THE MSA GROUP

Specialist Consultants to the Mining Industry

Red Crescent Resources Limited
Tufanbeyli Zinc Project
Turkey

NI 43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey (Revised)

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Red Crescent Resources Limited

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IMPORTANT NOTICE

This report was prepared as a National Instrument NI 43-101 Technical Report for Red Crescent Resources Limited (RCR) by The MSA Group (Pty) Ltd (MSA), South Africa. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in MSA's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by RCR subject to the terms and conditions of its contract with MSA. Except for the purposes legislated under Canadian provincial securities law, any other uses of this report by any third party is at that party's sole risk.

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1 SUMMARY

The Tufanbeyli Zinc Project (TZP) is located in south-central Turkey within Adana Province and comprises two Operation Licences, IR 944 and IR 8114, currently wholly held by Red Crescent Resources Limited (RCR). These licenses were previously 100% held by RCR through an agreement between *Yeni Anadolu Mineral Madençilik Sanayi ve Tic Ltd Şti* (YAMAS), which was a wholly owned Turkish subsidiary of Anatolia Minerals Development Limited (Anatolia), prior to Anatolia being incorporated into Alacer Gold Corporation.

This assessment of the TZP is based on a review of information and data supplied by RCR and YAMAS, as well as observations gathered during a site inspection from 14-18 April 2011 by the Qualified Person (Mike Robertson). RCR has not undertaken any material exploration activities on the project since the time of the site inspection.

The Tufanbeyli Project represents a cluster of oxidized Mississippi Valley Type (MVT) zinc – lead deposits hosted by dolomitized Devonian-age limestones. Many of the characteristics of typical MVT type deposits are observed at Tufanbeyli, however zinc mineralization is mainly in the form of smithsonite with no sulphides observed to date. There is a possibility of sulphide mineralization below the zone of oxidation.

Geochemically anomalous zinc and lead are observed over a northeast-southwest trending strike of 40 km, based on the General Directorate of Mineral Research and Exploration, *Maden Tetkik ve Arama* (MTA) exploration in the district. A soil geochemical survey undertaken by Silvermet Inc. has demonstrated anomalous zinc and lead over a 15 km strike within the two licence areas.

The two licences host five prominent zinc prospects of which two (Akçal and Belbaşi) were mined on a small-scale between 1985 and 1998, producing an estimated 210 000 tonnes of material with grades in the range 20% to 40% Zn. Significant potential exists to define multiple deposits with lower grade but higher tonnage. Potential also exists to define sulphide resources at depth.

A significant amount of drilling was completed on the project area between 2006 and 2008 (12 697.7 m in 168 holes). Drilling has tested most of the zinc prospects; however the extensive zinc and lead soil geochemical anomalies to the southeast of these showings have not yet been tested by drilling. This anomalous geochemistry straddling the two licences indicates that the mineralized system may extend further than is currently known.

Results from metallurgical testwork conducted on samples from Tufanbeyli concluded that pre-treatment should consist of gravimetric up-grading. Dense media separation tests strongly recommend the usage of dense media separation in order to upgrade the zinc-bearing material. Other gravimetric up-grading means such as cones or spirals can also be considered. The up-graded Tufanbeyli zinc-bearing material should be suitable for further processing by hydro and/or pyro-metallurgical means. Historical treatment routes viz. Waelz kiln treatment would still be suitable.

Based on the available database exports provided to MSA, and a review of procedures followed including quality control measures adopted by YAMAS, it is concluded that appropriate care and attention was given to aspects of data collection. In addition, a verification program was undertaken by the primary author and included site inspection of drillhole collars, relogging of selected drillholes,, re-assay of randomly selected preserved assay pulps and random checks of original laboratory assay certificates against the database. The results of this investigation provide an adequate measure of confidence in the data and it is concluded that the historical data are acceptable for use in a Mineral Resource estimate.

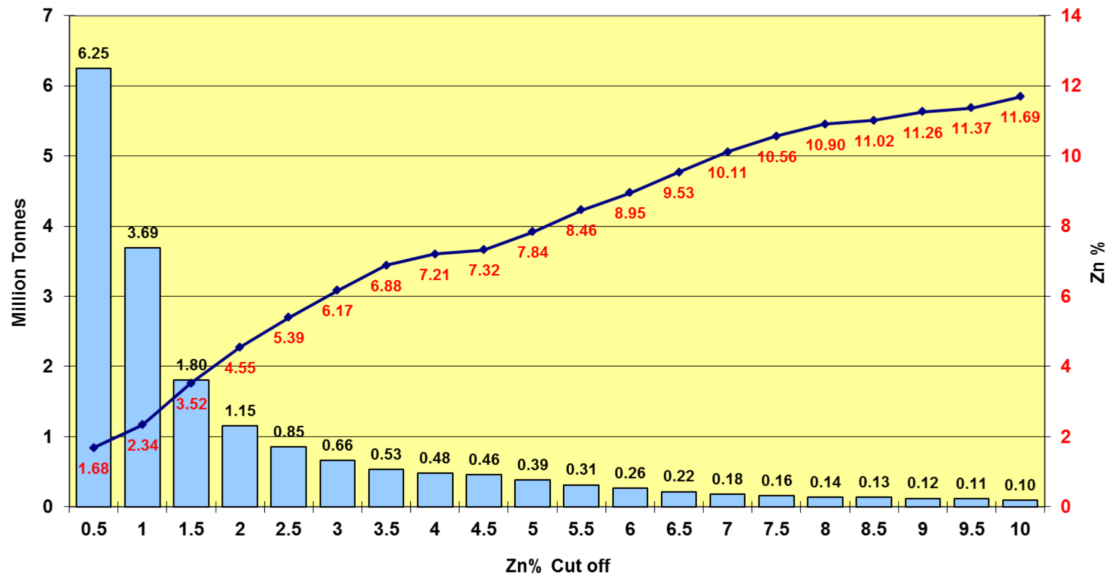
The current estimation exercise has produced the following, combined in-situ Inferred Mineral Resources at the five prospects at a 0.5% Zn cut off. This cut off has been selected in cognisance of the ability to upgrade material based on metallurgical investigations as well as acknowledging that the current data quantity and distribution represents a relatively early stage of exploration and that there is potential to selectively identify higher grade areas within the currently defined > 0.5% Zn envelopes with infill drilling and sampling:

Combined In-situ, Inferred Mineral Resources at a 0.5% Zn Cut Off

Zone	Million Tonnes	Density	Zn%	Pb%	Ag ppm
Akçal South-West	1.42	2.78	2.47	0.005	2.33
Akçal North-East	1.46	2.82	1.01	0.013	1.08
Belbaşi	1.10	2.80	1.82	0.001	0.89
Camlik	1.00	2.85	1.74	0.003	2.54
Kucuk-Teknecik	0.78	2.84	1.27	0.002	0.73
Meselik	0.49	2.83	1.58	0.001	1.17
Total	**6.25**	**2.82**	**1.68**	**0.005**	**1.53**

Each of these prospects is limited in strike and down-dip extents and the historical drilling programs are considered to have not been optimally designed to identify potential extensions. There are significant un-drilled strike lengths between these resource blocks at surface and down-dip to the southeast which could yield additional mineral resources.

A grade-tonnage curve for the combined Mineral Resource base at Tufanbeyli is shown below. Higher grade zones are patchy and limited in extent, as defined by previous drilling. Systematic drilling is recommended to delineate the strike and dip extent of these zones and to potentially increase the higher grade component of the Mineral Resource base. It is considered that the combined project area has potential for the delineation of additional resources which should be tested using a phased exploration approach.



A phased work program is recommended as follows:

- Phase: 1: Infill and step-out drilling to potentially increase resource size and confidence and specifically to identify and delineate higher grade mineralised zones. These results will prompt a revised Mineral Resource estimate.
- Phase 2: Test geochemical anomalies to the southeast to assess the potential for a sub-parallel mineralised system. Ongoing drill testing and mineral resource definition.

Phases 1 and 2 can run in parallel. The quantum of drilling required has been estimated, but can only be confirmed following other work. A total exploration budget of $1.09m is proposed for the two phases.

It is a requirement that a Qualified Person (QP) is assigned responsibility for planning, implementing and supervising further exploration work. This will ensure that the most appropriate methodology is applied, that the work is executed within a properly managed framework with appropriate quality control and environmental management, and that data generated is recorded in a database designed and managed for the project.

RCR/RCRZ will commence exploration at Tufanbeyli once sufficient cash has been generated via the sale of direct shipping zinc bearing- and, or concentrated material from its heavy media separation plant at the Hakkari prospect, including the Pentagon Licence and License 5. RCR/RCRZ will also continue to access the requisite funding from other sources.

2 INTRODUCTION

2.1 Scope of Work

The MSA Group (MSA) has been commissioned by Red Crescent Resources Limited (RCR) to provide a technical report on the Company's Tufanbeyli Zinc Project ("TZP" or the "property") located in south-central Turkey, in which the Company holds, or has the right to, a 100% interest.

This Technical Report has been prepared to comply with disclosure and reporting requirements set forth in the Toronto Stock Exchange (TSX) Corporate Finance Manual, Canadian National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101) of April 8, 2011, Companion Policy 43-101CP, Form 43-101F1 *Technical Report*, and the Mineral Resource and Reserve classifications adopted by CIM Council in November 2010.

All monetary figures expressed in this report are in United States of America dollars (US$) unless otherwise stated.

2.2 Terms of Reference and Purpose of the Report

This technical report on the TZP was commissioned by RCR as part of an internal due diligence of historical data by RCR, to record the results of an assay verification program, and to compile a maiden Mineral Resource estimate for the TZP, based on existing data.

2.3 Principal Sources of Information

MSA has based its review of the TZP on information provided largely by RCR, along with technical reports by Government agencies and previous tenement holders, notably *Yeni Anadolu Mineral Madençilik Sanayi ve Tic Ltd Şti* (YAMAS), which was a wholly owned Turkish subsidiary of Anatolia Minerals Development Limited (Anatolia), prior to Anatolia being incorporated into Alacer Gold Corporation, as well as other relevant published and unpublished data. This information was supplemented by the QP's (Mike Robertson) personal experience gained on RCR's Hakkari Zinc Project (HZP) in southeastern Turkey. A listing of the principal sources of information is included at the end of this Technical Report.

The authors have endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which the technical report is based. A final draft of the report was also provided to RCR, along with a written request to identify any material errors or omissions prior to lodgement.

RCR's Tufanbeyli property is considered to represent an "Exploration Project" which is inherently speculative in nature. However, MSA considers that the property has been acquired on the basis of sound technical merit. The property is also generally considered to be sufficiently prospective, subject to varying degrees of exploration risk, to warrant further exploration and assessment of its economic potential, consistent with the proposed programs.

Exploration and evaluation program costs are summarised in Table 26-1. RCR has prepared staged exploration and evaluation programs, specific to the potential of the project, which are consistent with the budget allocations. The project has evolved on the basis of considerable exploration by previous tenement holders over the last several years and MSA considers that the relevant areas have sufficient technical merit to justify the proposed programs and associated expenditure.

The technical report has been prepared on the basis of information available up to and including 26 July 2011.

2.4 Personal Inspection

A site visit was made during the period 14 to 18 April 2011 to the TZP property in south-central Turkey by the primary author Mike Robertson, a Qualified Person (QP) as that term is defined in NI 43-101. A visit was made to the two licences comprising the TZP including all of the known zinc showings, and to the field office where drill core and drill chips are stored. RCR has not undertaken any material exploration activities on the project since the time of the site inspection.

2.5 Qualifications, Experience and Independence

MSA is a mineral exploration consulting and contracting firm, which has been providing services and advice to the international mineral industry and financial institutions since 1983. The non-mineral resource sections of this report have been compiled by Mike Robertson, who is a professional geologist with 22 years' experience, the majority of which has involved the exploration and evaluation of gold and base metal properties throughout Africa, as well as the Middle East, Australia, Canada, Mexico, Russia and the CIS states.

Mr Robertson is Principal Consultant – Gold and Base Metals with The MSA Group, a Member of the South African Institute of Mining and Metallurgy (SAIMM) and a Professional Natural Scientist (Pr.Sci.Nat) registered with the South African Council for Natural Scientific Professions. Mr Robertson has the appropriate relevant qualifications, experience, competence and independence to act as a "Qualified Person" as that term is defined in NI 43-101.

The mineral resources aspects of this report have been compiled by Mike Hall who is a professional geologist with 30 years of experience. Mr Hall has been involved in the design, execution and management of exploration programs, mineral resource and reserve estimations and public reporting on projects around the globe.

Mr Hall is Consulting Geologist – Mineral Resources with The MSA Group, a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Geological Society of South Africa (GSSA). He is also a registered Professional Natural Scientist (Pr.Sci.Nat) with the South African Council for Natural Scientific Professions.

Neither the MSA Group, nor the authors of this report have or have previously had any material interest in RCR or the mineral properties in which RCR has an interest. Our relationship with RCR is solely one of professional association between client and independent consultant. This report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

3 RELIANCE ON OTHER EXPERTS

The TZP is understood to consist of 2 granted Operation Licences covering an aggregate area of approximately 6 090 hectares, issued in terms of Turkish Mining Legislation. MSA has not independently verified, nor is it qualified to verify, the legal status of these licences. The present status of tenements listed in this report is based on information and copies of documents provided by RCR, and the report has been prepared on the assumption that the licences will prove lawfully accessible to RCR for evaluation.

Neither MSA nor the authors of this report are qualified to provide extensive comment on legal issues associated with the RCR agreements.

Similarly, neither MSA nor the authors of this report are qualified to provide comment on environmental issues associated with the RCR Projects.

No warranty or guarantee, be it express or implied, is made by MSA with respect to the completeness or accuracy of the legal or environmental aspects of this document. Comment on these aspects is for introduction only, and should not be relied on by the reader.

The metallurgical test work documented in this report was undertaken under the direction of Mike Plaskitt, a professional metallurgist. An independent review of this work was conducted by Ewald H. O. Meyer, who is a Professional Engineer registered with the Engineering Council of South Africa and a Member of the South African Institute of Mining and Metallurgy, and together with his requisite relevant experience, is considered a Qualified Person in terms of NI 43-101.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Area and Demarcation of Licence

The TZP is located in south-central Turkey within Adana Province (Figure 4-1). The Project comprises two Operation Licence, IR 944 and IR 8114.

Figure 4-2 shows the location of the Operation Licence IR 944 (with an area of 1 826.47 Ha), and IR 8114 (with an area of 4 263.1 Ha). These licences were the subject of an agreement between YAMAS and RCR, dated 20 October 2010, a copy of which was supplied to MSA for inspection. The two licences are now held by RCR Holding A.Ş. and are valid until 13 January 2015 (IR 8114) and 7 September 2015 (IR 944). Copies of the licences were supplied by RCR to MSA for review. The coordinates for the two licences appear in Table 4-1.

Figure 4-1
Location of the Tufanbeyli Zinc Project in Adana Province, south-central Turkey

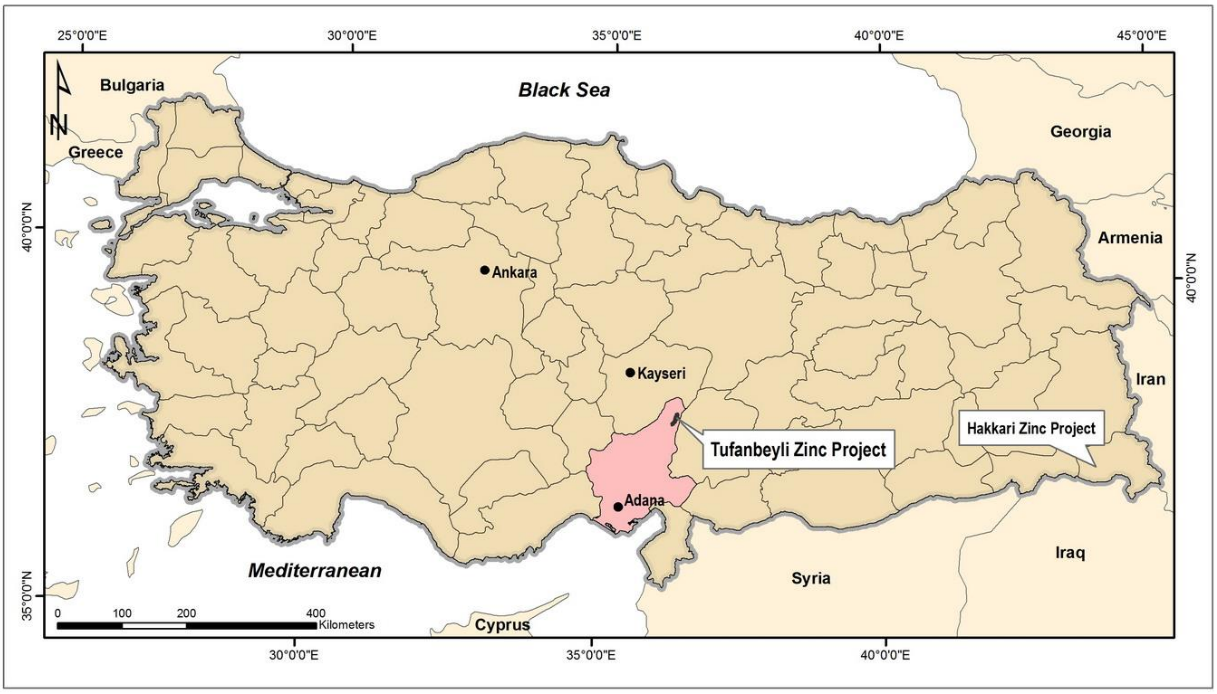


Figure 4-2

Tufanbeyli Zinc Project Operation Licences IR 8114 and IR 944 showing location of known zinc prospects overlain on the published 1:25 000 topographic map

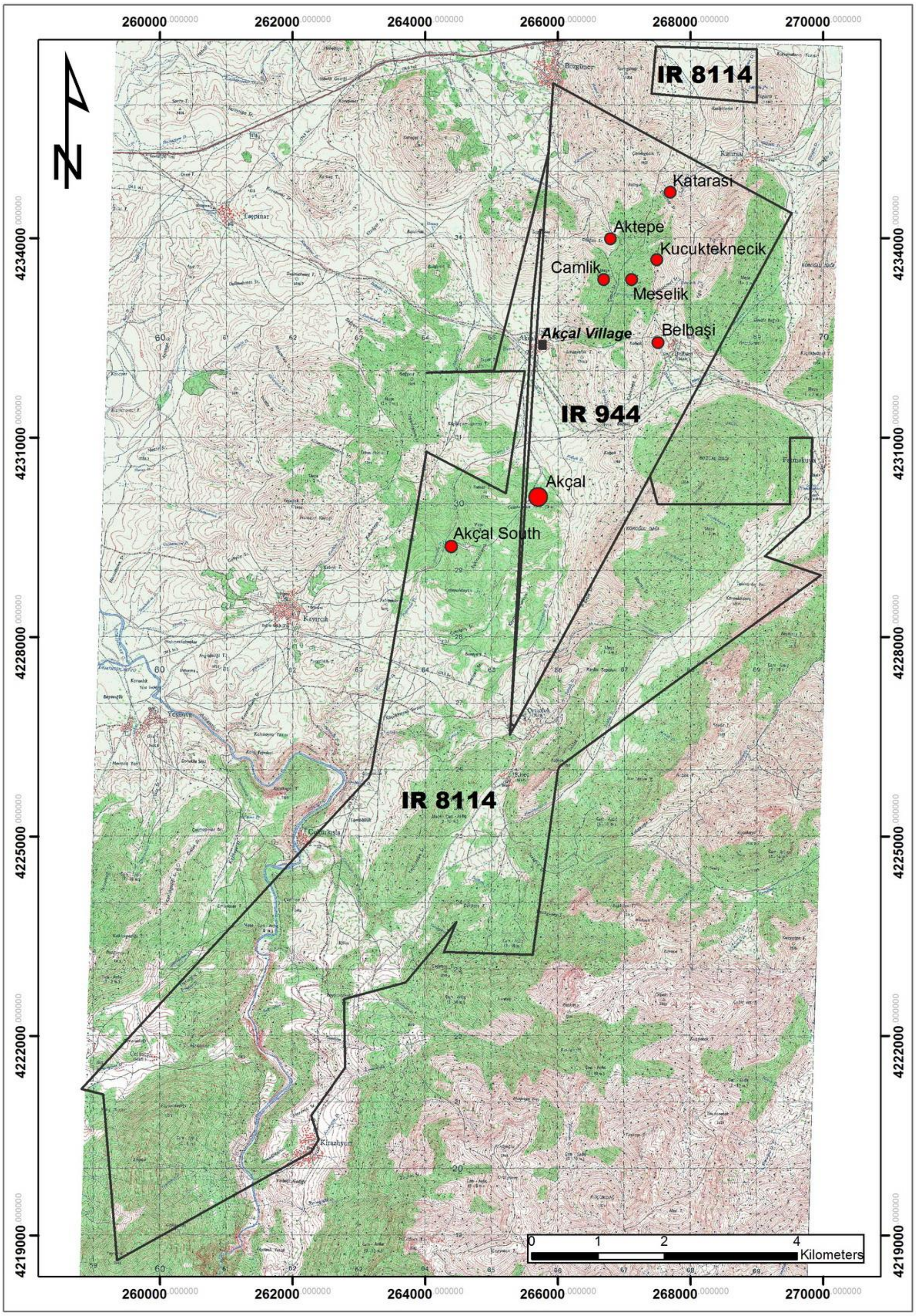


Table 4-1
Corner coordinates for the two Operation Licence areas

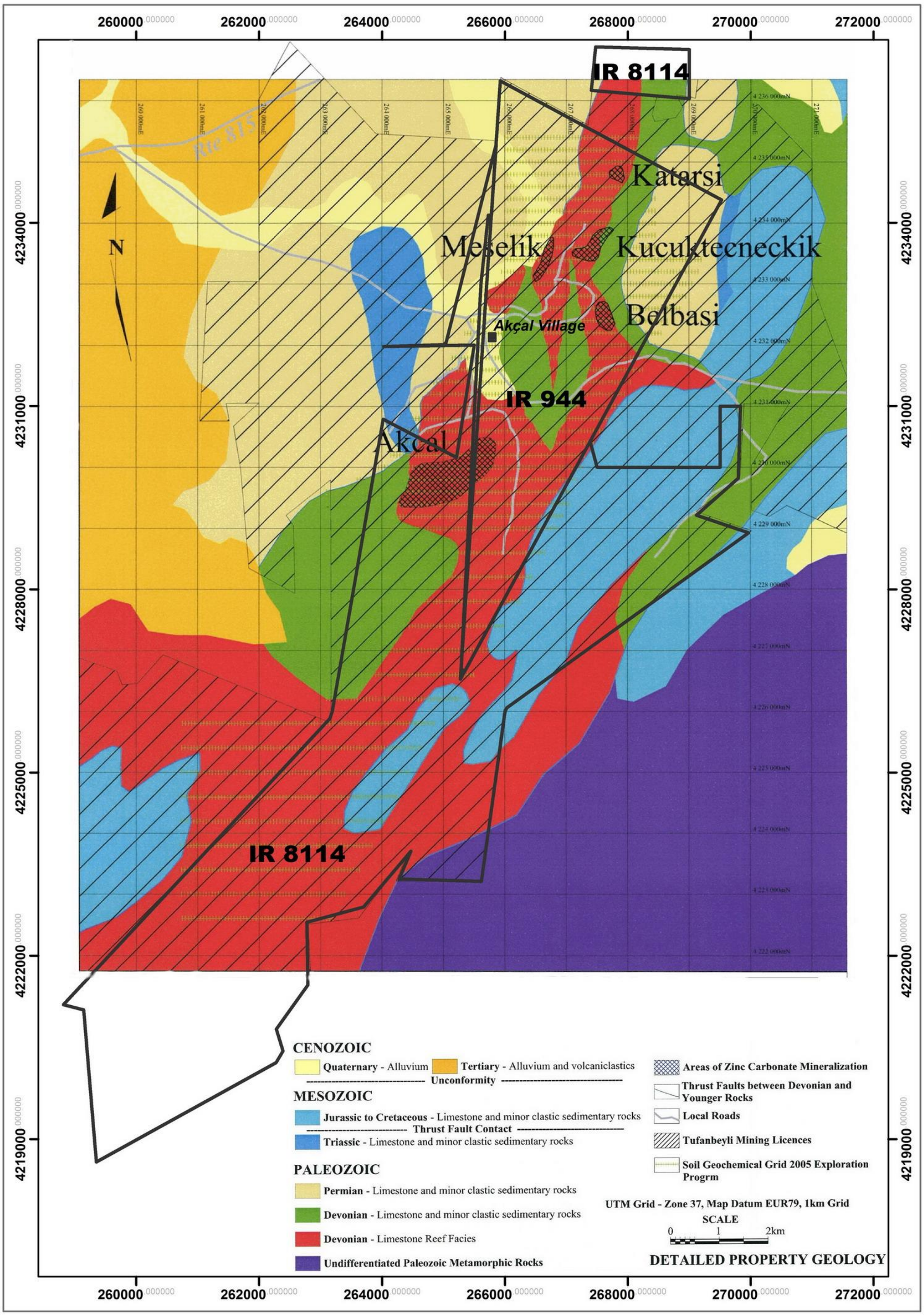
Mining Operation License	UTM Coordinates, Zone 37N, WGS84											
	Polygon	Point	X	Y	Polygon	Point	X	Y	Polygon	Point	X	Y
Adana IR 944 (1667)	1	1	265925	4236325	1	2	269525	4234375	1	3	265275	4226530
Licence No Adana IR 8114 (68987)	1	1	265856	4235291	2	7	267385	4230425	2	21	262775	4222550
	1	2	265779	4234125	2	8	267500	4230000	2	22	262793	4221523
	1	3	265730	4234125	2	9	269500	4230000	2	23	262280	4220800
	1	4	265609	4233000	2	10	269500	4231000	2	24	262389	4220441
	1	5	265477	4230453	2	11	269833	4231000	2	25	262275	4220250
	1	6	265270	4230524	2	12	269798	4229820	2	26	259350	4218625
	1	7	265501	4232000	2	13	269116	4229214	2	27	259144	4221116
	1	8	265032	4232008	2	14	269966	4228925	2	28	258814	4221201
	2	1	264019	4230787	2	15	266030	4226060	2	29	263148	4225886
	2	2	265213	4230160	2	16	266000	4226000	2	30	263189	4226000
	2	3	265270	4230524	2	17	265616	4223221	3	1	267477	4236882
	2	4	265477	4230453	2	18	264276	4223260	3	2	269000	4236836
	2	5	265284	4226704	2	19	264468	4223715	3	3	269000	4236034
	2	6	265342	4226654	2	20	263700	4222800	3	4	267407	4236170

There is also a slight gap between the western boundary of IR 944 and IR 8114 as depicted in Figure 4-3. RCR reportedly has a pre-emptive right on this area and has obtained the assurance from the Ministry of Energy and Natural Resources (MENR) that, following transfer of the IR 944 Licence to RCR, an agreement would be reached between the MENR and RCR on combining this gap most likely with Licence IR 944. As at the date of this report, Licence IR 8114 had been transferred to RCR whereas transfer of Licence IP 944 was pending, awaiting the final signature of the Minister of the MENR on the Forestry Permit required for issue.

The location of all known zinc mineralized zones within the TZP area is shown in Figure 4-2 and Figure 4-3. Historical small-scale mining operations produced direct-shipping zinc mineralized material, mainly from Akçal and Belbaşi. It is reported by George (2006), based on information from the prior owner of the property, that some 210 000 tonnes of material grading +20% Zn was shipped from the site between 1985 and 1998. Associated with these operations are modest waste dumps, two small open pits, and several small adits with related underground workings at Akçal and Belbaşi (George, 2006). It is understood that these workings comprise development of drives within the mineralized zone, with no stoping having been undertaken.

Past production originated mostly from the Akçal and Belbaşi mines, with other known zinc showings at Akçal South, Meselik, Kucukteknecik, West Kucukteknecik and Katarasi (Figure 4-2 and Figure 4-3).

Figure 4-3
Known mineralized zones within the Tufanbeyli Zinc Project overlain on the published geological map for the area (after George, 2006)



Holders of exploration permits have right of access on the surface; however compensation is payable to surface rights owners for any damages relating to execution of an exploration program.

4.2 Surface Rights

No information on the surface rights of the property has been provided to MSA.

4.3 Property Ownership

No legal assessment of the ownership of the properties comprising the TZP has been undertaken by MSA.

4.4 Turkish Minerals Legislation

Minerals legislation in Turkey is governed by the **Mining Law No. 3213** published in the Official Gazette No. 18785 dated 15 June 1985, amended by **Law No. 5177** of June 2004. A further Amendment to the Mining Law was published in the Official Gazette on 24 June 2010 to regulate the details of the permitting process in the law and to amend other provisions of the Mining Law. The **Mining Law Implementation Regulation** was published in the Official Gazette No. 27751 dated 6 November 2010.

Under current Turkish mining legislation, 'underground resources' are subject to the exclusive ownership and disposition of the State and are not considered a part of the land where they are located. The State delegates its right for exploration and operation to individuals or companies for specific periods by issuing licences subject to royalty payments to the State.

Only Turkish citizens and the companies established under Turkish laws specifically for mining purposes are entitled to hold mining rights. Foreign capital companies established in Turkey for mining purposes, like RCR, are entitled to hold mining rights as they are deemed Turkish Companies.

The Mining Law categorizes minerals in six groups:

- Sand and gravel [Group I(a)] and clay tile, cement tile or marl [Group I(b)];
- Grounded forms of stones such as calcite, limestone, granite [Group II (a)] and block stones or decorative stones such as marble, granite, travertine [Group II (b)];
- Salts in solution form that can be obtained from sea, lake and spring waters [Group III];
- Energy, metal and industrial minerals (including metals such as gold, silver, copper, brass…etc.) [Group IV];
- Precious metals and gem stones [Group V]; and
- Radioactive minerals and other radioactive substances [Group VI].

The Mining Law allows for overlapping licences for different category minerals in the same area.

The General Directorate of Mining Affairs (GDMA), a unit of the MENR, is the authorized body to regulate the mining activities and issue mining licences.

An **Exploration Licence** or **Certificate** (the licence issued for the fifth group is named "certificate" in the legislation) is granted by the Mining Department in accordance with the area limitations stated in the Mining Legislation.

The exploration licence has three-stages, as follows:

- "**Pre-exploration period**" is the first year after the issuance of the exploration licence.
- "**General exploration period**" is the period of two years for Group IV mines and one year for other groups starting from the expiration of the pre-exploration period.
- "**Detailed Exploration Period**" (for Group IV and VI mines only) is the period of four years starting from the expiration of the general exploration period.

Obligations of an Exploration Licence holder are summarized as follows:

- <u>Duties and Security Deposit:</u> Payment of an annual duty as well as 1% of the annual duty times the hectares to be deposited as a security for each licence, on an annual basis
- <u>Submission of Documents:</u> An annual report, including information regarding work done, the results thereof, and associated expenditures, must be submitted to the Mining Department.

The exploration licences obtained prior to the Amendment shall be subject to the previous regime, where an exploration licence is granted for three-year term and the term of the exploration licence may be extended for certain mines (i.e. Group IV) for another two years. If the licence holder fails to conduct sufficient exploration activities within the three-year period, the licence will be terminated.

Before the end of the exploration licence period, the licence holder must apply for an **Operation Licence** or **Certificate**. If the exploration licence holder fails to apply for an Operation Licence at the end of the licence term, the exploration licence shall be terminated and the security deposit shall be forfeited. An Operation Licence is an instrument granting the licence holder the right to operate a mine under the Mining Legislation.

The term of an Operation Licence/Certificate for the first group of minerals may not be less than five years and for the other groups may not be less than ten years. The term of an operation licence/certificate may be extended, but may not exceed 60 years.

The licence holder may continue exploration activities during the operation period. If the licence holder fails to identify the mine reserves within five years (for Group IV mines) and three years (for other groups) upon issuance of the licence, the licence area shall be divided.

Obligations of an Operation Licence holder are summarized as follows:

- Duties and Security Deposit: Payment of an annual duty as well as 1% of the annual duty times the hectares to be deposited as a security for each licence, on an annual basis, and based on the longevity of the licence.
- Submission of Documents: All technical documents, sales information form, and activity information form relating to operational activities for the year must be submitted to the Mining Department by the end of April each year.
- Royalty: Royalties to be paid by the licence holder are for Group IV minerals are as follows:
  - Group IV (excluding gold, silver and platinum) 2%
  - Group IV (gold, silver and platinum) 4%

The royalty will be levied by an addition of 30% for mining activities conducted on State owned lands. Additionally, licence holders obtain a 50% relief on royalties in the event that the extracted materials are processed in Turkey.

In addition to an Operation Licence, an **Operation Permit** is required to start production activities. An Operation Licence covers the area in which the mining activities will be conducted and provides the legal right to use the licenced area whereas the Operation Permit gives the licence-holder the right to operate the mine. Operating activities are required to commence within 1 year upon receiving the Operation permit. Failure to commence operations is subject to a penalty of 10% royalty on annual production.

In essence for RCR this means normally its liability would be a 1% royalty on any zinc, lead or other by-product metal or industrial mineral which, in the case of RCRZ is barium sulphate. However as a result of government's commitment to socio-economic development in south-eastern Turkey a special dispensation is given to investors and RCR will enjoy an initial royalty free period of up to 10 years.

The ownership of mineral rights does not cover the ownership of surface rights where the mineral resources are located. It is necessary to create a usufruct or easement right over the mineral exploration area in order to carry out any mining activities. Other legal options to utilise privately-owned lands are purchasing or leasing.

In terms of the 2010 Amendment to the Mining Law, extensions to Exploration Licences can only be granted upon the supply, from the company, of an exploration report documenting mapping and sampling results and an inferred mineral resource. For the conversion of Exploration Licences to Operation Licences, the requirements are:

- Preparation of detailed topographical map of the study area which shows drill holes, sampling points and trenches
- Exploratory activities i.e. mapping, sampling, trenching and drilling must have been conducted on the Licence
- Samples must be sufficient in number and nature to be considered representative

- Detailed geological, geochemical and geophysical maps must be provided, along with geological cross sections
- Three dimensional resource modelling must be carried out
- An indicated/measured resource statement must be prepared

Turkey's policies regarding environmental protection and development are based on the harmonisation of policies and solutions with both European Union and international standards, reinforcement of existing legislation, improvement of environmental management, prevention of pollution and increasing awareness of environmental issues. However, mineral exploration activities are no longer subject to an environmental impact assessment report but must lodge an environmental compliance plan (ECP). The New Law also provides that the Ministry of Environment and Forestry shall finalise the environmental impact assessment transactions for other mining activities within three months following the application. Although this amendment aims to shorten the time spent on bureaucratic transactions, the New Law does not provide any remedy for failure to finalise applications within the required time.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Tufanbeyli property is situated four hours by road from Ankara and is accessed via 450 km of paved highway and secondary roads including good gravel roads (Figure 4-1). The property is crossed by several good secondary roads as well as numerous jeep tracks. The towns of Tufanbeyli and Yesilkent are in the north and northeastern part of the area respectively, lying just outside the licence area. The town of Goksun is located approximately 20 km southeast of the property. Several small villages occur in the vicinity of the property.

5.2 Climate and Physiography

The Tufanbeyli region has four distinct seasons with a winter period (December to March) limiting access to some extent due to snow cover.

The regional relief ranges between 1 500 m and 2 500 m above mean sea level (mamsl), and the local relief in the area of zinc mineralization ranges between 1 600 m and 1 850 mamsl.

Vegetation is sparse and there are a limited number of small streams which crosscut the property. Water for diamond drilling would probably have to be obtained from local village wells and transported in by bowser.

The terrain is suited for mining operations as there are numerous areas where mining infrastructure (plant, tailings, waste dumps, etc.) could be located. Further, there is little agricultural activity, although surface rights would need to be acquired in the event of the establishment of a mining operation.

5.3 Local Resources and Infrastructure

Turkey is a modern, advanced business-oriented country with good infrastructure. The Tufanbeyli area has good power and community infrastructure. A major powerline crosses the property, although the rating of this line is not known to the authors (Figure 5-1).

Turkey has an excellent rail network of which the nearest lines lie approximately 100 km north and south of Tufanbeyli.

There is a source of unskilled labour in the villages in the immediate area of the licence. Skilled labour is available in the surrounding larger communities, which could also supply support required during the pre-development phase (supplies, accommodation, construction equipment etc.).

Figure 5-1
General physiography of the Tufanbeyli area showing powerlines infrastructure, Akçal village, and previous workings

6 HISTORY

The previous owner of the area underlain by the TZP was *Yeni Anadolu Mineral Madençilik Sanayi ve Tic Ltd Şti* (YAMAS), which was a wholly owned Turkish subsidiary of Anatolia Minerals Development Limited (Anatolia), prior to Anatolia being incorporated into Alacer Gold Corporation inlate 2010, Exploration undertaken by YAMAS on the property between 2005 and 2008 as reported hereunder, was carried out under a joint venture (JV) between YAMAS and Silvermet Inc. Two small mining operations at Akçal and Belbaşi produced approximately 200 000 tonnes of high-grade (20 to 40% Zn) zinc carbonate mineralized material between 1985 and 1998 (George, 2006). High grade material was extracted from small open pits and shallow underground workings, hand-sorted, and shipped to a smelter at Kayseri, 120 km to the northwest of the property (Figure 4-1).

Photographs of the workings and associated stockpiles at Akçal are shown in Figure 6-1. The extent of the workings at Akçal and Belbaşi is shown in Figure 6-2 and Figure 6-3. Only minor workings in the form of small pits are observed at the Camlik, Meselik, Kucuk Teknecik and Katarasi (Figure 6-4).

Figure 6-1
Surface and underground workings at Akçal

Figure 6-2

Extent of surface and underground workings at Akçal

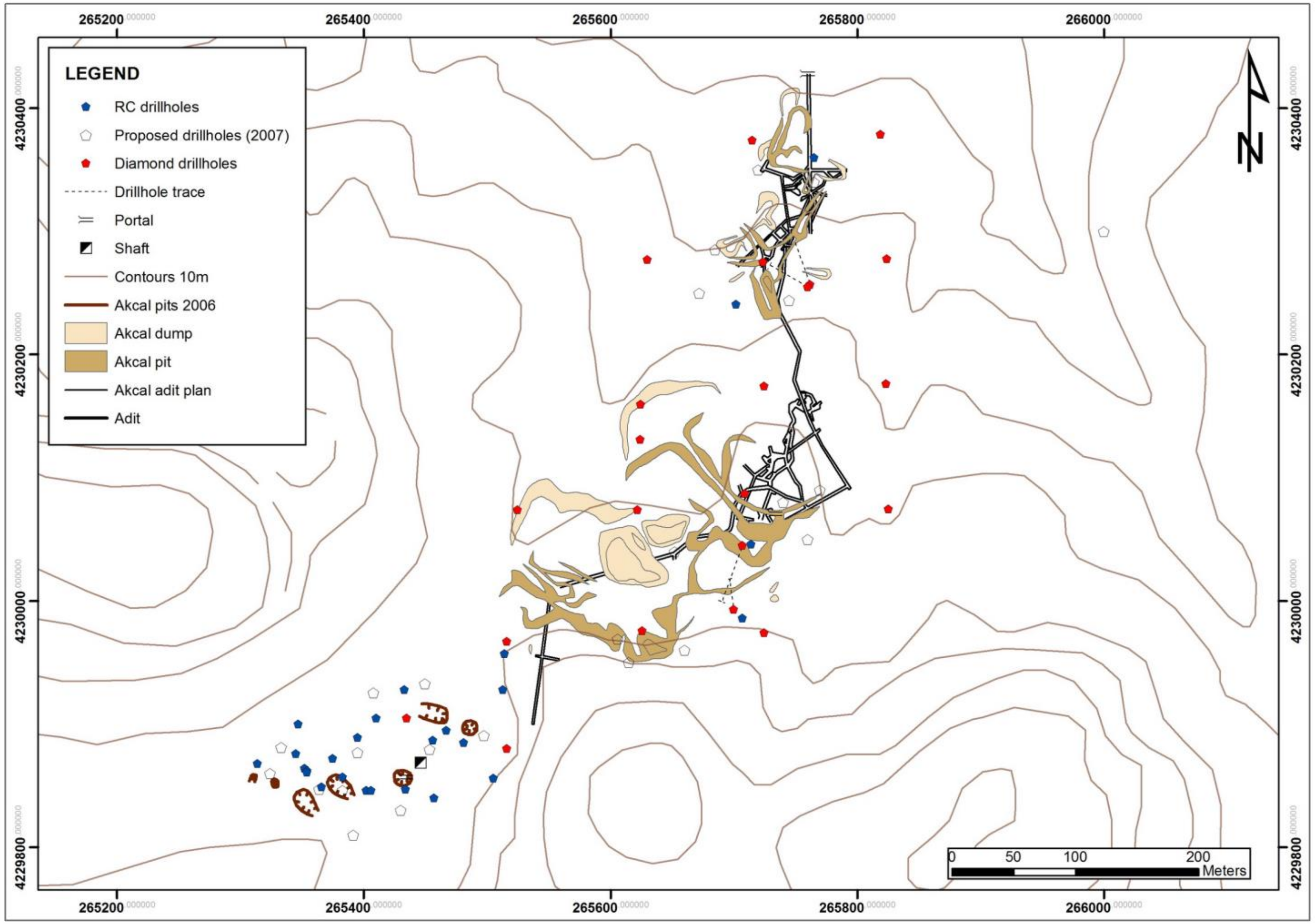


Figure 6-3

Extent of surface workings at Belbaşi

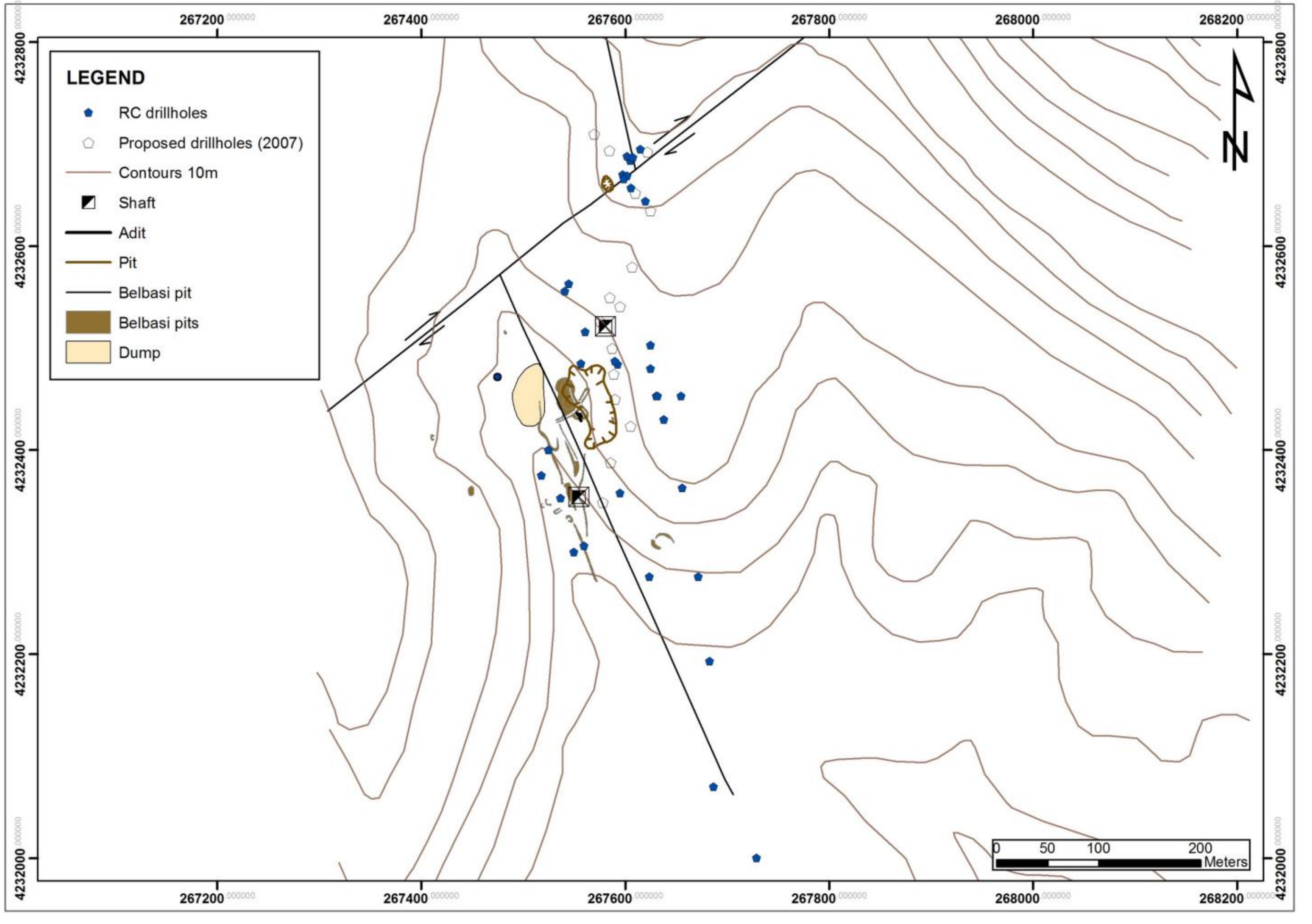
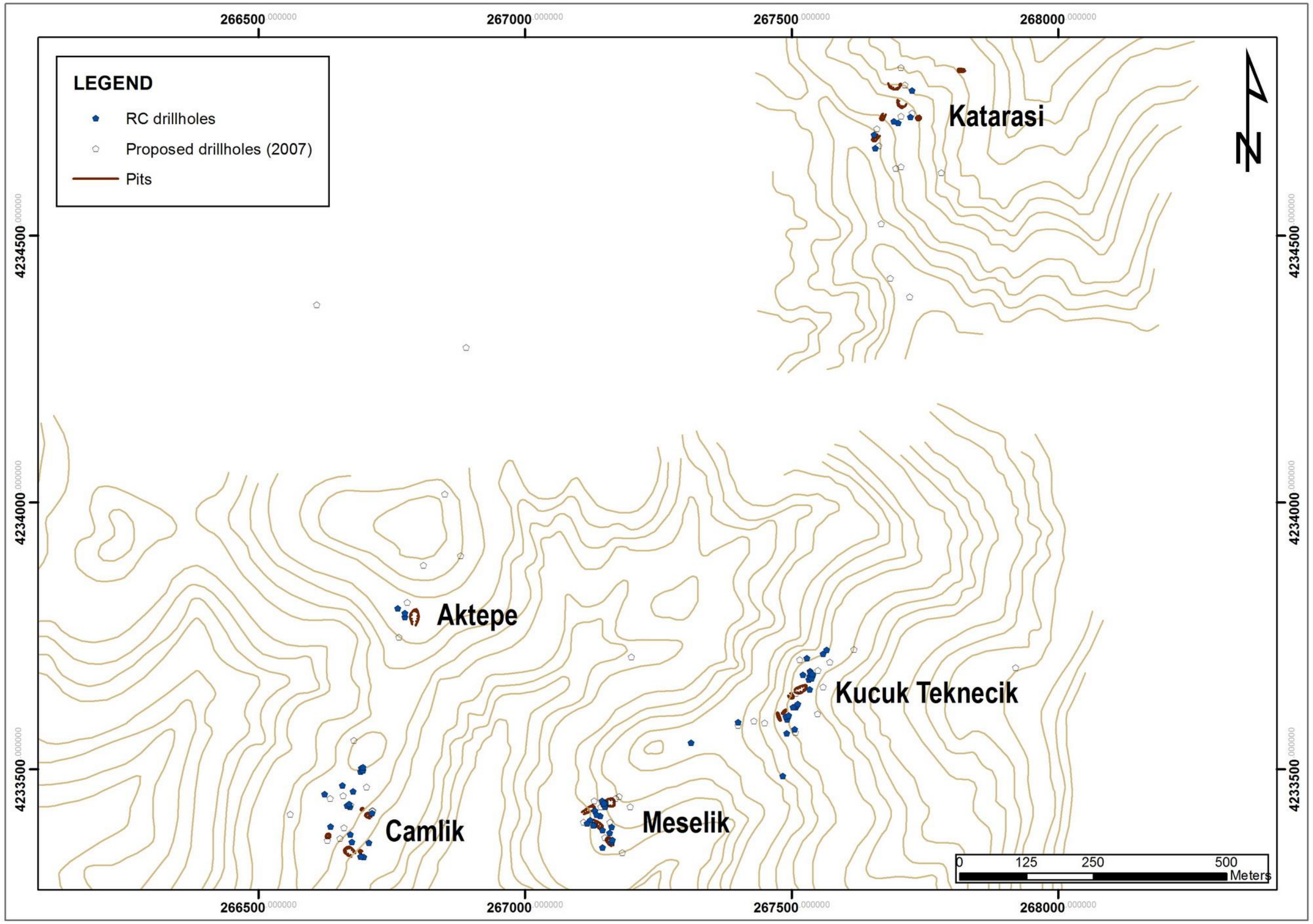


Figure 6-4

Extent of surface workings on the northern zinc prospects



The General Directorate of Mineral Research and Exploration, *Maden Tetkik ve Arama* (MTA) has published a 1:250 000 geological map of the Kayseri area, which covers the Tufanbeyli area. The MTA also undertakes an early-stage exploration function in identifying the minerals assets of Turkey. In this regard, the MTA carried out work in the Tufanbeyli area during the period 1981-1984, which comprised non-systematic soil geochemical sampling and the drilling of three shallow surface holes (George, 2006, from information supplied by YAMAS) and five shallow underground holes, all at Belbaşi mine. The soil geochemistry proved effective in identifying zones of zinc mineralization. Two of the three holes were inconclusive as they were either poorly located with respect to the known zinc mineralization, or were stopped before reaching the target horizon. The third hole reportedly intersected 25 m of high-grade (+20% Zn) zinc mineralization from 32 m to 57 m, down dip of the lowest workings at Belbaşi.

