During the virtual site visit the Competent Person inspected Diamond drill core processing (depth mark ups, geological logging, core sampling and sample bagging prior to dispatch) as well as a virtual field visit to the Segele deposit to inspect drill hole collars, artisanal pits and the general geomorphology.
Geological interpretation	▪ Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. ▪ Nature of the data used and of any assumptions made. ▪ The effect, if any, of alternative interpretations on Mineral Resource estimation. ▪ The use of geology in guiding and controlling Mineral Resource estimation. ▪ The factors affecting continuity both of grade and geology.	▪ Geological logging data from Diamond drill holes, trenches, artisanal pits and surface mapping and structural logging from Diamond drill holes was used to generate the Segele geological model. ▪ 18 different lithologies have been logged at Segele, these were condensed down to 5 main lithologies for the lithological model: mafic, meta-pyroxenite, ultramafic, mafic schist and a late-stage vulcanite dyke which crosscuts the other lithologies and the gold mineralisation. ▪ Gold mineralisation was modelled as a series of compact, thin, and sometimes bifurcating lenses, using a cut-off 0.2–0.3 g/t Au. The lenses occurred mostly within the ultramafic and meta-pyroxenite units but do also extend upwards into the overlying mafic units. Six mineralised lenses were modelled, a main lens which extends to surface, three footwall lenses, two of which extend at depth, and two minor isolated lenses occurring at the periphery of the other lenses. ▪ The Mineral Resource estimate used each of the mineralised lenses as hard boundaries for gold estimation, and the lithological domains as hard boundaries for density estimation.

Criteria	JORC Code explanation	Commentary
		▪ The geological modelling demonstrates good continuity of the mineralised lenses, particularly down plunge, however, uncertainly still exists about the structural controls on the mineralisation.
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.	▪ The Segele mineralisation is approximately 40 m wide (east–west) and extends approximately 400 m down plunge to depths of up to 280 m below the topographic surface. The mineralised lenses are typically between 2–5 m thick but can vary from 1 m to 15 m thick.
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. ▪ The assumptions made regarding recovery of by-products. ▪ Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). ▪ In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. ▪ Any assumptions behind modelling of selective mining units. ▪ Any assumptions about correlation between variables. ▪ Description of how the geological interpretation was used to control the resource estimates. ▪ 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 drillhole data, and use of reconciliation data if available.	▪ Estimates for gold and density were completed using Ordinary Kriging interpolation using Maptek Vulcan mining software. The Mineral Resource estimate used each of the mineralised lenses as hard boundaries for gold estimation and the lithological domains as hard boundaries for density estimation. No deleterious elements or additional grade variables of economic significance have been estimated. ▪ Drill hole samples were composited to 1 m lengths, broken by the mineralised domains, with residual composites <0.5 m added to the previous 1 m composite. ▪ A top cut of 850 g/t Au was applied to remove two high grade outliers and distance restrictions were applied to composite samples >150 g/t to control high grade smearing within the estimate. ▪ The estimation block size used was 5 mX x 5 mY x 1 mRL or approximately half the drill hole spacing. The estimation was completed over four passes with searches ranging from 5 mX x 5 mY x 1 mRL to 240 mX x 120 mY x 60 mRL and sample ranges of a minimum number of 6 samples and a maximum number of 22 samples, with a maximum of 3 samples per drill hole. ▪ Dynamic anisotropy searches were used during the estimates to account for localised changes in the dip and plunge of the mineralised lenses. ▪ Due to low sample numbers, the average composite gold grades were assigned to the two minor lenses which represent <1% of the Mineral Resources. ▪ Inverse distance squared and uncut Ordinary Kriging check estimates were also completed. ▪ The 2022 Segele Mineral Resource estimate has undergone several validation checks including visual validation against the Diamond drill hole sampling, a global statistical comparison between the composite samples and the estimated blocks and swath plot validations comparing averaged panel composite and estimated blocks grades along strike, along the dip direction and vertically.