Prior to the work undertaken under the YAMAS/Silvermet JV from 2005, no systematic exploration had been undertaken on the property. Previous work was dominated by small-scale mining, with no reliable or compliant estimates of mineral resources.

Geological mapping and soil geochemical sampling undertaken in 2005 by the JV was designed to delineate the extent of zinc mineralization and its relationship to the sedimentary depositional environment of the limestone. Mapping was assisted by the reasonable outcrop within the licence area, apart from the valley floors which are covered in alluvium. The soil geochemical survey covered an area of 15 km long by 2 km to 3 km wide and covered the northeast-trending Devonian reef facies carbonate that is host to the known zinc showings (Figure 4-3). Grid lines were oriented east-west, with the northern part of the area covering the known showings covered by a 200 m x 50 m grid and a 400 m x 50 m grid to the south of Akçal. Sample locations were determined by handheld GPS.

Samples were collected, transported, prepared and assayed in accordance with industry best practise. Sample batches were submitted to ALS Chemex, an accredited laboratory (ISO 17025). Sample preparation was undertaken at the ALS Chemex laboratory in Izmir and chemical analysis of the -80 mesh fraction carried out at ALS Chemex in Vancouver using aqua regia digest and standard multi-element Induction Coupled Plasma Atomic Emission Spectroscopy methods (ICP-AES). A total of 3 063 soil samples were collected and duplicates taken at 160 sites to monitor laboratory precision. Acceptable precision of +/-8% for Zn and +/-15% for Pb were reported from a statistical analysis of the duplicate data.

For both zinc and lead, taking the arithmetic means as the threshold (180 ppm Zn and 100 ppm Pb), contoured geochemical maps were produced for zinc and lead by George (2006). These are shown together with the replotted results in Figure 6-5 and Figure 6-6 respectively.

Strong zinc anomalies correlate with known mineralization. Strong lead-zinc anomalies in the southeastern part of the geochemical grid represent new targets.

Figure 6-5
Zinc-in-soil geochemistry

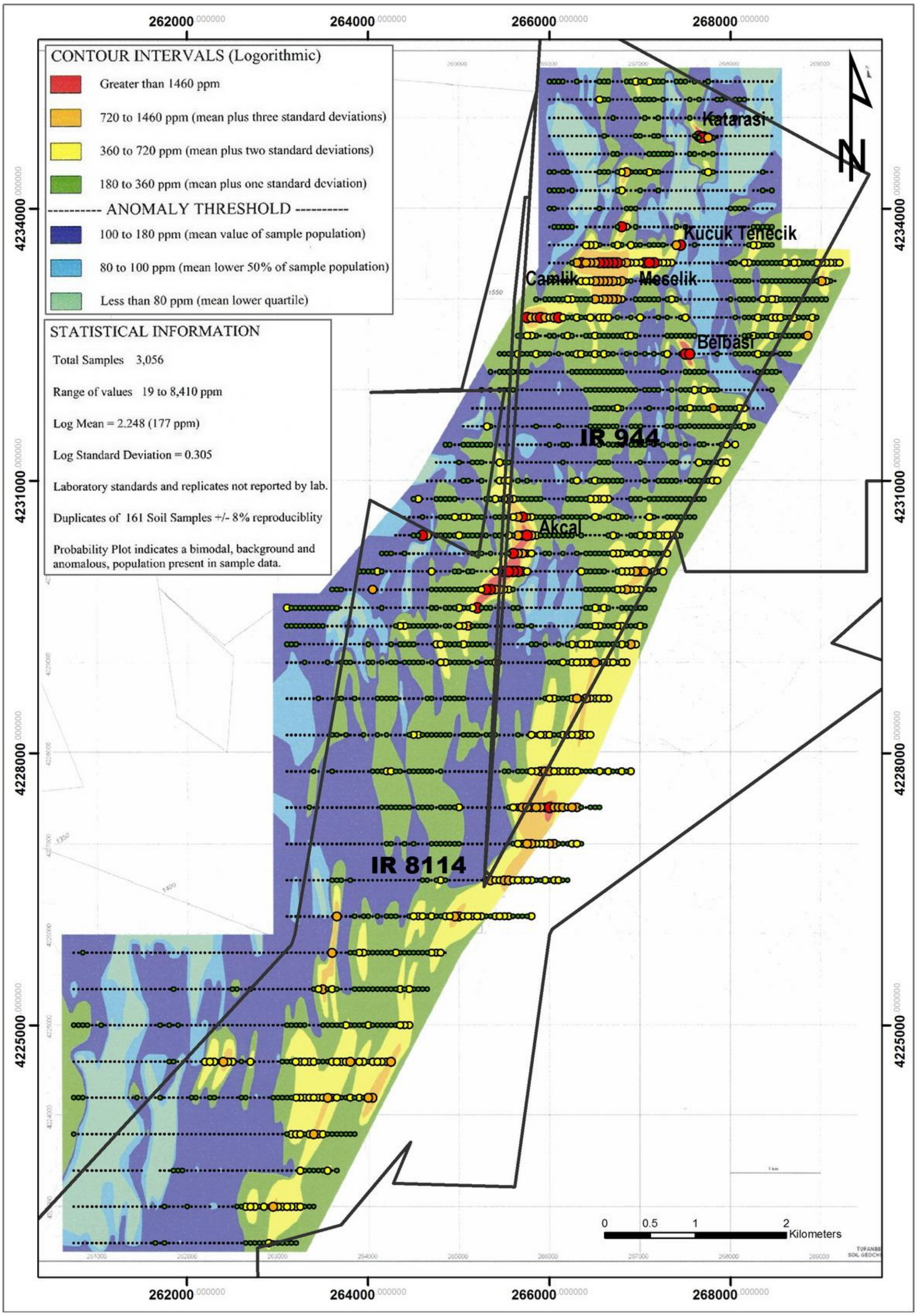
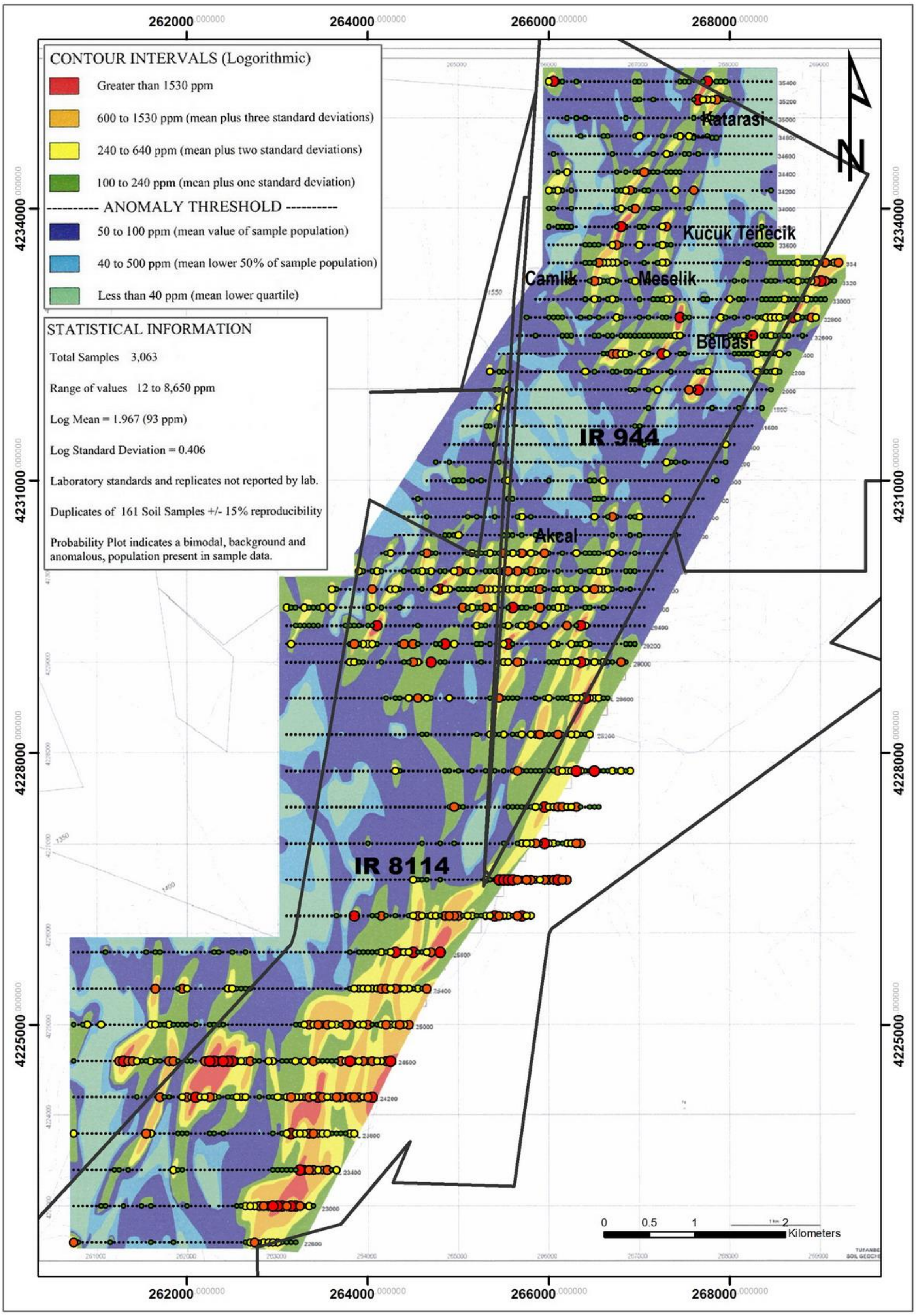


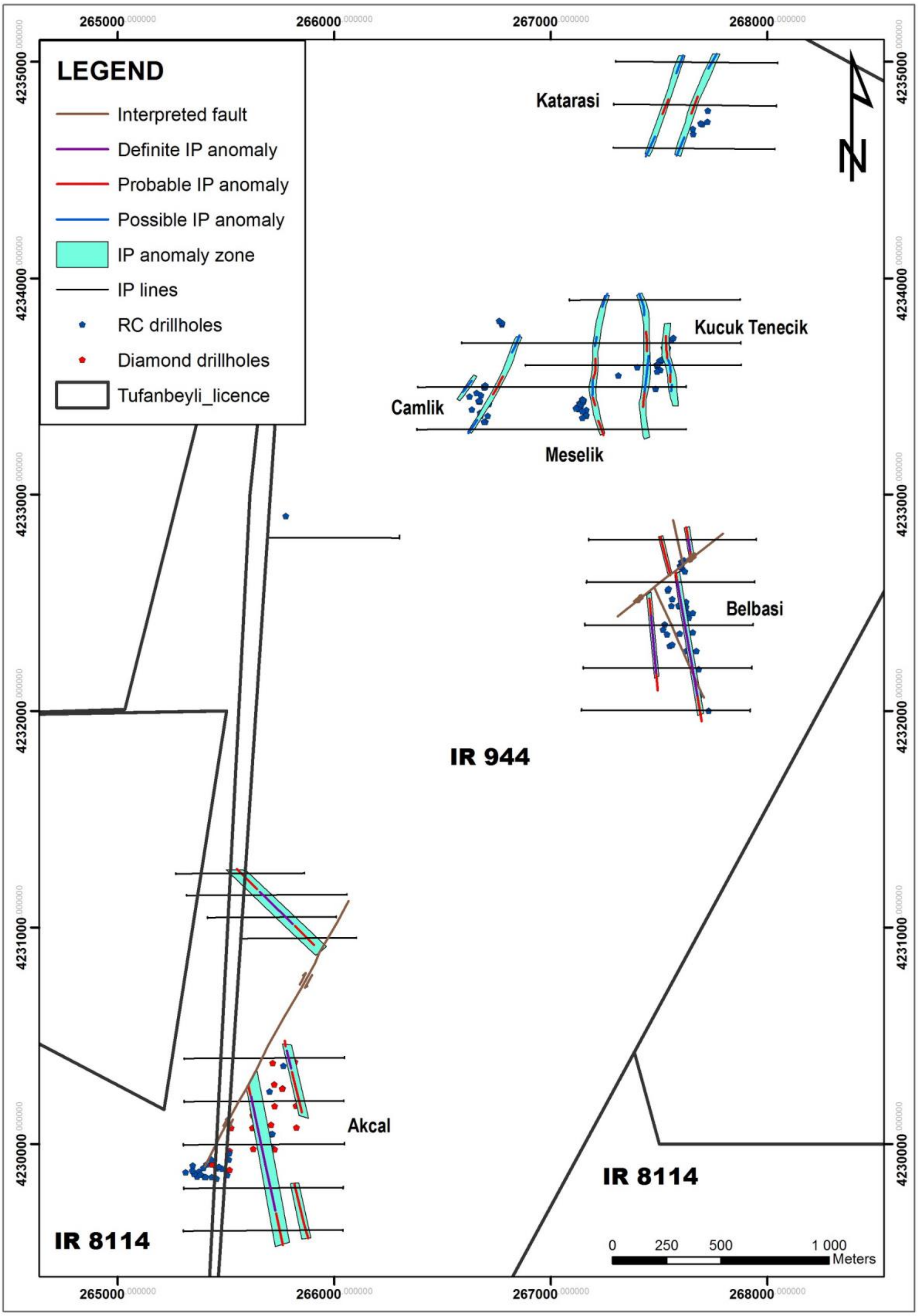
Figure 6-6
Lead-in-soil geochemistry



The results of Induced Polarisation – Resistivity (IP/R) surveys conducted by the JV are shown in Figure 6-7. Definite, probable and possible IP anomalies were delineated by the JV and would appear to confirm the broadly stratiform nature of the mineralization. These anomalies may reflect sulphide mineralization at depth. The existing drillholes range in depth from 20 m to 169 m and intersected oxide zinc mineralization.

The IP anomalies extend beyond the existing drillhole coverage and represent targets for possible extensions to the current known extent of Mineralization. These anomalies should be tested along strike and to depth by drilling.

Figure 6-7
Induced polarisation anomalies



7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The geology of Turkey can be simplistically divided into four east-west trending zones (Figure 7-1):

- The Pontid Belt which comprises at least three island arc volcanic systems (Jurassic to Eocene – 208 to 33 Ma) superimposed by thrust faulting and abundant intrusive activity
- The Anatolid Belt dominated by metamorphosed Paleozoic to Upper Cretaceous sedimentary rocks intruded by mafic to intermediate rocks and unconformably overlain by Tertiary to Recent rocks
- The Taurid Belt
- The Border Folds Belt which represents predominantly sedimentary rocks of the Arabian Platform preserved in a fold and thrust belt.

The four belts form part of the Alpine-Himalayan Orogenic Belt which developed in the Jurassic and continues to evolve to the Present.

The Tufanbeyli property is located within the Taurid Belt. Oxidized MVT deposits, similar to Tufanbeyli, are also known from the Hakkari region within the Border Folds Belt.

7.2 Local Geology

The following description of the regional geology of the area is obtained from the MTA published 1:250 000 Kayseri geological map (Figure 7-2).

The Tufanbeyli area is underlain by a northeast-southwest trending belt of carbonate-dominated and minor clastic sedimentary rocks which range in age from Cambrian to Upper Cretaceous. The oldest rocks are represented by Cambrian to Ordovician clastic and carbonate sedimentary rocks developed in the western part of the area. These are overlain by Devonian and Permian carbonate and minor clastic sedimentary rocks. Together these sequences underlie most of the licence area. The Devonian limestones, in particular the reef facies, are the host to zinc mineralization in the district.

These rocks are over thrust by Triassic to Cretaceous carbonate-dominated assemblages which are in turn overlain by an Upper Cretaceous clastic sedimentary sequence. A belt of metamorphic rocks (marble and schists) to the immediate southeast of the licence area is in tectonic contact with the above sequences. To the northwest of the licence area, ophiolitic melange occurs as windows within a younger cover (Miocene to Quaternary) of mafic to intermediate volcanics and pyroclastics.

7.3 Property Geology

The property geology is described by George (2006) who, together with YAMAS geologists, undertook satellite imagery interpretation and field mapping.

Zinc mineralization is hosted within Middle to Upper Devonian limestones which consist of dark grey medium to thick bedded limestones and thin bedded sandstone interlayers (Anatolia Minerals, 2009). The limestone beds include Crinoid fossils in the upper parts and these can be considered as marker beds in the area. Dolomitization of the limestone is widespread. Mineralization is spatially associated with a shallow water back reef environment with reef breccias, within the limestone sequence. Upper Devonian iron-rich thin bedded sandstone, limestone and quartzites represent the hangingwall rocks to the mineralized stratigraphy.

The Devonian rocks are uncomformably overlain by light grey coloured Permian, limestones and subordinate clastic sedimentary rocks. These are in turn overlain by a thrust sequence of Triassic and Jurassic limestones and subordinate clastic sedimentary rocks, with an apparent vergence to the southeast, based on observed drag folding (George, 2006). No intrusive rocks have been mapped within the area.

Very little structural information is presented in the available reports and it is not known to what extent, if any, the sequence is folded or faulted. Based on photographs, it appears that the sequence dips at approximately 20° to the southeast within the Akçal pit.

Figure 7-1
Major geological domains in Turkey (Source: George, 2006)

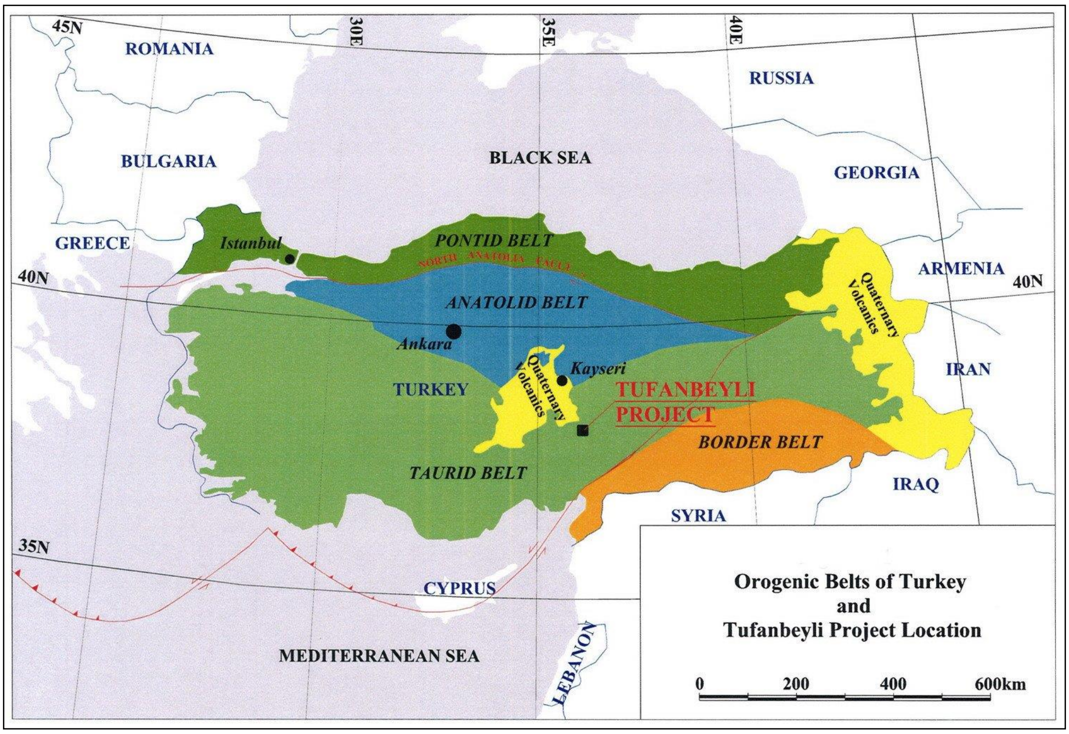
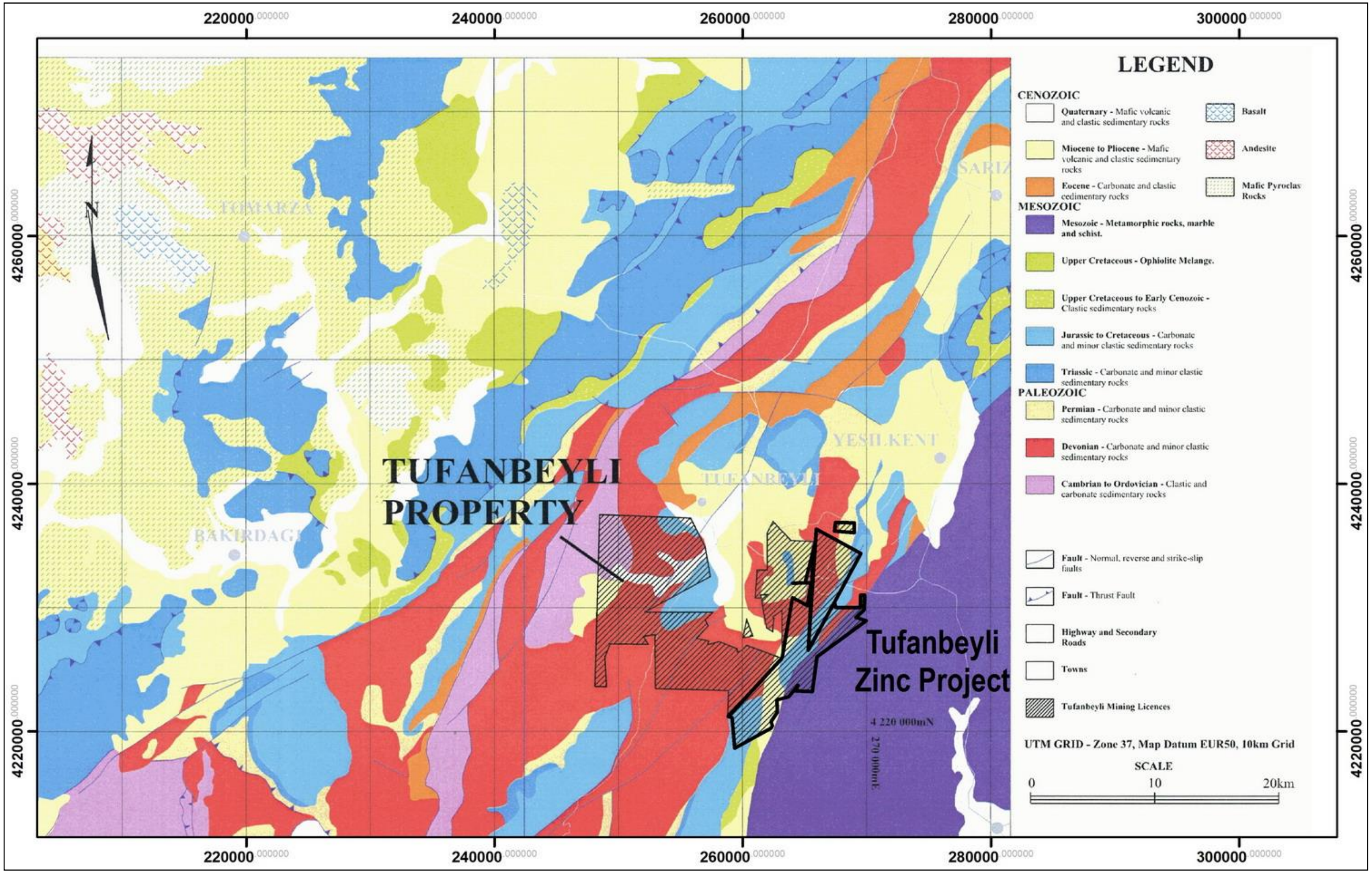


Figure 7-2

Regional geological setting, showing the TZP and original Tufanbeyli property held by YAMAS in 2006 (Source: George, 2006)



7.4 Mineralization

7.4.1 Tufanbeyli Zinc Mineralization

Non-sulphide zinc mineralization at the TZP is developed intermittently over a strike length of 15 km within dolomitized Devonian reef facies limestones. The mineralization is considered to represent oxidized MVT-type zinc mineralization hosted in fore reef breccias or karst breccias. The TZP is located within a north-northeast trending (mineralized) zone which has a long history of small-scale mining for zinc, lead, silver and more recently, for iron.

Zinc mineralization at Tufanbeyli occurs as a series of showings aligned along a 7 km long by 2 km wide northeast trending zone (Figure 4-2 and Figure 4-3). The style of mineralization indicates that these represent oxidized Mississippi Valley Type (MVT) primary zinc sulphide mineralization. The base of oxidation has not yet been delineated (George, 2006). Geological mapping by George (2006) and Anatolia indicate that the host rocks to the mineralization are dolomitized reef facies limestones and specifically reef breccias and back-reef facies.

Significant deposits of non-sulphide zinc mineralization occur at Belbaşi and Akçal from which 210 000 tonnes with the grades in the range 20% to 40% Zn are reported to have been mined at an approximate rate of 15 000 tonnes per year between 1985 and 1998. This material was shipped some 135 km by road to a government smelter to the southeast of Kayseri. The smelter was constructed in the 1970s by SNC Lavelin, for the purpose of treating high-grade zinc feed sourced from small-scale miners in the district. The smelter contracts from the above period of production called for an average grade of +21% Zn.

Additional zinc showings at lower grade (2% to 6% Zn) with local high-grade zones (+20% Zn) are reported from Meşelik (1 to 3 km north of Belbaşi), Küçük Teknecik, Katarasi, Çamlik, Aktepe and Akçal South (1.5 km southwest of Akçal) (Figures 4-3 and 6-1). These showings are all mapped as occurring with the dolomitized Devonian reef facies limestone.

Verification channel and rock chip sampling of the zinc showings (apart from Meşelik and Akçal South) by George in 2006 returned the following grade ranges:

- Zn: 0.79% - 31.87%
- Pb: 0.13% - 0.50%
- Fe_2O_3: 1.53% - 22.70%

Although broadly stratiform, the oxidised zinc mineralization is highly irregular on a local scale both in terms of geometry and grade as illustrated in Figure 7-3. This has implications for continuity and grade distribution particularly over short ranges.

Figure 7-3
Photos from the Akçal workings illustrating the broadly stratiform but locally irregular nature of the oxidised zinc mineralization

7.4.2 Akçal Mine

The initial workings at Akçal consisted of a series of shallow pits over an area of approximately 1 km^2. This was followed by several kilometres of underground development and mining from an adit at 1615 m elevation with development towards the south and southwest at a depth of approximately 50 m below surface. The underground workings exploited high-grade secondary mineralization in already oxidized material and it is estimated that some 30 000 tonnes of high-grade material (36% to 38% Zn) was mined in the 1980s (George, 2006). This is based on an estimated specific gravity of 4.

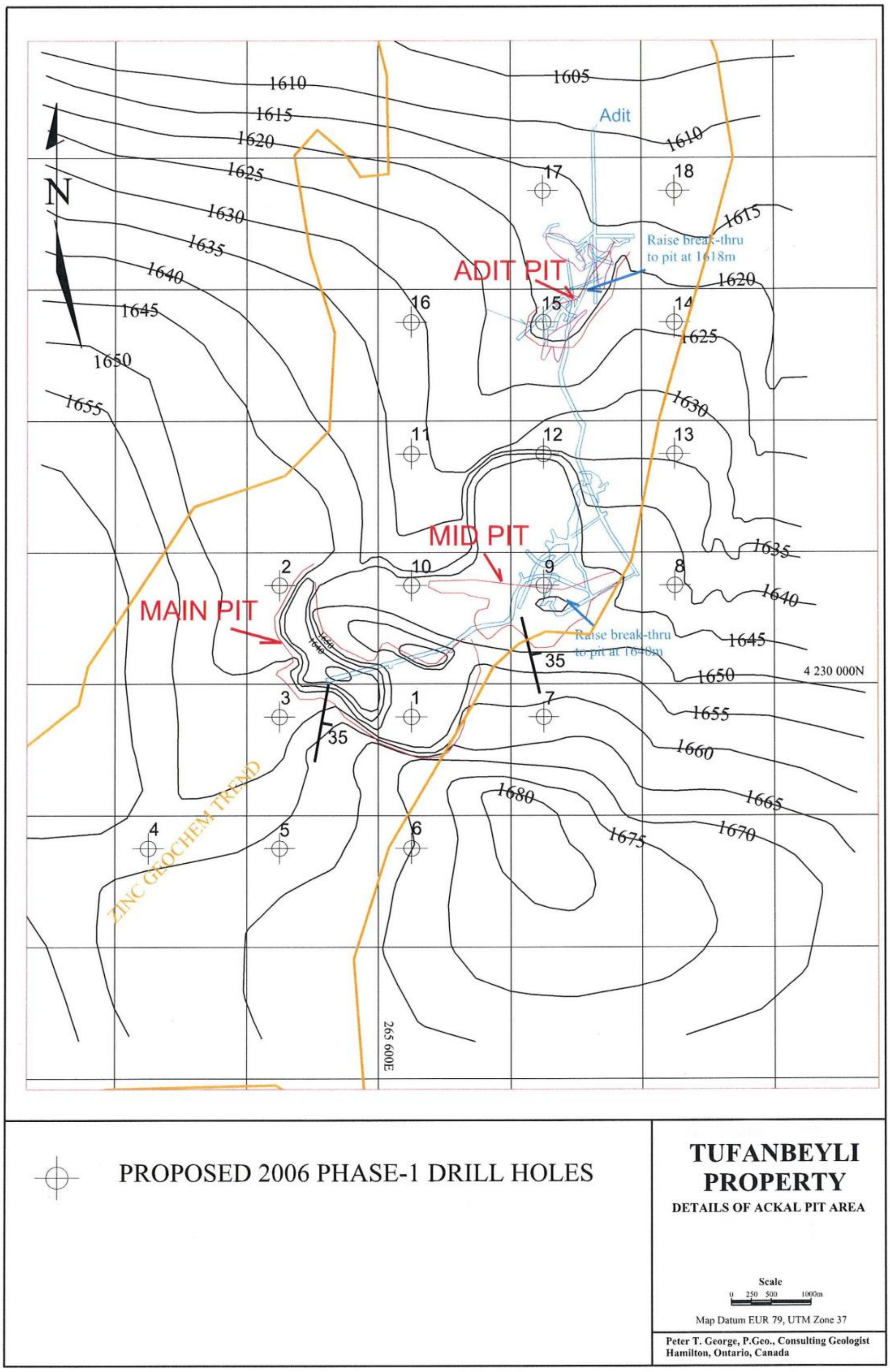
The open pit workings comprise the Main Pit, Mid Pit and Adit Pit as shown in Figure 7-4. The Main Pit extends to 30 m depth and is shown in Figure 6-1. Although no detailed production records exist, based on a GPS survey of the pits and volume estimates of the waste dumps, George (2006) estimated that some 120 000 tonnes of at a grade greater than >20% Zn (in terms of the smelter contracts) was mined from the open pits. In this estimate, George used a specific gravity of 3.6. Anatolia (2009) report a mined tonnage of 100 000 tonnes for Akçal and 110 000 tonnes for Belbaşi at similar grades of >20% Zn. Previous mining focussed primarily on high grade zones.

It is considered best practise that the dry bulk density is used for tonnage estimation. George's (2006) density estimation of 3.6 was based on mineralogical density and not bulk in-situ density. Based on experience on similar mineralization from the Hakkari region, a density of 3.6 is too high and the tonnage mined is therefore likely to have been overestimated.

The underground workings were surveyed by personnel from the government-owned smelter at Kayseri.

Figure 7-4

Open pit and underground workings at Akçal (Source: George, 2006)



8 DEPOSIT TYPES

8.1 Mineral deposit model

On the basis of the descriptions and photographs provided by George (2006), the Tufanbeyli zinc mineralization bears strong similarities to the non-sulphide zinc mineralization in the Hakkari region.

Based on a review of the available information, it is concluded that the major style of zinc-lead mineralization comprises supergene alteration of primary MVT-type zinc-lead deposits. An understanding of the characteristics and geological setting of MVT deposits will therefore assist in understanding the distribution of, and extensions to, known non-sulphide zinc-lead deposits and in further exploration targeting within the project area.

The typical characteristics of MVT deposits are described in Paradis *et al* (2007) and are summarized as follows:

- Primary MVT deposits are stratabound, carbonate-hosted sulphide bodies, composed predominantly of zinc and lead, occurring as sphalerite and galena respectively. The deposits occur mainly in dolomite (less frequently limestone) as open-space fillings, breccias (crackle, mosaic, rubble, solution collapse), structures within interconnected palaeokarst networks, replacement of the carbonate host rock, and as sulphide and gangue minerals occupying primary carbonate porosity. At the deposit scale, mineralization-controlling features are commonly zones of solution collapse breccias.
- They are located in platform carbonate settings, typically in relatively undeformed orogenic foreland rocks, commonly in foreland thrust belts, and rarely in rift zones. Deposits are commonly located close to a carbonate shelf margin, at the transition into slope and basinal shale facies. MVT deposits account for approximately 25% of the world's known zinc and lead resources.
- Major basement faults influence the alignment of deposits within districts, while subsidiary faults tend to create zones of weakness with subsequent dissolution and karstification.
- Orebodies typically occur in clusters within mineralized districts which can extend to hundreds or thousands of square kilometres. An example is the Cornwallis district in Canada which hosts at least 25 deposits containing 75 orebodies. Individual orebodies are generally <2 Mt, are zinc dominant, with grades seldom exceeding 10% zinc + lead combined Figure 8-1.
- Individual orebodies vary in geometry and are often interconnected. Host structures are commonly zones of highly brecciated dolomite which range from concordant features controlled by individual strata, to discordant features developed over tens of metres across sedimentary strata (Figure 8-2). MVT orebodies are therefore stratabound on a district scale, but typically discordant on a deposit scale.

The style of mineralization ranges from zones of massive replacement, to open space filling of breccias and fractures, to disseminated clusters of crystals that occupy pore spaces.

Figure 8-1
Grade-tonnage plot for Canadian and worldwide MVT deposits with contained metal content shown on diagonal lines (after Paradis *et al*, 2007)

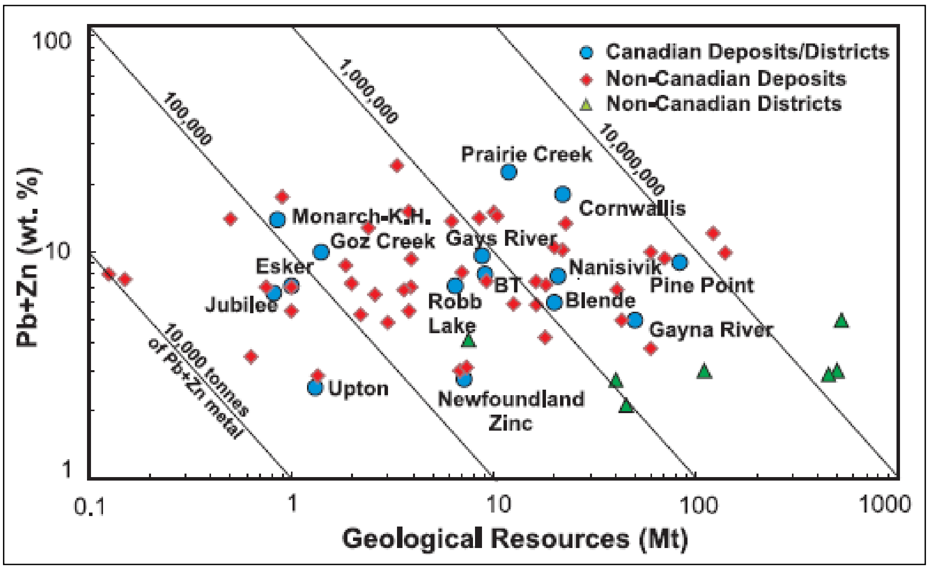
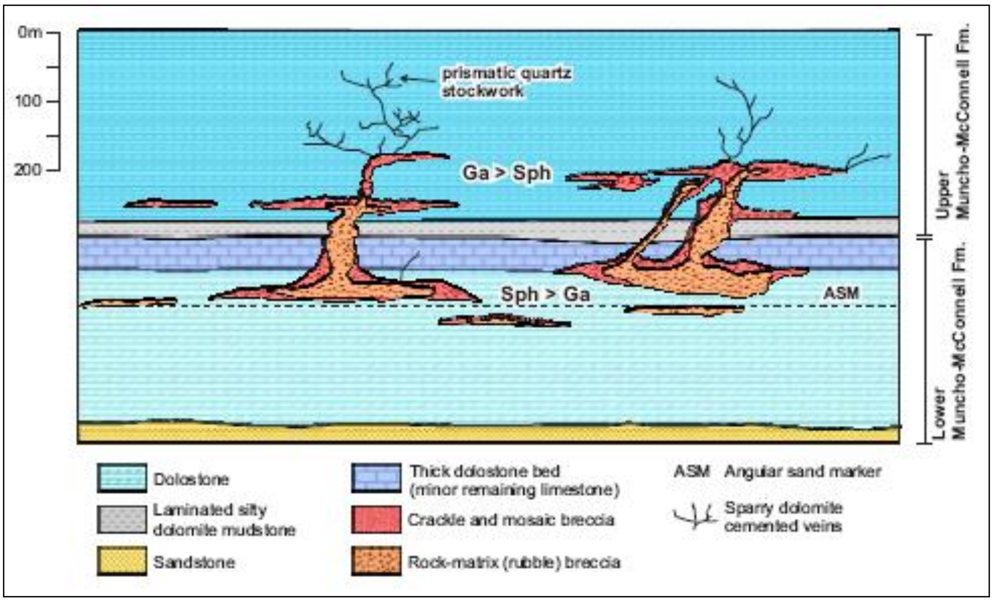


Figure 8-2
Schematic representation of MVT-hosted zinc-lead mineralization (after Paradis *et al*, 2007)

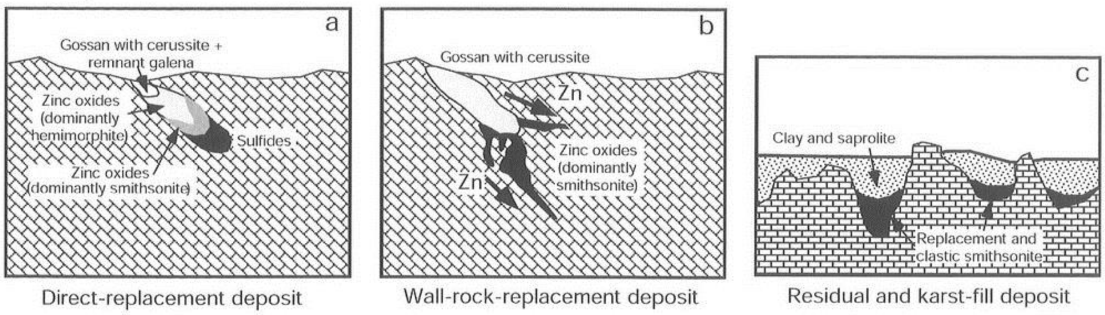


Supergene non-sulphide zinc-lead deposits are formed through the reactivity of acidic, oxidised zinc-lead rich fluids derived from oxidative destruction of zinc-lead bearing sulphide bodies with high reactive carbonate wall rocks (Hitzman *et al* 2003). The formation of these deposits depends on:

- The size and mineralogy of the pre-existing zinc-lead sulphide deposit,
- Exposure of the sulphide deposit to a seasonal fluctuating water table,
- Degree of primary porosity and secondary fault and fracture density, to permit movement of migrating oxidised ground waters,
- A suitable neutralising trap site for deposition of secondary zinc and lead minerals.

Three subtypes of supergene non-sulphide zinc-lead deposits are recognized, namely direct replacement, wall-rock replacement, and residual and karst-fill deposits (Figure 8-3). All three types may be present within a single deposit.

Figure 8-3
Exploration Models – Supergene Zinc Oxide (after Heyl and Bozion, 1962)



According to Boni and Large (2003) the critical geological features for the oxidation of primary (MVT) sulphides and preservation of the secondary zinc minerals include:

- Tectonic uplift subsequent to primary sulphide mineralization, promoting the oxidation and the development of karst systems.
- Brittle fracture of the host rocks promoting the flux of oxidising fluids and mobilisation to favourable depositories
- The presence of sufficient iron sulphide in the primary mineralization as an important control during oxidation, for the generation of acid required for the leaching and transport of zinc.

Characteristic features of non-sulphide supergene zinc-lead deposits include:

- Features of MVT deposits, as described above, are inherited by supergene deposits.
- Supergene formation through oxidative alteration of a zinc-lead sulphide bearing precursor deposit, typically a MVT deposit.
- The major secondary zinc minerals are smithsonite, hydrozincite, hemimorphite and sauconite, with smithsonite the most stable under atmospheric weathering conditions. Deposits may be mineralogically and metallurgically complex.

- Deposits are preserved in various states. Direct replacement deposits are essentially zinc-lead rich gossans. Original iron sulphide rich deposits may produce enough acid to extensively leach secondary zinc minerals in the near-surface environment.
- Mineralization textures are varied and often complex and range from massive to brecciated to disseminated, with vuggy to dense mineralization. The most common mineralization texture is breccia, several stages of secondary zinc mineralization are normally present, reflecting multi-cyclic oxidation and leaching.
- The grade and tonnage of deposits is a reflection of the primary zinc-lead content; however significant upgrading of parts of these systems is common. A tabular summary of known supergene zinc-lead deposits is contained in Hitzman (2003). Significant deposits in Turkey and the surrounding region are summarized in Table 8-1. The largest known oxide deposit of similar grade characteristics is Angouran in Iran which is hosted in the Zagros fold and thrust belt, an extension of the "Border Folds" belt in southeastern Turkey in which the Hakkari Zinc Project (HZP) area lies.

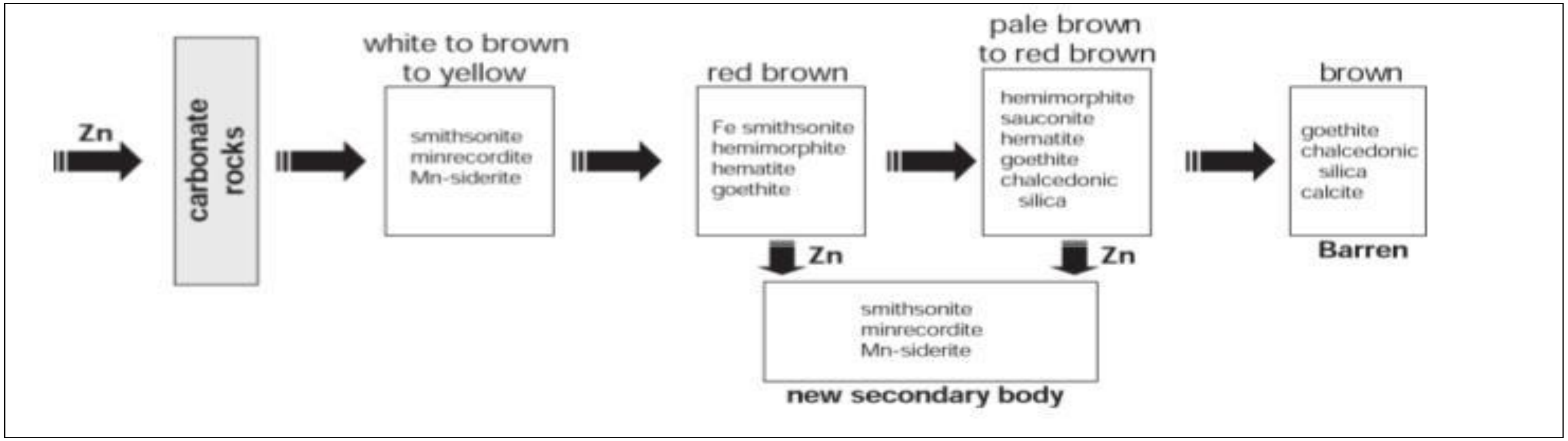
Within the HZP area, the direct association of significant iron grades (due to the presence of goethite and hematite after iron rich sulphides) with that of zinc and lead, suggest either wall rock replacement or direct replacement of a precursor MVT type sulphide deposit (Figure 8-4).

Table 8-1
Grade-tonnage attributes of supergene zinc-lead deposits in Turkey and the surrounding region (non-Code compliant) (source: Hitzman, 2003)

Deposit	Location	Sulphide Resource	Mixed Oxide-Sulphide Resource	Oxide Resource
Zamanti District	Turkey			6 Mt at 26% Zn
Angouran	Iran	14.5 Mt at 26.6% Zn, 4.6% Pb	2 Mt at 31% Zn, 4% Pb	3.2 Mt at 38% Zn, 2% Pb
Mehdiabab	Iran		218 Mt at 7.2% Zn, 2.3% Pb, 51g/t Ag	
Irankuh	Iran	15 Mt at 4% Zn, 2% Pb	4 Mt at 7% Zn, 1% Pb	14 Mt at 12% Zn + Pb
Kuh-e-Surmeh	Iran	2 Mt at 7% Zn, 4% Pb		0.8 Mt at 19% Zn, 7% Pb

Figure 8-4

Exploration Models – Mineralogy observed in progressive wall rock replacement (after Hitzman *et al* 2003)



9 EXPLORATION

No exploration has yet been carried out by RCR on the Tufanbeyli Project.

10 DRILLING

Previous drilling at Tufanbeyli was carried out by MTA and YAMAS. No drilling on the property has yet been undertaken by RCR. A drillhole database export was provided to MSA by RCR/YAMAS and included the following data: drillhole ID, collar surveys, drillhole inclination and azimuth, hole length, lithology, sampling, assay batch number, and multi-element results.

Three diamond drill holes totalling 251 m were drilled at Belbaşi mine at the Tufanbeyli property by MTA during the period 1981 to 1984 as reported by YAMAS (1999). Of these three holes, DDH BB-3A reportedly intersected 25.5 m zinc-rich oxide material from 32.0 m to 57.5 m, however the original assay data are not available. In addition, - five diamond drillholes was also drilled from shallow underground workings, for a total of 254.33 m. All of the holes reportedly intersected oxide mineralization with variable thicknesses ranging from 1.20 m to 20.05 m. Only assays from certain parts of the underground hole BG-1A are available, this intersection returning 22.4% Zn over 4.90 m. No further information is available from the MTA drilling, and these holes do not form part of the drillhole database used for the current Mineral Resource estimate.

A total of 12 697.7 m of drilling in 168 holes (including 6 holes that were re-drilled) were completed by YAMAS on the Tufanbeyli property between 2006 and 2008 (Table 10-1). This comprised 141 reverse circulation (RC) holes (excluding the 6 holes that were re-drilled) for 10 802.5 m and 21 diamond drill holes for 1 895.2 m. A summary of the YAMAS drilling is included in Appendix 3. The location of these holes with respect to geology, zinc showings and zinc-in-soil geochemical anomalies is shown in Figure 10-1 and in more detail in Figure 6-2 to Figure 6-4.

As shown in Table 10-1, the YAMAS drilling was carried out in four phases between July 2006 and June 2008. Drilling of the diamond core holes and RC holes BRC001 to BRC095 was undertaken by International Drilling Company (IDC), a contractor based in Ankara, Turkey. SPEKTRA JEOTEK A.Ş. undertook the latter part of the RC drilling program, completing holes BRC096 to BRC141.

The core drilling was undertaken using NQ size equipment and utilized an annular diamond impregnated drill bit attached to a double tube core barrel and a length of hollow drill rods to cut a cylindrical core of rock. Core samples were retrieved by wireline and the core carefully removed from the inner tube and placed in plastic core trays, where it was aligned and cleaned. RC drilling involved conventional dual tube drill rods whereby compressed air was forced down between the outer and inner walls. A down-hole hammer was used with air entering the hammer through the airways, crossing over to the outside of the bit and removing the chips to surface via the inner tube. In this manner, the transported rock chips were never in contact with the country rock. The return air and sample was collected through a cyclone, designed to reduce the air velocity and separate the sample from the air. Samples were collected at the base of the cyclone. On completion, both diamond and RC holes were capped with the hole number inscribed on a concrete base, in each case.

The drilling undertaken by YAMAS was not undertaken systematically along section lines due to the variable orientations of the mineralized zones, as observed from geological mapping. In attempting to define the geometries of the mineralized zones, YAMAS undertook drilling in multiple orientations from closely-spaced drill pads. Diamond drilling was only undertaken in the

Akçal area, with most of the holes collared within the workings and consequently, while these test the remaining extent of zinc mineralization, they do not test the full thickness of the mineralized zones. RC drilling was then used to test the wider extent of mineralization at the Akçal prospect and the other prospects as shown in Figure 10-1.

Although broadly stratiform on a tenement scale, the geometries of the mineralized zones are variably irregular on a local prospect scale and the relationship between sample length and true thickness of mineralization is not well understood at this point. Systematic follow-up drilling will be required in order to improve confidence in the disposition of the mineralized zones. Whereas drilling has tested most of the zinc prospects, the strike extensive zinc and lead soil geochemical anomalies to the southeast of these showings has not yet been tested by drilling. This anomalous geochemistry indicates that the mineralized system may extend twice as far as currently known.

No downhole survey data were included in the data provided by RCR/YAMAS and it is unclear whether downhole surveys were conducted. However the holes are relatively short and range in length from 20 m to 169 m with an average length of 75 m. The absence of downhole survey data is thus not considered material. No RC sample weight data are available and thus no sample recovery deductions can be made. However, summary core recovery data are available and are presented in Table 10-2.

Drill core and RC chip trays from the YAMAS drilling program are stored in a lockable facility on site in the Tufanbeyli area. The RC coarse reject samples have been discarded in one of the pits at the Akçal prospect. These facilities were observed during the course of the site inspection and photographs of the facilities and of the core and RC samples are shown in Section 12 of this report.

Table 10-1
Summary of drilling completed by YAMAS at Tufanbeyli

From	To	Holes	Type of Drilling	No. holes	Total meters*
Jul 2006	Sep 2006	AKD001 - AKD021	Core	21	1 895.20
Nov 2006	Jan 2007	BRC001 - BRC035	RC	35	3 733.00
Nov 2007	Feb 2008	BRC036 - BRC116	RC	81	5 757.50
May 2008	Jun 2008	BRC117 - BRC141	RC	25	1 312.00
Total				**162**	**12 697.70**

* Includes redrilling of 6 holes

Figure 10-1

EYAMAS drillholes in relation to zinc showings and Silvermet soil geochemistry

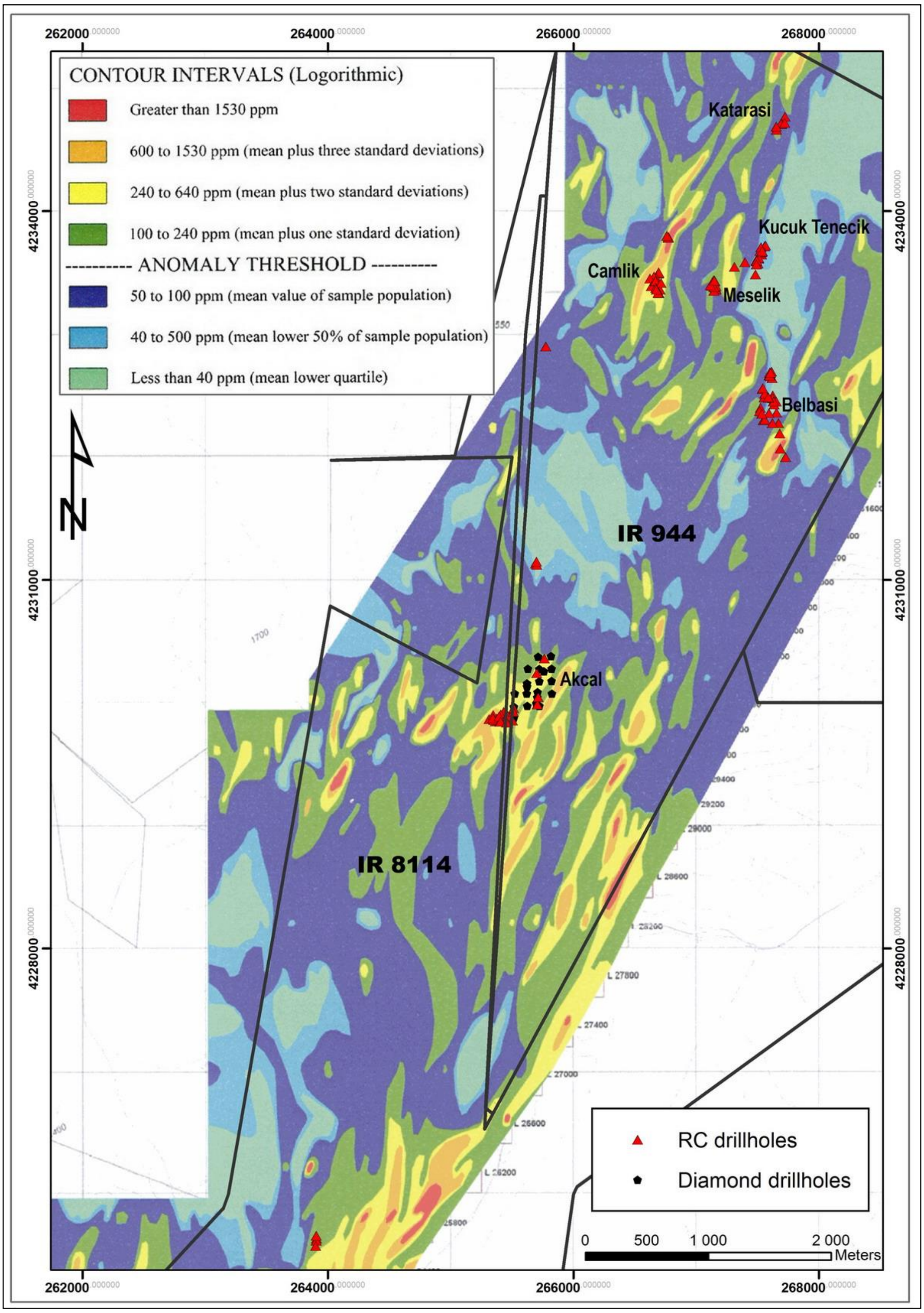


Table 10-2
Summary core recovery data from 2006 diamond drilling

DRILLHOLE NO	RECOVERY %
AKD-1/1A	68,7
AKD-2	75,8
AKD-3	90,6
AKD-4/4A	86,7
AKD-5	67,9
AKD-6	97,1
AKD-7	71,9
AKD-8	91,4
AKD-9	90,2
AKD-10	54,3
AKD-11	96,9
AKD-12	94,0
AKD 13	86,5
AKD-14	64,9
AKD-15	92.9
AKD-16	92,0
AKD-17	90,3
AKD-18	60,1
AKD-19	79,9
AKD-20	86,8
AKD-21	94,1
AVERAGE RECOVERY	82,0

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sampling Method and Approach

The following observations are made on the basis of data supplied to MSA and through examining of drill core and previous sampling practices during the course of the site inspection.

Sampling of drill core was carried out by splitting the NQ size core in half and collecting half core samples. Samples were collected over a nominal 2 m length, however several long samples (up to 10.5 m in length) are observed in the sampling database. Samples were placed in plastic sample bags and assigned unique sample numbers. A total of 852 core samples were collected and submitted to the laboratory. Based on observations on the remaining drill core, it is concluded that sampling of the core was representative of the intersected lithologies and mineralization and that lithological and mineralization contacts were taken into account during the sampling process.

RC samples were collected through a cyclone and represent splits of the total sample recovered. In all cases, the entire hole length was sampled. Sample lengths were a nominal 2 m, with 127 samples <2 m in length and 26 samples >2 m length (maximum sample length 21 m). A total of 4 622 RC samples were collected and submitted to the laboratory.

Lithological logging of the diamond core holes and the first 35 RC holes was done on a summary basis. More detailed geological logs exist for RC holes BRC-035 to BRC-141.

It is not clear what security measures were taken to ensure the validity and integrity of samples taken. The remaining core and RC chip boxes are stored in a lockable facility on the Tufanbeyli site. Sample pulps are stored at the Alacer Gold (previously Anatolia Minerals/YAMAS) offices in Ankara.

11.2 Sample Preparation, Analyses and Security

A total of 5 110 drill samples (4 498 RC samples and 612 core samples) were collected by YAMAS on the Tufanbeyli project were submitted to the ALS Chemex laboratory in Izmir, Turkey for sample preparation and analysis at the ALS Chemex laboratory in Vancouver, Canada. Prior to submission, these samples were analysed for zinc by portable X-ray fluorescence (XRF) instrument on site.

At the Izmir laboratory, samples were weighed, bar-coded and prepared as follows:

- Crush entire sample to >70% passing 6mm (Method Code CRU-21)
- Pulverize 1000g to 85% <75µm (Method Code PUL-32)
- Split sample with a riffle splitter (Method Code SPL-21).

Representative pulp splits were then analysed for 27 elements by 4 acid digest and inductively coupled plasma atomic emission spectroscopy (ICP-AES) finish (Method Code ME-ICP61). The analytes requested and reported were Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sr, Ti, U, V, W, and Zn. In the case of high concentrations, “ore-grade” overlimit assays (Method Code OG62) were requested as follows:

- If Ag >= 100 ppm, then run method Ag-OG62
- If Co >= 10 000 ppm, then run method Co-OG62
- If Cu >= 10 000 ppm, then run method Cu-OG62
- If Ni >= 10 000 ppm, then run method Ni-OG62
- If Pb >= 10 000 ppm, then run method Pb-OG62
- If Zn >= 10 000 ppm, then run method Zn-OG62.

Assay certificates in PDF and CSV format issued by ALS Chemex were provided to MSA by RCR. Internal laboratory quality control certificates were provided for batches relating to holes BRC036 to BRC141. Further, MS Excel spreadsheets showing the positions of standard, blanks and duplicate quality control samples were also provided to MSA.

Soil geochemical sample batches were also submitted to ALS Chemex for sample preparation (screening to 180µm) and multi-element analysis by aqua regia digest and finish by ICP-AES (Method Code ME-ICP61).

11.3 Quality Assurance and Quality Control (QAQC)

11.3.1 Requirement for QAQC

Appropriate QAQC monitoring is a critical aspect of the sampling and assaying process. Monitoring the quality of laboratory analyses is fundamental to ensuring the highest degree of confidence in the analytical data and providing the necessary confidence to make informed decisions when interpreting all the available information.

Quality assurance may be defined as information collected to demonstrate that the data used to construct the resource model are valid. *Quality control* (QC) involves procedures designed to maintain a desired level of quality in the assay database.

Effectively applied, QC leads to corrections of errors or changes in procedures that improve overall data quality. Such measures are essential towards minimising uncertainty and improving the integrity of the assay database and are aimed to provide:

- An integrity check on the reliability of the data
- Quantification of accuracy and precision
- Confidence in the sample and assay database
- Assurance that the accuracy of data underlying the resource model can be confirmed, within reasonable limits, by other laboratories
- The necessary documentation to support database validation.

The use of certified reference materials (CRMs) or “standards” provides a measure of analytical accuracy, and is useful in identifying any short or long-term drift and biases. Blank samples which have been established as barren by previous analysis, serve to detect contamination during the sample preparation and assay process. Duplicate samples are used in determining the quality of sample collection, sample preparation and analytical precision. Comparison of assay duplicate and field duplicate data can indicate where imprecision in the data originates from, i.e. sample preparation versus assay process.

Benefits can only be realized if QC is done in a timely manner, quality control data were collected and reviewed on a regular basis in order to monitor laboratory performance. The results of quality control samples are used to accept or reject the results of sample batches analyzed by the laboratory. Laboratory data should be reviewed on a batch by batch basis. In order to accept/reject samples or batches, it is necessary to establish a set of failure criteria. All failures must be recorded, identifying the reason for failure and corrective action required. This information must be updated once the results of corrective action are received.

In order to ensure quality standards were met and maintained, a range of external quality control measures relating to sample preparation and assay were implemented by YAMAS. In order to monitor QC on the soil geochemical sampling program, duplicate samples were inserted into the sample stream at a frequency of 1 in 20 routine samples.

In order to monitor QC on the RC and core sample batches, field duplicates were inserted at a frequency of 1 in 25 routine samples and standard samples (including various silica blanks) at a frequency of 1 in 20 routine samples. The standard samples used by YAMAS cover a range of silver, lead and zinc grades; however the certified limits for these samples are not known to MSA. The results were plotted chronologically as control charts and are included as Figure 11-1 to Figure 11-8. Notwithstanding the lack of certified limits, the results plot relatively consistency and provide a measure of confidence in the analytical accuracy of the assay database.

The results of silica blank samples inserted into the sample stream are shown in Figure 11-9. Several failures are observed, which indicate cross-contamination between samples at various stages. However, the extent of contamination is not regarded as significant, and compromising the integrity of the assay database.

Duplicate sample results are shown in Figure 11-10 to Figure 11-12 and show an acceptable degree of correlation between original and duplicate sample pairs for silver, lead and zinc.

Samples were submitted to ALS Chemex laboratories in Izmir and Vancouver for sample preparation and chemical analyses respectively. ALS Chemex is a recognised international leader in analytical data service and metallurgy services to the mining industry, with over 60 locations around the world.

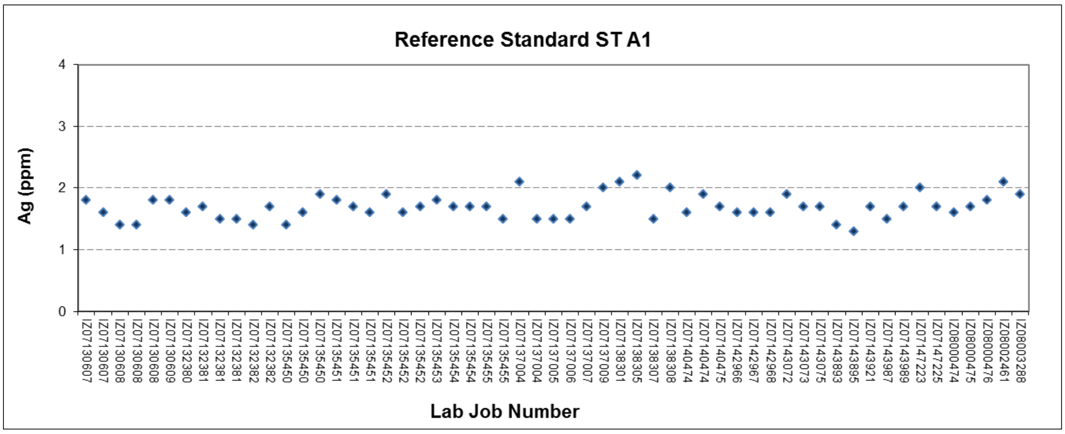
ALS Chemex has in place a Quality Management System (QMS) designed to ensure the production of consistently reliable data. The ALS Chemex laboratories at Izmir and Vancouver have received ISO 17025 accreditation for the sample preparation and analytical procedures used and described above. Laboratory accreditation assesses a laboratory's technical competence by peer review. Results that are reported by a laboratory need to be both technically sound and legally defensible.

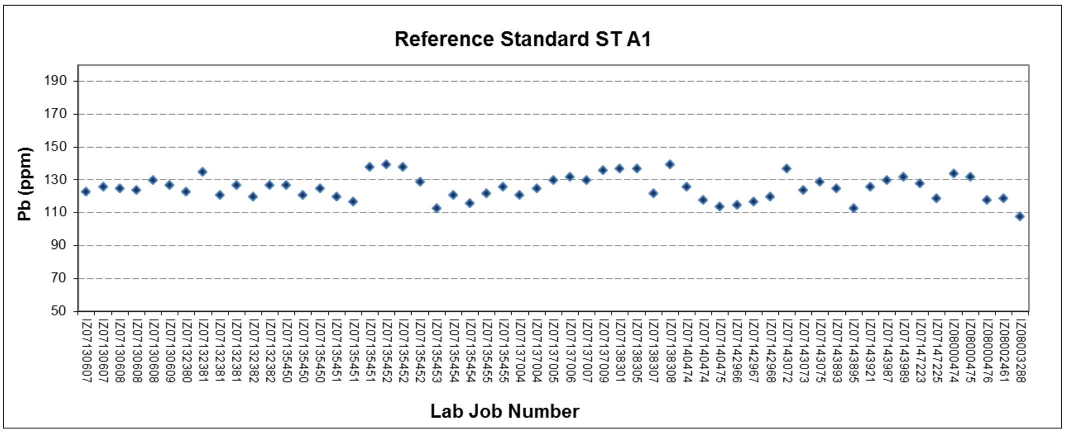
In the opinion of the authors, the quality control measures that were in place at Tufanbeyli are considered adequate; however the following recommendations are made for ongoing exploration:

- Failure criteria should be developed and used as a basis for accepting or rejecting individual samples and batches
- On-going monitoring of the quality control program should be undertaken, failures identified and an appropriate remedial program designed to act on these failures
- Umpire analyses should be carried out at an external certified laboratory.

The authors consider the sample preparation, security and analytical procedures employed to be appropriate and adequate for an exploration program of this nature. To the authors' knowledge, no aspect of the sample preparation or analysis was conducted by an employee, officer, director or associate of YAMAS.

Figure 11-1
Charts for standard sample ST A1





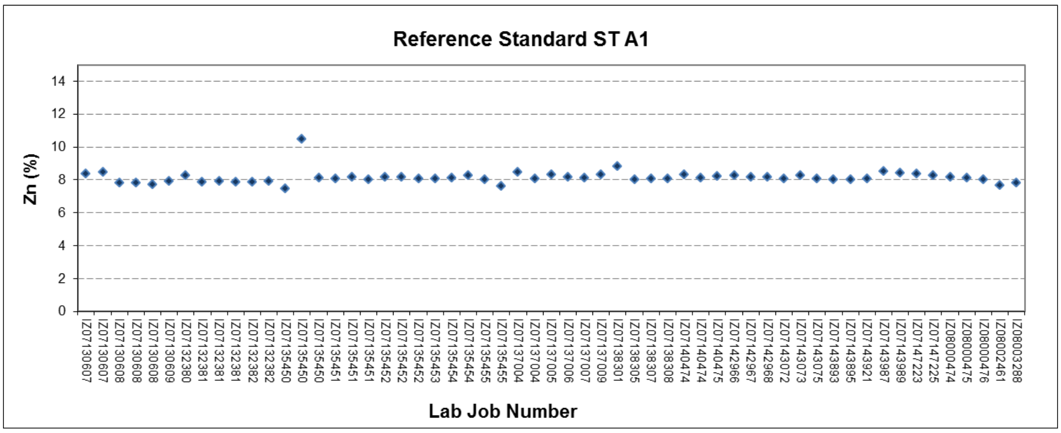
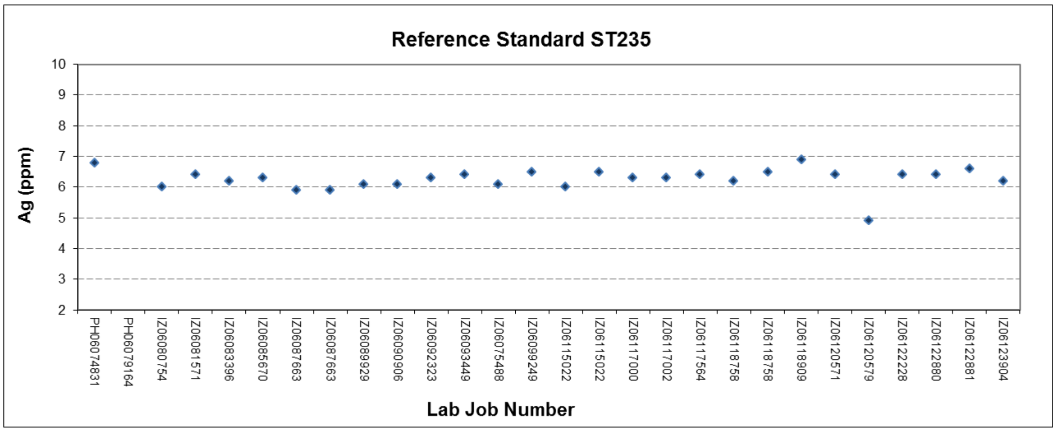
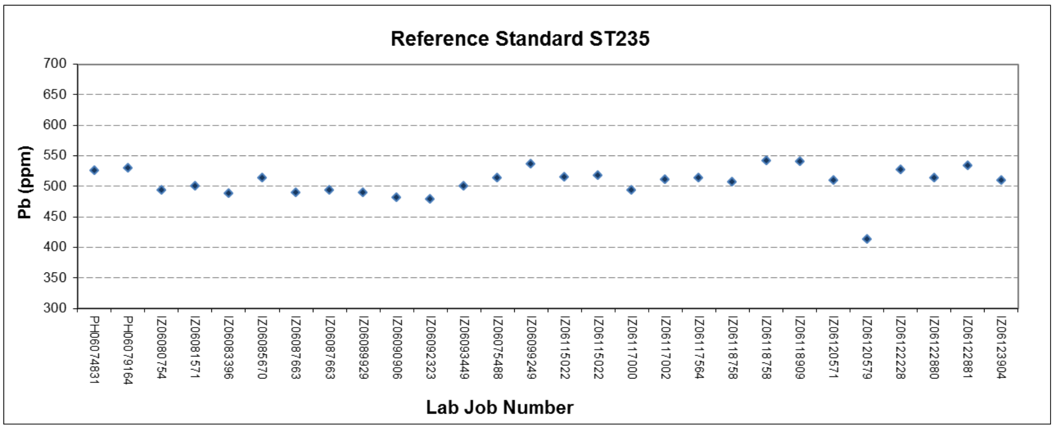


Figure 11-2
Charts for standard sample ST235





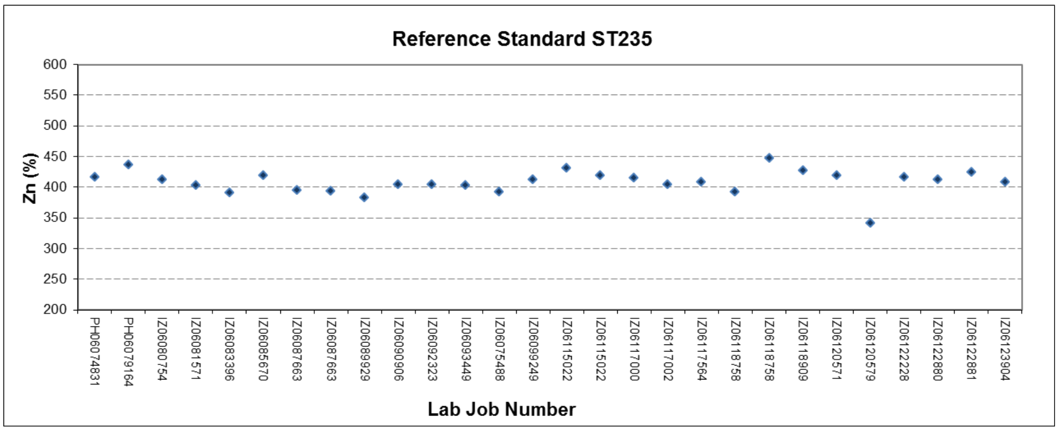
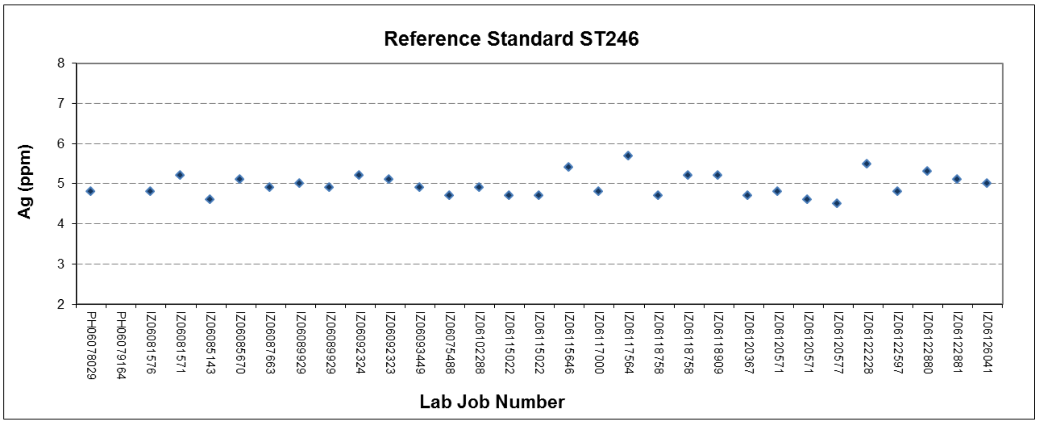
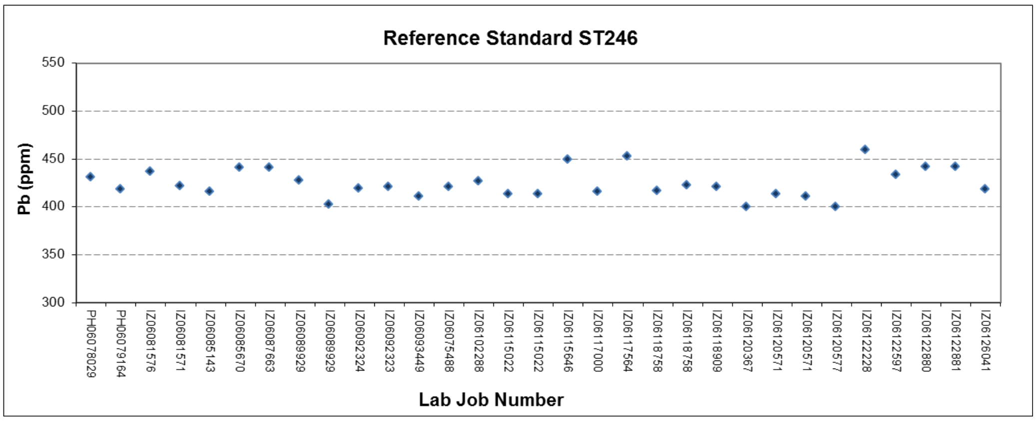


Figure 11-3
Charts for standard sample ST246





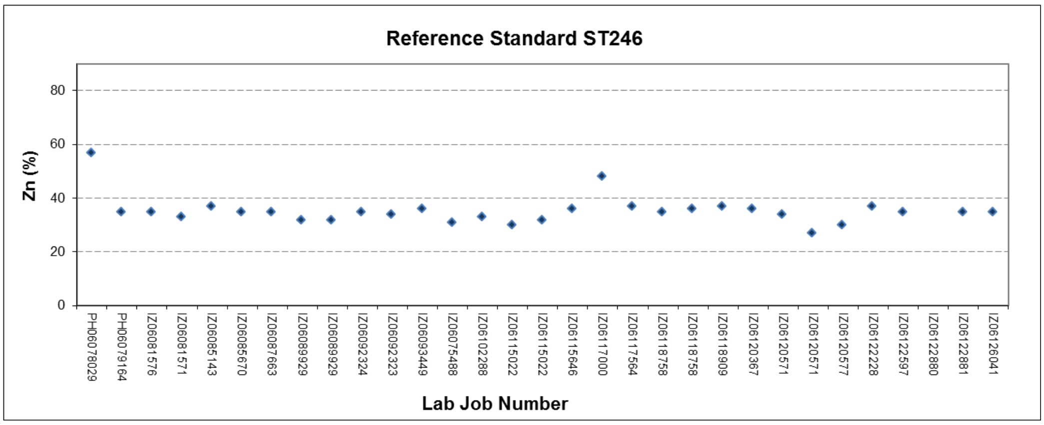
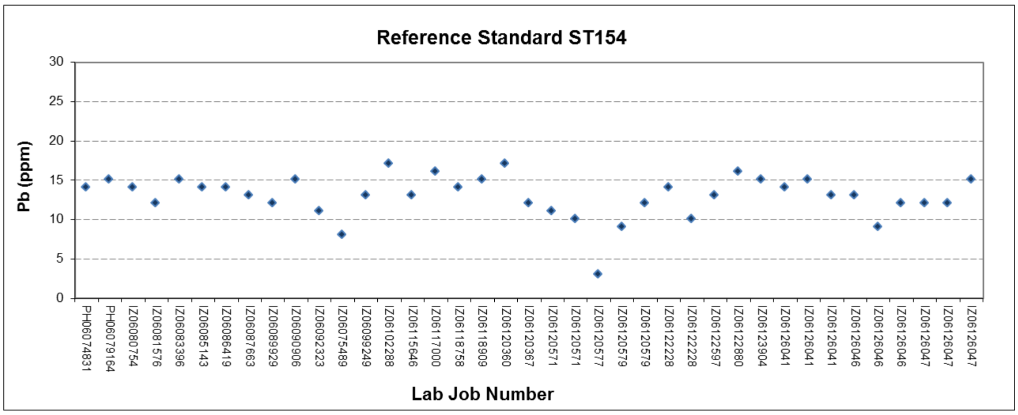


Figure 11-4
Charts for standard sample ST154



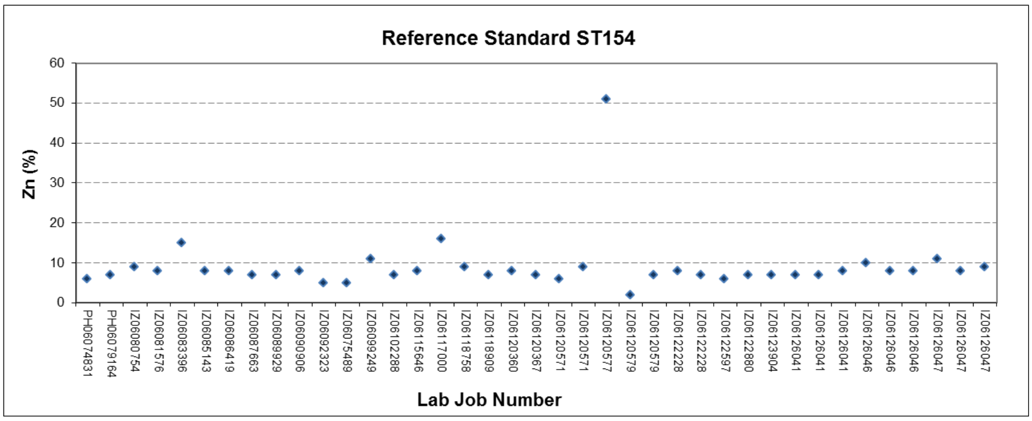
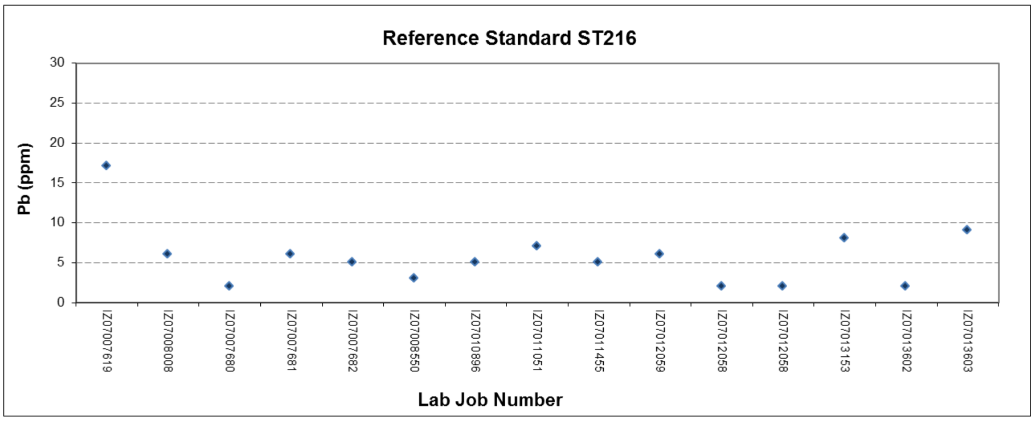


Figure 11-5

Charts for standard sample ST216



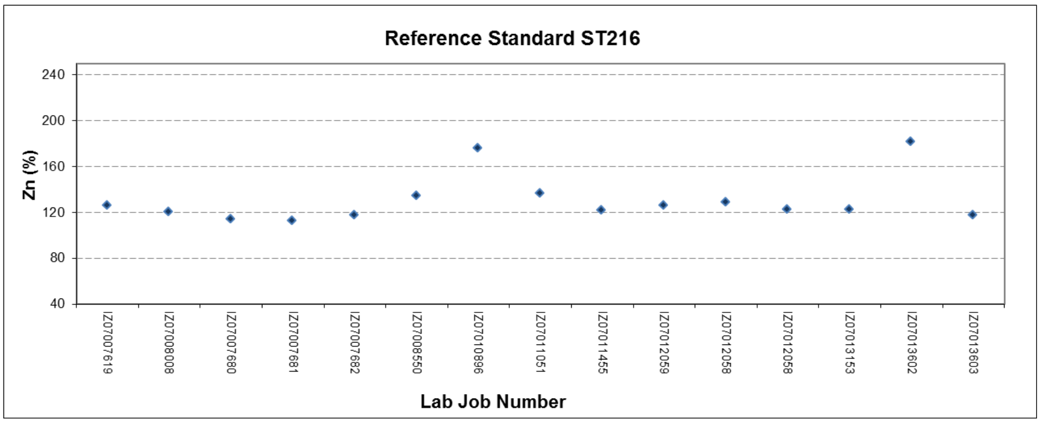
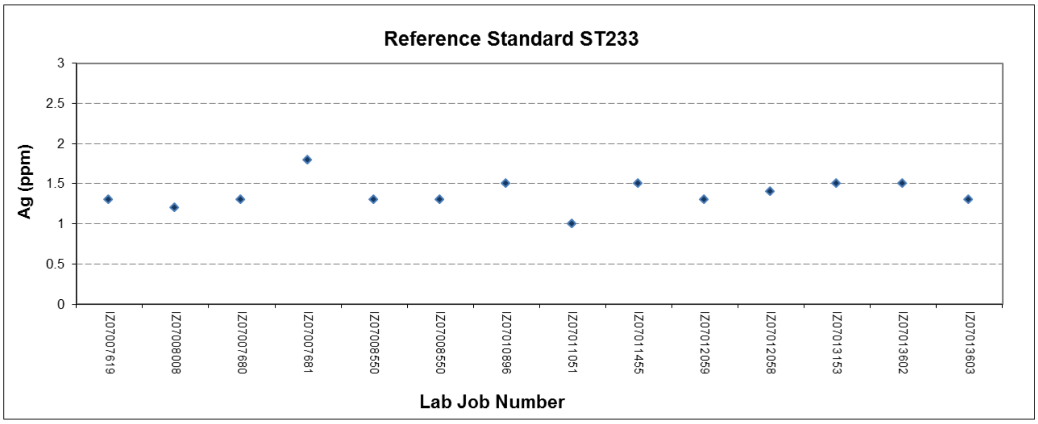
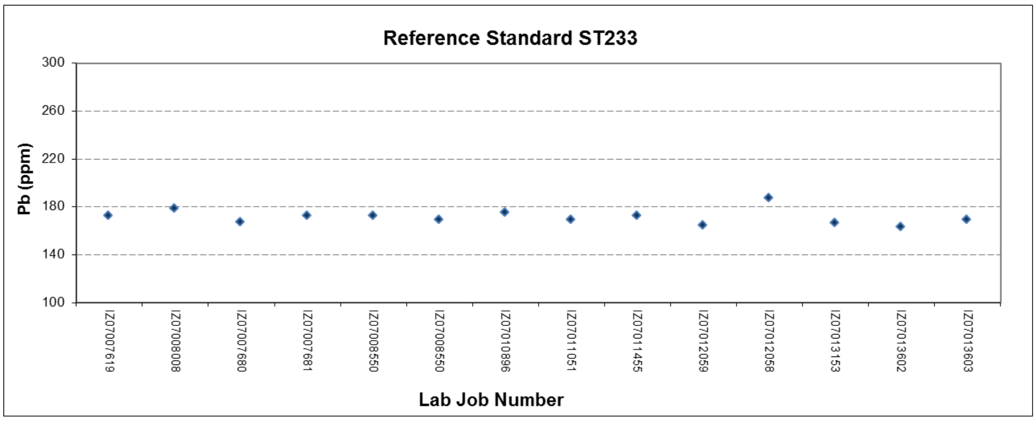