Criteria	JORC Code explanation	Commentary
Moisture	▪ Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	▪ Tonnages have been estimated on a dry basis. ▪ There has been no assessment of the moisture content.
Cut-off parameters	▪ The basis of the adopted cut-off grade(s) or quality parameters applied.	▪ A cut-off grade of 2.65 g/t Au has been used for Mineral Resource reporting. ▪ The cut-off grade assumes the deposit will be mined using a cut and fill underground mining technique which was studied by Akobo Minerals in a 2021 scoping study. The scoping study outlined that ore would be hoisted from the mine from an inclined shaft to a vertical depth of approximately 225 m, although it is expected that this depth could be extended pending further study. ▪ The cut-off grade was calculated using updated costs for mining, processing, administration, environment, social and governance (ESG) and royalty costs, a gold recovery of 90% and a gold price of USD1,600 per ounce.
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.	▪ A Scoping study was completed for the Segele Deposit in September 2021 by Akobo Minerals, their subsidiary Etno Mining, Goshawk Network Technologies CC (Metallurgy), Sazani Resource and Development Ltd (ESG), Borrego Sun Pty Ltd (Mining Engineering) and SRK Consulting (Australia) Pty Ltd (Mineral Resource Estimation). ▪ The Scoping study concluded that the deposit would be accessed using an inclined shaft from the surface and the ore be mined using shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill depending on the dip and orientation of the orebody.
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.	▪ A 258 kg sample of drill core has been processed by Peacocke & Simpson in Harare, Zimbabwe. The ore sample was subjected to Extended Gravity Recoverable Gold (EGRG) testing, an industry-standard test to determine the proportion, liberation properties and particle sizes of gravity recoverable gold (GRG) in an ore, and thus to allow process design. The sample had a very high GRG value of 76.0% at a final grind of 70.4% passing 75 microns (µm). 55.0% of head gold was liberated as GRG at coarse grind of nominal 80% passing 850 µm, and a further 13.1% at nominal 96.2% passing 212 µm. ▪ Cyanide leaching on the final gravity tailings realised a recovery of 83.9% of the test feed (20.2% of the test head) in 25 hours of leaching, overall recovery via gravity concentration and cyanide leaching on gravity tailings was 96.1 % of the test head. ▪ Mineralogical investigations suggest that the mineralisation at the Segele Deposit occurs as unevenly distributed, coarse to fine gold grains. The gold

Criteria	JORC Code explanation	Commentary
		appears to be unusually pure with very little associated sulphide and no associated silver or metals.
Environmental factors or assumptions	■ Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	■ An Environmental and Social Impact Assessment (ESIA) has been prepared in accordance with Ethiopian requirements. ■ A gap analysis is currently being undertaken to determine what is required for the ESIA to meet Good International Industry Standards (GIIP). ■ Key impacts identified so far are the potential economic displacement of artisanal miners and the impact of the proposed mine on surface and ground water availability. ■ An Environmental and Social Action Plan will be prepared to mitigate any negative impacts resulting from the ESIA and gap analysis. ■ A water study comprising hydrogeological and hydrological components is planned to better understand and address potential water impacts. ■ Once completed, an Environmental Monitoring Plan (EMP) will be implemented. ■ A stakeholder engagement plan, with grievance mechanism, has been prepared to guide ongoing relationships with the community local and regional governments and transient artisanal miners. All engagements are recorded, and grievances tracked until resolved. ■ In parallel, a review of Environmental, Social and Governance (ESG) risks has been undertaken and a program initiated to support sustainable livelihoods and environmental rehabilitation of degraded and damaged areas in the communities that host Akobo Minerals. Within this program are a series of innovative measures to extend shared value across the project area, facilitate resource stewardship and foster effective relationships without a culture of dependency.
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.	■ 614 Diamond drill samples over intervals ranging from 0.25 m to 1.8 m were selected from a range of stratigraphys; and grade ranges and were analysed for specific gravity at ALS (Loughrea) with a multipycnometer analytical method which uses an automated gas displacement pycnometer to determine density by measuring the pressure change of helium within a calibrated volume. ■ The gas pycnometer measures the volume of solid particles using gas (helium) displacement which will penetrate the finest pores. ■ Exploratory data analysis showed that lithological domains should be used as hard boundaries for density estimation.
Classification	■ The basis for the classification of the Mineral Resources into varying confidence categories.	■ Mineralisation within the 2022 Segele Mineral Resource estimate has been classified as either Indicated or Inferred Mineral Resources.

Criteria	JORC Code explanation	Commentary
	▪ Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). ▪ Whether the result appropriately reflects the Competent Person's view of the deposit.	▪ The Competent Person is of the opinion that the deposit has reasonable prospects of eventual economic extraction using either shrinkage stoping, post room and pillar, narrow vein stull mining, or cut and fill underground mining methods. ▪ Artisanal mining, survey data, sampling and assaying methodology and quality, drill hole spacing, confidence in the geological model, estimation performance and ESG factors were all taken into consideration when classifying the Segele deposit Mineral Resources.
Audits or reviews	▪ The results of any audits or reviews of Mineral Resource estimates.	▪ There have not been any audits or reviews of the 2022 Segele Mineral Resource estimate other than internal peer review by SRK Consulting (Australasia) Pty Ltd.
Discussion of relative accuracy/confidence	▪ Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. ▪ The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. ▪ These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	▪ The Competent Person considers that the unknown depth of artisanal shaft mining, surveying methodologies, low sample counts in some domains, low amounts of density sampling, confidence in the geological modelling and the high gold grade variability present the most significant impacts on the confidence of the Mineral Resource estimate. ▪ The Competent Person is of the opinion that the 2022 Segele Mineral Resource estimate represents an appropriate global estimate that reproduces the overall grade trends and tenor seen in the Diamond drill hole samples. Due to the geological complexity and the high gold grade variability; the estimate should not be considered as an accurate local estimate.