Figure 11-6

Charts for standard sample ST233





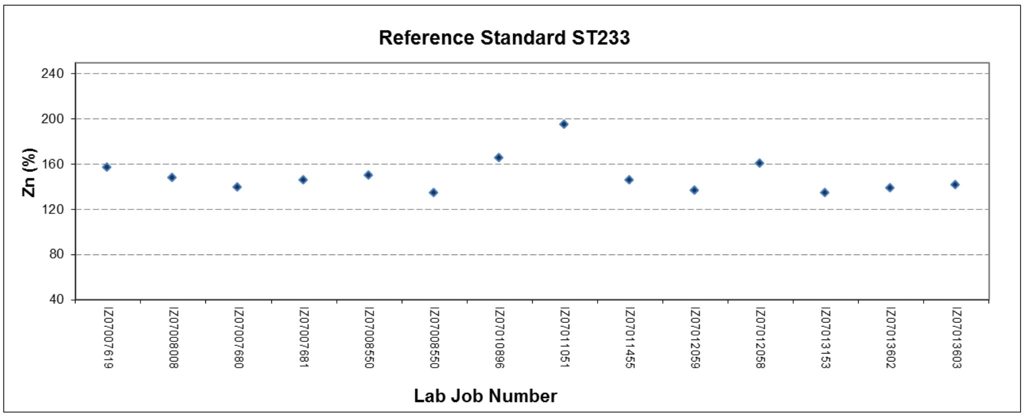
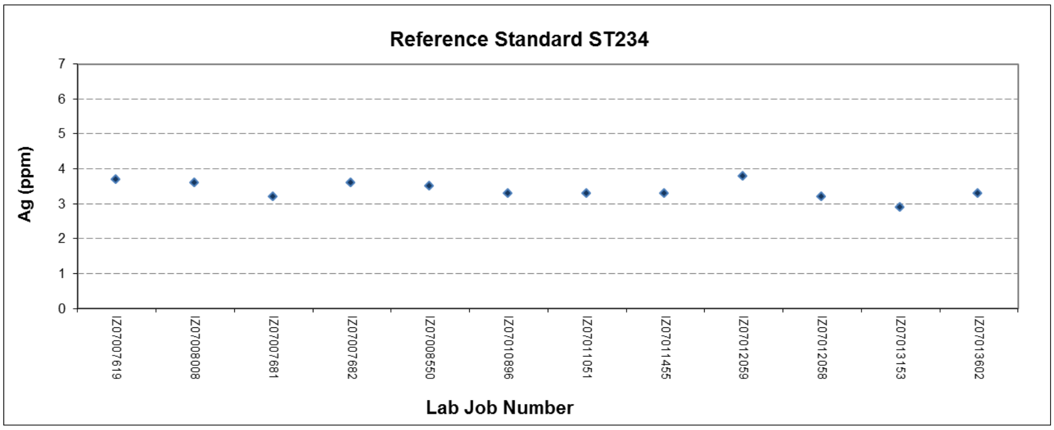
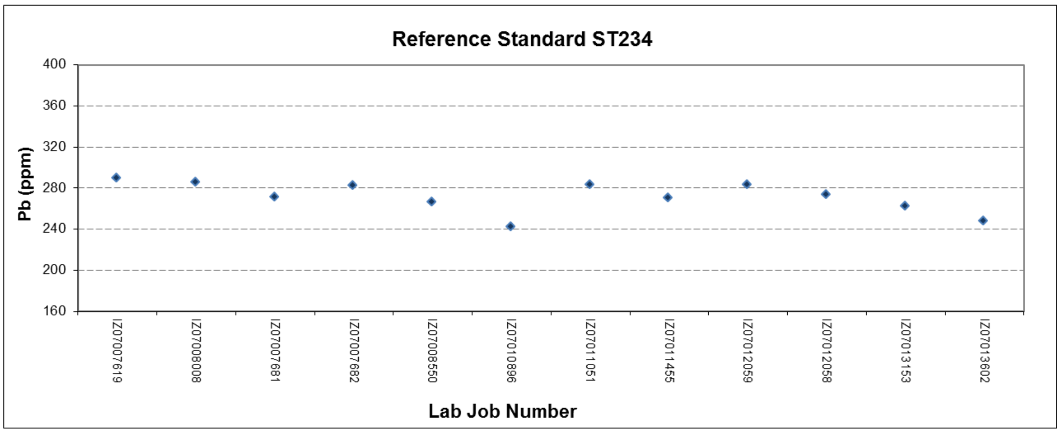


Figure 11-7
Charts for standard sample ST234





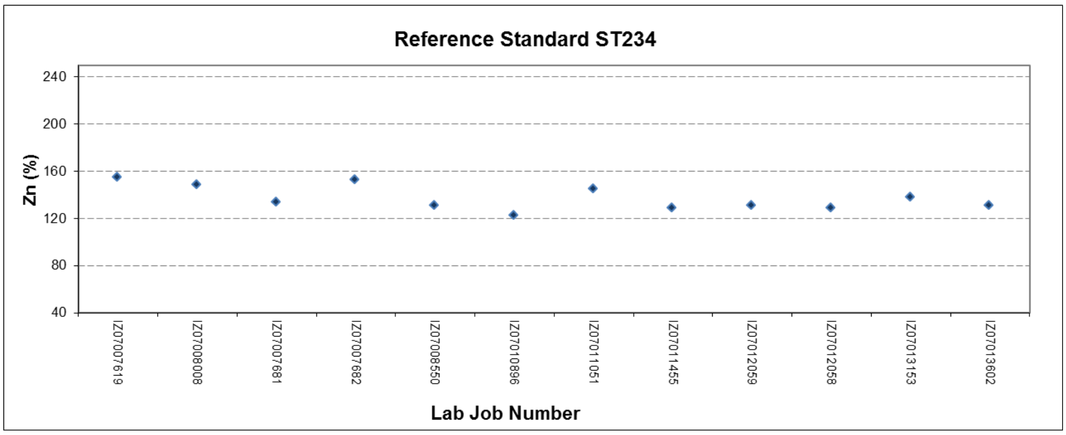
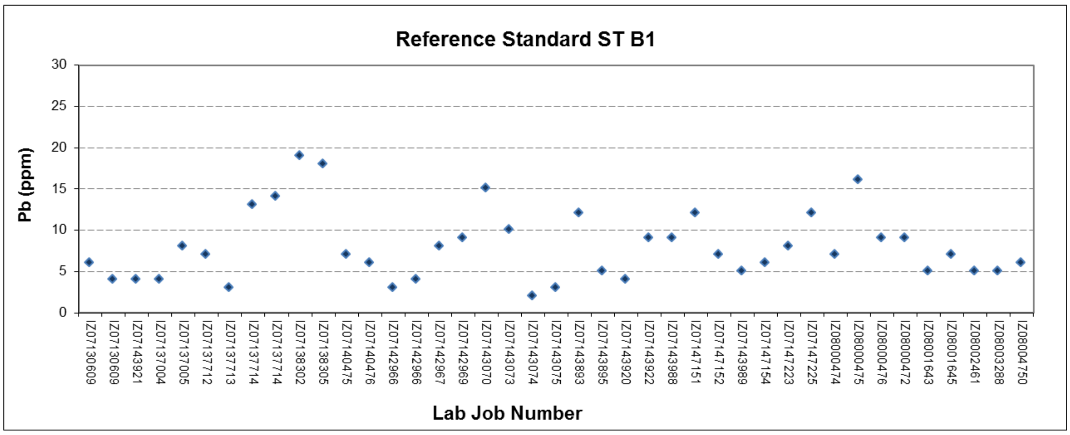


Figure 11-8
Charts for standard sample ST B1



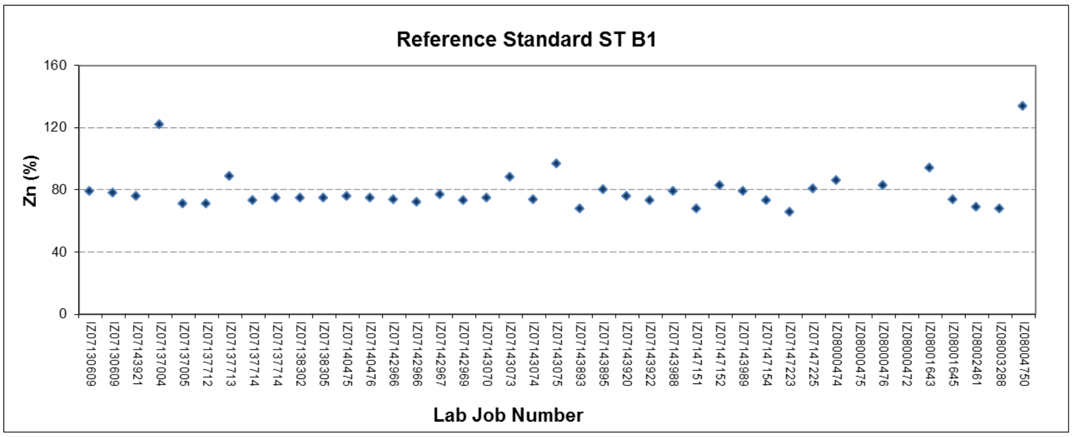


Figure 11-9
Charts for silica blank samples (the red line represents warning limit set at 5x the detection limit)

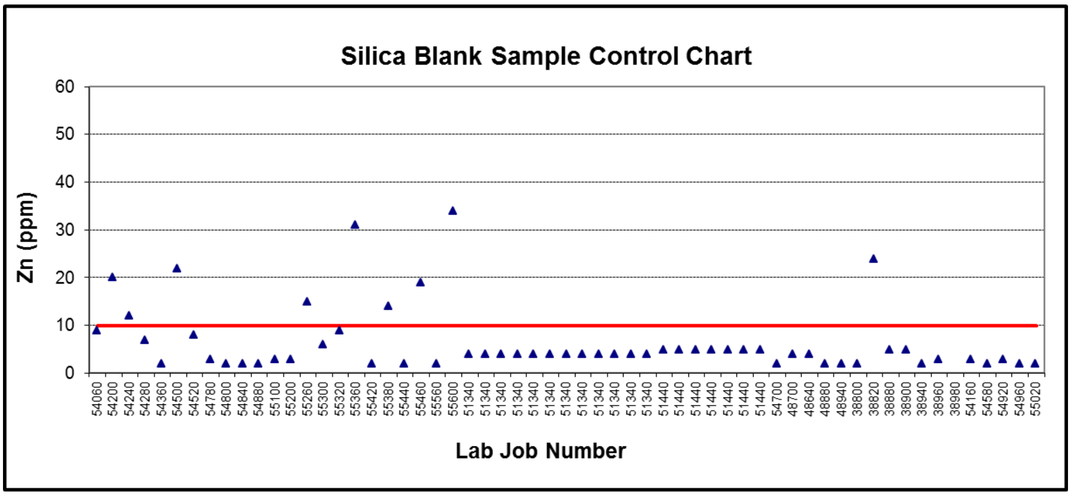
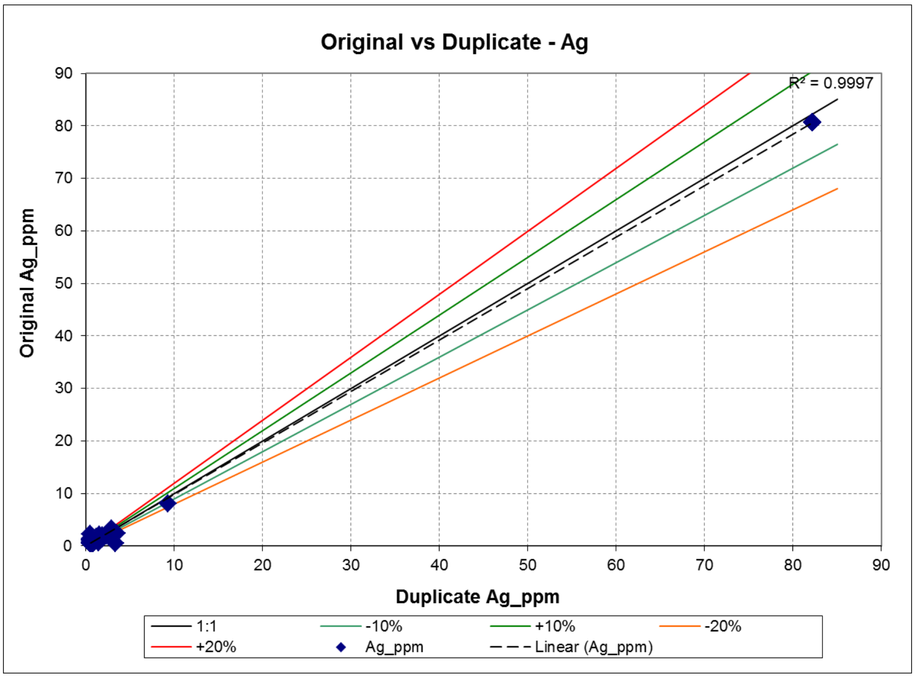


Figure 11-10

Scatterplots for duplicate samples (Ag)



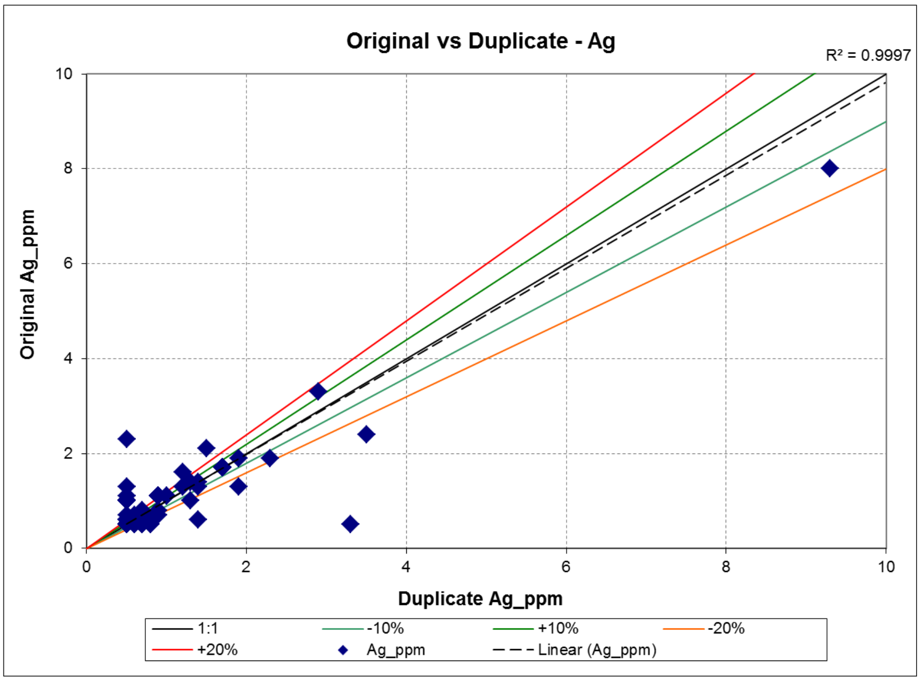
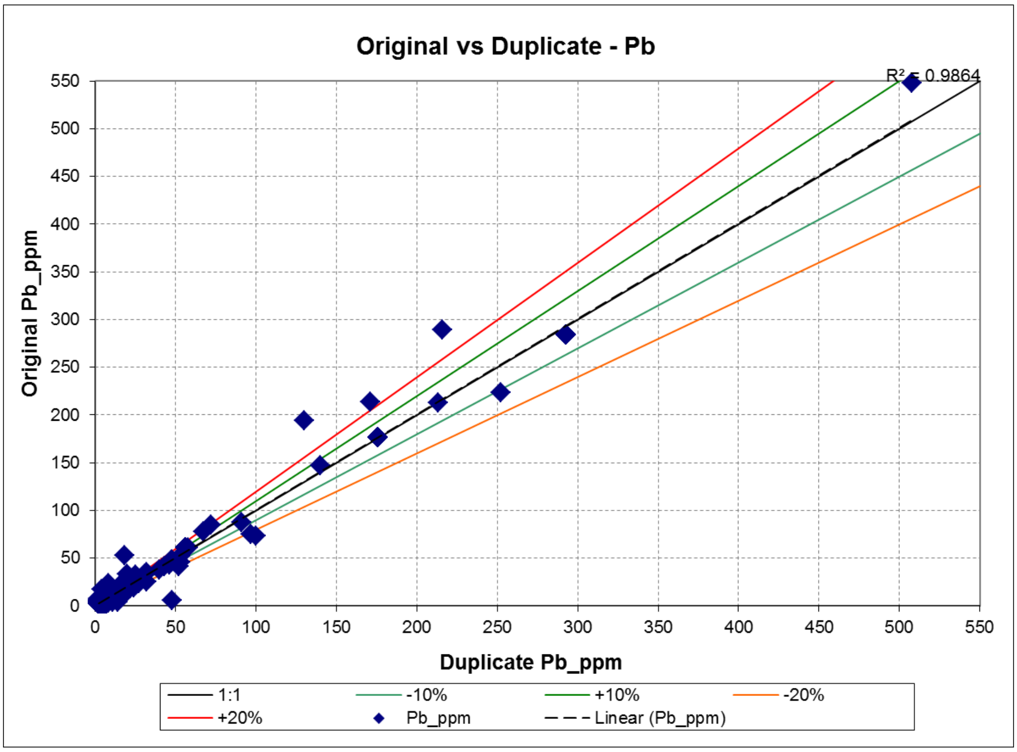


Figure 11-11
Scatterplots for duplicate samples (Pb)



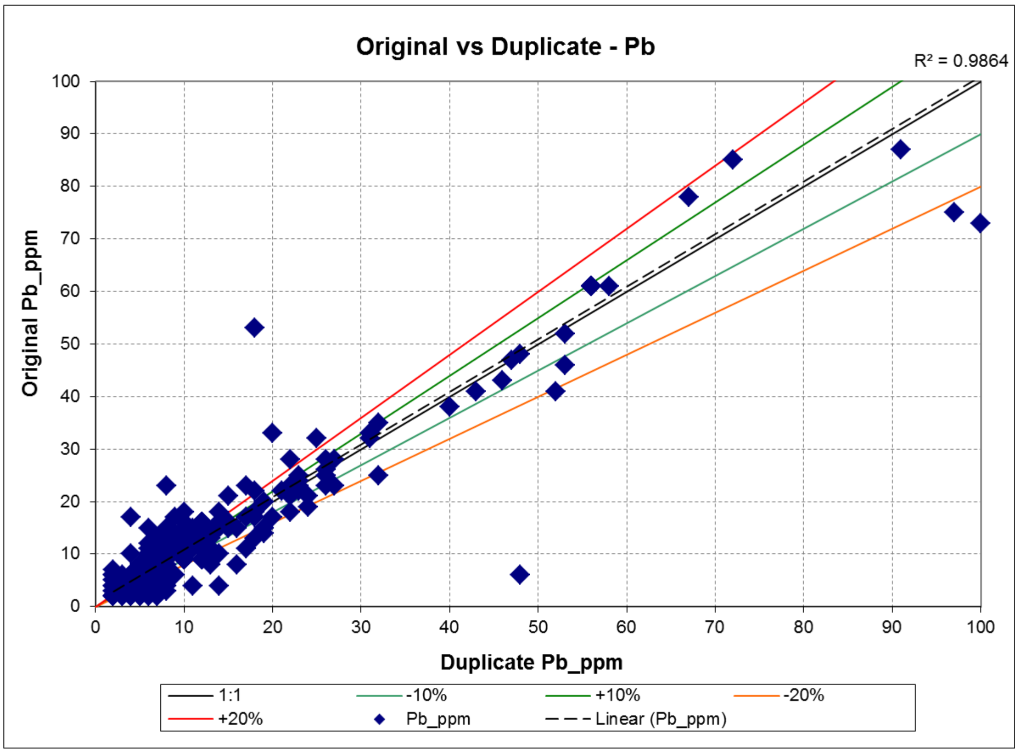
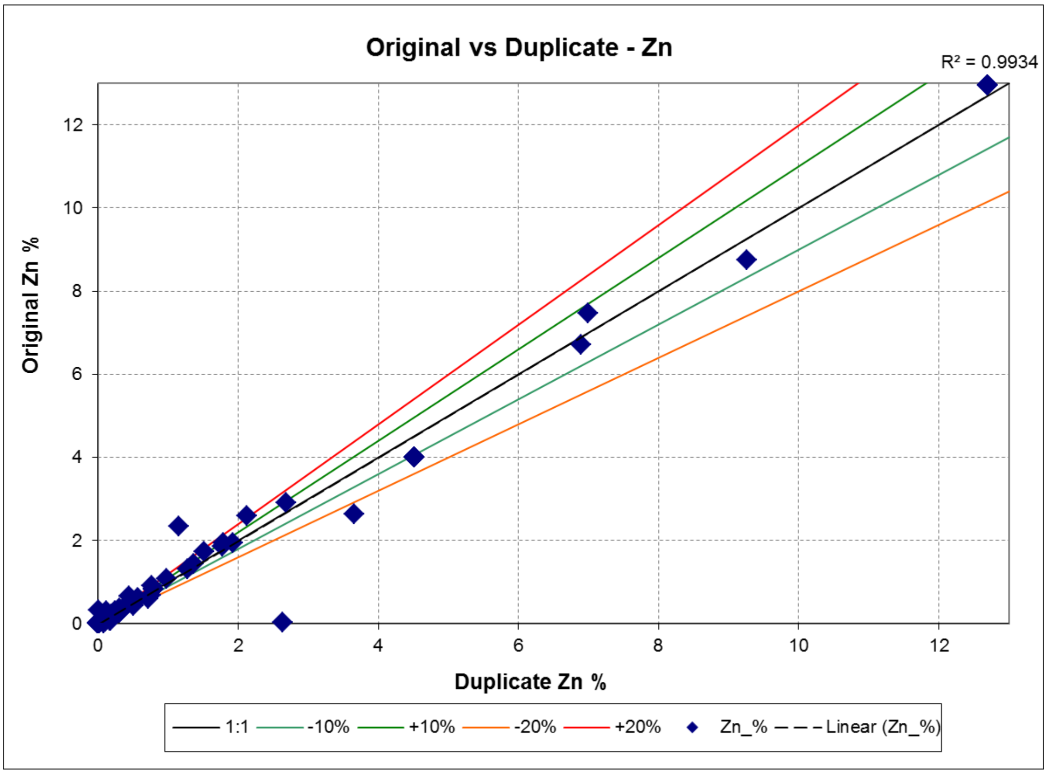
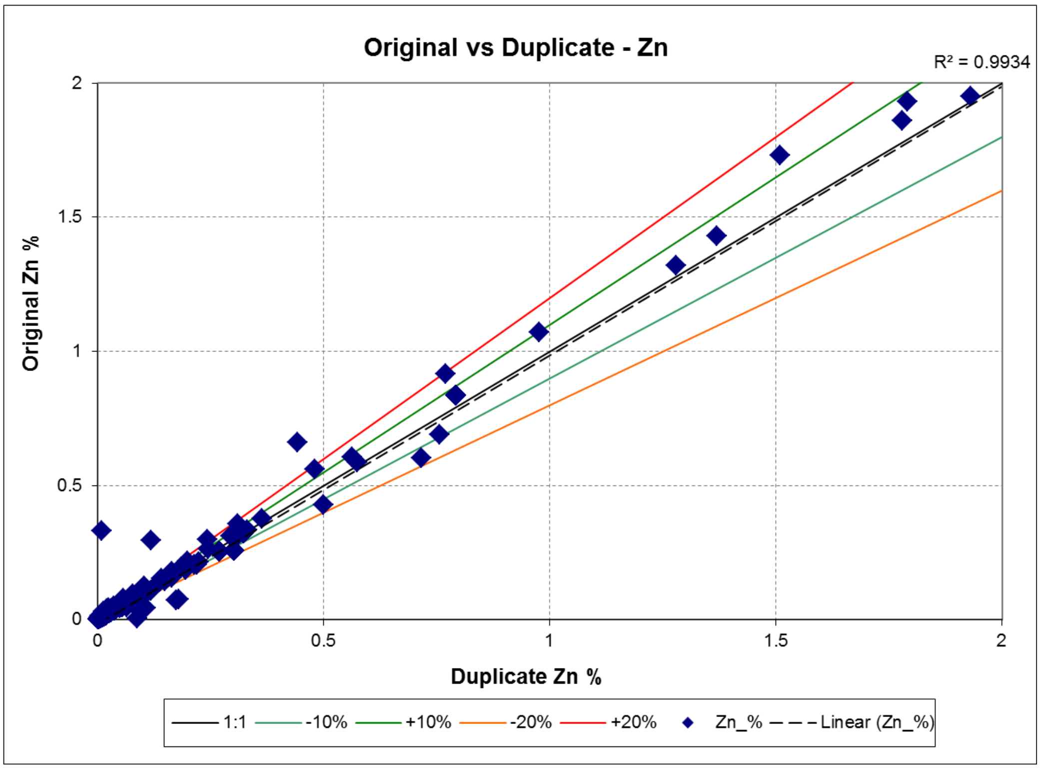


Figure 11-12
Scatterplots for duplicate samples (Zn)





12 DATA VERIFICATION

As part of a data verification exercise, drilling, sampling and assay data provided to MSA were compiled and visualized using ArcGIS and Geosoft Target software. Drill sections through the known zinc showings are included in Appendix 4.

Data verification carried out during the site visit included:

- Verification of the locations of the zinc prospects at Akçal, Belbaşi, Meselik and Küçük-Teknecik and the extent of the associated workings (Figure 12-1 to Figure 12-3)
- Checking of 28 RC and diamond drillhole collar positions at the various zinc prospects by GPS (Figure 12-4)
- Viewing of preserved drill core and RC chip trays. RC coarse rejects have been discarded (Figure 12-5).
- Relogging of RC drillholes BRC-024, -056, -062, -063, -065, -076, -091, -097, -100, -114, -116 and -023 using chip trays
- Relogging of diamond drillholes AKD-007, -014 and -021 (Figure 12-6)
- Selected resampling and density determinations of drillholes AKD-007, -014 and -021

Figure 12-1
Extent of surface workings and stockpiles at Akçal

Figure 12-2
Extent of surface workings at Belbaşi

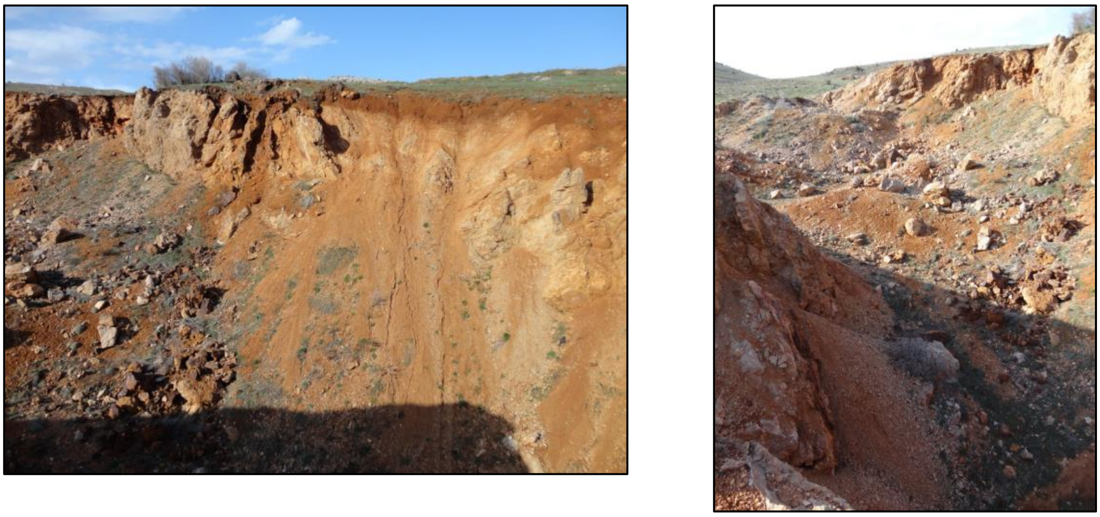


Figure 12-3
Extent of surface workings at Meselik and Kukuk-Tenecik

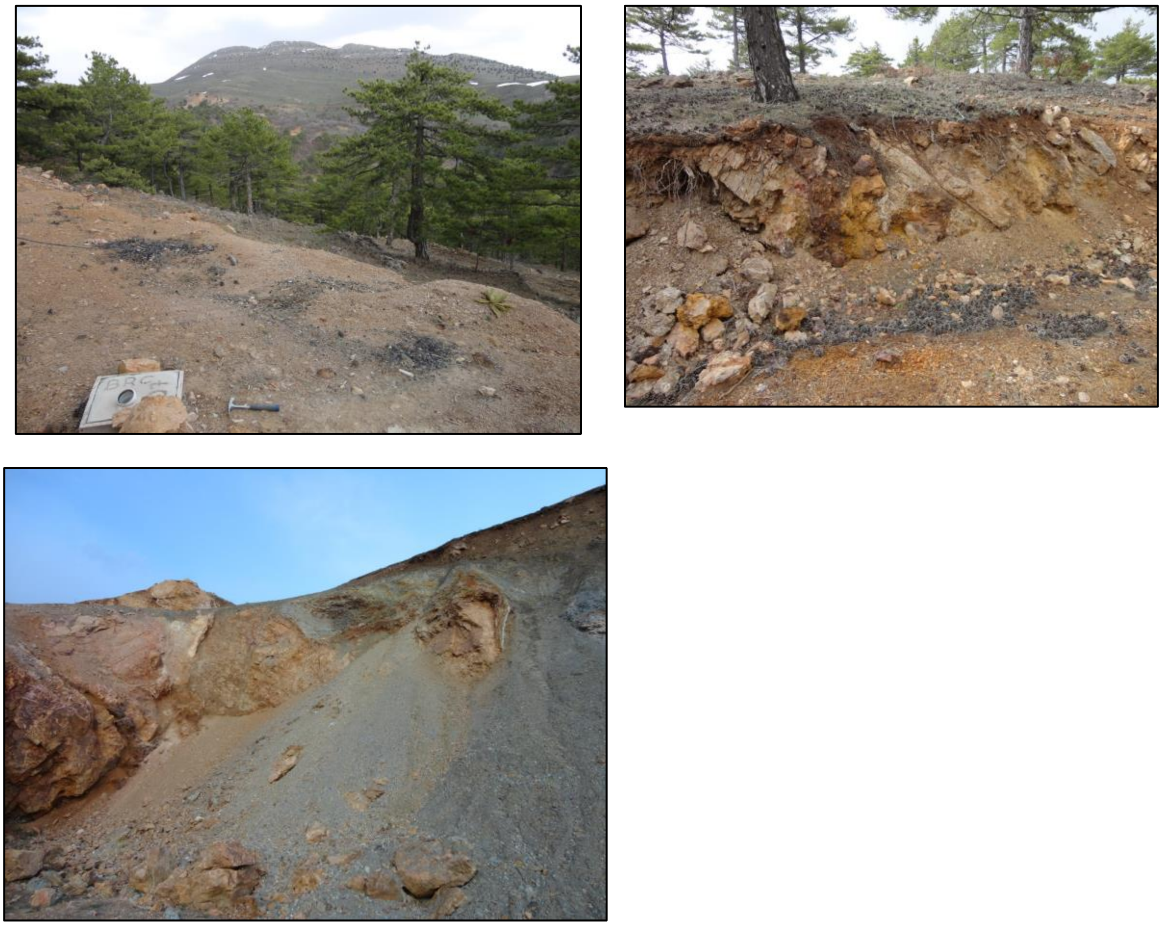


Figure 12-4
Drillhole collars at Akçal and Meselik

Figure 12-5
Field office and storage of drill core and RC chip trays at Akçal village. RC coarse rejects discarded at the Akçal prospect.

Figure 12-6
Oxidised zinc mineralization in drillholes AKD-007 and AKD-014.

Data pertaining to exploration carried out by the Yamas/Silvermet JV between 2006 and 2009 were provided to MSA by RCR, in electronic format. These data comprised the following:

- Drillhole collar data for 168 holes (21 diamond core holes and 147 RC holes)
- Summary lithology data for all drillholes

- Geological logs including XRF Spectrum results for RC holes BRC-036 to BRC-141. Only summary lithology data are available for RC holes BRC-001 to BRC-035.
- Sampling and assay data for 5 474 samples
- Sampling and multi-element results for 152 rock chip samples
- Sampling and multi-element results for 3293 soil geochemical samples
- Multi-element results for all RC and core samples batches as ALS Chemex certificates in PDF format and as CSV files
- MS Excel spreadsheets indicating the location and type of quality control samples (standards, blanks and duplicates) inserted into the samples stream
- MS Excel examples of daily drill reports
- Numerous MapInfo files for drillholes, lithology, faults, gossan outcrops, projected Mineralization outlines, IP profiles and anomalies, workings/pits, dumps, adits, shafts, elevation contours, roads and streams
- Data compilation plans for each of the zinc prospects
- Various reports as listed in Section 20

The following data are not available:

- Downhole survey data (downhole surveys were not undertaken)
- Density data (density determinations were not carried out by YAMAS)
- Sample recoveries for the RC holes

Random verification checks were done comparing assay results reported on ALS Chemex laboratory certificates with assay data in the project database. No discrepancies were noted.

An assay verification program was conducted by sorting the results by zinc grade and selecting 10% of the 1 361 samples containing >/= 0.10% Zn. A list of 137 samples was provided to YAMAS; however only 111 samples could be found out of all the original assay pulps stored at YAMAS.

The check assay batch comprising 111 assay pulps, seven certified reference materials (AMIS0144; AMIS0145 and AMIS0152) and two certified blank samples was submitted to the ALS Chemex laboratory in Izmir, Turkey on 13 May 2011. The samples were analysed by ALS Chemex in Vancouver for 33 elements (including zinc) using a four acid digest and ICP-AES finish (method code ME-ICP61) and for ore-grade zinc by four acid digest and ICP finish (method code ME-OG62). Results reported on 1 June 2011. Comparison of check assay original assay results for Zn, Pb, Ag and Fe were carried out and are shown correlation plots in Figure 12-7 to Figure 12-10. A good correlation is observed in the case of each of these elements. The results for certified reference materials and blank samples submitted as part of the check assay batch are shown as control charts in Figure 12-11. As these reference materials are not certified for lead and silver, plots for these elements are not shown. The results for Zn and Fe fall within the certified limits.

Figure 12-7
Correlation and percentage relative difference plots for zinc

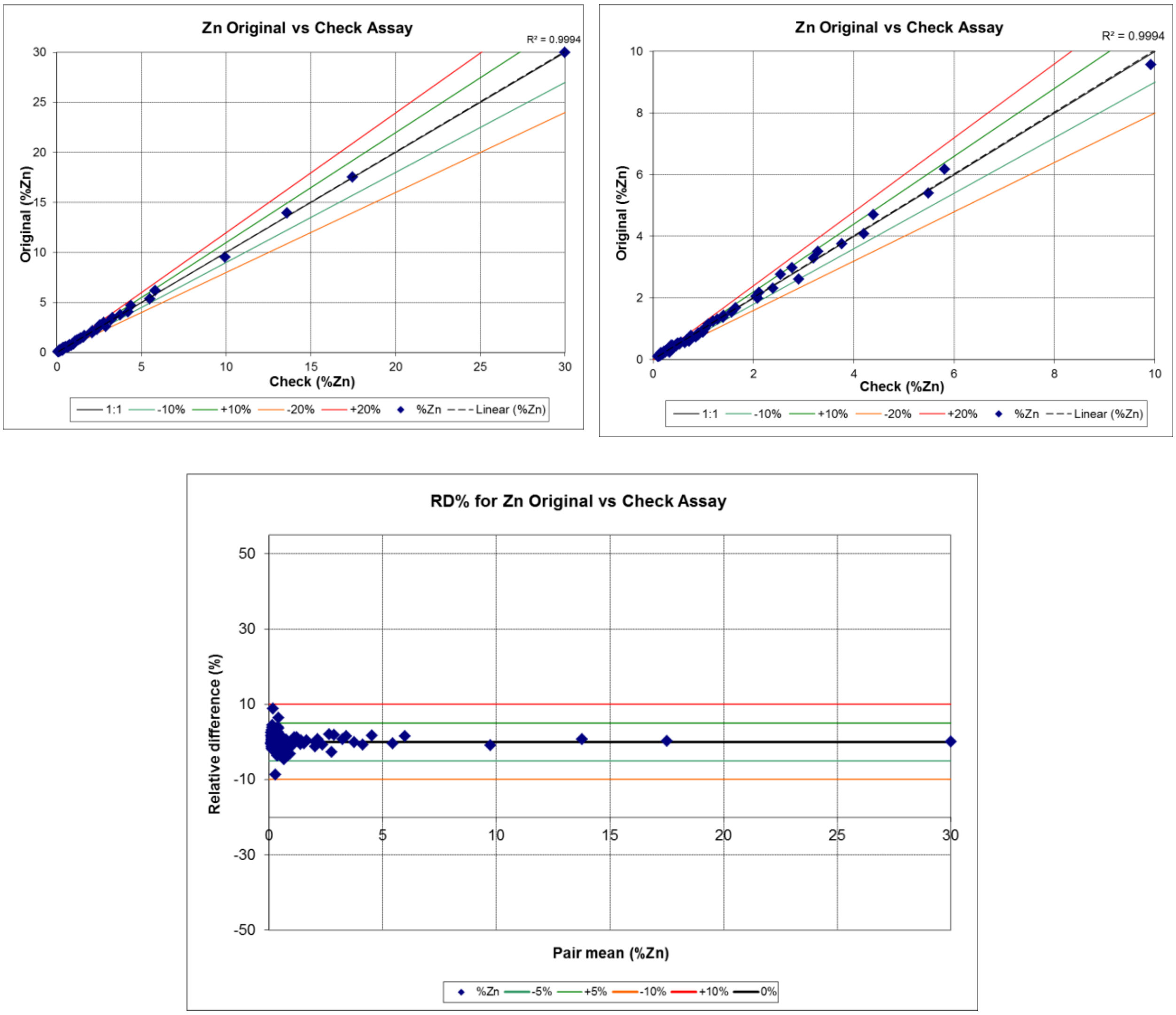


Figure 12-8

Correlation and percentage relative difference plots for lead

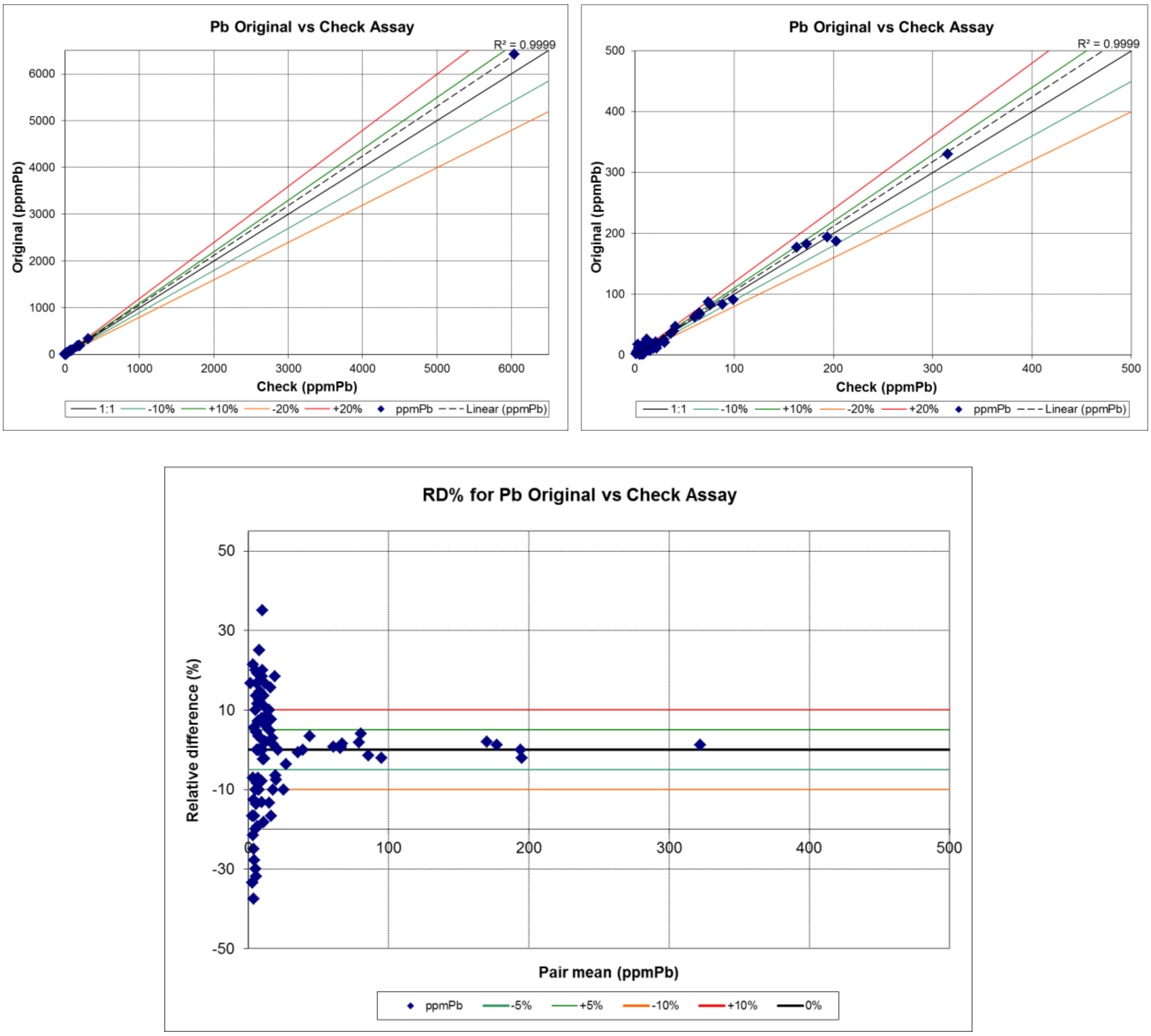


Figure 12-9
Correlation and percentage relative difference plots for silver

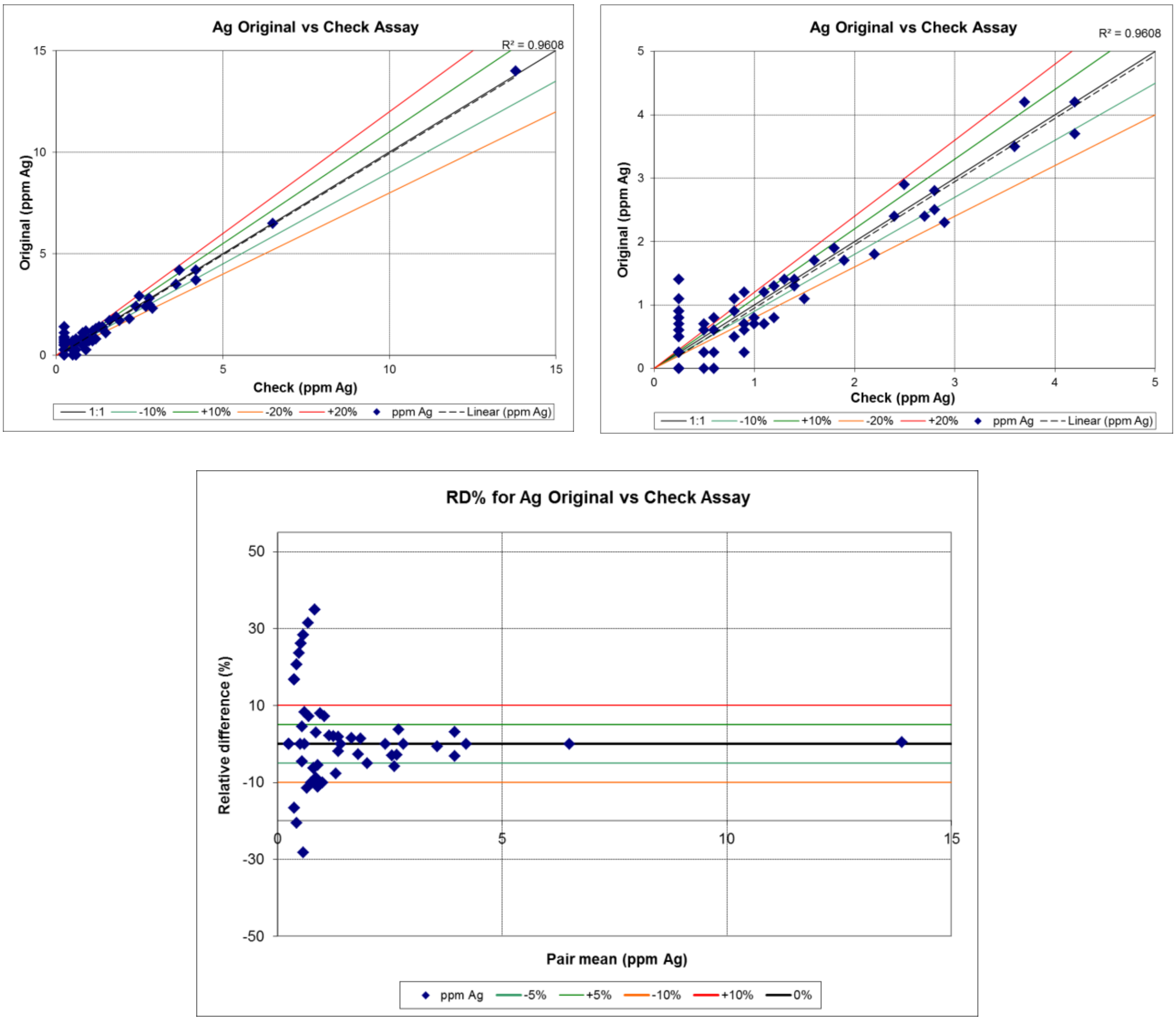


Figure 12-10

Correlation and percentage relative difference plots for iron

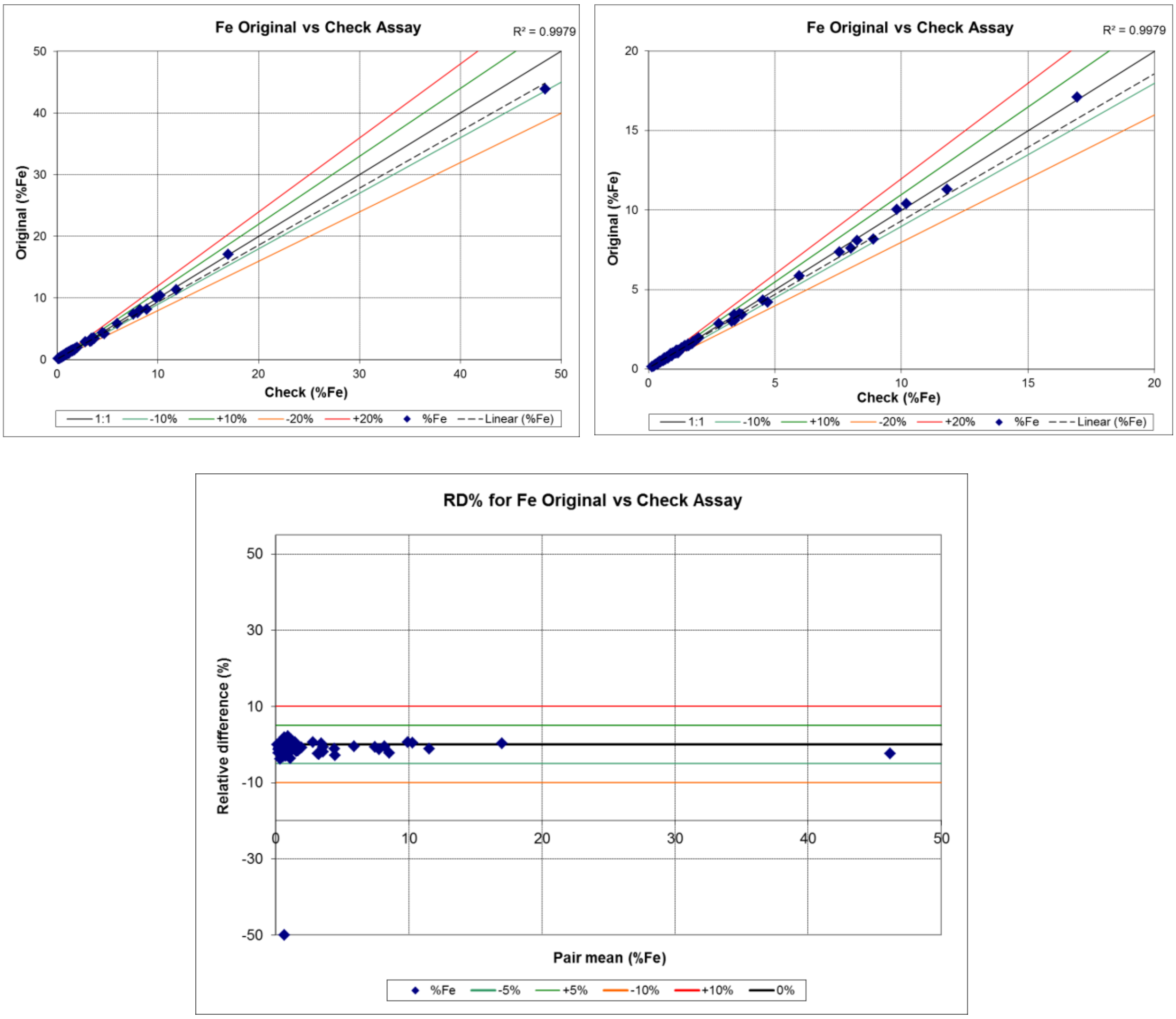
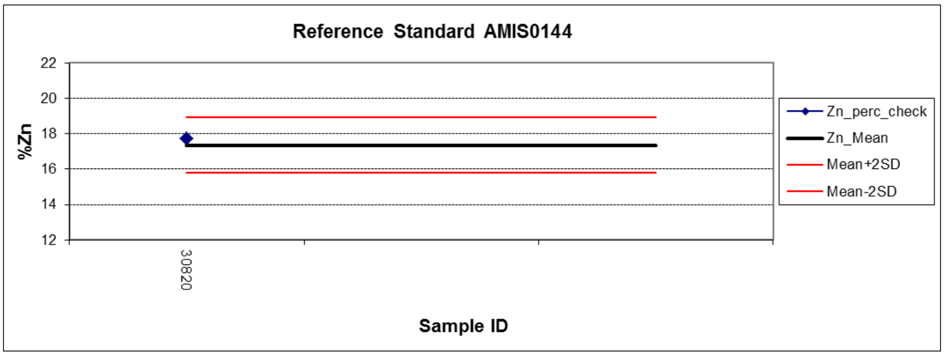
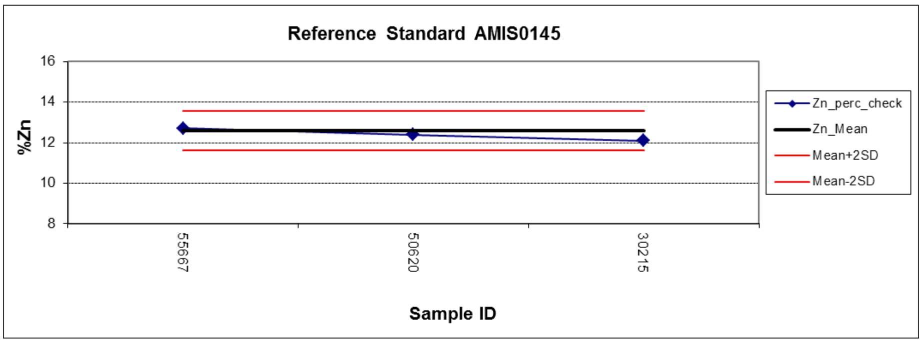
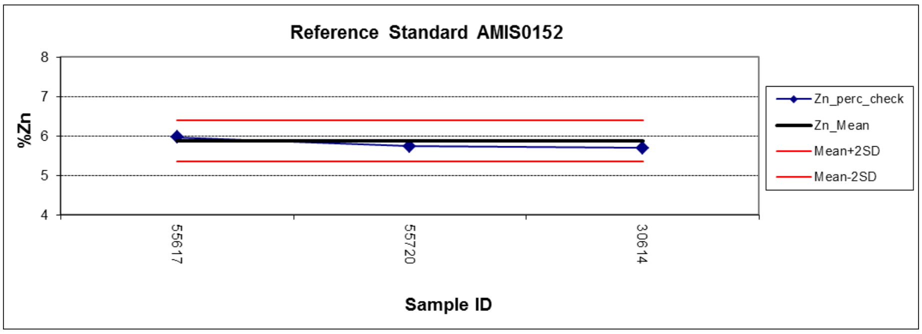


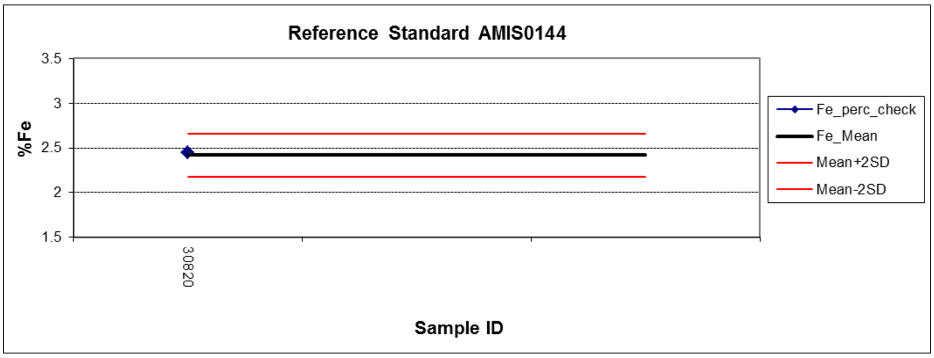
Figure 12-11

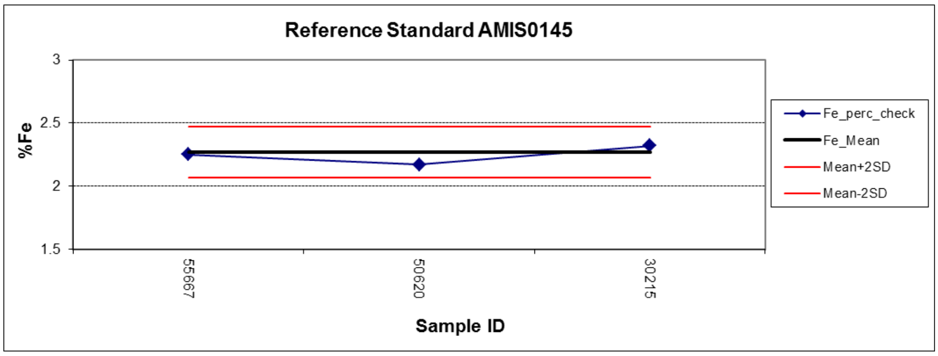
Control charts for certified reference samples and blank samples

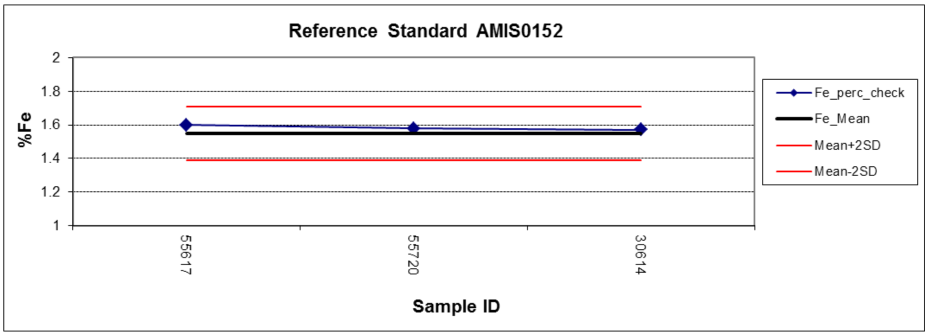


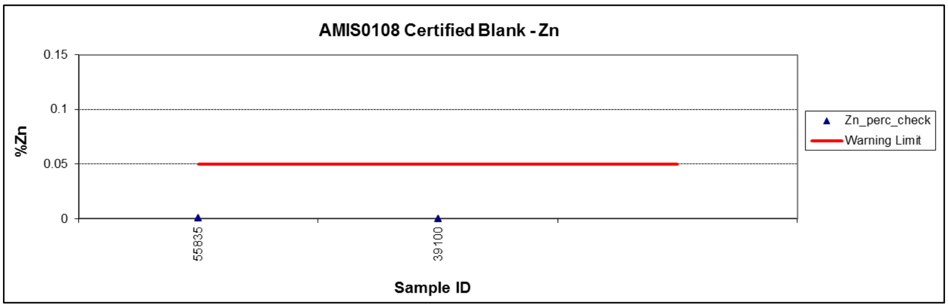












Diamond drilling was only undertaken on the Akçal prospect and the majority of these holes are poorly mineralised. For the purposes of relogging and resampling, three of the better mineralised holes were selected (AKD-007; AKD-014 and AKD-021). Relogging of these holes confirmed the original lithological logging. Check sampling of quarter core was undertaken by MSA, while honouring the original sample lengths as far as possible. The check samples were submitted to ALS Chemex in Izmir for sample preparation and chemical analyses conducted ALS Chemex in Vancouver using the same methods as per the check assays on the pulps. The results for Zn, Pb, Ag and Fe compare well with the original assays as shown by the comparison in Table 12-1.

Table 12-1
Comparative results of resampling on selected Akçal diamond drillholes

Drillhole	Original Sampling								Quarter Core Resampling							
	SampleNo	From	To	Interval	Zn %	Pb ppm	Ag ppm	Fe %	SampleNo	From	To	Interval	Zn %	Pb ppm	Ag ppm	Fe %
AKD-014	34595	2.0	4.5	2.5	3.83	24	3.3	4.53	K4001	2.5	4.5	2.0	3.12	105	8.0	19.3
AKD-014	34596	4.5	6.5	2.0	1.39	68	0.7	24.80	K4002	4.5	6.5	2.0	1.44	73	1.0	23.4
AKD-021	34885	0.0	2.5	2.5	0.00	1260	0.7	1.09	K4003	0.0	2.5	2.5	1.24	543	1.1	0.99
AKD-021	34886	2.5	4.5	2.0	0.63	231	0.0	0.17	K4004	2.5	4.5	2.0	0.74	217	0.6	0.29
AKD-021	34887	4.5	6.5	2.0	0.29	134	0.5	0.25	K4005	4.5	6.5	2.0	0.29	121	1.2	0.24
AKD-021	34888	6.5	8.5	2.0	0.13	79	0.8	0.19	K4006	6.5	8.5	2.0	0.12	68	1.5	0.24
AKD-007	34259	14.0	18.0	4.0	1.47	290	1.5	41.70	K4008	14.0	15.0	1.0	0.05	10	1.0	0.53
									K4009	15.0	18.0	3.0	2.00	461	1.9	>50
AKD-007	34261	18.0	21.0	3.0	1.99	491	5.5	35.50	K4010	18.0	19.8	1.8	2.82	734	8.4	>50
									K4011	19.8	21.0	1.2	0.89	183	2.6	7.68

As no density determinations were originally carried out by the YAMAS/Silvermet JV, density measurements were carried out using the immersion method on representative samples from the same intervals selected for resampling. These results are shown in Table 12-2.

Table 12-2
Results of density determinations on core samples

Drillhole	From	To	Dry Weight	Wet Weight	Density	%Zn
AKD014	2.50	4.50	118.2	74.6	2.71	3.12
AKD014	2.50	4.50	98.5	58	2.43	3.12
AKD014	4.50	6.50	1057.9	717.8	3.11	1.44
AKD014	4.50	6.50	370.2	230.1	2.64	1.44
AKD021	0.00	2.50	270.2	176.3	2.88	1.24
AKD021	0.00	2.50	1047.6	675.5	2.82	1.24
AKD021	2.50	4.50	695.4	446.4	2.79	0.74
AKD021	4.50	6.50	518.2	332.3	2.79	0.29
AKD007	15.00	18.00	355.8	241	3.10	2.00
AKD007	15.00	18.00	346.8	229.1	2.95	2.00
AKD007	18.00	19.80	476.7	325.1	3.14	2.82

The results from the check assay program and relogging of selected drillholes confirm historical results and indicate adeuqate confidence in the historical data. In the opinion of the QP, the historical data are acceptable for use in a mineral resource estimate.

It is noted that lead and silver grades are very low, with a maximum of 0.97% Pb and only 54 sample returning >5ppm Ag. However the iron content is lower than that of the HZP with 58 samples reporting >10% Fe and only 18 samples reporting >20% Fe.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Previous Metallurgical Testwork at Tufanbeyli

Six samples of zinc carbonate mineralization were collected by YAMAS in 2006 from the Akçal, Belbaşi and Katarasi deposits for metallurgical testwork by SGS Lakefield Research (SGS). The results of this work are described in Counsell (2007). Chemical analyses of these samples were conducted at the Kayseri smelter and at SGS with comparative results shown in Table 13-1.

Table 13-1
Samples collected by YAMAS in 2006 for metallurgical testwork

Source	Quantity	X_UTM*	Y_UTM*	% Zn (Kayseri)	% Zn (SGS Lakefield)	
					QEM	Chemical
Akçal	4 kg	265 767	4 230 358	46.31	47.4	46.1
Akçal	4 kg	265 757	4 230 292	11.27	18.6	19.6
Akçal	4 kg	265 714	4 230 050	37.84	44.1	43.2
Belbaşi	4 kg	267 560	4 232 440	39.23	35.3	37.4
Belbaşi	4 kg	267 580	4 232 660	13.00	9.1	8.6
Katarasi	4 kg	267 703	4 235 756	38.16	34.7	36.0

**UTM Zone 37N, datum EUR79*

Mineralogical investigation was undertaken to determine the amenability to reject gangue minerals using heavy media separation. The objective of the metallurgical testwork was to complete bench-scale heavy media separation tests to determine whether or not the mineralization was amenable to heavy media separation.

Mineralogical work comprised QEMScan analysis of polished section samples, X-Ray diffraction, and chemical assay. The dominant mineral is smithsonite, with subordinate hemimorphite and trace amounts of zincite and sphalerite. The dominant gangue mineral is dolomite, with minor calcite, barite, siderite, goethite and hematite.

Bench-scale heavy liquid separation on two of the samples was carried out by crushing the sample to ¼ inch, screening out fines (<20 mesh) and completion of heavy media float tests at media specific gravities of 2.7, 2.9 and 3.15 on the ¼ inch and +20 mesh fraction. Results indicated that heavy media separation can remove a high percentage (80% to 90%) of the non-zinc bearing carbonate leaving a higher grade fraction that could be further processed (Table 13-2). These results are reflective of laboratory bench scale test work and should not be considered indicative of industrial scale applications.

Sink-float technology has been in use in the MVT zinc-lead district in the United States for over a century, where low grade run of mine crushed material is put through a heavy media (ferro-silicon) sink-float circuit and a significant percentage of waste rock removed prior to the grinding and concentrator circuits (George, 2006). This has the effect of decreasing the amount of material into the crushing and grinding circuits, significantly increasing the grade of the material delivered to the flotation circuit, improved recoveries and overall economics.

Table 13-2
Summary of SGS Lakefield Research Sink-Float Test Work

	Sample TA-2			Sample TA-5		
	Weight %	% Zn	% of Total Zinc	Weight %	% Zn	% of Total Zinc
3.15 Sink	40.1	32.4	66.7	19.9	27.0	55.6
3.15 Float	25.3	4.1	5.4	50.4	2.4	12.4
Fines	34.6	15.7	27.9	29.7	10.4	32.0
Calculated head grade	100.0	19.5	100.0	100.0	9.7	100.0
Total of sink + fines	74.7	24.7	94.6	49.6	17.1	87.6
Weight % dolomite from QEMScan	30.9			55.2		
Percentage dolomite floated	82%			91%		

Preliminary mineralogical and metallurgical testwork carried out by SGS Lakefield Research concluded that heavy media separation is a viable process to remove waste dolomite from zinc carbonate mineralization. Order of magnitude operating costs provided by SNC Lavelin, based on the Çinkom Zinc-Lead Metal Industry Inc. (Çinkom) operations at Kayseri indicated at the time (2006) that the reduction in the carbonate waste component in the feed to a Waelz kiln could significantly reduce operating costs.

The conclusions of the SGS testwork were as follows (Counsell, 2007):

- Laboratory tests were carried out using heavy liquid separation. An industrial scale plant would use a dense medium, a fine suspension of ferro-silicate in water. These types of laboratory test are good at duplicating industrial performance.
- The results show that heavy liquid separation is a very effective method of upgrading the non-sulphide zinc material prior to treatment in a kiln. Material with a grade of only 4% Zn can be upgraded to nearly 15% and material of a grade just above 6% can be upgraded to 20%.
- The results can be used in evaluating the project and to determine a cut-off grade.

13.2 RCR Metallurgical Testwork at Tufanbeyli

RCR has conducted metallurgical testwork on sample material from Tufanbeyli, which has demonstrated the viability of gravity concentration of ore minerals (Plasktitt, 2013 (1) and (2)). The latter reports have been reviewed and their content approved for insertion into this report by the metallurgical QP, Mr. E. Meyer. His summary of this data is included as Appendix 5.

13.2.1 Source of the material

Twenty-five small stockpiles of zinc-bearing material, consisting of approximately 25 tonnes each were sampled after homogenisation and splitting. Twenty-five kilograms were selected from each of the stockpiles. The stockpile material was reportedly sourced from several of the known zinc mineralization occurrences across the Tufanbeyli workings and was considered to represent the area as a whole at the time of collection. Pits observed, being the source of the stockpiles, ranged from 4 m to 8 m in depth.

13.2.2 Testwork undertaken

A subsample of 10 kg from each 25 kg was re-homogenised and analysed for Zn, Fe, Pb, Ca, Mg, Si, Al, Ba, Cd, Cu, Cr and Ni. The general character of the material was granular, containing a low proportion of fines of less than 2 mm, suggesting its likely amenability to gravimetric upgrading. Following analysis, the samples were divided into five main groups, as shown in Table 13-3.

Table 13-3
Sample summary of Tufanbeyli material

Group	Samples	Zn%	Ca%	Mg%	Si%	Fe%	Ba%	Al%	Cd%	Notes
1	1-16	6.4	12.1	1.8	12.5	7.8	0.1	3.1	0.4	Average of 16 samples
2	17-20	9.3	11.4	1.6	12.7	5.6	-	2.8	-	Average of 4 samples
3	21-22	25.8	3.9	0.5	7.3	4.5	0.1	1.5	0.5	Average of 2 samples
4	23-25	12.7	8.4	1.8	12.1	5.9	0.2	2.8	0.5	Average of 3 samples
5	26	7.0	11.7	1.7	13.7	4.5	0.1	3.0	0.4	
	27	8.1	10.9	1.6	14.3	4.1	0.1	2.7	0.3	

Notes:
Sample 26 was a composite made from samples 1 to 20 and averaged 7.0% Zn
Sample 27 was a composite made from samples 1 to 20 and averaged 8.1% Zn

13.2.3 Mineralogy of the samples

The average composition of the Tufanbeyli material tested is shown in Table 13-4.

Table 13-4
Summary composition of Tufanbeyli material tested by RCR

Mineral	Mineral %	Metal %
Smithsonite Hemi morphite	10 4	4.8%Zn 1.2%Zn
Goethite Hematite/magnetite	5 2	3.1%Fe 1.4%Fe
Silica Silicates	8 23	3.8%Si 10.3%Si
Calcite Magnesite Sphalarite Baryte Cerrucite/Galena Clay Cadmium	28 8 1.0 0.5 0.5 7 1,0	11.0%Ca 2.1%Mg 0.4%S 0.3%Ba 0.4%Pb 2.8%Al and 1.5%Si 0.7%Cd

Iron minerals included goethite (FeO(OH)), hematite and magnetite. Calcite was identified as discrete grains and also associated with magnesite (Mg CO_3). Approximately two-thirds of the Si is in the form of silicates and only one-third as free quartz. The clay content ranged from 5 to 7 % but these minerals were not observed to compact easily. Maximum levels of 1 to 2% sphalerite (ZnS) and galena (PbS) were detected. Baryte is a minor constituent. No Cd-bearing mineral was identified, although Cd was detected in the assays.

13.2.4 Laboratory upgrading results

Material was crushed to <12.5 mm and sink-float tests were conducted on 13 of the samples using feeds of between 1 and 3 kg. Tetra-bromo-ethane (TBE) was the dense media used for the testwork, with a density of 2.95 (at an ambient temperature of 25° C). The results of the up-grading testwork are shown in Table 13-5.

Table 13-5

Results of Tufanbeyli dense media separation upgrade tests

Test No		Mass (g)	Zn%	Pb %	Ca%	Mg%	Si%	Fe%	Ba%	Al%	Cd%	S%
1	Feed	600	6.4	0.5	12.1	1.8	12.5	7.8	0.1	3.1	0.4	-
	Product	221.1	14.4	0.3	6.9	1.0	6.4	16.5	0.1	0.9	0.3	0.8
2	Feed	2000	9.3	0.6	11.4	1.6	12.7	5.6	-	2.8	-	-
	Product	789	22.7	0.5	5.8	0.8	6.6	12.1	0.2	1.4	0.4	1.0
3	Feed	1000	25.8	0.5	3.9	0.5	7.3	4.5	0.1	1.5	0.6	0.9
	Product	Material not upgraded due to Zn being too high										
4	Feed	2000	12.7	0.4	8.4	1.8	12.1	5.9	0.2	2.8	0.5	1.1
	Product	868	26.7	0.3	4.0	0.5	6.1	10.8	0.2	1.3	0.4	0.9
5.1	Feed	3000	7.0	0.4	11.7	1.7	13.7	4.5	0.1	3.0	0.4	0.6
	Product	996	16.9	0.3	6.7	0.4	7.5	11.0	0.1	1.4	0.3	0.5
5.2	Feed	3004	8.1	0.4	10.9	1.6	14.3	4.1	0.1	2.7	0.3	0.7
	Product	1023	201.	0.4	5.6	0.6	7.1	9.6	-	1.1	0.3	0.6

13.2.5 Discussion of results

Test 5.1 showed that a product of 16.9% Zn could be produced by gravimetric upgrading. Test 5.2 showed that a feed of approximately 8% Zn (and Fe at 4.1%) is required to yield a product of approximately 20% Zn, with a Fe content of less than 10%.

The low Fe content and a lower proportion of fines (<2 mm material) at Tufanbeyli has suggested there to be potential for blending with material from RCR's Hakkari project, as shown in Table 13-6. The Tufanbeyli data are a combination from the testwork shown in Table 13-5.

Table 13-6

Comparison between Tufanbeyli and Hakkari concentrates

Project Area	Zn%	Pb %	Ca%	Mg%	Si%	Fe%	Al%	Cd%
Tufanbeyli	20.1	0.4	6.0	1.0	7.0	10.0	1.5	0.5
Hakkari	24.0	5.0	2.5	0.5	2.3	17.0	-	-

The conclusions of Meyer (2013), following the review of the work by Plaskitt, are as follows:

- Pre-treatment should consist of gravimetric up-grading technology. Dense media separation tests conducted in the RSA strongly recommends the usage of DMS. Other gravimetric up-grading means (cones, spirals etc.) can also be considered.
- The up-graded Tufanbeyli zinc-bearing material should be suitable for further processing by hydro and/ or pyro-metallurgical means. Historical treatment routes viz. Waelz kiln treatment would still be suitable.

14 MINERAL RESOURCE ESTIMATES

No previous Mineral Resource estimates have been undertaken at Tufanbeyli. This report declares a maiden Mineral Resource estimate for five mineralised zones along a seven kilometer strike length of anomalous zinc in soils, corresponding with a distinct stratigraphic horizon of reef-facies limestone (in part, dolomitised).

The Mineral Resource estimate is based on historic borehole data, surface expressions of mineralization, underground exposures and induced polarisation (IP) survey data. In addition, MSA undertook assay QAQC analysis of a subset of pulps selected from previous exploration. As detailed in Section 12 of this report, the satisfactory results from this exercise, together with the results from QAQC undertaken by YAMAS at the time and reported on in Section 11, are considered justification for using the historical database for the current Mineral Resource estimates.

14.1 Assumptions, Methods and Parameters for the 2011 Mineral Resource Estimates

The methodology, assumptions and process for preparation of the mineral resource estimations are discussed under the following sections:

- Input Database Validation and Preparation
- Geological interpretation and modelling
- Block model creation
- Assay data compositing
- Exploratory Data Analysis ("EDA"), per reef constituent, including length
- Variogram modelling and fitting
- Estimation parameters
- Grade estimation
- Validation
- Factors considered for classification of resources.

14.1.1 Input Data Validation and preparation

MSA was provided with a single Excel spreadsheet of drillhole data, comprising the essential collar, geology, assay and sampling data for use in geological modelling. MSA undertook checks and verifications of data integrity using Datamine and Geosoft software routines as well as visual checks against graphical plots of drillholes and surface exploration features. MSA also converted all available GIS data from Mapinfo to ArcGIS.

A total of 12 697.70 m of drilling data in both diamond- and RC boreholes were included, in 168 boreholes (Table 14-1).

Table 14-1 Drilling data provided for Tufanbeyli				
Prospect	**Reverse circulation**	**Metres**	**Diamond drilling**	**Metres**
	No. of Boreholes		**No. of Boreholes**	
Akçal	**31**	**1953**	**21**	**1895.20**
Asfaltkenari	**6**	**326**	**-**	**-**
Belbaşi	**34**	**3290**	**-**	**-**
Camlik	**22**	**1698**	**-**	**-**
Katarasi	**6**	**547.5**	**-**	**-**
Kucuktecnecik	**23**	**1593**	**-**	**-**
Meselik	**21**	**1220**	**-**	**-**
Ortaoluk	**4**	**175**		
Total	**147***	**10 802.5**	**21**	**1895.2**

- *Includes 6 holes that were re-drilled*

Azimuths and dips for each borehole were supplied but no downhole survey data was available for any boreholes. All boreholes are limited in depth and as such are not considered to have deviated significantly from their collar azimuths and dips. Visual comparisons with plans confirmed the borehole azimuths were oriented against true north.

Bulk density data was limited to a selection of 11 readings at varying Zn contents of between 0.29% and 3.12%. Average bulk densities were applied to the block models according to Zn% from this small data set.

14.2 Geological Interpretation and Modelling

The geological logging data was not considered sufficiently detailed enough to build up a lithologically-based geological model. The drilling pattern is irregular which precluded the generation of parallel sectional interpretations. Mineralization envelopes were generated in plan view covering the extensive surface occurrences and the extent of known mineralization. These envelopes were draped onto the topographic surface and copied downwards and off-set to the east, being the direction of the regional dip, to form a shell within which each zone was estimated.

For each zone, it was observed that there are either a shallowly-east dipping trend to the mineralization and, or a steeply-dipping modification to this, interpreted to represent a structurally controlled component. Some zones show evidence for a combination of these, based on the search ellipse orientation derived from the geostatistical analysis. These features are consistent with the empirical Mississippi Valley Type (MVT) mineralization model (see Figure 8-2).

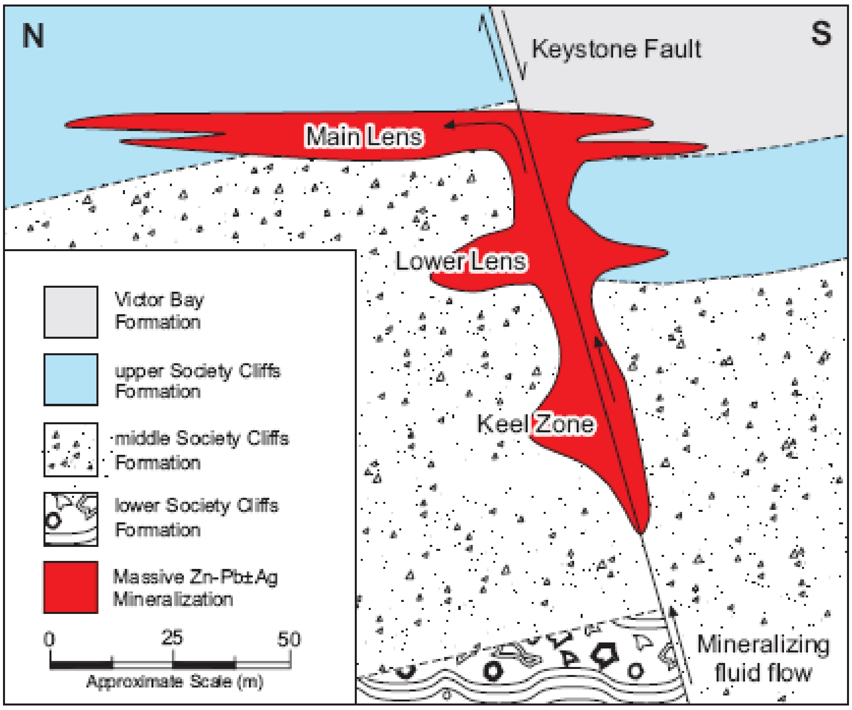
Such deposits occur in clusters, of a few, up to hundreds of individual (originally) sulphide bodies, of varying shape and character, which may often be inter-connected. Each of the bodies may either be massive replacement zones, open-space fillings of breccias and, or fractures, or as disseminated crystal masses in pore spaces in the host rock. Such bodies in breccias are often aligned along zones of inherent tectonic weakness. The mineralised zones are usually tabular with cross-cuttings and structurally related overprinting and modifications to give, as already noted above, an overall pattern of discordance on an individual deposit scale but a stratabound nature on a regional scale. It is also an MVT characteristic that deposits are irregular and variable in shape which detracts from the confidence in extrapolating zones along strike and down-dip (Figure 14-1). This is the character observed from the distribution and attitude of mineralised zones at Tufanbeyli and as such, each occurrence cannot be linked to the next with any degree of confidence, especially across areas devoid of drilling control.

The geological modelling employed at Tufanbeyli does however allow for encompassing the broad arrangement of these deposits within a strike-persistent zone. It is noted that there are extensive underground workings along the strike of these deposits, particularly at Akçal. Together with the documented and authenticated mining records, this provides further confidence in the strike-persistence of the mineralized zones.

For the purposes of this exercise, five zones have been modelled as discrete blocks, namely: Akçal (split into two bodies separated by an east-west trending fault), Belbaşi, Camlik, Kucuk-Teknecik and Meselik. It is considered that there is currently insufficient geological control to model the Asfaltkenari, Katarasi and Ortaoluk prospects, due to the erratically-distributed drilling data specific to these occurrences.

Each mineralization block was terminated along strike 50 m beyond the mineralized intersection point of the last borehole assigned to that block. In addition, each mineralization block was extended downwards by an additional 10% of the deepest borehole intersection depth for the respective block, which total vertical extent then varied from 100 m (Meselik) to 170 m (Akçal) below surface.

Figure 14-1
Schematic of a Typical MVT Zone Morphology (Paradis *et al*, 1999)



An east-west fault has been invoked for the Akçal deposit, due to the apparent plan-view offset between the two interpreted zones on maps supplied by RCR. No other faults were modelled. Confidence in the extending each zone along strike was aided by the supplied IP anomaly traces as well as by the documented occurrence of gossans and pits on surface and underground mining development tunnels.

Datamine Studio 3 software was used for all three-dimensional geological modelling and for resource estimation. Snowden Supervisor software was used for the geostatistical analysis and univariate statistical analysis.

14.2.1 Block Model Creation

Each zone envelope was used to generate block models for each prospect area.

The common origin for all models is:	Easting (X):268 300
	Northing (Y): 4 235 200
	Elevation (Z): 1 500

Block size used was 50 m (easting) x 50 m (northing) x 1 m (the nominal Z block height). Sub-celling of the blocks was used in the east-west and north-south directions, creating 12.5 m by 12.5 m sub-blocks, to allow for some degree of block selectivity.

14.2.2 Input Data Exploratory Data Analysis

The drilling data from the supplied database was used for the exploratory data analysis (EDA). The Zn population data for each zone is shown below (Figure 14-2 to Figure 14-7). Data were converted to log-distributions for visualisation purposes only. Grade interpolation used true assay data.

Figure 14-2
Zn Population Distribution – Akçal South-West of Fault

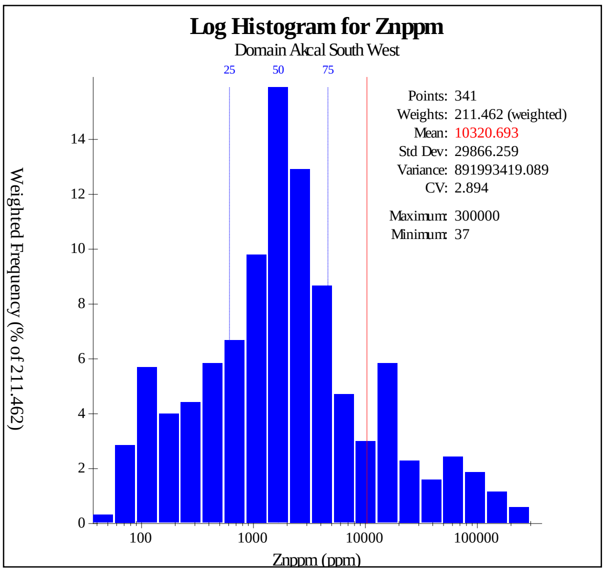


Figure 14-3
Zn Population Distribution – Akçal North-East of Fault

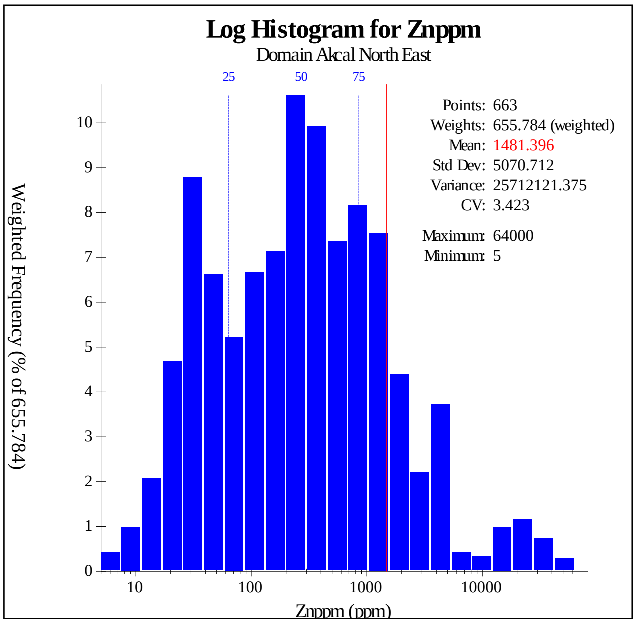


Figure 14-4
Zn Population Distribution – Belbaşi

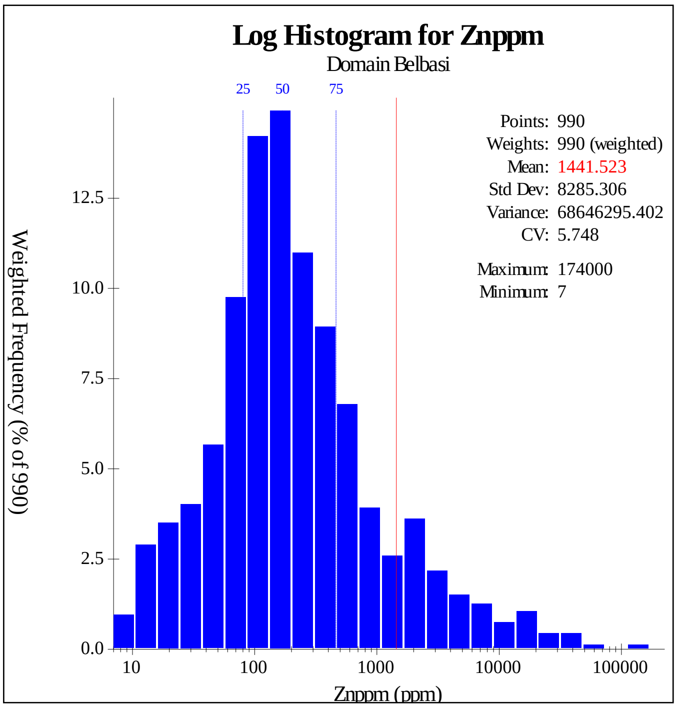


Figure 14-5
Zn Population Distribution – Zn Population Distribution – Camlik

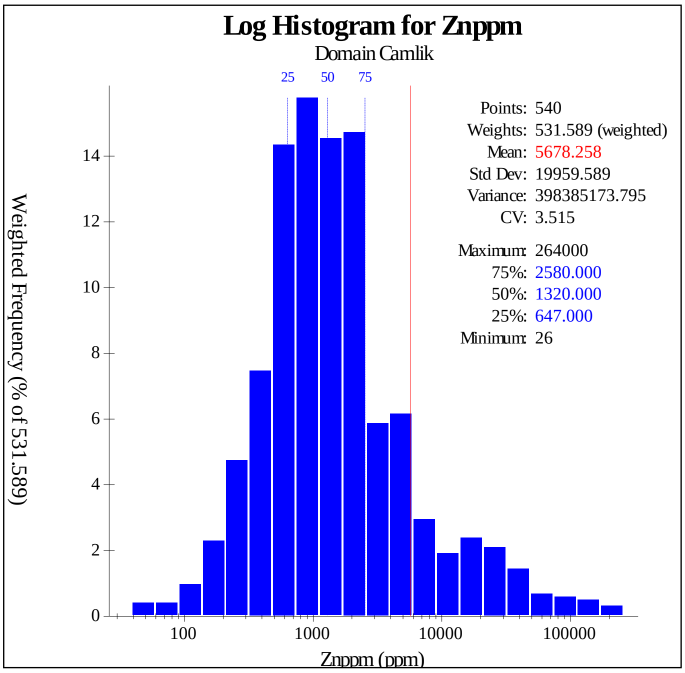


Figure 14-6

Zn Population Distribution – Kucuk Teknecik

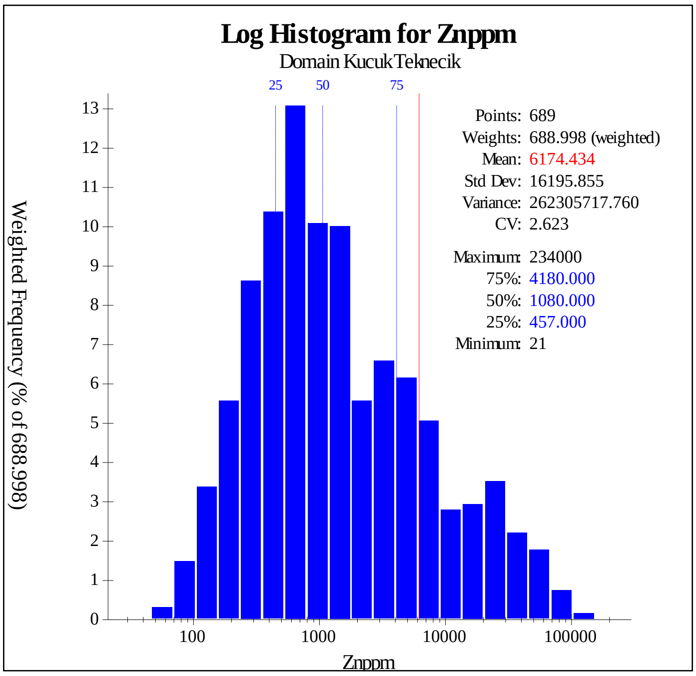
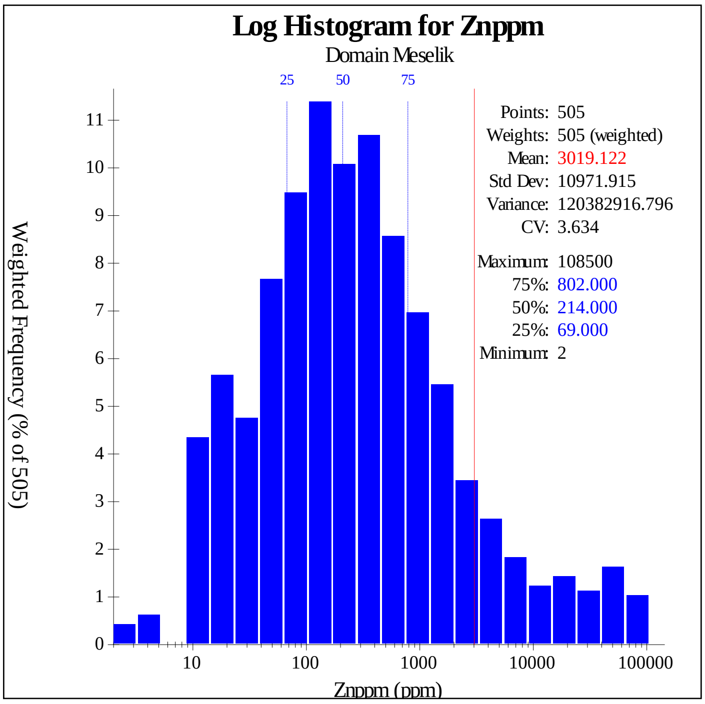


Figure 14-7

Zn Population Distribution – Meselik



The limited available bulk density data determined the following assignments to the block models (Table 14-2):

Table 14-2
Density Assignment

Zn Grade interval	Density Assignment	Based on No. of Samples	Description
<1%	2.79	2	(Porous) dolomite, not invaded by mineralization
≥1% and <2%	2.86	4	Some invasive mineralization
≥2% and <3%	3.06	3	Grade is low enough not to be massive and porous material
≥3%	2.57	2	Porous dolomite with massive, invasive mineralization and voids

14.2.3 Top Cutting and Top Capping

Following statistical analysis it was shown that there are only a few high grade samples and as such these are considered to only have limited effect on the grade estimation. No grade capping or cutting was applied.

14.2.4 Variography

Variographic analysis was undertaken on each of Zn, Pb and Ag in each of the mineralized blocks. Satisfactory variogram modelling was achieved for each element in each block. As noted above, the continuities and resultant search ellipse orientations highlighted both shallow-dipping (bedding) and steeply-dipping structural components for the mineralization.

14.2.5 Estimation Parameters and Grade estimation

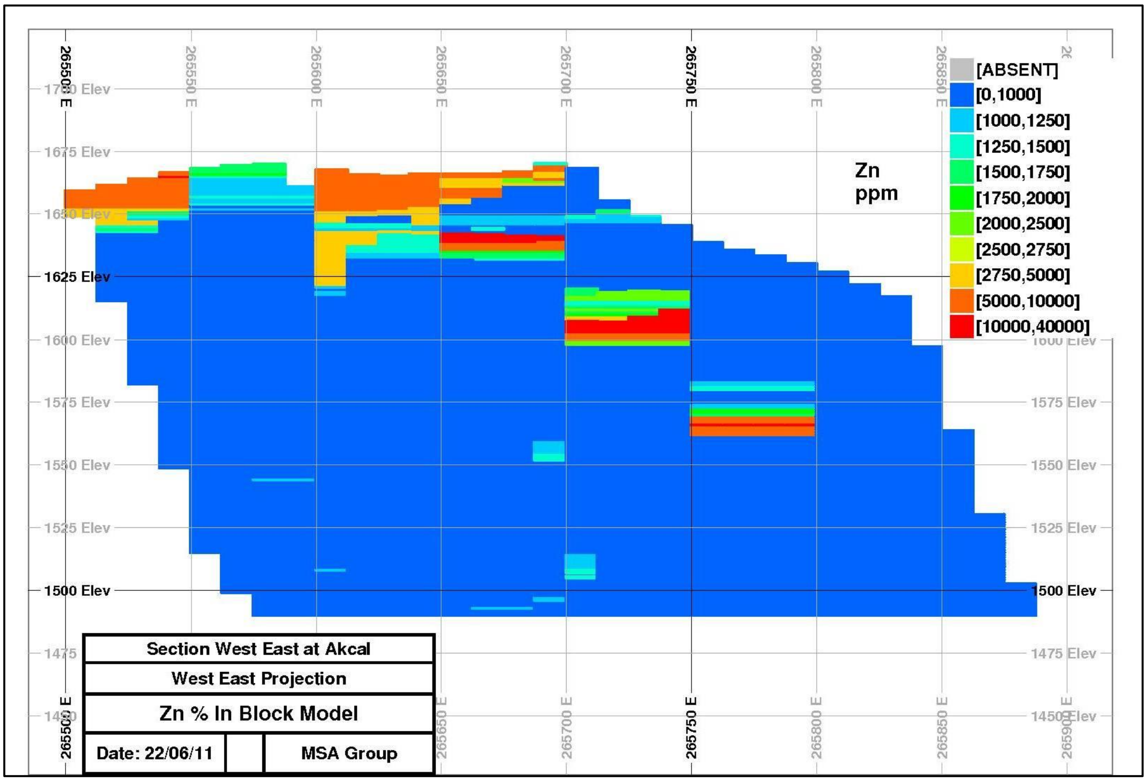
Ordinary Kriging (OK) was used to estimate grades into each of the zones.

A minimum of 2 and a maximum of 10 samples were used for an estimate. Parent cell estimation (50 m blocks) was applied to the sub-cells (12.5m blocks).

Checks were carried out on the resulting grades both as visual on-screen as well as statistical. Due to the manner of each zone's envelope construction and mainly due to the irregular depth penetration of the boreholes, there is no definitive average grade reconciliation between the input data and the block models. The block models were truncated at 100 m below surface for Meselik, 120 m for Akçal (southern section) and Camlik, 130m for Kucuk-Teknecik, 150 m for Belbaşi and at 170 m for the northern body at Akçal.

A west-east section through the southern part of the Akçal is shown in Figure 14-8, highlighting the down-dip extension to the east from the shallow-depth occurrences.

Figure 14-8
West-East Section through southern Açkal Block Model



14.2.6 Resource Classification

The resource classifications for Tufanbeyli are in accordance with the CIM Definition Standards - For Mineral Resources and Mineral Reserves (2010). The following is the definition of Inferred Mineral Resources, from that document:

> **"Inferred Mineral Resource**
>
> **An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes."**

The resources currently declared for Tufanbeyli are classified as Inferred, due to:

- The relatively low level of confidence defining specific geological controls to delineate the extent, continuity and morphology of the mineralization
- There are too few density data readings.

There is also a need to survey the abandoned underground workings in order to accurately determine the extent to which the zones have been depleted. A checklist for assessing the degree of compliance with CIM reporting guidelines is shown in Table 14-3.

14.3 Geological Losses

The resources are reported as in-situ and as such, no geological losses are applied. The tonnages removed during earlier mining, especially at Akçal are considered minor. A figure of 0.17% of the currently quoted resource has been calculated as lost to the voids due to this mining.

14.4 Resource Reporting

Inferred Mineral Resources at various Zn ppm cut-offs are shown in Table 14-4 to Table 14-9.

The combined mineral resources for all five zones, at a 0.5% Zn cut off are shown in Table 14-10. This cut off has been selected in cognisance of the ability to upgrade material based on metallurgical investigations as well as acknowledging that the current data quantity and distribution represents a relatively early stage of exploration and that there is potential to selectively identify higher grade areas within the currently defined > 0.5% Zn envelopes with infill drilling and sampling: A grade-tonnage curve for the combined mineral resources at Tufanbeyli is presented in Figure 14-9.

Table 14-3
Checklist for Resource Reporting

Criteria	Comment/Description
Drilling techniques	Reverse circulation and diamond drilling
Logging	All drillholes were geologically logged by qualified geologists. The logging was of an appropriate standard for grade estimation
Drill sample recovery	Recoveries are documented in borehole logs for the majority of the drillholes
Sampling methods	Percussion drilling chips and core samples were collected with a sample length of either 1 m or 2 m in RC holes and according to lithology in DD holes
Quality of assay data and laboratory tests	Based on the results of verification check assays arranged by MSA, the assay database displays adequate levels of precision and accuracy and meets the requirements for use in a Mineral Resource estimate
Verification of sampling and assaying	MSA has viewed internal assay data verification carried out by YAMAS which included assay QAQC samples submitted within their batches and have included this data graphically in this report. No anomalous trends were observed in these data. Independent assay QA/QC was carried out by MSA on a subset of selected pulps which supported the use of the historical data in Mineral resource estimation
Location and data points	All of the drillhole collars have been reportedly surveyed by a qualified surveyor using a differential GPS. No drillholes were downhole-surveyed as they are shallow depths and drill directions were accepted as laid-off for all drillholes
Tonnage factors (in situ bulk densities)	Only 11 density values were provided and these were interpolated into the block model, based on the estimated grade
Data density and distribution	Drillholes were collared to investigate continuations of the mineralization and not on a grid. The level of data density, over portions of the project area is sufficient to assume geological and grade continuity for an Inferred Mineral Resource estimate for this type of mineralization
Database integrity	Data were stored in Excel spreadsheets. MSA has checked the integrity of the database and considers that the database is an accurate representation of the original data collected
Dimension	The Mineral Resource occurs over a length of 7000 m north to south and 700 m east to west. It varies in thickness between 100 m and 200 m. The dips of the target area lithologies are 20 to 75 degrees to the east and north-east, as reported at Belbaşi. The Mineral Resource occurs from surface and has been constrained by a modelled envelopes representing each mineralized block or zone
Geological interpretation	There is adequate geological information to illustrate the persistence of a broad mineralized zone along the strike length encompassing the known deposits
Domains	The project area has been sub-divided into mineralized blocks or zones
Compositing	Drillhole samples were retained at the length intervals, as appearing in the database
Statistics and variography	Anisotropic variograms were used to model the spatial continuity
Top or bottom cuts for grades	Top cut analysis was completed that indicated that top cutting was not appropriate. No grade caps or cuts were applied
Data clustering	Drillholes were not drilled on a regular grid. There is also inconsistent depth of drilling but it has not lead to distributional anomalies
Block size	50 m N by 50 m E by 1 m RL three dimensional block models
Grade estimation	Metal grades were estimated using ordinary kriging. Grades were interpolated within a search ellipse representing the ranges of the anisotropic variograms
Resource classification	The classification incorporated the confidence in the drillhole data, the geological interpretation, data distribution, and variogram ranges. All blocks are Inferred due to the uncertainty regarding specific geological controls and the limited number of bulk density measurements
Cut-off grades	A range of cut-off grades has been selected for the purposes of resource illustration. A 0.5% Zn cut off has been selected as the illustrative base case, considering the results of metallurgical testwork on samples of the similar mineralization to that at Tufanbeyli
Mining cuts	No mining cuts have been applied
Metallurgical factors	Preliminary metallurgical results are available
Audits and reviews	The primary author carried out the following audit and review work: A review of the database against the Excel drillhole logs; a review of drill core and RC chip samples; and an assay verification program

Table 14-4
Inferred Mineral Resources at Tufanbeyli – Akçal South-West of the Fault

Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	Ag ppm
0.5	1.42	2.78	2.47	0.005	2.33
1.0	0.73	2.78	4.15	0.005	2.35
1.5	0.58	2.76	4.86	0.005	2.71
2.0	0.42	2.72	6.03	0.005	3.37
2.5	0.34	2.64	6.88	0.005	2.44
3.0	0.29	2.57	7.58	0.005	2.63
3.5	0.22	2.57	9.15	0.006	3.15

Table 14-5
Inferred Mineral Resources at Tufanbeyli – Akçal North-East of the Fault

Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	Ag ppm
0.0	29.45	2.79	0.11	0.004	0.97
0.5	1.46	2.82	1.01	0.013	1.08
1.0	0.66	2.86	1.31	0.014	0.99
1.5	0.12	2.88	1.90	0.017	1.04
0.5	0.78	2.84	1.27	0.002	0.73
1.0	0.50	2.86	1.55	0.002	0.77
1.5	0.18	2.87	2.07	0.003	0.81
2.0	0.06	2.90	2.81	0.001	0.60
2.5	0.03	2.77	3.29	0.001	0.60

Table 14-6
Inferred Mineral Resources at Tufanbeyli – Belbaşi

Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	Ag ppm
0.0	15.89	2.79	0.17	0.002	0.66
0.5	1.10	2.80	1.82	0.001	0.89
1.0	0.64	2.80	2.63	0.001	0.98
1.5	0.40	2.77	3.44	0.001	0.65
2.0	0.29	2.73	4.16	0.001	0.60
2.5	0.23	2.64	4.70	0.001	0.61

Table 14-7
Inferred Mineral Resources at Tufanbeyli – Camlik

Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	
0.0	8.14	2.80	0.35	0.002	1.25
0.5	1.00	2.85	1.74	0.003	2.54
1.0	0.70	2.88	2.19	0.003	2.86
1.5	0.42	2.89	2.82	0.004	3.31
2.0	0.28	2.91	3.38	0.004	4.18

Table 14-8
Inferred Mineral Resources at Tufanbeyli – Kucuk-Teknecik

Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	
0.5	0.78	2.84	1.27	0.002	0.73
1.0	0.50	2.86	1.55	0.002	0.77
1.5	0.18	2.87	2.07	0.003	0.81

Table 14-9
Inferred Mineral Resources at Tufanbeyli – Meselik

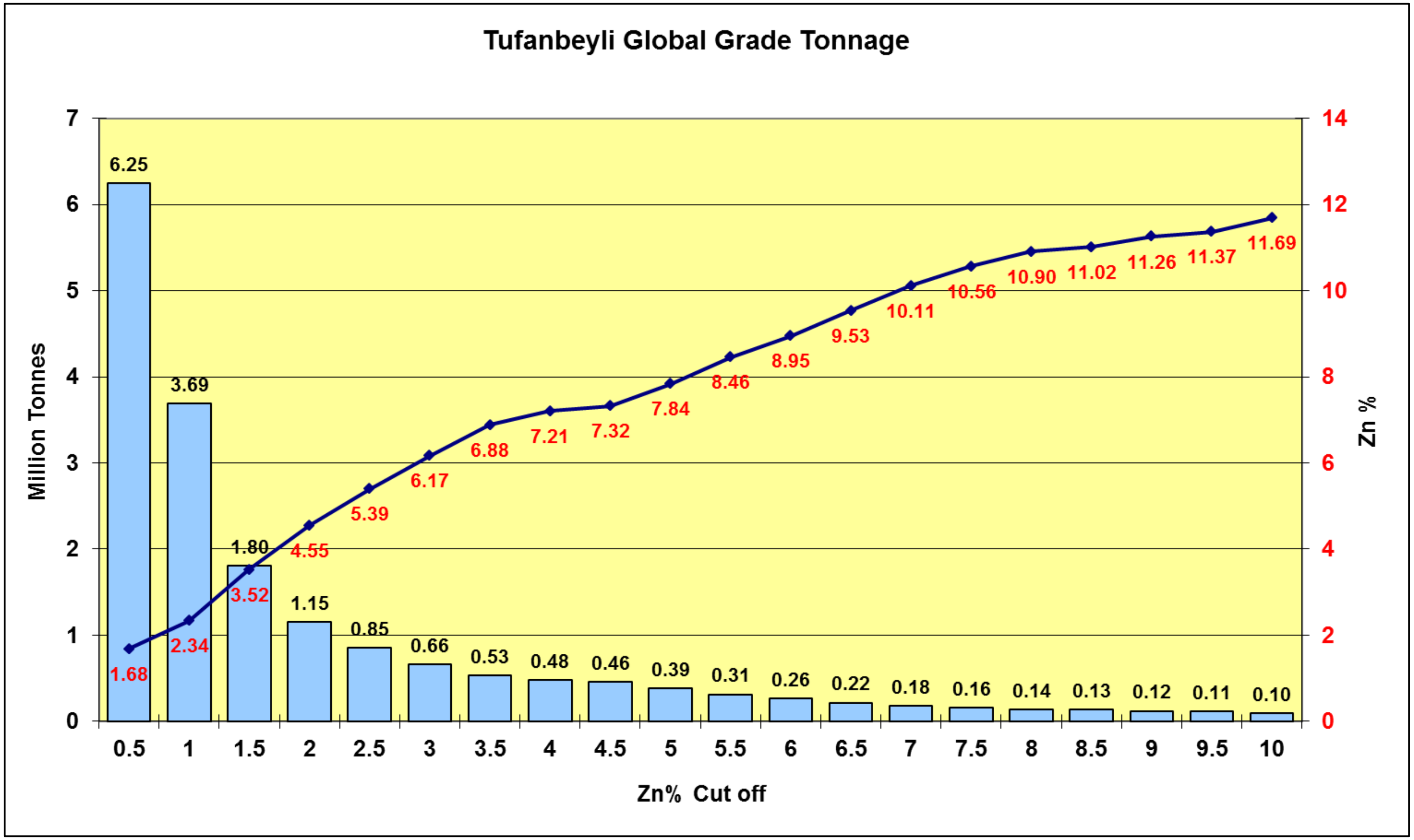
Zn Cut Off %	Million Tonnes	Density	Zn%	Pb%	
0.0	3.26	2.80	0.27	0.002	0.65
0.5	0.49	2.83	1.58	0.001	1.17
1.0	0.47	2.84	1.62	0.001	1.21
1.5	0.10	2.74	3.57	0.003	1.48
2.0	0.07	2.70	4.20	0.003	1.47

Table 14-10
Combined Inferred Resources at a 0.5% Zn Cut Off

Zone	Million Tonnes	Density	Zn%	Pb%	Ag ppm
Akçal South-West	1.42	2.78	2.47	0.005	2.33
Akçal North-East	1.46	2.82	1.01	0.013	1.08
Belbaşi	1.10	2.80	1.82	0.001	0.89
Camlik	1.00	2.85	1.74	0.003	2.54
Kucuk-Teknecik	0.78	2.84	1.27	0.002	0.73
Meselik	0.49	2.83	1.58	0.001	1.17
Total	**6.25**	**2.82**	**1.68**	**0.005**	**1.53**

Figure 14-9

Grade-Tonnage curve for combined Tufanbeyli Inferred Mineral Resources



15 MINERAL RESERVE ESTIMATES

No mineral reserve estimates have been undertaken on the TZP.

16 MINING METHODS

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

17 RECOVERY METHODS

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

18 PROJECT INFRASTRUCTURE

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

19 MARKET STUDIES AND CONTRACTS

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

21 CAPITAL AND OPERATING COSTS

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

22 ECONOMIC ANALYSIS

Not required as the TZP is not currently considered an Advanced Property in terms of NI 43-101.

23 ADJACENT PROPERTIES

The two Operation Licences comprising the TZP include a number of zinc showings and two informal mine sites at Akçal and Belbaşi. These occur within a 40 km long zinc-lead geochemical anomaly defined by the MTA. No known zinc or lead deposits are known to occur adjacent to the project area.

24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is deemed necessary to make this technical report understandable and not misleading.

25 INTERPRETATION AND CONCLUSIONS

25.1 Project Potential

The Tufanbeyli Project represents an oxidized Mississippi Valley Type (MVT) zinc – lead deposit hosted by dolomitized Devonian-age limestones. Many of the characteristics of MVT type deposits are observed at Tufanbeyli, however zinc mineralization is mainly in the form of smithsonite with no sulphides observed to date. Potential for sulphide mineralization exists at depth.

Geochemically anomalous zinc and lead are observed over a northeast-southwest trending strike of 40 km, based on MTA exploration in the district. Based on work by Silvermet, anomalous zinc and lead occur over a 15 km strike within the two licences forming the subject of this due diligence.

The two licences host five prominent zinc showings of which two (Akçal and Belbaşi) were mined on a small-scale between 1985 and 1998, producing an estimated 210 000 tonnes of mineralized material with grades in the range 20% to 40% Zn. Significant potential exists to define multiple deposits with lower grade but higher tonnage. Potential also exists to define sulphide resources at depth.

Drilling has tested most of the zinc showings; however the strike extensive zinc and lead geochemical anomalies to the southeast of these showings has not yet been tested by drilling. This anomalous geochemistry indicates that the mineralized system may extend twice as far as currently known.

A significant amount of drilling has been completed in the Project area (11 997.5 m in 161 holes). The results from this program need to be verified prior to an initial geologic model and mineral resource estimate being undertaken. This exercise will also need to include an assessment of the lead and silver potential.

The future project potential hinges significantly on:

- Establishing improved geological continuity between existing resource blocks
- Establishing improved down dip continuity of resource blocks as the dip is generally shallow and there should be opportunity to increase tonnages.

25.2 Project Risks

The following risks have been identified during this study:

- The Tufanbeyli Project is an 'exploration project' which carries inherent risk. The maiden Mineral Resource estimate forming part of this study is characterized by relatively low zinc grades. Further, lead and silver are present in very minor amounts and are not likely to add significant value. Systematic drilling and modelling are required in order to better understand the mineralised systems and to identify and delineate higher grade zones. Nevertheless, MSA considers the project to have demonstrated sufficient interest to warrant further investigation.

- Very few drilling assay results in the range 20-40% Zn associated with historical production are observed. This is likely related to selective mining and sorting/upgrading/beneficiation of historically produced material.
- The historical drilling pattern is regarded as poor, being aimed at randomly probing the continuation of zinc mineralization observed on surface, and not geared at systematic resource definition/extension
- MSA has not had sight of the complete licence application documentation pertaining to the two Operation Licences which comprise the Project. MSA is thus not aware of the commitments, obligations and encumbrances which may be associated with the two mining licences.

26 RECOMMENDATIONS

The following recommendations are made with respect to further work on the Tufanbeyli Project. The work program is presented as phases of exploration, and each phase of work is dependent on the results of the previous phase. The end of each phase of work should be considered a decision point.

MSA recommends that a QP is assigned responsibility for planning, implementing and supervising further exploration work. This will ensure that the most appropriate methodology is applied, that the work is executed within a properly managed framework with appropriate quality control and environmental management, and that data generated is recorded in a database designed and managed for the project.

Prior to undertaking an exploration program, it is recommended that a full legal due diligence is conducted with the objective of establishing tenure and identifying any commitments, obligations and encumbrances attached to the Project.

A phased work program is recommended as follows:

- Phase 1: Infill and step-out drilling to potentially increase resource size and confidence and specifically to identify and delineate higher grade mineralised zones. These results would prompt a revised mineral resource estimate.
- Phase 2: Test geochemical anomalies to the southeast to assess the potential for a sub-parallel mineralised system. Ongoing assessment and mineral resource definition over the TZP area.

Phase 1 – Infill and Step-out Drilling

- Plan a systematic infill and step-out drilling program to identify higher grade zones, improve confidence in the maiden mineral resource estimate and potentially increase the size of the mineral resource
- Geological mapping, trenching and sampling as well as drill testing of the strike extent of the defined IP anomalies, to potentially extend the mineral resources attributed to the individual deposits along their strike and to test for potential sulphide mineralization at depth
- Undertake a revised mineral resource estimate, based on the results of the above work

Phase 2 – Follow-up Work on Geochemical Anomalies and Ongoing Work

- Plan infill soil geochemical sampling over anomalies generated from the original 400 m spaced lines to the southeast of Akçal
- Undertake detailed geological mapping of this area and trenching and sampling of geochemical anomalies
- Plan and prioritize drill targets for subsequent testing.

- Execute a drilling program designed to test geochemical targets in the southeast of the Project area with the aim of defining additional mineral resources
- Ongoing assessment and mineral resource definition over existing and new zinc deposits and showings

A cost estimate for undertaking this work is presented in Table 26-1. In addition,

Table 26-1
Proposed Exploration Budget for Phases 1 and 2

Phase 1 Exploration	Cost (USD)
Mapping, Trenching and Sampling	75 000
Drilling (2 000m)	300 000
Sampling and Assay (2 000 samples including QAQC)	80 000
Update Mineral Resource Estimate	30 000
Environmental Baseline Study	85 000
Total	**570 000**
Phase 2 Exploration	
Soil Geochemistry	50 000
Mapping, Trenching and Sampling	90 000
Drilling (2 000m)	300 000
Sampling and Assay (2 000 samples including QAQC)	80 000
Total	**520 000**
Total Exploration	**1 090 000**

RCR/RCRZ will commence exploration at Tufanbeyli once sufficient cash has been generated via the sale of direct shipping zinc bearing- and, or concentrated material from its heavy media separation plant at the Hakkari prospect, including the Pentagon Licence and License 5. RCR/RCRZ will also continue to access the requisite funding from other sources.

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Tufanbeyli/Sambeyli Zinc/Lead/Silver Deposit. *One page summary, date unknown*.

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Various MapInfo files representing topographic features, workings, geology and geophysics.

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28 DATE AND SIGNATURE PAGE

This report titled "NI43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey" with an effective date of July 26, 2013; prepared by The MSA Group on behalf of Red Crescent Resources Holdings A.Ş., was prepared and signed by the following authors:

	Signed and Sealed
Dated at Johannesburg, South Africa 26 July 2013	Mike Robertson MSc; PrSciNat; MSAIMM. Principal Consultant The MSA Group (Pty) Ltd
	Signed and Sealed
Dated at Johannesburg, South Africa 26 July 2013	Mike Hall PrSciNat; MAusIMM. Consultant – Mineral Resources The MSA Group (Pty) Ltd
	Signed and Sealed
Dated at Johannesburg, South Africa 26 July 2013	Ewald H Meyer Pr. Eng; MSAIMM. Principal Consultant Anvil Sparks Enterprises CC.

APPENDIX 1:

Glossary of Abbreviations and Technical Terms

Glossary of Abbreviations and Technical Terms

AHOB	Alpine Himalayan Orogenic Belt - The major Mesozoic to Cenozoic orogenic belt stretching from Spain in the West to Southeast Asia in the East
Alteration	Changes in the mineralogical composition of a rock as a result of physical or chemical processes such as weathering or penetration by hydrothermal fluids
Anastomose/ing	(of bedding) Changes in strike direction imparting a wavy appearance to mapped units in plan view
Anatolides	A domain of the AHOB bounded in the north by the Pontides and in the south by the Taurides
Antiform	A fold structure which is convex upwards
Arabian Platform	The northern extent of the Arabian-Nubian shield, comprising predominantly platform (shallow marine) carbonates
Artisanal	Exploited at a local level, generally by manual labour
ASTER	ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) is one of five remote sensory devices on board the Terra satellite launched into Earth orbit by NASA in 1999. The instrument has been collecting surficial data since February 2000, and provides high-resolution images of the Earth in 15 bands. ASTER data are used to used primarily in geology to map alteration patterns and elevation.
Beneficiation	The process by which material is upgraded to achieve higher concentrations
BFS	Bankable Feasibility Study: a comprehensive financial assessment of a planned mining operation, carried out to levels required to obtain financing for the operation
Border Fold region	The deformed northern margin of the Arabian Platform
Breccia	A rock composed of angular rock fragments cemented within a fine-grained matrix
Ca	Calcium
Cu	Copper
Chert	A silica-rich, fine-grained, crypotcrystalline sedimentary rock
Clastic	Composed of mineral grains or fragments derived from pre-exisiting rock and transported from their place of origin
Conjugate	(of geological structures) In which both sets of structures show the same strike but opposite dip.
Cretaceous	The geological period dating 145.5 ± 4 to 65.5 ± 0.3 million years ago. The end of the Cretaceous marks the end of the Mesozoic era and the commencement of the Cenozoic era
Cryptocrystalline	Cryptocrystalline is a rock texture which is so finely crystalline, being made up of such minute crystals, that its crystalline nature is only vaguely revealed even at microscopic scales
Dextral	Inclined or shifted to the right
Diachronous	(refers to a sedimentary rock formation) In which apparently similar material varies in age from place to place
Dolomitic	Comprising the mineral dolomite, which is a magnesium-calcium carbonate
Facies	A distinctive rock unit that forms under certain conditions of sedimentation, reflecting a particular process or environment.

Fault	A planar rock fracture which shows evidence of relative movement
Fe	Iron
Fissile	(refers to rocks) That split readily into thin sheets
Fold	When originally flat and planar surfaces, such as sedimentary strata, are bent or curved as a result of plastic (ductile) deformation
Footwall	The rockmass underlying a mineralized horizon
Franklinite	A Zn, Fe and Mn oxide with variable proportions of Zn, Fe and Mn: (Zn, Fe, Mn)(Fe, $Mn)_2O4$
Galena	Lead-sulphide (PbS)
GDEM	Global Digital Elevation Model, derived from ASTER imagery
GIS	Geographic Information System (a computer-based system for managing and displaying geographical data)
Goethite	An iron-bearing hydroxide mineral, typical of soil and low temperature environments: FeO(OH)
Gossan	Intensely oxidized, weathered or decomposed rock, usually the upper and exposed part of an ore deposit or mineral vein.
Hangingwall	The rockmass underlying a mineralized horizon
Hematite	A deep red or steel grey iron oxide (Fe_2O_3)
Hemimorphite	A hydrous zinc-silicate with the formula $Zn_4Si2O_7(OH)_2$.H2O
Hiatus/es	A period of non-deposition within a sedimentary sequence/s
Hydrothermal	Relating to or caused by a hot watery fluid
Hydrozincite	A zinc-carbonate-hydroxide compound with the formula $Zn_5(CO_3)_2(OH)_6$
Hypogene	The original (primary) sulphide mineralization
HZP	Hakkari Zinc Project
ICP-AES	Inductively coupled plasma atomic emission spectroscopy (ICP-AES), also referred to as inductively coupled plasma optical emission spectrometry (ICP-OES), is an analytical technique used for the detection of trace elements
ICP-MS	Inductively coupled plasma mass spectroscopy,) - an analytical technique used for the detection of trace elements
IP/R	Induced polarization – resistivity survey. A geophysical method to measure chargeability and resistivity properties of rock masses
Joint	A fracture in a rock across which there has been no apparent movement
Jurassic	The period in geological time spanning 208 to 146 million years ago
Karst	Dissolution of carbonate bedrock by circulating waters (meteoric and ground) to create cavitities and irregularities in the bedrock
Massive	(refers to rocks) without internal structure or layers and homogeneous in composition
Mesozoic	A period of geological history dating from about 225 to 65 million years ago
MENR	Ministry of Energy and Natural Resources
GDMA	General Directorate of Mining Affairs
Mineralization	The process by which minerals are introduced into a rock resulting in the formation a mineral deposit
Mississippi Valley Type (MVT)	Carbonate-hosted lead-zinc deposits, named after the Mississippi River Valley where many such deposits are found
Mt	Million tonnes

Neritic	As in neritic zone, also called the Coastal Ocean and Sublittoral zone, is the part of the ocean extending from the low tide mark to the edge of the continental shelf, with a relatively shallow depth extending to about 200 meters
Orogenic	Relating to the formation of structures such as folds and thrusts during a period of mountain-building
Oxidation	The process of combining with oxygen ions. A mineral that is exposed to air may undergo oxidation as a form of chemical weathering.
Oxide	A mineral comprising oxygen and additional, usually metallic, element/s
Paleogene	The geological period that began 65.5 ± 0.3 and ended 23.03 ± 0.05 million years ago and comprises the first part of the Cenozoic Era
Paleokarst	Ancient karst phenomena that existed at the time of mineralization or deposition (see *karst* above)
Paleotopography	Topography that existed at the time of sedimentation/mineralization
Pb	Lead
PFS	Prefeasibility study: investigation of several scenarios to investigate the potential financial return of a planned mine
Platform carbonates	A carbonate deposit that was formed through the accumulation of calcareous material through the skeletons of animals or through microbial organisms that induce carbonate precipitation through their metabolism
Pontides	The northernmost orogenic domain of the AHOB
Porphyry	(as in porphyry systems) are potential (usually copper) orebodies which are associated with porphyritic intrusive rocks and the fluids that accompany them during the transition and cooling from magma to rock. Circulating surface water or underground fluids may interact with the plutonic fluids. Successive envelopes of hydrothermal alteration typically enclose a core of ore minerals disseminated in often stockwork-forming hairline fractures and veins.
Precambrian-Cambrian boundary	The major geological boundary indicating the appearance of the first complex life-forms on Earth (dated to approximately 542 million years before present)
QAQC	Quality Assurance, Quality Control
QP	Qualified Person, as defined in NI 43-101
RC	Reverse circulation. A percussion drilling method whereby rock chips are produced.
RCRZ	Red Crescent Resources Zinc, formally known as RCR Seyitoğlu Cinko Madencilik A.S
ROM	Run-of-mine i.e. the unbeneficiated ore extracted from a mine
Sauconite	a zinc-bearing clay mineral belonging to the smectite group
Sedimentary	(refers to sedimentary rock) - a type of rock that is formed by sedimentation of material at the Earth's surface and within bodies of water. Sedimentation is the collective name for processes that cause mineral and/or organic particles (detritus) to settle and accumulate or minerals to precipitate from a solution.
Shear	Deformation resulting from stresses that cause surfaces to slide against each other parallel to their plane of contact
Smithsonite	Znc carbonate: $ZnCO_3$
Sphalerite	Zinc sulphide: ZnS
Stratiform	(referring to a deposit) a deposit that occurs within a specific geological horizon i.e. is stratigraphically controlled

Stratigraphy	The layering of successive rock units due to sedimentary or volcanic processes
Subduction	The process that takes place at convergent boundaries by which one tectonic plate moves under another tectonic plate, sinking into the Earth's crust, as the plates converge
Sulphide	A mineral containing sulphur with a metal or semi-metal, e.g. pyrite
Supergene	The alteration (and frequent enrichment) of a mineral deposit due to the infiltration of meteoric waters and associated oxidation and chemical weathering
Synform	A fold structure which is concave upwards
Syngenetic	Mineralization occurred simultaneously to the rock-forming process
Taurides	A domain of the AHOB, bounded to the north by the Anatolides and to the south by the Border folds region
Tectonic	Relating to forces involved in or features resulting from deformation on a large scale
Tethyan	The orogenic belt formed when the Cimmerian Plate was subducting under eastern Laurasia, around 200 million years ago, in the Early Jurassic. The Tethyan Trench extended at its greatest during Late Cretaceous to Paleocene, from what is now Greece to the Western Pacific Ocean.
Thrust/ed	A shallow-dipping reverse fault, where the hangingwall is transported over the footwall due to compressional tectonic forces
Transcurrent	(fault) a steeply dipping fault characterised by horizontal displacement only
Triassic	The geologic period that extended from about 250 to 200 million years ago and was the first period of the Mesozoic Era
TZP	Tufanbeyli Zinc Project
Vein	A filled fracture in a rock, resulting from the precipitation of quartz or carbonate minerals from a fluid
Vergence	Structural asymmetry that indicates the direction of thrusting
Willemite	A zinc silicate with the formula Zn_2SiO_4
XRF	X-ray flourescence, a technique widely used for elemental determinations
YAMAS	Yeni Anadolu Mineral Madençilik Sanayi ve Tic Ltd Şti
Zinc zap	An indicator solution that is sprayed on a rock as a qualitative colorimetric test for zinc concentration
Zn	Zinc

APPENDIX 2:

Certificates of Qualified Person(s)

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I, Michael James Robertson, PrSciNat; MSAIMM do hereby certify that:

1. I am Principal Consulting Geologist of:
   The MSA Group
   20B Rothesay Avenue,
   Craighall Park,
   Johannesburg,
   2196.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey" effective as of the 26th Day of July, 2013 (the "Technical Report").
3. I graduated with a degree in BSc Eng (Mining Geology) from the University of the Witwatersrand in 1985. In addition, I obtained an MSc in Structural Geology from the University of the Witwatersrand in 1989.
4. I am a member of the South African Institute of Mining and Metallurgy, the Geological Society of South Africa, the Society of Economic Geologists and a Professional Natural Scientist (PrSciNat) registered with the South African Council for Natural Scientific Professions.
5. I have worked as a geologist for a total of 22 years since my graduation from university. My experience has included exploration project generation; planning, execution and management of gold and base metal exploration projects throughout Africa and the Middle East; mineral property reviews; exploration program audits; scoping to feasibility study inputs; and independent technical reports on gold and base metal properties for public reporting purposes on various stock exchanges.
6. I visited the Tufanbeyli Zinc Project property between 14 and 18 April 2011.
7. I am responsible for the preparation of all sections (apart from sections relating to Mineral Resources and Metallurgy) of the Technical Report
8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.
9. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
10. I have not had prior involvement with the property that is the subject of the Technical Report.
11. To the best of my knowledge, information and belief and as at the date hereof, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 26th Day of July, 2013.

Michael J Robertson (signed and sealed)

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
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Directors: KD Scott, WSM Majola

I, Michael Robert Hall, PrSciNat; MAusIMM do hereby certify that:

1. I am Consulting Geologist – Mineral Resources of:
   The MSA Group
   20B Rothesay Avenue,
   Craighall Park,
   Johannesburg,
   2196.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey" effective as of the 26th Day of July, 2013 (the "Technical Report"),
3. I graduated with a degree in BSc Hons (Mining Geology) from the University of Leicester in 1980. In addition, I obtained an MBA in Business Administration from the University of the Witwatersrand in 2003.
4. I am a member of the Australasian Institute of Mining and Metallurgy and a Professional Natural Scientist (PrSciNat) registered with the South African Council for Natural Scientific Professions.
5. I have worked as a geologist for a total of 32 years since my graduation from university. My experience has included field exploration, project generation and evaluation of PGE and Ni laterite projects in Africa, and other countries. I have undertaken mineral resource estimates for a variety of other mineral deposit types, including copperbelt copper, Rare Earth Elements, base metals, uranium and coal. I have also undertaken geological and mineral resource aspects for scoping up to feasibility level as well as, independent technical audits and due diligences, reporting these on various stock exchanges
6. I have not visited the Tufanbeyli Zinc Project.
7. I am responsible for the preparation of the Mineral Resources section of the Technical Report
8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.
9. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
10. I have not had prior involvement with the property that is the subject of the Technical Report.
11. To the best of my knowledge, information and belief and as at the date hereof, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 26th Day of July, 2013.

Michael R Hall (signed and sealed)

I, Ewald Heinrich Meyer, Pr. Eng., MSAIMM do herby certify that:

1. I am Principal Consultant of:

   Anvil Sparks Enterprises CC.
   266, Rubens Street,
   Faerie Glen,
   Pretoria
   0043,

2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey" effective as of the 26h Day of July, 2013 (the "Technical Report").
3. I graduated with a BSc degree in Chemistry and Geology from the University of Stellenbosch in 1965. In addition, I obtained a B.Com in 1979 and a BA in 2010, both from the University of South Africa.
4. I am a member of the South African Institute of Mining and Metallurgy and a retired Professional Engineer, registered with the Engineering Council of South Africa (reg. no. 930168).
5. I have worked as a metallurgist for a total of 41 years since my graduation from university. My experience has included employment in a variety of technical and line management positions, notably with the Tsumeb Corporation, Namibia. I attained the corporate position of Manager for Metal Production with that company.
6. I have not visited the Tufanbeyli Zinc Project property.
7. I am responsible for the preparation of Section 13 (Metallurgy) of the Technical Report
8. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.
9. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
10. I have not had prior involvement with the property that is the subject of the Technical Report.
11. To the best of my knowledge, information and belief and as at the date hereof, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 26th Day of July, 2013.

Ewald H. Meyer (signed and sealed)

APPENDIX 3:

Drillhole Summaries

2006 Diamond Drillholes

HOLE_ID	DATE_START	DATE_COMPLETE	EASTING	NORTHING	DIP	AZIMUTH	DEPTH (m)	ELEVATION (m)	BATCH No.
AKD-001/ 001A	15/07/2006	24/07/2006	265516	4229967	-90	0	92	1660	YAMAS-07-012
AKD-002	25/07/2006	29/07/2006	265633	4229980	-90	0	86.5	1656	YAMAS-07-013
AKD-003	30/07/2006	02/08/2006	265725	4229975	-90	0	85	1660	YAMAS-07-014
AKD-004/ 004A	02/08/2006	08/08/2006	265516	4229880	-90	0	90	1670	YAMAS-07-015
AKD-005	09/08/2006	11/08/2006	265435	4229905	-90	0	90	1654	YAMAS-07-16
AKD-006	11/08/2006	12/08/2006	265516	4230070	-90	0	89	1651	YAMAS-07-017
AKD-007	13/08/2006	15/08/2006	265622	4230074	-90	0	74.2	1648	YAMAS-07-018
AKD-008	15/08/2006	18/08/2006	265726	4230176	-90	0	89.5	1643	YAMAS-07-020
AKD-009	19/08/2006	21/08/2006	265808	4230076	-90	0	90.5	1650	YAMAS-07-021
AKD-010	21/08/2006	22/08/2006	265630	4230151	-90	0	25	1643	YAMAS-07-022
AKD-011	22/08/2006	25/08/2006	265832	4230275	-90	0	150	1622	YAMAS-07-023
AKD-012	25/08/2006	27/08/2006	265819	4230165	-90	0	144	1640	YAMAS-07-024
AKD-013	27/08/2006	30/08/2006	265712	4230103	-90	0	100	1653	YAMAS-07-025
AKD-014	31/08/2006	03/09/2006	265725	4230277	-90	0	83	1600	YAMAS-07-026
AKD-015	02/09/2006	04/09/2006	265715	4230374	-90	0	100	1600	YAMAS-07-027
AKD-016	04/09/2006	05/09/2006	265819	4230379	-90	0	111	1608	YAMAS-07-029
AKD-017	05/09/2006	06/09/2006	265630	4230277	-90	0	80	1637	YAMAS-07-030
AKD-018	06/09/2006	08/09/2006	265760	4230255	-60	300	71	1627	YAMAS-07-031
AKD-019	08/09/2006	11/09/2006	265762	4230257	-60	340	97	1627	YAMAS-07-032
AKD-020	12/09/2006	15/09/2006	265700	4229993	-60	352	50	1674	YAMAS-07-033
AKD-021	15/09/2006	16/09/2006	265707	4230045	-60	200	97.5	1627	YAMAS-07-034

2006 Diamond Drillhole Results

Drill Hole	From (m)	To (m)	Intercept (m)	Zn %	Depth (m)	Remarks
AKD-001/ 001A					92	No significant result
AKD-002	0	30	30	0.6	86.5	Not visible
AKD-003					85	No significant result
AKD-004/ 004A					90	No significant result
AKD-005	0	12	12	1.33	90	Fracture filled
	26	32	6	5.65		Fracture filled
AKD-006					89	No significant result
AKD-007	14	21	7	1.69	74.2	Not visible
AKD-008					89.5	No significant result
AKD-009					90.5	No significant result
AKD-010					25	No significant result
AKD-011					150	No significant result
AKD-012					144	No significant result
AKD-013	34	75	41	0.95	100	Not visible
Including	44.5	51	6.5	3.61		Not visible
AKD-014	0	6.5	6	2.03	83	Not visible
AKD-015					100	No significant result
AKD-016					111	No significant result
AKD-017					80	No significant result
AKD-018					71	No significant result
AKD-019					97	No significant result
AKD-020					50	No significant result
AKD-021					97.5	No significant result

Reverse Circulation Drillholes

PHASE	HOLEID	CONTRACTOR	EASTING	NORTHING	RL	START	END	AZIMUTH	DIP	DEPTH	BATCH_NO	LOCATION
2006	BRC001		267683	4232193	1708	05/11/2006	07/11/2006	270	-60	150.00	Yamas 07-035	Belbaşi
2006	BRC002		267631	4232453	1750	08/11/2006	09/11/2006	270	-60	70.00	Yamas 07-036	Belbaşi
2006	BRC002A		267632	4232453	1750	09/11/2006	10/11/2006	270	-75	120.00	Yamas 07-037	Belbaşi
2006	BRC003		267625	4232503	1750	11/11/2006	12/11/2006	270	-60	141.00	Yamas 07-038	Belbaşi
2006	BRC004		267656	4232363	1738	12/11/2006	13/11/2006	270	-60	110.00	Yamas 07-039	Belbaşi
2006	BRC005		267672	4232276	1720	13/11/2006	15/11/2006	270	-60	152.00	Yamas 07-040	Belbaşi
2006	BRC006		267525	4232400	1719	15/11/2006	16/11/2006	270	-60	118.00	Yamas 07-041	Belbaşi
2006	BRC007		267550	4232300	1712	17/11/2006	17/11/2006	270	-60	94.00	Yamas 07-042	Belbaşi
2006	BRC008		267560	4232306	1708	17/11/2006	18/11/2006	0	-90	61.00	Yamas 07-043	Belbaşi
2006	BRC009		267729	4232000	1695	18/11/2006	19/11/2006	280	-60	169.00	Yamas 07-044	Belbaşi
2006	BRC010		267687	4232070	1695	20/11/2006	20/11/2006	270	-60	100.00	Yamas 07-045	Belbaşi
2006	BRC011		265702	4231123	1573	21/11/2006	21/11/2006	330	-60	33.00	Yamas 07-046	North of Akçal pit-farm area
2006	BRC012		265694	4231132	1573	21/11/2006	22/11/2006	355	-60	100.00	Yamas 07-047	North of Akçal pit-farm area
2006	BRC013		267624	4232276	1717	22/11/2006	23/11/2006	290	-75	150.00	Yamas 07-048	Belbaşi
2006	BRC014		265700	4231149	1574	24/11/2006	24/11/2006	338	-60	71.00	Yamas 07-049	North of Akçal pit-farm area
2006	BRC015		265765	4230360	1615	25/11/2006	25/11/2006	203	-60	98.00	Yamas 07-050	Akçal
2006	BRC016		265702	4230241	1619	26/11/2006	26/11/2006	296	-60	75.00	Yamas 07-051	Akçal
2006	BRC017		265776	4232901	1554	26/11/2006	27/11/2006	202	-70	62.00	Yamas 07-052	North of Akçal village
2006	BRC018		267595	4232358	1728	27/11/2006	28/11/2006	262	-75	152.00	Yamas 07-053	Belbaşi
2006	BRC019		265469	4229941	1655	29/11/2006	29/11/2006	0	-90	25.00	Yamas 07-054	Akçal
2006	BRC020		265707	4229986	1658	29/11/2006	30/11/2006	270	-60	104.00	Yamas 07-055	Akçal
2006	BRC021		265714	4230046	1639	02/12/2006	02/12/2006	278	-60	90.00	Yamas 07-056	Akçal
2006	BRC022		266692	4233495	1730	11/01/2007	12/01/2007	235	-60	120.00	Yamas 07-057	Camlik
2006	BRC023		266775	4233785	1747	12/01/2007	13/01/2007	100	-70	100.00	Yamas-07-058	Camlik
2006	BRC024		266708	4233362	1708	13/01/2007	14/01/2007	220	-60	100.00	Yamas-07-059	Camlik
2006	BRC025		267312	4233549	1740	14/01/2007	15/01/2007	284	-60	80.00	Yamas-07-060	Meselik
2006	BRC026		267159	4233380	1717	15/01/2007	16/01/2007	182	-60	98.00	Yamas-07-061	Meselik
2006	BRC027		267534	4233649	1805	16/01/2007	17/01/2007	351	-70	128.00	Yamas-07-062	Kucukteknecik
2006	BRC028		267510	4233619	1797	17/01/2007	18/01/2007	360	-70	110.00	Yamas-07-063	Kucukteknecik
2006	BRC029		267492	4233593	1790	18/01/2007	19/01/2007	294	-60	110.00	Yamas-07-064	Kucukteknecik
2006	BRC030		267625	4232480	1752	20/01/2007	21/01/2007	270	-75	120.00	Yamas-07-065	Belbaşi

PHASE	HOLEID	CONTRACTOR	EASTING	NORTHING	RL	START	END	AZIMUTH	DIP	DEPTH	BATCH_NO	LOCATION
2006	BRC031		267655	4232453	1752	21/01/2007	22/01/2007	270	-75	120.00	Yamas-07-066	Belbaşi
2006	BRC032		267638	4232430	1749	22/01/2007	23/01/2007	270	-75	120.00	Yamas-07-067	Belbaşi
2006	BRC033		267598	4232670	1773	24/01/2007	24/01/2007	237	-60	110.00	Yamas-07-068	Belbaşi
2006	BRC034		265383	4229857	1645	25/01/2007	25/01/2007	265	-60	98.00	Yamas-07-069	Akçal
2006	BRC035		265352	4229864	1646	26/01/2007	26/01/2007	257	-60	74.00	Yamas-07-070	Akçal
2007	BRC036	IDC	267726	4234772	1780	04.11.2007	04.11.2007	268	-60	100.00	07- 074	Katarası
2007	BRC037	IDC	267700	4234711	1804	5.11.2007	05.11.2007	360	-60	100.00	07- 075	Katarası
2007	BRC038	IDC	267692	4234714	1804	05.11.2007	06.11.2007	260	-60	100.00	07- 076	Katarası
2007	BRC039	IDC	267723	4234722	1795	06.11.2007	07.11.2007	120	-60	47.50	07- 077	Katarası
2007	BRC040	IDC	267657	4234664	1823	7.11.2007	08.11.2007	300	-75	100.00	07- 078	Katarası
2007	BRC041	IDC	267655	4234689	1822	8.11.2007	08.11.2007	020	-60	100.00	07- 079	Katarası
2007	BRC042	IDC	267606	4232657	1753	10.11.2007	10.11.2007	237	-60	100.00	07- 080	Belbaşı
2007	BRC043	IDC	267620	4232644	1752	10.11.2007	10.11.2007	237	-60	116.00	07- 081	Belbaşı
2007	BRC044	IDC	267615	4232695	1756	10.11.2007	11.11.2007	272	-75	112.00	07- 082	Belbaşı
2007	BRC045	IDC	267608	4232687	1754	11.11.2007	11.11.2007	270	-60	44.00	07- 083	Belbaşı
2007	BRC045A	IDC	267605	4232684	1754	11.11.2007	11.11.2007	270	-60	48.00	07- 084	Belbaşı
2007	BRC045B	IDC	267602	4232688	1754	28.11.2007	29.11.2007	273	-60	100.00	07- 126	Belbaşı
2007	BRC046	IDC	267602	4232669	1753	12/11/2011	12.11.2007	237	-60	100.00	07- 085	Belbaşı
2007	BRC046A	IDC	267599	4232666	1753	12.11.2007	12.11.2007	190	-75	100.00	07- 086	Belbaşı
2007	BRC047	IDC	267117	4233398	1711	13.11.2007	13.11.2007	278	-60	91.00	07- 087	Meşelik
2007	BRC048	IDC	267123	4233404	1711	13.11.2007	14.11.2007	356	-55	59.00	07- 088	Meşelik
2007	BRC049	IDC	267163	4233363	1715	14.11.2007	14.11.2007	210	-60	51.00	07- 089	Meşelik
2007	BRC049A	IDC	267164	4233367	1715	14.11.2007	15.11.2007	210	-75	52.00	07- 090	Meşelik
2007	BRC050	IDC	267151	4233436	1721	15.11.2007	15.11.2007	50	-60	100.00	07- 091	Meşelik
2007	BRC051	IDC	267147	4233434	1721	15.11.2007	15.11.2007	83	-75	40.00	07- 092	Meşelik
2007	BRC052	IDC	267150	4233435	1721	15.11.2007	16.11.2007	0	-90	64.00	07- 093	Meşelik
2007	BRC053	IDC	267151	4233430	1721	16.11.2007	16.11.2007	99	-55	68.00	07- 094	Meşelik
2007	BRC054	IDC	267150	4233429	1721	16.11.2007	16.11.2007	104	-75	48.00	07- 095	Meşelik
2007	BRC055	IDC	267149	4233436	1721	16.11.2007	17.11.2007	14	-60	40.00	07- 096	Meşelik
2007	BRC056	IDC	267163	4233391	1717	17.11.2007	17.11.2007	48	-60	84.00	07- 097	Meşelik
2007	BRC057	IDC	267146	4233353	1711	17.11.2007	17.11.2007	54	-55	68.00	07- 098	Meşelik
2007	BRC058	IDC	267146	4233385	1714	18.11.2007	18.11.2007	280	-75	24.00	07- 099	Meşelik
2007	BRC059	IDC	267129	4233394	1711	18.11.2007	18.11.2007	102	-55	55.00	07- 100	Meşelik

PHASE	HOLEID	CONTRACTOR	EASTING	NORTHING	RL	START	END	AZIMUTH	DIP	DEPTH	BATCH_NO	LOCATION
2007	BRC060	IDC	267130	4233395	1711	18.11.2007	18.11.2007	0	-90	60.00	07- 101	Meşelik
2007	BRC061	IDC	267145	4233440	1721	19.11.2007	19.11.2007	50	-60	48.00	07- 102	Meşelik
2007	BRC062	IDC	267135	4233414	1714	19.11.2007	19.11.2007	335	-60	28.00	07- 103	Meşelik
2007	BRC063	IDC	267141	4233412	1714	19.11.2007	20.11.2007	335	-75	31.00	07- 104	Meşelik
2007	BRC064	IDC	267132	4233422	1714	20.11.2007	20.11.2007	296	-75	31.00	07- 105	Meşelik
2007	BRC065	IDC	267538	4233670	1805	21.11.2007	21.11.2007	161	-60	112.00	07- 106	K.Teknecik
2007	BRC066	IDC	267533	4233668	1805	21.11.2007	22.11.2007	160	-74	104.00	07- 107	K.Teknecik
2007	BRC067	IDC	267534	4233674	1805	22.11.2007	23.11.2007	185	-75	60.00	07- 108	K.Teknecik
2007	BRC068	IDC	267535	4233683	1805	23.11.2007	23.11.2007	40	-60	52.00	07- 109	K.Teknecik
2007	BRC069	IDC	267536	4233680	1805	23.11.2007	24.11.2007	40	-65	120.00	07- 110	K.Teknecik
2007	BRC070	IDC	267539	4233678	1805	24.11.2007	24.11.2007	107	-60	80.00	07- 111	K.Teknecik
2007	BRC071	IDC	267540	4233676	1805	24.11.2007	24.11.2007	107	-75	76.00	07- 112	K.Teknecik
2007	BRC072	IDC	267530	4233669	1805	24.11.2007	25.11.2007	210	-60	56.00	07- 113	K.Teknecik
2007	BRC073	IDC	267529	4233708	1787	25.11.2007	25.11.2007	308	-70	61.00	07- 114	K.Teknecik
2007	BRC074	IDC	267559	4233716	1788	25.11.2007	25.11.2007	57	-55	24.00	07- 115	K.Teknecik
2007	BRC075	IDC	267566	4233723	1788	25.11.2007	25.11.2007	165	-60	24.00	07- 116	K.Teknecik
2007	BRC076	IDC	267503	4233616	1796	26.11.2007	26.11.2007	340	-60	68.00	07- 117	K.Teknecik
2007	BRC077	IDC	267512	4233622	1797	26.11.2007	26.11.2007	50	-60	40.00	07- 118	K.Teknecik
2007	BRC078	IDC	267508	4233616	1796	26.11.2007	26.11.2007	0	-90	64.00	07- 119	K.Teknecik
2007	BRC079	IDC	267490	4233598	1790	26.11.2007	26.11.2007	256	-75	36.00	07- 120	K.Teknecik
2007	BRC080	IDC	267495	4233600	1791	26.11.2007	26.11.2007	320	-60	57.00	07- 121	K.Teknecik
2007	BRC081	IDC	267400	4233588	1757	27.11.2007	27.11.2007	360	-60	48.00	07- 122	K.Teknecik
2007	BRC082	IDC	267506	4233574	1792	27.11.2007	27.11.2007	0	-90	60.00	07- 123	K.Teknecik
2007	BRC083	IDC	267491	4233567	1786	27.11.2007	27.11.2007	260	-60	50.00	07- 124	K.Teknecik
2007	BRC084	IDC	267484	4233487	1771	28.11.2007	29.11.2007	210	-65	53.00	07- 125	K.Teknecik
2007	BRC085	IDC	267577	4232485	1737	29.11.2007	29.11.2007	270	-63	20.00	07- 127	
2007	BRC086	IDC	267561	4232516	1734	29.11.2007	29.11.2007	270	-75	56.00	07- 128	
2007	BRC087	IDC	267593	4232484	1738	30.11.2007	30.11.2007	270	-60	33.00	07- 129	
2007	BRC088	IDC	267590	4232487	1739	30.11.2007	1.12.2007	270	-75	44.00	07- 130	
2007	BRC089	IDC	267545	4232563	1745	1.12.2007	2.12.2007	19	-60	62.00	07- 131	
2007	BRC090	IDC	267541	4232556	1745	3.12.2007	5.12.2007	200	-60	120.00	07- 132	
2007	BRC091	IDC	267593	4232484	1745	6.12.2007	6.12.2007	216	-60	90.00	07- 133	
2007	BRC092	IDC	267518	4232375	1719	6.12.2007	6.12.2007	180	-60	60.00	07- 134	

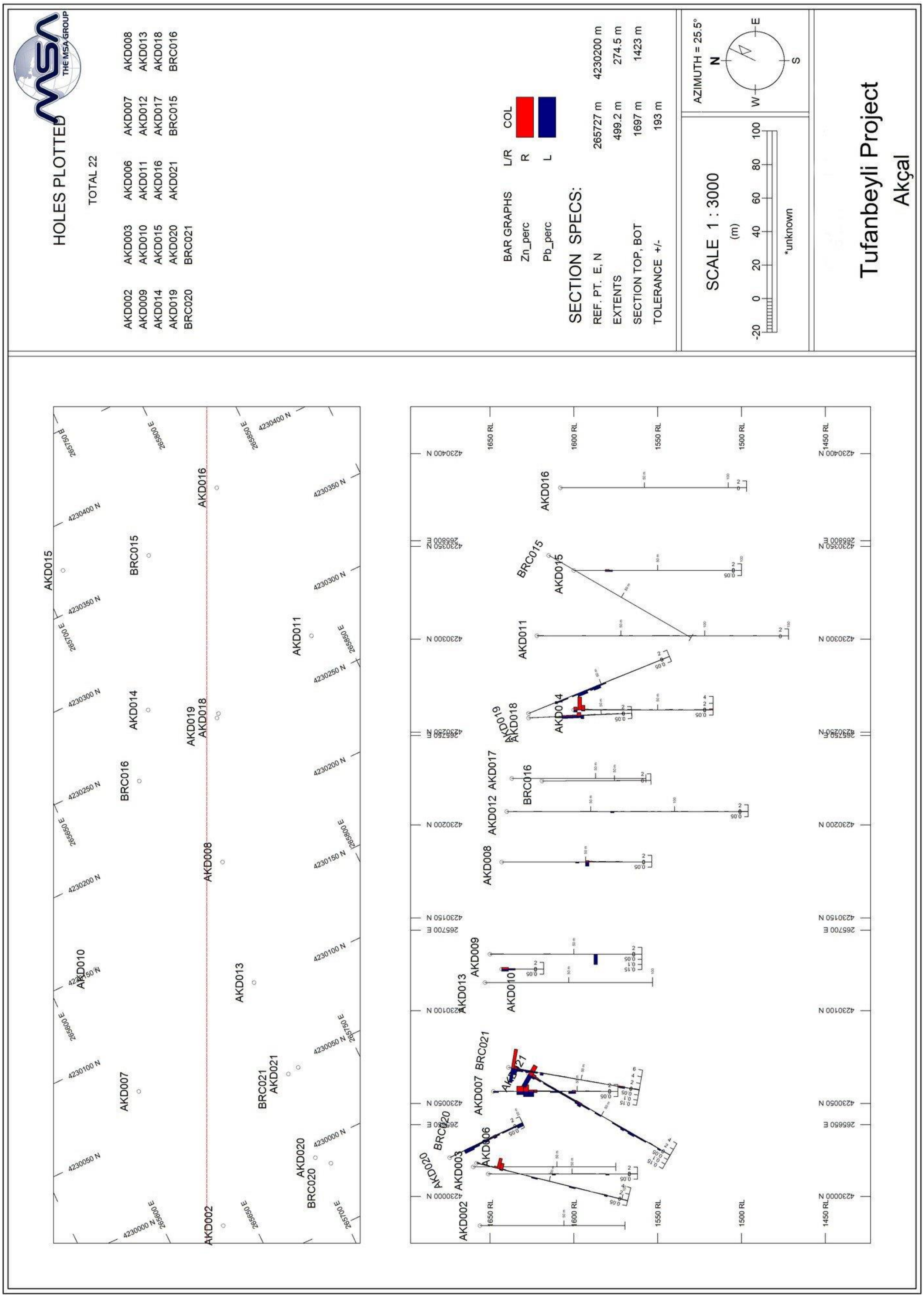
PHASE	HOLEID	CONTRACTOR	EASTING	NORTHING	RL	START	END	AZIMUTH	DIP	DEPTH	BATCH_NO	LOCATION
2007	BRC093	IDC	267537	4232353	1717	6.12.2007	7.12.2007	148	-75	28.00	07- 135	
2007	BRC094	IDC	266672	4233429	1728	8.12.2007	8.12.2007	200	-60	99.00	07- 136	Çamlık
2007	BRC095	IDC	266696	4233498	1730	8.12.2007	10.12.2007	197	-60	75.00	07- 137	Çamlık
2007	BRC096	IDC	266697	4233497	1730	16.12.2007	17.12.2007	200	-75	96.00	07- 138	Çamlık
2007	BRC097	IDC	266694	4233502	1730	26.12.2007		293	-60	126.00	07- 139	
2007	BRC098	IDC	266697	4233503	1730	27.12.2007		293	-67	90.00	07- 140	
2007	BRC099	IDC	266678	4233458	1730	27.12.2007		74	-60	72.00	No Sending	
2007	BRC100	IDC	266658	4233469	1730	28.12.2007		331	-60	78.00	07- 141	
2007	BRC101	IDC	266625	4233453	1730	28.12.2007		7	-60	68.00	07- 142	
2007	BRC102	IDC	266636	4233392	1730	29.12.2007		180	-60	48.00	07- 143	
2007	BRC103	IDC	266667	4233431	1730	29.12.2007		140	-60	62.00	07- 144	
2007	BRC104	IDC	266671	4233434	1728			120	-60	48.00	No Sending	
2007	BRC105	IDC	266714	4233417	1711	30.12.2007	30.12.2007	208	-60	48.00	07- 145	
2007	BRC106	IDC	266694	4233336	1706	30.12.2007	31.12.2007	19	-60	88.00	07- 146	
2007	BRC107	IDC	266698	4233335	1706	01.01.2008	02.01.2008	68	-59	45.00	07- 149	
2007	BRC108	IDC	266692	4233336	1706	02.01.2008	02.01.2008	345	-60	72.00	07- 147	
2007	BRC109	IDC	266673	4233377	1716	02.01.2008	03.01.2008	223	-70	72.00	07- 148	
2007	BRC110	IDC	266676	4233363	1716	03.01.2008	04.01.2008	206	-60	71.00	07- 150	
2007	BRC111	IDC	266775	4233792	1747	04.01.2008	04.01.2008	62	-60	54.00	07- 151	
2007	BRC112	IDC	266762	4233801	1748	04.01.2008	05.01.2008	102	-75	66.00	07- 152	
2007	BRC113	IDC	265514	4229957	1660	06.01.2008	06.01.2008	87	-60	60.00	07- 153	Akçal SW
2007	BRC114	IDC	265354	4229862	1646	07.01.2008	10.02.2008	192	-60	84.00	07- 154	Akçal SW
2007	BRC115	IDC	265353	4229869	1659	12.01.2008	10.02.2008	190	-74	84.00	07- 155	
2007	BRC116	IDC	265345	4229876	1648	02.01.2008	24.02.2008	211	-62	84.00	07- 156	
2008	BRC117	IDC	265375	4229872	1657	21.05.2008	22.05.2008	0	-90	60.00	Yamas-07-157	
2008	BRC118	IDC	265314	4229868	1663	23.05.2008	23.05.2008	0	-90	64.00	yamas-07-158	
2008	BRC119	IDC	265366	4229849	1654	23.05.2008	24.05.2008	0	-90	52.00	Yamas-07-159	
2008	BRC120	IDC	265402	4229846	1653	24.05.2008	24.05.2008	50	-60	23.00	Yamas-07-160	
2008	BRC120A	IDC	265406	4229846	1652	27.05.2008	27.05.2008	40	-60	56.00	Yamas-07-161	
2008	BRC121	IDC	265434	4229847	1650	25.05.2008	25.05.2008	340	-60	48.00	Yamas-07-162	
2008	BRC122	IDC	265456	4229887	1655	25.05.2008	25.05.2008	0	-90	36.00	Yamas-07-163	
2008	BRC123	IDC	265467	4229895	1658	25.05.2008	25.05.2008	40	-80	32.00	Yamas-07-164	
2008	BRC124	IDC	265481	4229885	1657	26.05.2008	26.05.2008	40	-80	55.00	Yamas-07-165	

PHASE	HOLEID	CONTRACTOR	EASTING	NORTHING	RL	START	END	AZIMUTH	DIP	DEPTH	BATCH_NO	LOCATION
2008	BRC125	IDC	265505	4229856	1661	26.05.2008	26.05.2008	40	-70	64.00		
2008	BRC126	IDC	265395	4229889	1660	26.05.2008	27.05.2008	50	-70	64.00	Yamas-07-166	
2008	BRC127	IDC	265410	4229905	1659	28.05.2008	28.05.2008	0	-90	56.00	Yamas-07-167	
2008	BRC128	IDC	265513	4229928	1661	28.05.2008	28.05.2008	360	-80	36.00	Yamas-07-168	
2008	BRC129	IDC	265347	4229900	1661	28.05.2008	28.05.2008	0	-90	56.00		
2008	BRC130	IDC	265433	4229928	1661	28.05.2008	29.05.2008	0	-90	51.00		
2008	BRC131	IDC	265457	4229840	1659	29.05.2008	30.05.2008	340	-70	58.00		
2008	BRC132	IDC	267976	4236812	1634	05.06.2008	05.06.2008	110	-60	84.00	Yamas-07-169	
2008	BRC133	IDC	268066	4236781	1628	05.06.2008	06.06.2008	230	-60	72.00	Yamas-07-170	
2008	BRC134	IDC	268044	4236768	1623	06.06.2008	07.06.2008	0	-90	36.00	Yamas-07-171	
2008	BRC135	IDC	268051	4236788	1629	07.06.2008	07.06.2008	115	-60	36.00	Yamas-07-172	
2008	BRC136	IDC	267991	4236827	1632	07.06.2008	08.06.2008	180	-60	70.00	Yamas-07-173	
2008	BRC137	IDC	268019	4236793	1633	08.06.2008	08.06.2008	0	-90	28.00		
2008	BRC138	IDC	263908	4225639	1500	09.06.2008	09.06.2008	0	-90	56.00		
2008	BRC139	IDC	263905	4225621	1497	09.06.2008	09.06.2008	270	-60	20.00		
2008	BRC140	IDC	263901	4225580	1501	09.06.2008	09.06.2008	270	-60	50.00	Yamas-07-174	
2008	BRC141	IDC	263905	4225662	1496	09.06.2008	10.06.2008	250	-60	49.00	Yamas-07-175	

)

APPENDIX 4:

Geosoft Target Sections through Zinc Deposits and Showings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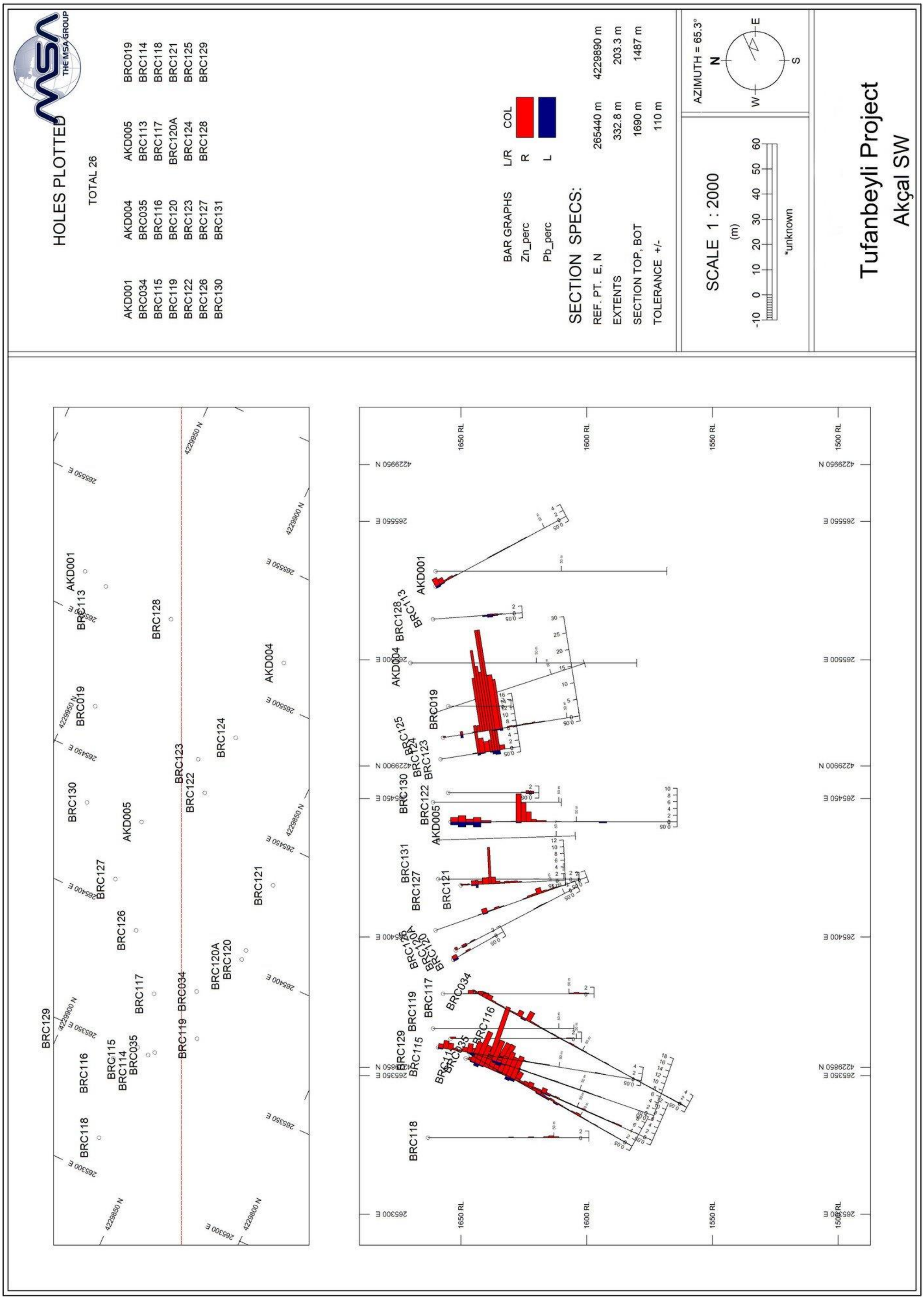
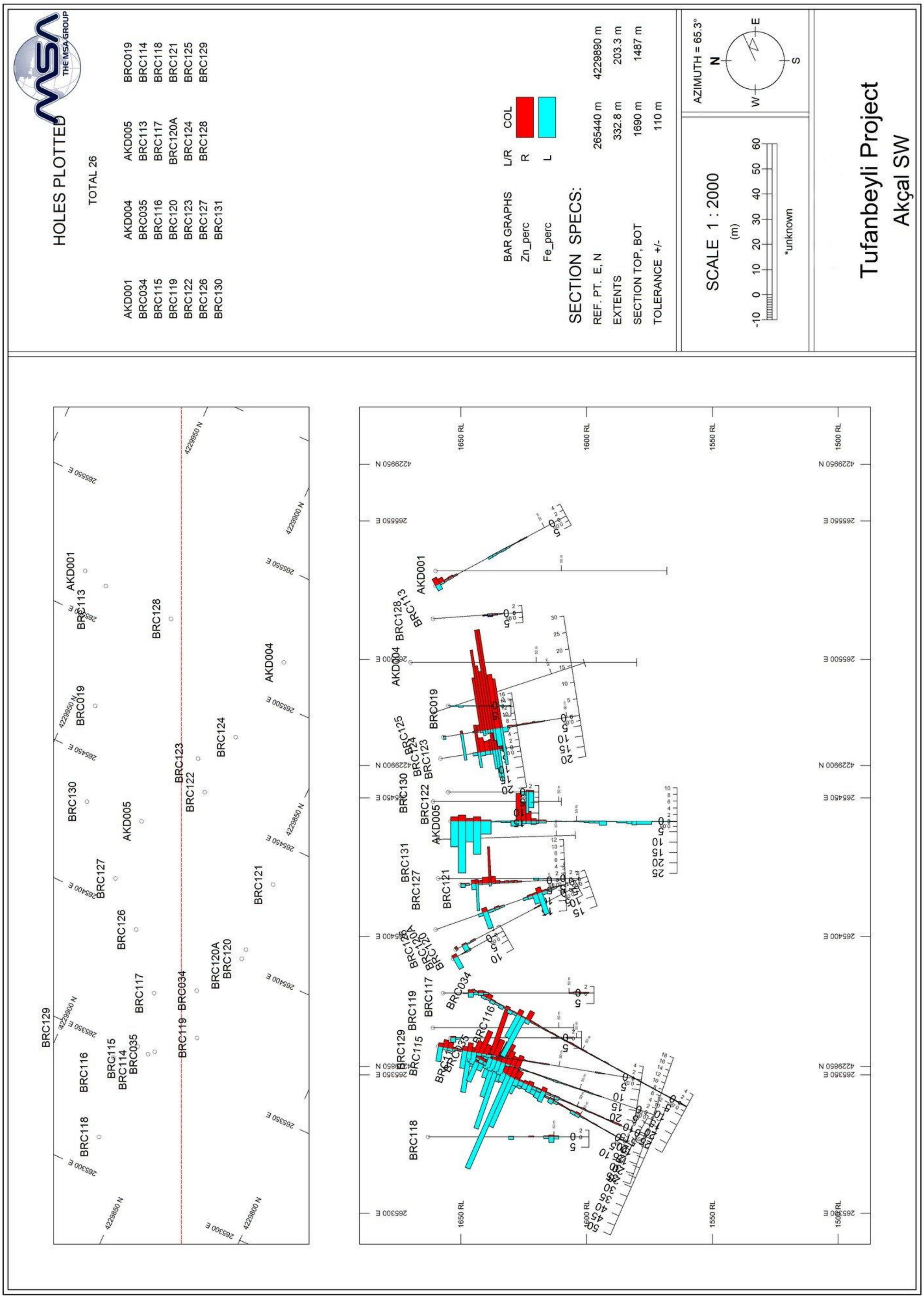
TOTAL 22
AKD002 AKD009 AKD014 AKD019 BRC020
AKD003 AKD010 AKD015 AKD020 BRC021
AKD006 AKD011 AKD016 AKD021
AKD007 AKD012 AKD017 BRC015
AKD008 AKD013 AKD018 BRC016
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 265727 m 4230200 m
EXTENTS 499.2 m 274.5 m
SECTION TOP, BOT 1697 m 1423 m
TOLERANCE +/- 193 m
SCALE 1 : 3000
(m)
*unknown
AZIMUTH = 25.5°
Tufanbeyli Project
Akçal


HOLES PLOTTED
TOTAL 26
AKD001 AKD004 AKD005 BRC019
BRC034 BRC035 BRC113 BRC114
BRC115 BRC116 BRC117 BRC118
BRC119 BRC120 BRC120A BRC121
BRC122 BRC123 BRC124 BRC125
BRC126 BRC127 BRC128 BRC129
BRC130 BRC131
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 265440 m 4229890 m
EXTENTS 332.8 m 203.3 m
SECTION TOP, BOT 1690 m 1487 m
TOLERANCE +/- 110 m
AZIMUTH = 65.3°
SCALE 1 : 2000
(m)
*unknown
Tufanbeyli Project
Akçal SW
1650 RL
1600 RL
1550 RL
1500 RL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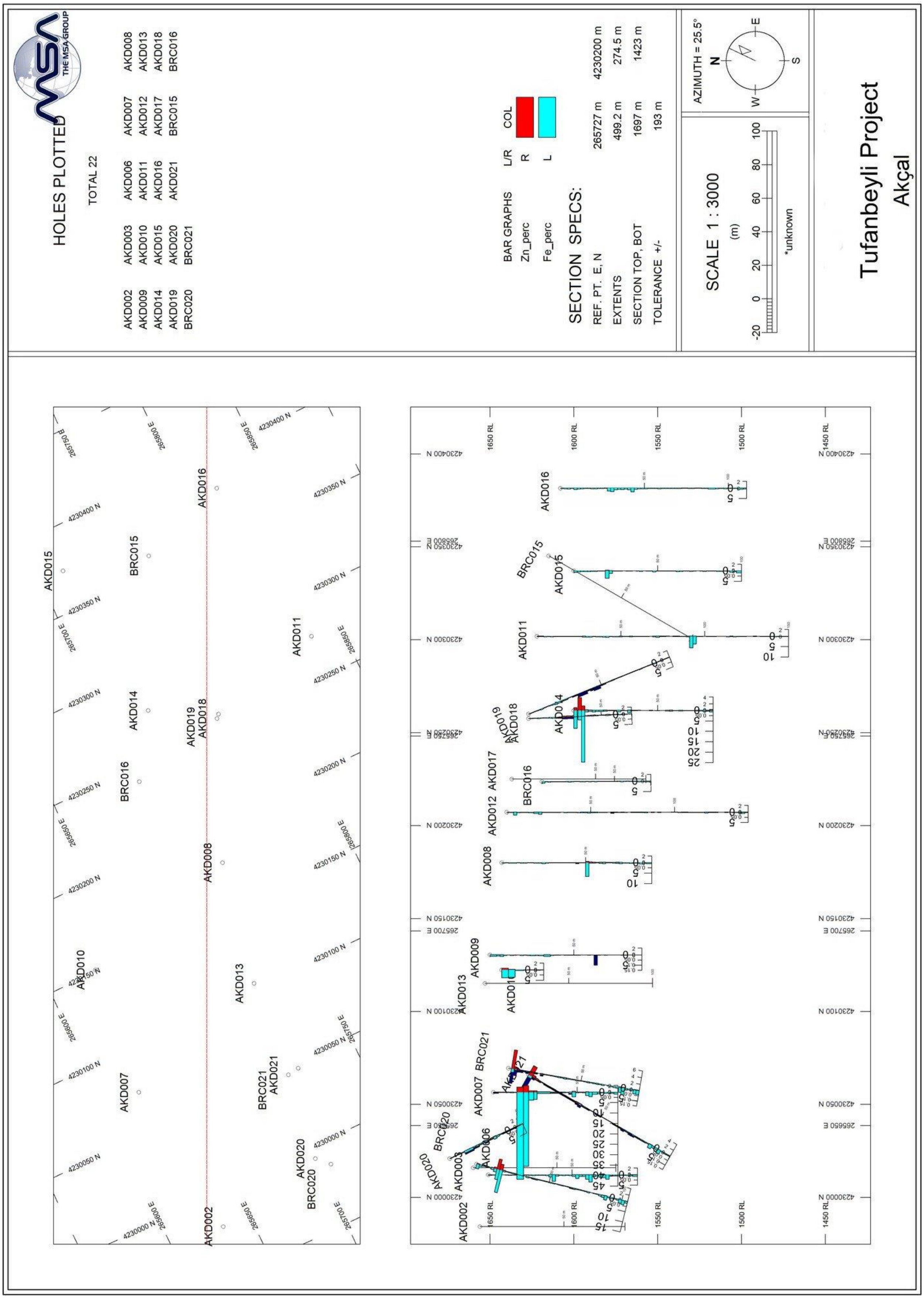
TOTAL 26
AKD001 BRC034 BRC115 BRC119 BRC122 BRC126 BRC130
AKD004 BRC035 BRC116 BRC120 BRC123 BRC127 BRC131
AKD005 BRC113 BRC117 BRC120A BRC124 BRC128
BRC019 BRC114 BRC118 BRC121 BRC125 BRC129
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 265440 m 4229890 m
EXTENTS 332.8 m 203.3 m
SECTION TOP, BOT 1690 m 1487 m
TOLERANCE +/- 110 m
AZIMUTH = 65.3°
SCALE 1 : 2000
(m)
*unknown
Tufanbeyli Project
Akçal SW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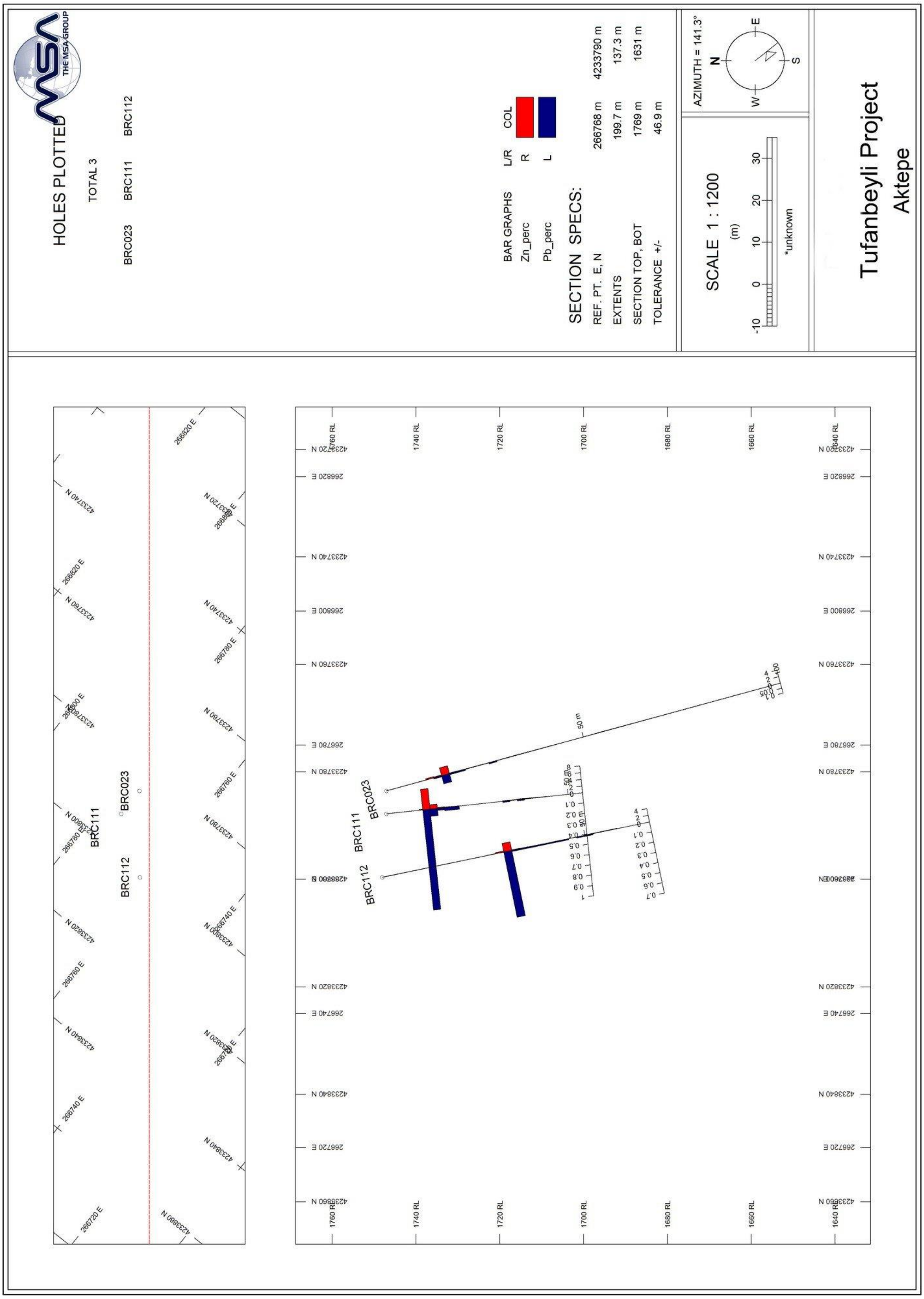
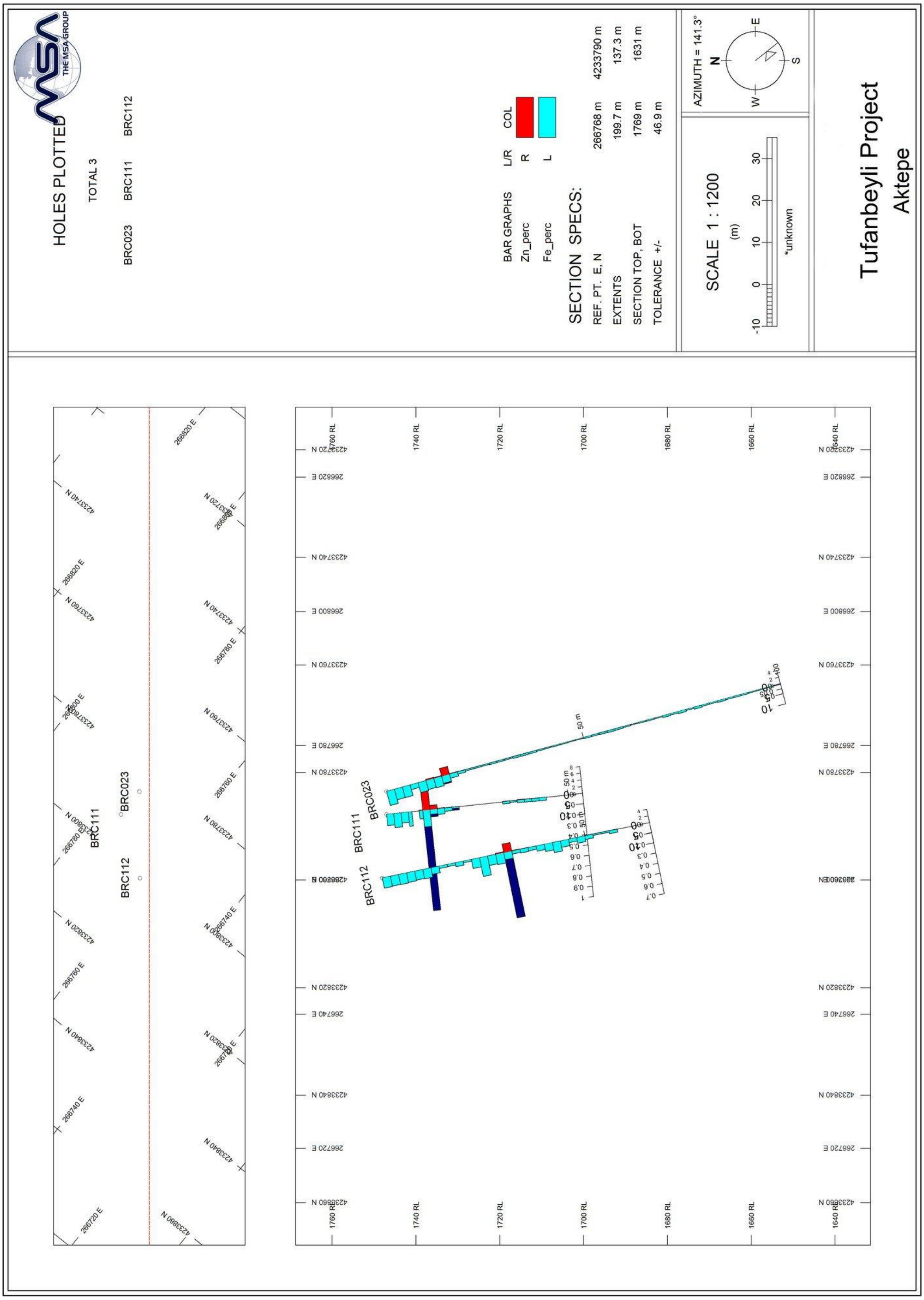
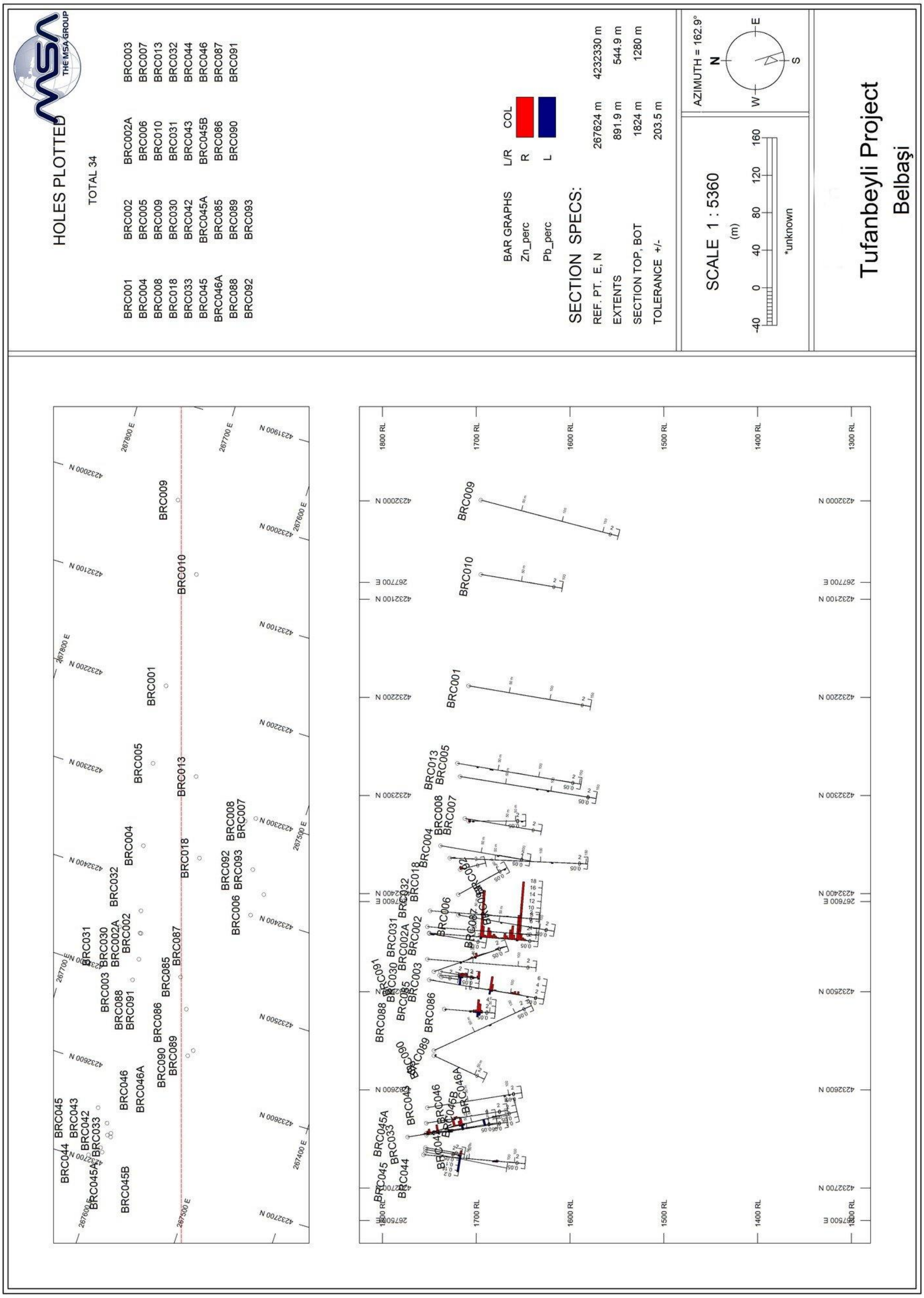
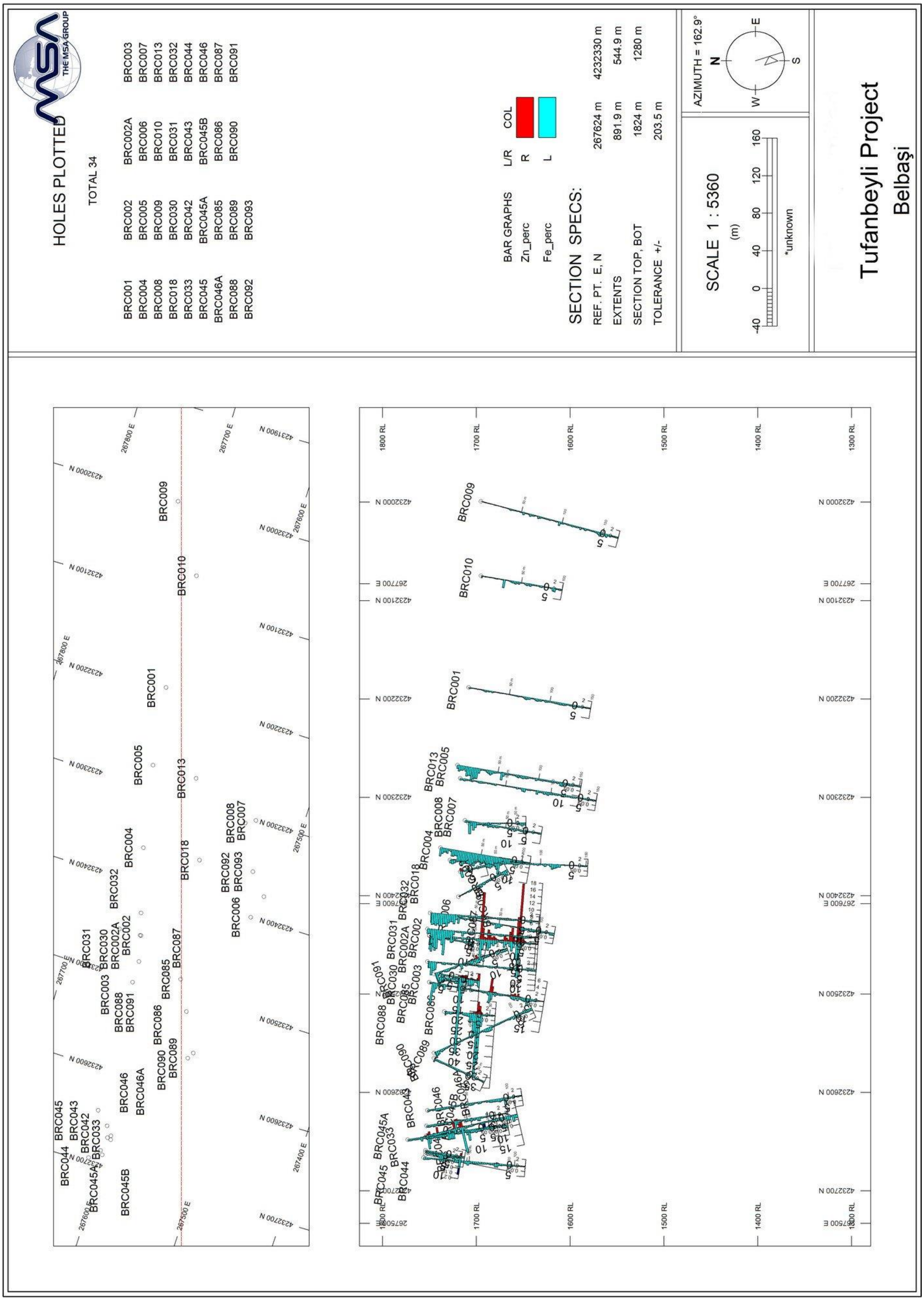
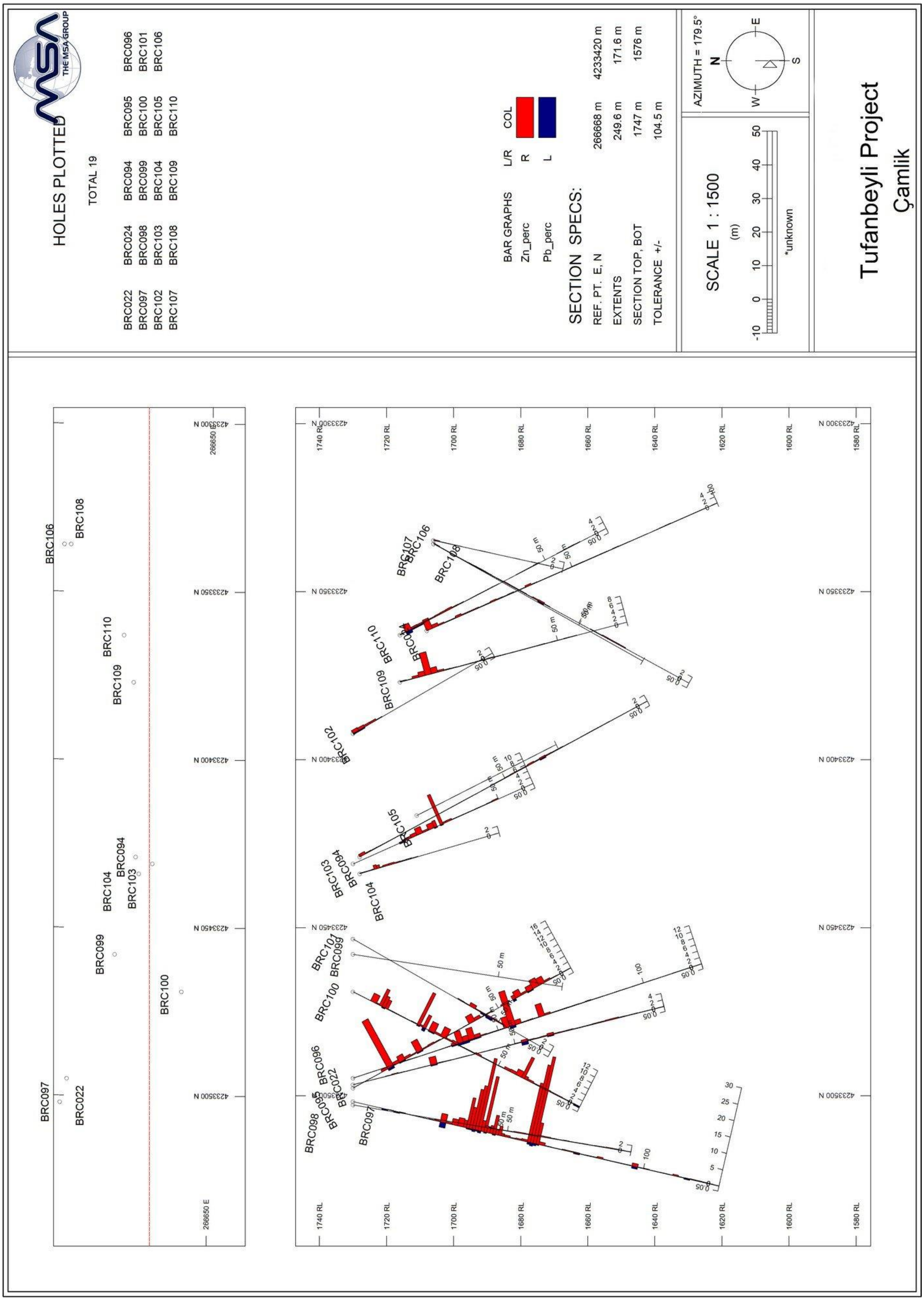
TOTAL 22
AKD002 AKD003 AKD006 AKD007 AKD008
AKD009 AKD010 AKD011 AKD012 AKD013
AKD014 AKD015 AKD016 AKD017 AKD018
AKD019 AKD020 AKD021 BRC015 BRC016
BRC020 BRC021
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 265727 m 4230200 m
EXTENTS 499.2 m 274.5 m
SECTION TOP, BOT 1697 m 1423 m
TOLERANCE +/- 193 m
SCALE 1 : 3000
(m)
*unknown
AZIMUTH = 25.5°
Tufanbeyli Project
Akçal

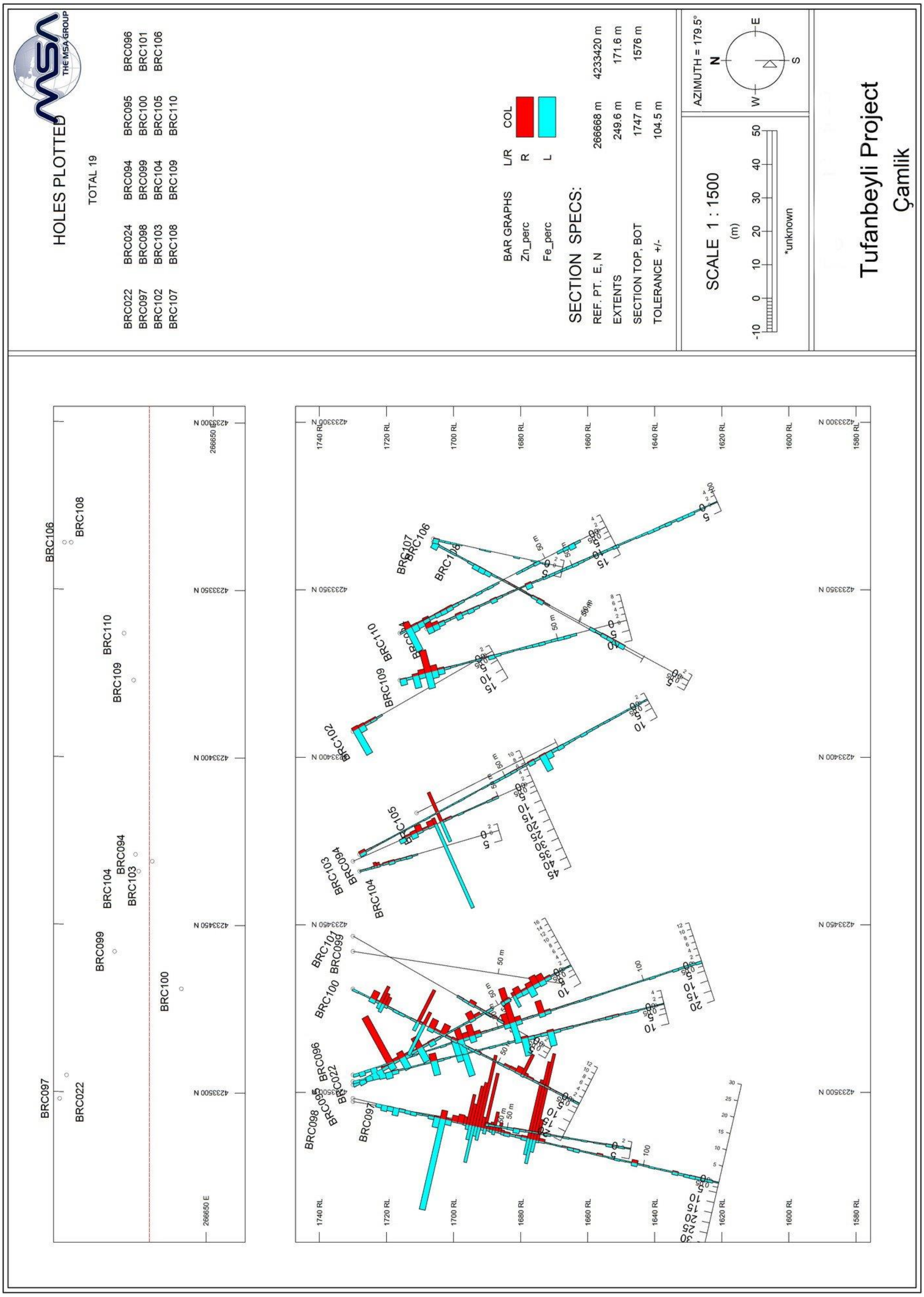

HOLES PLOTTED
TOTAL 3
BRC023
BRC111
BRC112
BAR GRAPHS
Zn_perc
Pb_perc
L/R
R
L
COL
SECTION SPECS:
REF. PT. E, N 266768 m 4233790 m
EXTENTS 199.7 m 137.3 m
SECTION TOP, BOT 1769 m 1631 m
TOLERANCE +/- 46.9 m
AZIMUTH = 141.3°
SCALE 1 : 1200
(m)
*unknown
Tufanbeyli Project
Aktepe

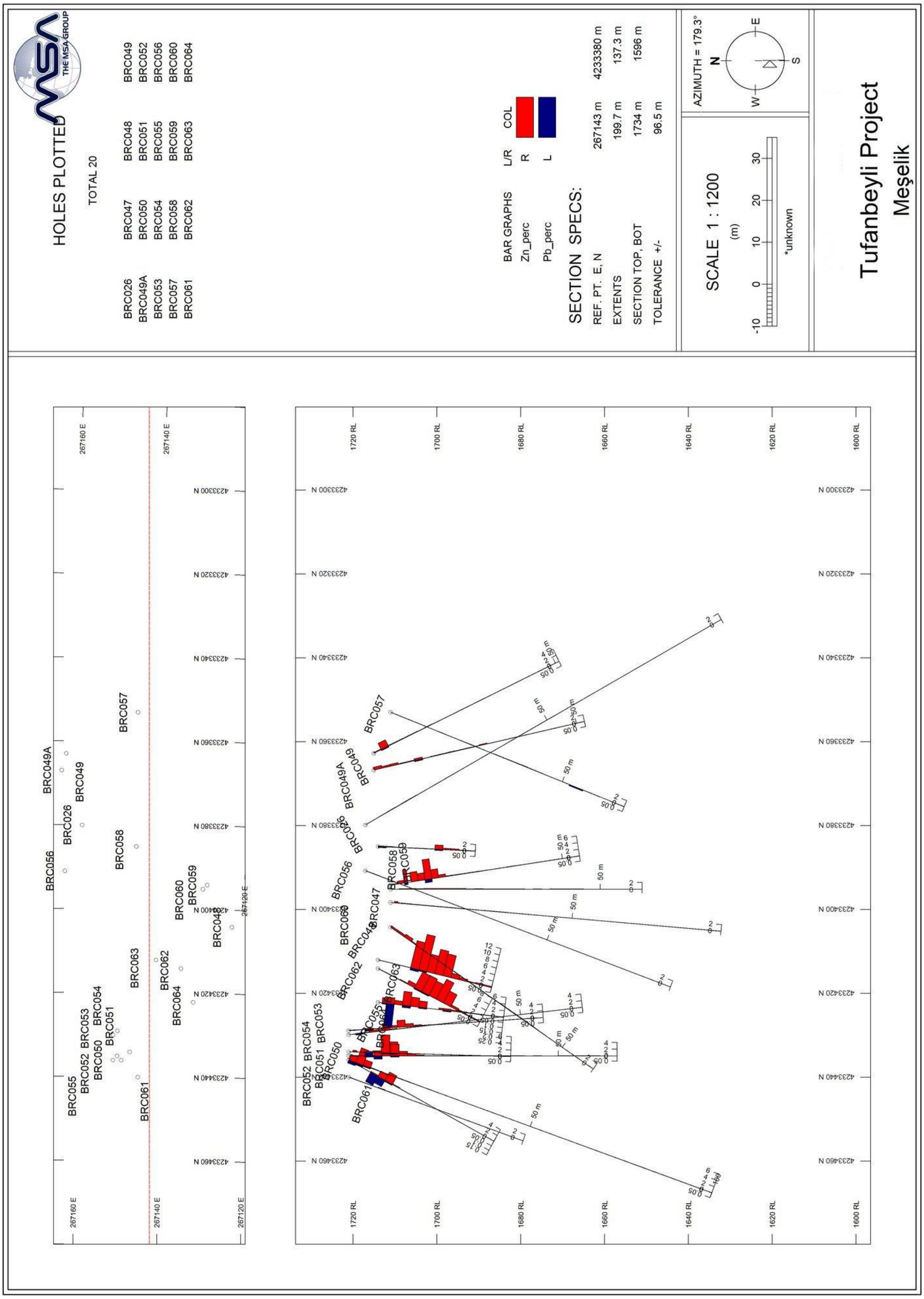

HOLES PLOTTED
TOTAL 3
BRC023 BRC111 BRC112
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 266768 m 4233790 m
EXTENTS 199.7 m 137.3 m
SECTION TOP, BOT 1769 m 1631 m
TOLERANCE +/- 46.9 m
AZIMUTH = 141.3°
SCALE 1 : 1200
(m)
*unknown
Tufanbeyli Project
Aktepe
BRC023
BRC111
BRC112

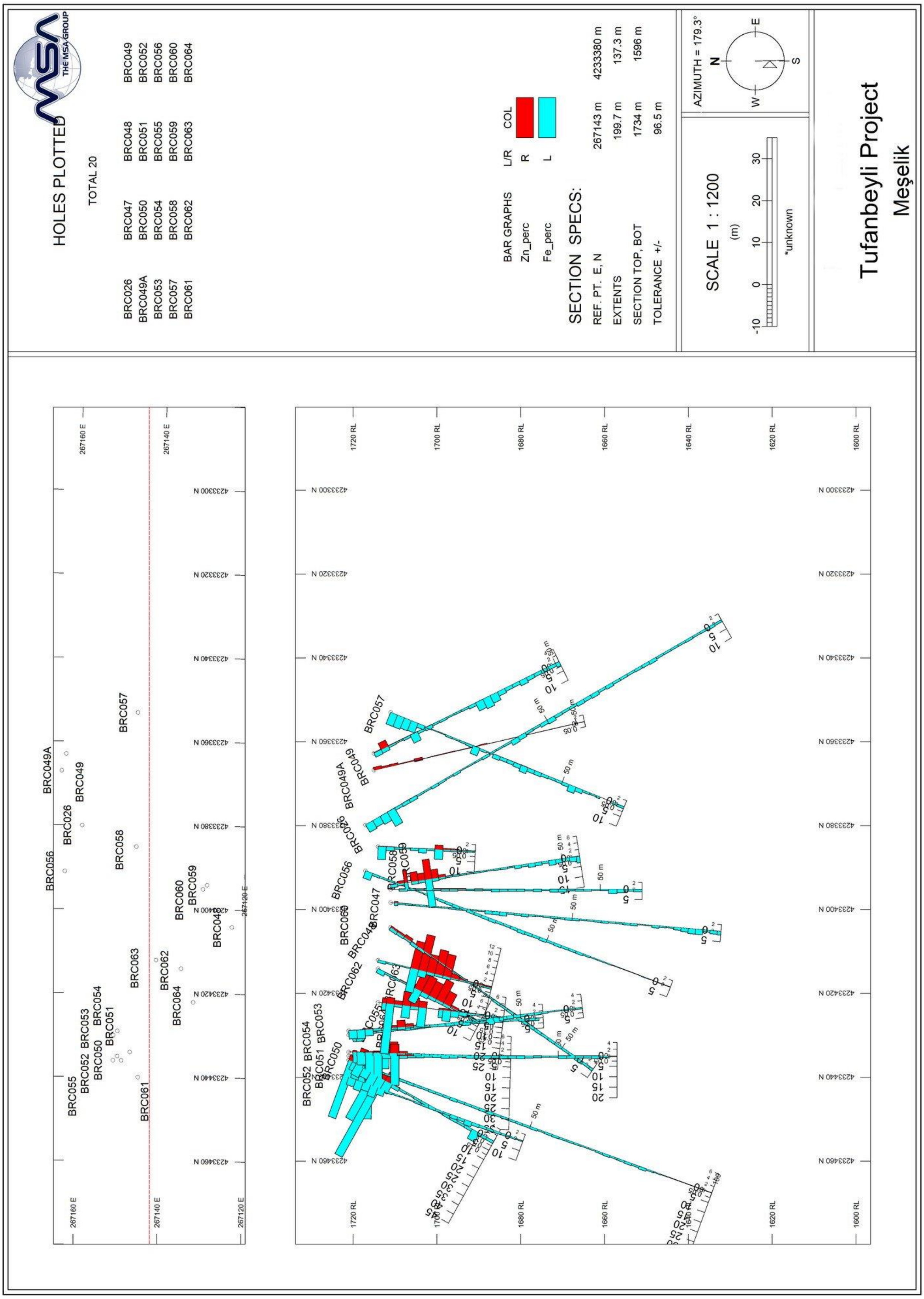

HOLES PLOTTED
TOTAL 34
BRC001 BRC004 BRC008 BRC018 BRC033 BRC045 BRC046A BRC088 BRC092
BRC002 BRC005 BRC009 BRC030 BRC042 BRC045A BRC085 BRC089 BRC093
BRC002A BRC006 BRC010 BRC031 BRC043 BRC045B BRC086 BRC090
BRC003 BRC007 BRC013 BRC032 BRC044 BRC046 BRC087 BRC091
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 267624 m 4232330 m
EXTENTS 891.9 m 544.9 m
SECTION TOP, BOT 1824 m 1280 m
TOLERANCE +/- 203.5 m
AZIMUTH = 162.9°
SCALE 1 : 5360
(m)
*unknown
Tufanbeyli Project
Belbaşi

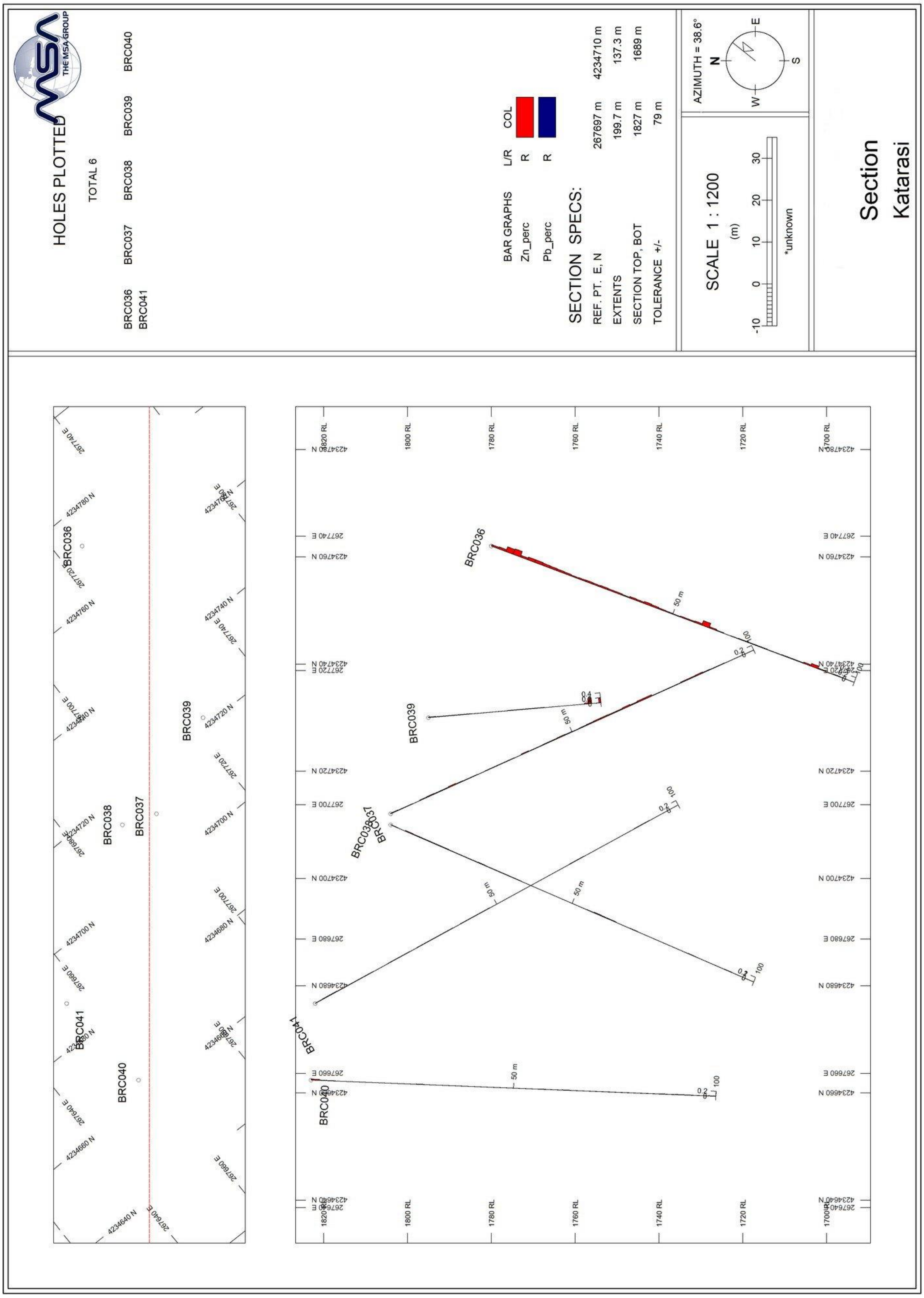

HOLES PLOTTED
TOTAL 34
BRC001 BRC002 BRC002A BRC003
BRC004 BRC005 BRC006 BRC007
BRC008 BRC009 BRC010 BRC013
BRC018 BRC030 BRC031 BRC032
BRC033 BRC042 BRC043 BRC044
BRC045 BRC045A BRC045B BRC046
BRC046A BRC085 BRC086 BRC087
BRC088 BRC089 BRC090 BRC091
BRC092 BRC093
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 267624 m 4232330 m
EXTENTS 891.9 m 544.9 m
SECTION TOP, BOT 1824 m 1280 m
TOLERANCE +/- 203.5 m
AZIMUTH = 162.9°
SCALE 1 : 5360
(m)
*unknown
Tufanbeyli Project
Belbaşi

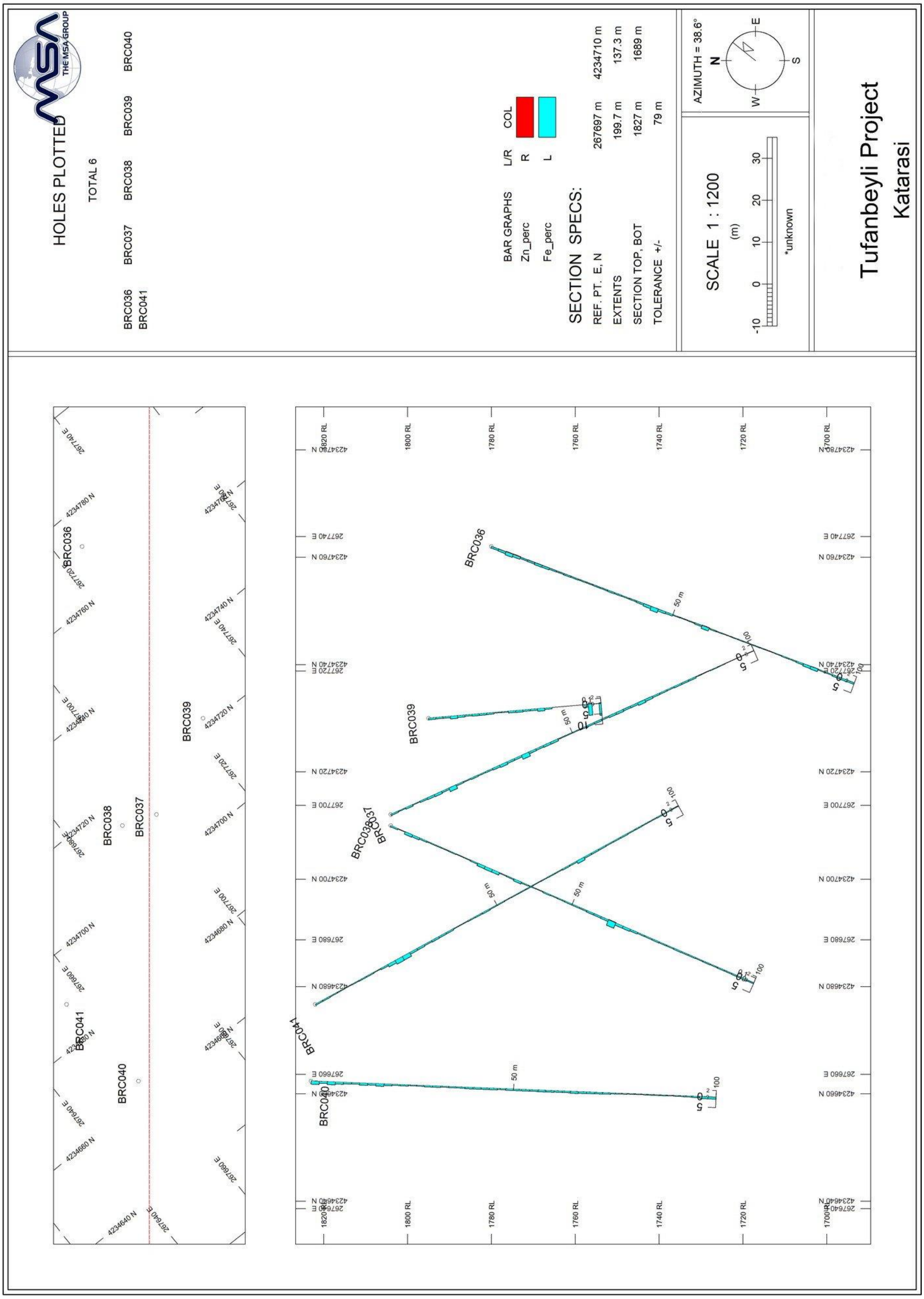

HOLES PLOTTED
TOTAL 19
BRC022 BRC024 BRC094 BRC095 BRC096
BRC097 BRC098 BRC099 BRC100 BRC101
BRC102 BRC103 BRC104 BRC105 BRC106
BRC107 BRC108 BRC109 BRC110
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 266668 m 4233420 m
EXTENTS 249.6 m 171.6 m
SECTION TOP, BOT 1747 m 1576 m
TOLERANCE +/- 104.5 m
AZIMUTH = 179.5°
SCALE 1 : 1500
(m)
*unknown
Tufanbeyli Project
Çamlik
THE MSA GROUP

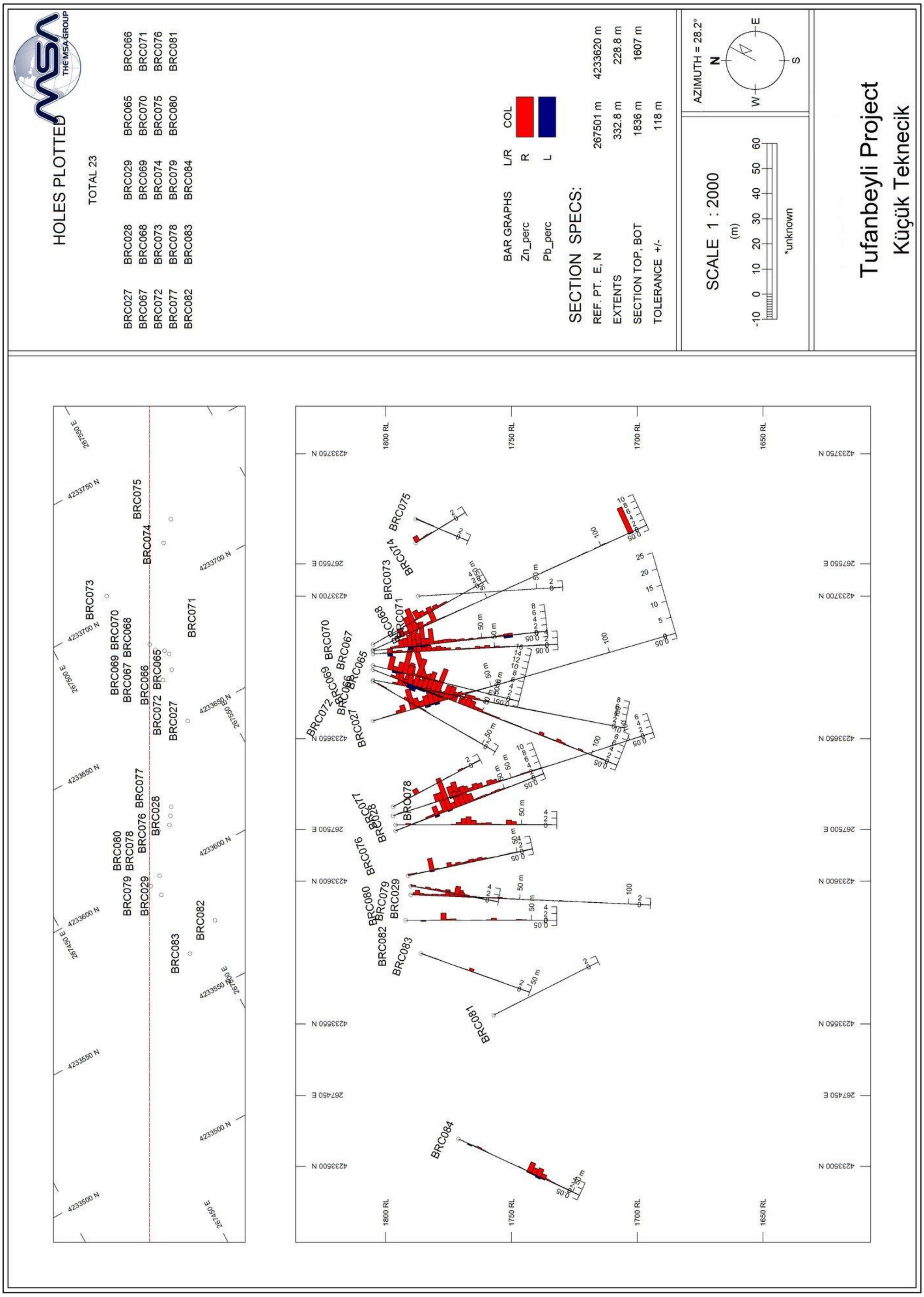

HOLES PLOTTED
TOTAL 19
BRC022 BRC024 BRC094 BRC095 BRC096
BRC097 BRC098 BRC099 BRC100 BRC101
BRC102 BRC103 BRC104 BRC105 BRC106
BRC107 BRC108 BRC109 BRC110
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 266668 m 4233420 m
EXTENTS 249.6 m 171.6 m
SECTION TOP, BOT 1747 m 1576 m
TOLERANCE +/- 104.5 m
AZIMUTH = 179.5°
SCALE 1 : 1500
(m)
*unknown
Tufanbeyli Project
Çamlik


HOLES PLOTTED
TOTAL 20
BRC026 BRC047 BRC048 BRC049
BRC049A BRC050 BRC051 BRC052
BRC053 BRC054 BRC055 BRC056
BRC057 BRC058 BRC059 BRC060
BRC061 BRC062 BRC063 BRC064
THE MSA GROUP
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 267143 m 4233380 m
EXTENTS 199.7 m 137.3 m
SECTION TOP, BOT 1734 m 1596 m
TOLERANCE +/- 96.5 m
AZIMUTH = 179.3°
SCALE 1 : 1200
(m)
*unknown
Tufanbeyli Project
Meşelik


HOLES PLOTTED
TOTAL 20
BRC026 BRC047 BRC048 BRC049
BRC049A BRC050 BRC051 BRC052
BRC053 BRC054 BRC055 BRC056
BRC057 BRC058 BRC059 BRC060
BRC061 BRC062 BRC063 BRC064
BAR GRAPHS L/R COL
Zn_perc R
Fe_perc L
SECTION SPECS:
REF. PT. E, N 267143 m 4233380 m
EXTENTS 199.7 m 137.3 m
SECTION TOP, BOT 1734 m 1596 m
TOLERANCE +/- 96.5 m
SCALE 1 : 1200
(m)
*unknown
AZIMUTH = 179.3°
Tufanbeyli Project
Meşelik


HOLES PLOTTED
TOTAL 6
BRC036 BRC037 BRC038 BRC039 BRC040
BRC041
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc R
SECTION SPECS:
REF. PT. E, N 267697 m 4234710 m
EXTENTS 199.7 m 137.3 m
SECTION TOP, BOT 1827 m 1689 m
TOLERANCE +/- 79 m
SCALE 1 : 1200
(m)
*unknown
AZIMUTH = 38.6°
N
E
S
W
Section
Katarasi


HOLES PLOTTED
TOTAL 6
BRC036
BRC037
BRC038
BRC039
BRC040
BRC041
BAR GRAPHS
L/R
COL
Zn_perc
R
Fe_perc
L
SECTION SPECS:
REF. PT. E, N
267697 m
4234710 m
EXTENTS
199.7 m
137.3 m
SECTION TOP, BOT
1827 m
1689 m
TOLERANCE +/-
79 m
AZIMUTH = 38.6°
N
E
S
W
SCALE 1 : 1200
(m)
-10
0
10
20
30
*unknown
Tufanbeyli Project
Katarasi
THE MSA GROUP


HOLES PLOTTED
TOTAL 23
BRC027 BRC028 BRC029 BRC065 BRC066
BRC067 BRC068 BRC069 BRC070 BRC071
BRC072 BRC073 BRC074 BRC075 BRC076
BRC077 BRC078 BRC079 BRC080 BRC081
BRC082 BRC083 BRC084
BAR GRAPHS L/R COL
Zn_perc R
Pb_perc L
SECTION SPECS:
REF. PT. E, N 267501 m 4233620 m
EXTENTS 332.8 m 228.8 m
SECTION TOP, BOT 1836 m 1607 m
TOLERANCE +/- 118 m
AZIMUTH = 28.2°
SCALE 1 : 2000
(m)
*unknown
Tufanbeyli Project
Küçük Teknecik

APPENDIX 5:

Metallurgical Testwork Report

Anvil Sparks Enterprises
Reg. Number 2006/081487/23
Tel & Fax: 012 991 5156
Cell: 082 651 9962
e mail: anvilsparks@vodamail.co.za
P.O. Box 38390
Faerie Glen 0043

26 July 2013

Mr M Robertson

MSA

Technology Review on the Tufanbeyli Prospect

Dear Sir,

The author has been requested to comment on the metallurgical technology options available for the Tufanbeyli prospect.

This memorandum lists the reports and studies reviewed below.

The geology of the Tufanbeyli ore body, the known mineralogy as well as the test work conducted on the samples, in South Africa, all suggest the following:

- Pre-treatment should consist of gravimetric up-grading technology. Dense media separation tests conducted in the RSA strongly recommends the usage of DMS. Other gravimetric up-grading means (cones, spirals etc.) can also be considered.
- The up-graded Tufanbeyli zinc-bearing material should be suitable for further processing by hydro and/ or pyro-metallurgical means. Historical treatment routes viz. Waelz kiln treatment would still be suitable.

The above comments are subject to the ore samples, which were tested in South Africa, being representative of the Tufanbeyli ore body. The author is not able to comment on this.

Yours sincerely,

E H O Meyer

Studies and reports reviewed:

1. N1 43-101 Technical Report on the Tufanbeyli Zinc Project, Turkey. MSA report (Ref. J2197) by M Robertson, M Hall. 26 July 2013.
2. Summary Report on Hakkari Up-Grading (+ Tufanbeyli). M A Plaskitt. 13 July 2013.
3. Summary Report on Tufanbeyli Up-Grading. M. A. Plaskitt. 19 July 2013.07.26.
4. Consultant Credentials. N1 43-101 requirements. E H O Meyer. 22 July, 2013.

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